Your Global Automation Partner



The Full Range for Interface Technology









TURCK

Turck is a global leader in automation technology. Over 4,500 employees in 30 countries strive to deliver the best sensor, connectivity, and fieldbus technology products on the market. To do this more efficiently, we have strategically located production facilities across the globe, including sites in the United States, Germany, Switzerland, Mexico, and China. This allows us to adapt to specific market conditions, as well as bring product to the market faster.

Turck strives to provide our customers with not only the best products on the market, but also the best service and support. Our highly trained engineering staff is available to walk you through your system requirements and help find solutions to difficult application problems. Unlike other companies, when you call Turck, you will always be able to speak directly with an engineer in a matter of minutes! Combine this with a network of 2,000 experts across the United States, and you literally have the finest assembly of automation professionals at your doorstep.



Interface Technology

Our interface technology products extend into both hazardous and non-hazardous signal conditioning applications. Including a broad range of point-to-point, remote I/O, and Foundation Fieldbus products approved for use in North America, Europe, and many other countries around the world. Our interface technology products help provide robust and reliable data, allowing your applications to operate efficiently without the fear of unplanned disruptions.

Customers in a variety of industries have utilized interface technology solutions from Turck, including:

- Chemical Processing
- Factory Automation
- Mobile Equipment
- Oil and Gas
- Pharmaceutical
- Wastewater Treatment

Hazardous Area Overview

Hazardous Area Descriptions

Class and Groups							
		Group					
Class	Substance	NEC500	NEC505/ CENELEC/IEC				
Class I (gas)	Acetylene	А	<u> </u>				
	Hydrogen	В	IIC				
	Ethylene	С	IIB				
	Propane	D	IIA				
Mining	Methane	—	l.				
Class II (dust)	Metal dust	E	Note: see zones below				
	Coal dust	F					
	Grain dust	G	zones below				
Class III (fibers)	Fibers	_	_				

Division/Zone				
Flammable Material	NEC500	NEC505	CENELEC/IEC	
Continuously present	Division	Zone 0	Zone 0 (Zone 20 - dust)	
Likely/can be present	1	Zone 1	Zone 1 (Zone 21 - dust)	
Not normally present	Division 2	Zone 2	Zone 2 (Zone 22 - dust)	

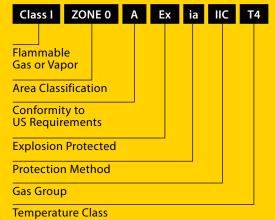
Temperature			
Maximum	Temperature Class		
Surface Temp. °C	NEC500	NEC505/ CENELEC/IEC	
450	T1	T1	
300	T2	T2	
280	T2A		
260	T2B		
230	T2C		
215	T2D		
200	Т3	Т3	
180	T3A		
165	T3B		
160	T3C		
135	T4	T4	
120	T4A		
100	T5	T5	
85	T6	T6	

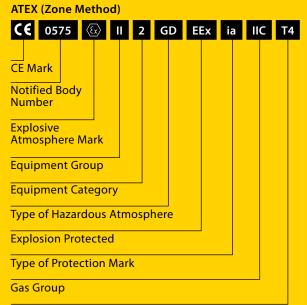
Hazardous Markings

NEC500 (Class & Division Method)

Class I	Div 1	Groups A, B, C, D		T4			
Flammable Gas or Vapor Area Classification							
Gas Group							
Temperature Class							

NEC505 (Class & Zone Method)





Temperature Class

Excom: In-Cabinet Modular I/O

The Excom modular I/O system combines both remote I/O and intrinsically safe into a single backplane, which reduces cabinet size, installation time, and hardware costs.



Non-Hazardous System

- Available in 8, 16, or 24 slots
- Up to 192 field devices
- Redundancy (power and communication)
- HART and non-HART capable
- Standard inputs/outputs
- Channel diagnostics



Zone 2 (Class I Div 2) System

- Available in 8, 16, or 24 slots
- Up to 192 field devices
- Redundancy (power and communication)
- HART capable
- Intrinsically safe inputs/outputs
- Channel diagnostics



Zone 1 (Class I Div 2) System

- Available in 8 (non-redundant) or 16 (redundant) slots
- Up to 128 field devices
- Redundancy (power and communication)
- HART capable
- Intrinsically safe inputs/outputs
- Channel diagnostics
- Available in Marine Shipboard Approved (MSA) version



Profibus Diagnostic Tool

- Asset management interface
- DTM technology
- Standard Ethernet interface
- Profibus DP master (Class 2)
- Integrated webserver for viewing diagnostics
- Available Emerson AMS SNAP-ON



Segment Coupler

- Profibus DP to RS485IS converter
- Redundancy (power
 - and RS485IS)
- Up to 62 RS485IS devices (31 redundant)
- Automatic baud rate detection
- Anodized aluminum housing
- LED indication



Fiber Optic Couplers

- Profibus DP to Fiber-IS converter
- Zone 2 or Zone 1 versions
- Galvanic isolation
- LED indication
- Powder-coated die-cast aluminum housing

DPC: In-Cabinet Diagnostic Power Conditioner

The DPC Foundation Fieldbus power supply provides physical layer diagnostics for up to 16 segments (or 192 devices). Available as single segment or four segments with redundancy.

Features

- Up to 192 devices (16 segments)
- 800 mA/segment
- Power supply redundancy
- Removable terminal blocks
- Diagnostics with relay output
- Asset Management via DTM technology

Advanced Segment Diagnostics

- Noise
- Jitter
- Device signal level
- Temperature
- Bus Load
- Power consumption



MBD: On-Machine Multibarrier

The MBD Foundation Fieldbus multibarrier provides intrinsically safe protection for up to 32 FISCO or entity devices in a Class I Division 1 or Zone 0 area.

Unlike traditional FISCO power supplies, the MBD reduces installation time because it requires no additional spur blocks to connect to field devices.

Features

- Class I Division 2 mountable (Zone 2)
- Available in 4 or 8 port
- Integrated terminating resistor
- Short-circuit protected spurs
- FISCO and entity compliant
- Galvanic isolation
- LED indication
- Pre-installed cable glands
- Powder-coated die-cast aluminum housing



IM: In-Cabinet Interface Amplifier

The IM amplifier comes standard with intrinsically safe inputs/outputs or optional standard input/outputs. The three way galvanic isolation allows the IM amplifier to be installed in traditional control cabinets without any additional hardware.

Features

- Available in 10-30 VDC or 20-250 VAC...20-125 VDC
- Class I Division 2 mountable (Zone 2)
- Available in non-LCD version (18 mm wide), or LCD version (27 mm wide)
- Optional non-intrinsically safe versions
- SIL approved

Benefits

- Three-way galvanic isolation
- Signal conditioning
- Wire break/short-circuit monitoring
- LED indication
- Relay, transistor, or analog outputs
- Asset management via DTM technology
- LCD with programmable push buttons

IMX: In-Cabinet Interface Amplifier, X Series

The IMX amplifier combines the newest interface technology in a slim 12.5 mm wide housing, and the optional power rail ensures complete power availability to all connected amplifiers.

Features

- Class I Division 2 mountable (Zone 2)
- = 10-30 VDC
- Removable screw terminals
- Short-circuit protected
- Wire break/short-circuit monitoring
- SIL approved

Benefits

- Three-way galvanic isolation
- LED indication
- Relay, transistor, or analog outputs
- Asset management via DTM technology
- SIL approved





IMC: On-Machine Cartridge Barrier

Exceptionally compact and rugged, the intrinsically safe IMC can be mounted in any Class I Division 2 area without the need for an enclosure when used with an IMC-SG (stainless guard) and IMC-MP-ALUM (aluminium mounting plate).

Features

- Class I Division 2 mountable (Zone 2)
- IP67 protection
- Ambient temperature (-25 to +70 °C)
- M12x1 connections
- SIL approved

Applications

- Analog input/output
- Analog transducers
- Discrete inputs/outputs



MZB: In-Cabinet Zener Diode Barrier

The MZB zener diode barrier provides intrinsically safe protection for field devices installed in Class I Division 1 or Zone 0 areas in a 12.6 mm wide housing.

Features

- Class I Division 2 mountable
- Removable terminals
- Built-in fuse (non-removable)
- Shielding terminal
- CSA, FM, UL approved

Applications

- Strain Gauges
- Thermocouples
- RTD's
- Analog transducers
- Discrete inputs/outputs
- I/P transmitters



IMS: In-Cabinet Signal Conditioners

The IMS conditioner provides analog signal conversion for field devices installed in non-hazardous areas in a slim 6.2 mm wide housing.

Features

- Class I Division 2 mountable
- Galvanic isolation (up to 1.5 kV)
- Screw terminals (non-removable)
- UL Approved

Applications

- Analog input (current/voltage)
- Analog transducer
- RTD





28 subsidiaries and over 60 representations worldwide!

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