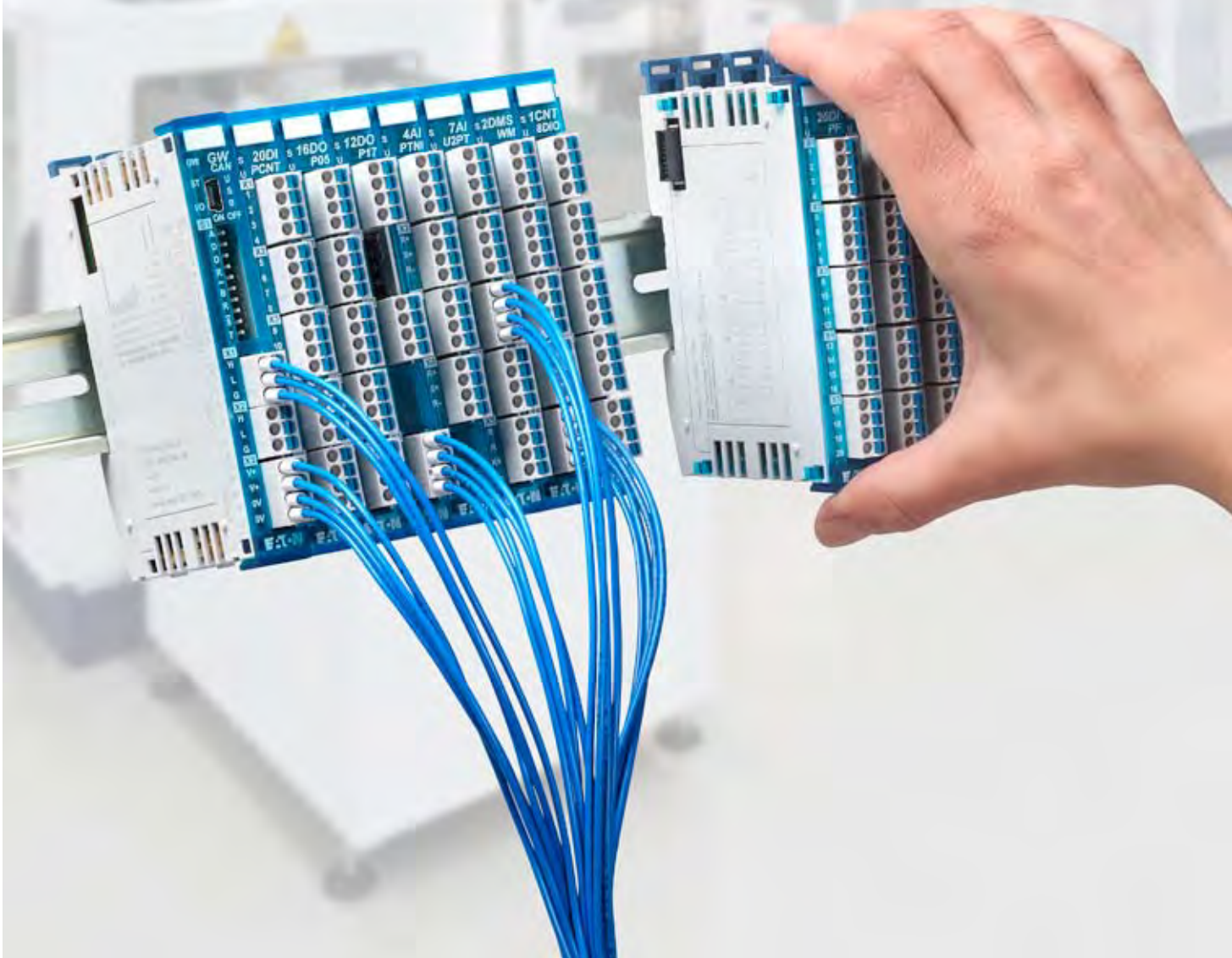


Big Efficiency in a Small Package



EATON

Powering Business Worldwide

Plug into Performance!

XN300 – The slice card modular I/O system for the machine building industry

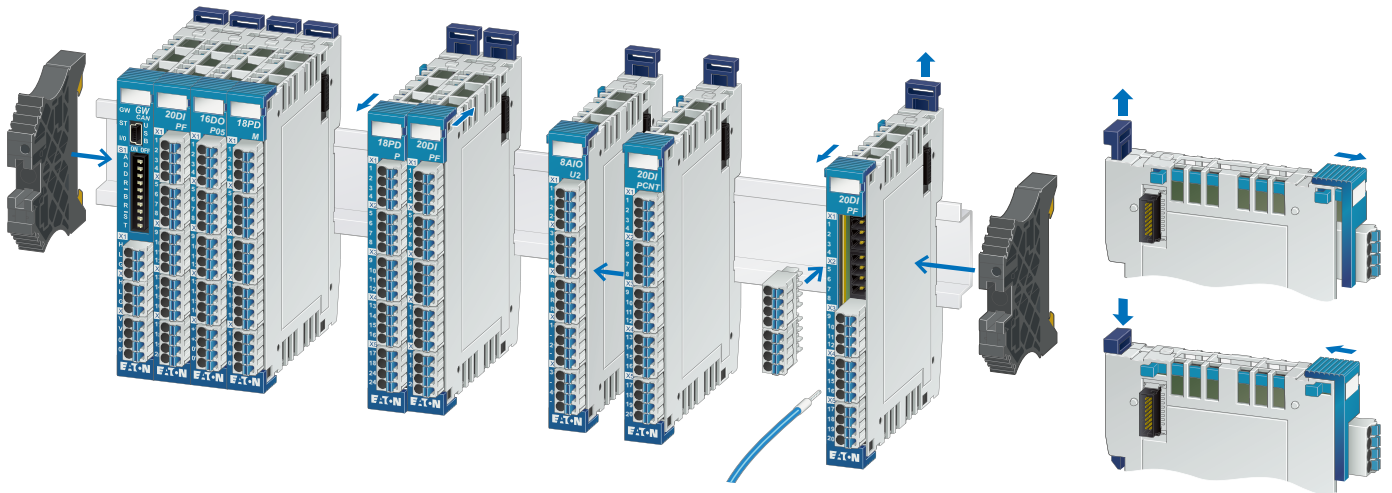
Eaton's ultra-compact, slice-card-based XN300 modular I/O system features a high channel density plug-in connection system and can be combined with HMI PLC products in order to create the ideal system solution for your applications. The secret? Application-oriented functions that

result in lower device costs and combine optimum performance with compact dimensions.

All this is combined with a sleek design and a convenient installation concept that makes handling easier and allows users to pre-assemble their I/O stations and the components they will be connecting.

Moreover, the plug-in terminal system and the way in which signals are clearly identified make commissioning easier and round off the system's characteristics, making it the perfect solution for the needs of machine building applications meant for mass production.

Designed for your needs



Compact

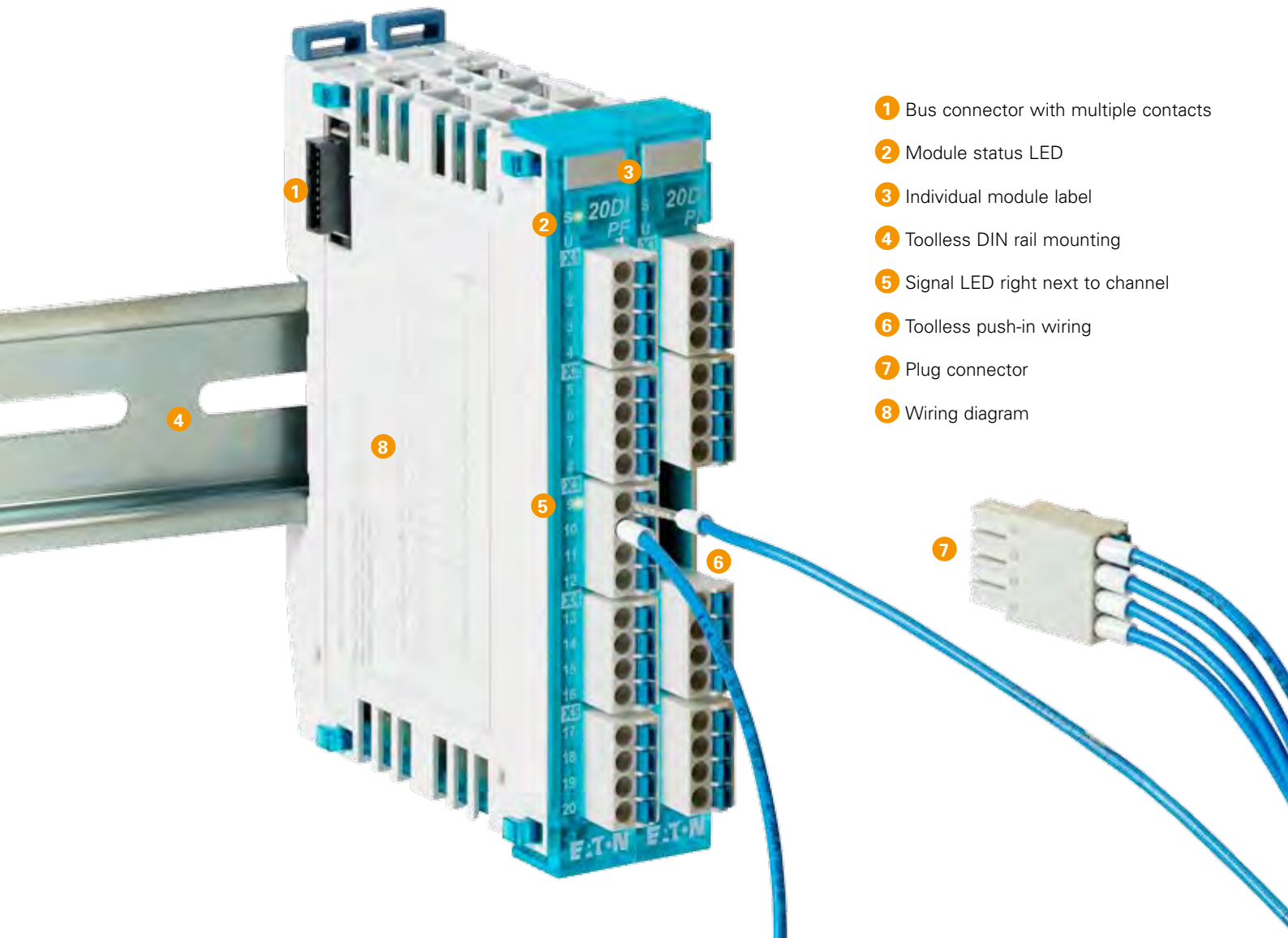
Space is always at a premium – especially when it comes to the machine building industry. Of course, this should come as no surprise in a sector where the drive towards miniaturization is resulting in the use of increasingly compact components. Or, to put it another way, every cubic centimeter counts. That is why the housings used in the XN300 system can accommodate up to 20 channels, with push-in terminal technology and status displays, on a front area of 12.5 x 102 mm and a height of 72 mm, all while ensuring that everything remains perfectly manageable and easy to keep track of.

Simple

Time is money! The XN300 system has been developed with this piece of wisdom in mind, which is why the installation work for it can be broken down into ideal and efficient steps that allow for pre-assembly and save a significant amount of time. This can be seen, for instance, in the system's use of plug-in terminals and in how it makes it possible to conveniently split installation work into two different steps (putting together a block and then installing it on a mounting rail). In fact, assembling a functional block and then mounting it as a unit on a rail can be easily done in record time – and without any tools to boot! All it takes after that is inserting the necessary wires into the push-in terminals or connecting the appropriate connectors and voilà: your system is ready to go!

Efficient

The various modules are functionally designed for real-life applications, minimizing the amount of devices needed. This not only goes easy on your wallet, but also reduces the amount of space required.



- 1 Bus connector with multiple contacts
- 2 Module status LED
- 3 Individual module label
- 4 Toolless DIN rail mounting
- 5 Signal LED right next to channel
- 6 Toolless push-in wiring
- 7 Plug connector
- 8 Wiring diagram

Convenient and easy to wire

A plug-in connection system makes it possible to quickly connect and replace modules, which in turn makes it much easier to commission and service machines. Each module can accommodate up to 20 channels, which are distributed among up to five plug connectors as required for the application at hand.

Accessories include keying pins designed to ensure that plugs will not be mixed up.

The push-in terminals have the following conductor cross-sections:

Connection specifications

- | | |
|--|-------------|
| • Rigid [mm ²] | 0.2 – 1.50 |
| • flexible with uninsulated ferrule [mm ²] | 0.25 – 1.50 |
| • Flexible with insulated ferrule [mm ²] | 0.25 – 0.75 |
| • AWG | 24–16 |

Neat and easy to keep track of

A clear functional layout makes it possible to easily keep track of things despite the modules' high channel density:

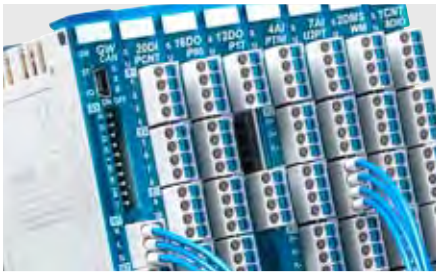
- Mechanical latches can be easily accessed – even after a module is installed
- Labels for individual identification
- Individually programmable user LEDs can be used as slot-specific indicators
- Each module has a status LED that shows its communication status
- The signal state for each wire is shown right next to where the wire is connected
- Different signal colors make it easy to identify functions (green = input, yellow = output, red = fault)

Solution-oriented and multifunctional

The devices' application-oriented functions reduce the number of slice cards required. This means, for instance, that digital outputs can be powered and fused in groups, as well as switched off centrally. In addition, digital inputs can perform additional counter functions, while analog modules include additional functions such as a reference voltage, temperature measuring, cold-junction compensation, etc.

With the XN300, you can rest assured knowing that you will find the ideal configuration for the exact system solution you want.

Simply better organized



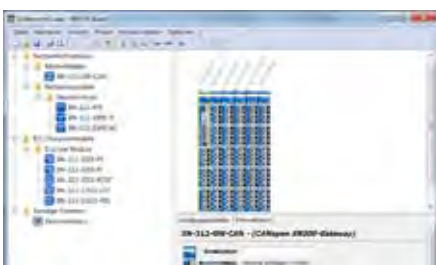
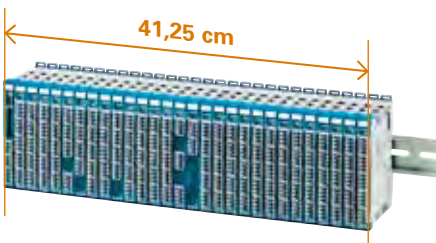
CANopen® Standard and Performance

The CANopen gateway is used to integrate the I/O system into the corresponding automation solution at the fieldbus level. Fast backplane communications enable fast response times of less than 1 ms in CANopen system environments.

When using a station configuration with a max. of 32 nodes, access to a maximum of 640 channels can be easily organized.

This performance data makes the XN300 I/O system perfect for even the most demanding of applications.

Total width with 32 modules



Ideal assistance: XN300 Assist

Offline functions, including the ability to configure and test systems, generate purchase orders, and create device specifications are just as helpful during commissioning and installation as online „signal state reading and setting“ functions.

The XN300 system at a glance



Gateway modules

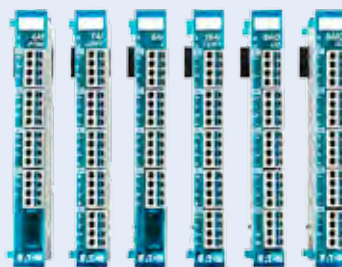
The XN-312-GW-CAN gateway is part of the basic XN300 portfolio and supports all Eaton I/O components for the system. The XN300 backplane is used to transmit data between the gateway and the various I/O washers.

- Direct connection to the components in the XN system
- Minimal width with easy-to-use push-in connection technology
- Clear separation between diagnostic, configuration, and connection functions
- LED indicators for system diagnostics
- The address and baud rate can be set with DIP switches; a bus termination resistor can be connected
- Communication with XN300 Assist via Mini-USB

Digital modules

XN-322 digital modules provide the following advantages as input/output and relay modules:

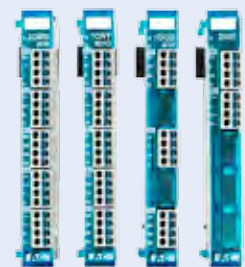
- Compact connection space
- LEDs with different colors in order to show the various possible states
- State signals directly at the point of connection
- Modules with and without potential isolation
- Outputs powered in groups
- Input modules with counter function



Analog modules

XN-322 analog washers are available as input/output modules and multifunctional modules.

- A wide variety of configuration options
- Modules with mixed functions
- Temperature measurement using thermocouples or resistance sensors (Pt, Ni, KTY)



Technology Modules

The following XN-322 specialty modules are an integral part of the XN300 portfolio:

- Weigh module
- RS422/TTL-Counter module
- Motor driver modules

XN300 general overview



Specification	Part-No.:	Article-No.
Gateway/Interface		
CANopen®	XN-312-GW-CAN	178782
Digital input		
20 inputs, P, 24VDC, 5.0ms	XN-322-20DI-PD	178786
20 inputs, P, 24VDC, 0.5ms	XN-322-20DI-PF	178768
20 inputs, P, 24VDC, 2/4 CNT, 25kHz	XN-322-20DI-PCNT	178767
Digital output		
16 outputs, sourcing, 24 VDC, 0.5 A, kf	XN-322-16DO-P05	178787
12 outputs, sourcing, 24 VDC, 1.7 A, kf	XN-322-12DO-P17	178788
Analog input		
6 inputs, +/-10 V, 1 Pt/KTY, Uref	XN-322-7AI-U2PT	178789
8 inputs, 0/4–20mA	XN-322-8AI-I	179288
8 inputs, thermocouple, 2 KTY	XN-322-10AI-TEKT	178792
4 inputs, Pt/Ni/KTY/R, 2/3-wire	XN-322-4AI-PTNI	178772
Analog output		
8 outputs, +/-10V	XN-322-8AO-U2	178790
Analog input/output		
4 inputs/4 outputs, +/-10V, Uref	XN-322-8AIO-U2	178791
Technology modules		
Weigh module, 2 strain gauges, 24-bit	XN-322-2DMS-WM	178793
DC motor driver, 12–30 V, brushed, 3.5 A	XN-322-1DCD-B35	178794
Counter, 1 CNT, 125kHz, 16Bit, 4 DO, 4 DI	XN-322-1CNT-8DIO	178795
Serial, 2 SSI, RS422, 32Bit	XN-322-2SSI	178773
Power supply modules		
Power supply, 4 x 24VDC/2A, kf	XN-322-4PS-20	178796
Passive field potential distributors		
Power Distribution, 18 channels, GND	XN-322-18PD-M	178769
Power Distribution, 18 channels, VCC	XN-322-18PD-P	178770

Eaton is dedicated to ensuring that reliable, efficient and safe power is available when it's needed most. With unparalleled knowledge of electrical power management across industries, experts at Eaton deliver customized, integrated solutions to solve our customers' most critical challenges.

Our focus is on delivering the right solution for the application. But decision makers demand more than just innovative products. They turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority. For more information, **visit www.eaton.eu**

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