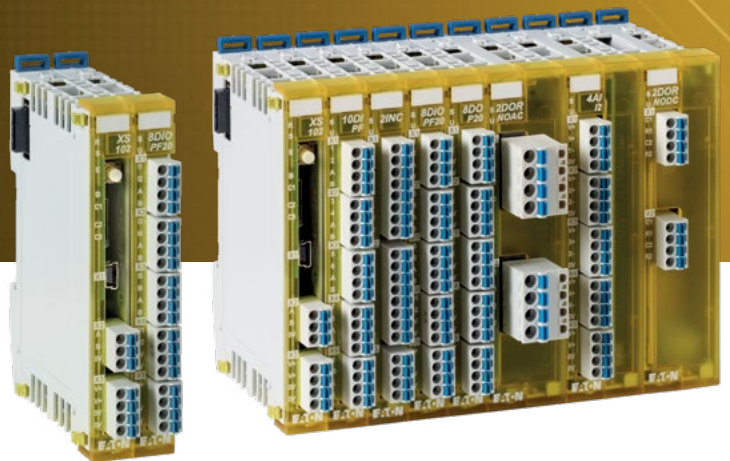


Your reliable partner
in functional safety
Safe. Safer.
XN Safety.



Powering Business Worldwide

Ensuring functional safety in industrial environments

Ensuring safety in industrial environments is crucial for protecting people, machinery and the environment throughout the entire lifecycle of a machine. Identifying risks during the construction phase and implementing suitable risk reduction measures are essential steps in achieving a safe working environment.

While achieving absolute safety is technically impossible, the challenge is to reduce the risk to a tolerable level. Functional safety, a key component of the overall safety, relies on the proper functioning of safety-related systems and external devices to mitigate risks effectively.



Safety Technology

Control the unexpected



Your partner in functional safety

With XN Safety you can experience reliable and flexible solutions for functional safety machinery and systems. The range includes a powerful safety programmable logic controller (PLC) and safety input/output (I/O) modules, based on a modular system. This modularity offers high flexibility and simplifies the integration of XN Safety, enhancing efficiency.

The **XS-102 safety PLC** features a powerful ARM CPU for fast processing of signals and is the core component within the safety application. It can be expanded with up to 16 safety I/O modules and can optionally be connected directly to other components like XC series PLCs or the XN300 I/O system, providing a comprehensive, safe automation solution.



XN Safety
Portfolio Overview

Elevate your safety standards

Modular and extendable design

XN Safety's compact footprint and modular design save valuable space inside the control cabinet. The I/O modules from the XN Safety range include safety digital and analog I/Os, as well as encoder input modules – all with Push-in and plug connection terminals for quick and tool-free wiring. Whether you need a standalone safety PLC or integration with a non-safety PLC, XN Safety can be tailored to your unique applications.



Simple handling

The Push-in and plug technology accounts for simple handling and fast, tool-free mounting, making installation quick and easy, simplifying your production processes.



Cybersecure

The XN Safety product range has been tested according to Eaton's high cybersecurity requirements and complies with the latest cybersecurity standards.



Intuitive programming

The XN Safety Designer software, available as a free download, ensures that programming is intuitive and straightforward, making it accessible for all users and further enhancing the ease of use. Additionally, our XN Safety Designer offers all the monitoring, diagnostic and debugging functionalities required to ensure a streamlined and fast engineering of your safety application.



Flexibility and integration

For more advanced needs, XN Safety can be directly attached to Eaton's XC100, XC200 and XC300 PLCs or to any PLC as a remote station with an XN300 Gateway, enabling the exchange of non-safety data utilizing various communication systems like EtherCAT and CAN. The modular system approach throughout the complete XC and XN portfolio helps to simplify the installation and the pre-assembly of block modules, ensuring seamless integration and flexibility.



Comprehensive safety solutions

Our XN Safety product range, together with related Eaton components, such as limit switches, emergency-stop buttons, safety sensors, and drives with safety inputs ensures a fully integrated safety solution. The solution map highlights our broad portfolio, which is compatible with all XN300 Gateways, all XC controllers, and all XV products, offering maximum flexibility for diverse applications.

Flexible visualization

XV300 HMI



XV300 HMI



XV300 HMI



Modular & safe control

XN Safety PLC



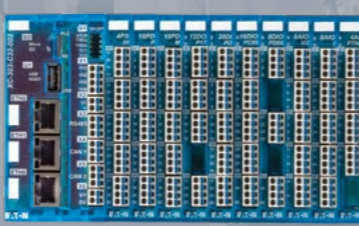
EtherCAT gateway with XN Safety



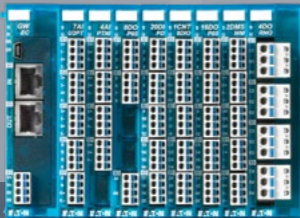
XC300 PLC with XN Safety



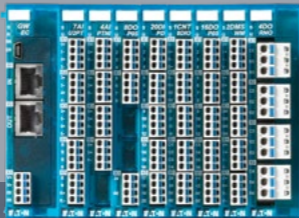
XC300 PLC



EtherCAT gateway with remote I/O



EtherCAT gateway with remote I/O



EtherCAT gateway with XN Safety



Fast command

Emergency-stop button



Emergency-stop button



RMQ pushbutton



Emergency-stop button



RMQ pushbutton



Emergency-stop button



EtherCAT

Ethernet

Wiring

XN Safety Designer

With the XN Safety Designer software, configuring and managing your safety system is intuitive and efficient. The software ensures compliance with the latest safety standards, achieving up to SIL 3 (EN 62061) and PL e, Kat. 4 (EN ISO 13849-1/-2). Its user-friendly interface simplifies the programming process, making it accessible for users without extensive training. Additionally, it supports modular configuration, allowing you to flexibly implement individual safety requirements. This includes decentralized configurations and easy expansion of existing systems with safety functions.

The software's intuitive interface, advanced diagnostics, compliance with safety standards, modular configuration, and integration with Eaton products make it a valuable asset for ensuring functional safety in industrial environments.

Download the software for free:
eaton.com/xnsafety-designer



Order information



Part no.	XS-102-C00-000	XS-322-10DI-PF	XS-322-8DO-P20	XS-322-8DIO-PF20	XS-322-4AI-I2	XS-322-2INC	XS-322-2DO-RNODC	XS-322-2DO-RNOAC
Ordering								
Catalog no.	EP-401352	EP-401353	EP-401354	EP-401355	EP-401356	EP-401357	EP-401359	EP-401360
General								
Type	Safety PLC	Safety extension	Safety extension	Safety extension	Safety extension	Safety extension	Safety extension	Safety extension
Interfaces:	1x USB device 1x MicroSD slot							
Achievable Safety Level:	SIL 3 (EN 62061) PL e, Kat. 4 (EN ISO 13849-1/-2)							
Interfaces:	1x USB device 1x microSD slot							
Inputs								
Type	Safe digital input		Safe digital input		Safe analog input (current)	Safe incremental encoder input		
Quantity	10		6		4	2		
Voltage	24 V DC		24 V DC					
Current	3 mA		3 mA		4-20 mA			
Filter Time	0.5 ms		0.5 ms		1 ms			
Resolution					16 Bit	12 Bit		
Other						Input frequency: 0.75 MHz Counter frequency: 3 MHz Signal processing: 4x		
Outputs								
Type	Safe digital output		Safe digital output			Encoder supply	Safe relay output	Safe relay output
Quantity	8		8			2	2 (Normally Open)	2 (Normally Open)
Voltage	24 V DC		24 V DC			5 V	≤ 30 V DC	≤ 250 V AC
Current	2 A		2 A			300 mA	6 A	6 A

We make what matters work. *

* At Eaton, we believe that power is a fundamental part of just about everything people do. Technology, transportation, energy and infrastructure—these are things the world relies on every day. That's why Eaton is dedicated to helping our customers find new ways to manage electrical, hydraulic and mechanical power more efficiently, safely and sustainably. To improve people's lives, the communities where we live and work, and the planet our future generations depend upon. Because that's what really matters. And we're here to make sure it works.

See more at Eaton.com/whatmatters

For more information, visit
Eaton.com/xnsafety

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