



**Probes**  
**Compact models**  
**Amplifiers**





**Ex-Probe** | Device category 1G, 1G/2G und 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b>					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	plug	plug	plug	plug	plug
ID-No.	P11164	P11165	P11166	P11167	P11169
Type	STS 101 S	STS 102 S	STS 103 S	STS 104 S	STS 106 S
Ex area of use	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20				
Certificate No.	TÜV 98 ATEX 1298 X				
Ex marking	Gas: $\text{Ex II 1 G Ex ia IIC T6...T3 Ga}$ $\text{Ex II 1/2 G Ex ia IIC T6...T3 Ga/Gb}$ Dust: $\text{Ex II 1 D Ex ia IIIC T125 °C Da}$				
Ambient temperature and medium temperature [°C]	Gas: T6: $-20 \leq T_a \leq +40$ T5: $-20 \leq T_a \leq +55$ T4: $-20 \leq T_a \leq +85$ T3: $-20 \leq T_a \leq +85$ Dust: $-20 \leq T_a \leq +85$				
Maximum values	$U_i = 13.65 \text{ V}$ / $I_i = 200 \text{ mA}$ / $P_i = 0.69 \text{ W}$ / $C_i = 0.27 \text{ nF}$ / $L_i = 1.30 \text{ }\mu\text{H}$				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	M12 connector				
Note:	Observe specific conditions for use in section "Technique and application" on page 1.13 for the connection to amplifier SZAb..., page 1.104-1.105				



**Ex-Probe** | Device category 1G, 1G/2G und 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b>					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	fixed cable	fixed cable	fixed cable	fixed cable	fixed cable
ID-No.	P11140	P11141	P11142	P11143	P11168
Type	STS 101 K	STS 102 K	STS 103 K	STS 104 K	STS 106 K
Ex area of use	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20				
Certificate No.	TÜV 98 ATEX 1298 X				
Ex marking	Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da				
Ambient temperature and medium temperature [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85				
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	2 m PUR-cable 4x0.25 mm <sup>2</sup>				



Observe specific conditions for use in section "Technique and application" on page 1.13

Note: for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 1G, 1G/2G und 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

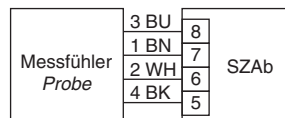
**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Extended temperature range  
up to 120 °C

Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b>					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	fixed cable	fixed cable	fixed cable	fixed cable	fixed cable
ID-No.	P11409	P11410	P11411	P11412	P11413
Type	STS 101 KH	STS 102 KH	STS 103 KH	STS 104 KH	STS 106 KH
Ex area of use	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20				
Certificate No.	TÜV 98 ATEX 1298 X				
Ex marking	Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da				
Ambient temperature [°C] and medium temperature	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85				
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	2 m FEP-cable 4x0.25 mm <sup>2</sup>				



Observe specific conditions for use in section "Technique and application" on page 1.13

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 2G and 2D

**Ex-Device category 2G**  
Installation in Zone 1 (gas)

**Ex-Device category 2D**  
Installation in Zone 21 (dust)



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b>					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	plug	plug	plug	plug	plug
ID-No.	P11170	P11171	P11172	P11173	P11175
Type	ST 101 S	ST 102 S	ST 103 S	ST 104 S	ST 106 S
Ex area of use	Gas: Zone 1 / Dust: Zone 21				
Certificate No.	TÜV 97 ATEX 1218				
Ex marking	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db				
Ambient temperature and medium temperature [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85				
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	M12 connector				
Note:	(probes with cable length > 2 m are available on request) for the connection to amplifier SZAb..., page 1.104-1.105				



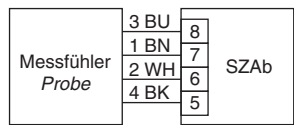
**Ex-Probe** | Device category 2G and 2D

**Ex**-Device category 2G  
Installation in Zone 1 (gas)

**Ex**-Device category 2D  
Installation in Zone 21 (dust)



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4
<b>Dimensions</b>					
Detection range [cm/s]	water 1...100 / oil 3...200				
Sensor length [mm]	25	31	48	40	48
Connection	fixed cable	fixed cable	fixed cable	fixed cable	fixed cable
ID-No.	P11144	P11145	P11146	P11147	P11174
Type	ST 101 K	ST 102 K	ST 103 K	ST 104 K	ST 106 K
Ex area of use	Gas: Zone 1 / Dust: Zone 21				
Certificate No.	TÜV 97 ATEX 1218				
Ex marking	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db				
Ambient temperature and medium temperature [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85				
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
Start-up time typ. [s]	8 (2...18)				
Reaction time typ. [s]	2 (1...13)				
Compressive strength [bar]	60				
Housing material	AISI 316 Ti • different materials on request				
Protection [EN 60529]	IP 67				
Connection	2 m PUR-cable 4x0.25 mm <sup>2</sup>				



(probes with cable length > 2 m are available on request)

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105





**Ex-Probe** | Device category 2G and 2D

**Ex**-Device category 2G  
Installation in Zone 1 (gas)

**Ex**-Device category 2D  
Installation in Zone 21 (dust)

Extended temperature range  
up to 120 °C



Design	G1/4	G1/2	G1/2	NPT1/2	G3/4										
<b>Dimensions</b>															
Detection range [cm/s]	water 1...100 / oil 3...200														
Sensor length [mm]	25	31	48	40	48										
Connection	fixed cable	fixed cable	fixed cable	fixed cable	fixed cable										
ID-No.	P11176	P11178	P11180	P11182	P11184										
Type	ST 101 KH	ST 102 KH	ST 103 KH	ST 104 KH	ST 106 KH										
Ex area of use	Gas: Zone 1 / Dust: Zone 21														
Certificate No.	TÜV 97 ATEX 1218														
Ex marking	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db														
Ambient temperature and medium temperature [°C]	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85														
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH														
Start-up time typ. [s]	8 (2...18)														
Reaction time typ. [s]	2 (1...13)														
Compressive strength [bar]	60														
Housing material	AISI 316 Ti • different materials on request														
Protection [EN 60529]	IP 67														
Connection	2 m FEP-cable 4x0.25 mm <sup>2</sup>														
	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td rowspan="4" style="text-align: center;">Messfühler Probe</td> <td>3 BU</td> <td>8</td> <td rowspan="4" style="text-align: center;">SZAb</td> </tr> <tr> <td>1 BN</td> <td>7</td> </tr> <tr> <td>2 WH</td> <td>6</td> </tr> <tr> <td>4 BK</td> <td>5</td> </tr> </table>					Messfühler Probe	3 BU	8	SZAb	1 BN	7	2 WH	6	4 BK	5
Messfühler Probe	3 BU	8	SZAb												
	1 BN	7													
	2 WH	6													
	4 BK	5													
Note:	(probes with cable length > 2 m are available on request) for the connection to amplifier SZAb..., page 1.104-1.105														



**Ex-Probe** | Device category 1G, 1G/2G and 1D

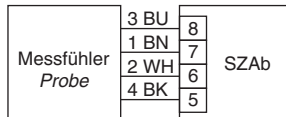
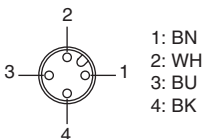
**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Design	G1/2				
<b>Dimensions</b>					
<b>Detection range</b>	[cm/s] water 1...100 / oil 3...200				
<b>Sensor length L</b>	48	48	80	110	140
<b>Connection</b>	fixed cable	plug	fixed cable	fixed cable	fixed cable
<b>ID-No.</b>	P11186	P11187	P11188	P11189	P11190
<b>Type</b>	STS 110 K	STS 110 S	STS 110 K-L80	STS 110 K-L110	STS 110 K-L140
<b>Ex area of use</b>	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20				
<b>Certificate No.</b>	TÜV 98 ATEX 1298 X				
<b>Ex marking</b>	Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da				
<b>Ambient temperature and medium temperature</b>	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85				
<b>Maximum values</b>	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 μH				
<b>Start-up time typ.</b>	[s] 8 (2...18)				
<b>Reaction time typ.</b>	[s] 2 (1...13)				
<b>Compressive strength</b>	[bar] 60				
<b>Housing material</b>	AISI 316 Ti • different materials on request				
<b>Protection</b>	[EN 60529] IP 67				
<b>Connection</b>	...K: 2 m PUR-cable 4x0.25 mm <sup>2</sup> ...S: M12 connector				
<b>Note:</b>	for the connection to amplifier SZAb..., page 1.104-1.105				



Observe specific conditions for use in section "Technique and application" on page 1.13





**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)

Extended temperature range up to 120 °C



Design	G1/2				
<b>Dimensions</b>					
Detection range	[cm/s]	water 1...100 / oil 3...200			
Sensor length L	[mm]	48	80	110	140
Connection		fixed cable	fixed cable	fixed cable	fixed cable
ID-No.		P11414	P11415	P11416	P11417
Type		STS 110 KH	STS 110 KH-L80	STS 110 KH-L110	STS 110 KH-L140
Ex area of use		Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20			
Certificate No.		TÜV 98 ATEX 1298 X			
Ex marking		Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da			
Ambient temperature and medium temperature	[°C]	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85			
Maximum values		Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH			
Start-up time typ.	[s]	8 (2...18)			
Reaction time typ.	[s]	2 (1...13)			
Compressive strength	[bar]	60			
Housing material		AISI 316 Ti • different materials on request			
Protection	[EN 60529]	IP 67			
Connection		2 m FEP-cable 4x0.25 mm <sup>2</sup>			
		Observe specific conditions for use in section "Technique and application" on page 1.13			
Note:		for the connection to amplifier SZAb..., page 1.104-1.105			



**Ex-Probe** | Device category 2G and 2D

**Ex**-Device category 2G  
Installation in Zone 1 (gas)

**Ex**-Device category 2D  
Installation in Zone 21 (dust)



Design	G1/2				
<b>Dimensions</b>					
<b>Detection range</b> [cm/s]	water 1...100 / oil 3...200				
<b>Sensor length L</b> [mm]	48	48	80	110	140
<b>Connection</b>	fixed cable	plug	fixed cable	fixed cable	fixed cable
<b>ID-No.</b>	P11192	P11193	P11194	P11195	P11196
<b>Type</b>	ST 110 K	ST 110 S	ST 110 K-L80	ST 110 K-L110	ST 110 K-L140
<b>Ex area of use</b>	Gas: Zone 1 / Dust: Zone 21				
<b>Certificate No.</b>	TÜV 97 ATEX 1218				
<b>Ex marking</b>	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db				
<b>Ambient temperature and medium temperature</b> [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85				
<b>Maximum values</b>	Ui = 13.65 V / Ii = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH				
<b>Start-up time typ.</b> [s]	8 (2...18)				
<b>Reaction time typ.</b> [s]	2 (1...13)				
<b>Compressive strength</b> [bar]	60				
<b>Housing material</b>	AISI 316 Ti • different materials on request				
<b>Protection</b> [EN 60529]	cable ...K: IP 67 / plug ...S: IP 67				
<b>Connection</b>	...K: 2 m PUR-cable 4x0.25 mm² / ...S: M12 connector				
<b>Note:</b>	(probes with cable length > 2 m are available on request) for the connection to amplifier SZAb..., page 1.104-1.105				



**Ex-Probe** | Device category 2G and 2D

**Ex**-Device category 2G  
Installation in Zone 1 (gas)

**Ex**-Device category 2D  
Installation in Zone 21 (dust)

Extended temperature range  
up to 120 °C



Design	G1/2													
<b>Dimensions</b>														
<b>Detection range</b> [cm/s]	water 1...100 / oil 3...200													
<b>Sensor length L</b> [mm]	48	80	110	140										
<b>Connection</b>	fixed cable	fixed cable	fixed cable	fixed cable										
<b>ID-No.</b>	P11198	P11200	P11201	P11202										
<b>Type</b>	ST 110 KH	ST 110 KH-L80	ST 110 KH-L110	ST 110 KH-L140										
<b>Ex area of use</b>	Gas: Zone 1 / Dust: Zone 21													
<b>Certificate No.</b>	TÜV 97 ATEX 1218													
<b>Ex marking</b>	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db													
<b>Ambient temperature and medium temperature</b> [°C]	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85													
<b>Maximum values</b>	U <sub>i</sub> = 13.65 V / I <sub>i</sub> = 200 mA / P <sub>i</sub> = 0.69 W / C <sub>i</sub> = 0.27 nF / L <sub>i</sub> = 1.30 µH													
<b>Start-up time typ.</b> [s]	8 (2...18)													
<b>Reaction time typ.</b> [s]	2 (1...13)													
<b>Compressive strength</b> [bar]	60													
<b>Housing material</b>	AISI 316 Ti • different materials on request													
<b>Protection</b> [EN 60529]	IP 67													
<b>Connection</b>	2 m FEP-cable 4x0.25 mm <sup>2</sup>													
<table border="1" style="margin: auto;"> <tr> <td rowspan="4" style="padding: 5px;">Messfühler Probe</td> <td style="padding: 2px 5px;">3 BU</td> <td style="padding: 2px 5px;">8</td> <td rowspan="4" style="padding: 5px;">SZAb</td> </tr> <tr> <td style="padding: 2px 5px;">1 BN</td> <td style="padding: 2px 5px;">7</td> </tr> <tr> <td style="padding: 2px 5px;">2 WH</td> <td style="padding: 2px 5px;">6</td> </tr> <tr> <td style="padding: 2px 5px;">4 BK</td> <td style="padding: 2px 5px;">5</td> </tr> </table> <p>(probes with cable length &gt; 2 m are available on request)</p>					Messfühler Probe	3 BU	8	SZAb	1 BN	7	2 WH	6	4 BK	5
Messfühler Probe	3 BU	8	SZAb											
	1 BN	7												
	2 WH	6												
	4 BK	5												
<b>Note:</b>	for the connection to amplifier SZAb..., page 1.104-1.105													



**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

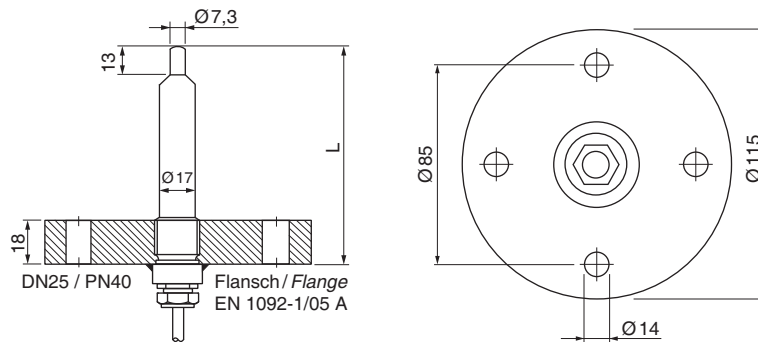
**Ex**-Device category 1D  
Installation in Zone 20 (dust)

With welded standard flange

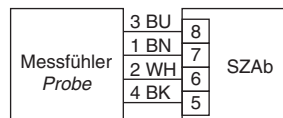


**Design** **DN25 / PN40 (EN 1092-1/05 A)**

**Dimensions**



<b>Detection range</b> [cm/s]	water 1...100 / oil 3...200		
<b>Sensor length L</b> [mm]	80	110	140
<b>Connection</b>	fixed cable	fixed cable	fixed cable
<b>ID-No.</b>	P11191	P11148	P11149
<b>Type</b>	STS 111 K-L80	STS 111 K-L110	STS 111 K-L140
<b>Ex area of use</b>	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20		
<b>Certificate No.</b>	TÜV 98 ATEX 1298 X		
<b>Ex marking</b>	Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da		
<b>Ambient temperature and medium temperature</b> [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85		
<b>Maximum values</b>	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH		
<b>Start-up time typ.</b> [s]	8 (2...18)		
<b>Reaction time typ.</b> [s]	2 (1...13)		
<b>Compressive strength</b> [bar]	probe: 60 / flange: PN40		
<b>Housing material</b>	AISI 316 Ti • different materials on request		
<b>Protection</b> [EN 60529]	IP 67		
<b>Connection</b>	2 m PUR-cable 4x0.25 mm <sup>2</sup>		



Observe specific conditions for use in section "Technique and application" on page 1.13

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

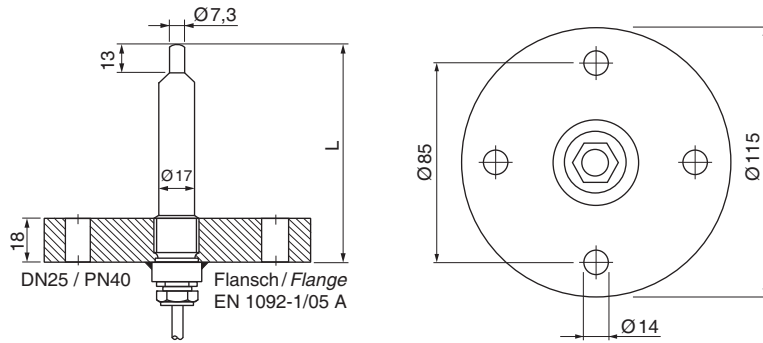
**Ex**-Device category 1D  
Installation in Zone 20 (dust)

With welded standard flange  
Extended temperature range up to 120 °C

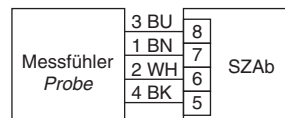


**Design** **DN25 / PN40 (EN 1092-1/05 A)**

**Dimensions**



Detection range	[cm/s]	water 1...100 / oil 3...200		
Sensor length L	[mm]	80	110	140
Connection		fixed cable	fixed cable	fixed cable
ID-No.		P11418	P11419	P11420
Type		STS 111 KH-L80	STS 111 KH-L110	STS 111 KH-L140
Ex area of use		Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20		
Certificate No.		TÜV 98 ATEX 1298 X		
Ex marking		Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da		
Ambient temperature and medium temperature	[°C]	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85		
Maximum values		Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH		
Start-up time typ.	[s]	8 (2...18)		
Reaction time typ.	[s]	2 (1...13)		
Compressive strength	[bar]	probe: 60 / flange: PN40		
Housing material		AISI 316 Ti • different materials on request		
Protection	[EN 60529]	IP 67		
Connection		2 m FEP-cable 4x0.25 mm <sup>2</sup>		



Observe specific conditions for use in section "Technique and application" on page 1.13

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 2G and 2D

**Ex**-Device category 2G  
Installation in Zone 1 (gas)

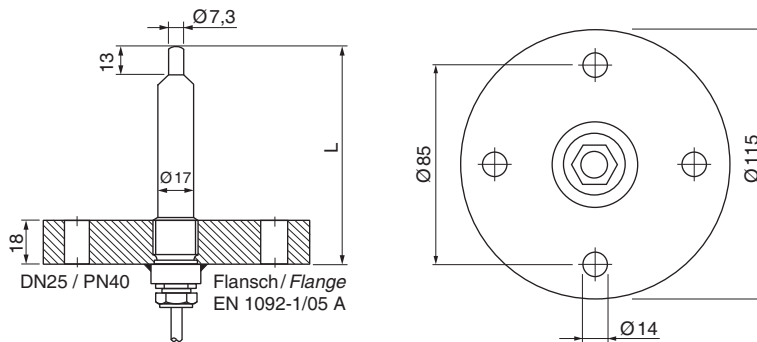
**Ex**-Device category 2D  
Installation in Zone 21 (dust)

With welded standard flange



**Design** **DN25 / PN40 (EN 1092-1/05 A)**

**Dimensions**



<b>Detection range</b>	[cm/s]	water 1...100 / oil 3...200		
<b>Sensor length L</b>	[mm]	80	110	140
<b>Connection</b>		fixed cable	fixed cable	fixed cable
<b>ID-No.</b>		P11197	P11150	P11151
<b>Type</b>		ST 111 K-L80	ST 111 K-L110	ST 111 K-L140
<b>Ex area of use</b>		Gas: Zone 1 / Dust: Zone 21		
<b>Certificate No.</b>		TÜV 97 ATEX 1218		
<b>Ex marking</b>		Gas:	Ex II 2 G Ex ib IIC T6 Gb	
		Dust:	Ex II 2 D Ex ib IIIC T125 °C Db	
<b>Ambient temperature and medium temperature</b>	[°C]	Gas:	T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85	
		Dust:	-20 ≤ Ta ≤ +85	
<b>Maximum values</b>		Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH		
<b>Start-up time typ.</b>	[s]	8 (2...18)		
<b>Reaction time typ.</b>	[s]	2 (1...13)		
<b>Compressive strength</b>	[bar]	60		
<b>Housing material</b>		AISI 316 Ti • different materials on request		
<b>Protection</b>	[EN 60529]	IP 67		
<b>Connection</b>		2 m PUR-cable 4x0.25 mm²		



(probes with cable length > 2 m and different flanges are available on request)

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105





**Ex-Probe** | Device category 2G and 2D

**Ex-Device category 2G**  
Installation in Zone 1 (gas)

**Ex-Device category 2D**  
Installation in Zone 21 (dust)

With welded standard flange

Extended temperature range up to 120 °C



Design	DN25 / PN40 (EN 1092-1/05 A)														
<b>Dimensions</b>															
<b>Detection range</b> [cm/s]	water 1...100 / oil 3...200														
<b>Sensor length L</b> [mm]	80	110	140												
<b>Connection</b>	fixed cable	fixed cable	fixed cable												
<b>ID-No.</b>	P11203	P11204	P11205												
<b>Type</b>	ST 111 KH-L80	ST 111 KH-L110	ST 111 KH-L140												
<b>Ex area of use</b>	Gas: Zone 1 / Dust: Zone 21														
<b>Certificate No.</b>	TÜV 97 ATEX 1218														
<b>Ex marking</b>	Gas: <b>Ex</b> II 2 G Ex ib IIC T6 Gb Dust: <b>Ex</b> II 2 D Ex ib IIIC T125 °C Db														
<b>Ambient temperature and medium temperature</b> [°C]	Gas: T6: +10 ≤ Ta ≤ +40 T5: +10 ≤ Ta ≤ +55 T4: +10 ≤ Ta ≤ +90 T3: +10 ≤ Ta ≤ +120 Dust: -20 ≤ Ta ≤ +85														
<b>Maximum values</b>	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH														
<b>Start-up time typ.</b> [s]	8 (2...18)														
<b>Reaction time typ.</b> [s]	2 (1...13)														
<b>Compressive strength</b> [bar]	60														
<b>Housing material</b>	AISI 316 Ti • different materials on request														
<b>Protection</b> [EN 60529]	IP 67														
<b>Connection</b>	2 m FEP-cable 4x0.25 mm <sup>2</sup>														
	<table border="1" style="margin: auto;"> <tr> <td rowspan="5" style="padding: 5px;">Messfühler Probe</td> <td style="padding: 2px;">3 BU</td> <td style="padding: 2px;">8</td> <td rowspan="5" style="padding: 5px;">SZAb</td> </tr> <tr> <td style="padding: 2px;">1 BN</td> <td style="padding: 2px;">7</td> </tr> <tr> <td style="padding: 2px;">2 WH</td> <td style="padding: 2px;">6</td> </tr> <tr> <td style="padding: 2px;">4 BK</td> <td style="padding: 2px;">5</td> </tr> <tr> <td style="padding: 2px;"></td> <td style="padding: 2px;"></td> </tr> </table>			Messfühler Probe	3 BU	8	SZAb	1 BN	7	2 WH	6	4 BK	5		
Messfühler Probe	3 BU	8	SZAb												
	1 BN	7													
	2 WH	6													
	4 BK	5													
	(probes with cable length > 2 m and different flanges are available on request)														
<b>Note:</b>	for the connection to amplifier SZAb..., page 1.104-1.105														



**Ex-Probe** | Device category 1G, 1G/2G and 1D

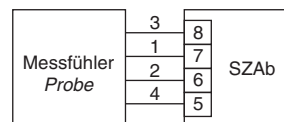
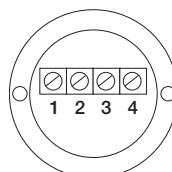
**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Design	G3/4	NPT3/4
<b>Dimensions</b>		
Detection range [cm/s]	water 1...100 / oil 3...200	water 1...100 / oil 3...200
Sensor length [mm]	68	68
Connection	terminal clamps	terminal clamps
ID-No.	P11268	P11269
Type	STSEX 01	STSEX 02
Ex area of use	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20	
Certificate No.	TÜV 98 ATEX 1298 X	
Ex marking	Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T125 °C Da	
Umgebungstemperatur und Mediumtemperatur [°C]	Gas: T6: -20 ≤ Ta ≤ +40 T5: -20 ≤ Ta ≤ +55 T4: -20 ≤ Ta ≤ +85 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85	
Maximum values	Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH	
Start-up time typ. [s]	8 (2...18)	
Reaction time typ. [s]	2 (1...13)	
Cable gland [mm]	clamping range 5.5...8.5	
Housing material	AISI 316 Ti • different materials on request	
Protection [EN 60529]	IP 67	
Connection cable	2 m PVC 4x0.75 mm <sup>2</sup> (number 1-4)	



Observe specific conditions for use in section "Technique and application" on page 1.13

**Note:** for the connection to amplifier SZAb..., page 1.104-1.105



**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Design		G1/2	
<b>Dimensions</b>			
Detection range	[m/s]	air 2...25	
Sensor length	[mm]	65	
Connection		fixed cable	plug
ID-No.		P11152	P11206
Type		STS 212 K	STS 212 S
Ex area of use		Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20	
Certificate No.		TÜV 98 ATEX 1298 X	
Ex marking		Gas: <b>Ex</b> II 1 G Ex ia IIC T4...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T4...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T145 °C Da	
Ambient temperature and medium temperature	[°C]	Gas: T4: -20 ≤ Ta ≤ +70 T3: -20 ≤ Ta ≤ +85 Dust: -20 ≤ Ta ≤ +85	
Maximum values		Ui = 13.65 V / li = 200 mA / Pi = 0.69 W / Ci = 0.27 nF / Li = 1.30 µH	
Start-up time typ.	[s]	10...40	
Reaction time typ.	[s]	5 (2...30)	
Compressive strength	[bar]	10	
Housing material		AISI 316 Ti • different materials on request	
Protection	[EN 60529]	IP 67	
Connection		2 m PUR-cable 4x0.25 mm <sup>2</sup>	M12 connector
		Observe specific conditions for use in section "Technique and application" on page 1.13	
Note:		for the connection to amplifier SZAb..., page 1.104-1.105	



**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Design	G1/2	
<b>Dimensions</b>		
<b>Detection range</b> [m/s]	air 2...25	
<b>Sensor length</b> [mm]	48	
<b>Connection</b>	fixed cable / plug	
<b>ID-No.</b>	P11153 / P11207	
<b>Type</b>	STS 215 K / STS 215 S	
<b>Ex area of use</b>	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20	
<b>Certificate No.</b>	TÜV 98 ATEX 1298 X	
<b>Ex marking</b>	Gas: $\text{Ex}$ II 1 G Ex ia IIC T6...T3 Ga $\text{Ex}$ II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: $\text{Ex}$ II 1 D Ex ia IIIC T130 °C Da	
<b>Ambient temperature and medium temperature</b> [°C]	Gas: T6: $-20 \leq T_a \leq +35$ T5: $-20 \leq T_a \leq +50$ T4: $-20 \leq T_a \leq +85$ T3: $-20 \leq T_a \leq +85$ Dust: $-20 \leq T_a \leq +85$	
<b>Maximum values</b>	$U_i = 13.65 \text{ V}$ / $I_i = 200 \text{ mA}$ / $P_i = 0.69 \text{ W}$ / $C_i = 0.27 \text{ nF}$ / $L_i = 1.30 \text{ }\mu\text{H}$	
<b>Start-up time typ.</b> [s]	5...20	
<b>Reaction time typ.</b> [s]	3 (2...30)	
<b>Compressive strength</b> [bar]	10	
<b>Housing material</b>	AISI 316 Ti • different materials on request	
<b>Protection</b> [EN 60529]	IP 67	
<b>Connection</b>	2 m PUR-cable 4x0.25 mm <sup>2</sup>	M12 connector
<b>Note:</b>	Observe specific conditions for use in section "Technique and application" on page 1.13 for the connection to amplifier SZAb..., page 1.104-1.105	



**Ex-Probe** | Device category 1G, 1G/2G and 1D

**Ex**-Device category 1G  
Installation in Zone 0 (gas)

**Ex**-Device category 1G/2G  
Installation in partition wall  
Zone 0 / Zone 1 (gas)

**Ex**-Device category 1D  
Installation in Zone 20 (dust)



Extended temperature range up to 120 °C

Design	G1/2	
<b>Dimensions</b>		
Detection range [m/s]	air 2...25	
Sensor length [mm]	48	
Connection	fixed cable	
ID-No.	P11212	
Type	STS 215 KH	
Ex area of use	Gas: Zone 0, Partition wall Zone 0 / Zone 1 / Dust: Zone 20	
Certificate No.	TÜV 98 ATEX 1298 X	
Ex marking	Gas: <b>Ex</b> II 1 G Ex ia IIC T6...T3 Ga <b>Ex</b> II 1/2 G Ex ia IIC T6...T3 Ga/Gb Dust: <b>Ex</b> II 1 D Ex ia IIIC T130 °C Da	
Ambient temperature and medium temperature [°C]	Gas: T6: - 20 ≤ Ta ≤ +35 T5: - 20 ≤ Ta ≤ +50 T4: - 20 ≤ Ta ≤ +85 T3: - 20 ≤ Ta ≤ +120 Dust: - 20 ≤ Ta ≤ +85	
Maximum values	U <sub>i</sub> = 13.65 V / I <sub>i</sub> = 200 mA / P <sub>i</sub> = 0.69 W / C <sub>i</sub> = 0.27 nF / L <sub>i</sub> = 1.30 μH	
Start-up time typ. [s]	5...20	
Reaction time typ. [s]	3 (2...30)	
Compressive strength [bar]	10	
Housing material	AISI 316 Ti • different materials on request	
Protection [EN 60529]	IP 67	
Connection	2 m FEP-cable 4x0.25 mm <sup>2</sup>	
Note:	Observe specific conditions for use in section "Technique and application" on page 1.13 for the connection to amplifier SZAb..., page 1.104-1.105	



**Ex**-Amplifiers AC/DC | Relay

Ex II (1) G [Ex ia Ga] IIC  
 Ex II (1) D [Ex ia Da] IIIC

AC 230 V • AC 115 V • DC 24 V

Relay output

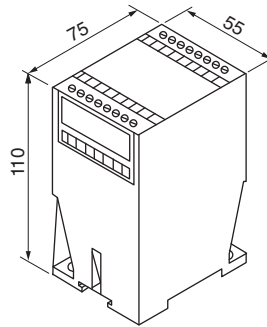
Cable break and short circuit monitoring

Turn off delay



**Design** **SZAb 400 EX...**

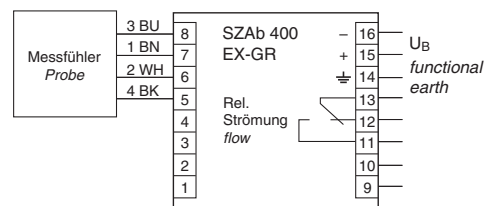
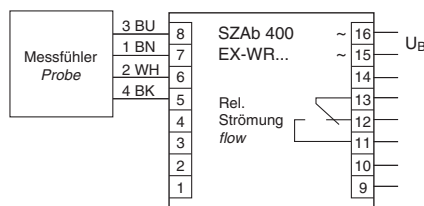
*Dimensions*



ID-No.	P11400	P11399	P11398
Type	SZAb 400 EX-WR230	SZAb 400 EX-WR115	SZAb 400 EX-GR
Output			
Supply voltage [V]	230 AC ±10%	115 AC ±10%	24 DC ±15%
Ex marking	Gas: Ex II (1) G [Ex ia Ga] IIC		Dust: Ex II (1) D [Ex ia Da] IIIC
Certificate No.	EPS 19 ATEX 1 009		IECEx EPS 19.0001
Maximum values	U <sub>o</sub> = 13.65 V I <sub>o</sub> = 200 mA P <sub>o</sub> = 683 mW IIC: C <sub>o</sub> = 0.35 µF; L <sub>o</sub> = 1.1 mH IIB: C <sub>o</sub> = 1.8 µF; L <sub>o</sub> = 6.2 mH IIA: C <sub>o</sub> = 5.7 µF; L <sub>o</sub> = 11.0 mH		
Turn off delay [s]	0...25		
Output	relay / change-over		
Switching voltage [V]	250 AC / 60 DC / 24 DC		
Switching current [A]	4 AC / 0.8 DC / 4 DC		
Switching power	cos φ >0,7 / L/R <200 ms		
Ambient temperature [°C]	-20 ≤ T <sub>a</sub> ≤ +60		
Protection [EN 60529]	IP 20		
Connection	terminal screws		

**Note:**

The Ex-amplifier must be mounted outside hazardous areas (gas or dust).







**Ex**-Amplifier DC | Analog

**Ex** II (1) G [Ex ia Ga] IIC  
**Ex** II (1) D [Ex ia Da] IIIC

DC 24 V

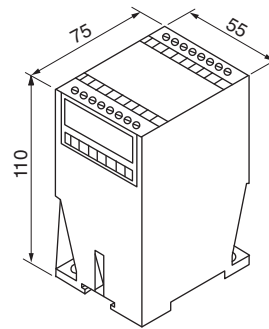
Analog output

Cable break and short circuit monitoring



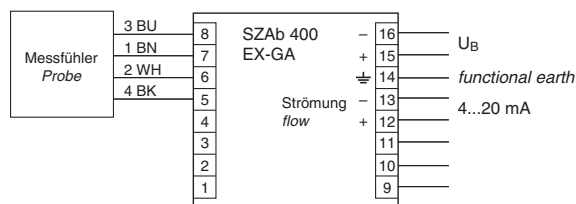
**Design** **SZAb 400 EX-GA**

*Dimensions*



ID-No.	P11401	
Type	SZAb 400 EX-GA	
Output	 4...20 mA	
Supply voltage [V]	24 DC ±15%	
Ex marking	Gas: <b>Ex</b> II (1) G [Ex ia Ga] IIC	Staub: <b>Ex</b> II (1) D [Ex ia Da] IIIC
Certificate No.	EPS 19 ATEX 1 009	IECEx EPS 19.0001
Maximum values	U <sub>o</sub> = 13.65 V I <sub>o</sub> = 200 mA P <sub>o</sub> = 683 mW IIC: Co = 0.35 µF; Lo = 1.1 mH IIB: Co = 1.8 µF; Lo = 6.2 mH IIA: Co = 5.7 µF; Lo = 11.0 mH	
Output	analog, non linear	
Current output [mA]	4...20	
Load R <sub>L</sub> [Ω]	0...500	
Ambient temperature [°C]	-20 ≤ Ta ≤ +60	
Protection [EN 60529]	IP 20	
Connection	terminal screws	

Note:  
 The Ex-amplifier must be mounted outside hazardous areas (gas or dust).





**Ex**-Compact model | Device category 3G and 3D

**Ex**-Device category 3G  
Installation in Zone 2 (gas)

**Ex**-Device category 3D  
Installation in Zone 22 (dust)

DC 24 V

PNP output



Design	M18x1	
<b>Dimensions</b>		
Detection range	[m/s]	gaseous media 0.5...20
Sensor length L	[mm]	80
Output		 PNP
ID-No.		<b>P11404</b>
Type		LC 518 GSP-Ex22
Ex area of use		Gas: Zone 2 / Dust: Zone 22
Certificate of conformity		EGE 20.0010 X
Ex marking	Gas:	<b>Ex</b> II 3 G Ex ic mc IIC T4...T3 Gc
	Dust:	<b>Ex</b> II 3 D Ex ic mc IIIC T135 °C Dc
Ambient temperature and medium temperature	Gas:	T3, T4: -10 ≤ Ta ≤ +60
	Dust:	-10 ≤ Ta ≤ +60
Supply voltage	[V]	24 DC ±10%
Current consumption	[mA]	≤ 35
Switching current	[mA]	≤ 200
Start-up time typ.	[s]	20
Reaction time typ.	[s]	< 5
Compressive strength	[bar]	1
Housing material		AISI 316 Ti, PBT-GF30, PUR, ceramic Al <sub>2</sub> O <sub>3</sub>
Display flow		three-colour-illuminated dot red/yellow/green
Protection	[EN 60529]	IP 67
Connection		2 m PUR-cable 3x0.5 mm <sup>2</sup>



**Ex**-Compact model | Device category 3G and 3D

**Ex**-Device category 3G  
Installation in Zone 2 (gas)

**Ex**-Device category 3D  
Installation in Zone 22 (dust)

DC 24 V

Analog output



Design	M18x1	
<b>Dimensions</b>		
Detection range [m/s]	gaseous media 0.5...20	
Sensor length L [mm]	80	
Output	 4...20 mA	
ID-No.	P11421	
Type	LC 518 GA-Ex22	
Ex area of use	Gas: Zone 2 / Dust: Zone 22	
Certificate of conformity	EGE 20.0010 X	
Ex marking	Gas:	<b>Ex</b> II 3 G Ex ic mc IIC T4...T3 Gc
	Dust:	<b>Ex</b> II 3 D Ex ic mc IIIC T135 °C Dc
Ambient temperature and medium temperature [°C]	Gas:	T3, T4: -10 ≤ Ta ≤ +60
	Dust:	-10 ≤ Ta ≤ +60
Supply voltage [V]	24 DC ±10%	
Current consumption [mA]	≤ 35	
Current output [mA]	4...20	
Start-up time typ. [s]	20	
Reaction time typ. [s]	< 5	
Compressive strength [bar]	1	
Housing material	AISI 316 Ti, PBT-GF30, PUR, ceramic Al <sub>2</sub> O <sub>3</sub>	
Display flow	two-colour-illuminated dot red/green	
Protection [EN 60529]	IP 67	
Connection	2 m PUR-cable 3x0.5 mm <sup>2</sup>	



**Ex**-Compact model | Device category 3G and 3D

**Ex**-Device category 3G  
Installation in Zone 2 (gas)

**Ex**-Device category 3D  
Installation in Zone 22 (dust)

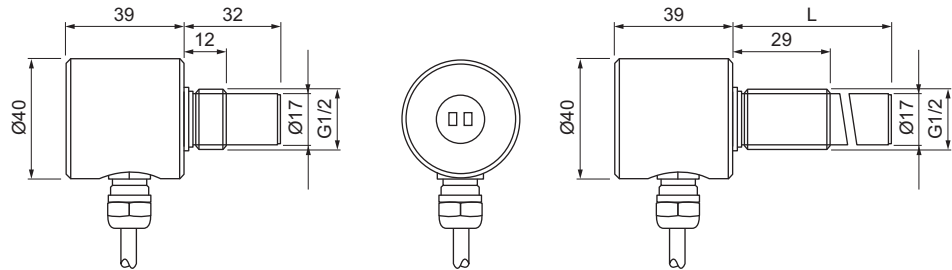
DC 24 V

PNP output

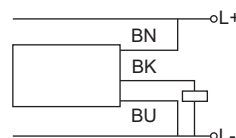


**Design** **G1/2**

*Dimensions*



Detection range	[m/s]	gaseous media 0.5...20			
Sensor length L	[mm]	32	49	101	151
Output		 PNP			
ID-No.		<b>P11405</b>	<b>P11406</b>	<b>P11407</b>	<b>P11408</b>
Type		LC 521 GSP-Ex22	LC 521/1 GSP-Ex22	LC 521/2 GSP-Ex22	LC 521/3 GSP-Ex22
Ex area of use		Gas: Zone 2 / Dust: Zone 22			
Certificate of conformity		EGE 20.0010 X			
Ex marking		Gas:	II 3 G Ex ic mc IIC T4...T3 Gc		
		Dust:	II 3 D Ex ic mc IIIC T135 °C Dc		
Ambient temperature and medium temperature	[°C]	Gas:	T3, T4: -10 ≤ Ta ≤ +60		
		Dust:	-10 ≤ Ta ≤ +60		
Supply voltage	[V]	24 DC ±10%			
Current consumption	[mA]	≤ 35			
Switching current	[mA]	≤ 200			
Start-up time typ.	[s]	20			
Reaction time typ.	[s]	< 5			
Compressive strength	[bar]	1			
Housing material		AISI 316 Ti, PBT-GF30, PUR, ceramic AL <sub>2</sub> O <sub>3</sub>			
Display flow		three-colour-illuminated dot red/yellow/green			
Protection	[EN 60529]	IP 67			
Connection		2 m PUR-cable 3x0.5 mm <sup>2</sup>			





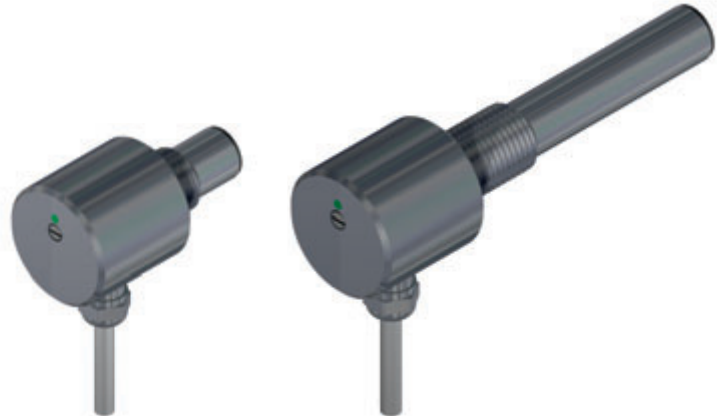
**Ex**-Compact model | Device category 3G and 3D

**Ex**-Device category 3G  
Installation in Zone 2 (gas)

**Ex**-Device category 3D  
Installation in Zone 22 (dust)

DC 24 V

Analog output



Design	G1/2			
<b>Dimensions</b>				
Detection range [m/s]	gaseous media 0.5...20			
Sensor length L [mm]	32	49	101	151
Output	 4...20 mA			
ID-No.	P11422	P11423	P11424	P11425
Type	LC 521 GA-Ex22	LC 521/1 GA-Ex22	LC 521/2 GA-Ex22	LC 521/3 GA-Ex22
Ex area of use	Gas: Zone 2 / Dust: Zone 22			
Certificate of conformity	EGE 20.0010 X			
Ex marking	Gas:	Ex II 3 G Ex ic mc IIC T4...T3 Gc		
	Dust:	Ex II 3 D Ex ic mc IIIC T135 °C Dc		
Ambient temperature and medium temperature [°C]	Gas:	T3, T4: -10 ≤ Ta ≤ +60		
	Dust:	-10 ≤ Ta ≤ +60		
Supply voltage [V]	24 DC ±10%			
Current consumption [mA]	≤ 35			
Current output [mA]	4...20			
Start-up time typ. [s]	20			
Reaction time typ. [s]	< 5			
Compressive strength [bar]	1			
Housing material	AISI 316 Ti, PBT-GF30, PUR, ceramic Al <sub>2</sub> O <sub>3</sub>			
Display flow	two-colour-illuminated dot red/green			
Protection [EN 60529]	IP 67			
Connection	2 m PUR-cable 3x0.5 mm <sup>2</sup>			



**Ex**-Junction box | Device category 2G and 2D

For the connection of supply and signal lines in explosion hazardous areas of zone 1 and zone 21

Clamp fastening



Design	GK E...		
Dimensions			
ID-No.	Z01222	Z01232	Z01246
Type	GK E 060 K M	GK E 080 K M	GK E 100 K M
Number of clamps	4	2 x 4	3 x 4
Dimensions (BxTxH) [mm]	58x64x36	98x64x36	150x64x36
Ignition protection type	Gas: increased safety		
Ex marking	Dust: protection through enclosure		
	Gas: $\text{Ex II 2G Ex eb IIC T6 Gb}$		
Certificate No.	Dust: $\text{Ex II 2D Ex tb IIIC T 80 °C Db}$		
	TÜV 16 ATEX 152979 X		
Ambient temperature [°C]	Gas: T3, T4, T5, T6: $-20 \leq T_a \leq +75$		
Voltage [V]	Dust: $-20 \leq T_a \leq +75$		
	Um $\leq 275$		
Current [A]	Im $\leq 2$		
Type of terminal	terminal with no screws		
Rated cross-section	„e+t“ single wire: 0.20...2.5 mm <sup>2</sup> / flexible: 0.20...2.5 mm <sup>2</sup>		
Clamping range of cable gland [mm]	flexible: 0.20...2.5 mm <sup>2</sup> (with wire end ferrule)		
	5.0...10.0		
Material	2.0...6.0 (with reduction insert RDE 16)		
	housing: aluminium powder coated / cable gland: Br-Ni / PA / EPDM		
Protection [EN 60529]	IP 65		
Connection	terminal compartment		

Note:

The Ex-junction box type GK E... is designed for the connection of non-intrinsically safe circuits in explosion-hazardous areas of zone 1 and zone 21. Outside of the housing, the lines must be installed permanently; further provisions must be observed if required.

Additional housings, additional terminals and plastic cable glands are available on request.

Accessories	reduction insert RDE 16 (part of delivery)
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**Ex-Junction box** | Device category 2G and 2D

For the connection of supply and signal lines in explosion hazardous areas of zone 1 and zone 21

Clamp fastening



Design	GK I...		
<b>Dimensions</b>			
<b>ID-No.</b>	Z01224	Z01234	Z01248
<b>Type</b>	GK I 060 K M	GK I 080 K M	GK I 100 K M
<b>Number of clamps</b>	4	2 x 4	3 x 4
<b>Dimensions (BxTxH) [mm]</b>	58x64x36	98x64x36	150x64x36
<b>Ignition protection type</b>	Gas: intrinsic safety		
<b>Ex marking</b>	Dust: intrinsic safety Gas: Ex II 2G Ex ib/ia IIC T6 Gb Dust: Ex II 2D Ex ib/ia IIIC T 80 °C Db		
<b>Certificate No.</b>	TÜV 16 ATEX 152979 X		
<b>Ambient temperature [°C]</b>	Gas: T3, T4, T5, T6: -20 ≤ Ta ≤ +75 Dust: -20 ≤ Ta ≤ +75		
<b>Voltage [V]</b>	Ui = 90		
<b>Current [A]</b>	Ii = 2.0		
<b>Type of terminal</b>	terminal with no screws		
<b>Rated cross-section</b>	„I“ single wire: 0.08...2.5 mm <sup>2</sup> / flexible: 0.08...2.5 mm <sup>2</sup> flexible: 0.08...2.5 mm <sup>2</sup> (with wire end ferrule)		
<b>Clamping range of cable gland [mm]</b>	5.0...10.0 2.0...6.0 (with reduction insert RDE 16)		
<b>Material</b>	housing: aluminium powder coated / cable gland: Br-Ni / PA / EPDM		
<b>Protection [EN 60529]</b>	IP 65		
<b>Connection</b>	terminal compartment		

Note:

The Ex-junction box type GK I... is designed for the connection of intrinsically safe circuits in explosion-hazardous areas of zone 1 and zone 21. Outside of the housing, the lines must be installed permanently; further provisions must be observed if required.

Additional housings, additional terminals and plastic cable glands are available on request.

Accessories	reduction insert RDE 16 (part of delivery)
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**Ex**-Junction box | Device category 2G and 2D

For the connection of supply and signal lines in explosion hazardous areas of zone 1 and zone 21

Clamp fastening



Design	GK EI...	GK EEI...	GK EII...
Dimensions			
ID-No.	Z01236	Z01250	Z01252
Type	GK EI 080 K M	GK EEI 100 K M	GK EII 100 K M
Number of clamps	4 / 4	4 + 4 / 4	4 / 4 + 4
Dimensions (BxTxH) [mm]	98x64x36	150x64x36	150x64x36
Ignition protection type	Gas: increased safety / intrinsic safety		
Ex marking	Dust: protection through enclosure / intrinsic safety		
	Gas: $\text{Ex}$ II 2G Ex eb ib/ia IIC T6 Gb		
Certificate No.	Dust: $\text{Ex}$ II 2D Ex tb ib/ia IIIC T 80 °C Db		
	TÜV 16 ATEX 152979 X		
Ambient temperature [°C]	Gas: T3, T4, T5, T6: $-20 \leq T_a \leq +75$		
	Dust: $-20 \leq T_a \leq +75$		
Voltage [V]	$U_m \leq 275 / U_i = 90$		
Current [A]	$I_m \leq 2 / I_i = 2.0$		
Type of terminal	terminal with no screws		
Rated cross-section	„i“ single wire: 0.08...2.5 mm <sup>2</sup> / flexible: 0.08...2.5 mm <sup>2</sup>		
	flexible: 0.08...2.5 mm <sup>2</sup> (with wire end ferrule)		
Clamping range of cable gland [mm]	„e+t“ single wire: 0.20...2.5 mm <sup>2</sup> / flexible: 0.20...2.5 mm <sup>2</sup>		
	flexible: 0.20...2.5 mm <sup>2</sup> (with wire end ferrule)		
Material	housing: aluminium powder coated / cable gland: Br-Ni / PA / EPDM		
Protection [EN 60529]	IP 65		
Connection	terminal compartment		

Note:

The Ex-junction box type GK... is designed for the connection of intrinsically safe and / or non-intrinsically safe circuits in explosion-hazardous areas of zone 1 and zone 21. Outside of the housing, the lines must be installed permanently; further provisions must be observed if required.

Additional housings, additional terminals and plastic cable glands are available on request.

Zubehör	Reduziereinsatz RDE 16 (im Lieferumfang enthalten)
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# Accessories | IO-Link-Master

Parametrization of IO-Link-devices

Version 1.1 - Universally usable

Easy configurable software

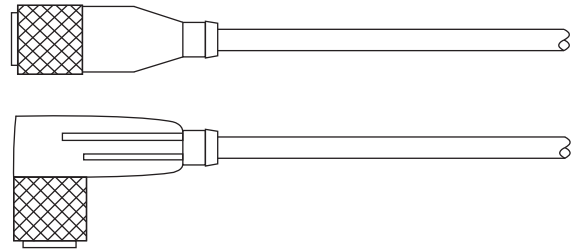


Design	USB
<b>Dimensions</b>	<p>1: mini USB 2: LED operating state / fault display 3: 24 V DC Ø 5.5/2.1 mm 4: M12 type A connector</p>
Application area	parametrization of devices with IO-Link-functions and monitoring of process data
Communications protocol	COM 1 (4.8 kBit/s), COM 2 (38.4 kBit/s), COM 3 (230 kBit/s)
Related software	Port and Device Configuration Tool 1
Output	
ID-No.	<b>Z01216</b>
Type	IO-Link-USB-Master-Set v1.1
Input voltage [V]	USB: 5 DC / external power supply: 24 DC (EN 60950)
Input current [mA]	USB: < 500 / external power supply: < 600
Output voltage [V]	USB: 24 DC / external power supply: see input voltage
Output current [mA]	USB: < 65 / external power supply: < 500
LED displays	
Green	continuous: Master ready for operation, flashes: IO-Link-communication active
Red	continuous and green LED off: fault
Material	aluminium, eloxed
Protection [EN 60529]	IP 20
Connection	M12 connector / type A / socket
1Download of iqPDCT-software from <a href="http://www.iq2-development.de/downloads">www.iq2-development.de/downloads</a> .	<p>1: +24 V 2: not used 3: GND 4: IO-Link: CH1 (C/Q) 5: not used</p> <p>1: +5 V 2: D- 3: D+ 4: not used 5: GND</p>
Accessories (incl. at delivery)	USB-connecting cable, M12-sensor-connecting cable 2 m, power supply 230 V AC / 24 V DC



# Accessories | M12 connector

Finished cable plug housing  
Self locking screw plug  
Protection IP 67

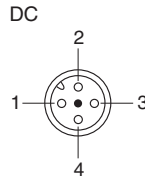
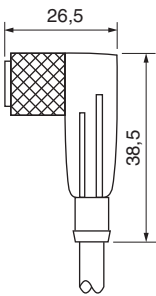
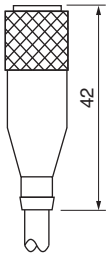


## Cable plug housing

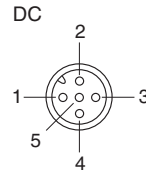
## Pin-assignment

straight

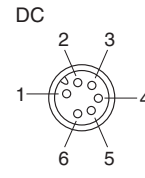
angular



- 3-wire**
- 1: BN
  - 2: -
  - 3: BU
  - 4: BK
- 4-wire**
- 1: BN
  - 2: WH
  - 3: BU
  - 4: BK



- 5-wire**
- 1: BN
  - 2: WH
  - 3: BU
  - 4: BK
  - 5: GY



- 6-wire**
- 1: BN
  - 2: WH
  - 3: BU
  - 4: BK
  - 5: GY
  - 6: PK

SLG...

SLW...

DC

TYPE	ID-NO.	DESIGN
SLG 3-2	Z01076	Cable plug housing straight, 2 m cable 3x0.34 mm <sup>2</sup> max. 250 V / 4 A
SLG 3-5	Z01077	Cable plug housing straight, 5 m cable 3x0.34 mm <sup>2</sup> max. 250 V / 4 A
SLW 3-2	Z01078	Cable plug housing angular, 2 m cable 3x0.34 mm <sup>2</sup> max. 250 V / 4 A
SLW 3-5	Z01079	Cable plug housing angular, 5 m cable 3x0.34 mm <sup>2</sup> max. 250 V / 4 A
SLW 3-2-LED	Z00052	Cable plug housing angular, 2 m cable 3x0.34 mm <sup>2</sup> max. 250 V / 4 A PNP with LED
SLG 4-2	Z00445	Cable plug housing straight, 2 m cable 4x0.25 mm <sup>2</sup> max. 250 V / 4 A
SLG 4-5	Z00449	Cable plug housing straight, 5 m cable 4x0.25 mm <sup>2</sup> max. 250 V / 4 A
SLW 4-2	Z00446	Cable plug housing angular, 2 m cable 4x0.25 mm <sup>2</sup> max. 250 V / 4 A
SLW 4-5	Z00450	Cable plug housing angular, 5 m cable 4x0.25 mm <sup>2</sup> max. 250 V / 4 A
SLW 4-2-LED	Z01157	Cable plug housing angular, 2 m cable 4x0.25 mm <sup>2</sup> max. 250 V / 4 A PNP with LED
SLG 5-2	Z01150	Cable plug housing straight, 2 m cable 5x0.34 mm <sup>2</sup> max. 60 V / 2 A
SLW 5-2	Z01151	Cable plug housing angular, 2 m cable 5x0.34 mm <sup>2</sup> max. 60 V / 2 A
SLG 6-2	Z01197	Cable plug housing straight, 2 m cable 6x0.25 mm <sup>2</sup> max. 36 V / 2 A
SLW 6-2	Z01198	Cable plug housing angular, 2 m cable 6x0.25 mm <sup>2</sup> max. 36 V / 2 A

### DATA

Thread	M12x1	Contact resistance	≤ 5 mΩ
Material	PVC	Insulation resistance	>10 <sup>9</sup>
Protection	IP 67	Testing voltage	2.0 KV eff. / 5 and 6 pol. 1.5 KV eff.
Temperature range	-25...+80 °C		

### Note:

Sensors with NC output are connected to 4 pole cable plug housings. In this case, the break output is connected to the white lead (connection 2).

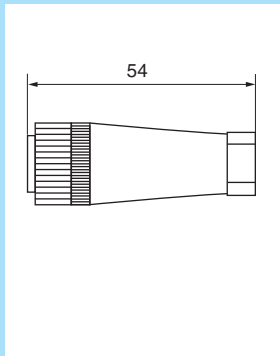


## Accessories | M12 connector

Cable plug user-assembled  
Great variety of cables  
Protection IP 67

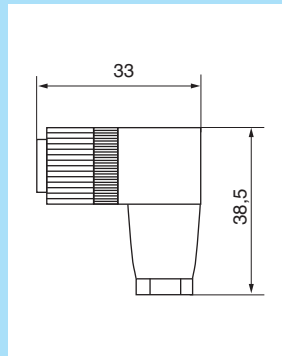


**Cable plug housing straight**

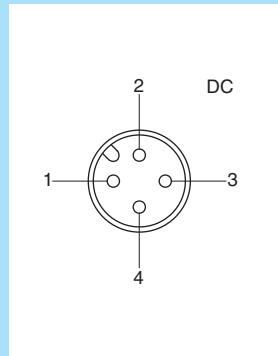


**SBG...**

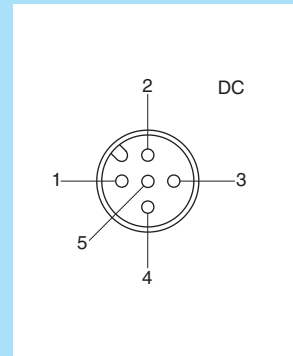
**Cable plug housing angular**



**SBW...**



**SBG.../SBW...**



**SBG 5.../SBW 5...**

TYPE	ID-NO.	DESIGN
SBG-DC	Z01060	DC-Cable plug housing M12x1, straight 4-pol user assembled 30 VDC, 3 A
SBW-DC	Z00038	DC-Cable plug housing M12x1, angular 4-pol user assembled 30 VDC, 3 A
SBG 5-DC	Z01146	DC-Cable plug housing M12x1, straight 5-pol user assembled 30 VDC, 1 A
SBW 5-DC	Z01147	DC-Cable plug housing M12x1, angular 5-pol user assembled 30 VDC, 1 A

**PREFERRED CABLE**

PVC 205	Z01061	PVC-cable 2x0.5 mm <sup>2</sup>	Lead colour coding: BN/BU
PVC 205B	Z01062	PVC-cable 2x0.5 mm <sup>2</sup> , blue cable covering	Lead colour coding: BN/BU
PVC 305	Z01063	PVC-cable 3x0.5 mm <sup>2</sup>	Lead colour coding: BN/BU/BK
PVC 434	Z01066	PVC-cable 4x0.34 mm <sup>2</sup>	Lead colour coding: BN/BU/BK/WH
PVC 405	Z01067	PVC-cable 4x0.5 mm <sup>2</sup>	Lead colour coding: BN/BU/BK/WH
PVC 505	Z01116	PVC-cable 5x0.5 mm <sup>2</sup>	Lead colour coding: BN/BU/BK/WH/GY
PUR 425S	Z01069	PUR-cable 4x0.25 mm <sup>2</sup> , shielded	Lead colour coding: BN/BU/BK/WH
PUR 425BS	Z01070	PUR-cable 4x0.25 mm <sup>2</sup> , shielded, blue cable covering	Lead colour coding: BN/BU/BK/WH
	Z01074	Finishing of cable plug housing	
	Z01075	Finishing of cable plug housing and cable extremity	

**Note**

Different cables on request.

Code: BK = black BN = brown BU = blue GN = green YE = yellow GY = grey PK = pink WH = white



## Accessories | Cable

TYPE	ID-NO.	MATERIAL/SHEAT	Ø <sub>A</sub> [mm]*	WIRE SPECIFICATION	COLOUR
PVC205	Z01061	PVC, grey	5.2	2x0.5 mm <sup>2</sup>	BU, BN
PVC205B	Z01062	PVC, blue	5.1	2x0.5 mm <sup>2</sup>	BU, BN
PVC275	Z01086	PVC, grey	6.0	2x0.75 mm <sup>2</sup>	BU, BN
PVC275BS	Z01108	PVC, blue	6.3	2x0.75 mm <sup>2</sup> shielded	numbered cable
PVC334	Z01109	PVC, grey	4.5	3x0.34 mm <sup>2</sup>	BU, BN, BK
PVC305E	Z01064	PVC, grey	5.2	3x0.5 mm <sup>2</sup>	BU, BN, GN/YE
PVC305	Z01063	PVC, grey	5.2	3x0.5 mm <sup>2</sup>	BU, BN, BK
PVC305B	Z01167	PVC, blue	5.2	3x0.5 mm <sup>2</sup>	BU, BN, BK
PVC375	Z01065	PVC, grey	6.0	3x0.75 mm <sup>2</sup>	numbered cable
PVC375E	Z01111	PVC, grey	6.0	3x0.75 mm <sup>2</sup>	BU, BN,GN/YE
PVC425	Z01110	PVC, grey	4.3	4x0.25 mm <sup>2</sup>	BU, BN, BK, WH
PVC434	Z01066	PVC, grey	4.5	4x0.34 mm <sup>2</sup>	BU, BN, BK, WH
PVC405	Z01067	PVC, grey	5.5	4x0.5 mm <sup>2</sup>	BU, BN, BK, WH
PVC475E	Z01113	PVC, grey	6.5	4x0.75 mm <sup>2</sup>	BU, BN, BK, GN/YE
PVC475BS	Z01114	PVC, blue	7.3	4x0.75 mm <sup>2</sup> shielded	numbered cable
PVC505	Z01116	PVC, grey	5.8	5x0.5 mm <sup>2</sup>	BU, BN, WH, BK, GY
PVC705	Z01117	PVC, grey	6.6	7x0.5 mm <sup>2</sup>	BU, BN, WH, GN/YE, GY, PK
PUR334	Z01156	PUR, grey	5.0	3x0.34 mm <sup>2</sup>	BU, BN, BK
PUR375	Z01068	PUR, black	6.0	3x0.75 mm <sup>2</sup> -40°C	BU, BN, BK
PUR425S	Z01069	PUR, grey	5.0	4x0.25 mm <sup>2</sup> shielded	BU, BN, WH, BK
PUR425BS	Z01070	PUR, blue	5.0	4x0.25 mm <sup>2</sup> shielded	BU, BN, WH, BK
PUR405	Z01112	PUR, black	5.0	4x0.5 mm <sup>2</sup>	BU, BN, WH, BK
PUR405BS	Z01173	PUR, blue	6.2	4x0.5 mm <sup>2</sup> shielded	BU, BN, WH, BK
PUR475SE	Z01118	PUR, grey	9.0	4x0.75 mm <sup>2</sup> shielded	numbered cable
PUR410E	Z01119	PUR, orange	8.0	4x1.0 mm <sup>2</sup>	BU, BN, BK, GN/YE
FEP375S	Z01126	FEP, red	5.0	3x0.75 mm <sup>2</sup> shielded	BU, BN, BK
FEP334	Z01071	FEP, red	3.8	3x0.34 mm <sup>2</sup>	BU, BN, BK
FEP425S	Z01073	FEP, red	4.1	4x0.25 mm <sup>2</sup> shielded	BU, BN, BK, WH
FEP425	Z01072	FEP, red	3.7	4x0.25 mm <sup>2</sup>	BU, BN, BK, WH
FEP425BS	Z01125	FEP, blue	4.1	4x0.25 mm <sup>2</sup> shielded	BU, BN, BK, WH
FEP375	Z01165	FEP, red	4.2	3x0.75 mm <sup>2</sup>	BU, BN, GN/YE
Silikon375E	Z01121	Silicone, red	6.0	3x0.75 mm <sup>2</sup>	BU, BN, GN/YE
Silikon475E	Z01122	Silicone, red	6.3	4x0.75 mm <sup>2</sup>	BU, BN, BK, GN/YE
Silikon475SE	Z01115	Silicone, red	8.8	4x0.75 mm <sup>2</sup> shielded	BU, BN, BK, GN/YE
Silikon305	Z01143	Silicone, red	5.5	3x0.5 mm <sup>2</sup>	BU, BN, BK
PVC705SE	Z01123	PVC-transparent	9.2	7x0.5 mm <sup>2</sup> shielded	numbered cable, GN/YE

\*Tolerance of diameter ±0,4 mm

Code: BK = black BN = brown BU = blue GN = green YE = yellow GY = grey PK = pink WH = white



Accessories | Product section 1

TYPE	ID-NO.	DIMENSIONS	DESIGN
Flange - Ø 20	Z01106		Plastic - flange with drilled hole Ø 20 mm  for sensors type LN 520
Flange DN25/PN40	Z01001		Flange AISI 316 Ti (1.4571) EN 1092-1/05 A (DIN 2527) with central thread G1/2  for sensors type ST... with G1/2
A501	Z01033		Thread sleeve of brass, nickel-plated L=50 mm, G1  for sensors type LN...
A502	Z01034		Thread sleeve of brass, nickel-plated L=50 mm, G1  for sensors type LN...
A503	Z01035		Welding sleeve of FE 360 B (1.0037), L=50 mm, G1  for sensors type LN...



# Accessories | Product section 1

TYPE	ID-NO.	DIMENSIONS	DESIGN
SIA G1/4 - 1/4 - 1/4	Z01018		<p>Adapter for G1/4-sensors with G1/4-pipe connections</p> <p>Material: AISI 316 Ti Sensors: STK 412...</p> <p>Massflow down to 10 ml/min</p> <p>(additional models on request)</p>
SDA-SCS-G1/4	Z01200 L = 39 mm		<p>Screw-in adapter G1/4 for flow sensors SCS, SNS, SNTS and ST418</p> <p>Material: AISI 316 Ti</p>
SDA-SCS-G1/2	Z01201 L = 30 mm		<p>Screw-in adapter G1/2 for flow sensors SCS, SNS, SNTS and ST418</p> <p>Material: AISI 316 Ti</p>
SDA-SCS-G1/2-L37	Z01208 L = 37 mm		<p>Material: AISI 316 Ti</p>
SDA G1/4-Ø10-L050	Z01175		<p>Adapter G1/4 for flow sensors inline-digital display SDN 5.../1..., SDV 652..., SDI 852/1...</p>
SDA G1/2-Ø18-L068	Z01176		<p>Adapter G1/2 for flow sensors inline-digital display SDN 552/3...</p>



# Process Sensors

## Level sensors

- For level monitoring  $-230...+230\text{ }^{\circ}\text{C}$
- Steam proof at a pressure of up to 30 bar
- For hot motor oil
- For liquid nitrogen
- For chemically aggressive media

## Ultrasonic sensors

- Switching distance up to 6000 mm
- Level monitoring
- Watertight housing
- Teach-in functions

## Pressure sensors

- Monitoring in pipes and containers
- Pressure up to 16 bar
- Level up to 10 m ( $\pm 1\text{ cm}$ )
- Compact models
- Programmable

## Temperature sensors

- Monitoring in pipes and containers
- Temperature  $-40...+120\text{ }^{\circ}\text{C}$  ( $\pm 0,3\text{ }^{\circ}\text{C}$ )
- Pressure up to 100 bar
- Compact models
- Multi use output NO/NC + analog

## Infrared detectors

- Measurement of temperature
- Monitoring of hot media
- Position control

## Metal detectors

- Detection of metal parts
- For harsh environment
- Large sensing range up to 400 mm
- Monitoring of bulk materials
- Machine protection



# Sales partners, wholesalers and representatives



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BRAZIL, Sao Paulo  
CANADA, Oldcastle – Ontario  
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DENMARK, Aabenraa  
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VIETNAM, Ho Chi Minh City



<https://ege-elektronik.com/en/organisation/ege/>

We look forward to your enquiry.  
Please contact us!

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