



# Manual **WERMA-WIN**

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	0.0 8 7	Control	
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## 1 Installation

WERMA-WIN is installed first during installation. The WERMA-WIN database is then installed and set up or a connection is made to an existing database.

(i) Administrator rights are needed to install WERMA-WIN. No administrator rights are needed to use WERMA-WIN.

i The WERMA-WIN Client can be installed, refreshed and uninstalled unattended. For information about this, refer to the **Docs** subdirectory in the installation directory of the server application.

## 1.1 Installing WERMA-WIN

- 1. Make sure that the necessary system requirements are met.
- 2. Download the latest version of WERMA-WIN at www.werma.com/win.
- 3. Extract the downloaded ZIP file.
- 4. Double-click on the WERMA-WIN-x-x-x-xxxx.exe file to start the installation.
   → The installation wizard starts.

(#) WERMA WIN		$\times$
	WERMA WIN 4 Installation         The installation files will now be unpacked. Please specify the destination folder and click on 'Install'.         WERMA WIN 4 Installation         Die Installationsdateien müssen nun entpackt werden. Bitte geben Sie das Zielverzeichnis an und klicken Sie dann auf 'Install'.         WERMA WIN 4 Installation         Pour continuer l'installation, le fichier doit être décompressé. Spécifiez le dossier de destination et cliquez sur "Install"	<
	, Destination folder C:\Users\VM_Win10\Desktop\WERMA-WIN-5-0-0-2535 Browse Installation progress	
	Install Cancel	

- 5. Follow the instructions in the installation wizard.
  - $\rightarrow$  Once the installation assistant has ended, the assistant to install the WERMA-WIN database appears.



## 1.2 Installing the WERMA-WIN database

There are three options available to you to install the WERMA-WIN database.



Install the database locally:

- The WERMA-WIN database is installed locally on the PC on which WERMA-WIN is installed.

Connect to existing database:

- A connection to an existing WERMA-WIN database is established using a link file previously installed.

IT expert installation:

- Establishment of a connection to a WERMA-WIN database on another desktop PC.
- Establishment of a connection to an empty Microsoft SQL server database in the network.
- Establishment of a connection to a Microsoft SQL server database in the network already containing WERMA-WIN data.

## **WERMA**®

### 1.2.1 Installing the database locally

(j) To access the WERMA-WIN database, WERMA-WIN creates a user and an associated password with the following data:

- User: wermawin
- Password: Tyz19\$lx50WsR3Ed7m

(i) The WERMA-WIN 4 Server Service and the WERMA WIN 4 Connector Service are both installed when the WERMA-WIN database is installed. These services run in the background when the PC is switched on. All collected WERMA-WIN data is written to the WERMA-WIN database without WERMA-WIN running and a user being logged on.

#### 1. Click on Install database.



- 2. Click on Next.
  - $\rightarrow$  The WERMA-WIN database is installed locally on the PC.
  - $\rightarrow$  Once the database has been installed, a window appears in which to save the link file.

(#) WERMA-WIN database setup	×
Save Link File for multi-user access	€
In order to connect further PCs to WERMA-WIN, a Link File will now be say	ved.
The following data will be saved in the Link File:          1. Connection to database       A         Server name: DESKTOP-6M5NQLP       Instance: WERMAWIN         Database: WERMAWIN       Vermather and the same of th	
Cancel	Save Next

3. Click on Save to save the link file.

The link file lets you connect other workplaces to the WERMA-WIN database.

### 1.2.2 Connecting to an existing database

(i) The **WERMA WIN 4 Connector Service** is installed when connecting to the existing WERMA-WIN database. This service runs in the background when the PC is switched on. All collected WERMA-WIN data from the connected WIN master is written to the WERMA-WIN database without WERMA-WIN running and a user being logged on.

#### 1. Click on **Connect to existing database**.



2. Click on Next.

(i)

- 3. Open the link file.
  - → The installation wizard checks the connection settings and establishes the connection to the existing WERMA-WIN database.

(i) The link file can be created on the available WERMA-WIN installation.

### 1.2.3 IT expert installation

1. Click on IT expert installation.

→ The WERMA-WIN database setup window appears.



IT expert installation offers the following options:

- Use of the database that has been installed by WERMA-WIN
- Use of a newly created empty Microsoft SQL server database
- Use of a Microsoft SQL server database with WERMA-WIN files

#### 1.2.3.1 Use of a database that has been installed by WERMA-WIN

- 1. Select A database that has been installed by WERMA-WIN option.
- 2. Click on Next.

() WERMA-WIN database setup	×
Expert installation	€
The name of the server on which the WERMA-WIN database is installed is required to connect to the WERMA-WIN database. The computer name or the address can be used as a server name. If this information is unknown please the Link File as described in the manual or contact your network administrate the Link File as described in the manual or contact your network administrate the Link File as described in the manual or contact your network administrate the Link File as described in the manual or contact your network administrate the Link File as described in the manual or contact your network administrate the Link File as described in the manual or contact your network administrate the transmission of the transmission of transmission of the transmission of transmission o	∍IP ∋use or.
Server name Check	
Back Cancel	Next OK

3. In the Server name field, enter the name of the server on which the WERMA-WIN database has been installed.



The server name can be found in the WERMA-WIN link file (.wde) saved when installing the WERMA-WIN database.

<b>4</b> . (	Click on	Next.
--------------	----------	-------

🛞 WERMA-WIN database setup 🛛 🗙				
Expert installation				
<ul> <li>Install the Server Service on this PC</li> <li>The Server Service must be installed and activated once per database. We recommend installing the Server Service on the PC where the database is installed.</li> <li>The Server Service uses the TCP Port 9710 as standard. If this port is already in use for a different network service please select an alternative TCP-Port</li> </ul>				
TCP-Port 9710 \$ Check				
Server name TCP-Port 9710				
Back Cancel Next OK				

5. Select whether the **WERMA WIN 4 Server Service** is to be installed on this computer or whether you wish to establish a connection to an existing server service.

#### Installing the WERMA WIN 4 Server Service

If the **WERMA WIN 4 Server Service** is to be installed on this computer:

1. Select Install the Server Service on this PC option.

<ul> <li>Install the Server Service on this PC</li> </ul>				
The Server Service must be recommend installing the Se installed.	The Server Service must be installed and activated once per database. We recommend installing the Server Service on the PC where the database is installed.			
The Server Service uses the TCP Port 9710 as standard. If this port is alrea in use for a different network service please select an alternative TCP-Port				
TCP-Port	9710 🖨 Check			

- 2. You may need to change the server service TCP port in the TCP port field.
- 3. Click on Next.
  - $\rightarrow$  The connection to the WERMA-WIN database is created.



#### Connection to an existing server service

If a connection is to be made to an existing server service:

1. Select Connect to the following Server Service option.

Connect to the following Server Service			
Server name	10.00.0000 (F 1)		
TCP-Port	9710 🜩		
	Check		
Note: The Server Service is currently installed on this PC. If you continue the Server Service will be uninstalled.			

- 2. In the Server name field, enter the name of the server on which the server service has been installed.
- 3. Enter the server service TCP port in the **TCP-Port** field.
- 4. Click on Next.
  - $\rightarrow$  The connection to the WERMA-WIN database is created.
- (i) The **WERMA WIN 4 Connector Service** is installed during installation. This service runs in the background when the PC is switched on. All collected WERMA-WIN data from the connected WIN master is written to the WERMA-WIN database without WERMA-WIN running and a user being logged on.

#### 1.2.3.2 Using a newly created empty Microsoft SQL server database

#### **Requirements:**

- An empty database has been set up on the Microsoft SQL server.
- A corresponding database user is linked to the database login.
- The database meets the following requirements:

Compatible from:	Microsoft SQL Server 2008	
Recommendation:	Microsoft SQL Server 2014	
Collation	Latin1_General_CI_AS	
Role membership:	db_datareader	
	db_datawriter	
	db_ddladmin or db_owner	

- 1. Select A newly created empty Microsoft SQL server database option.
- 2. Click on Next.

🛞 WERMA-WIN database setup 🛛 🕹			
Expert installation		÷	
Please enter the database se	erver connection settings.		
The Server name is the name WIN. In the Instance name b WERMA WIN. Alternatively, box	e of the computer on which you ox, enter the name of the instar you can combine these as 'Ser	u have installed SQL Server for WERMA nee of SQL Server that you want to use for vername\instancename' in the Server name	
If you have not specified an i box empty.	instance name for your SQL Se	erver installation, leave the Instance name	
This information is available	from your network administrat	or.	
Server name		(e.g. srv-sqldb-01)	
Instance name		(e.g. WERMAWIN)	
Database		(e.g. WERMAWIN)	
User name		(e.g. WERMAWIN)	
Password		(e.g. Tyz19\$lx50WsR3Ed7m)	
	Check		
Cancel		Rext OK	

3. Enter the access data for the empty database in the appropriate fields.

(i) You do not have to complete the **Instance name** field.

#### 4. Click on Next.

(#) WERMA-WIN database setu	p ×
Expert installation	( <del>)</del>
O Install the Server Service on	this PC
The Server Service must be recommend installing the Se installed.	installed and activated once per database. We rver Service on the PC where the database is
The Server Service uses the in use for a different network	a TCP Port 9710 as standard. If this port is already service please select an alternative TCP-Port
TCP-Port	9710 🜲
Connect to the following Service Connect to the following Servi	ver Service
Server name	DOKLINERS-0738
TCP-Port	9710 🜩
	Check
Gancel	Next OK



5. Select whether the WERMA WIN 4 Server Service is to be installed on this computer or whether you wish to establish a connection to an existing server service.

#### Installing the WERMA WIN 4 Server Service

If the WERMA WIN 4 Server Service is to be installed on this computer:

1. Select Install the Server Service on this PC option.

Install the Server Service of the Server Server Service of the Server Service of the Server Service of the Server Se	on this PC
The Server Service must I recommend installing the installed.	be installed and activated once per database. We Server Service on the PC where the database is
The Server Service uses t in use for a different netwo	he TCP Port 9710 as standard. If this port is already rk service please select an alternative TCP-Port
TCP-Port	9710 🛫 Check

- 2. You may need to change the server service TCP port in the TCP Port field.
- 3. Click on Next.
  - $\rightarrow$  The connection to the database is created.

#### Connection to an existing server service

If a connection is to be made to an existing server service:

1. Select Connect to the following Server Service option.

Connect to the following Server	er Service
Server name	10.00.000 (* 19
TCP-Port	9710 🜩
	Check
Note: The Server Service is Server Service will be uninst	currently installed on this PC. If you continue the alled.

- 2. In the Server name field, enter the name of the server on which the server service has been installed.
- 3. Enter the server service TCP port in the TCP-Port field.
- 4. Click on Next.
  - $\rightarrow$  The connection to the database is created.
- (i) The **WERMA WIN 4 Connector Service** is installed during installation. This service runs in the background when the PC is switched on. All collected WIN data from the connected WIN master is written to the WIN database without WIN software running and a user being logged on.

#### 1.2.3.3 Using a Microsoft SQL server database with WERMA-WIN files

- 1. Select Microsoft SQL server database with WERMA-WIN data option.
- 2. Click on Next.

WERMA-WIN database se	etup	×
Expert installation		÷
Please enter the database se	erver connection settings.	
The Server name is the name WIN. In the Instance name b WERMA WIN. Alternatively, box	e of the computer on which you ox, enter the name of the instar you can combine these as 'Ser	u have installed SQL Server for WERMA nee of SQL Server that you want to use for vername\instancename' in the Server name
If you have not specified an i box empty.	instance name for your SQL Se	erver installation, leave the Instance name
This information is available	from your network administrat	or.
Server name		(e.g. srv-sqldb-01)
Instance name		(e.g. WERMAWIN)
Database		(e.g. WERMAWIN)
User name		(e.g. WERMAWIN)
Password		(e.g. Tyz19\$lx50WsR3Ed7m)
	Check	
Cancel		Rext OK

3. Enter the access data for the empty database in the appropriate fields.

(i) You do not have to complete the **Instance name** field.

#### 4. Click on Next.

(#) WERMA-WIN database setu	p ×
Expert installation	( <del>)</del>
O Install the Server Service on	this PC
The Server Service must be recommend installing the Se installed.	installed and activated once per database. We rver Service on the PC where the database is
The Server Service uses the in use for a different network	a TCP Port 9710 as standard. If this port is already service please select an alternative TCP-Port
TCP-Port	9710 🜲
Connect to the following Service Connect to the following Servi	ver Service
Server name	DOKLINERS-0738
TCP-Port	9710 🜩
	Check
Gancel	Next OK



5. Select whether the WERMA WIN 4 Server Service is to be installed on this computer or whether you wish to establish a connection to an existing server service.

#### Installing the WERMA WIN 4 Server Service

If the WERMA WIN 4 Server Service is to be installed on this computer:

1. Select Install the Server Service on this PC option.

Install the Server Service or	n this PC
The Server Service must be recommend installing the S installed.	s installed and activated once per database. We erver Service on the PC where the database is
The Server Service uses th in use for a different networ	e TCP Port 9710 as standard. If this port is already k service please select an alternative TCP-Port
TCP-Port	9710 <del>*</del> Check

- 2. You may need to change the server service TCP port in the TCP port field.
- 3. Click on Next.
  - $\rightarrow$  The connection to the WERMA-WIN database is created.

#### Connection to an existing server service

If a connection is to be made to an existing server service:

1. Select Connect to the following Server Service option.

<ul> <li>Connect to the following Serv</li> </ul>	er Service
Server name	0.00.0000.07.0
TCP-Port	9710 🜩
	Check
Note: The Server Service is Server Service will be uninst	currently installed on this PC. If you continue the alled.

- 2. In the Server name field, enter the name of the server on which the server service has been installed.
- 3. Enter the server service TCP port in the TCP-Port field.
- 4. Click on Next.
  - $\rightarrow$  The connection to the WERMA-WIN database is created.



## 1.3 Firewall configuration

All necessary port enables are configured in the Windows firewall by default when WERMA-WIN is installed. If you are using additional firewall or network products, it may be necessary to adapt them manually.

1. Make sure that the following network cor	nnections are not blocked:
---	----------------------------

Source	Destination	Туре	Port	Remark
Server Client	Microsoft SQL Server	UDP/TCP	-	WERMA recommends allo- wing all network connec- tions for sqlservr.exe and sqlbrowser.exe in the Microsoft SQL Server Installation.
				Refer to the administration manual for the Microsoft SQL server for a different configuration.
Server	Server	TCP	9710*	Database connection to
Client				the WERMA WIN 4 Server Service
Server	WIN ethernet master	TCP	80*	http data connection
Server	WIN ethernet master	UDP broadcast	5000	Retrieval of device infor- mation
Server	External mail server	ТСР	25*	Mail sent by SMTP to the configured server
Server	www.werma-win.com**	TCP	443	Mail sent using the inte- grated mail function. Con- figuration of a web proxy is possible.
Server Client	www.werma.com** www.werma-win.com**	TCP	80	Update testing, retrieval of the Online Help and Con- tact site

\* Can be configured differently in WERMA-WIN on commissioning of the WERMA-WIN devices.

\*\* We recommend enabling access to other subdomains for future updates of WERMA-WIN.

## 1.4 Manual driver installation

(i) Manual driver installation is only required if the device driver software has not been automatically installed during connection of a WERMA-WIN device.



÷	Update Drivers – WIRELESS-DEVICE	×	
	Windows was unable to install your WIRELESS-DEVICE		
	Windows could not find drivers for your device.		
	If you know the manufacturer of your device, you can visit their website and check the support section for downloadable drivers.		
	$\rightarrow$ Search for updated drivers on Windows Update		
	-y search for updated drivers on windows opdate		
	Ch	ose	

1. Open Device Manager.



 $\rightarrow$  The **Device Manager** window appears.

📩 Device Manager	-	×
File Action View Help		
V 🗄 DESKTOP-6M5NQLP		
> 🐗 Audio inputs and outputs		
> 🗃 Batteries		
> 🖵 Computer		
> 👝 Disk drives		
> 🙀 Display adapters		
> 🔗 DVD/CD-ROM drives		
> 🛺 Human Interface Devices		
> 📹 IDE ATA/ATAPI controllers		
> 🥅 Keyboards		
> 🕕 Mice and other pointing devices		
> 📮 Monitors		
> 🚽 Network adapters		
✓  ↓ <sup>®</sup> Other devices		
🕅 WIRELES Undate driver		
> 🖻 Print queue		
> Processors Disable device		
Software de Uninstall device		
> 🔟 Sound, vide		
> Storage con		
> 🏣 System devi 🛛 Properties		
V 🖗 Universal Seriar Bus controllers		
Intel(R) USB 3.0 eXtensible Host Controller - 1.0 (Microsoft)		
🏺 USB Root Hub (USB 3.0)		
Launches the Update Driver Wizard for the selected device.		

- 2. Right-click WIRELESS DEVICE.
- 3. Select Update driver in the pop-up menu.

	×
Update Drivers – WIRELESS-DEVICE	
How do you want to search for drivers?	
→ Search automatically for updated driver software Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.	
→ Browse my computer for driver software Locate and install driver software manually.	
Cance	-1

4. Click Browse my computer for driver software.



		$\times$
÷	Update Drivers – WIRELESS-DEVICE	
	Browse for drivers on your computer	
	Search for drivers in this location:	
	C:\Program Files\WERMA-WIN-4	
	✓ Include subfolders	
	→ Let me pick from a list of available drivers on my computer This list will show available drivers compatible with the device, and all drivers in the same category as the device.	
	Next Cance	I

- 5. Click on Browse.
- 6. Navigate to the WERMA-WIN installation directory and open the Driver folder.
- 7. Click on Next.
  - $\rightarrow$  The device drivers are installed.

		$\times$	
~	Update Drivers – USB Serial Converter		
	Windows has successfully updated your drivers		
	Windows has finished installing the drivers for this device:		
	USB Serial Converter		
	Close		

- 8. Once successfully installed, click on **Close** to close the hardware wizard.
  - $\rightarrow\,$  The WERMA-WIN device is now ready for operation.

## 2 Activating WIN devices

WIN master or WIN ethernet master must be connected to a PC and configured before WERMA-WIN data from the signal towers can be received. WIN slaves should then be configured and assigned to a WIN master or WIN ethernet master.

## 2.1 WIN master

1. Click on Activation in the toolbar.



2. Click on Commission WIN master.

(#) Activation	×
wireless information network	
Connect the WIN master	
Please connect the WIN master to be configured and click on Search.	
Configurable WIN masters	
Cancel Close Next Step	

3. Connect WIN master to the PC and click on **Search**. → WERMA-WIN searches for the connected WIN master.

(#) Activation	×
wireless information network	
Connect the WIN master	
Please connect the WIN master to be configured and click on Search.	
Configurable WIN masters	
WIN master 1 (MAL 00-27-0L) Search	
Cancel Close Next Next Step	

4. Once WIN master has been recognised, click on Next.

(i) A message appears if a new firmware version is available. Click **Yes** to install the new firmware version.

(#) Activation	:	×
	network	
WIN master co	nfiguration	
Enter the name select the nam	e of the WIN master. When configuring the WIN slave, you have to e of the WIN master again.	
Name	Production	
Channel	e.g. Production           Image: Please do not change unless you are running multiple WIN systems in parallel - in this case reference to manual.	r
By clicking Next, the name for this WIN master is saved and the WIN slave configuration is started.		
Close	Next Next step	

5. Enter the description of the WIN master in the Name field.

(i) The transmission channel of the individual systems can be changed to enable the best possible radio connection when several WERMA-WIN systems are run in parallel.

WERMA recommends only operating one WIN master per transmission channel.

- 6. Select another transmission channel in the **Channel** selection list if necessary.
- 7. Click on Next.

 $\rightarrow$  The configuration is transferred to the WIN master.

### 2.2 WIN ethernet master

1. Click on Activation in the toolbar.



2. Click on Start up WIN master.



- 3. Use the USB cable to connect WIN ethernet master to the computer and click on Search.
  - $\rightarrow\,$  WERMA-WIN searches for the connected WIN ethernet master.

(#) Activation	×
wireless information network	
Connect the WIN master	
Please connect the WIN master to be configured and click on Search.	
Configurable WIN masters New WIN ethemet master (MAC 00-6F-F() Search	
Cancel Rext Next Step	

4. After WIN ethernet master has been recognised, click on Next.

A message appears if a new firmware version is available. Click **Yes** to install the new firmware version.

(#) Activation	×		
wireless information network			
WIN master cor	figuration		
Enter the name of the WIN master. When configuring the WIN slave, you have to select the name of the WIN master again.			
Name	Production		
	e.g. Production		
Channel	1 Please do not change unless you are running multiple WIN systems in parallel - in this case refer to manual.		
By clicking Next, the name for this WIN master is saved and the WIN slave configuration is started.			
Cancel Close	Next Next Step		

5. Enter the description of the WIN ethernet master in the Name field.

The transmission channel of the individual systems can be changed to enable the best possible radio connection when several WERMA-WIN systems are run in parallel.

WERMA recommends only operating one WIN master per transmission channel.

(i)

(i)



- 6. Select another transmission channel in the **Channel** selection list if necessary.
- 7. Click on Next.

(#) Activation	×
wireless information network	
Network configuration for	or WIN ethernet master
<ul> <li>Automatically obtain a</li> </ul>	n IP address via DHCP
If you select this optic administrator can pro	on, please ensure that UDP broadcasts are permitted on your network. Your network vide further details.
🔵 Use the following stati	c IP address:
IP-Address	0, 0, 0, 0 e.g. 192.168.0.42
Subnet mask	0.0.,0.e.g. 255.255.0
Default gateway	0.0.0
DNS-Server	0.0.0.
Show advanced netwo	rk configuration
Please enter, for exa UDP broadcast is not	mple, a DNS name for the WIN ethernet master if it is in a different sub-network or possible.
The configuration data regarding the configur Download manual	can be obtained from your network administrator. Please also refer to the notes ation in the user manual.
Cancel Close	Next Next step

There are three options available to connect to the network:

- Automatically obtain an IP address via DHCP
- Use a static IP address

 $(\mathbf{i})$ 

- Advanced network configuration

The **Advanced network configuration** must be used in the following cases:

- The WIN ethernet master and WERMA-WIN server service are in the same sub-network.
- UDP broadcast is not allowed.
- A static IP address should not be assigned.

### 2.2.1 Automatically obtaining an IP address via DHCP

- 1. Select Automatically obtain an IP address via DHCP option.
- 2. Click on Next.
  - $\rightarrow$  The configuration is transferred to the WIN ethernet master.
  - $\rightarrow$  The configuration has been successfully completed.

(#) Activation	×
wireless information network	
Configuration saved	
Configuration successfully saved. You can now remove the WIN master or WIN slave.	
How do you want to continue?	
Finish configuration	
O Configure a WIN master	
○ Configure a WIN slave	
Cancel Close	

- 3. Now choose whether you wish to perform further configuration or exit configuration.
- 4. Click on Next.

### 2.2.2 Using a static IP address

1. Select Use the following static IP address option.



2. Enter the network data into the corresponding fields.



(i) Your network administrator will provide the requisite data.

#### 3. Click on Next.

- $\rightarrow$  The configuration is transferred to the WIN ethernet master.
- $\rightarrow$  The configuration has been successfully completed.



- 4. Now choose whether you wish to perform further configuration or exit configuration.
- 5. Click on Next.

### 2.2.3 Advanced network configuration

1. Select Use the following static IP address option.

(*) Activation ×
wireless information network
Network configuration for WIN ethernet master
Automatically obtain an IP address via DHCP
If you select this option, please ensure that UDP broadcasts are permitted on your network. Your network administrator can provide further details.
Use the following static IP address:
IP-Address 0 . 0 . 0 . 0 e.g. 192.168.0.42
Subnet mask 0 . 0 . 0 . 0 e.g. 255.255.255.0
Default gateway 0 , 0 , 0 , 0
DNS-Server 0 . 0 . 0 . 0
Show advanced network configuration
Please enter, for example, a DNS name for the WIN ethernet master if it is in a different sub-network or UDP broadcast is not possible.
The configuration data can be obtained from your network administrator. Please also refer to the notes regarding the configuration in the user manual.
Download manual
Cancel Close Next step

2. Enter the network data into the corresponding fields.

(i) Your network administrator will provide the requisite data.

#### 3. Enable Advanced network configuration.

4. Click on Next.

(#) Activation		Х
	®	
Advanced network co	onfiguration for WIN ethernet master	
By default, the TCP/IP co ethemet master. You can in your DNS server.	nnection will be directly established with the IP address of the WIN however define a DNS name which has been appropriately configure	d
IP / DNS name	192.168.50.173	
TCP-Port	80 (Default value: 80)	
Cancel Close	Next Next step	

- 5. Enter the IP address or DNS name of WIN ethernet master in the IP / DNS name field.
- 6. You may need to change the TCP port in the **TCP-Port** field.



(i) Your network administrator will provide the requisite data.

#### 7. Click on Next.

 $\rightarrow$  The configuration has been successfully completed.

(#) Activation	×
wireless information network	
Configuration saved	
Configuration successfully saved. You can now remove the WIN master or WIN slave.	
How do you want to continue?	
Finish configuration	
○ Configure a WIN master	
○ Configure a WIN slave	
Cancel Rext Step	

- 8. Now choose whether you wish to perform further configuration or exit configuration.
- 9. Click on Next.

## 2.3 WIN slave

- 1. Start WERMA-WIN.
- 2. Use the USB cable to connect WIN slave to the PC.



 $\rightarrow$  The **Commissioning** window appears.

(#) Activation	×
wireless information network	
Connect the WIN slave	
Please connect the WIN slave to be configured and click on Search.	
Connected WIN slave New WIN slave (MAC 00-27-05)	
Cancel Close	Next step

- 3. Click on **Search** if WIN slave has not automatically been found. → WERMA-WIN searches for the connected WIN slave.
- 4. Once WIN slave has been recognised, click on Next.

(#) Activation	ı	×
Configure t	he WIN slave	
Please con individual ti	figure your signal tower by selectin ers.	g the colours and descriptions of the
Name WI	l slave 00-27-05	MAC-ID 00-27-05
Signal tower	Blink recognition	
Select p	roductive state	
	Description	Colour/Function
4th tier	<not in="" use=""></not>	<none> ~</none>
3rd tier	Error ~	Red 🗸
2nd tier	Warning ~	Yellow ~
1st tier	Operational ~	Green V
		T
Assign the	device to the following WIN maste	r <please select=""> ~</please>
By clicking	Next, the data for this WIN slave	will be saved.
Close		Next Next step

- 5. Enter the description of the WIN slave in the Name field.
- 6. Configure WIN slave in the Signal tower and Blink recognition tabs.
- 7. Assign WIN slave in the selection list Assign the device to the following WIN master to a WIN master.
- 8. Click on Next.
  - $\rightarrow\,$  The configuration has been successfully completed.

(#) Activation	$\times$
wireless information network	
Configuration saved	
Configuration successfully saved. You can now remove the WIN master or WIN slave.	
How do you want to continue?	
<ul> <li>Finish configuration</li> </ul>	
O Configure a WIN master	
○ Configure a WIN slave	
Cancel Close Next Next step	

- 9. Now choose whether you wish to perform further configuration or stop configuration.
- 10. Click on Next.
- 11. Disconnect the USB connection from the WIN slave.
  - $\rightarrow\,$  The WIN slave is configured and can be fitted on the signal tower.

## 2.4 WIN slave performance

- 1. Start WERMA-WIN.
- 2. Use the USB cable to connect WIN slave performance to the PC.



 $\rightarrow$  The **Commissioning** window appears.

(#) Activation	Х
wireless information network	
Connect the WIN slave	
Please connect the WIN slave to be configured and click on Search.	
Connected WIN slave New WIN slave (MAC 00-27-C2)	
Cancel Rext Next Step	

- 3. Click on **Search** if WIN slave performance has not automatically been found. → WERMA-WIN searches for the connected WIN slave performance.
- 4. Once WIN slave performance has been recognised, click on Next.

(#) Activation	1		×
Configure t	he WIN slave		
Please con individual tie	figure your signal tower by selectin ers.	g the colours and descriptions of the	
Name WIN	I slave performance 00-27-C2	MAC-ID 00-27-C2	
Signal tower	Blink recognition		
Select pr	Select productive state		
	Description	Colour/Function	
4th tier	Counter input v	Counter input V	
3rd tier	Error ~	Red 🗸	
2nd tier	Warning ~	Yellow ~	
1st tier	Operational ~	Green V	
Assign the	device to the following WIN maste	r <please select=""> ~</please>	
By clicking	ivext, the data for this WIN slave i	wiii de saved.	
Close	zel	Next Next step	

- 5. Enter the description of the WIN slave performance in the Name field.
- 6. Configure WIN slave performance in the Signal tower and Blink recognition tabs.
- 7. Assign WIN slave performance in the selection list **Assign the device to the following WIN master** to a WIN master.
- 8. Click on Next.
  - $\rightarrow$  The configuration has been successfully completed.

(#) Activation	$\times$
wireless information network	
Configuration saved	
Configuration successfully saved. You can now remove the WIN master or WIN slave.	
How do you want to continue?	
<ul> <li>Finish configuration</li> </ul>	
O Configure a WIN master	
◯ Configure a WIN slave	
Cancel Close Next Next step	

- 9. Now choose whether you wish to perform further configuration or stop configuration.
- 10. Click on Next.
- 11. Disconnect the USB connection from the WIN slave.
  - $\rightarrow$  The WIN slave performance is configured and can be fitted on the signal tower.

## 2.5 WIN slave control

- 1. Start WERMA-WIN.
- 2. Use the USB cable to connect WIN slave control to the PC.



 $\rightarrow$  The **Commissioning** window appears.

(#) Activation	Х
wireless information network	
Connect the WIN slave	
Please connect the WIN slave to be configured and click on Search.	
Connected WIN slave New WIN slave (MAC 00-39-33) Search	
Cancel Close Next Next step	

- 3. Click on **Search** if WIN slave control has not automatically been found. → WERMA-WIN searches for the connected WIN slave control.
- 4. Once WIN slave control has been recognised, click on Next.

Activation		×	
Configure	the WIN slave		
Please con individual ti	figure your signal tower by selecti ers.	ng the colours and descriptions of the	
Name WI	N slave control 00-39-83	MAC-ID 00-39-83	
Signal tower	Blink recognition		
Select p	Select productive state		
	Description	Colour/Function	
4th tier	Tier 4 🗸 🗸 🗸	Blue ~	
3rd tier	Tier 3 🗸 🗸	Red ~	
2nd tier	Tier 2 🗸 🗸	Yellow ~	
1st tier	Tier 1 v	Green V	
Assign the device to the following WIN master By clicking Next, the data for this WIN slave will be saved.			
Can Close		Next Next step	

- 5. Enter the description of the WIN slave control in the Name field.
- 6. Configure WIN slave control in the Signal tower and Blink recognition tabs.
- 7. Assign WIN slave control in the selection list **Assign the device to the following WIN master** to a WIN master.
- 8. Click on Next.


Activation	×
Configure power on sta	te
Please define the powe-on s	state for WIN slave control.
4th tier	Off ~
3rd tier	Off ~
2nd tier	Off ~
1st tier	Off ~
	-
Cancel Close	Next Next Step

9. Configure the switching status of the individual tiers in the respective selection lists.

(i) The switching status is enabled as soon as power is supplied to the WIN slave control.

10. Click on Next.



- 11. Select the switching condition of the WIN slave control.
- 12. Click on Next.
  - $\rightarrow$  The configuration has been successfully completed.

(#) Activation	Х
wireless information network	
Configuration saved	
Configuration successfully saved. You can now remove the WIN master or WIN slave.	
How do you want to continue?	
Finish configuration	
○ Configure a WIN master	
◯ Configure a WIN slave	
Cancel Next Close Next step	

- 13. Now choose whether you wish to perform further configuration or stop configuration.
- 14. Click on Next.
- **15.** Disconnect the USB connection from the WIN slave.
  - $\rightarrow$  The WIN slave control is configured and can be fitted on the signal tower.

## 2.6 Changing transmission channel

The transmission channel of the individual systems can be changed to enable the best possible radio connection when several WERMA-WIN systems are run in parallel. Four different transmission channels are available.

WERMA recommends only operating one WIN master per transmission channel.

- 1. Click on **Activation** in the toolbar.
  - $\rightarrow$  The **Activation** window appears.

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- 2. Click on Change transmission channel.
  - $\rightarrow$  The **Activation** window appears.

(#) Activation	×
wireless information network	
Connect the WIN master	
Please connect the WIN master to be configured and click on Search.	
Configurable WIN masters	
Please start search Search	
Cancel Rext Step	

- 3. WIN master or start up WIN ethernet master again.
- 4. Select the preferred transmission channel in the Channel dropdown list during activation.



(i) WIN slave must be reconfigured if the WIN master transmission channel is changed after WIN slave has been configured.

## 2.7 Firmware update

- 1. Click on Activation in the toolbar.
  - $\rightarrow$  The **Activation** window appears.



#### 2. Click on Firmware update.



- 3. Read the information text and click on Next.
  - $\rightarrow$  The wizard for activation of a WERMA-WIN device appears.

## 

(#) Activation	×
wireless information network	
Connect the WIN master	
Please connect the WIN master to be configured and click on Search.	
Configurable WIN masters	
Please start search Search	
Cancel Rext Step	

- 4. WIN master or start up WIN ethernet master again.
- 5. During activation, confirm the firmware update message with Yes.
  - → The **Firmware update** window appears.

Firmware update	
Click 'Start update' to in Please observe that installation must process l	nstall the firmware update. t not be interrupted after the installation has started.
Cancel Close	Start update Firmware update

- 6. Click Start update.
  - $\rightarrow$  The firmware is updated.

## 2.8 Swapping WIN master and WIN ethernet master

A WIN master can be replaced by a WIN ethernet master. A wizard can be used to transmit all the WIN slaves assigned to the WIN master to the WIN ethernet master.

- 1. Click on **Activation** in the toolbar.
  - $\rightarrow$  The **Activation** window appears.



- 2. Click on Swap WIN master (USB) and WIN ethernet master.
  - $\rightarrow$  The **Activation** window appears.

(#) Activation	×
wireless information network	
Swap WIN ethernet master and WIN master (l	JSB)
The swap function enables you to integrate the WIN et installation without having to reconfigure the WIN slave both devices will be swapped.	hemet master into an existing s. The wireless parameters of
Please connect both devices to the computer via USB.	
WIN master (USB) Please start search	
WIN ethernet master Please start search	
Search	
Cancel Close	Next Next step

3. Connect WIN master and WIN ethernet master to the computer.

#### 4. Click Search.

 $\rightarrow$  WERMA-WIN searches for the connected WIN master and WIN ethernet master.



(#) Activation		×
wireless information network		
Swap WIN ethernet master	and WIN master (USB)	
The swap function enables you to installation without having to reco both devices will be swapped.	o integrate the WIN ethemet master into an existing infigure the WIN slaves. The wireless parameters of	
Please connect both devices to t	he computer via USB.	
WIN master (USB)	Production	
WIN ethemet master	Warehouse	
	Search	
Close	Next Next step	

5. Once WIN master has been recognised, click on Next.  $\rightarrow$  WIN master and WIN ethernet master are swapped.

(#) Activation	Х
wireless information network	
Configuration successful	
WIN master (USB) and WIN ethemet master configurations successfully amended.	
Vin Se0.xxx.xx Vie 2012 Se0.xxx.xx Vie 2012 Vie 2012	
Please click on 'Next' and check the network configuration of the WIN ethemet master.	
Cancel Next Close Next Step	

- 6. Once they have been successfully swapped, amend or strike through the MAC addresses printed on the type labels.
- 7. Click on Next to complete the swap and check the configuration of the WIN ethernet master.

(#) Activation	X
wireless information network	
Network configuration f	or WIN ethernet master
O Automatically obtain a	n IP address via DHCP
If you select this opti administrator can pro	on, please ensure that UDP broadcasts are permitted on your network. Your network vide further details.
Use the following stati	c IP address:
IP-Address	192 . 168 . 0 . 42 z.B. 192.168.0.42
Subnet mask	255 , 255 , 255 , 0 z.B. 255.255.255.0
Default gateway	0.0.0.
DNS-Server	0.0.0
Show advanced netwo	rk configuration
Please enter, for exa UDP broadcast is not	mple, a DNS name for the WIN ethernet master if it is in a different sub-network or possible.
The configuration data regarding the configur	a can be obtained from your network administrator. Please also refer to the notes ration in the user manual.
ILLI <u>Download manual</u>	
Cancel Close	Next Next Step

- 8. Check the configuration of the WIN ethernet master and adapt if necessary.
- 9. Click on Next to save the configuration.
  - $\rightarrow$  The swap has been successfully completed.

(#) Activation	Х
wireless information network	
Configuration saved	
Configuration successfully saved. You can now remove the WIN master or WIN slave.	
How do you want to continue?	
Finish configuration	
O Configure a WIN master	
○ Configure a WIN slave	
Cancel Close Next Step	

- **10.** Now choose whether you wish to perform further configuration or exit configuration.
- **11.** Click on **Next**.

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## 3 Program functions

WERMA-WIN is subdivided into six main modules:

- Control station
- Productivity
- Runtime
- Job
- Control
- Routing

## 3.1 Control station

The statuses and job details of up to 50 machines, systems and workplaces are displayed in an overview in the **Control station** module. The overview shows which machine is running or has a fault. This enables reaction times and downtimes to be effectively shortened.

The job details show how far the jobs have progressed on the individual machines.

The position of a machine can be easily identified by the integration of a building plan into the Control station module.



## 3.1.1 Control station display

The control station display of the WIN slave shows the status of the respective signal tower or machine and enables the WIN slaves to be configured.

### 3.1.1.1 WIN slave

The control station display of the WIN slave includes the following information:



ltem	Description
1	Enable, disable and set up status transmission
	Status transmission is disabled.
	Status transmission is enabled.
2	Enable, disable and set up status change message option
	Status change message option is disabled.
	Status change message option is enabled.
3	Edit WIN slave configuration
4	Current shift if a shift is assigned to the machine.
	<pause> is displayed if there is a pause in the shift.</pause>
5	Representation of the statuses of tiers
6	Name of the WIN slave

### 3.1.1.2 WIN slave performance with running job

The control station display of a WIN slave performance with running job includes the following information:



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ltem	Description
1	Description of the running job
2	Call up job details
3	Current quantity
4	Edit WIN slave configuration
5	Enable, disable and set up status transmission
	Status transmission is disabled.
6	Enable, disable and set up status change message option
	Status change message option is disabled.
7	Job progression
8	Representation of the statuses of tiers
9	Name of the WIN slave

Additional job details appear as soon as the cursor hovers over the job progression (7).

Machin	e 2					
JUL	345.666.522					
0			78			
	5%					1
	Job number		8720			
	Plan quantity		1	.500	Piece(s)	
	Remaining quantity		1.	422	Piece(s)	0
	Net remaining runtime	c.	16 min. 35	sec.		
	Gross remaining runtime	appro	16 min. 35	sec.		

ltem	Description
1	Hover function for additional job details
	<ul> <li>Job number: Job number of the job</li> <li>Plan quantity: Job quantity of the job</li> <li>Remaining quantity: Quantity until the end of the job</li> <li>Net remaining runtime: Time until the end of the job excluding payses</li> </ul>
	- Gross remaining runtime: Time until the end of the job including pauses

As soon as the plan quantity has been reached with a job that does not stop automatically, a corresponding message appears in the additional Job details:

Plan quantity reached					
Job number		255.555.444.889			
Plan quantity		10 Piece(s)			
Remaining quantity		0 Piece(s)			
Net remaining runtime	с.	0 sec.			
Gross remaining runtime	appro	0 sec.			

### 3.1.1.3 WIN slave performance without running job

The control station display of a WIN slave performance without running job includes the following information:



ltem	Description
1	No running job information
2	Enter new job or series job
3	Reset counter value
4	Current quantity without plan specification
5	Enable, disable and set up status transmission
	Status transmission is disabled.
6	Enable, disable and set up status change message option
	Status change message option is disabled. Status change message option is enabled.
7	Edit WIN slave configuration
8	Current shift if a shift is assigned to the machine.
	<pause> is displayed if there is a pause in the shift.</pause>
9	Representation of the statuses of tiers
10	Name of the WIN slave

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### 3.1.1.4 WIN slave control

The control station display of the WIN slave control includes the following information:



ltem	Description
1	Enable, disable and set up status transmission
	Status transmission is disabled.
	Status transmission is enabled.
2	Enable, disable and set up status change message option
	Status change message option is disabled.
	Status change message option is enabled.
3	Edit WIN slave configuration
4	Current shift if a shift is assigned to the machine.
	<pause> is displayed if there is a pause in the shift.</pause>
5	Representation of the statuses of tiers
	Tier can be switched manually
	Tier is controlled with a switching rule
6	Name of the WIN slave

## 3.1.2 Views

The **Control station main view** or a user-defined view can be used in the **Control station** module.

#### 3.1.2.1 Control station main view

The **Control station main view** gives an overview of all WIN slaves that have been configured. The **Control station main view** can be provided with a background image.

Control station Productivity Runtime Job Control Routing	- & × ^ - & ×
Control station views           Image: Control station views         View 1         View 2         View 3         View 4         More views         Add WIN Select Full screen Report / sbore views         Activation Settings Software update of the views         Monual Control station views	
Matchine 1         Error         Warning         O         O         Day shift	
Ready.	Connected to WIN master Production

### 3.1.2.2 User-defined views

Additional user-defined views can be created in addition to the Control station main view.

The user-defined views can be named as required and be provided with a background image. Different WIN slaves can be displayed in every user-defined view.



The user-defined views of the **Control station**, **Productivity** and **Runtime** modules are always identical. All view settings are applied.

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#### Naming a user-defined view

- 1. Click on **Settings** in the toolbar.  $\rightarrow$  The **Settings** window appears.
- 2. Select the Views tab.
- 3. Highlight the required view.
- 4. Click on Edit.

 $\rightarrow$  The **Edit view** window appears.

Edit view		×
Name	Assembly	
<b>?</b>	Close	OK Save

- 5. Enter the name of the view in the Name field.
- 6. Click on OK.
  - ightarrow The name of the view has been changed.
- 7. Click OK to apply the settings.

#### Adding WIN slave to a view

- 1. Call up the required view.
- 2. Click on Add WIN slave.
  - $\rightarrow$  The **Select WIN slave** window appears.

(#) Select WIN slave	×
WIN slave	
Unit 1	
Unit 2	
Unit 3	
Cancel Close	Add

- **3.** Highlight the required WIN slave.
- 4. Click on OK.
  - ightarrow The WIN slave has been added to the view.

#### Deleting WIN slave from the view

- 1. Call up the required view.
- 2. Right-click on the WIN slave to be deleted.
- 3. Select **Remove** in the pop-up menu.



- **4.** Confirm the prompt with **Yes**.
  - $\rightarrow$  The WIN slave has been deleted from the view.

### 3.1.2.3 Selecting the background image of a view

- **1.** Call up the required view.
- 2. Click on Select background.

→ The **Background image** window appears.

(#) Background image	×
Settings	
Use the following background image for View 1:	
No background image	
O Selected image	
Displayed size:	
As original	
O Zoom out / zoom in 100 ♠ %	
Cancel Close Preview Apply Cose	

- 3. Select Following option.
- 4. Click on **Browse** and open the required background image.

(i) The background image needs to be saved on the local PC.

If more than one computer is accessing a WERMA-WIN database, then the background image must be saved on a network drive.

5. Select As original option to paste the background image in its original size.

6. Select Zoom out / zoom in option to paste the background imaged scaled.

(i) Clicking on **Preview** allows a **preview** of the background image to be displayed.

7. Click on Save to paste the background image into the view.

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### 3.1.2.4 Removing the background image

- **1.** Call up the required view.
- 2. Click on Select background.
  - → The **Background image** window appears.

(*) Background image ×					
Settings					
Use the following background ima	ge for View 1:				
O No background image					
Selected image E:\floor pla	an.jpg				
Displayed size:	Displayed size:				
As original					
O Zoom out / zoom in	100 🜩 %				
Close	Preview Apply	Save Close			

- 3. Select No background image option.
- 4. Click on Save to paste the background image into the view.

- or -

- 1. Call up the required view.
- 2. Right-click in the view.

#### 3. Select Remove Background.



#### 3.1.2.5 Repositioning a WIN slave

Every WIN slave can be repositioned anywhere in the view.

1. Left-click on the name of the WIN slave and hold down the mouse key.

Unit	3	Ν	
	- Tier 4	3	
	- Tier 3		
	🎊 Tier 2		
	🍪 Tier 1		
	ſ		📑 🔏 🏷

2. Drag the WIN slave to the desired position and release the mouse key.

#### 3.1.2.6 Full-screen mode

Every view can be displayed in full screen and without the menu bar.

- 1. Call up the required view.
- 2. Click on Full screen in the menu bar.

To exit the full screen view:

1. Press ESC.

## 3.1.3 Configuration of the WERMA-WIN devices

Every WIN slave can be individually named and configured in accordance with the scope of its functions.

#### 3.1.3.1 Configuring WIN slave

1. Click on **Edit WIN slave** in the control station display of the desired WIN slave.  $\rightarrow$  The **WIN slave configuration** window appears.

(#) WIN slave	configuration			×
Name Mag	chine 3		MAC-ID 00-39-83	l
Signal tower	Blink recognition	Shift assignmen	t Design	
Select p	roductive state			
	Description	C	Colour/Function	
4th tier	Tier 4	~	Blue	~
3rd tier	Tier 3	~	Red	~ <b>_</b>
2nd tier	Tier 2	~	Yellow	~ <mark>_</mark>
1st tier	Tier 1	$\sim$	Green	~
	cel		•	OK Save

- 2. Configure the following settings:
- Name of the WIN slave
- Tiers and colours of the signal tower
- Blink recognition
- Shift assignment
- Representation of the WIN slave

3. Once configuration has been completed, click on OK to save the settings.

#### Modifying the name

Every WIN slave can be individually named.

1. Enter the name of the WIN slave in the **Name** field.

Name Unit 3



#### Modifying the tiers and colours of the signal tower

The tiers and colours can be modified on the signal tower installed. A productive state can be defined, if required, for every tier and the statuses **Off** and **Connection error**. The productive statuses are evaluated in the **Productivity** module.

1. Select the Signal tower tab.

Signal tower	Blink recognition	Shift assignment	Design	
Select pr	oductive state			
	Description	C	olour/Function	
4th tier	Material	~	Blue	~
3rd tier	Error	~	Red	~
2nd tier	Waming	~	Yellow	~
1st tier	Operational	~	Green	~

2. Define a Description and Colour/Function for the tiers of the WIN slave.

A user-defined description can be entered in the **Description** selection list. As soon as the configuration of the WIN slave has been saved, this user-defined description can be called up again using the selection list.

If a user-defined description is no longer used, it will not be displayed in the selection list any longer. Consequently, it is possible to delete misspelt or incorrectly created names (for example, material, mterial) from the selection list.

#### Selecting productive states

(i)

To define the productive states of the tiers:

- 1. Select check box Select productive state.
- 2. The Productive column to select the productive states is shown.



3. Define productive states for the tiers of the WIN slave.

The productive states are calculated in the evaluation based on the following priority:

- Non productive
- Productive
- Do not analyse
- Undefined

 $(\mathbf{i})$ 

#### Modifying blink recognition

If the signal tower installed has a blinking function, it can be evaluated using blink recognition. A productive status can be defined for every tier. The productive statuses are evaluated in the **Pro-ductivity** module.

 $(\mathbf{i})$ 

Blink recognition detects blinking signals between 15 Hz and 0.8 Hz switching frequency generated by a machine or control (e.g. via the PLC).

1. Select the Blink recognition tab.

Signal tower	Blink recognition	Shift assignmen	nt	Design	
Select p	roductive state				
	Blink recognition	ا 🍞	Des	cription	
4th tier	$\checkmark$		Tie	r 4 blinking	$\sim$
3rd tier	$\checkmark$		Tie	r 3 blinking	~
2nd tier	$\checkmark$	[	Tie	r 2 blinking	~
1st tier	$\checkmark$		Tie	r 1 blinking	~

- 2. Enable or disable the **Blink recognition** checkbox to enable or disable blink recognition for the individual tiers of the WIN slave.
- 3. Defining a **Description** for the tiers of the WIN slave.

(i) A user-defined description can be entered in the **Description** selection list. As soon as the configuration of the WIN slave has been saved, this description can be called up again using the selection list.

#### Selecting productive states

To define the productive states of the tiers:

- 1. Select check box **Select productive state**.
  - $\rightarrow$  The **Productive** column to select the productive states is shown.

Signal tower	Blink recognition	Shift assignmen	it Design		
Select p	roductive state				
1	Blink recognition	? [	escription		Productive
4th tier	$\checkmark$	-	Tier 4 blinking	~	Undefined $\checkmark$
3rd tier	$\checkmark$		Tier 3 blinking	~	Undefined $\checkmark$
2nd tier	$\checkmark$		Tier 2 blinking	~	Undefined $\checkmark$
1st tier	$\checkmark$	[	Tier 1 blinking	$\sim$	Undefined $\checkmark$

2. Define productive states for the tiers of the WIN slave.

 $(\mathbf{i})$ 

The productive states are calculated in the evaluation based on the following priority:

- Non productive
- Productive
- Do not analyse

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#### (i) – Undefined

#### Shift assignment

One or more shifts can be assigned to each WIN slave.

#### Assigning shifts

#### 1. Select the Shift assignment tab.

Signal tower	Blink recognition	Shift assignm	ent Design
Historisch	ie Zuordnungen a	nzeigen	
Calculate		Zuord	nung 🥒 Edit
Schicht		von	bis
There are n	o active shift ass	ignments for t	he WIN slave.

#### 2. Click on Edit.

(h) Assign shirts	x
Available shifts Assigned shifts	
Morning shift Day shift ( ) ( )	

- 3. Double-click on the shift or shifts to be assigned to WIN slave in the Available shifts area.
  - Shifts can only be assigned if their time periods do not overlap.

If the time period of a shift in the **Available shifts** column overlaps with the time period of a shift already assigned in the **Assigned shifts** column, then the shift is disabled in the **Available shifts** column.

4. Click on **OK** to save the settings.

#### Cancelling a shift assignment

1. Select the Shift assignment tab.

 $(\mathbf{i})$ 

Signal tower	Blink recognition	Shift assignm	ent	Design	
Historisch	ne Zuordnungen a	nzeigen			
Cabiabat		Zuord	Inung		🖋 Edit
Schieft		von	bis		
Morning shift	ft	20.11.2019	Curr	ent	
Day shift		20.11.2019	Curr	ent	

#### 2. Click on Edit.

(#) Assign shifts	×
Available shifts	Assigned shifts
	Morning shift Day shift
	>
	<
	*
	ок_
Close	Save Save

- 3. Double-click on the shift or shifts, the assignment of which is to be cancelled in the **Assigned shifts** area.
- 4. Click on **OK** to save the settings.

(i) Shifts whose assignment has been cancelled can be shown by enabling **Display historical** assignments.

#### Modifying the control station display

The control station display of the WIN slave can be modified.

#### 1. Select the **Design** tab.



- 2. Select the display version of the WIN slave.
- 3. If necessary, select the size of the control station display in the Size selection list.



(i) If you have selected a display version with **Individual light** and the signal tower displays two states, the control station display automatically switches to the **Signal tower without text** display version.

### 3.1.3.2 Configuring WIN slave control

1. Click on Edit WIN slave  $\stackrel{\text{III}}{=}$  in the control station display of the desired WIN slave control.  $\rightarrow$  The WIN slave configuration window appears.

(#) WIN slave	configuration			×
Name Mac	thine 3	м	AC-ID 00	-39-83
Signal tower	Blink recognition	Shift assignment	Design	
Select pr	oductive state			
	Description	Co	lour/Functi	on
4th tier	Tier 4	~	Blue	~
3rd tier	Tier 3	~	Red	~
2nd tier	Tier 2	~	Yellow	~ _
1st tier	Tier 1	~	Green	~
Close	<u>xel</u>			A Save

- 2. Configure the following settings:
- Name of the WIN slave control
- Tiers and colours of the signal tower
- Blink recognition
- Shift assignment
- Control station display of the WIN slave control
- 3. Once configuration has been completed, click on OK to save the settings.

#### Modifying the name

Every WIN slave control can be individually named.

1. Enter the name of the WIN slave control in the Name field.

Name Unit 3

#### Modifying the tiers and colours of the signal tower

The tiers and colours can be modified on the signal tower installed. A productive state can be defined, if required, for every tier and the statuses **Off** and **Connection error**. The productive statuses are evaluated in the **Productivity** module.

1. Select the **Signal tower** tab.

Signal tower	Blink recognition	Shift assignment Design
Select pr	oductive state	
	Description	Colour/Function
4th tier	Material	✓ Blue ✓
3rd tier	Error	~ Red ~
2nd tier	Warning	Yellow
1st tier	Operational	∽ Green ∽

- 2. Define a **Description** and **Colour/Function** for the tiers of the WIN slave control.
- (i) A user-defined description can be entered in the **Description** selection list. As soon as the configuration of the WIN slave control has been saved, this user-defined description can be called up again using the selection list.

If a user-defined description is no longer used, it will not be displayed in the selection list any longer. Consequently, it is possible to delete misspelt or incorrectly created names (for example, material, mterial) from the selection list.

#### Selecting productive states

To define the productive states of the tiers:

- 1. Select check box **Select productive state**.
- 2. The Productive column to select the productive states is shown.

Signal tower	Blink recognition	Shift assignment	Design			
Select pr	oductive state					
	Description	C	olour/Function		Productive	
4th tier	Tier 4	~	Blue	~	Undefined	$\sim$
3rd tier	Tier 3	~	Red	~	Undefined	$\sim$
2nd tier	Tier 2	~	Yellow	~	Undefined	$\sim$
1st tier	Tier 1	~	Green	~	Undefined	$\sim$
	Off				Undefined	$\sim$
	Connection error				Do not analyse	$\sim$

3. Define productive states for the tiers of the WIN slave control.

The productive states are calculated in the evaluation based on the following priority:

- Non productive
- Productive
- Do not analyse
- Undefined

#### Modifying blink recognition

Blink recognition is enabled by default for all tiers with the WIN slave control. Blink recognition can be used with the **manual control** function or with the definition of a switching rule.

A productive status can be defined for every tier. The productive states are evaluated in the **Pro-ductivity** module.

 $(\mathbf{i})$ 



(j) The blink signal is transmitted to the signal tower and the terminals at a switching frequency of 1 Hz.

#### 1. Select the Blink recognition tab.

Signal tower	Blink recognition	Shift assignment	t Design	
Select p	roductive state			
1	Blink recognition	🥐 D	escription	
4th tier	$\checkmark$	Т	ìer 4 blinking	$\sim$
3rd tier	$\checkmark$	Т	ier 3 blinking	$\sim$
2nd tier	$\checkmark$	Т	ìer 2 blinking	$\sim$
1st tier	$\checkmark$	Т	ìer 1 blinking	$\sim$

- 2. Enable or disable the **Blink recognition** checkbox to enable or disable blink recognition for the individual tiers of the WIN slave control.
- 3. Defining a **Description** for the tiers of the WIN slave control.
- (i) A user-defined description can be entered in the **Description** selection list. As soon as the configuration of the WIN slave control has been saved, this description can be called up again using the selection list.

#### Selecting productive states

To define the productive states of the tiers:

- 1. Select check box Select productive state.
  - $\rightarrow$  The **Productive** column to select the productive states is shown.



2. Select productive states for the tiers of the WIN slave control.

(i)

The productive states are calculated in the evaluation based on the following priority:

- Non productive
- Productive
- Do not analyse
- Undefined

#### Shift assignment

One or more shifts can be assigned to each WIN slave control.

#### Assigning shifts

#### 1. Select the **Shift assignment** tab.

#### 2. Click on Edit.

(#) Assign shifts	×
Available shifts       Available shifts       Morning shift       Day shift	Assigned shifts
Cancel Close	OK Save

3. Double-click on the shift or shifts to be assigned to WIN slave control in the Available shifts area.

(i) Shifts can only be assigned if their time periods do not overlap.

If the time period of a shift in the **Available shifts** column overlaps with the time period of a shift already assigned in the **Assigned shifts** column, then the shift is disabled in the **Available shifts** column.

4. Click on **OK** to save the settings.

#### Cancelling a shift assignment

1. Select the **Shift assignment** tab.

Signal tower Blink recognit	tion Shift assignm	ment Design	
Historische Zuordnunge	n anzeigen		
C-1:-1-1	Zuor	dnung	🖋 Edit
Schicht	von	bis	
Morning shift	20.11.2019	Current	
Day shift	20.11.2019	Current	



#### 2. Click on Edit.

(#) Assign shifts	x
Available shifts	Assigned shifts
	Morning shift Day shift
	>
	<
	•
Cancel Close	<b>OK</b> Save

- 3. Double-click on the shift or shifts, the assignment of which is to be cancelled in the Assigned shifts area.
- 4. Click on OK to save the settings.

Shifts whose assignment has been cancelled can be shown by enabling **Display historical** assignments.

#### Modifying the control station display

The control station display of the WIN slave control can be modified.

(i) The *manual control* function is only possible in the **Signal tower with text** display version.

#### 1. Select the **Design** tab.

(i)



- 2. Select the display version of the WIN slave control.
- 3. If necessary, select the size of the control station display in the Size selection list.

(i) If you have selected a display version with **Individual light** and the signal tower displays two

i states, the control station display automatically switches to the **Signal tower without text** display version.

### 3.1.3.3 Configuring WIN slave performance

1. Click on Edit WIN slave  $\stackrel{\text{res}}{=}$  in the control station display of the desired WIN slave performance.  $\rightarrow$  The WIN slave configuration window appears.

(W) WIN slave	configuration						×
VID THIT SHARE	comgaration						
Name Mac	chine 2		VAC-ID 00-	27-C2			
Signal tower	Blink recognition	Shift assignment	t Design				
Select pr	roductive state						
	Description	C	olour/Functi	on		Productive	
4th tier	Counter input	~ [	Counter i	nput ~	Л	Undefined	$\sim$
3rd tier	Job input	~ [	Job input	~		Undefined	$\sim$
2nd tier	Warning	~	Yellow	~	· 📕	Productive	~
1st tier	Operational	~	Green	~		Productive	~
	Off					Non productive	~
	Connection error					Do not analyse	~
	el					<b></b>	DK Save

- 2. Configure the following settings:
- Name of the WIN slave performance
- Tiers and colours of the signal tower
- Blink recognition
- Shift assignment
- Control station display of the WIN slave performance
- 3. Once configuration has been completed, click on OK to save the settings.

#### Modifying the name

Every WIN slave performance can be individually named.

1. Enter the name of the WIN slave performance in the Name field.

Name Unit 3

#### Modifying the tiers and colours of the signal tower

The tiers and colours can be modified on the signal tower installed. A productive state can be defined, if required, for every tier and the statuses **Off** and **Connection error**. The productive statuses are evaluated in the **Productivity** module.

1. Select the **Signal tower** tab.

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Signal tower	Blink recognition	Shift assignment	Design	
Select pr	oductive state			
	Description	Co	lour/Function	
4th tier	Counter input	~	Counter input	~ л
3rd tier	Error	~	Red	~
2nd tier	Warning	~	Yellow	~
1st tier	Operational	~	Green	~

- 2. Define a **Description** and **Colour/Function** for the tiers of the WIN slave.
- (i) A user-defined description can be entered in the **Description** selection list. As soon as the configuration of the WIN slave has been saved, this user-defined description can be called up again using the selection list.

If a user-defined description is no longer used, it will not be displayed in the selection list any longer. Consequently, it is possible to delete misspelt or incorrectly created names (for example, material, mterial) from the selection list.

(i) The **Counter input** and **Job input** functions can each only be defined for one tier.

(i) The maximum counter frequency of the counter input is 10 Hz (> 50 ms 24 V - > 50 ms 0 V).



(i) The **Counter input** function was assigned to a tier during activation of the WIN slave performance. If the **Counter input** function is to be assigned to another tier, you must connect the WIN slave performance to the PC using the USB cable to transfer the modified configuration.

(i) The pulse at the tier configured for the **Job input** function must be applied for at least five seconds. The first pulse starts the job and the second pulse completes the job. If you have already created another job as **active waiting**, it can be started with a further pulse.

The pulse can also be applied for the whole duration of the job. Then the pulse must be inactive for at least five seconds so that a further pulse ends the job.



#### Selecting productive states

To define the productive states of the tiers:

1. Select check box Select productive state.

2. The Productive column to select the productive states is shown.

Signal tower	Blink recognition	Shift assignment	Design				
Select pr	oductive state						
	Description	Co	olour/Function			Productive	
4th tier	Counter input	~	Counter input	$\sim$	л	Undefined	$\sim$
3rd tier	Error	~	Red	$\sim$		Undefined	~
2nd tier	Warning	~	Yellow	$\sim$		Undefined	~
1st tier	Operational	~	Green	$\sim$		Undefined	~
	Off					Undefined	~
	Connection error					Do not analyse	$\sim$

3. Define productive states for the tiers of the WIN slave performance.

The productive states are calculated in the evaluation based on the following priority:

- Non productive
- Productive

(i)

(i)

- Do not analyse
- Undefined

#### Modifying blink recognition

If the signal tower installed has a blinking function, it can be evaluated using blink recognition. A productive status can be defined for every tier. The productive statuses are evaluated in the **Pro-ductivity** module.

Blink recognition detects blinking signals between 15 Hz and 0.8 Hz switching frequency generated by a machine or control (e.g. via the PLC).

1. Select the Blink recognition tab.

Signal tower	Blink recognition	Shift assignme	nt	Design	
Select j	productive state				
	Blink recognition	?	Des	scription	
4th tier	$\checkmark$		Tie	r 4 blinking	$\sim$
3rd tier	$\checkmark$		Tie	er 3 blinking	$\sim$
2nd tier	$\checkmark$		Tie	r 2 blinking	$\sim$
1st tier	$\checkmark$		Tie	r 1 blinking	$\sim$

- 2. Enable or disable the **Blink recognition** checkbox to enable or disable blink recognition for the individual tiers of the WIN slave performance.
- 3. Defining a **Description** for the tiers of the WIN slave performance.
- (i) A user-defined description can be entered in the **Description** selection list. As soon as the configuration of the WIN slave performance has been saved, this description can be called up again using the selection list.



#### Selecting productive states

To define the productive states of the tiers:

1. Select check box Select productive state.

 $\rightarrow$  The **Productive** column to select the productive states is shown.

Signal tower	Blink recognition	Shift assignment	Design			
Select pro	oductive state					
B	link recognition	🕐 De	scription		Productive	
4th tier	$\checkmark$	Tie	er 4 blinking	~	Undefined	$\sim$
3rd tier	$\checkmark$	Tie	er 3 blinking	~	Undefined	~
2nd tier	$\checkmark$	Tie	er 2 blinking	~	Undefined	~
1st tier	$\checkmark$	Tie	er 1 blinking	$\sim$	Undefined	~

2. Define productive states for the tiers of the WIN slave performance.



The productive states are calculated in the evaluation based on the following priority:

- Non productive
- Productive
- Do not analyse
- Undefined

#### Shift assignment

One or more shifts can be assigned to each WIN slave performance.

#### **Assigning shifts**

1. Select the Shift assignment tab.



2. Click on Edit.

(#) Assign shifts	×
Available shifts Morning shift Day shift	Assigned shifts
	> < «
Cancel Close	OK Save

3. Double-click on the shift or shifts to be assigned to WIN slave performance in the Available shifts area.

(i) Shifts can only be assigned if their time periods do not overlap.

If the time period of a shift in the **Available shifts** column overlaps with the time period of a shift already assigned in the **Assigned shifts** column, then the shift is disabled in the **Available shifts** column.

4. Click on **OK** to save the settings.

#### Cancelling a shift assignment

1. Select the Shift assignment tab.



2. Click on Edit.



(#) Assign shifts		×
Available shifts	Assigned shifts	
Available shirts	Assigned shirts       Morning shift       Day shift       Image: Construction of the shift of	
Close	OK Save	-

- **3.** Double-click on the shift or shifts, the assignment of which is to be cancelled in the **Assigned shifts** area.
- 4. Click on OK to save the settings.

(i) Shifts whose assignment has been cancelled can be shown by enabling **Display historical** assignments.

#### Modifying the control station display

The control station display of the WIN slave performance can be modified.

1. Select the **Design** tab.



- 2. Select the display version of the WIN slave performance.
- 3. If necessary, select the size of the control station display in the Size selection list.

(i) If you have selected a display version with **Individual light** and the signal tower displays two states, the control station display automatically switches to the **Signal tower without text** display version.

## 3.1.4 Resetting the quantity counter

Quantities can be counted without or with job with every WIN slave performance. The counter can only be reset when counting without a job.

- 1. In the control station display of the WIN slave performance, click on **Reset counter** 2.
- 2. Confirm the prompt with Yes to reset the quantity counter.
  - ightarrow The counter has been reset.

## 3.1.5 Manual control

Every WIN slave control can be switched or controlled manually or via a Switching rule.

- 1. Click on **Switch** beside the tier to be switched.
  - $\rightarrow$  The menu to select the switching status appears.

0	Off
Ι	On
лл	Blinking

- 2. Select the switching status of the tier.
  - $\rightarrow$  The tier of the signal tower is switched and displayed in the control station display.

i	Tiers that can be controlled with a switching rule ( $^{\textcircled{\column}}$ ) cannot be manually controlled.
(j)	The <b>Blinking</b> status is only available if the <i>Blink recognition</i> of the tier is enabled.
i	The <b>Switch</b> Symbol can flicker during transmission of the switching status. As soon as the transmission of the WIN slave control has been confirmed, the symbol changes to a permanent representation.

## 3.1.6 Status change message

If the status change message of a WIN slave is enabled, a pop-up window appears when the status of the signal tower is changed. This allows you to minimise the WERMA-WIN program window without neglecting to monitor the machines.

It is possible for define for each tier whether and when a pop-up window appears (e.g. Tier on, Tier off, Connection error).

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(#) 1 Notices of change	×
On 29.11.2018 at 15:25	
Machine 1	
Pause Operational	
Close all Cancel	

- 1. Click on **Status change message option deactivated** in the control station display of the WIN slave.
  - $\rightarrow$  The **Status Change Message** window appears.



2. Define for each tier in the **Tier status** selection menu whether and at what status a pop-up window is to be displayed.



(i)

A status change message can be generated for a tier with the function **Counter input** with the WIN slave performance.

- 3. Click on OK to save the settings.
- 4. Define the Time delay.

(i) The pop-up window only appears when the new status is unchanged during the defined **Time delay**. No pop-up window appears if the status has changed again within the **Time delay**.

#### 5. Click on **OK** to save the settings.

 $\rightarrow$  The status change message has been enabled.

The Status change message option activated symbol appears in the control station display of WIN slave.

(i) An individual sound can be defined under Settings for the status change message.

## 3.1.7 Status transmission

If the status transmission of a WIN slave is active, an e-mail is sent to one or more recipients when the status of the signal tower changes. This enables WERMA-WIN to be run on an unattended PC or server without neglecting to monitor the machines.

It is possible to define for each tier whether and when a pop-up window appears (e.g. Tier on, Tier off, Connection error).

#### 3.1.7.1 WIN slave and WIN slave control

1. In the control station display of the WIN slave or WIN slave control, click on Status transmission

- deactivated 🏸
- $\rightarrow$  The **Status transmission** window appears.

Status Trai ne defined t	nsmission is enable ier status changes. E-Mail recipient	d for WIN slave, the Status is transmitte	ed when
Tier sta Transi tiers:	ntus mit the status whe	n a change occurs on the following	
		Tier status	
	4th tier	<status not="" selected=""></status>	~
	3rd tier	<status not="" selected=""></status>	~
	2nd tier	<status not="" selected=""></status>	~
	1st tier	<status not="" selected=""></status>	~
		Time delay 0 🖨 sec. 🧊	D

- 2. Select the General tab.
- 3. Define for each tier in the **Tier status** selection menu whether and at what status a pop-up window is to be displayed.


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#### 4. Define the Time delay.

 $(\mathbf{i})$ 

The e-mail is only sent if the new status is unchanged during the defined **Time delay**. No email is sent if the status has changed again within the **Time delay**.

#### 5. Select the E-mail recipient tab.

6. Select the e-mail recipient.

Option	Description
As specified in Settings	Send an e-mail to the recipient specified under
	Settings.
Selected recipients	Send an e-mail to the specified recipient(s).
	Multiple recipients are separated by a semicolon (;).
Define a recipient per tier	Send an e-mail to the specified recipient(s) per
	tier.
	Multiple recipients are separated by a semicolon
	(;).

7. Click on **OK** to save the settings.

- $\rightarrow$  Status transmission has been enabled.
- → In the control station display of the WIN slave or WIN slave control, the **Status transmission activated** vated symbol appears.

## 3.1.7.2 WIN slave performance

1. In the control station display of the WIN slave performance, click on Status transmission deac-

tivated 🌾

 $\rightarrow$  The **Status transmission** window appears.

🛞 Status tr	ansmission		×			
If Status Trar the defined ti	nsmission is enable er status or Job sta	d for WIN slave, the Status is transmitted when tus changes.	1			
General	E-Mail recipient		_			
-Tier sta	tus					
Transn tiers:	nit the status whe	n a change occurs on the following				
	1	Tier status				
л	4th tier	<count input=""></count>				
	3rd tier	<status not="" selected=""></status>				
	2nd tier	<status not="" selected=""></status>				
	1st tier	<status not="" selected=""></status>				
-		Time delay 0 🛊 sec. ?				
Job sta	tus					
Transn quanti	nit the status whe ty has been reach	n a certain job progression or ed				
🗌 At	a job progression	of 100 🖕 %				
At a quantity of Piece						
	ose	Save				

#### 2. Select the General tab.

3. Define for each tier in the **Tier status** selection menu whether and at what status a pop-up window is to be displayed.



#### 4. Define the Time delay.

(i) The e-mail is only sent if the new status is unchanged during the defined **Time delay**. No email is sent if the status has changed again within the **Time delay**.

5. In the Job status area, define whether an e-mail is also to be sent if a certain job progression is reached or when a certain quantity is reached.

#### 6. Select the E-Mail recipient tab.

7. Select the e-mail recipient.

Option	Description
As specified in Settings	Send an e-mail to the recipient specified under
Selected recipients	Send an e-mail to the specified recipient(s). Multiple recipients are separated by a semicolon
Define a recipient per tier	Send an e-mail to the specified recipient(s) per tier.



Option	Description
	Multiple recipients are separated by a semicolon
	(;).

- 8. Click on **OK** to save the settings.
  - $\rightarrow$  Status transmission has been enabled.
  - → In the control station display of WIN slave performance, the **Status transmission activated** Symbol appears.

## 3.1.8 Report

A report can be generated for each view. In the **Control station main view**, the report takes into account all WIN slaves. In the user-defined views, the report takes into account the WIN slaves contained in the respective view.

- 1. Call up the required view.
- 2. Click on Report / Export in the toolbar.
   → The Generate report window appears.

(#) Generate report	×
Please select the report to be shown:	
Data selection	
Tabular display of current statuses     Overview of the current statuses	
<ul> <li>Tabular display of currently running jobs</li> <li>Overview of the actual quantities</li> </ul>	
Cancel Close	Ok Generate

- 3. Select the required report in the **Data selection** area.
- 4. Click on OK.
  - $\rightarrow$  The report is generated.
  - $\rightarrow$  The Print preview for the report appears.

# 3.2 Productivity

The capacity of the machines can be analysed for any time intervals in the **Productivity** module. Work shifts, errors and downtimes can therefore be detected retrospectively, for instance for the last working day or for defined time periods.



## 3.2.1 Views

The **Productivity main view** or a user-defined view can be used in the **Productivity** module.

## 3.2.1.1 Productivity main view

The **Productivity main view** gives an overview of all WIN slaves that have been configured. The **Productivity main view** can be provided with a background image.

	Control station	Deceluctivity	Runtime 14	h Capital	P	roductivity - all WIN sla	aves - WERMA Signalte	chnik GmbH + Co. K	G				- 8 ×
Productivity main view	View 1	View 2 Vi	a 4 ew 3 View 4	More	Show Combined Ar Productivity	dd WIN slave background	Full screen Report Export	Activation Se	ettings Software update	Manual Co	ontact Info		
Time interval Shift	do not take	> e into account br	eak ti V	of 08.11 Until 08.11	.2018 ¥ 12:00:00 .2018 ¥ 15:00:00	Contraction of the second seco	r values in % 'Do not evaluate'	Analy:	se only job producti se productive state:	r ivity s	Bar chart     Pie chart	*	
Machine 1 100 50 0	-		0.34 0.31 1.51 0.34 0.00 0 -	ne 2	<b>22,9 %</b> Actual Plan 2,2 s 1	Machine 3 100 50 0 0 0		1:51					^
									1				
< Ready.							^				Connected to W	IN master Production	>

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## 3.2.1.2 User-defined views

Additional user-defined views can be created in addition to the Productivity main view.

The user-defined views can be named as required and be provided with a background image. Different WIN slaves can be displayed in every user-defined view.



The user-defined views of the **Control station**, **Productivity** and **Runtime** modules are always identical. All view settings are applied.

#### Adding WIN slave to a view

1. Call up the required view.

(i)

2. Click on Add WIN slave.

 $\rightarrow$  The **Select WIN slave** window appears.

(#) Select WIN slave	×
WIN slave	
Unit 1	
Unit 2	
Unit 3	
Cancel Close	Add

**3.** Highlight the required WIN slave.

- 4. Click on OK.
  - $\rightarrow$  The WIN slave has been added to the view.

#### Deleting WIN slave from the view

- 1. Call up the required view.
- 2. Right-click on the WIN slave to be deleted.

#### 3. Select **Remove** in the pop-up menu.



- 4. Confirm the prompt with Yes.
  - $\rightarrow$  The WIN slave has been deleted from the view.

#### Selecting the background image of a view

- 1. Call up the required view.
- 2. Click on Select background.
  - → The **Background image** window appears.

🛞 Background image	×
Settings	
Use the following background image for View 1:	
No background image	
O Selected image	
Displayed size:	
O Zoom out / zoom in 100 € %	
Cancel Close Preview Apply Cose	

- 3. Select Following option.
- 4. Click on **Browse** and open the required background image.

(i) The background image needs to be saved on the local PC.

If more than one computer is accessing a WERMA-WIN database, then the background image must be saved on a network drive.

- 5. Select As original option to paste the background image in its original size.
- 6. Select Zoom out / zoom in option to paste the background imaged scaled.



(i) Clicking on **Preview** allows a **preview** of the background image to be displayed.

7. Click on Save to paste the background image into the view.

#### Repositioning a WIN slave

Every WIN slave can be repositioned anywhere in the view.

1. Left-click on the name of the WIN slave and hold down the mouse key.

Maschine 1		
100 -	NF	0:34
-		0:31
50 -		0:34
		0:00
0		
2		

2. Drag the WIN slave to the desired position and release the mouse key.

#### 3.2.1.3 Full-screen mode

Every view can be displayed in full screen and without the menu bar.

- 1. Call up the required view.
- 2. Click on Full screen in the menu bar.

To exit the full screen view:

1. Press ESC.

## 3.2.2 Productivity view

The diagrams in the productivity display show the individual statuses of the WIN slaves. The diagrams can be shown as pie charts or as bar charts.



Machine 2	
	0:05 0:04 0:12 0:00 0:12 0:04 0:00 0:00
<i>"</i>	~

The displayed statuses of the WIN slaves correspond to the settings entered in the **Control station module**. The **Off** and **Connection error** statuses are also displayed. Blink recognition is shown by hatched areas in the diagram.

(i)

The bars in the bar chart are always shown in the same order.

Off and Connection error statuses occur in the following cases:

Status	Description
Off	Signal tower is off but is supplied with power.
Connection error	No radio connection between WIN slave and WIN master.
	WERMA WIN 4 Server Service and WERMA WIN 4 Connector Service have not started.
	PC with WERMA-WIN database (Server PC) is switched off.
	Microsoft SQL server cannot be accessed and there is no connection to the WERMA-WIN database.
	There is no power supply to the WIN slave.
	WIN master is not connected to the PC.

(i)

A yellow warning triangle Å indicates a signal overlap.

## 3.2.2.1 Modifying the productivity display

The time interval of the values displayed can be modified in the options bar.

Time interval	<manually></manually>	of	08.11.2018 ¥ 12:00:00	Show values in %	Analyse only job productivity	Bar chart	
Shift	do not take into account break ti \vee	Until	08.11.2018 ¥ 15:00:00	Hide 'Do not evaluate'	Analyse productive states	O Pie chart	

The values displayed can be further filtered and modified using additional options. The following options are available:

Option	Description
Time interval	Select pre-set time interval or select <b><manually></manually></b> and enter the time interval in the <b>From</b> and <b>Until</b> fields.
Shift	Enter a certain shift and influence of pause times on the calculation.
	<ul> <li>Do not take into account pause times: Ignore shifts entered in the calculation.</li> </ul>
	<ul> <li>Only productive times: Take shift model into account in the calculation.</li> </ul>
	<ul> <li>Single shift: Only calculate the selected shift as the time period. All times outside of the shift are cal- culated as pause times.</li> </ul>
Show values as a %	Display runtime as a percentage.
Hide 'Do not analyse'	Ignore all statuses defined as <b>Do not analyse</b> in the WIN slave configuration and do not display them in the diagram.
Analyse only job productivity	Ignore with all WIN slave performance times without job.
Analyse productive states	Display all statuses defined as <b>Productive</b> and/or <b>Non</b>
	<b>productive</b> in the WIN slave configuration in the dia-
	gram.
Bar chart	Represent productivity in a Bar chart.



Option	Description
Pie chart	Represent productivity in a Pie chart.
<b>3</b>	Update productivity display manually. Enable automatic update and define the update inter-
	val.

To modify the productivity display:

- 1. Select the pre-set time interval in the **Time interval** selection list or enter another time interval in the **From** and **Until** fields.
- 2. Enable or disable additional options if necessary.
- 3. Click on Update.

## 3.2.2.2 Updating the productivity display

The productivity display can be updated manually or automatically.

#### Updating the productivity display manually

1. Click on **Update** in the options bar.

#### Updating the productivity display automatically

- 1. Click on Update in the options bar.
- 2. Enable Auto update.
- 3. Enter the update interval in the after field.



## 3.2.2.3 Zoom in or zoom out of the productivity display

- 1. Click on the magnifying glass  $\checkmark$  in the productivity display.
  - $\rightarrow$  You zoom into or zoom out of the productivity display.
  - $\rightarrow$  The descriptions of the tiers of the signal tower are also displayed in the zoomed in display.



## 3.2.2.4 Representation versions WIN slave and WIN slave control

The productive statuses can be represented as a bar chart or pie chart with WIN slave and WIN slave control.

Bar chart	Pie chart
Machine 2 100 50 0 0 0 0 0 0 0 0 0 0 0 0 0	Machine 2

## Switching between pie chart and bar chart

1. You can enable or disable Calculate productive statuses in the options bar.



2. Click on **Update** in the options bar.

#### 3.2.2.5 Display versions WIN slave performance

It is possible to choose between the following display versions with WIN slave performance. Productive statuses can also be displayed as a pie chart.

Display version	Representation	
Status	Machine 2 100 50 0 0 0 0 0 0 0 0 0 0 0 0 0	
Productivity	Machine 2 22,9 % Actual 2,2 s Plan 1,2 s *	
Combined	Machine 2 100 50 0 Actual Plan 2,2 s 1,2 s V	
Productive statuses	Machine 2 100 50 0 0 0 0 0 0 0 0 0 0 0 0 0	Machine 2

#### Selecting the representation version

- 1. Click on the arrow symbol  $\checkmark$ .
  - $\rightarrow$  The menu to select the representation version appears.

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- 2. Select the representation version.
- 3. Click on Update in the options bar.

#### Switching between pie chart and bar chart

1. You can enable or disable Calculate productive statuses in the options bar.

Analyse only job productivity	O Bar chart	
✓ Analyse productive states	Pie chart	

2. Click on **Update** in the options bar.

## 3.2.2.6 Combined productivity

Combined productivity can be shown in each view.



If the combined productivity is shown as a bar chart, the bars are not shown in the defined order but rather sorted according to the height of the bars.

(i)

100 -		Off (2:34) Tier 1 (1:51)
80 -		Error (1:00) Pause (0:31) Job input (0:04) Connection error (0:
60		Tier 1 blinking (0:00) Tier 2 (0:00) Other (0:00)
40		
20		
0		

#### Showing combined productivity

1. Click on the arrow 🔨 at the end of the view.

- or -

2. Click on Show combined productivity in the toolbar.

#### Hiding combined productivity

1. Click on the arrow v above combined productivity.

- or -

2. Click on Hide combined productivity in the toolbar.

## 3.2.3 Report

A report can be generated for each view. In the **Productivity main view**, the report takes into account all WIN slaves. In the user-defined views, the report takes into account the WIN slaves contained in the respective view.



The report is generated with the times and settings defined in the Options bar.

- 1. Call up the required view.
- 2. Click on Report / Export in the toolbar.
   → The Generate report window appears.

🛞 Generate report	×
Please select the report to be shown:	
Data selection	
Tabular display of data     Optimised for further processing of the data	
<ul> <li>Graphical display of the data</li> <li>Optimised for printing</li> </ul>	
Cancel Close	Ok Generate



- 3. Select Tabular display of data or Graphical display of data option.
- 4. Click on OK.
  - $\rightarrow$  The report is generated.
  - $\rightarrow$  The Print preview for the report appears.

# 3.3 Runtime

The **Runtime** module shows an overview of the operation and downtimes of the machines monitored. This quickly detects patterns of downtime with machines, giving you improved transparency in the production process. This forms the basis for improving the efficiency of the machines monitored.



## 3.3.1 Views

The Runtime main view or a user-defined view can be used in the Runtime module.

## 3.3.1.1 Runtime main view

The data of all WIN slaves already configured can be displayed in the **Runtime main view**.



## 3.3.1.2 User-defined views

The user-defined views defined in the **Control station module** or **Productivity module** are available in addition to the **Runtime main view**. The user-defined views show an overview of the WIN slaves assigned in each case.



The user-defined views of the **Control station**, **Productivity** and **Runtime** modules are always identical. All view settings are applied.

(i)



## 3.3.1.3 Comparing multiple machines

Additional windows can be opened and arranged as required in the **Runtime main view** to compare multiple machines.

1. In the toolbar, expand Runtime main view by clicking on the arrow -.



#### 2. Select New window.

 $\rightarrow$  A further window appears and can be arranged as required.

## 3.3.2 Runtime display

The runtime display shows a separate diagram for each WIN slave.

## 3.3.2.1 WIN slave and WIN slave control

The WIN slave and WIN slave control runtime display includes the following information:



Item	Description
1	Design of statuses in the selected time interval
2	Note field
3	Quantity of statuses in the selected time interval
	The blink recognition signal is displayed as a shaded area in the colour of the respective
	tier.

Following a power loss, the **Power loss**  $bilde{L}$  warning symbol is displayed as soon as power is

(i)

(i) applied again to the WIN slave or WIN slave control. There may be incorrect data during the preceding time interval.

## 3.3.2.2 WIN slave performance





ltem	Description
1	Status display/quantity display for the selected time interval depending on the display ver-
	sion
2	Note field
3	Job field
4	Quantity of statuses in the selected time interval
	The blink recognition signal is displayed as a shaded area in the colour of the respective
	tier.

(i) Following a power loss, the **Power loss** A warning symbol is displayed as soon as power is supplied again to the WIN slave performance. There may be incorrect data during the preceding time interval.

## 3.3.2.3 Modifying the runtime display

The time interval of the values displayed can be modified in the Options bar. Additional information can be shown or hidden in the Display options.

The buttons in the Navigation bar can be used to scroll through and zoom into the diagram displayed.

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#### **Options bar**

Time interval	Last hour	~	of	03.02.2020	v 13:24:32	<b>^</b>	<b>A</b>
Shift	<no selection=""></no>	$\sim$	Until	03.02.2020	✓ 14:26:32	Ŷ	* ا

The values displayed can be further filtered and modified using additional options. The following options are available:

Option	Description
Time interval	Select pre-set time interval or select <b><manually></manually></b> and enter the time interval in the <b>From</b> and <b>Until</b> fields.
Shift	Enter a certain shift and influence of pause times on the calculation.
	<ul> <li>Do not take into account pause times: Ignore shifts entered in the calculation.</li> </ul>
	in the calculation.
	<ul> <li>Single shift: Only calculate the selected shift as the time period. All times outside of the shift are cal- culated as pause times.</li> </ul>
<u> </u>	Update productivity display manually.
	Enable automatic update and define the update interval.

To modify the runtime display:

- 1. Select the pre-set time interval in the **Time interval** selection list or enter another time interval in the **From** and **Until** fields.
- 2. If necessary, enable or disable additional options in the Display options.
- 3. Click on Update.

#### Showing or hiding the options bar

To hide the options bar and zoom into the representation of the diagram:

- 1. Click on **Display options** in the menu bar.
- 2. Click on Hide filter.

To show the options bar again:

- 1. Click on **Display options** in the menu bar.
- 2. Click on Show filter.

#### **Display options**



You can show or hide different information in a runtime diagram in the Display options, regardless of the WIN slave displayed. The following options are available:

Option	Description
	Show or hide options bar.
Hide filters	
Display job volume (plan)	Display job volume in a diagram.
Display job curve (plan)	Display plan volume corresponding to the cycle time
	of the job in a diagram.
Display modified job curve (plan)	Display actual volume in a diagram. The pause times
	and volumes from other shifts will be taken into
	account.
Display automatic job end	Display job end in a diagram.
Label pause markings	Mark pause times in the diagram.
Display shift names	Display the names of the shifts in the diagram.

#### Example:



Item	Description
1	Shift name
2	Job volume (plan)
3	Pause
4	Job curve (plan)
5	Modified job curve
6	Quantity (actual)

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#### Navigation bar

Next / back     Com out / Zoom out / Zoom in       Change time interval     Change time interval								
Button	Function							
4	Show earlier time interval.							
	Show later time interval.							
<b>C</b>	Zoom out of diagram and zoom into time interval displayed.							
$\sim$	Zoom into diagram and zoom out of time interval displayed.							

## 3.3.2.4 Updating the runtime display

The runtime display can be updated manually or automatically.

#### Updating the runtime display manually

1. Click on **Update** in the options bar.

#### Updating the runtime display automatically

- 1. Click on **Update** in the options bar.
- 2. Enable Auto update.
- 3. Enter the update interval in the after field.



# 3.3.3 Notes/Fault conditions

Different notes or fault conditions can be entered for each WIN slave in the **Runtime** module.

## 3.3.3.1 Creating a note/fault condition

Notes or fault conditions can be created for defined time intervals.

The time interval of a note or fault condition can be defined in two ways:

- Manually defining the time interval of the note or fault condition
- Defining the time interval of the note or fault condition based on the duration of a status

#### Manually defining the time interval of the note or fault condition

- 1. Double-click in the comment field in the WIN slave diagram.  $\rightarrow$  The **Edit note** window appears.
- 2. Enter the time interval in the Start and End fields.

#### Defining the time interval of the note or fault condition based on the duration of a status

- 1. Click twice on a status in the WIN slave diagram.
  - $\rightarrow$  The **Edit note** window appears.
- () If **Use touch interface to assign fault conditions** has been enabled under Settings, the display option for **Touch interface** appears instead of the **Edit note** window. A defined fault condition can only be selected in this case. It is not possible to create a note.



#### Editing a note/fault condition

(#) Create note						×
WIN slave	Unit 3					
Fault condition	<no reas<="" specific="" td=""><td>son&gt;</td><td></td><td></td><td></td><td><math>\sim</math></td></no>	son>				$\sim$
Colour		Start	09/08/2017	$\sim$	14:35:00	-
Note		End	09/08/2017	$\sim$	14:47:10	\$
I						$\sim$
						~
Close					Save	

1. Select Fault condition in the selection list.



Fault conditions must have previously been defined under Settings. The defined fault conditions can then be selected in the **Fault condition** selection list.

- 2. Select the Colour.
- 3. Modify the time interval in the Start and End fields.
- 4. Enter a note in the Note field.
- 5. Click on OK to save the note or fault condition.

#### 3.3.3.2 Displaying a note/fault condition

- **1.** Place the cursor on the note.
  - $\rightarrow$  The note is displayed in an information window.



#### 3.3.3.3 Editing a note/fault condition

- 1. Right-click on the required note.
- 2. Select Edit in the pop-up menu.

#### - or -

1. Double-click on the required note.  $\rightarrow$  The **Edit note** window appears.

(#) Edit note					×
WIN slave	Unit 3				
Fault condition	Support				$\sim$
Colour		Start	09/08/2017	~ 14:53:00	-
Note		End	09/08/2017	~ 15:02:40	-
I					^
					~
Close				Save	

- 2. Modify the note as required.
- 3. Click on OK to save all changes.

#### 3.3.3.4 Deleting a note/fault condition

- **1.** Right-click on the note to be deleted.
- 2. Select Delete in the pop-up menu.

- 3. Confirm the prompt with Yes.
  - $\rightarrow$  The note has been deleted.

#### 3.3.3.5 Limiting the view to the time interval of a note/fault condition

- 1. Right-click on the required note.
- 2. Check Select time interval in the pop-up menu.
   → The view zooms in or out of the time interval of the note.

## 3.3.4 Job

If a job has been created in the Job module for a WIN slave performance, this appears in the diagram.

## 3.3.4.1 Displaying jobs

- 1. Place the cursor on the job or the associated line.
  - $\rightarrow$  The job information is displayed in an information window.



## 3.3.4.2 Limiting the view to the time interval of a job

1. Right-click on the job.



2. Check Select time interval in the pop-up menu.
 → The view zooms in or out of the time interval of the job.

## 3.3.4.3 Displaying job information

1. Right-click on the job.

Job		2	Select time interval
	09/08/2		Go to Job overview

- 2. Select Go to Job overview in the pop-up menu.
  - $\rightarrow$  The **Job** module appears and displays the corresponding job.



## 3.3.5 Report

A report can be generated for each view. In the **Runtime main view** the report takes into account all WIN slaves. In the user-defined views, the report takes into account the WIN slaves contained in the respective view.

(i)

The report is generated with the times and settings defined in the **Options bar**.

- 1. Call up the required view.
- 2. Click on Report / Export in the toolbar.



(#) Generate report	×
Please select the report to be shown:	
Data selection	
<ul> <li>Tabular display of statuses</li> <li>Optimised for further processing of the data</li> </ul>	
<ul> <li>Tabular display of Notes</li> <li>Display of the individual notes</li> </ul>	<b>S</b>
<ul> <li>Tabular display of fault conditions</li> <li>Cumulative display of fault conditions</li> </ul>	
<ul> <li>Tabular display of quantities</li> <li>Optimised for further processing of the data</li> </ul>	
Graphical display of the data Optimised for printing	200
Cancel Ciose	Ok Generate

- 3. Select the required report in the Data selection area.
- 4. Click on OK.
  - $\rightarrow$  The report is generated.
  - $\rightarrow$  The Print preview for the report appears.

# 3.4 Job

The **Job** module shows which job is running on which machine and how far it has progressed.

	Job overview - WIN 0.1.2.3 - WERMA Signaltechnik GmbH + Co. KG	- 8 :
D overview D control station Productivity Ruthamie 3.00 Control Enter Stati End Job Edit Job Delete Import Job Ist Jobs D Description D Description	Accurang De Ful screen Report / Activation Settings Software Unit Manual Contact Info Design Start date V unti	Job details
Job number Machine <not assigned=""></not>	▼ State <all> V</all>	Job information
		OOO Job progression
	^	Piere *
dy.		Connected to WIN master Production

(i) No jobs can be created for WIN slave and WIN slave control.

# 3.4.1 Job overview

The job overview shows all jobs created with the relevant details. Auto jobs are listed in a separate area that can be shown and hidden.

	ID		Description		Start	date		~	until
	Job number		Machine <all></all>		¥ 5	State	<all></all>		~
_	ID 4	Job number	Description	M	achine		State	-	Job progression
	1	4856	841.225.978	Ur	nit 2		Comp	leted	104%
	2	6483	846.365.978	<	not assigned>		🔴 Waitir	ng	0%
	3	7984	207.866.124	<	not assigned>		🔴 Waitir	ng	0%
	4	1472	114.458.323	<	not assigned>		🔴 Waitir	ng	0%
	5	8952	846.365.978	<	not assigned>		🔴 Waitir	ng	0%
	6	4856	841.225.978	Ur	nit 2		Comp	leted	26%
	7	2323	842.715.777	Ur	nit 2		Runni	ng	0%
Auto jobs									
_	Job number	Description		Machine	Activated	Wee	ekday	Start tir	ne
Þ	2323	842.715.777		Unit 2	$\checkmark$	Mon	, Thu, Fri	10:12	
	6578	759.681.956		Unit 2	~	Tue,	, Wed	12:12	

 $(\mathbf{i})$ 

Clicking on the column name in the job overview lets you collate the displayed jobs in ascending or descending order.

The fields in the options bar can be used to filter and collate the displayed jobs.



ID	Description		Start date	×	until	~
Job number	Machine	<all> ~</all>	State	<all></all>	*	

## 3.4.1.1 Showing Auto jobs

1. Click on the arrow 🔥 at the end of the view.

- or -

1. Click on **Show Auto jobs** in the toolbar.

## 3.4.1.2 Hiding Auto jobs

1. Click on the arrow v above the Auto jobs overview.

- or -

1. Click on Hide Auto jobs in the toolbar.

## 3.4.2 Job details

Job details show all information on a job selected in the job overview.

Jo	b details				*	\$
	Job information					
		ID	1	State	Complet	ted
	Job nun	nber	4856			
	Descrip	tion	841.225.978			
	Mad	hine	Machine 2			
	5	Shift				
_	OOO Schedule	dev	viation +1,9 hr			$\bigcirc$
		Plan	1	A	Actual	
	Set up time		0:00 hr			0:00 hr
	Start time	09.0	08.2017 12:21	1	09.08.20	17 12:21
	Job end time	09.0	08.2017 12:38	1	09.08.20	17 14:31
	net runtime	2 hr	10 min.	n.		
	Gross runtime	17 n	nin. 0 sec.	:	2 hr 10 mi	n.
_	• Job prog	ress	ion: 104%			$\bigcirc$
			Piece			
	Actual -	0	400 600	80	0 10	00
	Actual total	quar	ntity: 1.048 P	lan tota	d quantity	1.000
	Amend actual	quar	ntity 1.000	Piece	(s)	

Button	Function
\$\$	Update job details and job overview.
*	Switch to the <b>Productivity</b> or <b>Runtime</b> module.
$\bigcirc$	Hide area.
	Show area.

A traffic light display provides a quick overview of how well or poorly the job is running or has run in the **Schedule deviation**, **Job progression** and **Productivity** areas.

The traffic light setting can be individually modified if required.

## 3.4.2.1 Schedule deviation

(i)

The **Schedule deviation** area displays information on the set-up, start, run and end time.

Schedule deviation +0,0 hr							
	Plan	Actual					
Set up time	0:00 hr	0:00 hr					
Start time	05.12.2019 14:10	05.12.2019 14:10					
Job end time	05.12.2019 14:10	05.12.2019 14:11					
net runtime	43 sec.	43 sec.					
Gross runtime	22 sec.	43 sec.					

The schedule deviation is specified in machine hours. 0.1 machine hours corresponds to 6 minutes, 1 machine hour corresponds to 60 minutes.

## 3.4.2.2 Job progression

The Job progression area displays information on the plan quantity and actual quantity.



The current data is displayed for jobs currently running. The job progression is calculated as the ratio of the current actual quantity to the current plan quantity, expressed as a percentage.

The data for completed jobs is displayed at the end of the job. The job progression is calculated as the ratio of the actual quantity to the plan quantity, expressed as a percentage.



In addition, you can see the actual correction and the factor entered for this job.

## 3.4.2.3 Productivity

The **Productivity** area displays information on the plan cycle time and the actual cycle time.



The current data is displayed for jobs currently running. The productivity is calculated as the ratio of the current actual cycle time to the current plan cycle time, expressed as a percentage.

The data for completed jobs is displayed at the end of the job. The productivity is calculated as the ratio of the actual cycle time to the plan cycle time, expressed as a percentage.

## 3.4.2.4 Editing traffic light settings

The traffic lights for **Schedule deviation**, **Job progression** and **Productivity** can be individually adapted.

The traffic light settings are saved in a local configuration file. You have to edit this local configuration file to change the traffic light setting.

The configuration file must be copied to transfer the altered traffic light setting to other PCs.

- 1. Open the following folder on your PC:C:\ProgramData\WERMA\WERMA-WIN-3.0 orC:\ProgramData\WERMA\WERMA-WIN-4.0.
- 2. Use a text editor (e.g. Notepad) to open the configuration file WERMA-WIN.ini.
- 3. Search for the following segment in the configuration file.

```
[Orders]
ProductivityGreenLimit=100
ProductivityYellowLimit=75
```

```
CompletionGreenLimit=100
CompletionYellowLimit=90
```

```
RuntimeGreenLimit=100
RuntimeYellowLimit=110
```

Setting	Description	Example
Productivity		

(i)

Setting	Description	Example	
ProductivityGreenLimit	Indicates up to what per-	ProductivityGreenLimit=100	
	centage the traffic light is	ProductivityYellowLimit=75	
	switched to oreen.	Productivity 0% to 74%: Traffic light is red	
ProductivityYellowLimit	Indicates up to what per- centage the traffic light is	Productivity 75% to 99%: Traffic light is yellow	
	switched to reliow.	Productivity 100% or higher: Traffic light is green	
Job progression			
CompletionGreenLimit	Indicates up to what per-	CompletionGreenLimit=100	
	centage the traffic light is	CompletionYellowLimit=90	
		Job progression 0% to 89%: Traffic light is red	
CompletionYellowLimit	Indicates up to what per- centage the traffic light is	Job progression 90% to 99%: Traffic light is yellow	
	switched to reliow.	Job progression 100% or higher: Traffic light is green	
Schedule deviation			
RuntimeGreenLimit	Indicates up to what per-	RuntimeGreenLimit=100	
	centage the traffic light is	RuntimeYellowLimit=110	
		Schedule deviation 0% or nega- tive: Traffic light is green	
RuntimeYellowLimit	Indicates up to what per- centage the traffic light is	Schedule deviation 1% to 10%: Traf- fic light is yellow	
		Schedule deviation greater than 11%: Traffic light is red	

4. Save the configuration file once all changes have been made.

The modified traffic light setting will be available as soon as WERMA-WIN is restarted.

# 3.4.3 Entering jobs

Jobs can be manually entered or imported from a Job list.

Auto jobs can be created for recurring jobs. Auto jobs start and stop the jobs automatically.

An Auto job is only started if no other job is running on the selected WIN slave performance or has the status **Active waiting**.

(i)

(i)

# **WERMA**

## 3.4.3.1 Entering single jobs

- 1. Click on **Enter job** in the toolbar.
  - $\rightarrow$  The **Enter job** window appears.
- 2. Select the Single job Type in the Job information area.

🛞 Enter job					×
Job information ID Type	20 <ul> <li>Individual order</li> </ul>	· O Auto job			
Job number Description Machine	<pre></pre>	¥			
Plan specifications			Actual information		
Quantity Cycle time	0,0	Piece(s) sec.	Amend actual quantity Actual set up time	0:00 ~	Piece(s) hr
Set up time Factor	0:00 ¥	hr Piece(s)/cycle			
net runtime	0 sec.				
End Set end time	00:00 💲	on Day 1			
Cancel Close			Star Job	$\frac{t}{s}$	ж ave

3. Enter your required Job number and Description.

(i) The ID is a continuous number and is automatically issued by WERMA-WIN.

4. Select the WIN slave performance on which the job is to run in the Machine selection list.

5. Enter	the required pla	n values for the job ir	n the <b>Plan specifications</b> area.
----------	------------------	-------------------------	--

Plan value	Description		
Quantity	Volume to be produced		
Cycle time	Time needed to produce a part		
Set up time	Set up time for the job		
	If a part has been produced before the end of the set up time entered, the actual set up time is set to this time.		
Factor	Quantity of pieces per cycle		
net runtime	The time calculated by WERMA-WIN that is required to complete the job		
	(including set up time, excluding pause times).		

6. Enter the required actual values for the job in the Actual value area.

Actual value	Description
Amend actual quantity	Positive or negative correction values (e.g. with reject parts)
Actual set up time	Time from the start of job until the first quantity being transmitted

Actual value	Description
	WERMA-WIN system automatically sets the time which can be manually
	altered.

- 7. Enable Stop at in the End area and enter the end time if the job is to be completed at a certain time.
- 8. Enable Stop when the plan quantity is reached in the End area if the job is to be completed when the plan quantity is reached.

(i) If **Stop at** and **Stop when the plan quantity is reached** are enabled simultaneously, the job is stopped as soon as the end time or the plan quantity has been reached.

j There can be deviations relating to the actual quantity (≥ plan quantity) due to radio transmission.

Once all data has been entered:

1. Click on Start to start the job immediately.

- or -

1. Click on OK to save the job and set the status to Waiting.

## 3.4.3.2 Entering Auto jobs

- Click on Enter job in the toolbar.
   → The Enter job window appears.
- 2. Select the Single job Type in the Job information area.

# 

🛞 Enter auto job					×
Job information					
ID	<auto job=""></auto>				
Туре	O Individual order	Auto job			
Job number					
Description					
Machine	<not assigned=""></not>	~			
Plan specifications			Actual information		
Quantity	0	Piece(s)	Amend actual quantity	0 A Piece(s)	
Cycle time	0,0	sec.	Actual set up time	0:00 🗸 hr	
Set up time	0:00 🗸	hr			
Factor	1,000	Piece(s)/cycle			
net runtime	0 sec.				
End Set end time End with quantity	00:00	on Day 1			
Auto job Options					
✓ Auto job activated					
Job start time	13:38 🗘				
Active days	✓ Monday	Tuesday	Wednesday	Thursday	
	Friday	Saturday	Sunday		
Start date	03.02.2020 ¥	<ul> <li>No end date</li> <li>End after</li> <li>End by</li> </ul>	section of the sectio		
Close			0	Start Job OK Save	

#### 3. Enter your required Job number and Description.

(i) The ID is a continuous number and is automatically issued by WERMA-WIN.

4. Select the WIN slave performance on which the job is to run in the Machine selection list.

5. Enter the required plan values for the job in the **Plan specifications** area.

Plan value	Description
Quantity	Volume to be produced
Cycle time	Time needed to produce a part
Set up time	Set up time for the job
	If a part has been produced before the end of the set up time entered, the actual set up time is set to this time.
Factor	Quantity of pieces per cycle
net runtime	The time calculated by WERMA-WIN that is required to complete the job
	(including set up time, excluding pause times).

- 6. Enable Stop at in the End area and enter the end time if the job is to be completed at a certain time.
- 7. Enable **Stop when the plan quantity is reached** in the **End** area if the job is to be completed when the plan quantity is reached.
- (i) If **Stop at** and **Stop when plan quantity is reached** are enabled simultaneously, the Auto job is stopped as soon as the end time or the plan quantity has been reached.
- There can be deviations relating to the actual quantity (≥ plan quantity) due to radio transmission.
- 8. Enter the required start time in the Job start time field in the Auto job Options area.
- 9. Select **Enabled** if the Auto job is to be enabled once it has been saved.
- 10. Enable the days on which the Auto job is to be performed in the Active days area.
- 11. Enter the start and end of the Auto job.

Field/Option	Description
Start date	Start date of Auto job
<b>No end date</b> Auto job remains enabled until it is manually disabled.	
End after x jobs	Auto job is disabled after the specified number of jobs.
End by	Auto job is disabled up to the specified time.

- (j) WERMA-WIN checks for a duration of 1 year whether Auto jobs overlap. Overlapping Auto jobs cannot be saved.
- 12. Click on OK to save the Auto job.

## 3.4.3.3 Importing a job list

A job list can be imported in CSV format to create several jobs simultaneously.

#### Requirement:

- There is a CSV file available in a suitable format.
- **1.** Click on **Import job list** in the toolbar.  $\rightarrow$  The **Import jobs** window appears.

(#) Import jobs	×
CSV import Open a CSV fi displayed in th	le and import the job list. The imported jobs will be e job overview.
Filename	
File format	Western European (Windows)
	el Next Start

# **WERMA**

- 2. Click on Browse and open the CSV file you require.
- 3. Adapt the File format if necessary.
- 4. Click on Next.
  - $\rightarrow$  The CSV file is imported and checked.
  - $\rightarrow$  If the check is successful, the jobs appear in the job overview.

#### Format of the job list

The CSV file must meet the following requirements to correctly import a job list.

Column label or header:

- JOBNUMBER
- DESCRIPTION
- MACHINE
- QUANTITY
- CYCLETIME
- SETUPTIME
- FACTOR

Format rules:

- The Windows standard character set (for example Western European) or Unicode (UTF-8)
- Header or first row with column label must be specified.
- The delimiters are a semicolon (;), comma (,), Tabulator (\t) or pipe (|). Only one delimiter is allowed per document.
- SETUPTIME must be in the format [hh]h:mm (e.g. 0:00).
- CYCLETIME must be in seconds (e.g. 0.8).
- Decimal numbers must always use a point as a decimal separator (e.g. 0.8).
- Every data value can be placed in double quotation marks. The data value can therefore be a text. A semicolon (;) can occur in the text with quotation marks.
- One decimal place is allowed after the point for the cycle time (CYCLETIME).
- Three decimal places are allowed after the point for the factor (FACTOR).
- The maximum number of characters is checked.

Not relevant:

- The column order is not relevant (data is identified by the header).
- Column labels and headers are not case-sensitive.
- A maximum of 7 columns can be created. Not all columns need to be specified.

#### Example:

JOBNUM	BER DESCRIPTION MACHINE QUANTI	TY CYCLE	TIME SETUPTIN	AE FACTOR
4800	"Round parts;4711" job Machine 2 10000	0.8	01:00	2
4801	"Round parts;4500" job Machine 3 15000	1.0	05:00	1
4802	"Round parts;3520" job Machine 2 10000	0.7	01:00	2
4803	"Round parts;8466" job Machine 5 20000	1.2	10:00	5
4804	"Round parts;0124" job Machine 6 5000	1.5	01:50	1
4805	"Round parts;4500" job Machine 2:50000	1.0	03:00	1

# 3.4.4 Starting jobs

Jobs can be started in the following way:

- Manually
- Quick start
- With the first pulse at the Counter input tier
- With the first pulse at the Job input tier

## 3.4.4.1 Starting a job manually

- 1. Select a job with the state **Waiting** in the job overview.
- 2. Click on Start job in the toolbar.
  - $\rightarrow$  The job is started.

- or -

- 1. Right-click on the job to be started.
- 2. Select Start job in the pop-up menu.
  - $\rightarrow$  The job is started.

## 3.4.4.2 Job quick start

Jobs from all modules can be started using a *keyboard shortcut*. Once the ID, job number or description has been entered, the program searches for a corresponding job and starts it immediately.

1. In the toolbar, expand Start job by clicking on the arrow -.



#### 2. Select Quick start.

 $\rightarrow$  The **Job quick start** window appears.

🛞 Job quick start	×	
1. Please select a search attribute for the job.		
C II		
Job number		
<ul> <li>Description</li> </ul>		
2. Please enter the job number by keyboard or barcode scanner and confirm the start.		
Job number		
Cancel OK Start		

- 3. Choose the option the program is to search for.
- 4. Enter the value of the selected option into the corresponding field.



- 5. Click on **OK** to search for a job with the corresponding value.
  - $\rightarrow$  If a job with the corresponding value is available, then it is started immediately.

## 3.4.4.3 Job start with 1st piece

Jobs can be started as soon as the first pulse to the **Counter input** tier of a WIN slave performance has been transmitted.

The job can be ended by a further pulse to the **Job input** tier.

1. Select a job with the state **Waiting** in the job overview.

2. In the toolbar, expand Start job by clicking on the arrow -.



3. Select Start with 1st Piece in the pop-up menu.

- $\rightarrow$  The state of the job changes to **Active waiting**.
- → The job starts automatically as soon as the first pulse to the **Counter input** tier of a WIN slave performance has been transmitted.

- or -

- 1. Right-click on the job to be started.
- 2. Select Start with 1st Piece in the pop-up menu.
  - $\rightarrow$  The state of the job changes to **Active waiting**.
  - → The job starts automatically as soon as the first pulse to the **Counter input** tier of a WIN slave performance has been transmitted.

## 3.4.4.4 Job start with job input

Jobs can be started as soon as the first pulse to the **Job input** tier of a WIN slave performance has been transmitted.

The job can be ended by a further pulse to the **Job input** tier.

1. Select a job with the state Waiting in the job overview.

2. In the toolbar, expand Start job by clicking on the arrow -.

D			<b>\$\$</b>	÷
Start job *	End job	Edit job	Delete job	Import job list
2	े Quick star	t	ALT	+ F1
Ø	Start with	1st piece	ALT	+ F2
	Start with	job input	ALT	+ F3

#### 3. Select Start with job input.

 $\rightarrow$  The state of the job changes to **Active waiting**.

→ The job starts automatically as soon as the first pulse to the **Job input** tier of a WIN slave performance has been transmitted.

#### - or -

- 1. Right-click on the job to be started.
- 2. Select Start with job input in the pop-up menu.
  - $\rightarrow$  The state of the job changes to **Active waiting**.
  - → The job starts automatically as soon as the first pulse to the **Job input** tier of a WIN slave performance has been transmitted.

## 3.4.5 Completing jobs

- 1. Select the required job in the job overview.
- 2. Click on **End job** in the toolbar.

#### - or -

- 1. Right-click on the required job.
- 2. Select End job in the pop-up menu.

# 3.4.6 Activating Auto jobs

1. Enable the checkbox in the Activated column in the overview of Auto jobs.

Auto jobs					
	Job number 🛛 🔺	Description	Machine	Activated	
Þ	2323	842.715.777	Unit 2	R	

# 3.4.7 Disabling Auto jobs

1. Disable the checkbox in the Activated column in the overview of Auto jobs.

Auto jobs							
	Job number 🛛 🔺	Description	Machine	Activated			
۲	2323	842.715.777	Unit 2				
				~~~~			

# 3.4.8 Editing jobs

- 1. Select the required job in the job overview.
- 2. Click on Edit job in the toolbar.

- or -

- 1. Right-click on the required job.
- 2. Select Edit job in the pop-up menu.
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#### $\rightarrow$ The **Edit job** window appears.

(#) Edit job				×
Job information	3	]		
Type	<ul> <li>Individual order</li> </ul>	Auto job		
Description	207.866.124			
Machine	<not assigned=""></not>	*		
Plan specifications			Actual information	
Quantity	780	Piece(s)	Amend actual quantity	0 🗘 Piece(s)
Cycle time	0,5	sec.	Actual set up time	0:00 🗸 hr
Set up time	0:00 🗸	hr		
Factor	1,000	Piece(s)/cycle		
net runtime	6 min. 30 sec.			
End Set end time End with quantity	00:00 💲	on Day 1		
Close			Start Job	A OK Save

3. Edit the job information as required.

Once all data has been entered:

1. Click on Start to start the job immediately.

- or -

1. Click on **OK** to save the job and set the status to **Waiting**.

# 3.4.9 Correction of a completed job

- 1. Select the job with the state **Completed** in the Job overview.
- 2. Click on **Edit job** in the toolbar.

- or -

- 1. Right-click on the required job.
- **2.** Select **Edit job** in the pop-up menu.  $\rightarrow$  The **Edit job** window appears.

ob information				
ID	6	]		
Туре	Individual order	r 🔿 Auto jol	2	
Job number	4856			
Description	841.225.978			
Machine	Machine 2	~		
Plan specifications			Actual information	
Quantity	3.700	Piece(s)	Amend actual quantity	0 🗘 Piece(s)
Cycle time	0,5	sec.	Actual set up time	0:02 🗸 hr
Set up time	0:00 🗸	hr		
Factor	1,000	Piece(s)/cycle		
net runtime	30 min. 50 sec.			
End				
Set end time	00:00	on Day 1		
End with quantity				

- 3. Change the job information as required.
- 4. Click on OK to save the settings.

# 3.4.10 Deleting jobs

- 1. Select the job in the job overview.
- 2. Click on **Delete job** in the toolbar.

- or -

- 1. Right-click on the job to be deleted.
- 2. Select **Delete job** in the pop-up menu.

# 3.4.11 Duplicating jobs

- 1. Right-click on the required job.
- 2. Select Duplicate job in the pop-up menu.
  → The Copy job window appears.

# 

ob information		1			
ID	20				
Туре	Individual order	· O Auto jo	0		
Job number	4856				
Description	841.225.978				
Machine	Machine 2	~			
lan specifications			Actual information		
Quantity	3.700	Piece(s)	Amend actual quantity	0 🗘 Piece	(s)
Cycle time	0,5	sec.	Actual set up time	0:00 🖌 hr	
Set up time	0:00 ¥	hr			
Factor	1,000	Piece(s)/cycle			
net runtime	30 min. 50 sec.				
ind					
Set end time	00:00 🗘	on Day 1			
End with quantity					

- **3.** Modify the job information as required.
- 4. Click on OK to save the settings.

# 3.4.12 Report

A report can be generated for the filters currently selected and the current collation in the *job* overview. Only jobs on the machine are taken into account in the report as soon as a certain machine has been selected in the filter menu.

- 1. Adapting the required filters and collation.
- 2. Click on **Report / Export** in the toolbar.
  - $\rightarrow$  The **Generate report** window appears.



3. Select the required report in the Data selection area.



Selecting the **Tabular display of data** option allows the content of the report to be individually adapted.

- 4. Click on OK.
  - → Selecting the **Tabular display of data** option generates the report and the *Print preview* is displayed.
  - → Selecting the **Tabular display of data** option makes the window appear for further data selection.

4	Machine	^
느	ID	
느	Job number	
	Description	
	State	
	End type	
	Actual start time	
	Actual end time	
	Plan start time	
	Plan end time	
	Actual set up time	

- 5. Adapting the report by enabling or disabling the individual buttons.
- 6. Click on OK.
  - $\rightarrow$  The report is generated.
  - $\rightarrow$  The Print preview for the report appears.

# 3.5 Control

In the **Control** module, rules with different logic functions can be defined, with which WIN slave control can be switched or controlled. The WIN slave included in the WERMA-WIN network can be used as the input signals for the logic functions.



	Control station		t e. a.	Duration		Control	2	5	Switching n	ules - WIN 4.	4.0.1642 -	WERMA Sig	gnaltechr	nik GmbH + Co. KG	-	5	×
2000 Provine w	New rule	New rule	Edit rule	Dunicate	Job Delete	Enable	Disable	Activation	Settings	Software	Manual	Contact	(i) Info			- 0'	~
of rules	(Assistant)	(Expert)	Corcitore	rule	rule	rule	rule	Activition	betanga	update	1 Ion Ioon	contact	2110				
Name				Rules	ult	Proc	essed	Message		Othe	r						_
<u> </u>																	_
Ready.														Connected to WIN master Production			
$\sim$																	

# (i) No rules can be defined for WIN slave and WIN slave performance.

# 3.5.1 Overview of rules

The overview of rules shows a list of all switching rules that have been created and their current status.



Column	Description
Name	Name of switching rule
Result	Current result of switching rules (e.g. On, Off, Blinking)
Processed	= Switching rule being processed
	Sector Antipation A
	Switch being processed
Message	More information on the rule

# 3.5.2 Defining new rules

New rules can be defined either using an assistant, which takes you step by step through the settings, or in an *Expert mode*.

## 3.5.2.1 Creating a new rule with assistants

### 1. Click on New rule (Assistant) in the toolbar.

 $\rightarrow$  The **Define new switching rule** window appears and shows an example of a switching rule.



## 2. Click on Next.

 $\rightarrow$  The window to select the logic function appears.

# **WERMA**

## Selecting the logic function

🛞 Define new switching rule			×
Logic function		AND-Logic example	
Please select the logic function to which the input signals sho	uld be assigned.	Input signals Logic function	Output signals
Description	Logic function		
Each tier must be in the selected status	AND		
At least one tier must have the defined status	OR	WIN slave 1	
No tier may be in the defined status	NOR		
Enter custom logic function (expert mode)		WIN slave 2	U WIN slave control
Eack Cancel			Next Next step

3. Select the Logic function with which the input signals are to be linked.

Logic function	Description
AND	Each tier must be in the selected status.
OR	At least one tier must have the selected status.
NOR	No tier may be in the defined status.

The graphic on the right in the window shows an example of the logic function selected. You may wish to create your *own logic functions*.

#### 4. Click on Next.

(i)

ightarrow The window to select the input signal appears.

## Selecting the input signal

(#) Define new switching rule						×
Input signals for AND-Logic f	unction			AND-Logic example		
Please select the input signals to b	e assigned to switching	g rule AND.		Input signals	Logic function	Output signals
WIN slave Switching delay If a switching delay is set up then th Delay 0	he input signals must re	Status	Add	WIN slave 1		WIN slave control
Cancel						Next Next step

5. Click on Add to select the input signals for the selected logic function.  $\rightarrow$  The Select tier and status window appears.

(#) Select tier and status					×
1. WIN slave select		2. Sele	ect tier		3. Select status
Name	MAC-ID	Tier	Description	Blink recognition	Description
Unit 1	002705	1	Operational	-	On
Unit 2	0027C2	2	Warning	-	Off
Unit 3	003983	3	Error	-	Connection error
		Note: Or The cou	nly configured tiers are of Inter input of a WIN slav	displayed. The tiers can be cor ve performance cannot be use	rfigured in the Control station module. d as an input signal.
Close					Apply

# (i) The **Select tier and status** window shows all the WIN slaves included in the WERMA-WIN network. The available tiers and statuses correspond to the tiers and statuses *configured* in the **Control station** module.

The blinking status is only displayed if blink recognition is enabled for the tier.

- 6. Select the WIN slave to be used as the input signal.
- 7. Select the tier of the WIN slave to be used as the input signal.

(i) The counter input of a WIN slave performance cannot be used as input signal for a logic function.

- 8. Select the status in which the selected tier is to be.
- 9. Click OK to apply the settings.

 $\rightarrow$  The **Define new switching rule** window appears and shows the input signal defined in the list.

nput signals for AND-L	ogic function		
Please select the input signa	als to be assigned to switching	grule AND.	
		Chat up	
WIN slave	lier 1	Status	Add
	1		🖋 Edit
			🗶 Delete

- **10.** Click on **Add**, if necessary, to add an additional input signal.
- 11. Click on Edit, if necessary, to modify the selected input signal.
- **12.** Click on **Delete**, if necessary, to delete the selected input signal.



#### 13. Set the switching delay in the **Delay** field.

 $(\mathbf{i})$ 

The switching delay defines how long all input signals have to be in the same status for the output signal to be switched.

#### 14. Click on Next.

 $\rightarrow$  The window for selection of the output signal appears.

#### Selecting the output signal

(#) Define new switching rule					×
Output signals for logic function			AND-Logic example		
Please select the output signals which are assigned to the swite	ching rule.		Input signals	Logic function	Output signals
WIN slave WIN slave Switch the output signal as follows:  Permanent light Blinking	Tier	Add Edit Collecte	WIN slave 1	AND	WIN slave control
Back Cancel					Next Next step

#### 15. Click on Add.

 $\rightarrow$  The **Select tier** window appears.

me	MAC-ID	Tier	Description	Blink recognition
Init 3	003983	1	Tier 1	Tier 1 blinking
		2	Tier 2	Tier 2 blinking
		3	Tier 3	Tier 3 blinking
		4	Tier 4	Tier 4 blinking
		Note: On	ly configured tiers are (	displayed. The tiers can be
		Note: On configure	ly configured tiers are d in the Control station	displayed. The tiers can be module.

- 16. Select the WIN slave control to be used as the output signal.
- 17. Select the tier to be switched.
- 18. Click OK to apply the settings.
  - $\rightarrow$  The **Define new switching rule** window appears and shows the input signal defined in the list.

) Define new switching rule			
Dutput signals for logic function			
Please select the output signals which	are assigned to the switch	ning rule.	
WIN slave		Tier	Add
Unit 3		1	
			Je Edit
			🔉 Delete

- 19. Click on Add, if necessary, to add an additional output signal.
- **20.** Click on **Edit**, if necessary, to modify the selected output signal.
- 21. Click on **Delete**, if necessary, to delete the selected output signal.
- 22. Define whether the Output signal should be switched as a Permanent light or blinking.
- 23. Click on Next.

(#) Define new switching rule	Х
Save switching rule	
Please enter a name for the switching rule which will be displayed in the overview.	
Name	
Advanced settings can be made once the switching rule has been saved.	
Show the advanced settings dialog	
Back Cancel Ok Save	

- 24. In the Name field, enter a name for the switching rule.
- 25. Enable Show the advanced settings dialog if more settings are to be entered for the switching rule.
- 26. Click on OK to save the switching rule.
  - $\rightarrow$  The switching rule appears in the rule overview and is enabled.

								5	Switching ru	ules - WIN 4.	4.0.1642 -	WERMA Si	gnaltech	nik GmbH + Co. KG
	Control statio	n Prod	luctivity	Runtime	Job	Cont	ol Routi	ng						
	<b>P</b>	•		1 1 1	2			Þ		<b>N</b>		$\bigcirc$	i	
Overview of rules	New rule (Assistant)	New rule (Expert)	Edit rule	Duplicate rule	Delete rule	Enabl rule	e Disable rule	Activation	Settings	Software update	Manual	Contact	Info	
				Rules						Other	r			
Name				A Res	ult	P	ocessed	Message						
Materia	l message			Off			1							



## 3.5.2.2 Defining new rules in Expert mode

- 1. Click on **New rule (Expert)** in the toolbar.
  - $\rightarrow$  The **Define new switching rule** window appears.

(#) Define r	new switching rule	×
Please det	emine the settings for the switch function.	
Name	New rule 1	
Outpu	t signals:	
No tie	er defined	🖋 Edit
Logic	function for permanent light:	
No ru	le defined	🖋 Edit 👻
Logic	function for blinking light:	
No ru	le defined	🖋 Edit 🛛 🔻
lf both	logic functions are true activate the following output signal: Permanent light Blinking	
Cir Car	ncel	Ok Save

2. In the Name field, enter a name for the switching rule.

## Selecting the output signal

- 1. Click on Edit beside the Output signals field.
  - $\rightarrow$  The **Define new switching rule** window appears and shows an example of a switching rule.

(#) Define new switching rule					×
Output signals for logic function			AND-Logic example		
Please select the output signals which are assigned to the swite	ching rule.		Input signals	Logic function	Output signals
WIN slave Switch the output signal as follows:  Permanent light Blinking	Tier	<ul> <li>Add</li> <li>Edit</li> <li>Delete</li> </ul>	WIN slave 1		WIN slave control
Eack Cancel					Next Next step

- 2. Click on Add.
  - ightarrow The **Select tier** window appears.

⊛	Select tier					×
1.	WIN slave control select		2. Selec	t tier		
N	ame	MAC-ID	Tier	Description	Blink recognition	
U	nit 3	003983	1	Tier 1	Tier 1 blinking	
			2	Tier 2	Tier 2 blinking	
			3	Tier 3	Tier 3 blinking	
			4	Tier 4	Tier 4 blinking	
			Note: Onl configure	y configured tiers are ( d in the Control station	displayed. The tiers can be module.	
4	Cancel Close				Apply	

- 3. Select the WIN slave control to be used as the output signal.
- 4. Select the tier to be switched.
- 5. Click **OK** to apply the settings.

 $\rightarrow$  The **Define new switching rule** window appears and shows the input signal defined in the list.

Define new switching rule			
Output signals for logic functio	n		
lease select the output signals whic	h are assigned to the switcl	hing rule.	
WIN slave		Tier	💠 Add
Unit 3		1	
			J Eur
			🔉 Delete

- 6. Click on Add, if necessary, to add an additional output signal.
- 7. Click on Edit, if necessary, to modify the selected output signal.
- 8. Click on **Delete**, if necessary, to delete the selected output signal.
- 9. Define whether the Output signal should be switched as a Permanent light or Blinking.
- 10. Click on Next to save the settings.
  - $\rightarrow\,$  The **Define new switching rule** window appears.

### Selecting the logic function for permanent light

Click on Edit beside the Logic function for permanent light field.
 → The Define new switching rule window appears and shows an example of a switching rule.



🛞 Define new switching rule			×
Logic function for Permanent light Please select the logic function to which the input signals shou	uld be assigned.	AND-Logic example	c function Output signals
Description Each ter must be in the selected status At least one tier must have the defined status No tier may be in the defined status Enter custom logic function (expert mode)	Logic function AND OR NOR	WIN slave 1	AND 0 WIN slave control
Hack Cancel			Next Next step

### 2. Select the Logic function with which the input signals are to be linked.

Logic function	Description
AND	Each tier must be in the selected status.
OR	At least one tier must have the selected status.
NOR	No tier may be in the defined status.

The graphic on the right in the window shows an example of the logic function selected. You may wish to create your *own logic functions*.

#### 3. Click on Next.

(i)

 $\rightarrow\,$  The window to select the input signal appears.

## Selecting the input signal

(#) Define new switching rule				_		×
Input signals for AND-Logi	ic function - Permaner	nt light		AND-Logic example		
Please select the input signals to	o be assigned to switching	rule AND.		Input signals	Logic function	Output signals
WIN slave Switching delay If a switching delay is set up the Delay	en the input signals must re	Status	Add  Add  Edit  Score Delete	WIN slave 1	→ AND _0	WIN slave control
Cancel						Next Next step

4. Click on Add to select the input signals for the selected logic function.

 $\rightarrow$  The **Select tier and status** window appears.

(#) Select tier and status					×			
1. WIN slave select		2. Sele	ct tier		3. Select status			
Name	MAC-ID	Tier	Description	Blink recognition	Description			
Unit 1	002705	1	Operational	-	On			
Unit 2	0027C2	2	Warning	-	Off			
Unit 3	003983	3	Error	-	Connection error			
		Note: Only configured tiers are displayed. The tiers can be configured in the Control station module. The counter input of a WIN slave performance cannot be used as an input signal.						
Close					Apply			

(i) The **Select tier and status** window shows all the WIN slaves included in the WERMA-WIN network. The available tiers and statuses correspond to the tiers and statuses *configured* in the **Control station** module.

The blinking status is only displayed if blink recognition is enabled for the tier.

- 5. Select the WIN slave to be used as the input signal.
- 6. Select the tier of the WIN slave to be used as the input signal.

(j) The counter input of a WIN slave performance cannot be used as input signal for a logic function.

- 7. Select the status in which the selected tier is to be.
- 8. Click OK to apply the settings.
  - $\rightarrow$  The **Define new switching rule** window appears and shows the input signal defined in the list.

(#) Define new switching rule						×
Input signals for AND-Logic function -	Permanent ligh	ıt		AND-Logic example		
Please select the input signals to be assigned	to switching rule A	AND.		Input signals	Logic function	Output signals
WIN slave Unit 1	Tier St 1 O	itatus Dn	📤 Add			
Switching delay If a switching delay is set up then the input sig Delay 0 0 sec.	nals must remain th	he same for the del	ay period.	WIN slave 1		WIN slave control
Cancel						Next Next step



- 9. Click on Add, if necessary, to add an additional input signal.
- 10. Click on Edit, if necessary, to modify the selected input signal.
- 11. Click on **Delete**, if necessary, to delete the selected input signal.
- 12. Set the switching delay in the Delay field.

(j) The switching delay defines how long all input signals have to be in the same status for the output signal to be switched.

- 13. Click on Next to save the settings.
  - → The **Define new switching rule** window appears.

### Selecting the logic function for blinking light

- 1. Click on **Edit** beside the **Logic function for blinking light** field.
- $\rightarrow$  The **Define new switching rule** window appears and shows an example of a switching rule.



#### 2. Select the Logic function with which the input signals are to be linked.

Logic function	Description
AND	Each tier must be in the selected status.
OR	At least one tier must have the selected status.
NOR	No tier may be in the defined status.

The graphic on the right in the window shows an example of the logic function selected. You may wish to create your *own logic functions*.

#### 3. Click on Next.

 $(\mathbf{i})$ 

 $\rightarrow$  The window to select the input signal appears.

## Selecting the input signal

🛞 Define new switching rule						×
Input signals for AND-Logic f	function - Blinking			AND-Logic example		
Please select the input signals to b	be assigned to switching	grule AND.		Input signals	Logic function	Output signals
WIN slave WIN slave Switching delay If a switching delay is set up then t Delay 0	Tier the input signals must re	Status	e delay period.	WIN slave 1	→ AND 0	WIN slave control
Cancel						Next Next step

4. Click on Add to select the input signals for the selected logic function.

$\rightarrow$	The Select	tier and	l status	window	appears.	

(#	Select tier and status					>	(
1	I. WIN slave select		2. Select t	ier		3. Select status	
Γ	Name	MAC-ID	Tier	Description	Blink recognition	Description	
	Unit 1	002705	1	Operational	-	On	
	Unit 2	0027C2	2	Warning	-	Off	
	Unit 3	003983	3	Error	-	Connection error	
			Note: Only c	onfigured tiers are display input of a WIN slave perf	ed. The tiers can be configured	l in the Control station module. i input signal.	
<	Close					OK Apply	
							-

(i) The **Select tier and status** window shows all the WIN slaves included in the WERMA-WIN network. The available tiers and statuses correspond to the tiers and statuses *configured* in the **Control station** module.

The blinking status is only displayed if blink recognition is enabled for the tier.

- 5. Select the WIN slave to be used as the input signal.
- 6. Select the tier of the WIN slave to be used as the input signal.
- (i) The counter input of a WIN slave performance cannot be used as input signal for a logic function.

7. Select the status in which the selected tier is to be.



#### 8. Click OK to apply the settings.

 $\rightarrow$  The **Define new switching rule** window appears and shows the input signal defined in the list.

(#) Define new switching rule				_		×
Input signals for AND-Logic	function - Blinking			AND-Logic example		
Please select the input signals to b	be assigned to switchin	ng rule AND.		Input signals	Logic function	Output signals
WIN slave Unit 2 Switching delay If a switching delay is set up then t Delay 0	Tier 1 the input signals must r Sec.	Status On remain the same for th	e delay period.	WIN slave 1 0 WIN slave 2 1		WIN slave control
Gancel						Next Next step

- 9. Click on Add, if necessary, to add an additional input signal.
- 10. Click on Edit, if necessary, to modify the selected input signal.
- 11. Click on **Delete**, if necessary, to delete the selected input signal.
- 12. Set the switching delay in the **Delay** field.

(i) The switching delay defines how long all input signals have to be in the same status for the output signal to be switched.

- 13. Click on Next to save the settings.
  - $\rightarrow\,$  The Define new switching rule window appears.
- 14. Select whether the output signal should be switched as a **Permanent light** or **Blinking**, if both logic functions apply.
- 15. Click on OK to save the switching rule.
  - $\rightarrow$  The switching rule appears in the rule overview and is enabled.

(	(H)										5	Switching ru	iles - WIN 4.	4.0.1642 -	WERMA Si	gnaltech	hnik GmbH + Co. KG
<u> </u>		Control station	n Prod	luctivity	Run	time	Job	Co	ntrol	Routi	ng						
I		<b>P</b>			ŧ	*	X		D	0	Þ		<b>N</b>		$\bigcirc$	6	)
0	verview of rules	New rule (Assistant)	New rule (Expert)	Edit rule	Dupli ru	icate le	Delete rule	En	able ule	Disable rule	Activation	Settings	Software update	Manual	Contact	Info	
					Rules								Other	r			
Г	Name					Resu	lt		Proc	essed	Message						
+	Material	message				Off				1							
	Support	enquiry				Off				×							

## 3.5.2.3 Entering custom logic function in expert mode

1. Select Enter custom logic function (expert mode) option in the Switching rule window.

#### 2. Click on Next.

 $\rightarrow$  The Logic function (expert mode) window appears.

(*) Define new switching rule	×
Logic function (expert mode)	Example of a custom logic function (expert mode)
Please enter your custom logic function here. Tip: Create an AND/OR-Logic function with the assistant and edit the logic function using the expert mode. Further information and examples can be found in the manual.	Input signals Logic function Output signals
Logic function       WIN slave       AND       OR       NOT	WIN slave 1 WIN slave 1
() v Check	WIN slave 2
Cancel	Next Next Step

3. Enter a custom logic function in Visual Basic Syntax or create it using the buttons in the Logic function area.

Button	Function
WIN slave	Paste tier and status of a WIN slave.
AND	Paste logic function AND.
OR	Paste logic function OR.
NOT	Paste logic function NOT.
()	Paste brackets.

The program code uses the MAC IDs of the WIN slaves, not the individual WIN slave names.

- 4. Click on **Check** to check the switching rule created.
  - $\rightarrow$  WERMA-WIN checks the switching rule.
  - → If the switching rule includes errors, a window appears with relevant information on resolving the errors.
- 5. Click on Next.

(i)

 $\rightarrow$  The switching rule is saved.

#### Examples of custom logic functions

#### Example 1: AND rule

Tier 1 and Tier 2 of a WIN slave must have the status **ON**.

Slave("0024B1").Tier1.On AND Slave("0024B1").Tier2.On

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### Example 2: OR rule

Tier 1 of a WIN slave must have the status **Blinking** or Tier 2 of the same WIN slave must have the status **OFF**.

Slave("0024B1").Tier1.Blink OR Slave("0024B1").Tier2.Off

## Example 3: NOR rule

Neither of the two WIN slave may display a connection error.

NOT (Slave("0024B1").Tier1.Error OR Slave("0024B2").Tier1.Error)

### Example 4: Logic function using variables

```
' declare variables
Dim a As Boolean
Dim b As Boolean
Dim x As Boolean
' read out Slave statuses and store in variables
a = Slave("0024A1").Tier1.On
b = Slave("0024A2").Tier1.On
' Program code which processes variables.
x = a OR b
' Note: if multiple program lines are entered,
' the result of the logic function must be returned as Boolean data type with
' 'Return'.
Return x
```

# 3.5.3 Enabling a rule

- 1. Select the switching rule in the rule overview.
- 2. Click on **Enable rule** in the toolbar.
- 3. Confirm the prompt with Yes to enable the rule.

# 3.5.4 Disabling a rule

(i) The WIN slave control remains in the last transmitted status as soon as a switching rule has been disabled.

- 1. Select the switching rule in the rule overview.
- 2. Click on **Disable rule** in the toolbar.
- 3. Confirm the prompt with Yes to disable the switching rule.

# 3.5.5 Editing a rule

- 1. Select the switching rule in the rule overview.
- 2. Click on Edit rule in the toolbar.
  - $\rightarrow$  The Edit switching rule window appears.

🛞 Edit swi	tching rule	×
Please det	emine the settings for the switch function.	
Name	Support enguiny	
Outpu	t signals:	
Z- Unit :	3, tier 2	🖋 Edit
Logic	function for permanent light:	
AND-	Logic function with 1 input signals	🖋 Edit 🛛 👻
Logic	function for blinking light:	
AND-	Logic function with 2 input signals	🖋 Edit 🛛 👻
lf both	logic functions are true activate the following output signal: Permanent light Blinking	
Cir Car	ise roel	Ok Save

- 3. Enable or disable **Enable switching rule** to immediately enable or disable the switching rule.
- 4. Adapt the Output signals by clicking on Edit, if necessary.



- 5. Adapt the Logic function for permanent light and the Logic function for blinking light: by clicking on Edit, if necessary.
- 6. Remove the Logic function for permanent light and the Logic function for blinking light by expanding the Edit button and clicking on Delete, if necessary.
- 7. Select whether the output signal should be switched as a **Permanent light** or **Blinking**, if both logic functions apply.
- 8. Click OK to apply the settings.

# 3.5.6 Duplicating a rule

- 1. Select the switching rule in the rule overview.
- 2. Click on Duplicate rule in the toolbar.
- 3. Confirm the prompt with Yes.
  - $\rightarrow\,$  The Duplicate switching rule window appears.

# **WERMA**

(#) Duplicate switching rule	×
Please determine the settings for the switch function.	
Name New rule 1 Finable switching rule	
Output signals:	
- Unit 3, tier 2	🖋 Edit
Logic function for permanent light:	
AND-Logic function with 1 input signals	🖋 Edit 🔻
Logic function for blinking light:	
AND-Logic function with 2 input signals	🖋 Edit 🛛 👻
If both logic functions are true activate the following output signal: Permanent light  Blinking	
Close Cancel	V Ok Save

- 4. Enter the name of the switching rule in the Name field.
- 5. Enable or disable Enable switching rule to immediately enable or disable the switching rule.
- 6. Adapt the Output signals by clicking on Edit, if necessary.

(i) Only one switching rule can be enabled on an output signal.

- 7. Adapt the Logic function for permanent light and the Logic function for blinking light: by clicking on Edit, if necessary.
- 8. Remove the Logic function for permanent light and the Logic function for blinking light by expanding the Edit button and clicking on Delete, if necessary.
- 9. Select whether the output signal should be switched as a **Permanent light** or **Blinking**, if both logic functions apply.
- 10. Click OK to apply the settings.

## 3.5.7 Deleting a rule

(i) The WIN slave control remains in the last transmitted status once a switching rule has been deleted.

- 1. Select the switching rule in the rule overview.
- 2. Click on **Delete rule** in the toolbar.
- 3. Confirm the prompt with Yes to delete the rule.

# 3.6 Routing

The **Routing** module shows an overview of the WERMA-WIN network. A tree structure shows the structure and the quality of the wireless connections between the individual devices.



Design	Description
WIN USB	WIN master
WIN TCP/IP	WIN ethernet master
00-0E-39	WIN slave, WIN slave control, WIN slave performance
WIN USB 00-0E-39	Good radio connection between the devices.
USB 00-0E-39	Weak radio connection between the devices.

# **WERMA**

Design	Description
WIN USB 00-0E-39	Poor radio connection between the devices.

To ensure the best possible radio connection, every WIN slave automatically looks for the best transmission path to the WIN master. Other WIN slave can act as repeaters and forward the radio signal to improve the radio connection or increase the range.

Direct connection:

 $(\mathbf{i})$ 

(i)

i

Connection via another WIN slave as a repeater:





A WIN slave can set up a connection to the WIN master via at most two more WIN slaves.

Unconnected but configured WIN slaves are displayed in the lower part of the window, if there are any.

<		
Disconnected	WIN slaves	
00-0D-46	00-0E-39	
<		
Ready.		

# 3.6.1 Displaying connection status

The connection status and the connection type of all WIN masters saved in the WERMA-WIN database can be displayed in the **Connection status** window.

1. Click on **Connection status** in the toolbar.

 $\rightarrow$  The **Connection status** window appears.

¢₩	) (	Conne	ection status				×
Γ	Τ		Name	Connection type	Date/Time	Message	
	Þ	$\checkmark$	Production	USB	08/09/2017 09:07:30	Connected to computer 'DESKTOP-6M5NQLP'.	
	1	8	Warehouse	TCP/IP	08/09/2017 10:08:26	Device not be found in network.	
							Close

# 3.6.2 Optimising wireless communication

Wireless communication can be improved by implementing the following measures:

- Position the WERMA-WIN devices within sight of each other.
- Remove as many metal surfaces as possible between the WERMA-WIN devices.
- Position WIN master as ideally as possible.
- Poor radio connections can be improved by the use of a repeater (WIN slave).
- Connect any parts of the system outside of radio range via a further WIN master.

# 3.7 Settings

The functions of WERMA-WIN can be modified under Settings.



Settings can be protected by a password to prevent unauthorised access.

To call up Settings:

- 1. Click **Settings** in the toolbar.
  - ightarrow The **Settings** window appears.



neral Vie	ws Status tran	smission Sound	Reports	WIN devices	Database	Shifts	Fault conditions	Functions	
	Languag	e English		·	())(5)				
At Sta	(#) 🧐 09:38		or product ( ninimised w llowing Vie	updates at Star indow in Syster w:	tup of WER	MA-WIN			
Mod	ule <no select<="" td=""><td>tion&gt; n fullscreen mode</td><td>~</td><td>V</td><td>fiew Main v View 1 View 2</td><td>view L</td><td></td><td></td><td>^</td></no>	tion> n fullscreen mode	~	V	fiew Main v View 1 View 2	view L			^
Time inter	val		~		View 3	3			~
Defin	e the name and Off	color of the Gener	al condition	ns:	Pe	fault set	ing for shift select	ion in the Producti break times	ivity and
	nnection error	Connection erro	r	~	<i>P</i> 0	) only pr	oductive times		

# 3.7.1 General

Various settings can be modified on the **General** tab.

🛞 Setti	ings											$\times$
General	Views	Status trans	mission	Sound	Reports	WIN devices	Database	Shifts	Fault conditions	Functions		
	(#)	Languag		glish Search fo Display m	or product	vindow in Syster	tup of WERI n tray only	MA-WIN				
A	At Startup	of WERMA	-WIN, op	en the fol	lowing Vie	W:						
	Module	<no select<="" th=""><th>ion&gt;</th><th></th><th><math>\sim</math></th><th>V</th><th>iew Main v</th><th colspan="4">Main view</th><th>^</th></no>	ion>		$\sim$	V	iew Main v	Main view				^
		Open in	fullscree	n mode			View 2					
Time	interval				~		View 3 View 4					~
D	efine the Conner	e name and o Off ction error	Off Connec	tion error	al conditio	ns:	Per Contraction Co	fault sett do not only pr	ing for shift select take into account oductive times	ion in the Pr	oductivity ar	nd F
5	Cance	<u>I</u>									OK Save	

The following settings can be modified:

- Program interface language
- Search for updates
- Minimise program window in the system tray
- View at program start
- Description and colour of general statuses
- Standard setting for shift selection

## 3.7.1.1 Selecting the language of the program interface

1. Select the language in the Language dropdown list.

- 2. Click on OK to save the settings.
  - $\rightarrow$  WERMA-WIN is restarted and appears in the selected language after the restart.

## 3.7.1.2 View at program start

It is possible to set which module is to be automatically displayed in which view when the program starts.

The following views are possible:

Module	Main view	More views	Time interval	Full screen mode
Control station	~	~		
Productivity	~	~	~	
Runtime	~	~	~	
Job	~			
Control	~			
Routing	~			

- 1. Select the desired module in the Module selection list.
- 2. Select the required view in the View list.
- 3. If the **Runtime** or **Productivity** module has been selected, select the required time interval in the **Time interval** selection list.
- 4. Enable **Open in fullscreen mode** if WERMA-WIN is to be started in full-screen mode.
- 5. Click on **OK** to save the settings.

## 3.7.1.3 Minimising program window in the system tray

The minimised WERMA-WIN program window can be displayed in the taskbar (Windows standard) or in the system tray.



To display the minimised WERMA-WIN program window in the system tray.

- 1. Enable Display minimised window only in the system tray.
- 2. Click on OK to save the settings.

## 3.7.1.4 Updates

WERMA-WIN can search for updates after every program startup.

- 1. Enable Search for product updates at Startup of WERMA-WIN.
- 2. Click on OK to save the settings.



(i) The computer must be connected to the internet and must be able to access www.werma.com to search for updates.

## 3.7.1.5 General statuses

The descriptions and colours of the generals statuses **Off** and **Connection error** can be adapted individually.

Define the name and o	olor of the General cond	litions:	
Off	Off	~	<i>~</i>
Connection error	Connection error	~	<i>~</i>

- 1. Select one of the default texts in the Off or Connection error selection list or enter an individual text.
- 2. Click on Select colour 2 and define the required colour.
- 3. Click on **OK** to save the settings.

## 3.7.1.6 Shift selection default setting

The setting in the **Shift** filter can be set as a default system-wide for the **Runtime** and **Productivity** modules.



- 1. Select the required option.
- 2. Click on **OK** to save the settings.
  - → The selected setting is used as the default in the Shift filter in the **Runtime** and **Productivity** modules.

Time interval	Last hour	~
Shift	do not take into account break ti	$\checkmark$

## 3.7.2 Views

The views of the **Control station**, **Productivity** and **Runtime** modules can be created and adapted in the **Views** tab.

🕽 Setti	ngs									
eneral	Views	Status transmission	Sound	Reports	WIN devices	Database	Shifts	Fault conditions	Functions	1
Name										💠 Add
View 1										🖉 Edit
View 2										J Luit
View 3										🗯 Delete
View 4										
View 5										
View 6										
View 7									,	
View 8										📄 Сору
View 9										
View 1	0									
									, i i	
										1 Move up
									[	V Move down
6	Cance	21								ок 🖉
1	Close									Save

The following functions are possible:

- Add views
- Copy views
- Rename views
- Sort views
- Delete views

## 3.7.2.1 Adding a view

- 1. Click on Add.
  - $\rightarrow$  The **Create view** window appears.

Create view	×
Name	
Cancel Close	OK Save

2. Enter the name of the view in the Name field.

(i) If the name of the view contains a &, then it must be entered as &&. The name Warehouse 1 & Warehouse 2, for example, must be entered as Warehouse 1 && Warehouse 2.

3. Click on OK to add the view.

## 3.7.2.2 Copying views

- 1. In the list of views, select the view to be copied.
- 2. Click on Copy.
  - ightarrow The **Copy view** window appears.

# **WERMA**

Copy view			x
Name	Copy of Assembly		
	ancel	OK Save	

- 3. In the Name field, adapt the name of the view.
- 4. Click on OK to copy the view.

## 3.7.2.3 Renaming views

- 1. In the list of views, select the desired view.
- 2. Click on Edit.
  - $\rightarrow$  The **Edit view** window appears.

Edit view		×
Name	Assembly	
	Cancel Close	OK Save

3. In the Name field, adapt the name of the view.

If the name of the view contains a &, then it must be entered as &&. The name Warehouse 1
 & Warehouse 2, for example, must be entered as Warehouse 1 && Warehouse 2.

4. Click on **OK** to save the setting.

## 3.7.2.4 Sorting views

You can adapt the order of the views in the toolbar.

1. In the list of views, select the desired view.

2. Click Move up or Move down to move the view.

Views arranged at the top of the list of view appear first in the toolbar.

## 3.7.2.5 Deleting views

- 1. In the list of views, select the view to be deleted.
- 2. Click Delete.

(i)

3. Confirm the prompt with Yes.

# 3.7.3 Status transmission

A status transmission can be enabled by e-mail for individual WIN slaves in the **Control station** module. The necessary settings can be modified in the **Status transmission** tab. The transfer of the status transmission to an external program using *WINtoApplication* can also be configured.

(#) Settings										$\times$
General Views	Status transmission	Sound	Reports	WIN devices	Database	Shifts	Fault conditions	Functions		
✓ Transmit Recipient Sender	status by E-Mail mail@werma-v	vin.com			J Edit Detail	5				
Transmit stat WINtoApplica when a tier s reached or a	tus to application ation allows additions tate of a WIN slave n order progression i	al externa changes, is exceed	l program a counte ed.	ns to start r value is	3 Start	WINtoA	Application			
Close	_								OK Save	

The following settings are possible:

- Disable e-mail transmission
- Modify settings of integrated e-mail transmission function
- Configure own SMTP server for the transmission of e-mails
- Modify message texts
- Configure WINtoApplication

## 3.7.3.1 Disabling e-mail transmission

- 1. Click on Edit.
  - $\rightarrow$  The **E-mail settings** window appears.



🛞 E-Mail settin	ngs		×
Server settings	Message		
🔿 Disable	e mail transmissi	n	
Send a	n E-Mail via bui	It-in transmitting feature (recommended)	
⊖ Send a	in E-Mail with yo	ur own SMTP server	
E-Ma	ail address(es	) of recipients and sender	
Recip	pient	You may enter multiple F-Mail addresses by delimiting with a semicolon (·)	
Send	er	mail@wema-win.com	
Web	proxy	<no proxy="" web=""> Configure</no>	
		Send test E-Mail	
Pleas	e refer to the in	formation in the manual regarding this function.	
Close	<u>el</u>	OK Save	

- 2. Select Disable mail transmission option.
- 3. Click on **OK** to save the setting.

## 3.7.3.2 Integrated transmission function

The e-mail transmission function integrated in WERMA-WIN is restricted as follows:

- Max. 10 recipients per e-mail
- Max. 100 different recipients in seven days
- Max. 240 e-mails in 4 hours

(j) If more than 240 e-mails are sent in 4 hours, then message delivery is interrupted for one hour. The messages that accumulate during the interruption are not subsequently sent.

Transmission using your own SMTP server is recommended if the transmission function is to be used beyond these limits.

#### 1. Click on Edit.

 $\rightarrow$  The **E-Mail settings** window appears.

(#) E-Mail settings		×
Server settings M	issage	
<ul> <li>Disable ma</li> <li>Send an E</li> <li>Send an E</li> </ul>	il transmission Mail via built-in transmitting feature (recommended) Mail with your own SMTP server	
E-Mail a	ddress(es) of recipients and sender	
Recipien		
	You may enter multiple E-Mail addresses by delimiti	ng with a semicolon (;)
Sender Wah are	mail@werna-win.com	
web pro	y sto web proxy>	
	Send test E-Mail	
Please re	fer to the information in the manual regarding this function.	
Close		Save

- 2. Select Send an e-mail via built-in transmitting feature (recommended) option.
- 3. Enter e-mail recipients in the **Recipient** field.

í	Multiple recipients are separated by a semicolon (;).
$\bigcirc$	If no e mail recipient is specified, the recipient must be specified when enabling status
	transmission for the respective WIN slave.
<b>4.</b> Ad	lapt the <b>Web proxy</b> by clicking on <b>Configure</b> if necessary.
i	Clicking on Send test E-Mail sends a test e-mail to test the settings entered.

5. Click on OK to save the settings.

### Configuring the web proxy

If a web proxy is used in the network, the access data can be entered in the **Configuration of web proxy** window.

# 

Configuration of web proxy × The 'WERMA WIN Server Service' needs to access https-websites in order to send an E-Mail via built-in transmitting feature. Please enter the required configuration here if your network requires the usage of a web proxy.				
Configuration of htt	ps web proxy			
Server				
Port	8080 🗘			
User				
Password				
	Check			
The configuration will be internet service provide	e provided by your network administrator or er.			
Cancel Close	Ok Save			

1. Enter access data into the respective fields.



Your network administrator will provide the requisite data.

### 2. Click on Check.

- $\rightarrow$  WERMA-WIN checks the entered data.
- 3. Click on **OK** to save the settings.

## 3.7.3.3 Custom SMTP server

- 1. Click on Edit.
  - $\rightarrow$  The **E-mail settings** window appears.

🛞 E-Mail settin	gs		×
Server settings	Message		
<ul> <li>Disable</li> <li>Send ar</li> <li>Send ar</li> </ul>	mail transmissio n E-Mail via built n E-Mail with yo	n -in transmitting feature (recommended) ur own SMTP server	
E-Mai	il address(es)	) of recipients and sender	
Recipi	ient		
		You may enter multiple E-Mail addresses by delimiting with a semicolon (;)	
Sende	er		
web p	oroxy	Conliguie	
		Send test E-Mail	
Please	e refer to the inf	ormation in the manual regarding this function.	
Cancel Close	<u>L</u>	CK Save	

**2.** Select **Send an e-mail with your own SMTP server** option.  $\rightarrow$  The fields to adapt your custom SMTP server appear.

🛞 E-Mail	settings		×
Server sett	ings Message		
OD	isable mail transmissior		
O S	end an E-Mail via built-	in transmitting feature (recommended)	
) (S	end an E-Mail with you	r own SMTP server	
1	E-Mail address(es)	of recipients and sender	
	Recipient		
		You may enter multiple E-Mail addresses by delimiting with a semicolon (;)	
	Sender		
		(your E-Mail address)	
	Your E-Maill server	data	
	Server name		
		(alternative Server IP-Address)	
	Port	25 文 Standard port 25	
	Access data (if req	uired)	
	User name		
	Password	Send test E-Mail	
	The configuration for the network administrator of	e E-Mail server and account information will be provided by your r internet service provider.	
	Please note: All E-Mail	s are sent by the Server Service.	
<b>)</b>	Cancel	OK Save	

3. Enter e-mail recipients in the **Recipient** field.



(i) Multiple recipients are separated by a semicolon (;).

- 4. Enter the sender address in the **Sender** field.
- 5. Enter the details of your SMTP server in the respective fields in the Your E-Mail server data and Access data (if required) areas.

(i) Your network administrator or internet provider can provide the requisite data.

(i) Clicking on **Send test E-Mail** sends a test e-mail to test the settings entered.

6. Click on OK to save the settings.

## 3.7.3.4 Modifying message texts

The subject and the text of the e-mail can be modified by pasting individual texts and different placeholders.

#### 1. Call up the **Message** tab.

★ E-Mail settings          Server settings       Message         Subject       Message from %name% (%reason%)         Message text       The WIN transmitter %name% is now in the following state:         tier 4 (%statename4%): %state4% tier 3 (%statename3%): %state3% tier 2 (%statename2%): %state1% tier 1 (%statename1%): %state1%         \performance}Actual quantity: %counter%         Job number: %order-description% Job progression: %order-progression% Total quantity: %order-total%{/performance}         Message sent at %time%	The following placeholders can be used: %name%: WIN slave name %time%: Date and time %reason%: reason for sending mail States (0=off, 1=on, 2=blinking, 3=error): %state1%: State of tier 1 %state2%: State of tier 2 %state2%: State of tier 3 %state4%: State of tier 3 %state4%: State of tier 3 %statename1%: Name of tier 1 %statename2%: Name of tier 3 %statename2%: Name of tier 3 %statename2%: Name of tier 3 %statename3%: Name of tier 3 %statename4%: Name of tier 4 For WIN slave performance: %counter%: counter value %order/description%: description %order-description%: description %order-description%: description %order-progression%: job progression	×
Close		OK Save

2. Enter the text and placeholders required in the Subject and Message fields.

## (i) Clicking on **Reset** resets the subject and the message text to the default values.

**3.** Click on **OK** to save the setting.

#### Example of a message text:

The WIN slave %name% changed its status at %time%.

Tier 4 (%statename4%): %state4%

Tier 3 (%statename3%): %state3%

Tier 2 (%statename2%): %state2%

Tier 1 (%statename1%): %state1%

#### **Placeholders/Parameters**

The following placeholders/parameters are available:

Placeholders/Parameters	Description
%slaveid%	ID of the WIN slave
%name%	Description of the WIN slave
%time%	Date and time of status transmission
%reason%	Reason for status transmission
%state1%	Status of tier 1
%state2%	Status of tier 2
%state3%	Status of tier 3
%state4%	Status of tier 4
%statename1%	Description of tier 1
%statename2%	Description of tier 2
%statename3%	Description of tier 3
%statename4%	Description of tier 4
%counter%	Counter status of the job
%order-id%	JobID
%order-number%	Jobnumber
%order-description%	Description of job
%order-total%	Total amount of job
%order-progression%	Job progression

(i) All placeholders/parameters start and end with the character %.

## 3.7.4 Sound

Status change messages can be indicated by playing an individual signal tone.


(#) Setti	ings									×
General	Views	Status transmission	Sound	Reports	WIN devices	Database	Shifts	Fault conditions	Functions	
		Play the following sour No sound Default system : Selected sound	nd file wh sound	en new sta	atus change me	op	ssued:			
5	Cance Close	el								OK Save

WERMA-WIN offers a pre-selection of signalling sounds. An overview of the pre-selection is displayed by clicking on ?

- 1. Select which sound is to be played when a status change message appears.
- 2. Select the **Selected sound** option and click on **Browse** to play an individual sound.
- 3. Select the file in the appropriate format and click on Open.

(i) Files in the popular audio formats (.mp3, .wav etc.) can be used.

(i) The selected sound can be tested by clicking on **Play** and **Stop**.

4. Click on OK to save the settings.

## 3.7.5 Reports

(i)

Individual headers and footers can be saved for reports.

(#) Setti	ings											×
General	Views	Status tr	ansmission	Sound	Reports	WIN devices	Database	Shifts	Fault conditions	Functions		
Com	ipany nar	ne	WERMA	Signalted	hnik Gmbl	H + Co. KG						
Com	ipany log	0					(	) VI	/ERM	Δ 差	Select Reset	
5	Cance Close	21									Arr OK Save	

- 1. In the Company name field, enter the text for the footer.
- 2. Click **Select** to paste an individual company logo into the header.

(i) Graphics in the popular graphic formats (.jpg, .png etc.) can be used. The graphic file may not exceed 1 MB. The height and width are each restricted to 2,000 pixels.

Clicking **Reset** resets all settings to the default settings (WERMA logo and WERMA company name).

**3.** Click on **OK** to save the settings.

# 3.7.6 WIN devices

WERMA-WIN devices which are no longer in the WERMA-WIN network can be deleted. All data recorded by these devices will be deleted from the WERMA-WIN database.



S	ettings									
er	al Views	Status transmission	Sound	Reports	WIN devices	Database	Shifts	Fault conditions	Functions	
	Name		C	onnected	to WIN master		IP-Addre	ess		💢 Delete
•	Machine 1		P	roduction						
	Machine 2		P	roduction						
	Machine 3		P	roduction						
	Production									
_										

WIN masters can only be deleted if the power supply to the WIN master is disconnected. WIN slaves can only be deleted if the power supply to the WIN slave is disconnected.

1. In the list of WERMA-WIN devices, select the WERMA-WIN device to be deleted.

(i) Several WERMA-WIN devices can be selected by pressing CTRL.

#### 2. Click Delete.

(i)

3. Confirm the prompt with Yes.

# 3.7.7 Database

Various settings of the WERMA-WIN database can be adapted and the device data backed up or imported in the **Database** tab.

(#) Setti	ings									×
General	Views	Status transmission	Sound	Reports	WIN devices	Database	Shifts	Fault conditions	Functions	
	Databa Connect	ion settings The	e databas abase.	e assistan	t can be used to	edit the co	nnection	settings for the		
4	Export Save as	devices The swi	e Import/E tching rule rkstation.	Export opti es from an	on allows you to available install	transfer all o ation to a ne	configure w install	ed WIN devices an ation at a different	d	
1	Import Load fro	<b>devices</b> m file								
	Save li Save as	i <b>nk file</b> Us file	e 'Save lir	nk file'to e	xport the conne	ction informa	ition.			
°	Clean of Delete of	data By Id files pro	clicking "( cess redu	Clean data ices the re	', you can remo quired database	ve all old dat e size.	a from th	e database. This		
5	Cance Close	21							,	Arr Save

The following functions are available:

- Adapt connection settings in the Database assistant
- Export devices
- Import devices
- Create link file
- Clean old data

## 3.7.7.1 Database assistant

The database assistant can be used to edit the connection settings for the database.



#### 1. Click on **Database assistant**.

2. Confirm the prompt with Yes.

 $\rightarrow$  WERMA-WIN is completed and the assistant appears to set up the database.

# 

🛞 WERMA-WIN data	base setup	×
Database setup	G	D
$\checkmark$	Database installed The local database is installed	
	Use local database server Reset connection settings	
	Connect database Connect to existing database Choose this option to connect to an existing WERMA- WIN database with a Link File.	
	IT expert installation_ Further installation options	
	Save Link Filee to Save as file	
	Close Cancel	

The wizard to set up the database offers the following functions:

Function	Description
Use local database server	Reset existing connection settings.
Connect database	Connect to an existing WERMA-WIN database and
	thus enable multi-user access to the database.
IT expert installation	Enable Expert installation and adapt the saved
	connection settings.
Save Link File to	Save the link file to connect other workplaces to the
	WERMA-WIN database.

## 3.7.7.2 Exporting devices

All device configurations and switching rules can be exported to apply all configured WERMA-WIN devices from an existing installation to a new installation or to another workplace.

- **1.** Click on **Export devices**.
- 2. Select the filename and storage location for the export file.
- 3. Click on Save.

## 3.7.7.3 Importing devices

(i) During import, all existing device configurations and switching rules are overwritten.

## 1. Click on Import devices.

- 2. Select the saved export file.
- 3. Click on Open.

4. Confirm the prompt with Yes.

## 3.7.7.4 Creating a link file

The link file lets you connect other WERMA-WIN installations on other workplaces to the WERMA-WIN database.

- 1. Click on **Save link file**.
- 2. Select the file location for the link file.

## 3.7.7.5 Cleaning data

Old data can be removed and deleted from the WERMA-WIN database. You can specify from what point in time the data is to be kept.

### 1. Click on Clean data....

 $\rightarrow$  The **Data Removal** window appears.

🛞 Data Removal	×
Use the Data Removal specified number of day	option to delete all data older than the ys.
Save the last	30 🚖 days
Cancel Close	OK Delete

- 2. Select the time interval from when the data is to be kept.
- 3. Click on OK.
- 4. Confirm the prompt with Yes.

# 3.7.8 Shifts

Shifts can be created and assigned to the individual WIN slave for analysis in the **Runtime** and **Productivity** modules.

Different time periods and pause times can be combined in a shift. The time periods can be entered differently for each day of the week and span more than one day.



🕷 Sett	ings										
ieneral	Views	Status transmission	Sound	Reports	WIN devices	Database	Shifts	Fault co	nditions	Functions	
Here y	ou can en	iter, edit, or delete la	yers for 1	WERMA-W	/IN.						
		Shifts			Work	ing hours					
💠 A	dd					S	tart			End	
/ Ec	lit				Day			Time	Day		Time
<u>.</u>											
<b>35</b> Di	elete										
Contraction	ору										
<u>м</u>	ove up ove dowr										
6		<u>4</u>								<b></b>	OK

The **Shifts** list displays all currently available shifts. Deleted shifts are not displayed.

## 3.7.8.1 Setting up a shift

#### 1. Click on Add.

(i)

 $\rightarrow$  The **Set up new shift** window appears.

Shif	thame				
Wor	rking hours Start		End		MP Dalata
	Day	Time	Day	Time	26 Delete
*	<please select=""></please>		<please select=""></please>		

- 2. Enter the name for the shift in the Shift name field.
- 3. Click on <please select> in the Start column in the Working hours list and select the required day.
- 4. Enter the time at which the shift is to start in the Time column.
- 5. Select the Day and the Time at which the shift is to end in the End area.

(i) Shifts can be defined to span more than one day, for instance Sunday 22:00 until Monday 05:00.

(i)

Pause times can be defined by leaving corresponding gaps in the time periods on a respective day.

St	art	E	nd
Day	Time	Day	Time
Monday	05:00	Monday	09:00
Monday	09:30	wonday	13:30

- 6. Press the Tab key to enter a new line.
- 7. Enter the times for all other days.
- 8. Click on OK to save the shift.

(i) You can also assign shifts to the individual WIN slave in the **Control station** module in the Configuration.

## 3.7.8.2 Modifying shifts

(i) If a shift, which is already assigned to a machine, is to be changed, then the changes will have a retrospective impact on all analysis, representations and reports. No history is saved of the changes to the shift.

WERMA recommends that you do not change shifts and, instead, create a new shift.

- 1. Select the required shift in the Shifts list.
- 2. Click on Edit.
  - $\rightarrow$  The **Edit shift** window appears.

hif	t name	Day shift					
Vor	rking hours						
		Start		End			🗯 Delete
	Day		Time	Day	Time		
	Wednesday		05:00	Wednesday	09:00	^	
	Wednesday		09:30	Wednesday	11:00		
	Thursday		05:00	Thursday	09:00		
	Thursday		09:30	Thursday	11:00		
	Friday		05:00	Friday	09:00		
Ø.	Friday	~	09:30	Friday	11:00		
*	<please select=""></please>			<please select=""></please>			

- 3. Modify the shift as required.
- 4. Click on **OK** to save the settings.

# **WERMA**

## 3.7.8.3 Copying shifts

- 1. Select the shift to be copied in the Shifts list.
- 2. Click on **Copy**.
  - $\rightarrow$  The **Copy shift** window appears.

		-			
orki	ng hours		C-4		<b>10</b> - 1 -
ŀ	Start	Time	Enu	Time	X Delete
-	Jay	Time	Day	Time	
	Monday	05:00	Monday	09:00	<u>^</u>
Ν	Monday	09:30	Monday	11:00	
1	Tuesday	05:00	Tuesday	09:00	
1	Fuesday	09:30	Tuesday	11:00	
١	Wednesday	05:00	Wednesday	09:00	
١	Wednesday	09:30	Wednesday	11:00	
1	Thursday	05:00	Thursday	09:00	
1	Thursday	09:30	Thursday	11:00	
F	Friday	05:00	Friday	09:00	
F	Friday 🗸	09:30	Friday	11:00	<b>~</b>

3. Modify the name of the shift in the **Shift name** field.

Modify the **Time periods** of the shift if you need to.

4. Click on **OK** to copy the shift.

## 3.7.8.4 Sorting shifts

- 1. Select the required shift in the Shifts list.
- 2. Click Move up or Move down to move the shift.

Shifts arranged at the top of the list appear first in the selection list in the **Productivity** module.

## 3.7.8.5 Deleting shifts

(i)

(i) If a shift is to be deleted that is not assigned to a machine, then the data will be fully deleted from the database.

If a shift is to be deleted that is assigned to a machine, then the data is retained. The shift will no longer be displayed in the **Shifts** list.

- 1. Select the shift to be deleted in the Shifts list.
- 2. Click on Delete.
- 3. Confirm the prompt with Yes.

# 3.7.9 Fault conditions

Company-specific fault conditions (e.g. lack of material) can be defined for the creation of notes in the **Runtime** module. When an error occurs, it is possible to select from the predefined fault conditions.

💠 Add
🖋 Edit
🗶 Delete
Move up

**Use touch interface to assign fault conditions** must be enabled to show the display version for the **Touch interface** instead of the **Edit note** window in the event of an error. A defined fault condition can only be selected in this case.



# 3.7.9.1 Adding fault conditions

- 1. Click on Add.
  - $\rightarrow$  The Enter fault condition window appears.

(i)

# **WERMA**

(#) Enter fault condition	×
Description	
Colour	
Additional note	
	~
	$\sim$
Cancel Close OK	e.

- 2. Enter the fault condition in the **Description** field.
- 3. Select a **Colour** for the fault condition.
- 4. Enter additional information in the Additional note field if necessary.
- 5. Click on **OK** to save the settings.

## 3.7.9.2 Modifying fault conditions

- 1. Select the required fault condition in the list of fault conditions.
- 2. Click on Edit.
  - $\rightarrow$  The Edit fault condition window appears.

🛞 Edit fault	condition	×
Description Colour	Material	
Additional not	2	
		^
		~
	ncel	OK Save

- 3. Modify the fault condition as required.
- 4. Click on **OK** to save the settings.

## 3.7.9.3 Collating fault conditions

- 1. Select the required fault condition in the list of fault conditions.
- 2. Click on Move up or Move down to move the fault conditions.

Fault conditions arranged at the top of the list of fault conditions appear first in the selection list in the **Runtime** module.

## 3.7.9.4 Deleting fault conditions

- 1. In the list of fault conditions, select the fault condition to be deleted.
- 2. Click Delete.
- 3. Confirm the prompt with Yes.

# 3.7.10 Functions

Complete modules or individual functions of modules that are to be available at a workplace can be enabled or disabled in the **Functions** tab.

Settings can also be protected by a password to prevent unauthorised access.



## 3.7.10.1 Enabling and disabling modules or functions

All the functions of the module are disable as soon as a module is disabled. This also applies to functions where the checkbox is enabled in the **Enabled** column.

## **Enabling modules**

(i)

1. Enable the checkbox beside the required module in the list.

Function	Enabled
Control station	~
Commissioning and configuration devices	<b>&gt;</b>
Configuration change notification	>
Status transmission configuration	>
Add or Remove device from view	<b>&gt;</b>
Configuration of the device position	>
Select background image	>
Manual control WIN slave control	>
Productivity	4
Runtime	23
Create, edit, and delete comment/fault conditions	$\checkmark$



2. Click on OK to save the settings.

## Enabling individual functions of a module

1. Enable the checkbox beside the required function in the list.

Function	Enabled
Show 'Control station' module	<ul> <li>Image: A start of the start of</li></ul>
-> Manual switching of WIN slave control	×
Show 'Productivity' module	<b>↓</b> s²

2. Click on OK to save the settings.

### **Disabling modules**

1. Disable the checkbox beside the required module in the list.

Function	Enabled
Control station	<ul> <li>Image: A start of the start of</li></ul>
Commissioning and configuration devices	$\checkmark$
Configuration change notification	<b>&gt;</b>
Status transmission configuration	<b>&gt;</b>
Add or Remove device from view	$\checkmark$
Configuration of the device position	$\checkmark$
Select background image	<b>&gt;</b>
Manual control WIN slave control	<b>&gt;</b>
Productivity	N
Runtime	Jos J
Create, edit, and delete comment/fault conditions	$\checkmark$

2. Click on **OK** to save the settings.

#### Disabling individual functions of a module

1. Disable the checkbox beside the required function in the list.

Function	Enabled
Show 'Control station' module	$\checkmark$
-> Manual switching of WIN slave control	
Show 'Productivity' module	Jr3

2. Click on OK to save the settings.

## 3.7.10.2 Protecting settings with a password

- 1. Click on **Define**.
  - $\rightarrow$  The **Enter password** window appears.

🛞 Enter password		×
Enter a password wh Settings dialog is ope used on every Client	nich will be requested before the ened. The same password is	
Old password		
New password		
Repetition		
Close	A Save	

2. Enter the existing password in the Old password field.

- (i) If no password has been assigned, leave the **Old password** field empty.
- 3. Enter a new password in the **New password** field and in the **Repetition** field.
- 4. Click on **OK** to protect the settings with the password entered.

## 3.7.10.3 Deleting a password

You can delete a password if access to the settings is to be possible again without a password once a password has been set.

- 1. Click on **Delete**.
- 2. Confirm the prompt with Yes.

## 3.7.10.4 Resetting a password

You can reset the password system-wide if you have lost the password and you can no longer open the settings.

1. Open the WERMA-WIN Administration Console on the server PC.

	WERMA-WIN Admin	istration Console 0.1.2.3 - WERMA Signaltednik GmbH + Co. KG $>>>$ Untested developer version (Use at your own risk) $<<<$	-	×
XML interface Resi Interface Syste	Annual Contact	Info		~
Interfaces Syste	em Support			
H C 🚍	🧠 🛞 (			ĸŔ



- 2. In the toolbar, click on **Reset password**.
- 3. Enable I have understood and wish to reset the system password.
- 4. Click on Reset password.

(i)

(i)

The settings can be changed by all users once the password has been reset. WERMA recommends immediately *Issuing a new password*.

# 3.8 Reports and exports

In the print preview, the export can be adapted or exported before printing.

Company name and logo can be modified under Settings.

Ø										Print pre	eview 'F	luntime - stat	uses'										- 1	a ×
Print Quick Sca Print Print T	Margins Page	Orientation	Size	Find Thu	umbnails	Editing Fields Navi	First Pro Page P	evious age	Next I Page P	Last Page	<b>▶</b> ∛] ⊲	Many Pages	Q Zoom Out Zoom	Zoom	æ Zoom In	Waten Page Bad	mark kground	Export To + Exp	E-Mail As +	Close Close				
																								^
		<b>Runti</b> Time period I Hauptansich	<b>me -</b> trom 08.11 t	<b>Stati</b> 2018 12:0	USES 0:09 to 08	<b>5</b> 3.11.2018	15:00:09										(#		EF	RMA				
		Machine				Start		End				Duration	Tier 1		Tier 2		Tier 3		Tier 4					
		Machine 1 Machine 2 Machine 3 Machine 2 Machine 2 Machine 2 Machine 2				08.11.201 08.11.201 08.11.201 08.11.201 08.11.201 08.11.201 08.11.201	8 12:00:09 8 12:00:09 8 12:00:09 8 12:01:05 8 12:25:25 8 12:25:28 8 12:25:28 8 12:29:37	* 08.1 * 08.1 * 08.1 08.1 08.1 08.1 08.1	1.2018 12 1.2018 12 1.2018 12 1.2018 12 1.2018 12 1.2018 12 1.2018 12 1.2018 12	2:29:46 2:01:05 2:29:46 2:25:25 2:25:28 2:29:37 2:30:41	29 29 24 4	min. 37 sec. 57 sec. min. 37 sec. min. 20 sec 3 sec. 4 min. 9 sec 1 min. 4 sec	Operatio Operatio Tier 1 Operatio	nal nal	Error		Job input							
Function	n			D	)esc	cript	ion																	
Print																								
		P		P	rint	rep	ort.																	
		Print		T	hep	orint	tset	ting	gs c	an	be	ado	apte	ed.										
		Quick Print		P	rint	rep	ort c	on t	he	de	fai	ult pr	inte	r wi	thou	ut ad	lapt	ing	prir	nt se <sup>.</sup>	Iting	gs.		
Page Se	etting	s																						
		Scale		Z	oor	n int	to oi	τ zo	om	OL	ut c	of the	erep	oort	as c	a per	cer	ntag	je o	or to p	ag	e wi	dth.	
		Margins		A	۸da	ptp	age	e m	arg	jins														

Function	n	Description
	Orientation	Adapt page orientation (portrait or landscape).
		Adapt paper size of the report.
	Size	Note: All reports are optimised for A4.
Naviga	lion	
	Find	Search for text in the report.
	Thumbnails	Show and hide miniature view of the report.
		Move to first page.
	First Page	
		Move to previous page.
	Previous Page	
		Move to next page.
	Next Page	
		Move to last page.
	Last Page	
Zoom		
	k	Enable default cursor.
	Ś	Enable the hand cursor to drag the print preview of the report with the cursor.
	্	Select the zoom cursor to zoom out of or zoom into the print preview.
	Many Pages	Display multiple pages in the print preview.
	Com Out	Zoom out of print preview.
	Zoom	Set zoom to a fixed value.
	Coom In	Zoom into print preview.
Backgro	ound	
		Paste a watermark into a report.
	Watermark	Delete a watermark in a report.
Export	I	1



Functio	n	Description						
		Export report.						
	Export To +	The export file format can be selected.						
	<b>F09</b>	Send report as e-mail attachment.						
	E-Mail As ▼	The e-mail attachment file format can be selected.						
Close								
	Close	Close print preview.						

# 3.8.1 Pasting a watermark

An individual text, an image or a combination of text and image can be used as a watermark.

- 1. Click on **Watermark** in the toolbar.
- $\rightarrow$  The **Watermark** window appears.

Watermark		×
	Text Watermark	Picture Watermark
	Text:	Y
	Direction: Forwa	ard Diagonal 🗸 Color:
	Font: Verda	nna 🗸 Size: 36 🗸
	Во	ld Italic
	Transparency (0-2	255): 50
	Position	Page Range
	🔿 In front	All O Pages:
	Behind	Enter page numbers and/or page ranges separated by commas. For example: 1,3,5-12
Clear All		OK Cancel

- 2. Enter the text on the Text tab and format it as required.
- 3. Upload a picture on the Picture tab and format it as required.
- 4. Select the position of the watermark in the Position area.
- 5. In the Page range area, select the pages on which the watermark is to be inserted.

(i) Multiple single pages are separated by a semicolon (;) (e.g. 3;5;7). Page ranges are specified by a dash (e.g. 3-5)

6. Click on OK to paste the watermark.

# 3.8.2 Deleting a watermark

- 1. Click on Watermark in the toolbar.
  - $\rightarrow$  The **Watermark** window appears.

	Text Watermark	Picture Watermark	
	Text: DR	AFT	>
	Direction: For	ward Diagonal 🗸 Color:	×
	Font: Ver	dana 🗸 Size: 36	*
		Bold Italic	
RBY	Transparency (	0-255):	50
~	· · · ·		
	Position	Page Range	
	◯ In front	All O Pages:	
	Behind	Enter page numbers and/or page separated by commas. For exam	e ranges iple: 1,3,5-12

- 2. Click on Clear All to delete the watermark.
- 3. Click OK to apply the settings.

# 3.8.3 File formats

The following file formats are available for export and as an e-mail attachment:

File format	Export	E-mail attachment
PDF file		~
HTML file		
DOCX file	~	~
Excel 2007 document	~	$\checkmark$
CSV file	~	$\checkmark$
Picture file	~	$\checkmark$

# 

# 3.8.3.1 PDF export options

PDF Export Options	×
Page range:	
Don't embed these fonts:	
Export editing fields to	o AcroForms
Convert images to JP	EG
Image quality:	Highest 🗸
PDF/A compatibility:	None
Password security:	(none) ····
Digital signature:	(none)
Application:	
Author:	
Keywords:	
Subject:	
Title:	
	OK Cancel

Option	Description
Page range	Limit page range for export with multi-page reports (e.g. 2-4).
Don't embed these	
fonts	
Export editing fields to	Export editing fields for AcroForms.
AcroForms	
Convert images to	Convert images to JPEG when exporting.
JPEG	
Image quality	Adjust image quality. A higher quality generates larger PDF files.
PDF/A compatibility	Select compatibility of the PDF file.
Password security	Protect PDF file with password.
Digital signature	Sign PDF file with a digital signature
Application	Name of the application that created the PDF (e.g. WIN)WERMA-WIN
Author	Author of the author of the exported PDF file
Keywords	Keywords for description of the contents
Subject	Subject c
Title	Title of the exported PDF file

# 3.8.3.2 HTML export options

HTML Export Options		
Export mode:	Single file	$\sim$
Page range:		
Page border color:	Black	~
Page border width:	1	$\sim$
Title:	Runtime - statuses	
Character set:	Unicode (UTF-8)	~
Remove carriage returns		
☑ Table layout		
Export watermarks		
Embed images in HTML		
	OK Cancel	

Option	Description		
Export mode	Single fileExport report as a single file.		
	Single file page-by-	Export report as a single file.	
	page         The individual pages are formatted as showing the individual pages ar		
		in the preview.	
	Different files	Export each page of the report as a separate	
Pago rango			
	Limit page range for export with multi-page reports (e.g. 2-4).		
Page border color	Define the colour of the page margins.		
Page border width	Define width of page margins.		
Title	Define the title of the export.		
Character set	Define the character set of the export.		
Remove carriage	Delete line breaks in HTML code.		
returns			
Table layout	Use tables for export layout		
Export watermarks	Issue watermark with export		
Embed images in HTML	Integrate images into the HTML file and do not save in a separate image		
	folder.		

# 3.8.3.3 DOCX export options

DOCX Export Options			
Export mode: Single file page-by-page			
Page range:			
Table layout			
Keep row height			
Export watermarks			
	ОК	Cancel	



Option	Description		
Export mode	<b>Single file</b> Export report as a single continuous file.		
	Single file page-by-	Export report as a single file.	
	page	The individual pages are formatted as shown in the preview.	
Page range	Limit page range for export with multi-page reports (e.g. 2-4).		
Table layout	Use tables for export layout		
Keep row height	Maintain line height for export with table layout		
Export watermarks	Issue watermark with export		

# 3.8.3.4 XLSX export options

( XLSX export options	×
C Export data only	
✓ Localised column hea	adings
Dates according to I	SO 8601
Formatted output	
Export mode:	Single file
Page range:	
Text export mode:	Value
Show table lines	
	OK Cancel
	[]

Option	l	Description	
Export	data only	Export data unformatted.	
	Localised column headings	Translate column headin	gs.
	Dates according to ISO 8601	Format dates according to ISO-8601 for- mat.	
Forma	tted output	Export data with formatti	ng.
	Export mode	Single file	Export report as a single file.
		Single file page-by- page	Export report as a single file.
			The indi- vidual pages are for- matted as shown in the preview.
	Page range	Limit page range for export with multipage reports (e.g. 2-4).	

Option	Description		
Text export mode	Text	Issue values	
		(e.g. dates)	
		as text.	
	Value	Issue values	
		(e.g. dates)	
		as values	
		with user-defi-	
		ned number	
		format.	
Show table lines	Show or hide grid	Show or hide grid lines in Microsoft <sup>®</sup>	
	Excel.		

# 3.8.3.5 CSV export options

CSV exp	ort options	×
Delimiter	Semicolon (;)	~
	ОК	Cancel

Option	Description
Delimiter	Define delimiters between the individual values.

# 3.8.3.6 Image export options

Image Export Options					
Image format:	PNG	$\checkmark$			
Resolution (dpi):	96	< >			
Export mode:	Single file	~			
Page range:					
Page border color:	Black	~			
Page border width:	1	< >			
	OK Cancel				

Option	Description				
Image format	Define the file format of the graphics export.				
	Possible formats:				
	- BMP				
	– EMF				
	– WMF				
	– GIF				
	– JPEG				
	– PNG				
	- TIFF				

# 

Option	Description	Description			
Resolution (dpi)	Define the resolution of the graphics export.				
	The higher the resolution, the better the image quality of the export, but the larger the file size of the export file.				
Export mode	Single fileExport report as a single file.Single file page-by-Export report as a single file.				
	page	The individual pages are formatted as shown in the preview.			
	Different filesExport each page of the report as a sepafile.				
Page range	Limit page range for export with multi-page reports (e.g. 2-4).				
Page border color	Define the colour of the page margins.				
Page border width	Define width of page mo	argins.			

# 4 Automation interfaces

WERMA-WIN has 3 automation interfaces.

The XML interface makes it possible to make data available to third-party programs or to import data from a third-party program into WERMA-WIN.

The WINtoApplication makes it possible for the statuses of a signal tower to be transmitted to an external application.

The WERMA-WIN CLI Tool makes it possible for external applications to switch a WIN slave control controlled by the program.

# 4.1 XML interface

The XML interface consists of an export and an *import* module. It is possible to enable or disable both modules separately.

Information about imports and exports currently in progress as well as the status of the XML interface is displayed in the *Interface status* area.

(i) The XML interface is set up on the (server) PC on which the WERMA-WIN server service is executed.

For optimum availability of the XML interface, WERMA recommends:

- Saving the export file or import file on a local data medium (not on a network drive).
- Setting up an exception in the virus scanner for the export file and the import directory so that the export file is not completely scanned on every export.
- Setting up write authorisation for the WERMA-WIN server service for the directory. The WERMA-WIN server service is executed under Windows user account Network Service.

WERMA-WIN does not archive the exported data. For error analysis purposes, WERMA recommends archiving the XML export files in the external system.

# 4.1.1 Export

During the export process changes to statuses, counter values and jobs are exported incrementally to an XML file. This sees a record written to the XML file for each change.

## 4.1.1.1 Configuring the XML interface

1. WERMA-WINOpen the Administration Console on the server PC.

# 

			WERMA-	WIN Adminis	stration Co	onsole 0.1.2.3 - WERMA Signaltechnik GmbH + Co. KG >>> Untested developer version (Use at your own risk) <<<	-	×
		Administration		~	_			^
	<b>M</b>	X		$\frown$	i			
	XML interface	e Reset	Manual	Contact	Info			
	Interfaces	System		Support				
		,						
	Hi C		<b>\$</b> (		2			RR
ļ								

- 2. In the Interfaces area of the toolbar, click on XML interface.  $\rightarrow$  The XML interface window appears.
- **3.** Select the **Export** tab.

Export	Import					
Configu	iration					
Filename						
		Specify the file to which to export the XML data.				
		Note: Recommended file on local disk.				
System II	em ID (optional)					
		If you use multiple WERMA-WIN systems, you can later uniquely identify the various systems via the system ID in the processing of data.				
		Carl Contract Contrac				
Export	current c	onditions				
When cor option of counters changes	n commissioning the XML export interface, you have the on of manually exporting the current state of all signals, iters and jobs. In regular operation of the interface, the iges are exported incrementally.					

4. In the **Configuration** area click on **Search** then select the file location and also enter the name of the XML file.

5. If required, enter the system ID of the WERMA-WIN system in the field System ID.

(i) Entering the system ID makes it possible to unambiguously identify different WERMA-WIN systems while processing the data.

## 4.1.1.2 Enabling the XML interface

### 1. Click on **Enable**.

(j) If the XML interface is enabled for the first time, WERMA recommends performing a one-off manual export of the data.

## 4.1.1.3 Disabling the XML interface

#### 1. Click on **Disable**.

() WERMA-WIN does not archive the exported data. For error analysis purposes, WERMA recommends archiving the XML export files in the external system.

## 4.1.1.4 Element and attribute description

(j) WERMA recommends that you ignore unknown elements and attributes when processing the XML export file.

## **General attributes**

Attributes	Data type	Description	Values
rowid	[bigint]	This is increased	
		consecutively	
		with each expor-	
		ted record; it is uni-	
		que for each	
		record.	
		The external sys-	
		tem should	
		import each	
		rowid only once	
		to detect dupli-	
		cates in the event	
		an error occurs.	
		rowid can be	
		used as the pri-	



Attributes	Data type	Description	Values
		mary key for the	
		data records	
timestamp	[datetime]	Time stamp in ISO	
		8601 format	
refid	Different, see	The refid spe-	
	data type at the	cifies the internal	
	respective ele-	ID in the WERMA-	
	ment	WIN database	
		when database	
		objects are expor-	
		ted directly.	

#### <data>

<data> contains all export data.

Attributes	Data type	Description	Values
version	[nvarchar]	Version of the	
	(20)	nition	
systemid	[nvarchar]	System ID, which	
	(25)	was configured in	
		the WERMA-WIN	
		Administration	
		Console.	
appname	[nvarchar]	Name of the	
	(max)	exporting app-	
		lication	
appversion	[nvarchar]	Version number	
	(20)	of the exporting	
		application	

## <slaveref>

Reference to a WIN slave. It is possible to use the refid or the macid to unequivocally identify a WIN slave.

Attributes	Data type	Description	Values
refid	[smallint]	The refid spe-	
		cifies the internal	
		ID in the WERMA-	
		WIN database	
		when database	
		objects are expor-	
		ted directly.	
macid	[nvarchar]	Assignment to a	
	(6)	WIN slave via the	
		wireless MAC	

Attributes	Data type	Description	Values
		address	
		Notation: Lower	
		case letters	
		without hyphens	

## <slavestate>

A new status was received for a WIN slave.

Data type	Description	Values
[tinyint]	Status tier 1	
		0 = 0ff = Off
[tinyint]	Status tier 2	1 = 0n = On
FL	Statustics 2	2 = Blinking = Blinking
[τιηγιητ]		3 = [Error] = Connection error
[tinyint]	Status tier 4	
	Data type [tinyint] [tinyint] [tinyint] [tinyint]	Data typeDescription[tinyint]Status tier 1[tinyint]Status tier 2[tinyint]Status tier 3[tinyint]Status tier 4

### <counterinfo>

A new counter value was received for a WIN slave performance, the counter was manually reset, or a job was started or completed.

Attributes	Data type	Description	Values
tier	[tinyint]	Configured coun-	1 = Tier 1
		ter tier	2 = Tier 2
			3 = Tier 3
			4 = Tier 4
value	[int]	Counter status,	Value >= 0
		display in control	
		station	
orderrefid	[int]	Reference to an	
		internal job ID	

#### <order>

<order> contains data belonging to a job.

Attributes	Data type	Description	Values
orderid	[int]	Job ID generated by WERMA-WIN	
		The job ID is displayed in the job module.	
refid	[int]	The refid specifies the internal ID in the	



Attributes	Data type	Description	Values
		WERMA-WIN database	
		when database objects	
		are exported directly.	
number	[nvarchar]	Selected job number	
	(60)		
description	[nvarchar]	Selected job name	
	(250)		
state	[tinyint]	Current job status	1=Waiting=Onlycrea- ted
			2 = Processing = In pro- gress
			3 = Completed = Com- pleted
			4=WaitForStart(see waitmode)
waitmode	[tinyint]	If state = 4, the wait- mode indicates when	0 = Counter = Start with next piece
		the job will be started.	1 = Signal = Start, as soon as job input tier is enabled
targetamount	[decimal]	Plan quantity	
	(18.3)		
piecespersignal	[decimal]	Factor (number of pie-	
	(18.3)	ces per cycle)	
timepersignal	[decimal]	Plan cycle time in	
	(18.1)	seconds	
targetsetuptime	[int]	Plan set up time in minu-	
		tes	
amountcorrection	[decimal]	Actual correction	
	(18.3)	(piece)	
realbegintime	[datetime]	Time when the job was started (or empty cha- racter string)	
realendtime	[datetime]	Time when the job was ended (or empty cha- racter string)	
realsetuptime	[int]	Actual set up time	
realamount	[decimal]	Actual quantity	
	(18.3)	Is set only once the job is ended. It is possible to determine the quantity of pieces until the job is	

Attributes	Data type	Description	Values
		completed using <coun- terinfo&gt; in the XML interface.</coun- 	
autostoptimeenabled	[bit]	The job is completed automatically taking into consideration: – autoStopTime – autostoptimedays	0 = Job will not be com- pleted 1 = Job will be com- pleted
autostoptime	[datetime]	Time at which the job is to be exited auto- matically	
autostoptimedays	[int]	Specifies after how many days the job is to be ended.	
autostoptargetamount	[bit]	Job is completed auto- matically as soon as the plan quantity is rea- ched.	0 = Job will not be com- pleted 1 = Job will be com- pleted

## <deleteinfo>

<deleteinfo> flags a record as deleted.

Attributes	Data type	Description	Values
type		Record type	order
refid	[int]	Internal record ID	

## <sync>

<sync> highlights the start and the end of the XML export.

Attributes	Description	Values
state	Specifies if the sync tag stands for the	
	start (started) or the end (com-	
	pleted) of the synchronisation.	
syncid	Unambiguous GUID to assign the	
	sync end to the start.	

# () WERMA

## 4.1.1.5 Example – XML export file

## Example of an XML export file

xml version="1.0" encoding="UTF-8"?
<data appname="WERMA-WIN-3.0" appversion="4.5.0.1816" systemid="Wermapc235" version="1.0"></data>
- <slavestate rowid="551807" tier1="0" tier2="0" tier3="0" tier4="0" timestamp="2018-02-14T15:03:35.5919399+01:00"></slavestate>
<slaveref macid="006C36" refid="1"></slaveref>
- <slavestate rowid="551808" tier1="0" tier2="0" tier3="0" tier4="0" timestamp="2018-02-14T15:03:35.8260887+01:00"></slavestate>
<slaveref macid="006C79" refid="3"></slaveref>
slavestate tier4="0" tier3="0" tier2="0" tier1="1" timestamn="2018-02-14T15:03:41_7800895+01:00" rowid="551809">
<slaveref marid="006C36" refid="1"></slaveref>
<pre>colouroatate hard="0" Har3="0" Har1="1" Himestamn="2018-02-14T15:03:41 9088901+01:00" rowid="551810"&gt;</pre>
<pre>claveraf moid="0.06(70" rafid="3"/&gt;</pre>
visitestate ford="0" florb="0" fl
<ul> <li>Salavestate del4= 0 del5= 0 del2= 0 del1= 2 difestamp= 2018-02-14113.03.42.01429/3+01.00 100/d= 331811 3</li> <li>Alavestate de main del 1006/02/1 addd 11/2</li> </ul>
<savere 1="" 3<="" macue="" ouocoo="" rende="" td=""></savere>
- <siavestate der1="0" der1<="" der3="0" deri4="0" td=""></siavestate>
<slaverer macid="006C79" rend="3"></slaverer>
- <slavestate rowid="551813" tier2="0" tier4="0" timestamp="2018-02-14115:03:58.5163838+01:00"></slavestate>
<slaveref macid="006C36" refid="1"></slaveref>
- <counterinfo orderrefid="" rowid="551814" tier="1" timestamp="2018-02-14T15:12:13.9583469+01:00" value="0"></counterinfo>
<slaveref macid="006BBD" refid="6"></slaveref>
- <order <="" autostoptargetamount="1" autostoptime="00:00:00" autostoptimedays="1" autostoptimeenabled="0" p="" realamount="0" refid="180848" rowid="551815" timestamp="2018-02-14T15:13:08.2450790+01:00"></order>
realsetuptime="0" realendtime="" realbegintime="" amountcorrection="0" targetsetuptime="0" timepersignal="0.8" piecespersignal="10" targetamount="1000" waitmode="0" state="1" description="A00014" number="A00014"
orderid="87677">
<slaveref macid="006BBD" refid="6"></slaveref>
- <order <="" autostoptargetamount="1" autostoptime="00:00:00" autostoptimedays="1" autostoptimeenabled="0" p="" realamount="0" refid="180848" rowid="551816" timestamp="2018-02-14T15:17:35.0651364+01:00"></order>
realsetuptime="0" realendtime="" realbegintime="2018-02-14T15:17:35.0494684+01:00" amountcorrection="0" targetsetuptime="0" timepersignal="0.8" piecespersignal="10" targetamount="1000" waitmode="0" state="2"
description="A00014" number="A00014" orderid="87677">
<slaveref macid="006BBD" refid="6"></slaveref>
- <counterinfo orderrefid="180848" rowid="551817" tier="1" timestamp="2018-02-14T15:17:35.0651364+01:00" value="0"></counterinfo>
<slaveref macid="006BBD" refid="6"></slaveref>
<pre>&lt; ccounterinfo timestamp="2018-02-14T15:17:35.0961291+01:00" rowid="551818" orderrefid="180848" value="0" tier="1"&gt;</pre>
<slaveref macid="006BBD" refid="6"></slaveref>
- <order <="" autostoptargetamount="1" autostoptime="00:00:00" autostoptimedays="1" autostoptimeenabled="0" p="" realamount="0" refid="180848" rowid="551819" timestamp="2018-02-14T15:30:47.7027443+01:00"></order>
realset untime=""" realendtime="2018-02-14T15:30:47 7027443+01:00" realbegintime="2018-02-14T15:12:35 0500000" amountcorrection="0" targetset untime="0" timepersional="0.8" piecespersional="10"
target and the state "3" description = "ADD014" number = "ADD014" orderid = 82677" >
claveref marid="006RBD" refid="6"/>
<pre>comptering timestamp="2018-02-14T15:30:47 7495606+01:00" rowid="551820" orderrefid="" value="0" tier="1"&gt;</pre>
<saveref marid="006BBD" refid="6"></saveref>
constanting
<pre>cdeletinfo timestamn="2018-02-14T15:30:50 1822793+01:00" rowid="551821" refid="180848" type="order"/&gt;</pre>

## 4.1.1.6 Accessing the XML export

WERMA-WIN regularly opens the XML export file for write access purposes only and to check if the XML export file can be overwritten. Consequently, the XML export file must be renamed before the XML export file can be processed by an external system.

If the XML export file was renamed, WERMA-WIN creates a new file when the next export is run.

If WERMA-WIN has opened the XML export file, it cannot be renamed. In that case the external system must make several attempts to rename the XML export file.

Access can be granted to the XML export file in accordance with the following diagram:

(i)



(i) To prevent a new XML export file from being created after it has been renamed, although no data needs to be processed, WERMA recommends only renaming and processing the XML export file as soon as its size exceeds 120 bytes. An empty XML export file without exported data is approx. 120 bytes in size (depending on the stored system ID).

(i) WERMA-WIN exports new data within a few milliseconds. If the external system is to process the data very quickly, WERMA recommends using the Windows API to monitor the file system or rather the XML export file (for example with .NET FileSystemWatcher). In this case, WERMA recommends not checking the size of the file and processing the XML export file immediately after it has been created.

# 4.1.1.7 Exporting data manually

The manual export serves as initial synchronisation after the XML interface has been enabled for the first time. This exports all tier statuses, counter statuses and jobs. It is then subsequently possible to use the automated export interface.

- 1. Configuring the XML interface.
- 2. Click Export in the Export current conditions area.



(i) Manual export can take some time depending on the quantity of jobs.

# 4.1.2 Import

During the import process WERMA-WIN reads in data from an XML file. The XML file can contain several data records. The data records to be imported can be different data record types, for example, Set up job or Start job. Each data record is processed individually.

An import report is created for each imported file in the form of an XML file and saved in a dedicated directory. The filename is suffixed with -result.

## 4.1.2.1 Configuring the XML interface

(i) The filenames of the XML files to be imported in the import directory must observe a specified schema.

An example shows the structure of the XML import file.

1. Open the WERMA-WIN Administration Console on the server PC.

	A desini dan tina	WERMA-V	VIN Admini	stration Co	nsole 0.1.2.3 - WERMA Signaltechnik GmbH + Co. KG >>> Untested developer version (Use at your own risk) <<<	-	×
XML interface	e Reset password System	Manual	Contact Support	1 Info			~
Interfaces	System	1	Support				
li e		<del>\$</del> (		8			ĸ

- 2. In the Interfaces area of the toolbar, click on XML interface.  $\rightarrow$  The XML interface window appears.
- **3.** Select the **Import** tab.

Export import	
Configuration	
Import directory	
	Specify the directory from which to read the XML files.
Results directory	
	A results file for each processed XML file is placed in this directory. The external system can process this as confirmation.
Archive directory	
	This directory contains the processed XML files
Number of days after wh	ich files will be from the archive
	✓ Enable X Disable
Note: Recommend	ed directories to local disk.

4. In the Configuration area click on Search and select Import directory.



- 5. Select **Results directory**, in which a results file of every imported XML file is saved.
- $(\mathbf{i})$

The Results file can be processed by the external system as feedback.

- 6. Select Archive directory, into which the processed XML files are moved.
- 7. In the Number of days after which files will be from the archive field, specify how long archived files should be kept.

## 4.1.2.2 Enabling the XML interface

1. Click on **Enable**.

## 4.1.2.3 Disabling the XML interface

1. Click on **Disable**.

(j) WERMA-WIN does not archive the exported data. For error analysis purposes, WERMA recommends archiving the XML export files in the external system.

## 4.1.2.4 Element and attribute description

#### **General attributes**

Attributes	Data type	Description	Values
rowid	[nvarchar] (60)	The rowid is used for the record in the results file.	
		The external sys- tem is able to assign the rowid as required (max. 60 characters).	
		The rowid for each respective import file must be unambiguous.	
timestamp	[datetime]	Time stamp in ISO 8601 format Date entries are evaluated as local time/time	
		zone.	

Attributes	Data type	Description	Values
		Example:	
		31.12.2017	
		19:00:00 = 2017-	
		12-31T19:00:00	

#### <data>

<data> contains all export data.

Attributes	Data type	Description	Values
version	[nvarchar] (20)	Version of the XML schema defi- nition	
appname	[nvarchar] (max)	Name of the exporting app- lication	
appversion	[nvarchar] (20)	Version number of the exporting application	
cancelonerror	[bit]	Specifies if pro- cessing of the import file is to be continued if an import error occurs.	false = Continue processing with the next record true = Cancel processing the file

### <slaveref>

Reference to a WIN slave. It is possible to use the refid or the macid to unequivocally identify a WIN slave.

Attributes	Data type	Description	Values
refid	[smallint]	Assignment to a	
		WIN slave via the	
		database ID	
macid	[nvarchar] (6)	Assignment to a WIN slave via the wireless MAC address Notation: Lower case letters without hyphens	

### <orderref>

Assignment to a job. Can be selected using orderid or refid.

Attributes	Data type	Description	Values
orderid	[int]	The job ID shown	


Attributes	Data type	Description	Values
		in the user inter-	
		face	
		Theorderidis	
		generated con-	
		tinuously. If the	
		job with the hig-	
		hest orderid was	
		deleted, the orde-	
		rid for the next	
		job is used again.	
refid	[int]	Assignment to a	
		job via the data-	
		base ID	

### Saving a job

Attributes	Data type	Description	Values	
number	[nvarchar] (60)	Job number	String with 60 characters, no line breaks	
description	[nvarchar] (250)	Job name	String with 250 characters, no line breaks	
targetamount	[decimal] (18.3)	Plan quantity	Integer	
piecespersignal	[decimal] (18.3)	Factor (number of pieces per cycle)	Integer	
timepersignal	[decimal] (18.1)	Plan cycle time in seconds	Decimal number max. one place after the decimal point	
targetsetuptime	time [int] Pla in r		Integer	
autostoptargetamount	[bit]	Exit job auto- matically when the plan quan- tity is reached.	true =Endjob false =Donotendjob	
autostoptimeenabled	[bit]	Exit job auto- matically when the auto- stoptime is rea- ched.	true =Endjob false =Donotendjob	
autostoptime	[datetime]	Time at which the job is com- pleted auto- matically. autostoptime	Date + time: 2017-12- 31T19:00:00	

Attributes	Data type	Description	Values
		evaluates the	
		time only.	
autostoptimedays	[int]	If the job is not to	
		be completed	
		on the start day,	
		it is possible to	
		specify a num-	
		ber of days after	
		which the job	
		will be com-	
		pleted auto-	
		matically.	

(i)

(i)

Do not use the attributes refid and orderid when saving a new job.

A point (.) is used as a decimal separator for decimal numbers. Thousands separators are not supported. Decimal places are ignored with quantities.

### Editing jobs

Attributes	Data type	Description	Values
amountcorrection	[int]	Actual correction	
		Is added to the quantity deter- mined via clock signal.	
		If the actual cor- rection is nega- tive, it is subtracted from the determined quantity.	
realsetuptime	[int]	Actual set up time in minutes	

(i)

If an attribute is not specified, the value stored to date remains valid.

(i) When using the attributes refid and orderid:



(i) - Specify just one of the two attributes when editing a job. If there is an option in the external system to save the refid generated when creating the job, the attribute refid should always be specified for subsequent processing operations. In that case, the attribute orderid need not be transferred.

- If both attributes are specified, both IDs must reference the same job.

### Deleting the assignment of a WIN slave

Attributes	Description	Values
slaveref refid	Delete the assignment of a WIN slave to a job.	empty
slaveref macid Delete the assignment of a WIN slave to a job.		empty

### Starting jobs

Attributes	Description	Values
action rowid="" type="order-start"	Startjob.	
action orderref refid="" type-	Startjob.	
e="order-start"		
action orderref oderid="" type-	Startjob.	
e="order-start"		

### Changing job to active waiting

Attributes	Description	Values
action rowid="" type="order-wait-	Please wait for	
for-start" waitmode=""	counterinput	
	or job input to	
	start the job.	
action orderref refid ="" type-	Please wait for	
e="order-wait-for-start" waitmode="	counterinput	
н	or job input to	
	start the job.	
action orderref oderid ="" type-	Please wait for	
e="order-wait-for-start" waitmode="	counterinput	
н	or job input to	
	start the job.	
waitmode	Specification, if	signal = Jobinput
	a counter input	counter = Counterinput
	or job input trig-	
	gers the	
	change.	

### **Ending jobs**

Attributes	Description	Values
action rowid="" type="order-stop"	Endjob.	
action orderref refid ="" type- e="order-stop"	End job.	
action orderref oderid ="" type- e="order-stop"	End job.	

### **Deleting jobs**

Attributes	Description	Values
action rowid="" type="order-delete"	Delete job.	
action orderref refid ="" type- e="order-delete"	Delete job.	
action orderref oderid ="" type- e="order-delete"	Delete job.	

### 4.1.2.5 Example of an XML import file

An example of an XML import file is available in the installation directory of WERMA-WIN in the Docs subdirectory.

### 4.1.2.6 File name

(i)

The filename can be assigned as desired; however, it must end with a time stamp corresponding to the format -YYYYMMDDhhmmss and the file extension .xml.



#### Examples:

# () WERMA

order-20180301150000.xml config-20180301150104.xml start-order-20180301153041.xml

### 4.1.2.7 Results file

The results file is created during the import operation and saved to the results directory with the suffix -result. If the file already exists, the name is suffixed with -0002, -0003 and so forth.

### Example of a results file

```
<?xml version="1.0" encoding="utf-8"<mark>?></mark>
<results appname="..." appversion=".
                                    ... cancelonerror="false" xmlns="http://www.werma-win.com/xml/1.0/import/results">
 <!-- XML format errors etc. -->
 <result timestamp="2018-01-17T11:08:31.2922173+01:00" type="file" success="false">
   <exception type="..." message="..." />
 </result>
   <result rowid="..." timestamp="2018-01-17T11:08:31.2922173+01:00" type="order" success="false">
   <!-- If available, all ID attributes are transferred in the results file -->
   <orderref refid="4711" orderid="2" />
   <exception type="..." message="..." />
 </result>
 <result rowid="..." timestamp="2018-01-17T11:08:31.2922173+01:00" type="order" success="true">
   <orderref refid="4711" orderid="2" />
 </result>
 <!-- Process (for example, Start job) was successfully executed -->
 <result rowid="..." timestamp="2018-01-17T11:08:31.2922173+01:00" type="action" success="true" />
 <!-- Process (for example, Start job) was not successfully executed -->
 <result rowid="..." timestamp="2018-01-17T11:08:31.2922173+01:00" type="action" success="false">
   <exception type="..." message="..." />
 </result>
</results>
```

## 4.1.3 Interface status

The **Interface status** area displays information about the current state of the XML interface as well as imports and exports currently in progress.

Interface status

 XML export interface started successfully.

 Since the last start of the export interface, 3 records have been exported

 XML import interface not enabled

Errors are also logged in the Windows Event Viewer and in the WERMA-WIN error log.

(i)

## 4.2 WINtoApplication

The WINtoApplication allows you to transmit the statuses of a signal tower to an external application and specifically further process them in this application. This application can be set up individually for each user.

i	The application data is stored, user-related, locally and not in the WERMA-WIN database. The settings of the WINtoApplication can be <i>exported</i> and <i>imported</i> for use on another PC or with another user.
i	The WINtoApplication only operates with an active user login. A user must be continuously logged in.

- 1. If the Settings window is not yet open, click on Settings in the toolbar.
- 2. Click on Start WinToApplication in the Status transmission tab.
   → The WINtoApplication task overview window appears.



The WINtoApplication task overview window shows an overview and the state of all available jobs.

State	Description
✓	The job has been successfully performed.
×	There was an error the last time the job was performed. The History shows error details.
	The job is running.



(i) Clicking on **Refresh** updates the job overview.

(i) The symbol in the system tray can be used to enable and disable jobs and complete WINtoApplication.

## 4.2.1 Adding a job

### 1. Click on Add.

 $\rightarrow$  The WINtoApplication task configuration window appears.

WINtoApplicat	tion task configuration		
1/3 Genera	al settings		*.exe *.bat *.cmd
You can create n	new tasks or edit existing tasks with this assistant.		
Please specify the	e settings for the application		
Description			
	Enabled		
Comment		*	
		-	
Close Cancel			Next Next step

- 2. Enter the name of the job in the **Description** field.
- 3. Enter an additional description of the job in the **Comment** field, if necessary.
- 4. Select **Enabled** if the job is to be immediately enabled once it has been created.
- 5. Click on Next.
  - $\rightarrow$  The window to input the application settings appears.

P WINtoApplication task configuration				_ <b>D</b> X
2/3 Application settings				*.exe *.bat *.cmd
Please specify here which application should be started and define the	parameters	s which will be transferred to the application.		
Application Parameters The application cannot be started multiple times simultaneously Tip: To transfer the parameters correctly to the application, put the placeholders in quotes. Example: "%name%" "%state 1%"		The following placeholders can be used as parameters: %slaveid%: ID of the WIN slave %mame%: WIN slave name %time%: Date and time States (0=off, 1=on, 2=blinking, 3=error): %state 1%: State of tier 1 %state 2%: State of tier 3 %state 3%: State of tier 3 %state 4%: State of tier 3 %statename 1%: Description tier 1 %statename 2%: Description 2 %statename 2%: Description 3 %statename 2%: Description 4 For WIN slave performance: %counter %: counter value %order-id%: order id %order-docription%: order no %order-total%: total pieces %order-total%: total pieces %order-progression%: job progression	•	
Eack Cancel				Next Next step

- 6. Click on ... in the Application field to select the external application.
- 7. In the **Parameters** field, enter the *Parameters* which are to be transmitted to the external application.
- 8. Enable The application cannot be started multiple times simultaneously, if required, to prevent the external application from being started several times simultaneously.
- (i) By enabling **The application cannot be started multiple times simultaneously**, the program waits until the external application has ended. The external application is then called up again.

Disable **The application cannot be started multiple times simultaneously** if applications expect a multiple start.

### 9. Click on Next.

 $\rightarrow$  The window to select the WIN slave appears.



P WINtoApplication task configuration			_ <b>– ×</b>
3/3 Select WIN slaves			*.exe *.bat *.cmd
Please specify which WIN slaves and status changes should be respo Select the individual WIN slaves in the left panel and configure the ap	nded to. propriate options on the right.		
WIN slave	Change of tier state		
Unit 1		Time delay	
Unit 2	4th tier: Counter input	20 🌲 sec.	
	3rd tier: Stufe 3	20 🌲 sec.	
	2nd tier: Warning	20 🌲 sec.	
	1st tier: Operational	20 🜲 sec.	
	Change of job state		
	At a job progression of	0 🗘 %	
	At a quantity of	0 🌲 Piece	
	Transmit new counter values immediately		
Gancel			OK Save

10. From the list of WIN slave, select WIN slave the status changes of which are to be transmitted.

11. In the **Change of tier state** area, select for which tiers the status changes are to be transmitted.

**12.** Enter a **Time delay** for each tier if necessary.

- (i) The status change is only transmitted if the new status is unchanged during the defined **Time delay**. No status change is transmitted if the status has changed again within the **Time delay**.
- **13.** In the **Change of job state** area, select at which job progression or at which quantity the status change is to be transmitted.
- 14. Enable Transmit new counter values immediately if every changed counter status is to be transmitted.

(i) The **Change of job state** area is only available if a WIN slave control is selected.

### **15.** Click on **Next**.

 $\rightarrow$  The window in which to create an Autostart shortcut appears.

🖗 WINtoApplication task configuration	
Start WINtoApplication at windows startup	*.exe *.bat *.cmd
Do you want to configure WINtoApplication to start up with the Windows user log-on?	
Start WINtoApplication at windows startup	
Reck Cancel	A Save

- **16.** Enable **Start WINtoApplication at windows startup** if WINtoApplication is to be automatically started when the PC is started or after user login.
- 17. Click on OK to save the job.

### 4.2.1.1 Placeholders/Parameters

The following placeholders/parameters are available:

Placeholders/Parameters	Description
%slaveid%	ID of the WIN slave
%name%	Description of the WIN slave
%time%	Date and time of status transmission
%reason%	Reason for status transmission
%state1%	Status of tier 1
%state2%	Status of tier 2
%state3%	Status of tier 3
%state4%	Status of tier 4
%statename1%	Description of tier 1
%statename2%	Description of tier 2
%statename3%	Description of tier 3
%statename4%	Description of tier 4
%counter%	Counter status of the job



Placeholders/Parameters	Description
%order-id%	JobID
%order-number%	Jobnumber
%order-description%	Description of job
%order-total%	Total amount of job
%order-progression%	Job progression

(i)

All placeholders/parameters start and end with the character %.

## 4.2.2 Editing a job

- 1. Select the required job in the job overview.
- 2. Click on Edit.

### $\rightarrow$ The WINtoApplication task configuration window appears.

🔗 WINtoApplica	ation task configuration		_ <b>– ×</b>
1/3 Gener	ral settings		*.exe *.bat *.cmd
You can create	new tasks or edit existing tasks with this assistant.		
Please specify t	he settings for the application		
Description	Counter		
	🗹 Enabled		
Comment			
Close Cancel			Next Next step

- 3. Enter the name of the job in the **Description** field.
- 4. Enter an additional description of the job in the **Comment** field, if necessary.
- 5. Select **Enabled** if the job is to be immediately enabled once it has been created.
- 6. Click on Next.

 $\rightarrow$  The window to input the application settings appears.

🖗 WINtoApplicati	on task configuration			_ <b>– ×</b>
2/3 Applica	tion settings			*.exe *.bat *.cmd
Please specify her	re which application should be started and define the pa	rameters	which will be transferred to the application.	
Application	C:\Program Files\Application\Application.exe		The following placeholders can be used as parameters:	
Parameters	%slaveid%;%state1%;%state2%;%state3%;%		%slaveid%: ID of the WIN slave	
The application	a cannot be started multiple times simultaneously	?	%name%: WIN slave name %time%: Date and time	
Tip: To transfer th placeholders in qu Example: "%name	ne parameters correctly to the application, put the lotes. 2%" "%state1%"		States (0=off, 1=on, 2=blinking, 3=error): %state 1%: State of tier 1 %state 2%: State of tier 2 %state 2%: State of tier 3 %state 4%: State of tier 4 Description (e.g. ready for operation) %statename 1%: Description 1 %statename 2%: Description 2 %statename 3%: Description 3 %statename 4%: Description 4 For WIN slave performance: %counter %: counter value %order -id%: order i %corder dis': order i %order -description %: description %order -otal%: total pieces %order -progression%: job progression	
Tancel Back				Next Next step

- 7. Click on ... in the **Application** field to select the external application.
- 8. In the **Parameters** field, enter the *Parameters* which are to be transmitted to the external application.
- **9.** Enable **The application cannot be started multiple times simultaneously**, if required, to prevent the external application from being started several times simultaneously.
- (i) By enabling **The application cannot be started multiple times simultaneously**, the program waits until the external application has ended. The external application is then called up again.

Disable **The application cannot be started multiple times simultaneously** if applications expect a multiple start.

### 10. Click on Next.

 $\rightarrow$  The window to select the WIN slave appears.



WINtoApplication task configuration			_ <b>D</b> X
3/3 Select WIN slaves			*.exe *.bat *.cmd
Please specify which WIN slaves and status changes should be respo Select the individual WIN slaves in the left panel and configure the ap	nded to. propriate options on the right.		
WIN slave	Change of tier state		
Unit 1		Time delay	
Chit 2      Unit 3	<ul> <li>4th tier: Counter input</li> <li>3rd tier: Stufe 3</li> <li>2nd tier: Warning</li> <li>1st tier: Operational</li> </ul> Change of job state At a job progression of At a quantity of Transmit any source values impediately.	20 ↓ sec.         0 ↓ sec.         0 ↓ %         0 ↓ Piece	
Back Carcel	Iransmit new counter values immediately		OK Save

11. SelectWIN slave, the status changes of which are to be transmitted, from the list of WIN slave.

12. In the Change of tier state area, select for which tiers the status changes are to be transmitted.

**13.** Enter a **Time delay** for each tier if necessary.

(i) The status change is only transmitted if the new status is unchanged during the defined **Time delay**. No status change is transmitted if the status has changed again within the **Time delay**.

- 14. In the **Change of job state** area, select at which job progression or at which quantity the status change is to be transmitted.
- **15.** Enable **Transmit new counter values immediately** if every changed counter status is to be transmitted.

(i) The **Change of job state** area is only available if a WIN slave control is selected.

### 16. Click on Next.

 $\rightarrow$  The window in which to create an Autostart shortcut appears.

🖗 WINtoApplication task configuration	
Start WINtoApplication at windows startup	*.exe *.bat *.cmd
Do you want to configure WINtoApplication to start up with the Windows user log-on?	
Start WINtoApplication at windows startup	
Cancel	A Save

- **17.** Enable **Start WINtoApplication at windows startup** if WINtoApplication is to be automatically started when the PC is started or after user login.
- 18. Click on OK to save the job.

### 4.2.2.1 Placeholders/Parameters

The following placeholders/parameters are available:

Placeholders/Parameters	Description
%slaveid%	ID of the WIN slave
%name%	Description of the WIN slave
%time%	Date and time of status transmission
%reason%	Reason for status transmission
%state1%	Status of tier 1
%state2%	Status of tier 2
%state3%	Status of tier 3
%state4%	Status of tier 4
%statename1%	Description of tier 1
%statename2%	Description of tier 2
%statename3%	Description of tier 3
%statename4%	Description of tier 4
%counter%	Counter status of the job



Placeholders/Parameters	Description
%order-id%	JobID
%order-number%	Jobnumber
%order-description%	Description of job
%order-total%	Total amount of job
%order-progression%	Job progression

(i)

All placeholders/parameters start and end with the character %.

## 4.2.3 Duplicating a job

- 1. Select the required job in the job overview.
- 2. Click on Duplicate.
  - $\rightarrow$  The WINtoApplication task configuration window appears.

WINtoApplica	tion task configuration		
1/3 Gener	al settings		*.exe *.bat *.cmd
You can create	new tasks or edit existing tasks with this assistant.		
Please specify t	he settings for the application		
Description	Counter		
	🗹 Enabled		
Comment		<u>ـ</u>	
		-	
			Next Next step

- 3. Enter the name of the job in the **Description** field.
- 4. Enter an additional description of the job in the **Comment** field, if necessary.
- 5. Select **Enabled** if the job is to be immediately enabled once it has been created.
- 6. Click on Next.

 $\rightarrow$  The window to input the application settings appears.

🖗 WINtoApplicati	on task configuration			_ <b>– ×</b>
2/3 Applica	tion settings			*.exe *.bat *.cmd
Please specify her	re which application should be started and define the pa	rameters	which will be transferred to the application.	
Application	C:\Program Files\Application\Application.exe		The following placeholders can be used as parameters:	
Parameters	%slaveid%;%state1%;%state2%;%state3%;%		%slaveid%: ID of the WIN slave	
The application	a cannot be started multiple times simultaneously	?	%name%: WIN slave name %time%: Date and time	
Tip: To transfer th placeholders in qu Example: "%name	ne parameters correctly to the application, put the lotes. 2%" "%state1%"		States (0=off, 1=on, 2=blinking, 3=error): %state 1%: State of tier 1 %state 2%: State of tier 2 %state 2%: State of tier 3 %state 4%: State of tier 4 Description (e.g. ready for operation) %statename 1%: Description 1 %statename 2%: Description 2 %statename 3%: Description 3 %statename 4%: Description 4 For WIN slave performance: %counter %: counter value %order -id%: order i %corder dis': order i %order -description %: description %order -otal%: total pieces %order -progression%: job progression	
Tancel Back				Next Next step

- 7. Click on ... in the **Application** field to select the external application.
- 8. In the **Parameters** field, enter the *Parameters* which are to be transmitted to the external application.
- **9.** Enable **The application cannot be started multiple times simultaneously**, if required, to prevent the external application from being started several times simultaneously.
- (i) By enabling **The application cannot be started multiple times simultaneously**, the program waits until the external application has ended. The external application is then called up again.

Disable **The application cannot be started multiple times simultaneously** if applications expect a multiple start.

### 10. Click on Next.

 $\rightarrow$  The window to select the WIN slave appears.



WINtoApplication task configuration			_ <b>D</b> X
3/3 Select WIN slaves			*.exe *.bat *.cmd
Please specify which WIN slaves and status changes should be respo Select the individual WIN slaves in the left panel and configure the ap	nded to. propriate options on the right.		
WIN slave	Change of tier state		
Unit 1		Time delay	
Chit 2      Unit 3	<ul> <li>4th tier: Counter input</li> <li>3rd tier: Stufe 3</li> <li>2nd tier: Warning</li> <li>1st tier: Operational</li> </ul> Change of job state At a job progression of At a quantity of Transmit any source values impediately.	20 ↓ sec.         0 ↓ sec.         0 ↓ %         0 ↓ Piece	
Back Carcel	Iransmit new counter values immediately		OK Save

11. SelectWIN slave, the status changes of which are to be transmitted, from the list of WIN slave.

12. In the Change of tier state area, select for which tiers the status changes are to be transmitted.

**13.** Enter a **Time delay** for each tier if necessary.

(i) The status change is only transmitted if the new status is unchanged during the defined **Time delay**. No status change is transmitted if the status has changed again within the **Time delay**.

- 14. In the **Change of job state** area, select at which job progression or at which quantity the status change is to be transmitted.
- **15.** Enable **Transmit new counter values immediately** if every changed counter status is to be transmitted.

(i) The **Change of job state** area is only available if a WIN slave control is selected.

### 16. Click on Next.

 $\rightarrow$  The window in which to create an Autostart shortcut appears.

🖗 WINtoApplication task configuration	
Start WINtoApplication at windows startup	*.exe *.bat *.cmd
Do you want to configure WINtoApplication to start up with the Windows user log-on?	
Start WINtoApplication at windows startup	
Cancel	A Save

- **17.** Enable **Start WINtoApplication at windows startup** if WINtoApplication is to be automatically started when the PC is started or after user login.
- 18. Click on OK to save the job.

### 4.2.3.1 Placeholders/Parameters

The following placeholders/parameters are available:

Placeholders/Parameters	Description
%slaveid%	ID of the WIN slave
%name%	Description of the WIN slave
%time%	Date and time of status transmission
%reason%	Reason for status transmission
%state1%	Status of tier 1
%state2%	Status of tier 2
%state3%	Status of tier 3
%state4%	Status of tier 4
%statename1%	Description of tier 1
%statename2%	Description of tier 2
%statename3%	Description of tier 3
%statename4%	Description of tier 4
%counter%	Counter status of the job

# **WERMA**

Placeholders/Parameters	Description
%order-id%	JobID
%order-number%	Jobnumber
%order-description%	Description of job
%order-total%	Total amount of job
%order-progression%	Job progression

All placeholders/parameters start and end with the character %.

## 4.2.4 Enabling or disabling individual jobs

1. Select the required job in the job overview and enable or disable the checkbox in the **enabled** column.

1	P WINtoApplication task overview		
File Tools ?			
	Enabled	Name	Comment
Þ	K	Counter	
	43	Malfunction	

(i)

(i)

The statuses will continue to be monitored if a job is disabled. Status transmission to the external application is stopped.

## 4.2.5 Enabling or disabling all jobs

1. Right-click on the WINtoApplication symbol in the information section.



2. Select Enable or Disable in the menu.

(i) The statuses will continue to be monitored if the jobs are disabled. Status transmission to the external application is stopped.

## 4.2.6 Deleting jobs

- 1. Select the required job in the job overview.
- 2. Click Delete.
- 3. Confirm the prompt with Yes.

### 4.2.7 Exporting jobs

An export can be created to use the created jobs on another PC or for another user.

- 1. Click on **Export** in the **Tools** menu.
  - $\rightarrow$  The **Export task configuration** window appears.

② Export task core	figuration	x
Export To		
Cancel Close		OK Save

- 2. Click on ... in the Export to field.
- 3. Select the filename and storage location for the export file.
- 4. Click on Save.
- 5. Click on OK.

### 4.2.8 Importing jobs

- 1. Click on **Import** in the **Tools** menu.
  - $\rightarrow$  The **Import task configuration** window appears.

🕜 Import task co	nfiguration
Import of	Delete all existing tasks before the import is activated
Cancel Close	OK Save

- 2. Enable **Delete all existing tasks before the import is activated** if all existing jobs are to be deleted before the import.
- 3. Click on ... in the Import of field and select the import file.
- 4. Confirm the prompt with Yes.



### 4.2.9 History

A history log is automatically created to understand previous processes better and identify errors. This indicates which parameters have been transmitted to which external application.

To display the history log of a job:

1. Hover your cursor over the State column to select the required job in the job overview.

### 4.2.10 Settings

The processing of all jobs can be started and a startup shortcut created for the WINtoApplication in Settings.

- 1. Click on Settings in the Tools menu.
  - $\rightarrow$  The **Settings** window appears.



- 2. Enable Start task processing to start the processing of all tasks.
- **3.** Enable **Start WINtoApplication at windows startup** if WINtoApplication is to be automatically started when the PC is started or after user login.
- 4. Click on OK to save the job.

### 4.2.11 Exiting WINtoApplication

To move WINtoApplication into the system tray:

1. Click on **Close overview** in the **File** menu or close the WINtoApplication job overview by clicking on **X**.

To fully exit the WINtoApplication and the execution of all jobs:

1. Right-click on the WINtoApplication symbol in the information section.



- 2. Select Exit in the pop-up menu.
- 3. Confirm the prompt with Yes.

## 4.3 WERMA-WIN CLI Tool

The WERMA-WIN CLI Tool (command-line interface tool) makes it possible to automate WIN slave control with different commands using an external application.

To call up the WERMA-WIN CLI tool:

1. Open the command line.



2. Enter the path for WERMA-WIN in the command line (e.g. cd C:\Program Files (x86)\WERMA-WIN-4).

The following functions are available:

Function	Description	Command line entry/example
/help	Shows all possible functions.	WIN-CLI.exe /help
/server	Adapts the WERMA- WIN ser- ver's port and server. The default setting is the server setting of WERMA- WIN.	/server <server>[:<port>] Example: WIN-CLI.exe /server Winserver01:10710</port></server>



Function	Description	Command line entry/example			
/switchcontrol	Controls	/switchcontrol <slave> <tier> <state></state></tier></slave>			
	the WIN slave con- trol	<slave></slave>	<tier></tier>	<state></state>	
		"id: <slave-id>"</slave-id>	1:Tier1	0: Off	
		"maci-	2: Tier2	1:On	
		d: <slave- macid&gt;"</slave- 	3: Tier3	2: Blinking	
		"name: <slave- name&gt;"</slave- 	4: Tier4		
		Example:	On WIN-CLI.exe /switchc Blinking WIN- CLI.exe /switchcontr 2 Off WIN-CLI.exe /switchc d:03162D" 2 0	ontrol "id:7" 2 1 ol "name:machine1" 2- ontrol "maci-	
/export-sla-	Create a	/export-slave	es <file></file>		
ves	CSV file	Example:			
with all WIN slave from the WERMA- WIN data- base in the selected <file> location.</file>		WIN-CLI.exe ,	/export-slaves "C:\te	st.csv"	

Exit Code	Description
Ο.	Command successfully executed
1.	no command is executed, help message displayed
-1 .	an exception occurred, see command line output

## 5 Fault diagnostics

Possible errors and the current status of the WERMA-WIN devices are displayed by the respective LEDs.

## 5.1 WIN slave, WIN slave performance, WIN slave control

LED	Description
Green	Radio connection established to the WIN master.
Red	No radio connection possible to the WIN master.

## 5.2 WIN slave control

The blue state LEDs shows the status of the outputs.



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ltem	Description
1	Tier 4 output
2	Tier 3 output
3	Tier 2 output
4	Tier 1 output

LED		Description
1	On	Output was switched manually or by a switching rule.
	Off	Output was not switched.

(i) The blue state LEDs only light up if **Activate additional pins 2 to 5** option was selected during configuration of the switching behaviour of the WIN slave control.

## 5.3 WIN master

LED	Description
Green	Radio connection established to the WIN slave.
Red	No radio connection possible to the WIN slave.

LED Ethernet connection		Description
Green		
Contraction of the second seco	On	Connection established to the network.
10	Off	No connection possible to the network.
STE	Blinking	Network activity
Yellow		
	On	Connection established to WERMA-WIN.
	Off	No connection established to WERMA-WIN.

## 5.4 WIN ethernet master

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## 6 Software update

As soon as a software update is available, it can be downloaded and installed from the WERMA homepage.

- 1. Click Software update in the toolbar.
  - ightarrow The Download area on the WERMA homepage appears.
- 2. Download the update file and install on the PC.
- (j) If several workplaces are accessing a common WERMA-WIN database, you first need to install the software update on the PC with the WERMA-WIN database (server PC). An appropriate message appears if the installation is first started on a client PC.

The software update must be run on all PCs connected to the common WERMA-WIN database.

## 7 System requirements

	Server PC	Client PC	
Installed software	Microsoft SQL server	WERMA-WIN	
components	WERMA-WIN	Network connection to Microsoft SQL	
	WERMA-WIN database	server with the WERMA-WIN data- base	
	Device driver for hardware	Device driver for hardware	
Processor	CPU with 4 processors	Pentium III compatible processor or higher	
		Dual Core processor is recom- mended	
Minimum RAM	16 GB	1 GB	
Free hard disk space (recom- mended)	20 GB	8 GB	
USB port	Required for the hard	J dware configuration.	
	The configuration can also	be used on the Client PC.	
Screen resolution	At least: 1	280 x 1024	
	Recommended: 1920 x 1080 or higher		
	Scaling of font size (DPI) 100% (96 DPI)		
Microsoft.NET Fra- mework 4.5.2	Automatically installed w	nen installing WERMA-WIN.	
Supported ope-	Wind	ows 8	
rating systems	Windo	ows 8.1	
	Windows Serv	rer 2008 R2 SP 1	
	Windows S	Server 2012	
	Windows Se	erver 2012 R2	
	Windo	ows 10	
	Windows S	Server 2016	
Supported SQL ser-	Microsoft SQL Server 2008 SP4		
ver	Microsoft SQL Server 2008 R2 SP3		
	Microsoft SQL Server 2012 SP4		
	Microsoft SQL Server 2014 SP2 (recom- mended)		
	Microsoft SQL Server 2016 SP2		
	Microsoft SQL Server 2017		

The system requirements differ for the server PC and client PCs.



(i) Unless otherwise specified, the 32-bit (x86) and 64-bit (x64) versions are supported.

Supported operating systems and SQL Server versions are only supported as long as Microsoft also supports them through the Microsoft Support **Lifecycle**.

The automatic installation of the database onto a domain controller is not supported. Manual installation is possible.

Installation of the Windows server core and nano server is not supported.

The Windows server role **Remote desktop services** is not supported on the server PC.

Only Microsoft SQL server editions Express, Workgroup, Standard, Enterprise and Datacenter for Windows, as well as the supplied Microsoft SQL Server 2014 Express database are supported.

In each case, only the latest Microsoft Windows and Microsoft SQL server service packs are supported.

Microsoft Server 2019 and Microsoft SQL Server 2019 have not been tested in all configurations. The tests to date have been successful.

## 7.1 Network stability and security

(i) WERMA recommends that you only operate WERMA-WIN in a reliable LAN environment (TCP/IP network). The function or performance of WERMA-WIN could be impaired in an unstable or insecure network.

## 8 Keyboard shortcuts

Keyboard shortcuts let you work more quickly with WERMA-WIN. You can select from general keyboard shortcuts and shortcuts that apply to the specific module.

Keyboard shortcut	Description
F1	Display Help.
F5	Refresh active window.
F10	Enable menu bar.
F11	Maximise active window.
CTRL + F1	Minimise menu bar.
CTRL + F4	Close active document.
CTRL + A	Select all items.
CTRL + C	Copy selected item.
CTRL + D	Delete selected item.
CTRL + N	Open new window.
CTRL + O	Open document / file.
CTRL + P	Print document.
CTRL + V	Paste selected item.
CTRL + W	Close current window.
CTRL + X	Cut selected item.
CTRL + Z	Undo action.
ALT + F4	Close active item or exit active app.
ALT + P	Display preview window.
DELETE	Delete selected item.

## 8.1 Windows standard

## 8.2 General

Keyboard shortcut	Description
F1	Call up manual.
F2	Call up contact page.
F3	Call up Information window.
CTRL + F4	Close active document.
CTRL + F6	Call up <b>Control station</b> main view.
CTRL + F7	Call up <b>Productivity</b> main view.
CTRL + F8	Call up <b>Runtime</b> main view.
CTRL + F9	Call up <b>Job</b> main view.

# 

Keyboard shortcut	Description
CTRL + F10	Call up <b>Control</b> main view.
CTRL + F11	Call up <b>Routing</b> main view.
CTRL + F12	Call up <b>Runtime</b> module with WIN slave selection.
ALT + F1	Call up <b>Job quick start</b> window.

## 8.3 Control station

Keyboard shortcut	Description
F1	Call up manual.
F2	Call up contact page.
F3	Call up Information window.
F8	Add WIN slave.
F9	Select background.
F11	Start full screen mode.
F12	Generate report.
CTRL + F4	Close active document.
ALT + F1	Call up <b>Job quick start</b> window.
ALT + F6	Call up <b>Activation</b> window.
ALT + F7	Call up <b>Settings</b> window.
ALT + F8	Search for software update.
ESC	Exit full screen mode.

## 8.4 Productivity

Keyboard shortcut	Description
F1	Call up manual.
F2	Call up contact page.
F3	Call up Information window.
F7	Show combined productivity.
F8	Add WIN slave.
F9	Select background.
F11	Start full screen mode.
F12	Generate report.
CTRL + F4	Close active document.
ALT + F1	Call up <b>Job quick start</b> window.
ALT + F6	Call up <b>Activation</b> window.
ALT + F7	Call up <b>Settings</b> window.
ALT + F8	Search for software update.
ESC	Exit full screen mode.

## 8.5 Runtime

Keyboard shortcut	Description
F1	Call up manual.
F2	Call up contact page.
F3	Call up Information window.
F7	Call up the <b>Status</b> view.
F8	Call up the <b>Quantity</b> view.
F9	Call up the <b>Combined</b> view.
F11	Start full screen mode.
F12	Generate report.
CTRL + F4	Close active document.
ALT + F1	Call up <b>Job quick start</b> window.
ALT + F6	Call up <b>Activation</b> window.
ALT + F7	Call up <b>Settings</b> window.
ALT + F8	Search for software update.
ESC	Exit full screen mode.

## 8.6 Job

Keyboard shortcut	Description
F1	Call up manual.
F2	Call up contact page.
F3	Call up Information window.
F9	Show Auto jobs.
F12	Generate report.
CTRL + E	Editjob.
CTRL + I	Import job list.
CTRL + N	Enterjob.
CTRL + Q	End job.
CTRL + R	Start job.
CTRL + F4	Close active document.
ALT + F1	Call up <b>Job quick start</b> window.
ALT + F2	Start with 1st piece
ALT + F3	Start with job input
ALT + F6	Call up <b>Activation</b> window.
ALT + F7	Call up <b>Settings</b> window.
ALT + F8	Search for software update.
ESC	Exit full screen mode.
DELETE	Delete job.

# 

## 8.7 Control

Keyboard shortcut	Description
F1	Call up manual.
F2	Call up contact page.
F3	Call up Information window.
CTRL + F4	Close active document.
CTRL + D	Duplicate rule.
CTRL + E	Edit rule.
CTRL + N	Create new rule (assistant).
CTRL + Q	Disable rule.
CTRL + R	Enable rule.
ALT + F1	Call up <b>Job quick start</b> window.
ALT + F6	Call up <b>Activation</b> window.
ALT + F7	Call up <b>Settings</b> window.
ALT + F8	Search for software update.
DELETE	Delete rule.
CTRL + Shift + NCTRL + N	Create new rule (Expert).

## 8.8 Routing

Keyboard shortcut	Description
F1	Call up manual.
F2	Call up contact page.
F3	Call up Information window.
F12	Call up the <b>Connection status</b> window.
CTRL + F4	Close active document.
ALT + F1	Call up <b>Job quick start</b> window.
ALT + F6	Call up <b>Activation</b> window.
ALT + F7	Call up <b>Settings</b> window.
ALT + F8	Search for software update.

## 9 FAQ – Frequently Asked Questions

### On which frequency band does the WIN system run?

WIN runs in the frequency band 868,0 – 868,6 MHz. Short-range radio system has no effect on existing Wi-Fi or Bluetooth networks.

### Can WIN be run on different radio channels?

Yes, you can choose from four radio channels. You should only run one WIN master per channel.

The channels have the following frequencies:

Channel	Frequency
1	868,15 MHz
2	868,25 MHz
3	868,35 MHz
4	868,45 MHz

### Why are different radio channels needed? When should the radio channel be changed?

If more than one WIN master is run on a channel, it can cause transmission problems between the systems. This can be seen by the frequency connection errors. In this case, run the WIN master on *different radio channels*.

### How can I increase the range?

Every WIN master possesses a repeater function, which can be used to increase the range between the WIN master and the WIN slave. Every WIN slave can thereby establish a connection to the WIN master using a maximum of 2 WIN slave (repeaters).

### Is the radio transmission encrypted?

The WIN system is equipped with several protection mechanisms, which prevent the radio transmission being intercepted. However, unrestricted security against interception cannot be guaranteed. In addition, no confidential data from the WIN system is transmitted wirelessly.

### How often does the WIN slave transmit the signal status to the WIN master?

If the status of the signal tower changes, the WIN slave sends this new signal status to the WIN master within a response time of up to 5 seconds. If the signal status does not change, the WIN slave transmits the signal status every 15 seconds to the WIN master.

### Why can the WIN slave not establish a connection to the WIN master?

Check the following points:

- The WIN master (USB) must be connected to the PC by USB. The red or green LED must light up.
- The WIN slave must be connected to a power supply. The red or green LED must light up.
- The WIN slave must be configured.
- The radio connection must not be disrupted.
- If the WIN master has been configured on another radio channel, the assigned WIN masters have to be reconfigured on the WIN master.

### There are frequent connection errors to the WIN slaves. What can be done?



- Data will only be logged while WERMA-WIN is running. WERMA-WIN must be running in the monitoring period.
- The connection quality can be checked in the *Routing module*. The use of additional WIN slaves as repeaters is recommended if connection lines appear red. A WIN slave must be positioned at the critical point for this purpose.
- There needs to be a permanent 24 V power supply connected to Pin 5 on every WIN slave.

### Why does the PC not recognise the WIN master?

- WERMA-WIN must be installed and started on the PC.
- Disconnect the USB connection to the WIN slave and reconnect it.
- Manually install the driver.
- The Windows Service WERMA WIN 4 Connector Service must have started.

### Why can WERMA-WIN not be installed?

Administrator rights are needed to install WERMA-WIN.

### How many WIN slaves can be monitored by one WIN master?

Up to 50 WIN slaves can be monitored.

### What happens if more than 50 WIN slaves are connected?

If more than 50 WIN slaves are connected, this can lead to transmission errors between the WIN slaves.

### How many signal elements can be monitored per WIN slave?

Up to 4 elements can be monitored per WIN slave. Up to 8 statuses can be monitored using blink recognition.

### How many signal elements can be monitored per WIN slave performance?

Up to 3 elements can be monitored per WIN slave performance. Up to 6 statuses can be monitored using blink recognition.

A tier is essential for the counter input.

You can monitor up to 2 elements or a maximum of 4 statuses if a tier is also fitted with the job input.

### How many strokes per minute (e.g. with punching) can WERMA-WIN count or record?

WERMA-WIN can count up to a maximum of 600 strokes per minute. The timer of the machine or control must be increased (> 100 ms) to detect the correct quantity of the machine.

### Why does the WIN master light up red?

The WIN master is ready for operation but is not connected to a WIN slave.

### Why is the red state LED on the WIN slave lit?

The WIN slave is ready for operation but is not connected to a WIN master.

### What is the maximum permissible USB cable length between the WIN master and PC?

The cable length should not exceed 3 metres. The maximum cable length can be increased using a USB hub.

### Can the collected data be further processed?

Yes, all data is stored in a Microsoft SQL server database. The data can be read (Microsoft Excel, Microsoft Access ...). Avoid changing the database to avoid loss of data.

### What steps need to be taken with time changes?

A time change can lead to a loss of data. If the system time is synchronised several times (e.g. automatically with a server), then we would recommend doing so outside the monitoring period.

### Can a WIN slave performance be configured to have the same configuration as a WIN slave?

No, a WIN slave performance always needs one tier allocated to the counter input.

### What must be considered when installing WERMA-WIN?

The system requirements need to be observed. Administrator rights are needed to install WERMA-WIN.

### How fast can a WIN slave performance count on the tier with counter input?

The counter pulse can be up to 10 Hz.

### Can blink recognition be set up for all tiers of the WIN slave performance?

No, blink recognition cannot be selected for the tier with counter input or for the tier with job input.

### Is it possible to read job information from an ERP system into WERMA-WIN?

Yes, you need to create a CSV file with the correct format for this. This can then be imported into WERMA-WIN.

### Are there any keyboard shortcut functions in the software?

Yes, WERMA-WIN can be quickly operated using the keyboard with a number of different keyboard shortcuts.

### What must be observed when saving data to the WERMA-WIN database?

The PC to which the WIN master is connected by a USB cable must be continuously in operation.

The PC on which the WERMA-WIN database is installed must be in operation around the clock

The WERMA WIN 4 Server Service and the WERMA WIN 4 Connector Service must have been started.

### Why is the WERMA WIN 4 Connector Service needed?

The service runs in the background when the PC (client and server) is running. The collected WERMA-WIN data from the WIN master is transmitted to the **WERMA WIN 4 Server Service** without WERMA-WIN being started and a user being logged in.

### What is the WERMA WIN 4 Server Service needed for?


The service runs in the background when the PC (client and server) is running. The collected WERMA-WIN data from the WIN master is transmitted to the **WERMA WIN 4 Server Service** without WERMA-WIN being started and a user being logged in.

## Can energy-saving mode or hibernation mode be enabled on a PC with WERMA-WIN?

WERMA recommends disabling energy-saving mode and hibernation state for the following uses:

- PC with the WERMA-WIN database
- PC with the WERMA WIN 4 Server Service
- PC with a connected WIN master (USB)

## Can the WIN ethernet master be operated over the internet?

From a technical perspective, the WIN ethernet master can be operated over the internet.

In spite of basic security measures, we would nevertheless strongly recommend in this case providing additional security for the connection to the WIN ethernet master, for example via an encrypted VPN connection.