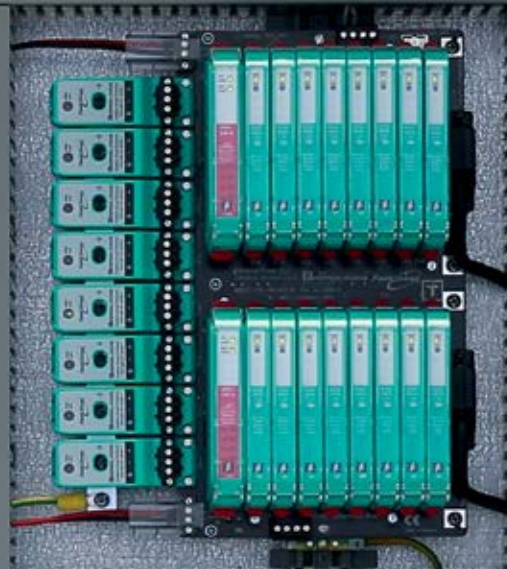


Quick Select Product Guide Process Interfaces

Interface Technology
Remote I/O Systems
Fieldbus Infrastructure



Your automation, our passion.

 **PEPPERL+FUCHS**

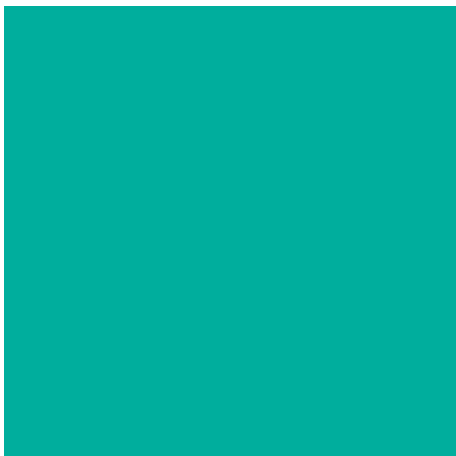
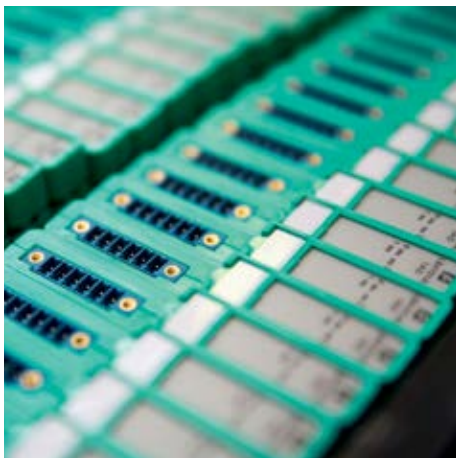
Courtesy of Steven Engineering, Inc - (800) 258-9200 - sales@steveneng.com - www.stevenengineering.com

Quick Select Product Guide: Use, Purpose, and Target Group

The Quick Select Product Guide for interface technology, FieldConnex®, and remote I/O connection technologies is designed for experienced users such as technicians and engineers. This guide will help you select the correct technology and systems when designing plants.

Selection tables with specific product features will help you find the correct solution or component quickly and reliably. You can find more detailed system descriptions as well as a basic explanation of explosion protection and the technologies available (signal transmission, fieldbus technology, surge protection, etc.) on the individual product pages.

Particularly in the area of interface technology, specialist terms can vary from provider to provider. The terms required for product selection are explained on pages 9 and 51. You can always find our up-to-date product portfolio at www.pepperl-fuchs.com.



Innovative Solutions.

Perfect Applications.



The courage to take commercial risks, an inquiring mind, and the belief in one's own abilities—these are the assets on which Walter Pepperl and Ludwig Fuchs established a small radio workshop in the German city of Mannheim back in 1945. A few years later, they demonstrated their credentials by inventing the proximity sensor. This marked the start of a success story that has been shaped as much by close customer relationships as by pioneering technology and automation technology processes.

Then as now, our focus is directed squarely on the individual requirements of each customer. Whether as a pioneer in electrical explosion protection or as a leading innovator of high-performance sensors, close communication with our customers is what has allowed us to become a leader in automation technology. Our main objective is combining state-of-the-art technologies and comprehensive services to optimize our customers' processes and applications.

For more information, visit our website:
www.pepperl-fuchs.com

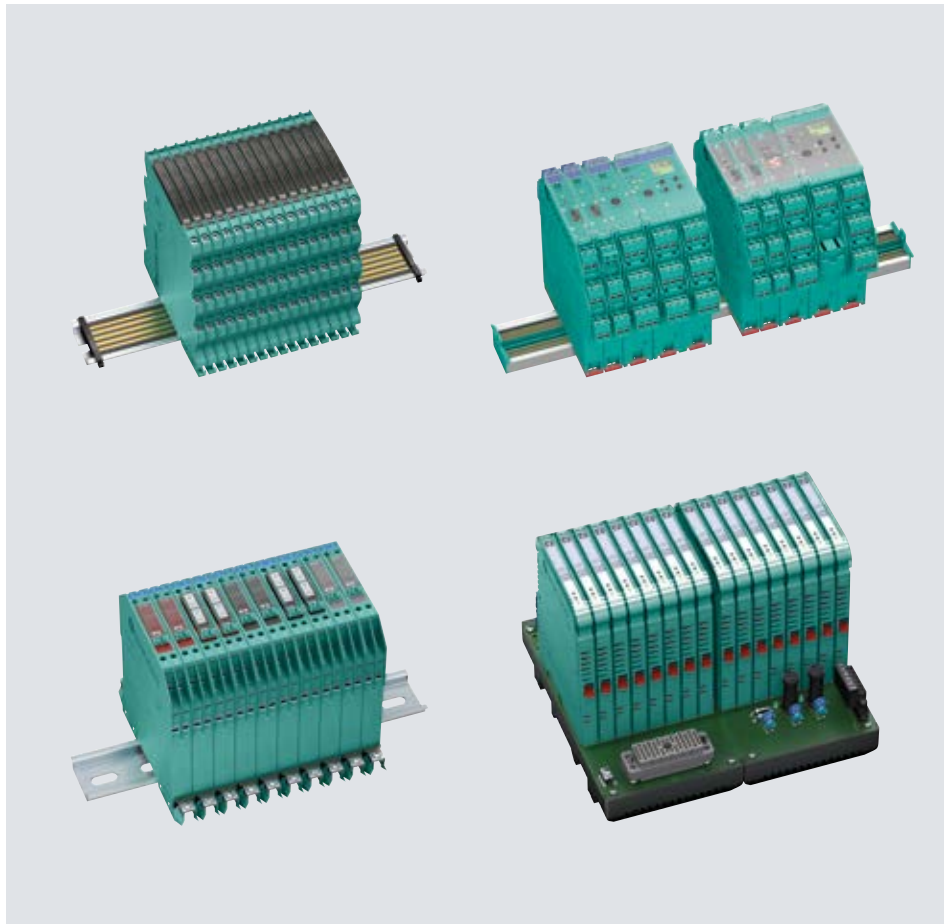
Contents

Technologies	4
Enclosure Solutions	6
Interface Technology	8
K-System Isolated Barriers	10
H-System Isolated Barriers	22
K-System Signal Conditioners	28
SC-System Signal Conditioners	36
Z-System Zener Barriers	39
Surge Protection Barriers	42
HART Interface Solutions	45
WirelessHART Interface Solutions	48
Remote I/O Systems	50
LB System	52
FB System	59
Multifunction Terminals	66
FieldConnex® Fieldbus Infrastructure	68
PROFIBUS PA	70
FOUNDATION Fieldbus H1	74
Enclosure Solutions for Segment Protectors and Field Barriers	78
Enclosure Solutions for Process Interfaces	91

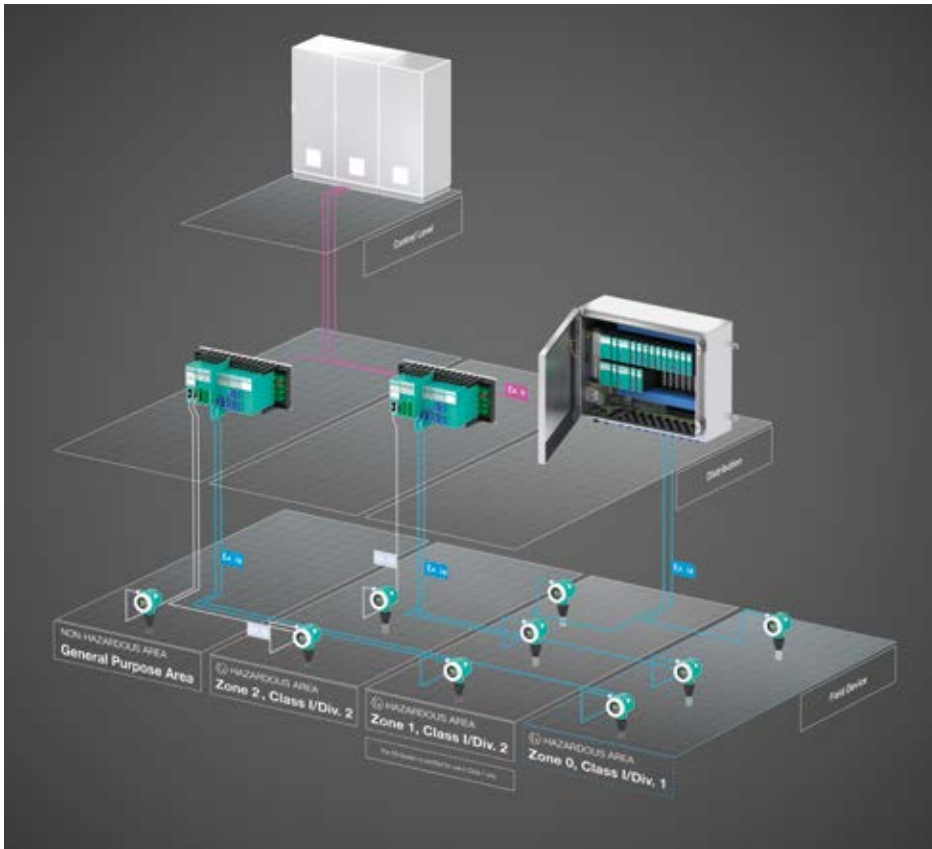
The Correct Technology for Every Requirement

Choosing the correct connection technology is a fundamental part of plant design.

Interface technology is a proven, easy-to-manage method of assigning each signal to a terminal. Point-to-point wiring allows the device to be connected directly to the I/O card and used in the control cabinet. A wide range of modules and systems offers the correct solution for every application.



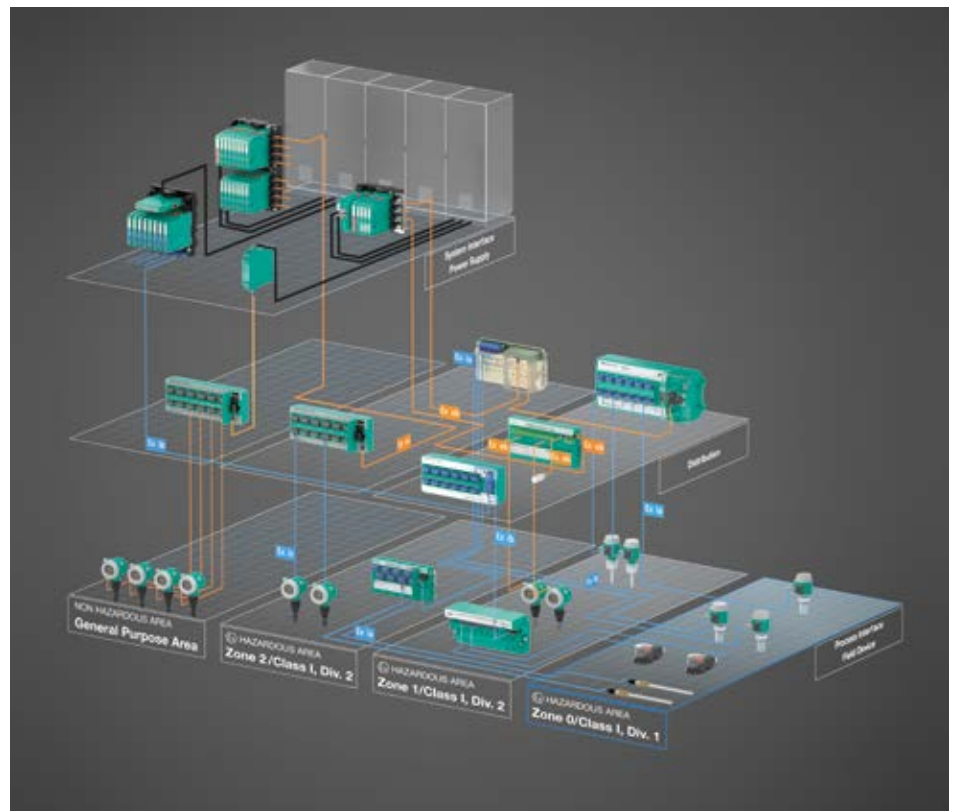
Examples of interface technology: K-System, H-System, Z-System, and SC-System (clockwise from top right).



Remote I/O network

Remote I/O systems combine conventional field technology with modern bus technology. This means that when modernizing and expanding plants, the existing field technology can be connected with the control system over the remote I/O system via a fieldbus.

FieldConnex® facilitates the connection of high-level bus systems to digital communication in the field. Wherever processes require high performance and maximum transparency, digital communication enables sophisticated, intelligent diagnostics and remote configuration. Deviations in the quality of the data and the installation itself will be detected before these changes can have an impact. This makes processes secure, efficient, and highly available.



FieldConnex architecture



Enclosure Solutions

Interface Technology

The entire range of interface products from Pepperl+Fuchs can be integrated into customer-specific cabinet and enclosure solutions. This reduces commissioning time and improves ROI.

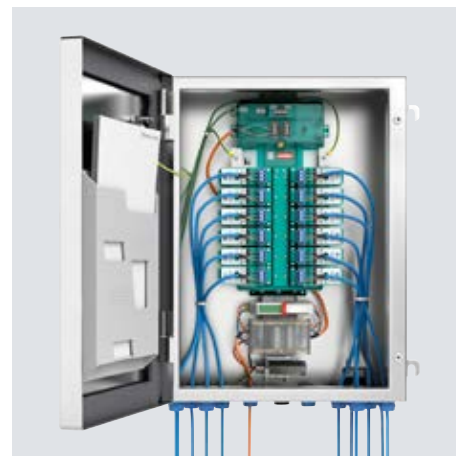
Remote I/O Systems

Pepperl+Fuchs offers standard enclosure solutions for remote I/O that are designed for the most demanding applications in explosion-hazardous areas. The surrounding enclosures are already equipped with backplanes with simple connections to I/O modules. These solutions are available in corrosion-and impact-resistant stainless steel. Pre-configured solutions with a nonmetallic enclosure are also available. These enclosures offer a high degree of corrosion protection for both onshore and offshore installations.

FieldConnex® Fieldbus Infrastructure

Pre-installed, complete fieldbus solutions from Pepperl+Fuchs offer easy and convenient operation. FieldConnex® junction boxes come with a variety of options and can be selected using a configurator. Enclosure size, electronics, ignition protection, and accessories are tailored to the specific application and the planned operating location.

To ensure an efficient connection to the control technology, FieldConnex® power supplies offer factory-made connector solutions that allow four segments to be connected to one another. Regional Solution Engineering Centers take care of full planning and execution, including documentation and factory testing.

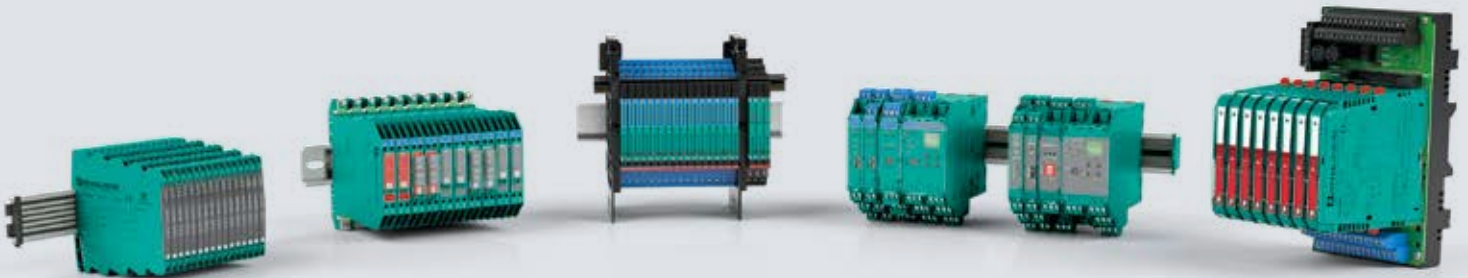


Tailor-Made SEC Solutions

More and more users are looking for complete system solutions from a single source. Experienced employees in Pepperl+Fuchs' Solution Engineering Centers (SECs) support companies from the initial planning stages up to the commissioning of new plants. All over the world, customers receive tailor-made system solutions complete with hazardous-location certification and documentation.

Interface Technology: Isolated Barriers, Signal Conditioners, and Zener Barriers

Interface technology ensures reliable signal transmission between the control level and field devices. It includes products for explosion and surge protection, galvanic isolation between the field and control panel, and digital communication based on the HART protocol.



K-System Isolated Barriers and Signal Conditioners

The K-System offers the broadest product portfolio of its kind, has the right solution for every requirement in the process industry, and is designed for a mixture of applications involving both Ex modules and non-Ex modules.

The modules are easily snapped onto a DIN mounting rail. They can be energized both via terminals or our unique Power Rail, which also transmits a collective error message for improved performance.

K-System isolators offer removable terminal blocks for wiring on the control and field sides, and control elements on the front of the device, making them user-friendly and easy to service. The modules are available as a 12.5 mm wide KC version as well as a 20 or 40 mm wide KF version.

H-System Isolated Barriers

The H-System offers an interface solution based on a termination board for large plants and for plants directly connected to DCS/ESD systems. The modules are connected to termination boards mounted on a DIN rail without the need for tools. The termination boards connect the control system via system plugs, which ensure fast, error-free wiring.

The isolated barriers are available as HiC modules with a width of 12.5 mm for compact single-loop integrity or as multichannel HiD modules with a width of 18 mm for maximum packing density.

Z-System Zener Barriers

Z-System Zener barriers offer cost-effective explosion protection and limit the energy supplied in intrinsically safe circuits to a safe level.

SC-System Signal Conditioners

The SC-System was developed for plants where explosion-hazardous areas are not a factor. The powerful signal conditioners ensure fault-free communication between the control level and the field and feature a high level of isolation quality, an extended temperature range, and an extremely compact, space-saving design that is only 6 mm wide.

For more information on our interface product portfolio, visit:

www.pepperl-fuchs.com/k-system
www.pepperl-fuchs.com/h-system
www.pepperl-fuchs.com/z-system
www.pepperl-fuchs.com/hart-interface
www.pepperl-fuchs.com/sc-system
www.pepperl-fuchs.com/surge

HART Interface Solutions, WirelessHART Technology, and HART Modems

K- and H-System multiplexers are used to ensure the best possible communication between the asset management system and HART field devices. The HART loop converter in the K-System is a single-channel isolated barrier and utilizes the full potential of HART field devices.

Our wireless HART technology includes several industry-leading products to make wireless installations operate reliably in a wide range of applications.

As part of any HART-based installation, a Viator® HART modem is a critical tool for technicians or other installation/programming professionals. These industry-leading products are easy to use and provide quick access to HART data embedded in the field instrument.

Surge Protection Modules

For reliable protection of field devices and the control level against surge voltage, Pepperl+Fuchs offers five product lines that are tailored to different process requirements:

P-LB series

Plug-in modules for the K-System

K-LB series, M-LB-5000 series

Universal DIN rail modules

F-LB series

Screw modules for field devices

M-LB series

For 120/230 V AC mains voltage

Product Selection Terms

You are looking for

Isolating Amplifier
Ex-isolator
Coupling Relay
Safety Relay
Motherboard
Backplane
Base Plate

Pepperl+Fuchs term

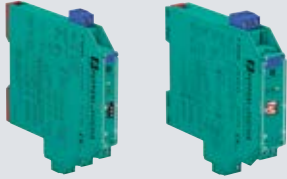
Signal Conditioner
Isolated Barrier
Relay Module
Relay Module
Termination Board
Termination Board
Termination Board

Interface Technology

K-System Isolated Barriers

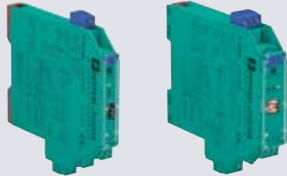
Digital input signals

Switch amplifiers



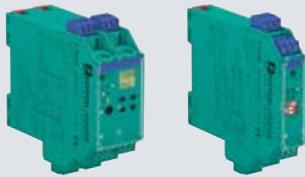
Model Number	Number of channels	Housing width			Input			Output				Functions										Supply				SIL 2	SIL 3	Installation in Zone 2	Installation in Div. 2
		12.5 mm	20 mm	40 mm	NAMUR sensor	volt-free contact	SN/S1N sensor	Relays	Transistor	Relay and Voltage output	Relay and Transistor	Fault indication output	Line fault detection	Splitter function	Reversible mode of operation	Reset function	Time function	Line fault transparency	Interval relay	2:1 method	24 V DC	115 V AC	230 V AC	115 V AC/230 V AC					
KCD2-SOT-EX1.LB	1	■			■	■			■			■	■	■							■				■			■	■
KCD2-SR-EX1.LB	1	■			■	■		■				■	■	■							■				■			■	■
KCD2-ST-EX1.LB	1	■			■	■			■			■	■	■	■						■				■			■	■
KFD2-SR2-EX1.W	1		■		■	■		■				■			■						■				■			■	■
KFA5-SR2-EX1.W	1		■		■	■		■				■			■							■			■				■
KFA6-SR2-EX1.W	1		■		■	■		■				■			■								■		■				■
KFD2-SR2-EX1.W.LB	1		■		■	■		■				■	■	■	■						■				■			■	■
KFA5-SR2-EX1.W.LB	1		■		■	■		■				■	■	■	■							■			■				■
KFA6-SR2-EX1.W.LB	1		■		■	■		■				■	■	■	■								■		■				■
KCD2-SON-EX1	1	■			■	■			■			■	■					■			■				■			■	■
KCD2-SON-EX1.R1	1	■			■	■			■			■	■	■				■			■				■			■	■
KCD2-SON-EX2.R1	2	■			■	■			■			■	■					■			■				■			■	■
KCD2-SON-EX2	2	■			■	■			■			■	■					■			■				■			■	■
KCD2-SOT-EX2	2	■			■	■			■			■	■		■						■				■			■	■
KCD2-SR-EX2	2	■			■	■			■			■	■								■				■			■	■
KCD2-ST-EX2	2	■			■	■			■			■	■		■						■				■			■	■
KFD2-SR2-EX2.W	2		■		■	■		■				■			■						■				■			■	■
KFA5-SR2-EX2.W	2		■		■	■		■				■			■							■			■				■
KFA6-SR2-EX2.W	2		■		■	■		■				■			■								■		■				■
KFA5-SR2-EX2.W.IR	2		■		■	■		■				■							■			■							■
KFA6-SR2-EX2.W.IR	2		■		■	■		■				■							■				■						■
KFD2-SRA-EX4	4		■		■	■		■				■			■					■	■							■	■
KFD2-ST3-EX1.LB	1		■		■	■			■			■	■	■	■						■				■			■	
KFD2-ST3-EX2	2		■		■	■			■			■			■						■				■			■	
KFD2-SOT2-EX1.LB	1		■		■	■			■			■	■		■						■				■			■	■
KFD2-SOT2-EX1.LB.IO	1		■		■	■			■			■	■	■	■						■				■			■	■
KFD2-SOT2-EX2	2		■		■	■			■			■			■						■				■			■	■
KFD2-SOT2-EX2.IO	2		■		■	■			■			■	■	■	■						■				■			■	■
KFD2-SOT2-EX2.IO-Y181008	2		■		■	■			■			■	■	■	■						■				■			■	■
KFD2-ST2-EX1.LB	1		■		■	■			■			■	■		■						■				■			■	■
KFD2-ST2-EX2	2		■		■	■			■			■			■						■				■			■	■
KFD2-SOT3-EX1.LB	1		■		■	■			■			■	■		■						■				■			■	
KFD2-SOT3-EX1.LB.IO	1		■		■	■			■			■	■	■	■						■				■			■	
KFD2-SOT3-EX2	2		■		■	■			■			■			■						■				■			■	
KFD2-SOT3-EX2.IO	2		■		■	■			■			■			■						■				■			■	
KFD2-SH-EX1	1			■		■	■	■				■	■								■						■		■

Switch amplifiers



Model Number	Number of channels	Housing width			Input			Output			Functions								Supply									
		12.5 mm	20 mm	40 mm	NAMUR sensor	volt-free contact	SN/SIN sensor	Relays	Transistor	Relay and Voltage output	Relay and Transistor	Fault indication output	Line fault detection	Splitter function	Reversible mode of operation	Reset function	Time function	Line fault transparency	Interval relay	2:1 method	24 V DC	115 V AC	230 V AC	115 V AC/230 V AC	SIL 2	SIL 3	Installation in Zone 2	Installation in Div. 2
KFD2-SH-EX1.T.OP	1		■			■	■	■		■		■	■								■					■		
KHA6-SH-EX1	1			■			■	■																■		■		
KFD2-DU-EX1.D	1			■	■	■		■		■		■				■	■				■						■	■
KFA5-DU-EX1.D	1			■	■	■		■		■		■				■	■					■					■	■
KFA6-DU-EX1.D	1			■	■	■		■		■		■				■	■						■				■	■

Frequency converters



Model Number	Number of channels	Housing width		Input			Output	Functions								Supply									
		20 mm	40 mm	Frequency	NAMUR sensor	volt-free contact	0(4) mA ... 20 mA	Relay and Transistor	Start-up override	Rotation direction monitoring	Rotation speed monitoring	Fault indication output	Frequency conversion	Synchronization monitoring	Trip relay	Line fault detection	Slip monitoring	Pulse divider	20 V ... 90 V DC / 48 V ... 253 V AC	24 V DC	115 V AC	230 V AC	SIL 2	Installation in Zone 2	Installation in Div. 2
KFD2-SR2-EX2.W.SM	2	■		■	■	■			■	■	■				■	■				■			■	■	■
KFD2-DWB-EX1.D	1		■	■	■	■			■		■	■			■	■			■				■	■	■
KFA5-DWB-EX1.D	1		■	■	■	■			■		■	■			■	■				■			■	■	■
KFA6-DWB-EX1.D	1		■	■	■	■			■		■	■			■	■					■		■	■	■
KFD2-UFC-EX1.D	1		■	■	■	■	■	■	■		■	■	■		■	■		■		■			■	■	■
KFU8-UFC-EX1.D	1		■	■	■	■	■	■	■		■	■	■		■	■		■	■				■	■	■
KFD2-UFT-EX2.D	2		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			■				■	■
KFU8-UFT-EX2.D	2		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■					■	■

Digital input signals

Conductive switch amplifiers



Model Number	Number of channels	Housing width	Input	Output	Functions						Supply		
		20 mm	Resistance	Relays	Fault indication output	Conductivity measurement	Line fault detection	Min./max. control	Time delay		24 V DC	115 V AC	230 V AC
KFD2-ER-EX1.W.LB	1	■	■	■	■	■	■	■	■		■		
KFA5-ER-EX1.W.LB	1	■	■	■	■	■	■	■	■			■	
KFA6-ER-EX1.W.LB	1	■	■	■	■	■	■	■	■				■

Earth fault detection



Model Number	Number of channels	Housing width	Output	Functions	Supply
		60 mm	Relays	Conformal coating	24 V DC
KFD2-ELD-EX16	16	■	■	■	■

Digital output signals

Solenoid drivers



Model Number	Number of channels	Housing width		Input		Output		Output voltage							Output Current					Functions				Supply							
		12.5 mm	20 mm	Logic input	Field device supply	Valve	Audible alarm	Visual alarm	9.8 V	10 V	11 V	11.2 V	11.7 V	12 V	12.5 V	13.5 V	20.4 mA	45 mA	65 mA	70 mA	80 mA	100 mA	Line fault detection	Fault indication output	Test pulse immunity	Conformal coating	24 V DC	Loop powered	SIL 2	SIL 3	Installation in Zone 2
KFD0-SD2-EX1.1045	1		■		■	■	■	■		■							■										■		■	■	■
KFD0-SD2-EX2.1045	2		■		■	■	■	■		■							■										■		■	■	■
KCD0-SD-EX1.1245	1	■			■	■	■	■						■			■										■		■	■	■
KFD0-SD2-EX2.1245	2		■		■	■	■	■						■			■										■		■	■	■
KFD0-SD2-EX1.1065	1		■		■	■	■	■	■									■									■		■	■	■
KFD0-SD2-EX1.1180	1		■		■	■	■	■			■										■						■		■	■	■
KFD0-SD2-EX1.10100	1		■			■	■	■		■												■					■		■	■	■
KFD2-SL2-EX1	1		■	■		■	■	■					■				■					■					■		■	■	■
KFD2-SL2-EX1.B	1		■	■		■	■	■					■				■										■		■	■	■
KFD2-SL2-EX1.LK	1		■	■		■	■	■				■					■					■	■				■		■	■	■
KFD2-SL2-EX1.LK.1045	1		■	■		■	■	■		■							■					■	■				■		■	■	■
KFD2-SL2-EX1.LK.1270	1		■	■		■	■	■							■				■			■	■				■		■	■	■
KFD2-SL2-EX2	2		■	■		■	■	■					■				■					■					■		■	■	■
KFD2-SL2-EX2.B	2		■	■		■	■	■					■				■										■		■	■	■
KFD2-RCI-EX1	1		■	■		■	■	■								■	■					■	■	■		■			■	■	■
KCD2-SLD-EX1.1045	1	■			■	■	■	■		■							■					■	■	■		■			■	■	■
KCD2-SLD-EX1.1065	1	■			■	■	■	■		■								■				■	■	■		■			■	■	■
KCD2-SLD-EX1.1245	1	■			■	■	■	■						■			■					■	■	■		■			■	■	■

Relay modules



Model Number	Number of channels	Housing width		Input		Output		Supply		SIL 3	Installation in Zone 2	Installation in Div. 2
		20 mm		Logic input		Relays		Loop powered				
KFD0-RO-EX2	2		■		■		■		■		■	■

Analog input signals

Transmitter power supplies



Model Number	Number of channels	Housing width		Input				Output				Functions					Supply						
		12.5 mm	20 mm	2-wire-transmitters	3-wire-transmitters	Current source	0(4) mA ... 20 mA	4 mA ... 20 mA	0(4) mA ... 20 mA	0(2) V ... 10 V	0(1) V ... 5 V	1 V ... 5 V	Test sockets	For higher field voltages	Line fault detection	For long field lines	Fault indication output	Splitter function	24 V DC	SIL 2	SIL 3	Installation in Zone 2	Installation in Div. 2
KCD2-STC-EX1	1	■		■		■		■		■									■	■		■	■
KCD2-STC-EX1.ES	1	■		■		■		■						■		■			■		■		■
KCD2-STC-Ex1.HC	1	■		■		■		■		■		■				■			■	■		■	■
KFD2-STC4-EX1	1		■	■	■	■	■	■				■							■	■		■	■
KFD2-STC4-EX1.ES	1		■	■	■	■	■	■		■				■					■		■	■	■
KFD2-STC4-EX1.H	1		■	■	■	■	■	■				■	■						■	■		■	■
KFD2-STV4-EX1-1	1		■	■	■	■	■	■			■		■						■	■		■	■
KFD2-STV4-EX1-2	1		■	■	■	■	■			■		■							■	■		■	■
KFD2-STC4-EX1.20	1		■	■	■	■	■	■		■		■					■		■		■	■	■
KFD2-STC4-EX1.20.H	1		■	■	■	■	■	■		■		■	■				■		■		■	■	■
KFD2-STV4-EX1.20-1	1		■	■	■	■	■	■			■		■				■		■		■	■	■
KFD2-STV4-EX1.20-2	1		■	■	■	■	■	■		■		■					■		■		■	■	■
KFD2-STC4-EX2	2		■	■			■		■				■						■	■		■	■
KFD2-STC4-EX2-Y229428	2		■	■			■		■				■						■	■		■	■
KFD2-STV4-EX2-1	2		■	■			■				■		■						■	■		■	■
KFD2-STV4-EX2-2	2		■	■			■			■			■						■	■		■	■
KFD2-STC3-EX1	1		■	■				■	■				■						■			■	■
KFD2-STV3-EX1-1	1		■	■				■				■							■			■	■
KFD2-STV3-EX1-2	1		■	■				■		■			■						■			■	■
KFD2-STC5-EX1	1		■	■	■	■	■		■				■						■	■		■	■
KFD2-STC5-EX1.20	1		■	■	■	■	■	■	■				■				■		■		■	■	■
KFD2-STC5-EX1.20.H	1		■	■	■	■	■	■	■				■	■			■		■		■	■	■
KFD2-STC5-EX1.H	1		■	■	■	■	■	■	■				■	■					■	■		■	■
KFD2-STC5-EX2	2		■	■	■	■	■	■	■				■						■	■		■	■
KFD2-STV5-EX1-1	1		■	■	■	■	■	■			■		■						■	■		■	■

Analog input signals

Transmitter power supplies with trip values



Model Number	Number of channels	Housing width	Input		Output		Supply		SIL 2	Installation in Zone 2	Installation in Div. 2
			2-wire-transmitters	3-wire-transmitters	0(4) mA ... 20 mA	Relays	20 V ... 90 V DC / 48 V ... 253 V AC	24 V DC			
KFD2-CRG2-EX1.D	1	■	■	■	■	■		■	■	■	■
KFU8-CRG2-EX1.D	1	■	■	■	■	■	■		■	■	■

Transmitter power supplies with HART communication



Model Number	Number of channels	Housing width	Input				Output		Functions			Supply	Installation in Zone 2	Installation in Div. 2
			3-wire-transmitters	HART	Transmitter supply	active sources	4 mA ... 20 mA	Relays	Trip relay	HART communication	Splitter function			
KFD2-HLC-EX1.D	1	■	■	■	■	■	■		■	■	■	■	■	■
KFD2-HLC-EX1.D.2W	1	■	■	■	■	■	■	■	■	■	■	■	■	■
KFD2-HLC-EX1.D.4S	1	■	■	■	■	■	■	■	■	■	■	■	■	■

Analog input signals

Current repeaters



Model Number	Number of channels	Housing width 20 mm	Field Side				Control Side				Transmission Direction		Functions			Supply	SIL 2	SIL 3	Installation in Zone 2	Installation in Div. 2
			1 mA ... 20 mA	4 mA ... 20 mA	0 mA ... 40 mA	Fire alarm	1 mA ... 20 mA	4 mA ... 20 mA	0 mA ... 40 mA	HART	To the control system	To the field / To the control system	Reverse polarity protection	HART communication	Line fault detection					
KFD0-SCS-EX1.55	1	■	■					■		■		■		■	■	■	■		■	■
KFD0-CS-EX1.50P	1	■		■		■		■				■	■			■	■		■	■
KFD0-CS-EX1.51P	1	■			■	■			■			■	■			■	■		■	■
KFD0-CS-EX1.52	1	■		■				■			■					■			■	■
KFD0-CS-EX1.54	1	■	■			■	■			■	■			■		■		■	■	■
KFD0-CS-EX2.50P	2	■		■		■		■				■	■			■	■		■	■
KFD0-CS-EX2.51P	2	■			■	■			■			■				■	■		■	■
KFD0-CS-EX2.52	2	■		■				■			■					■			■	■
KFD0-CS-EX2.54	2	■	■			■	■			■	■			■		■		■	■	■
KFD0-CS-EX1.54-Y2	1	■	■			■	■			■	■			■		■			■	■

Voltage repeaters



Model Number	Number of channels	Housing width	Field Side						Control Side						Transmission Direction	Supply	Cut-off frequency					SIL 2	Installation in Zone 2	Installation in Div. 2	
			RS 232	-20 V ... 0 V	-10 V ... +10 V	0 V ... 9 V	0 V ... 12 V	-50 mV ... +50 mV	-500 mV ... +500 mV	RS 232	-20 V ... 0 V	-10 V ... +10 V	0 V ... 9 V	0 V ... 12 V			-50 mV ... +50 mV	-500 mV ... +500 mV	24 V DC	350 Hz	1.2 kHz				10 kHz
KFD2-VR2-EX1.50M	1	■					■							■		■								■	■
KFD2-VR2-EX1.500M	1	■						■							■	■	■							■	■
KFD2-VR-EX1.12	1	■				■						■				■		■							
KFD2-VR-EX1.18	1	■					■						■			■		■						■	■
KFD2-VR-EX1.19	1	■			■							■				■		■						■	■
KFD2-VR-EX1.19-Y109129	1	■			■							■				■						■		■	■
KFD2-VR4-EX1.26	1	■		■						■						■	■		■	■		■	■	■	■
KFD2-FF-EX2.RS232	1	■	■						■							■	■								■

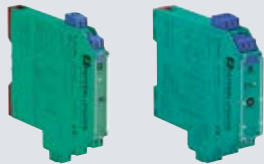
Analog input signals

Signal converters for current and voltage



Model Number	Number of channels	Housing width		Input			Output					Functions		Supply		Installation in Zone 2	Installation in Div. 2
		20 mm	40 mm	Strain gauge bridge	Voltage	Current / voltage	-10 V ... +10 V	0 V ... 10 V	-20 mA ... +20 mA	0 mA ... 20 mA	4 mA ... 20 mA	Relays	Trip relay	Line fault detection	24 V DC		
KFD0-CC-EX1	1	■				■					■				■	■	■
KFD2-WAC2-Ex1.D	1		■	■	■		■	■	■	■		■	■	■	■		■

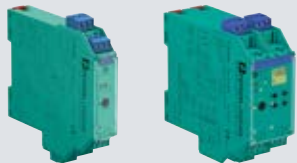
Temperature converters and repeaters



Model Number	Number of channels	Housing width		Input							Output				Functions			Supply		SIL 2	Installation in Zone 2	Installation in Div. 2
		12.5 mm	20 mm	2-wire connection	3-wire connection	4-wire connection	Thermocouple	Resistance thermometer	Potentiometer	Voltage	4 mA ... 20 mA	0(4) mA ... 20 mA	0(1) V ... 5 V	Resistance	Internal cold junction compensation	Line fault detection	Splitter function	24 V DC	Loop powered			
KCD2-UT2-EX1	1	■		■	■	■	■	■	■	■		■				■		■			■	■
KFD2-UT2-EX1	1		■	■	■	■	■	■	■	■		■				■		■			■	■
KFD2-UT2-EX1-1	1		■	■	■	■	■	■	■	■			■			■		■			■	■
KFD2-UT2-EX2	2		■	■	■	■	■	■	■	■		■				■	■	■			■	■
KFD2-UT2-EX2-1	2		■	■	■	■	■	■	■	■			■			■	■	■			■	■
KFD0-TR-EX1	1		■		■			■			■							■	■		■	
KFD0-TT-EX1	1		■	■			■				■				■	■		■	■		■	
KCD2-RR-EX1	1	■						■						■		■		■			■	■
KCD2-RR-EX1-Y1	1	■						■						■				■			■	■
KCD2-RR-EX1.SP	1	■						■						■		■		■			■	

Analog input signals

Temperature converters with trip values



Model Number	Number of channels	Housing width		Input					Output		Functions			Supply		SIL 2	Installation in Zone 2	Installation in Div. 2
		20 mm	40 mm	Potentiometer	Voltage	Thermocouple	Resistance thermometer	Current / voltage	0(4) mA ... 20 mA	Relays	Trip relay	Line fault detection	Programmable high/low alarm	20 V ... 90 V DC / 48 V ... 253 V AC	230 V AC			
KFD2-GU-EX1	1	■				■	■	■		■		■	20 V ... 90 V DC / 48 V ... 253 V AC		■		■	■
KFD2-GUT-EX1.D	1		■	■	■	■	■		■	■	■	■			■	■	■	
KFU8-GUT-EX1.D	1		■	■	■	■	■		■	■	■	■		■	■	■		

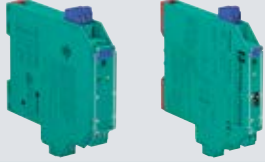
Signal converters for resistors and potentiometers



Model Number	Number of channels	Housing width	Input				Output				Supply	SIL 2	Installation in Zone 2	Installation in Div. 2
			20 mm	3-wire connection	4-wire connection	5-wire connection	Potentiometer	4 mA ... 20 mA	0 mA ... 20 mA	0 V ... 5 V	0 V ... 10 V			
KFD2-PT2-EX1	1	■	■	■	■	■	■				■	■	■	■
KFD2-PT2-EX1-1	1	■	■	■	■	■	■			■		■	■	■
KFD2-PT2-EX1-4	1	■	■	■	■	■	■		■			■	■	■
KFD2-PT2-EX1-5	1	■	■	■	■	■	■	■				■	■	■

Analog output signals

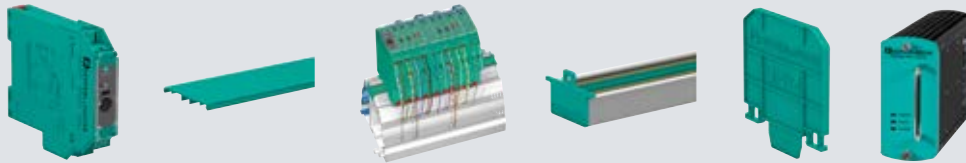
Current drivers



Model Number	Number of channels	Housing width		Input								Output								Transmission Direction		Functions				Supply							
		12.5 mm	20 mm	0 V ... 10 V	0 V ... 5 V	1 V ... 5 V	2 V ... 10 V	0 mA ... 20 mA	0 mA ... 40 mA	4 mA ... 20 mA	HART	4 mA ... 20 mA	0 mA ... 40 mA	0 V ... 10 V	0 V ... 5 V	1 V ... 5 V	2 V ... 10 V	I/P converters	Positioner	Valve	Fire alarm	To the field	To the field / To the control system	HART communication	Line fault detection	Test sockets	For long field lines	Reverse polarity protection	24 V DC	Loop powered	SIL 2	Installation in Zone 2	Installation in Div. 2
KCD2-SCD-EX1	1	■								■	■	■					■	■	■		■		■					■		■	■	■	
KCD2-SCD-EX1.SP	1	■								■	■						■	■	■		■		■					■		■	■	■	
KCD2-SCD-Ex1.HC	1	■								■	■						■	■	■		■		■			■		■		■	■	■	
KCD2-SCD-Ex1.HC.SP	1	■								■	■						■	■	■		■		■			■		■		■	■	■	
KFD2-SCD-EX1.LK	1		■							■	■						■	■	■		■		■	■	■			■		■	■	■	
KFD2-SCD2-EX1.LK	1		■							■	■						■	■	■		■		■	■	■			■		■	■	■	
KFD2-SCD2-EX1-Y1	1		■							■	■						■	■	■		■		■	■	■			■		■	■	■	
KFD2-CD2-EX1	1		■							■	■						■	■	■		■							■		■	■	■	
KFD2-SCD2-EX2.LK	2		■							■	■						■	■	■		■		■	■	■			■		■	■	■	
KFD2-SCD2-EX2-Y1	2		■							■	■						■	■	■		■		■	■	■			■		■	■	■	
KFD2-CD2-EX2	2		■							■	■						■	■	■		■							■		■	■	■	
KFD0-SCS-EX1.55	1		■							■	■	■										■	■	■					■		■	■	■
KFD0-CS-EX1.51P	1		■						■			■								■		■					■		■		■	■	■
KFD0-CS-EX1.53	1		■						■			■									■								■		■	■	■
KFD0-CS-EX2.51P	2		■						■			■								■		■							■		■	■	■
KFD0-CS-EX2.53	2		■						■			■									■								■		■	■	■
KFD2-CD-EX1.32-1	1		■					■		■							■	■	■		■							■		■	■	■	■
KFD2-CD-EX1.32-2	1		■					■				■					■	■	■		■							■		■	■	■	■
KFD2-CD-EX1.32-3	1		■		■	■		■				■					■	■	■		■								■		■	■	■
KFD2-CD-EX1.32-5	1		■		■							■					■	■	■		■							■		■	■	■	■
KFD2-CD-EX1.32-6	1		■	■				■				■					■	■	■		■							■		■	■	■	■
KFD2-CD-EX1.32-8	1		■	■								■					■	■	■		■							■		■	■	■	■
KFD2-CD-EX1.32-9	1		■					■						■			■	■	■		■							■		■	■	■	■
KFD2-CD-EX1.32-10	1		■						■								■	■	■		■							■		■	■	■	■
KFD2-CD-EX1.32-12	1		■					■		■							■	■	■		■							■		■	■	■	■
KFD2-CD-EX1.32-13	1		■							■							■	■	■		■							■		■	■	■	■
KFD2-CD-EX1.32-15	1		■	■	■	■	■						■	■	■	■	■	■	■		■							■		■	■	■	■
KFD2-CD-EX1.32-21	1		■	■										■			■	■	■		■							■		■	■	■	■

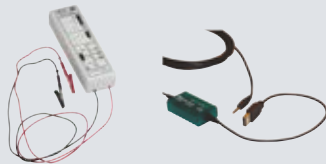
Accessories

Supply and assembly



Model Number	Description
KFA6-STR-1.24.500	Power supply, 24 V, 500 mA
KFA6-STR-1.24.4	Power supply, 24 V, 4 A
KFD2-EB2	Power Feed Module
KFD2-EB2.R4A.B	Power feed module, redundant supply
UPR-03-S	Universal Power Rail with end caps and cover, 3 conductors, length: 0.8 m
UPR-03-M	Universal Power Rail with end caps and cover, 3 conductors, length: 1.6 m
UPR-03	Universal Power Rail with end caps and cover, 3 conductors, length: 2 m
UPR-05-S	Universal Power Rail with end caps and cover, 5 conductors, length: 0.8 m
UPR-05	Universal Power Rail with end caps and cover, 5 conductors, length: 2 m
UPR-E	End cap for universal power rail UPR-**-*
UPR-I	Insulation spacer for universal power rail UPR-**-*
UPR-COVER	Cover for 35 mm DIN mounting rail
UPR-INS-03	Insert for 35 mm DIN mounting rail
UPR-MR	35 mm DIN mounting rail, length: 2 m (packaging unit: 2 pieces)
K-DUCT-BU-UPR-03	Profile rail with UPR-03- * insert, 3 conductors, wiring comb field side blue
K-DUCT-BU-UPR-05	Profile rail with UPR-05- * insert, 5 conductors, wiring comb field side blue
K-DUCT-GY-UPR-03	Profile rail with UPR-03-* insert, 3 conductors, wiring comb field side gray
K-DUCT-GY-UPR-05	Profile rail with UPR-05-* insert, 5 conductors, wiring comb field side gray
K-MS	Mounting Socket
PS3500-PM-1.24.15	PS3500 Power Supply Module
PS3500-TB-3	PS3500 Power Supply Backplane - 3-position
PS3500-TB-6	PS3500 Power Supply Backplane - 6-position
PS3500-DM	PS3500 Diagnostic Module

Commissioning



Model Number	Description
K-ADP-USB	Adapter with USB Interface
IS01	Simulator

Terminal blocks



Model Number	Type		Accessories		Number of pins	Test sockets	External cold junction compensation	Color					Packing unit	Structure
	Spring terminal	Screw terminal	for KF modules	for KC modules				green	red	blue	blue, green	black		
K-CJC-BK		■	■		3		■					■	1 item(s)	one-rowed
K-CJC-BU		■	■		3		■			■			1 item(s)	one-rowed
KC-ST-5GN				■	2			■					5 item(s)	one-rowed
KF-ST-5BU		■	■		3					■			5 item(s)	one-rowed
KF-ST-5GN		■	■		3			■					5 item(s)	one-rowed
KC-STP-5BU		■		■	2	■				■			5 item(s)	one-rowed
KC-STP-5GN		■		■	2	■		■					5 item(s)	one-rowed
KF-STP-5BU		■	■		3	■				■			5 item(s)	one-rowed
KF-STP-5GN		■	■		3	■		■					5 item(s)	one-rowed
KC-CTT-3GN2BU	■			■	2	■					■		5 item(s)	one-rowed
KC-CTT-5BU	■			■	2	■				■			5 item(s)	one-rowed
KC-CTT-5GN	■			■	2	■		■					5 item(s)	one-rowed
KC-STT-5BU		■		■	2					■			5 item(s)	one-rowed
KF-CTT-3GN2BU	■		■		3	■					■		5 item(s)	one-rowed
KF-CTT-5BU	■		■		3	■				■			5 item(s)	one-rowed
KF-CTT-5GN	■		■		3	■		■					5 item(s)	one-rowed
KF-CP			■	■					■				120 item(s) (20 x 6 items)	

Additional accessories



Model Number	Description
F-KD-EX2	Terminal module for NAMUR sensors
F-KDR-EX2	Terminal module for mechanical contacts
F-NR2-EX1	NAMUR Resistor Network
K-500R0%1	Measuring resistor
KCD0-LGH	Place holder barrier for KC modules, intrinsically safe
KFD0-LGH	Place holder barrier for KF modules, intrinsically safe
KFD0-LGH-GN	Place holder barrier for KF modules, intrinsically safe
KFD0-LGH-Y34868	Place holder barrier for KF modules, non-intrinsically safe, DC version, negative polarity
KF-SEAL	Adhesive sticker

H-System Isolated Barriers

Digital input signals

Switch amplifiers																				
																				
Model Number	Number of channels	Housing width		Input			Output			Functions						Supply	SIL 2	SIL 3	Installation in Zone 2	Installation in Div. 2
		12.5 mm	18 mm	NAMUR sensor	volt-free contact	SN/S1N sensor	Transistor	Relays	Voltage output	Application-specific outputs	Fault indication output	Line fault transparency	Splitter function	Line fault detection	Reversible mode of operation					
HIC2821	1	■		■	■			■			■		■	■		■	■		■	■
HIC2822	2	■		■	■			■			■			■		■	■		■	■
HIC2831	1	■		■	■		■				■	■	■			■	■		■	■
HIC2831R1	1	■		■	■		■			■	■	■	■			■	■		■	■
HIC2831R2	1	■		■	■		■			■	■	■	■			■	■		■	■
HIC2831R3	1	■		■	■		■			■	■	■	■			■	■		■	■
HIC2832	2	■		■	■		■				■	■				■	■		■	■
HIC2832R1	2	■		■	■		■				■	■	■			■	■		■	■
HIC2832R2	2	■		■	■		■				■	■	■			■	■		■	■
HIC2832R3	2	■		■	■		■				■	■	■			■	■		■	■
HIC2841	1	■		■	■		■				■		■	■	■	■	■			■
HIC2842	2	■		■	■		■				■			■	■	■	■			■
HIC2851	1	■			■	■	■		■		■					■		■	■	■
HIC2853	1	■			■	■	■		■		■					■		■	■	■
HIC2853R1	1	■			■	■	■		■		■					■		■	■	■
HIC2853R2	1	■			■	■	■		■	■	■					■		■	■	■
HID2821	1		■	■	■			■			■		■	■		■	■		■	■
HID2822	2		■	■	■			■			■		■	■		■	■		■	■
HID2824	4		■	■	■			■			■			■		■	■		■	■
HID2842	2		■	■	■		■				■		■	■		■	■		■	■
HID2844	4		■	■	■		■				■			■		■	■		■	■

Digital output signals

Solenoid drivers



Model Number	Number of channels	Housing width		Input			Output			Output voltage			Output Current			Functions				Supply					
		12.5 mm	18 mm	Field device supply	Logic input	Contact input	Valve	Audible alarm	Visual alarm	11.2 V	12 V	13 V	40 mA	45 mA	60 mA	Filter	Test pulse immunity	Line fault detection	Fault indication output	24 V DC	Loop powered	SIL 3	Installation in Zone 2	Installation in Div. 2	
HIC2871	1	■		■			■	■	■		■			■		■				■	■	■	■	■	
HIC2873	1	■		■	■	■	■	■	■		■			■		■		■		■	■	■	■	■	
HIC2877	1	■		■	■	■	■	■	■	■				■		■	■	■	■	■	■	■	■	■	
HID2872	2		■	■	■	■	■	■	■		■			■		■		■	■	■	■	■	■	■	
HID2876	2		■	■	■	■	■	■	■	■				■		■		■	■	■	■	■	■	■	
HID2881	1		■	■	■	■	■	■	■			■			■			■	■	■	■	■		■	
HIC2883	1	■		■	■		■	■	■		■			■		■	■	■		■	■	■	■		

Relay modules



Model Number	Number of channels	Housing width		Input				Output	Functions			Supply		Installation in Zone 2
		12.5 mm	18 mm	Field device supply	Logic input	Test input	Contact input		ETS function	Test pulse immunity	DTS function	Loop powered	SIL 3	
HID2862	2		■		■		■					■		■
HIC5861	1	■		■	■	■		■		■	■	■	■	
HiC5861Y1	1	■		■	■	■		■		■	■	■	■	
HIC5863	1	■		■	■	■		■	■	■		■	■	
HiC5863Y1	1	■		■	■	■		■	■	■		■	■	

Analog input signals

Transmitter power supplies



Model Number	Number of channels	Housing width		Input					Output		Functions					Supply					
		12.5 mm	18 mm	2-wire-transmitters	3-wire-transmitters	Current source	0(4) mA ... 20 mA	0(1) V ... 5 V	0(4) mA ... 20 mA	0(1) V ... 5 V	Fault indication output	HART communication	Line fault detection	Splitter function	For long field lines	24 V DC	SIL 2	SIL 3	Installation in Zone 2	Installation in Div. 2	
HIC2025	1	■		■		■	■		■	■		■				■	■		■	■	
HIC2025ES	1	■		■		■	■		■	■	■	■	■			■		■	■	■	
HIC2025HC	1	■		■		■	■		■	■		■			■	■	■		■	■	
HIC2027	1	■		■		■	■		■	■		■			■	■	■		■	■	
HIC2027DE	1	■		■		■	■		■	■		■			■	■	■		■	■	
HIC2027ES	1	■		■		■	■		■	■		■			■	■	■		■	■	
HID2022	2		■	■	■	■	■		■			■				■	■		■		
HID2022SK	2		■	■	■	■	■		■			■				■	■		■		
HID2024	4		■				■	■	■			■				■	■		■		
HID2025	1		■	■			■		■	■		■				■	■		■	■	
HID2025SK	1		■	■			■		■			■				■	■		■	■	
HID2026	2		■	■			■		■	■		■				■	■		■	■	
HID2026SK	2		■	■			■		■			■				■	■		■	■	
HID2029	1		■	■		■	■		■	■	■	■	■			■	■		■	■	
HID2030	2		■	■		■	■		■	■	■	■	■	■		■	■		■	■	
HID2029SK	1		■	■		■	■		■		■	■	■			■	■		■	■	
HID2030SK	2		■	■		■	■		■		■	■	■	■		■	■		■	■	

Current repeaters



Model Number	Number of channels	Housing width	Field Side			Control Side	Transmission Direction	Functions		Supply	Installation in Zone 2	Installation in Div. 2
			18 mm	Fire and smoke detectors	I/P converters			Conformal coating	Reverse polarity protection			
HID2035	1	■		■	■	■	■		■	■	■	■
HID2036	2	■		■	■	■	■	■	■	■	■	■

Voltage repeaters



Model Number	Number of channels	Housing width		Field Side							Control Side			Transmission Direction	Functions		Supply	SIL 2	Installation in Zone 2	Installation in Div. 2
		12.5 mm	18 mm	Acceleration Sensor	Voltage	Vibration sensor	Strain gauge	Thermocouple	Amplifiers	Load cell	-20 V ... 0 V	0 V ... ±500 mV	0 V ... ±50 mV		Fault indication output	Line fault detection				
HIC2065	1	■			■	■	■	■	■	■			■	■	■	■	■		■	■
HIC2068	1	■			■	■	■	■	■	■		■		■	■	■	■		■	■
HIC2095	1	■		■	■	■					■			■			■	■	■	■
HID2096	2		■	■	■	■					■			■			■	■	■	■

Signal converters for current and voltage



Model Number	Number of channels	Housing width	Input		Output			Supply	Installation in Zone 2	Installation in Div. 2
			Voltage	Current / voltage	0(1) V ... 5 V	0(2) V ... 10 V	0(4) mA ... 20 mA			
HID2012	2	18 mm	■	■	■	■	■	■	■	■

Analog input signals

Temperature converters and repeaters																	
Model Number	Number of channels	Housing width		Input							Output			Functions			Supply
		12.5 mm	18 mm	2-wire connection	3-wire connection	4-wire connection	Potentiometer	Voltage	Thermocouple	Resistance thermometer	0(1) V ... 5 V	0(4) mA ... 20 mA	Resistance	Fault indication output	Line fault detection	Splitter function	24 V DC
HIC2077	1	■								■			■		■		■
HIC2081	1	■		■	■	■	■	■	■	■		■			■		■
HID2061	1		■	■	■	■		■	■		■	■			■		■
HID2062	2		■	■	■	■		■	■		■	■			■		■
HID2071	1		■	■	■	■	■			■	■	■			■		■
HID2072	2		■	■	■	■	■			■	■	■			■		■
HID2081	1		■	■	■	■	■	■	■	■	■	■		■	■		■
HID2082	2		■	■	■	■	■	■	■	■	■	■		■	■	■	■

Analog output signals

Current drivers																										
																										
Model Number	Number of channels	Housing width		Input				Output						Transmission Direction		Functions				Supply						
		12.5 mm	18 mm	0(4) mA ... 20 mA	4 mA ... 20 mA	1.5 mA ... 50 mA	0(1) V ... 5 V	4 mA ... 20 mA	0(4) mA ... 20 mA	1.5 mA ... 50 mA	I/P converters	Positioner	Visual alarm	Fire and smoke detectors	To the field	To the field / To the control system	HART communication	Line fault detection	Reverse polarity protection	Fault indication output	For long field lines	24 V DC	Loop powered	SIL 2	Installation in Zone 2	Installation in Div. 2
HIC2031	1	■			■			■			■	■	■		■		■					■		■	■	■
HIC2031HC	1	■			■			■			■	■	■		■		■				■		■	■	■	■
HID2024	4		■	■			■		■							■	■					■		■	■	■
HID2031	1		■		■			■			■	■	■		■							■			■	■
HID2032	2		■		■			■			■	■	■		■							■			■	■
HID2033	1		■		■			■			■	■	■		■				■			■	■	■	■	■
HID2034	2		■		■			■			■	■	■		■							■		■	■	■
HID2035	1		■			■		■		■	■			■		■			■			■	■		■	■
HID2036	2		■			■		■		■				■		■			■			■	■		■	■
HID2037	1		■		■			■			■	■	■		■		■	■		■		■		■	■	■
HID2038	2		■		■			■			■	■	■		■		■	■		■		■		■	■	■
HID2038Y	2		■		■			■			■	■	■		■		■	■				■		■	■	■

Analog output signals

Termination boards



Model Number	Number of modules	Construction type		Control side		Field side	Number of channels per module	Number of HART communication channels
		HiD	HiC	screw terminals per module, black	37-pin Sub-D connector	screw terminals per module, blue		
HICTB08-SCT-44C-SC-RA	8		■	4		4	1, 2	2 per module
HICTB16-SCT-44C-SC-RA	16		■	4		4	1, 2	2 per module
HICTB08-SDC-44C-SC-RA	8		■		1	4	1, 2	2 per module
HICTB16-SDC-24C-SC-RA	16		■		1	4	1	1 per module
HICTB16-SDC-44C-SC-RA	16		■		2	4	1, 2	2 per module
HICTB32-SDC-24C-SC-RA	32		■		2	4	1	1 per module
HIDTB16-SCT-44C-SC-RA	16	■		4		4	1, 2	2 per module
HIDTB08-SCT-49C-SC-RA	8	■		4		9	1, 2	2 per module
HIDTB08-SCT-99C-SC-RA	8	■		9		9	1, 2, 4	2 per module
HIDTB08-SDC-44C-SC-RA	8	■			1	4	1, 2	2 per module
HIDTB08-SDC-89C-SC-RA	8	■			2	9	1, 2, 4	4 per module
HIDTB16-SDC-44C-SC-RA	16	■			2	4	1, 2	2 per module
HIDTB08-SCT-44C-SC-RA	8	■		4		4	1, 2	2 per module
HIDTB08-SDC-49C-SC-RA	8	■			1	9	1, 2	2 per module

Accessories



Model Number	Description
HIALC-HICTB-SET-108	Label carriers for HiC termination boards
HIALC-HIDTB-SET-150	Label carriers for HiD termination boards
HIACA-UNI-FLK34-FLK34-0M5	HART Connection Cable, length: 0.5 m
HIACA-UNI-FLK34-FLK34-2M0	HART Connection Cable, length: 2 m
HIACA-UNI-FLK34-FLK34-3M0	HART Connection Cable, length: 3 m
HIACA-UNI-FLK34-FLK34-6M0	HART Connection Cable, length: 6 m
HIC2000 BLANK	Place holder barrier for HiC modules
HID2000 BLANK	Place holder barrier for HiD modules

K-System Signal Conditioners

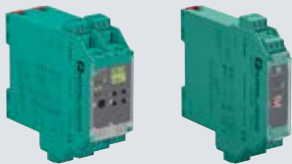
Digital input signals

Switch amplifiers



Model Number	Number of channels	Housing width		Input				Output		Functions								Supply			Installation in Zone 2
		12.5 mm	20 mm	3-wire sensor	Push-pull (4 in 1) output	NAMUR sensor	volt-free contact	Relays	Transistor	Splitter function	Time function	Line fault detection	Reversible mode of operation	Fault indication output	Interval relay	Min./max. control	24 V DC	230 V AC	115 V AC + 230 V AC	SIL 2	
KCD2-SOT-1.LB	1	■				■	■		■	■		■	■				■			■	
KCD2-SOT-2	2	■				■	■		■			■	■				■			■	
KCD2-SR-1.LB	1	■				■	■	■		■		■		■			■			■	
KCD2-SR-2	2	■				■	■	■		■		■					■			■	
KCD2-ST-1.LB	1	■				■	■		■	■		■	■	■			■			■	
KCD2-ST-2	2	■				■	■		■			■	■				■			■	
KFD2-SR3-2.2S	2		■			■	■	■		■		■	■				■			■	■
KFU8-SR-1.3L.V	1		■	■	■			■		■	■							■			■
KFA6-SR-2.3L	2		■	■	■			■							■	■			■	■	

Frequency converters



Model Number	Number of channels	Housing width		Input			Output		Functions										Supply					
		20 mm	40 mm	Frequency	NAMUR sensor	volt-free contact	0(4) mA ... 20 mA	Relay and Transistor	Relays	Start-up override	Rotation direction monitoring	Rotation speed monitoring	Fault indication output	Frequency conversion	Synchronization monitoring	Trip relay	Line fault detection	Slip monitoring	Pulse divider	20 V ... 90 V DC / 48 V ... 253 V AC	24 V DC	SIL 2	Installation in Zone 2	Installation in Div. 2
KFD2-SR2-2.W.SM	2	■		■	■	■			■	■	■	■				■	■				■	■		
KFD2-DWB-1.D	1		■	■	■	■			■	■		■	■			■	■				■	■	■	■
KFU8-DWB-1.D	1		■	■	■	■			■	■		■	■			■	■			■		■		
KFD2-UFC-1.D	1		■	■	■	■	■	■		■		■	■	■		■	■		■		■	■	■	■
KFU8-UFC-1.D	1		■	■	■	■	■	■		■		■	■	■		■	■		■	■		■		
KFD2-UFT-2.D	2		■	■	■	■	■	■		■	■	■	■	■	■	■	■	■			■			
KFU8-UFT-2.D	2		■	■	■	■	■	■		■	■	■	■	■	■	■	■	■		■				

Digital input/output signals

Conductive switch amplifiers



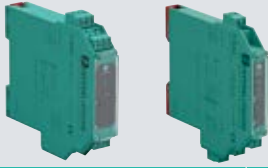
Model Number	Number of channels	Housing width	Input	Output	Functions					Supply	
		20 mm	Resistance	Relays	Fault indication output	Conductivity measurement	Line fault detection	Min./max. control	Time delay	230 V AC	24 V DC
KFD2-ER-1.5	1	■	■	■		■		■			■
KFD2-ER-1.6	1	■	■	■		■		■			■
KFA6-ER-1.5	1	■	■	■		■		■		■	
KFA6-ER-1.6	1	■	■	■		■		■		■	
KFD2-ER-1.W.LB	1	■	■	■	■	■	■	■	■		■
KFD2-ER-2.W.LB	2	■	■	■	■	■	■	■	■		■
KFA6-ER-1.W.LB	1	■	■	■	■	■	■	■	■	■	
KFA6-ER-2.W.LB	2	■	■	■	■	■	■	■	■	■	

Solenoid drivers



Model Number	Number of channels	Housing width	Input	Output			Output Current	Functions	Supply	
		20 mm	Logic input	Valve	Audible alarm	Visual alarm	600 mA	Line fault detection	24 V DC	SIL 2
KFD2-SL-4	4	■	■	■	■	■	■	■	■	■

Relay modules



Model Number	Number of channels	Housing width		Input			Output	Functions				Supply	SIL 3	Installation in Zone 2	Installation in Div. 2
		12.5 mm	20 mm	Logic input	Field device supply	Test input		DTS function	Test pulse immunity	ETS function	DPS function				
KFD0-RSH-1.4S.PS2	1		■	■	■	■	■	■		■	■	■	■	■	
KFD0-RSH-1.1D.F1	1		■	■	■	■	■	■	■			■	■	■	■
KFD0-RSH-1.1E.1	1		■	■	■	■	■		■	■		■	■	■	■
KCD0-RSH-1.1D.1	1	■		■	■	■	■	■	■			■	■	■	■
KCD0-RSH-1.1E.1	1	■		■	■	■	■		■	■		■	■	■	■
KFD0-RSH-1	1		■	■	■		■					■	■		
KFD0-RO-2	2		■	■			■					■	■		

Analog input signals

Transmitter power supplies



Model Number	Number of channels	Housing width		Input						Output			Functions			Supply	SIL 2	SIL 3
		12.5 mm	20 mm	2-wire-transmitters	3-wire-transmitters	Current source	0(4) mA ... 20 mA	4 mA ... 20 mA	0(2) V ... 10 V	0(4) mA ... 20 mA	0(2) V ... 10 V	0(1) V ... 5 V	HART communication	Test sockets	Splitter function			
KCD2-STC-1	1	■		■		■		■		■			■			■	■	
KCD2-STC-1.20	1	■		■		■	■			■		■	■	■		■	■	
KFD2-STC4-1	1		■	■	■	■	■			■			■	■		■	■	
KFD2-STC4-1-3	1		■	■	■	■	■			■			■	■		■	■	
KFD2-STV4-1-1	1		■	■	■	■	■					■	■	■		■	■	
KFD2-CR4-1	1		■	■	■	■	■			■						■	■	
KFD2-STC4-1.20	1		■	■	■	■	■			■			■	■	■	■		■
KFD2-STC4-1.20-3	1		■	■	■	■	■			■			■	■	■	■		■
KFD2-CR4-1.20	1		■	■	■	■	■			■					■	■		■
KFU8-VCR-1	1		■	■	■	■	■		■	■	■					■		
KFD2-STC4-2	2		■	■			■			■			■	■		■	■	
KFD2-STC5-1	1		■	■	■	■	■			■			■	■		■	■	
KFD2-STC5-1.20	1		■	■	■	■	■						■	■	■	■		■
KFD2-STC5-2	2		■	■	■	■	■						■	■		■	■	
KFD2-CR4-2	2		■	■			■									■	■	
KFD2-STC4-2-3	2		■	■			■						■	■		■	■	

Transmitter power supplies with trip values



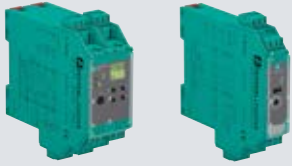
Model Number	Number of channels	Housing width	Input				Output		Functions	Supply		SIL 2
			2-wire-transmitters	3-wire-transmitters	Current source	0(4) mA ... 20 mA	0(4) mA ... 20 mA	Relays		20 V ... 90 V DC / 48 V ... 253 V AC	24 V DC	
KFD2-CRG2-1.D	1	■	■	■	■	■	■	■	■		■	■
KFU8-CRG2-1.D	1	■	■	■	■	■	■	■	■	■		■

Current repeaters



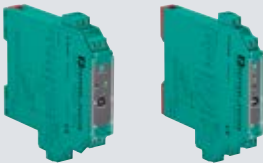
Model Number	Number of channels	Housing width	Field Side		Control Side			Functions		Supply	SIL 2
			4 mA ... 20 mA	0 mA ... 40 mA	4 mA ... 20 mA	0 mA ... 40 mA	HART	HART communication	Line fault detection		
KFD0-SCS-1.55	1	■	■		■		■	■	■	■	■
KFD0-CS-1.50	1	■	■		■					■	■
KFD0-CS-2.50	2	■	■		■					■	■
KFD0-CS-2.51P	2	■		■		■				■	■

Signal converters for current and voltage



Model Number	Number of channels	Housing width		Input			Output								Functions				Supply			
		20 mm	40 mm	Voltage	Strain gauge bridge	Current / voltage	-20 mA ... +20 mA	0 mA ... 20 mA	0(4) mA ... 20 mA	4 mA ... 20 mA	-10 V ... +10 V	0 V ... 10 V	0(1) V ... 5 V	0(2) V ... 10 V	Relays	Trip relay	Line fault detection	Programmable high/low alarm	Test sockets	20 V ... 90 V DC / 48 V ... 253 V AC	24 V DC	Loop powered
KFD0-CC-1	1	■				■			■								■				■	■
KFD2-USC-1.D	1	■				■		■				■	■	■			■				■	
KFU8-USC-1.D	1	■				■		■				■	■	■			■			■	■	
KFD2-GS-1.2W	1	■				■									■			■			■	
KFD2-WAC2-1.D	1		■	■	■		■	■		■	■			■	■	■					■	
KFU8-VCR-1	1	■		■				■						■							■	

Temperature converters and repeaters



Model Number	Number of channels	Housing width		Input				Output			Functions			Supply		
		12.5 mm	20 mm	Thermocouple	Potentiometer	Voltage	Resistance thermometer	0(4) mA ... 20 mA	4 mA ... 20 mA	0(1) V ... 5 V	Internal cold junction compensation	Line fault detection	Splitter function	24 V DC	Loop powered	SIL 2
KCD2-UT2-1	1	■		■	■	■	■	■				■		■		
KFD2-UT2-1-1	1		■	■	■	■	■			■		■		■		■
KFD2-UT2-1	1		■	■	■	■	■	■				■		■		■
KFD2-UT2-2	2		■	■	■	■	■	■				■	■	■		■
KFD2-UT2-2-1	2		■	■	■	■	■			■		■	■	■		■
KFD0-TR-1	1		■				■		■					■	■	
KFD0-TT-1	1		■	■					■		■	■		■	■	

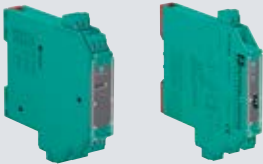
Temperature converters with trip values



Model Number	Number of channels	Housing width		Input				Output		Functions			Supply		SIL 2
		20 mm	40 mm	Potentiometer	Voltage	Thermocouple	Resistance thermometer	0(4) mA ... 20 mA	Output Relays	Trip relay	Line fault detection	Programmable high/low alarm	20 V ... 90 V DC / 48 V ... 253 V AC	24 V DC	
KFD2-GU-1	1	■				■	■		■	■		■		■	
KFD2-GUT-1.D	1		■	■	■	■	■	■	■	■	■			■	■
KFU8-GUT-1.D	1		■	■	■	■	■	■	■	■	■		■		■

Analog output signals

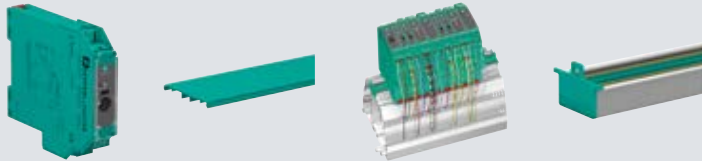
Current drivers



Model Number	Number of channels	Housing width		Input			Output					Transmission Direction		Functions				Supply		SIL 2	
		12.5 mm	20 mm	0 mA ... 20 mA	4 mA ... 20 mA	0 mA ... 40 mA	0 mA ... 40 mA	4 mA ... 20 mA	I/P converters	Positioner	Valve	Fire alarm	To the field	To the field / To the control system	Reverse polarity protection	HART communication	Line fault detection	Test sockets	24 V DC		Loop powered
KCD2-SCD-1	1	■			■			■	■	■		■			■				■		■
KFD2-SCD2-1.LK	1		■		■			■	■	■		■			■		■	■	■		■
KFD2-SCD2-2.LK	2		■		■			■	■	■		■			■		■	■	■		■
KFD0-SCS-1.55	1		■		■			■					■		■		■			■	■
KFD0-CS-2.51P	2		■			■	■				■		■	■						■	■
KFD2-CD-1.32	1		■	■					■	■	■		■						■		■

Accessories

Supply and assembly



Model Number	Description
KFA6-STR-1.24.500	Power supply, 24 V, 500 mA
KFA6-STR-1.24.4	Power supply, 24 V, 4 A
KFD2-EB2	Power Feed Module
KFD2-EB2.R4A.B	Power feed module, redundant supply
UPR-03-M	Universal Power Rail with end caps and cover, 3 conductors, length: 1.6 m
UPR-03-S	Universal Power Rail with end caps and cover, 3 conductors, length: 0.8 m
UPR-05-S	Universal Power Rail with end caps and cover, 5 conductors, length: 0.8 m
UPR-E	End cap for universal power rail UPR-**-*
UPR-I	Insulation spacer for universal power rail UPR-**-*
UPR-COVER	Cover for 35 mm DIN mounting rail
UPR-INS-03	Insert for 35 mm DIN mounting rail
UPR-MR	35 mm DIN mounting rail, length: 2 m (packaging unit: 2 pieces)
K-DUCT-GY-UPR-03	Profile rail with UPR-03-* insert, 3 conductors, wiring comb field side gray
K-DUCT-GY-UPR-05	Profile rail with UPR-05-* insert, 5 conductors, wiring comb field side gray
K-MS	Mounting Socket

Commissioning



Model Number	Description
K-ADP-USB	Adapter with USB Interface

Terminal blocks



Model Number	Type		Accessories		Number of pins	Test sockets	External cold junction compensation	Color			Packing unit	Structure
	Spring terminal	Screw terminal	for KF modules	for KC modules				red	green	black		
K-CJC-BK		■	■		3		■			■	1 item(s)	one-rowed
KC-ST-5GN		■		■	2				■		5 item(s)	one-rowed
KF-ST-5GN		■	■		3				■		5 item(s)	one-rowed
KC-STP-5GN		■		■	2	■			■		5 item(s)	one-rowed
KF-STP-5GN		■	■		3	■			■		5 item(s)	one-rowed
KC-CTT-5GN	■			■	2	■			■		5 item(s)	one-rowed
KF-CTT-5GN	■		■		3	■			■		5 item(s)	one-rowed
KF-CP			■	■				■			120 item(s) (20 x 6 items)	

Additional accessories



Model Number	Description
K-500R0%1	Measuring resistor
KFD0-LGH-GN	Place holder barrier for KF modules, intrinsically safe
KFD0-LGH-Y34868	Place holder barrier for KF modules, non-intrinsically safe, DC version, negative polarity
KF-SEAL	Adhesive sticker

SC-System Signal Conditioners

Digital input signals

Switch amplifiers



Model Number	Number of channels	Housing width	Digital input								Output	Supply	Functions
			2-wire DC sensor	AC/DC voltage source	NAMUR sensor	NPN sensor	PNP sensor	S0 sensor	SN sensor	volt-free contact			
S1SD-1DI-1R	1	6.2 mm	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

Rotation speed monitors



Model Number	Number of channels	Housing width	Digital input								Output	Supply	Functions		
			2-wire DC sensor	AC/DC voltage source	NAMUR sensor	NPN sensor	PNP sensor	S0 sensor	SN sensor	volt-free contact			Start-up override	Restart inhibit	Time function
S1SD-1FI-1R	1	6.2 mm	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒

Analog input signals

Transmitter power supplies



Model Number	Number of channels	Housing width	Analog input			Output			Supply	Functions		Installation in Zone 2	Installation in Div. 2
			2-wire-transmitters	3-wire-transmitters	0(4) mA ... 20 mA	0(4) mA ... 20 mA	0(2) V ... 10 V			Splitter function	HART communication		
S1SD-1AI-1U	1	6.2 mm	☒	☒	☒	☒	☒	☒	☒			☒	☒
S1SD-1AI-1C.H	1	6.2 mm	☒	☒	☒	☒	☒	☒	☒		☒	☒	☒
S1SD-1AI-2C	1	6.2 mm	☒	☒	☒	☒	☒	☒	☒	☒		☒	☒

Isolating amplifiers



Model Number	Number of channels	Housing width									Output				Supply	Functions		Installation in Zone 2	Installation in Div. 2				
			6.2 mm	0(2) mA ... 20 mA	0(4) mA ... 20 mA	-10 mA ... 10 mA	-20 mA ... 20 mA	0(2) V ... 10 V	-5 V ... 5 V	-10 V ... 10 V	0(1) V ... 5 V	2-wire-transmitters	0(4) mA ... 20 mA	-10 mA ... 10 mA		-20 mA ... 20 mA	-5 V ... 5 V			-10 V ... 10 V	0(2) V ... 10 V	0(1) V ... 5 V	24 V DC
S1SD-1AI-1U.1	1	■		■			■				■					■			■			■	■
S1SD-1AI-1U.2	1	■	■	■	■	■	■	■	■	■		■	■	■	■	■	■	■	■		■	■	■
S1SD-1AI-2U	1	■		■			■				■	■				■	■	■	■	■		■	■

Passive isolators



Model Number	Number of channels	Housing width	Analog input	Output	Supply		Installation in Zone 2	Installation in Div. 2
		6.2 mm	0(4) mA ... 20 mA	0(4) mA ... 20 mA	24 V DC	Loop powered		
S1SL-1AI-1C	1	■	■	■	■	■	■	■
S1SL-2AI-2C	2	■	■	■	■	■	■	■

Signal converters



Model Number	Number of channels	Housing width	Analog input	Output							Supply	Installation in Zone 2	Installation in Div. 2
				± mV	-10 V ... 10 V	-10 mA ... 10 mA	-20 mA ... 20 mA	0(4) mA ... 20 mA	-5 V ... 5 V	0(1) V ... 5 V	0(2) V ... 10 V		
S1SD-1AI-1U.3	1	■	■	■	■	■	■	■	■	■	■	■	■

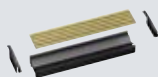
Temperature converters



Model Number	Number of channels	Housing width 6.2 mm	Analog input				Output			Supply 24 V DC	Functions Line fault detection	Installation in Zone 2	Installation in Div. 2
			± mV	2-wire connection	3-wire connection	4-wire connection	0(1) V ... 5 V	0(2) V ... 10 V	0(4) mA ... 20 mA				
S1SD-1TI-1U	1	■	■	■	■	■	■	■	■	■	■	■	■

Accessories

General



Model Number	Description
POWERBUS-SETL5.250	Power bus for 35 mm DIN mounting rail, height: 7.5 mm, length: 250 mm
POWERBUS-SETH5.250	Power bus for 35 mm DIN mounting rail, height: 15 mm, length: 250 mm
POWERBUS-SETL5.500	Power bus for 35 mm DIN mounting rail, height: 7.5 mm, length: 500 mm
POWERBUS-SETH5.500	Power bus for 35 mm DIN mounting rail, height: 15 mm, length: 500 mm
POWERBUS-COV.250	Cover for 35 mm DIN mounting rail, length: 250 mm
POWERBUS-CAP	End Cap for Power Bus
S1SD-2PF	Power feed module with screw terminals
S-ADP-USB	Adapter with USB Interface

Z-System Zener Barriers

DC versions

Positive polarity



Model Number	Number of channels	Supply loop	Measurement loop	Series resistance	Fuse rating	Asymmetrical version	High power version	Increased nominal resistance	Current limit	Internal measuring resistor	Replaceable back-up fuse	Diode return
Z040	2	5 V	3 V at 10 μ A (1 V at 1 μ A)	50 Ω	100 mA							
Z041	2	7.5 V	7 V at 10 μ A (6 V at 1 μ A)	2030.5 Ω	80 mA							
Z042	2	5 V	3 V at 10 μ A (1 V at 1 μ A)	209.5 Ω	100 mA							
Z 705	1	4.3 V	0.9 V at 1 μ A	18.18 Ω	250 mA							
Z 710	1	8.5 V	6.5 V at 10 μ A	56 Ω	100 mA							
Z 713	1	14.1 V	13.7 V at 10 μ A	29 Ω	160 mA							
Z 715	1	13.3 V	13 V at 10 μ A	107 Ω	100 mA							
Z 715.1K	1	13.3 V	13 V at 10 μ A	1025 Ω	100 mA			■				
Z 715.F	1	13.3 V	13 V at 10 μ A	121 Ω	63 mA						■	
Z 722	1	19.5 V	19 V at 10 μ A	166 Ω	50 mA							
Z 728	1	26.9 V	26.5 V at 10 μ A	327 Ω	50 mA							
Z 728.CL	1	26.9 V	26.5 V at 10 μ A	342 Ω +2 V	50 mA				■			
Z 728.F	1	26.9 V	26.5 V at 10 μ A	341 Ω	50 mA						■	
Z 728.H	1	26.9 V	26.5 V at 10 μ A	250 Ω	80 mA		■					
Z 728.H.F	1	26.9 V	26.5 V at 10 μ A	273 Ω	50 mA		■				■	
Z 755	2	4.4 V	0.9 V at 1 μ A	18.18 Ω	250 mA							
Z 757	2	6.4 V	6 V at 10 μ A	15.5 Ω	200 mA							
Z 764	2	10.4 V	10 V at 10 μ A	1033 Ω	50 mA							
Z 765	2	13.3 V	13 V at 10 μ A	107 Ω	100 mA							
Z 765.F	2	13.3 V	13 V at 10 μ A	121 Ω	63 mA						■	
Z 772	2	19.6 V	19 V at 10 μ A	166 Ω	50 mA							
Z 778	2	27 V	26.5 V at 10 μ A	646 Ω	50 mA							
Z 779	2	27 V	26.5 V at 10 μ A	327 Ω	50 mA							
Z 779.F	2	27 V	26.5 V at 10 μ A	341 Ω	50 mA						■	
Z 779.H	2	27 V	26.5 V at 10 μ A	250 Ω	80 mA		■					
Z 779.H.F	2	27 V	26.5 V at 10 μ A	273 Ω	50 mA		■				■	
Z 786	2	27 V	26.5 V at 10 μ A	36 Ω + 0.9 V	50 mA							■
Z 787	2	27 V	26.5 V at 10 μ A	327 Ω	50 mA							■
Z 787.F	2	27 V	26.5 V at 10 μ A	341 Ω	50 mA						■	■
Z 787.H	2	27 V	26.5 V at 10 μ A	250 Ω	80 mA		■					■
Z 787.H.F	2	27 V	26.5 V at 10 μ A	273 Ω	50 mA		■				■	■
Z 788	2	27 V / 8.6 V	26.5 V at 10 μ A / 6.5 V at 10 μ A	327 Ω / 64 Ω	50 mA	■						
Z 788.H	2	27 V / 8.6 V	26.5 V at 10 μ A / 6.5 V at 10 μ A	250 Ω / 64 Ω	80 mA	■	■					
Z 788.R	2	27 V / 8.6 V	26.5 V at 10 μ A / 6.5 V at 10 μ A	327 Ω / 64 Ω	50 mA	■				■		
Z 789	2	27 V	26.5 V at 10 μ A	640 Ω	50 mA							■
Z 796	2	24.6 V / 19 V	24 V at 10 μ A / 18 V at 10 μ A	340 Ω / 437 Ω	50 mA	■						

DC versions

Negative polarity										
										
Model Number	Number of channels	Supply loop	Measurement loop	Series resistance	Fuse rating	High power version	Asymmetrical version	Current limit	Replaceable back-up fuse	Diode return
Z 810	1	8.6 V	6.5 V at 10 μ A	56 Ω	100 mA					
Z 810.CL	1	8.6 V	6.5 V at 10 μ A	56 Ω	100 mA				■	
Z 813	1	14.2 V	13.7 V at 10 μ A	29 Ω	160 mA					
Z 822	1	19.6 V	19 V at 10 μ A	166 Ω	50 mA					
Z 828	1	27 V	26.5 V at 10 μ A	327 Ω	50 mA					
Z 828.H	1	27 V	26.5 V at 10 μ A	250 Ω	80 mA	■				
Z 828.H.F	1	27 V	26.5 V at 10 μ A	273 Ω	50 mA	■			■	
Z 857	2	6.4 V	6 V at 10 μ A	15.5 Ω	200 mA					
Z 864	2	10.4 V	10 V at 10 μ A	1033 Ω	50 mA					
Z 865	2	13.3 V	13 V at 10 μ A	107 Ω	100 mA					
Z 865.F	2	13.3 V	13 V at 10 μ A	121 Ω	63 mA				■	
Z 879.F	2	27 V	26.5 V at 10 μ A	341 Ω	50 mA				■	
Z 872	2	19.6 V	19 V at 10 μ A	166 Ω	50 mA					
Z 878	2	27 V	26.5 V at 10 μ A	646 Ω	50 mA					
Z 879.H.F	2	27 V	26.5 V at 10 μ A	273 Ω	50 mA	■			■	
Z 886	2	27 V	26.5 V at 10 μ A	36 Ω + 0.9 V	50 mA					■
Z 887	2	27 V	26.5 V at 10 μ A	327 Ω	50 mA					■
Z 887.F	2	27 V	26.5 V at 10 μ A	341 Ω	50 mA				■	■
Z 887.H.F	2	27 V	26.5 V at 10 μ A	273 Ω	50 mA	■			■	■
Z 888	2	27 V / 8.6 V	26.5 V at 10 μ A / 6.5 V at 10 μ A	327 Ω / 64 Ω	50 mA		■			
Z 888.H	2	27 V / 8.6 V	26.5 V at 10 μ A / 6.5 V at 10 μ A	250 Ω / 64 Ω	80 mA	■	■			
Z 896	2	24.6 V / 19 V	24 V at 10 μ A / 18 V at 10 μ A	340 Ω / 437 Ω	50 mA		■			

AC versions

AC versions



Model Number	Number of channels	Supply loop	Measurement loop	Series resistance	Fuse rating	High power version	Increased nominal resistance	Replaceable back-up fuse	Diode return
Z 905	1	4.3 V	0.9 V at 1 μ A	18.18 Ω	250 mA				
Z 910	1	8.8 V	6.5 V at 10 μ A	56 Ω	100 mA				
Z 915	1	13.6 V	13 V at 10 μ A	107 Ω	100 mA				
Z 915.1K	1	13.6 V	13 V at 10 μ A	1025 Ω	100 mA		■		
Z 928	1	26.3 V	26 V at 10 μ A	327 Ω	50 mA				
Z 954	3	3.7 V	0.6 V at 1 μ A	27.27 Ω	50 mA				
Z 955	2	4.3 V	0.9 V at 1 μ A	18.18 Ω	250 mA				
Z 960	2	8.8 V	6.5 V at 10 μ A	64 Ω	50 mA				
Z 960.F	2	8.8 V	6.5 V at 10 μ A	79 Ω	50 mA			■	
Z 961	2	7.7 V	6.5 V at 10 μ A	106 Ω	100 mA				
Z 961.F	2	7.7 V	6.5 V at 10 μ A	115 Ω	100 mA			■	
Z 961.H	2	7.7 V	6.5 V at 10 μ A	380 Ω	50 mA	■			
Z 964	2	11.1 V	10 V at 10 μ A	1033 Ω	50 mA				
Z 965	2	13.6 V	13 V at 10 μ A	115 Ω	50 mA				
Z 966	2	11.1 V	10 V at 10 μ A	166 Ω	50 mA				
Z 966.F	2	11.1 V	10 V at 10 μ A	169 Ω	63 mA			■	
Z 966.H	2	11.1 V	10 V at 10 μ A	82 Ω	100 mA	■			
Z 967	2	15.6 V	15 V at 10 μ A	136 Ω	50 mA				■
Z 972	2	19.6 V	19 V at 10 μ A	327 Ω	50 mA				■
Z 978	2	26.3 V	26 V at 10 μ A	646 Ω	50 mA				■

Accessories



Model Number	Description
USLKG5	Terminal Block
ZH-Z.NLS-CU 3/10	Grounding Rail
Z 799	Place Holder Zener Barrier
ZH-ES/LB	Insertion Strip
ZH-Z.AB/NS	Mounting Block
ZH-Z.AB/SS	Mounting Block
ZH-Z.AK16	Connection Terminal
ZH-Z.AR.125	Spacing Roller
ZH-Z.BT	Label Carrier
ZH-Z.ES	Single Socket
ZH-Z.LL	Ground Rail Feed

Surge Protection Barriers

K-LB

Modules for measuring signals for DIN rail mounting



Model Number	Number of protected signal lines	Maximum continuous operating voltage	Topology grounded	Topology non-grounded
K-LB-1.30	2	30 V DC		■
K-LB-2.30	4	30 V DC		■
K-LB-1.6	2	6 V DC		■
K-LB-2.6	4	6 V DC		■
K-LB-1.30G	2	30 V DC	■	
K-LB-2.30G	4	30 V DC	■	
K-LB-1.6G	2	6 V DC	■	
K-LB-2.6G	4	6 V DC	■	

P-LB

K-System plug-in modules



Model Number	Number of protected signal lines	Rated voltage	Connection
P-LB-1.A.13	2	max. 30 V	terminals 1, 3
P-LB-2.A.1346	4	max. 30 V	terminals 1, 3; 4, 6
P-LB-1.B.12	2	max. 30 V	terminals 1, 2
P-LB-2.B.1245	4	max. 30 V	terminals 1, 2; 4, 5
P-LB-1.C.123	3	max. 30 V	terminals 1, 2, 3
P-LB-2.D.123456	6	max. 30 V	terminals 1, 2, 3; 4, 5, 6
P-LB-1.E.23	2	max. 30 V	terminals 2, 3
P-LB-2.C.2356	4	max. 30 V	Terminals 2, 3; 5, 6
P-LB-1.D.1234	4	max. 30 V	terminals 1, 2, 3, 4
P-LB-1.F.1236	4	max. 30 V	terminals 1, 2, 3, 6

F*-LB

Screw Modules for Field Devices



Model Number	Number of protected signal lines	Supply	Mounting NPT1/2 thread	Mounting PG13.5 thread	Mounting M20 x 1.5 thread
FS-LB-I	1	48 V			■
FP-LB-I	1	48 V		■	
FN-LB-I	1	48 V	■		

M-LB-1/2/3/4

Surge protection for supply lines



Model Number	Number of protected supply lines	Nominal voltage	Network configuration	Fault indication output	status display
M-LB-1.150.D	1	120 V AC		■	■
M-LB-1.275.D	1	230 V AC		■	■
M-LB-2.150TN.D	2	120 V AC	TN	■	■
M-LB-2.275TN.D	2	230 V AC	TN	■	■
M-LB-2.275TT.D	2	230 V AC	TT	■	■
M-LB-3.150TNC.D	3	120 V AC / 240 V AC	TN-C	■	■
M-LB-3.275TNC.D	3	230 V AC / 400 V AC	TN-C	■	■
M-LB-4.150TNS.D	4	120 V AC / 240 V AC	TN-S	■	■
M-LB-4.275TNS.D	4	230 V AC / 400 V AC	TN-S	■	■
M-LB-4.275TT.D	4	230 V AC / 400 V AC	TT	■	■
M-LB-2.30.T3.D	2	24 V AC		■	■
M-LB-2.150.T3.D	2	120 V AC		■	■

M-LB-5000

Surge protection for signal lines



Model Number	Number of protected signal lines	Nominal voltage	Nominal discharge current (8/20 μ s)	Total discharge current (8/20 μ s)	Topology grounded	Topology non-grounded	Display elements	SIL 3
M-LB-5111	1	1 V DC	5 kA per line (10x)	10 kA (1x)		■		■
M-LB-5112	2	1 V DC	5 kA per line (10x)	20 kA (1x)		■		■
M-LB-5113	1	1 V DC	5 kA per line (10x)	10 kA (1x)	■			■
M-LB-5114	2	1 V DC	5 kA per line (10x)	20 kA (1x)	■			■
M-LB-5141	1	24 V DC	5 kA per line (10x)	10 kA (1x)		■		■
M-LB-5142	2	24 V DC	5 kA per line (10x)	20 kA (1x)		■		■
M-LB-5143	1	24 V DC	5 kA per line (10x)	10 kA (1x)	■			■
M-LB-5144	2	24 V DC	5 kA per line (10x)	20 kA (1x)	■			■
M-LB-5211	1	1 V DC	5 kA per line (10x)	10 kA (1x)		■	■	■
M-LB-5212	2	1 V DC	5 kA per line (10x)	20 kA (1x)		■	■	■
M-LB-5213	1	1 V DC	5 kA per line (10x)	10 kA (1x)	■		■	■
M-LB-5214	2	1 V DC	5 kA per line (10x)	20 kA (1x)	■		■	■
M-LB-5241	1	24 V DC	5 kA per line (10x)	10 kA (1x)		■	■	■
M-LB-5242	2	24 V DC	5 kA per line (10x)	20 kA (1x)		■	■	■
M-LB-5243	1	24 V DC	5 kA per line (10x)	10 kA (1x)	■		■	■
M-LB-5244	2	24 V DC	5 kA per line (10x)	20 kA (1x)	■		■	■
M-LB-EX-5111	1	1 V DC	5 kA per line (10x)	10 kA (1x)		■		■
M-LB-EX-5112	2	1 V DC	5 kA per line (10x)	20 kA (1x)		■		■
M-LB-EX-5113	1	1 V DC	5 kA per line (10x)	10 kA (1x)	■			■
M-LB-EX-5114	2	1 V DC	5 kA per line (10x)	20 kA (1x)	■			■
M-LB-EX-5141	1	24 V DC	5 kA per line (10x)	10 kA (1x)		■		■
M-LB-EX-5142	2	24 V DC	5 kA per line (10x)	20 kA (1x)		■		■
M-LB-EX-5143	1	24 V DC	5 kA per line (10x)	10 kA (1x)	■			■
M-LB-EX-5144	2	24 V DC	5 kA per line (10x)	20 kA (1x)	■			■
M-LB-EX-5211	1	1 V DC	5 kA per line (10x)	10 kA (1x)		■	■	■
M-LB-EX-5212	2	1 V DC	5 kA per line (10x)	20 kA (1x)		■	■	■
M-LB-EX-5213	1	1 V DC	5 kA per line (10x)	10 kA (1x)	■		■	■
M-LB-EX-5214	2	1 V DC	5 kA per line (10x)	20 kA (1x)	■		■	■
M-LB-EX-5241	1	24 V DC	5 kA per line (10x)	10 kA (1x)		■	■	■
M-LB-EX-5242	2	24 V DC	5 kA per line (10x)	20 kA (1x)		■	■	■
M-LB-EX-5243	1	24 V DC	5 kA per line (10x)	10 kA (1x)	■		■	■
M-LB-EX-5244	2	24 V DC	5 kA per line (10x)	20 kA (1x)	■		■	■

Accessories

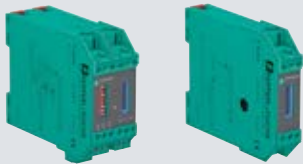


Model Number	Description
M-LB-5000	Base module for non-intrinsically safe protection modules or function modules
M-LB-5000.SP	Base module for non-intrinsically safe protection modules or function modules, with spring terminals
M-LB-EX-5000	Base module for intrinsically safe protection modules
M-LB-EX-5000.SP	Base module for intrinsically safe protection modules, with spring terminals
M-LB-5900	Place holder module for non-intrinsically safe protection modules or function modules
M-LB-EX-5900	Place holder module for intrinsically safe protection modules
M-LB-5300	Power Feed Module
M-LB-5400	Fault Status Module
M-LB-5500	Maintenance Status Module
M-UPR-03-S	Universal Power Rail, 3 conductors, length: 0.8 m
M-UPR-I	Insulation Spacer for Universal Power Rail

HART Interface Solutions

K-System HIS

HART multiplexers



Model Number	Description	Number of channels	Housing width		Function		SIL 3	Installation in Zone 2
			20 mm	40 mm	Slave	Master		
KFD2-HMM-16	HART Multiplexer Master	16		■		■	■	■
KFD0-HMS-16	HART Multiplexer Slave	16	■		■		■	■

Termination boards



Model Number	Description
FI-PFH-NS0137-R	HART termination board for K-System HART Multiplexer

HART loop converters



Model Number	Number of channels	Housing width 40 mm	Input				Output		Functions			Supply 24 V DC	Installation in Zone 2	Installation in Div. 2
			3-wire-transmitters	HART	Transmitter supply	active sources	4 mA ... 20 mA	Relays	Trip relay	HART communication	Splitter function			
KFD2-HLC-EX1.D	1	■	■	■	■	■	■		■	■	■	■	■	■
KFD2-HLC-EX1.D.2W	1	■	■	■	■	■	■	■	■	■	■	■	■	■
KFD2-HLC-EX1.D.4S	1	■	■	■	■	■	■	■	■	■	■	■	■	■

Accessories



Model Number	Description
K-22μ	HART Filter
K-HM14	HART connection cable for master – slave connection
K-HM26	HART connection cable for master/slave – termination board connection

H-System HIS

HART multiplexers



Model Number	Number of channels	Housing width	Supply	SIL 3	Installation in Zone 2	Installation in Div. 2
HIDMUX2700	32	18 mm	24 V DC			

Termination boards



Model Number	Number of channels	Splitting	Type/number 2 x RS-485	Supply	Redundancy available
HIATB01-HART-2X16	32-channel	2 x 16		24 V DC	
HIATB01-HART-4X8	32-channel	4 x 8		24 V DC	
HIATB01-HART-4X8-Y1	32-channel	4 x 8		24 V DC	
HISHPSM/32/MM-01	32-channel	1 x 32		24 V DC	

Accessories



Model Number	Description
HIACA-UNI-FLK34-FLK34-0M5	HART Connection Cable, length: 0.5 m
HIACA-UNI-FLK34-FLK34-1M0	HART Connection Cable, length: 1 m
HIACA-UNI-FLK34-FLK34-2M0	HART Connection Cable, length: 2 m
HIACA-UNI-FLK34-FLK34-3M0	HART Connection Cable, length: 3 m
HIACA-UNI-FLK34-FLK34-6M0	HART Connection Cable, length: 6 m

Wireless HART Interface Solutions

Viator modems



Model Number	Description
HM-MT-BT-Ex-010041	Interface for wireless communication between PC host and HART field devices
HM-MT-BT-GP-010040	Interface for wireless communication between PC host and HART field devices
HM-MT-RS232-01001	Interface for communication with HART field devices
HM-MT-USB-010031	Interface for commissioning, calibrating, and acquiring data from HART field devices
HM-MT-USB-PWRX-010031P	Interface for commissioning, calibrating, and acquiring data from HART field devices

Adapters



Model Number	Input	HART communication	internal antenna	external antenna	IECEx approval	ATEX marking
WHA-BLT-F9D0-N-A0-GP-1	4 ... 20 mA	8 devices	■			
WHA-BLT-F9D0-N-A0-Z0-Ex1	4 ... 20 mA	8 devices	■		■	■
WHA-BLT-F9D0-N-A0-Z1-1	4 ... 20 mA	8 devices	■		■	■
WHA-ADP2-F8B2-0-A0-Z1-Ex1	4 ... 20 mA	4 devices		■	■	■
WHA-ADP2-F8B2-0-P0-GP-1	4 ... 20 mA	4 devices		■		
WHA-ADP2-F8B2-0-P0-Z1-Ex1	4 ... 20 mA	4 devices		■	■	■

Gateways



Model Number	Description	Protocols			Installation in Zone 2	Installation in Div. 2
		HART	MODBUS	Ethernet/IP		
WHA-GW-F2D2-0-AS-Z2-ETH	MODBUS WirelessHART Gateway	■	■		■	■
WHA-GW-F2D2-0-AS-Z2-ETH.EIP	Ethernet/IP WirelessHART Gateway	■		■	■	■

Remote I/O Systems: The Link Between Conventional Field Technology and Bus Technology

Modular remote I/O systems from Pepperl+Fuchs transfer process data from explosion-hazardous and non-explosion-hazardous areas by connecting digital or analog sensors and actuators to the control system via a bus interface. This reduces costs by allowing plants to be modernized or expanded without replacing existing field-level technology.



Typical Industries

Remote I/O systems are the ideal solution for applications in explosion-hazardous areas or harsh industrial environments. The technology is used in the oil and gas industry (both onshore and offshore), in the pharmaceutical and chemical sector, in the wastewater sector, and in the food and beverage industry.

The FB System

The FB remote I/O system is certified for use in Zone 1. The modular system allows modules with Ex-i (intrinsic safety) field circuits and Ex-e (Increased safety) field terminals to be combined directly next to one another. An innovative plug-in design saves space and reduces costs. The FB system can be installed in a nonmetallic or stainless steel enclosure.

The LB System

The LB remote I/O system is certified for use in Class I, Div. 2/ Zone 2 and non-explosion-hazardous areas. The modular system allows different circuits to be operated directly next to one another. Signals can be transferred to the process control system via the Ex-i field circuits in a non-explosion-hazardous area. The LB remote I/O system is mounted on a backplane.

You can find more information on the remote I/O product portfolio in the product brochure or in the Engineer's Guide at www.pepperl-fuchs.com/rio

Product Selection Terms

You are looking for

Current Driver
Output Isolator Transformer
Input Isolator
Gateway
Pt100
Thermocouple
Motherboard
Power Supply
Switch Amplifier
Transmitter Power Supply
Isolated Switch Amplifier

Isolator Transformer
Solenoid Driver
Valve Driver

Pepperl+Fuchs term

Analog Output Signals
Analog Output Signals
Analog Input Signals
Com Unit
Temperature Converter
Temperature Converter
Backplane
Power Supply
Digital Input Signals
Analog Input Signals
Digital Input Signals
Analog Input Signals
Digital Output Signals
Digital Output Signals

Remote I/O Systems

LB System

Universal input and output signals

Analog output



Model Number	Number of input channels	Number of output channels	Occupied slots	Voltage	Current	Power	Explosion protection		Installation in Zone 2	Installation in Div. 2
							Ex ia	Ex ic		
LB7004A	4	4	1					■	■	
LB7104A	4	4	1	27 V	87 mA	575 mW	■		■	■

Digital input signals

Digital input



Model Number	Number of input channels		Occupied slots	Connection		Operating frequency	Voltage	Current	Power	Explosion protection			Installation in Zone 2	Installation in Div. 2
				NAMUR sensor	volt-free contact					Ex ia	Ex ic	Ex nA		
LB1001A	2	1	■	■							■		■	
LB1002A	3	1	■	■			10.5 V	35 mA	92 mW		■		■	
LB1003A	1	1	■	■		0 ... 15 kHz								
LB1003C	1	1	■	■		0 ... 400 Hz					■			
LB1008A	8	2	■	■							■		■	
LB1009A	8	1	■	■			10 V	12 mA	30 mW		■		■	
LB1015A	15	2											■	
LB1101A	2	1	■	■			12.6 V	12.8 mA	40.1 mW	■			■	■
LB1102A	3	1	■	■			10.5 V	35 mA	92 mW	■			■	■
LB1103A	1	1	■	■		0 ... 15 kHz	10.5 V	23.3 mA	61.2 mW	■			■	■
LB1103C	1	1	■	■		0 ... 400 Hz	10.5 V	23.3 mA	61.2 mW	■			■	■
LB1108A	8	2	■	■			14.9 V	15.7 mA	58.2 mW	■			■	■
LB1109A	8	1	■	■			10 V	12 mA	30 mW	■			■	■

Digital output signals

Digital output with position feedback



Model Number	Number of input channels	Number of output channels	Occupied slots	Open loop voltage	Internal resistor	Current limit	Voltage	Current	Power	Explosion protection		Installation in Zone 2	Installation in Div. 2
										Ex ic	Ex ia		
LB2016E	2	1	1	23 V	258 Ω	50 mA	24.2 V	108 mA	654 mW	■		■	
LB2017E	2	1	1	16.5 V	131 Ω	50 mA	17.8 V	162 mA	721 mW	■		■	
LB2116E	2	1	1	23 V	258 Ω	50 mA	24.2 V	108 mA	654 mW		■	■	■
LB2117E	2	1	1	16.5 V	131 Ω	50 mA	17.8 V	162 mA	751 mW		■	■	■

Digital output with shutdown input



Model Number	Number of output channels	Occupied slots	Field device			Current limit	Internal resistor	Open loop voltage	Voltage	Current	Power	Explosion			Installation in Zone 2	Installation in Div. 2
			Solenoid Valve	audible alarm	visual alarm							Ex ia	Ex ib	Ex ic		
LB6008A	8	2	■	■	■	8 mA		20 V	28 V	13.5 mA	376 mW			■	■	
LB6016E	2	1	■	■	■	40 mA	258 Ω	23 V	24.2 V	108 mA	654 mW			■	■	
LB6017E	2	1	■	■	■	50 mA	131 Ω	16.5 V	17.8 V	162 mA	721 mW			■	■	
LB6108A	8	2	■	■	■	8 mA		20 V	28 V	13.5 mA	376 mW		■		■	■
LB6108C	8	2	■	■	■	5.2 mA		21.6 V	30 V	13.5 mA	404 mW		■		■	■
LB6116E	2	1	■	■	■	40 mA	258 Ω	23 V	24.2 V	108 mA	654 mW	■			■	■
LB6117E	2	1	■	■	■	50 mA	131 Ω	16.5 V	17.8 V	162 mA	721 mW	■			■	■

Relay output



Model Number	Number of output channels	Occupied slots	Connection	Explosion protection	Installation in Zone 2	Installation in Div. 2
				Ex nA nC		
LB6005A	4	2	Relay output	■	■	■
LB6006A	8	2	Relay output	■	■	■

Analog input signals

Transmitter power supplies



Model Number	Number of input channels	Occupied slots	Connection									Explosion protection			
			2-wire transmitter	3-wire transmitter	4-wire transmitter	HART communication	HART secondary variable	Voltage		Current	Power	Ex ia	Ex ic	Installation in Zone 2	Installation in Div. 2
LB3002A2	1	1	■	■	■	■	■						■	■	
LB3005A2	4	2	■	■	■	■	■						■	■	
LB3006A	4	1	■			■	■						■	■	
LB3103A2	1	1	■	■	■	■	■	24.9 V	77 mA	478 mW	■		■	■	
LB3104A2	4	2	■	■	■			27 V	90 mA	588 mW	■		■	■	
LB3105A2	4	2	■	■	■	■	■	27 V	90 mA	588 mW	■		■	■	
LB3106A	4	1	■			■	■	27 V	87 mA	575 mW	■		■	■	
LB3101A2	1	1	■	■	■			23.8 V	90 mA	533 mW	■		■	■	
LB3102A1	1	1	■			■		27 V	87 mA	575 mW	■		■	■	
LB3102A2	1	1	■	■	■	■		27 V	92 mA	619 mW	■		■	■	

Temperature converters, voltage converters



Model Number	Number of input channels	Occupied slots	Field device						Connection				Current	Power	Explosion protection		Installation in Zone 2	Installation in Div. 2	
			resistance thermometer	Thermocouple	slide-wire sensors	mV source	potentiometer	voltage input	2-wire sensor	3-wire sensor	4-wire sensor	Voltage			Ex ia	Ex ic			
LB5001A	1	1	■		■				■	■	■						■		
LB5002A	1	1		■		■											■	■	
LB5004A	4	2	■		■		■		■	■	■						■	■	
LB5005A	4	2		■		■											■	■	
LB5101A	1	1	■		■				■	■	■	2.7 V	43 mA	93 mW	■			■	■
LB5102A	1	1		■		■						1.8 V	43 mA	67 mW	■			■	■
LB5104A	4	2	■		■		■		■	■	■	7.14 V	70 mA	123 mW	■			■	■
LB5105A	4	2		■		■						1 V	71 mA	62 mW	■			■	■
LB5106A	1	1						■				0.9 V	0.2 mA	0.2 mW	■			■	■

Analog output signals

Analog output



Model Number	Number of output channels	Occupied slots	Field device					Voltage	Current	Power	Explosion protection		Installation in Zone 2	Installation in Div. 2
			Proportional Valve	I/P converters	on-site display	HART secondary variable	HART communication				Ex ia	Ex ic		
LB4002A2	1	1	■	■	■		■					■	■	
LB4005A2	4	2	■	■	■	■	■					■	■	
LB4005C2	4	2	■	■	■	■	■					■	■	
LB4101A2	1	1	■	■	■			27 V	87 mA	575 mW	■		■	■
LB4102A2	1	1	■	■	■		■	27 V	87 mA	575 mW	■		■	■
LB4102C2	1	1	■	■	■		■	27 V	87 mA	575 mW	■		■	■
LB4104A2	4	2	■	■	■	■	■	27 V	87 mA	575 mW	■		■	■
LB4105A2	4	2	■	■	■	■	■	27 V	87 mA	575 mW	■		■	■
LB4105C2	4	2	■	■	■	■	■	27 V	87 mA	575 mW	■		■	■
LB4106A	4	1	■	■	■	■	■	27 V	87 mA	575 mW	■		■	■
LB4106C	4	1	■	■	■	■	■	27 V	87 mA	575 mW	■		■	■

Power Supplies

Power supply units



Model Number	Bus coupler	I/O modules	Input voltage range	Installation in Zone 2	Installation in Div. 2
LB9006C	2	>12	18 ... 32 V DC	■	■

Com units

Gateways



Model Number	Description	Cyclic process data		Number of stations per bus line			Fieldbus			HART communication	Installation in Zone 2	Installation in Div. 2
		240 bytes input	240 bytes output	PROFIBUS	MODBUS	service bus	MODBUS TCP	PROFIBUS DP / DP-V1	MODBUS RTU			
LB8106H0629	EasyCom Com Unit for PROFIBUS DP/DP-V1	■	■	125		119		■		■	■	■
LB8107H0706	Com Unit for MODBUS RTU				245	119			■	■	■	■
LB8109H0907	Unicom Com Unit for PROFIBUS DP/DP-V1	■	■	125		119		■		■	■	■
LB8111A2-0756	Com Unit for MODBUS TCP						■			■	■	■

Enclosures

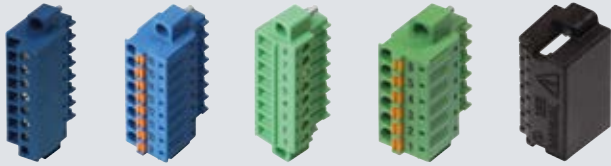
Field units



Model Number	Field Unit	Redundancy Field Unit	I/O modules		Fieldbus				Installation in Zone 2
			(single width) [max.]	(dual width) [max.]	MODBUS TCP	MODBUS RTU	PROFIBUS DP / DP-V1	FOUNDATION Fieldbus H1	
LB9508-PB0-0-0-1-0-0	■		8	4		■	■		■
LB9510-PB0-0-0-1-0-F	■			5				■	■
LB9510-S90-0-0-1-0-F	■			5				■	■
LB9513-PB0-0-0-1-0-0		■	12	6		■	■		■
LB9516-PB0-0-0-1-0-0	■		16	8		■	■		■
LB9532-S60-0-0-1-0-0	■		32	16		■	■		■
LB9547-S70-0-0-1-0-0		■	46	23		■	■		■
LB9547-S70-0-0-1-0-M		■	46	23	■				■

Accessories

Terminal blocks



Model Number	Description	Construction type			Number of pins	Housing		
		screw terminal	spring terminal	front screw terminal		green	blue	black
LB9007A	Terminal Block	■			6	■		
LB9008A	Protective Cover for Terminal Blocks				6	■		
LB9009A	Terminal Block		■		6	■		
LB9010A	Protective Cover for Terminal Blocks				8	■		
LB9011A	Cold Junction Module with Protective Cover				6	■		
LB9013A	Terminal Block	■			8	■		
LB9014A	Terminal Block	■			2 x 8	■		
LB9015A	Terminal Block		■		8	■		
LB9016A	Terminal Block		■		2 x 8	■		
LB9017A	Terminal Block			■	6	■		
LB9018A	Terminal Block			■	8	■		
LB9019A	Terminal Block			■	2 x 8	■		
LB9107.E.6	Protective Cover for Ex e Modules				6			
LB9107.E.8	Protective Cover for Ex e Modules				8			
LB9107A	Terminal Block	■			6		■	
LB9107P	Terminal Block		■		6		■	
LB9108A	Protective Cover for Terminal Blocks				6		■	
LB9111A	Cold Junction Module with Protective Cover				6		■	
LB9112A	Cold Junction Module				6		■	
LB9113A	Terminal Block	■			8		■	
LB9115A	Terminal Block		■		8		■	
LB9116A	Terminal Block		■		2 x 8		■	
LB9117A	Terminal Block			■	6		■	
LB9118A	Terminal Block			■	8		■	
LB9119A	Terminal Block			■	2 x 8		■	
LB9109.E.6.1	Plug for Ex e Modules		■		6			■
LB9109.E.8.1	Plug for Ex e Modules		■		8			■
LB9109.E.8.2	Plug for Ex e Modules		■		8			■
LB9120A	Protective Cover for Terminal Blocks				8		■	
LB9124A	Terminal Block	■			2 x 8		■	
LB9125A	Terminal Block	■			8		■	
LB9126A	Terminal Block		■		8		■	
LB9127A	Terminal Block			■	8		■	
LB9130A	Terminal Block		■		8		■	
LB9131A	Terminal Block		■		8	■		

Backplanes



Model Number	Backplanes		Redundancy		I/O modules		Fieldbus				Installation in Zone 2	Installation in Div. 2
	Base Backplane	Extension Backplane	Fieldbus	Power Supply	(single width) [max.]	(dual width) [max.]	FOUNDATION Fieldbus H1	MODBUS RTU	PROFIBUS DP / DP-V1	MODBUS TCP		
LB9022E	■		■	■	22	11				■	■	■
LB9022S	■		■	■	22	11		■	■		■	■
LB9023A	■				8	4		■	■		■	■
LB9023E	■				8	4				■	■	■
LB9024S		■		■	24	12		■	■	■	■	■
LB9025A		■			8	4		■	■		■	■
LB9026A	■				16	8		■	■		■	■
LB9026E	■				16	8				■	■	■
LB9027A		■			16	8		■	■	■	■	■
LB9029A	■		■	■	12	6		■	■		■	■

Additional accessories



Model Number	Description
LB9099	I/O module placeholder, green screw terminal
LB9199	I/O module placeholder, blue screw terminal
LB9110A	D-Sub plug, 9-pin, bus terminator, switchable
LB9180	Watchdog Plug, 1-channel
LB9182A	Separation wall for mounting on LB backplanes, color: green
LB9001A	D-Sub plug 9-pin, cable feed below 35°
LB9002A	D-Sub plug 9-pin, axial cable feed
LB9003A	D-Sub plug 9-pin, cable feed below 90°

FB System

Digital input signals

Digital input



Model Number	Number of input channels	Occupied slots	Function			Connection			Voltage	Current	Power	Explosion protection		
			Counter	frequency	direction of rotation	NAMUR sensor	volt-free contact	active binary signal 24 V DC				Ex e connection	Ex ia	Installation in Zone 1
FB1201B	2	1				■	■	■	12.6 V	12.8 mA	40.1 mW		■	■
FB1202B	3	1				■	■	■	10.5 V	35 mA	92 mW		■	■
FB1203B	1	1	■	■	■	■	■		10.5 V	23.3 mA	61.2 mW		■	■
FB1203D	1	1	■	■	■	■	■		10.5 V	23.3 mA	61.2 mW		■	■
FB1208B	8	2				■	■		14.9 V	15.7 mA	58.2 mW		■	■
FB1301B2	2	1				■	■	■				■		■
FB1302B2	3	1				■	■	■				■		■
FB1303B2	1	1	■	■	■	■	■	■				■		■
FB1308B2	8	2				■	■	■				■		■

Digital output signals

Digital outputs with position feedback



Model Number	Number of input channels	Number of output channels	Occupied slots	Open loop voltage	Internal resistor	Current limit	Voltage	Current	Power	Ex ia	Explosion protection	Installation in Zone 1
FB2201BR	2	1	1	22 V	315 Ω	53 mA	24.9 V	91 mA	558 mW	■		■
FB2201ER	2	1	1	22 V	315 Ω	53 mA	24.9 V	91 mA	558 mW	■		■
FB2203BR	2	1	1	24 V	360 Ω	50 mA	27.83 V	91.7 mA	636 mW	■		■
FB2203ER	2	1	1	24 V	360 Ω	50 mA	27.83 V	91.7 mA	636 mW	■		■
FB2204B	2	1	1	22 V	220 Ω	52 mA	24.2 V	145 mA	872 mW	■		■
FB2212BR	2	1	1	25.3 V	329 Ω	53 mA	27.8 V	108 mA	751 mW	■		■
FB2212ER	2	1	1	25.3 V	329 Ω	53 mA	27.8 V	108 mA	751 mW	■		■
FB2213BR	2	1	1	26.7 V	509 Ω	40 mA	28.7 V	68 mA	485 mW	■		■
FB2213ER	2	1	1	26.7 V	509 Ω	40 mA	28.7 V	68 mA	485 mW	■		■

Digital output



Model Number	Number of output channels	Occupied slots	Field device			Internal resistor	Current limit	Voltage	Current	Power	Explosion protection		
			Solenoid Valve	audible alarm	visual alarm						Ex e connection	Ex ia	Ex ib
FB6208B	8	2	■	■	■		8 mA						■
FB6208C	8	2	■	■	■		5.2 mA						■
FB6210BR	4	2	■	■	■	max. 370 Ω	37 mA	27.8 V	90.4 mA	629 mW		■	
FB6210ER	4	2	■	■	■	max. 370 Ω	37 mA	27.8 V	90.4 mA	629 mW		■	
FB6211BR	4	2	■	■	■	max. 320 Ω	40 mA	27.8 V	107 mA	744 mW		■	
FB6211ER	4	2	■	■	■	max. 320 Ω	40 mA	27.8 V	107 mA	744 mW		■	
FB6213BR	4	2	■	■	■	max. 290 Ω	42 mA	26 V	110 mA	714 mW		■	
FB6215BR	4	2	■	■	■	max. 90 Ω	70 mA	18.9 V	286 mA	1350 mW		■	
FB6308B2	8	2	■	■	■		8 mA				■		

Relay output



Model Number	Number of output channels	Occupied slots	Connection	Switching voltage	Switching current	Switch power	Explosion protection	
							Ex e connection	Installation in Zone 1
FB6306B2	2	2	Relay output	24 V DC / AC	1 A DC / AC resistive load	30 VA / 30 W	■	■

Analog input signals

Transmitter power supplies



Model Number	Number of input channels	Occupied slots	Connection			HART communication	HART secondary variable	Voltage	Current	Power	Explosion protection	
			2-wire transmitter	3-wire transmitter	4-wire transmitter						Ex e connection	Ex ia Installation in Zone 1
FB3201B2	1	1	■	■	■			23.8 V	90 mA	533 mW		■
FB3202B1	1	1	■			■	■	27 V	87 mA	575 mW		■
FB3203B2	1	1	■	■	■	■		24.9 V	77 mA	478 mW		■
FB3204B2	4	2	■	■	■			27 V	90 mA	588 mW		■
FB3205B2	4	2	■	■	■	■	■	27 V	90 mA	588 mW		■
FB3302B2	1	1	■	■	■	■	■				■	■
FB3305B2	4	2	■	■	■	■	■				■	■

Temperature converters, voltage converters



Model Number	Number of input channels	Occupied slots	Field device						Voltage	Current	Power	Explosion protection	
			resistance thermometer	Thermocouple	slide-wire sensors	mV source	potentiometer	voltage input				Ex ia	Installation in Zone 1
FB5201B	1	1	■		■				2.7 V	43 mA	93 mW	■	■
FB5202B	1	1		■		■			1.8 V	43 mA	67 mW	■	■
FB5204B	4	2	■		■		■		7.14 V	70 mA	123 mW	■	■
FB5205B	4	2		■		■			1 V	71 mA	62 mW	■	■
FB5206B	1	1						■	0.9 V	0.2 mA	0.2 mW	■	■

Analog output signals

Output isolators											
											
Model Number	Number of output channels	Occupied slots	Field device			HART communication	HART secondary variable	Explosion protection		Installation in Zone 1	
			Proportional Valve	I/P converters	on-site display			Ex e connection	Ex ia		
FB4201B2	1	1	■	■	■				■		■
FB4202B2	1	1	■	■	■	■			■		■
FB4205B2	4	2	■	■	■	■	■		■		■
FB4204B2	4	2	■	■	■	■	■		■		■
FB4205C2	4	2	■	■	■	■	■		■		■
FB4302B2	1	1	■	■	■	■		■			■

Power supplies

Power supplies				
				
Model Number	Bus coupler	I/O modules	Input voltage range	Installation in Zone 1
FB9205C			95 ... 230 V AC	■
FB9206D	2	>12	18 ... 32 V DC	■
FB9215B2	2	>12	90 ... 253 V AC	■

Com units

Gateways					
					
Model Number	Description	Number of channels per station		HART communication	Installation in Zone 1
		analog [max.]	binär [max.]		
FB8206H0629	EasyCom Com Unit for PROFIBUS DP/DP-V1	80	184	■	■
FB8207H0706	Com Unit for MODBUS RTU	80	184	■	■
FB8209H0907	Unicom Com Unit for PROFIBUS DP/DP-V1	80	184	■	■
FB8211B2-0756	Com Unit for MODBUS TCP	80	184	■	■

Enclosures

Field units					
					
Model Number	Field Unit	Redundancy Field Unit	I/O modules		Installation in Zone 1
			(single width) [max.]	(dual width) [max.]	
FB9210-PB0-0-0-0-0-0	■		10	5	■
FB9210-PB0-0-0-0-0-F	■		10	5	■
FB9210-S50-0-0-0-0-0	■		10	5	■
FB9211-PB0-0-0-0-0-0		■	10	5	■
FB9224-PG0-0-0-0-0-0	■		24	12	■
FB9224-PH0-0-0-0-0-0	■		24	12	■
FB9224-S60-0-0-0-0-0	■		24	12	■
FB9225-PG0-0-0-0-0-0		■	24	12	■
FB9225-PH0-0-0-0-0-0		■	24	12	■
FB9225-S70-0-0-0-0-0		■	24	12	■
FB9248-PG0-0-0-0-0-0	■		48	24	■
FB9248-PH0-0-0-0-0-0	■		48	24	■
FB9248-S70-0-0-0-0-0	■		48	24	■
FB9249-PG0-0-0-0-0-0		■	48	24	■
FB9249-PH0-0-0-0-0-0		■	48	24	■
FB9249-S80-0-0-0-0-0		■	48	24	■

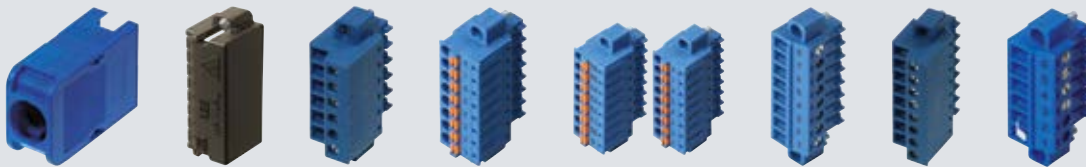
Accessories

Bus termination modules



Model Number	Description
FB9293B	Bus termination module, service bus termination
FB9293F	Bus termination module, fieldbus terminating resistor
FB9294B	Bus termination module, bus termination
FB9295B	Bus termination module, bus and service bus termination

Terminal blocks



Model Number	Description	Construction type			Number of pins	Housing
		spring terminal	screw terminal	front screw terminal		
LB9107A	Terminal Block		■		6	■
LB9107P	Terminal Block	■			6	■
LB9108A	Protective Cover for Terminal Blocks				6	■
LB9111A	Cold Junction Module with Protective Cover				6	■
LB9112A	Cold Junction Module				6	■
LB9113A	Terminal Block		■		8	■
LB9115A	Terminal Block	■			8	■
LB9116A	Terminal Block	■			2 x 8	■
LB9117A	Terminal Block			■	6	■
LB9118A	Terminal Block			■	8	■
LB9119A	Terminal Block			■	2 x 8	■
LB9120A	Protective Cover for Terminal Blocks				8	■
LB9124A	Terminal Block		■		2 x 8	■
LB9125A	Terminal Block		■		8	■
LB9126A	Terminal Block	■			8	■
LB9127A	Terminal Block		■		8	■
LB9107.E.6	Protective Cover for Ex e Modules				6	
LB9107.E.8	Protective Cover for Ex e Modules				8	

Additional accessories

Model Number	Description
FB9272-300	Backplane cordset FB9272, redundancy unit to extension unit (3 m)
FB9299B	Place Holder Module
FOL7250B059	PROFIBUS Fiber Optic Link Coupler and Repeater

Multifunction Terminals

Multifunction terminal with fuse



Model Number	Description
MFT-2F.0500	Multifunction terminal, 4-pin, 2x fuses (0.5 A)
MFT-F.0315	Multifunction terminal, 2-pin, 1x fuse (0.315 A)
MFT-F.1000.L	Multifunction terminal, 4-pin, 1x fuse (1 A) and bridge

Multifunction terminal with diode



Model Number	Description
MFT-2D.0500	Multifunction terminal, 4-pin, 2x diodes (230 V/0.5 A)
MFT-D.1000	Multifunction terminal, 2-pin, 1x diode (230 V/1 A)
MFT-D.1000.L	Multifunction terminal, 4-pin, 1x diode (230 V / 1 A), 1 x bridge

Multifunction terminal with resistor



Model Number	Description
MFT-2R.1004	Multifunction terminal, 4-pin, 2x resistors (1 kOhm)
MFT-R.1003	Multifunction terminal, 2-pin, 1x resistor (100 Ohm)

Multifunction terminal with relay



Model Number	Description
MFT-RNC.0006	Multifunction terminal, 4-pin, 1x relay (NC)
MFT-RNO.0006	Multifunction terminal, 4-pin, 1x relay (NO)

Multifunction terminal with bus terminator

Model Number	Description
MFT-FT.0001	Multifunction terminal, 4-pin, 1x terminator

Module socket

Model Number	Description
MFT-BASE.2P	Multifunction terminal socket, 2-pin
MFT-BASE.4P	Multifunction terminal socket, 4-pin

FieldConnex®: Fieldbus Technology for Maximum Transparency

The FieldConnex® product portfolio from Pepperl+Fuchs enables easy management of FOUNDATION Fieldbus H1 and PROFIBUS PA infrastructure.



Power Supplies

Fieldbus power supplies are typically installed in control buildings and are designed for use in Class I, Div. 2/Zone 2. For FOUNDATION Fieldbus H1, machine-made cordsets are available that provide seamless integration into all standard control systems. For PROFIBUS PA, you have a choice between PROFINET and PROFIBUS DP control protocols.

Power supplies are available with advanced diagnostics. This feature monitors the quality of the installation in real time and indicates deviations before they can have a negative impact on the availability of the automation, ensuring maximum transparency and availability.

Fieldbus Junction Boxes

Segment protectors allow devices to be connected in plants without requirements for explosion protection and make them suitable for Div. 2/Zone 2. Field barriers connect field devices in Div. 1/Zone 0...1. All fieldbus junction boxes offer extensive fault protection at the output, which protects the fieldbus from issues that can occur when working on a field device. They are available with screw or spring terminals.

Enclosure solutions made from aluminum, glass fiber reinforced plastic, or stainless steel offer a host of options for adapting the device to the plant's ambient conditions. This includes the size and material of the cable glands, nameplate, shield connection, lightning protection, and terminator. The fieldbus junction box is mounted and pre-wired at the factory.

Process Interfaces

Process interfaces connect basic signals with control technology. The multi-input/output connects discrete signals such as low-power valves, vibrating forks, pulse generators, or up to twelve NAMUR switches to the control system. The same enclosure solutions are available as for the field junction box.

Commissioning Tools and Accessories

Diagnostic handhelds assist field service technicians and engineers during inspections. An embedded expert system, automated segment checking, and other features reduce the time needed for commissioning and troubleshooting.

Lightning protection with self-diagnostics reports its status automatically. Moisture ingress can be detected in critical applications using leakage sensors.

FieldConnex® components are specially developed for use in extreme conditions and can withstand temperature fluctuations, changes in humidity, and vibration. They also meet all current national and international safety requirements and are marine-certified.

You can find more information on the FieldConnex® product portfolio in the "FieldConnex® Fieldbus Infrastructure" product overview and at www.pepperl-fuchs.com/fieldconnex

Fieldbus Infrastructure

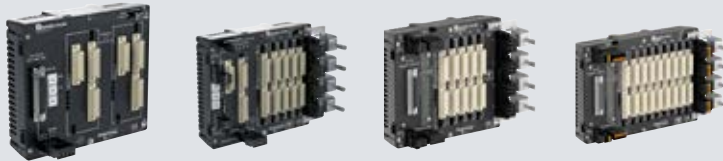
PROFIBUS PA

Fieldbus power supply – power hub modules

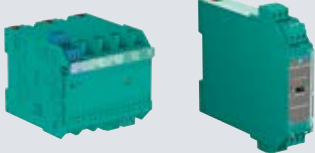


Model Number	Description	Function			Output voltage			Output current
		Gateway	Physical layer diagnostics	Fieldbus power supply	9 ... 32 V	28 ... 29.5 V	21 ... 23 V	
HCD2-FBPS-1.23.500	Fieldbus Power Hub, Compact Power Supply Module			■			■	■
HCD2-FBPS-1.500	Fieldbus Power Hub, Compact Power Supply Module			■	■			■
HD2-GTR-4PA	PROFIBUS Power Hub, Gateway Module	■						
HD2-GTR-4PA.PN	PROFINET Power Hub, Gateway Module	■						
ACC-MB-HDC	Diagnostic Cordset for Motherboards							

Fieldbus power supply – power hub motherboards



Model Number	Description	Number of segments	Connection type	
			pluggable, spring terminal	pluggable, screw terminal
MB-FB-GTR1	Fieldbus Power Hub, Gateway Motherboard	4 redundant		■
MB-FB-GTR1.1	Fieldbus Power Hub, Gateway Motherboard	4 redundant	■	
MBHC-FB-4.GT	Fieldbus Power Hub, Motherboard for Gateway and Power Supply Modules	4 simplex		■
MBHC-FB-4.GT.1	Fieldbus Power Hub, Motherboard for Gateway and Power Supply Modules	4 simplex	■	
MBHC-FB-4.HSC	Compact Fieldbus Power Hub Motherboard with Host System Connectors	4 simplex		■
MBHC-FB-4.HSC.1	Compact Fieldbus Power Hub Motherboard with Host System Connectors	4 simplex	■	
MBHC-FB-4R.HSC	Compact Fieldbus Power Hub Motherboard with Host System Connectors	4 redundant		■
MBHC-FB-4R.HSC.1	Compact Fieldbus Power Hub Motherboard with Host System Connectors	4 redundant	■	

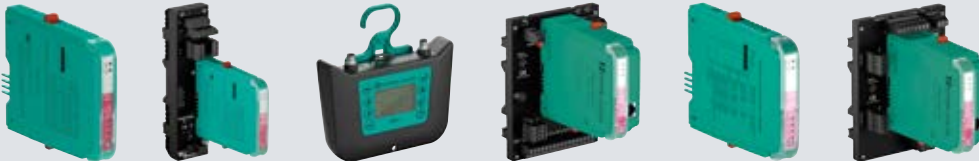
Fieldbus power supply – basic power supplies						
						
Model Number	Description	Function	Output voltage		Rated current	
		PROFIBUS gateway	12.6 ... 13.4 V	24 ... 26 V	max. 100 mA	max. 400 mA
KFD2-BR-1.PA.1500	Basic Segment Coupler	■		■		■
KFD2-BR-EX1.3PA.93	Segment Coupler 1	■	■		■	

Device couplers



Model Number	Description	Number of outputs	Connection type		
			pluggable, spring terminal	pluggable, screw terminal	screw fixing
R2-SP-IC10	Segment Protector for Cabinet Installation	10		■	
R2-SP-IC10.1	Segment Protector for Cabinet Installation	10	■		
R2-SP-IC12	Segment Protector for Cabinet Installation	12		■	
R2-SP-IC12.1	Segment Protector for Cabinet Installation	12	■		
R2-SP-IC4	Segment Protector for Cabinet Installation	4		■	
R2-SP-IC4.1	Segment Protector for Cabinet Installation	4	■		
R2-SP-IC6	Segment Protector for Cabinet Installation	6		■	
R2-SP-IC6.1	Segment Protector for Cabinet Installation	6	■		
R2-SP-IC8	Segment Protector for Cabinet Installation	8		■	
R2-SP-IC8.1	Segment Protector for Cabinet Installation	8	■		
R-SP-E12	Segment Protector for Cabinet Installation	12			■
R4D0-FB-IA10.0	FieldBarrier® for Cabinet Installation	10		■	
R4D0-FB-IA10.1	FieldBarrier® for Cabinet Installation	10	■		
R4D0-FB-IA12.0	FieldBarrier® for Cabinet Installation	12		■	
R4D0-FB-IA12.1	FieldBarrier® for Cabinet Installation	12	■		
R4D0-FB-IA8.0	FieldBarrier® for Cabinet Installation	8		■	
R4D0-FB-IA8.1	FieldBarrier® for Cabinet Installation	8	■		
RD0-FB-Ex4	FieldBarrier® for Cabinet Installation	4			■
RD0-FB-Ex4.COM	FieldBarrier® for Cabinet Installation	4		■	

Physical layer diagnostics



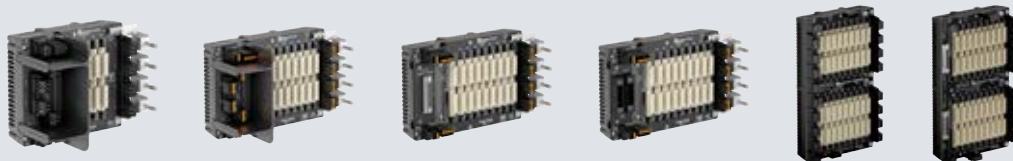
Model Number	Description
DTM-FC.AD	Diagnostic Manager Software Standard License (up to 100 Segments)
DTM-FC.AD.1	Diagnostic Manager Software Bulk License (from 100 Segments)
DTM-FC.AD.UPG	Diagnostic Manager Upgrade License (up to 100 Segments)
DTM-FC.AD.1.UPG	Diagnostic Manager Upgrade Bulk License (from 100 Segments)
KT-MB-DMA	Advanced Diagnostic Module, Kit for stand-alone Operation
KT-MB-GT2AD.FF	Advanced Diagnostic Gateway with Ethernet and FF-H1 Interface
KT-MB-GT2AD.FF.1	Advanced Diagnostic Gateway with Ethernet and FF-H1 Interface
KT-MB-GT2AD.FF.IO	Advanced Diagnostic Gateway with Ethernet and FF-H1 Interface and I/O
HD2-DM-A	Fieldbus Power Hub, Advanced Diagnostic Module
HD2-DM-A.RO	Fieldbus Power Hub, Advanced Diagnostic Module with Relay Output
HD2-DM-B	Fieldbus Power Hub, Basic Diagnostic Module
FDH-1	Fieldbus Diagnostic Handheld
FDH-SW-P	FDH-1 Manager Software, Premium License
ACC-FDH-CTRG	FDH-1 Accessory Cable

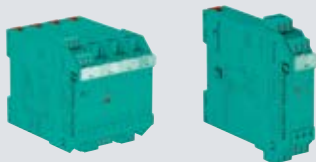
Interface for discrete I/O



Model Number	Description	Design / Mounting		Connection type	
		Outside installation	Cabinet installation	plug-in terminals, screw terminal	plug-in terminals, spring terminal
R8D0-MIO-EX12.PA.1	Multi-Input/Output Device for Cabinet Installation		■	■	
R8D0-MIO-EX12.PA.2	Multi-Input/Output Device for Cabinet Installation		■		■
F2D0-MIO-EX12.PA.1.02	Multi-Input/Output Device with Aluminum Housing	■		■	
F2D0-MIO-EX12.PA.1.05	Multi-Input/Output Device with Aluminum Housing	■		■	

FOUNDATION Fieldbus H1

Fieldbus power supply – power hub motherboards										
										
Model Number	Description	Number of segments	System Interface						Connection type	
			All systems	Yokogawa	Honeywell	Invensys	ABB	Emerson	pluggable, spring terminal	pluggable, screw terminal
MBHC-FB-4	Compact Fieldbus Power Hub Motherboard with Common Interface	4 simplex	■					■	■	
MBHC-FB-4.1	Compact Fieldbus Power Hub Motherboard with Common Interface	4 simplex	■					■	■	■
MBHC-FB-4.HSC	Compact Fieldbus Power Hub Motherboard with Host System Connectors	4 simplex			■	■				■
MBHC-FB-4.HSC.1	Compact Fieldbus Power Hub Motherboard with Host System Connectors	4 simplex			■	■				■
MBHC-FB-4.YO	Compact Fieldbus Power Hub Motherboard for Yokogawa ALF111	4 simplex		■						■
MBHC-FB-4.YO.1	Compact Fieldbus Power Hub Motherboard for Yokogawa ALF111	4 simplex		■						■
MBHC-FB-4R	Compact Fieldbus Power Hub Motherboard with Common Interface	4 redundant	■					■	■	
MBHC-FB-4R.1	Compact Fieldbus Power Hub Motherboard with Common Interface	4 redundant	■					■	■	■
MBHC-FB-4R.HSC	Compact Fieldbus Power Hub Motherboard with Host System Connectors	4 redundant			■	■				■
MBHC-FB-4R.HSC.1	Compact Fieldbus Power Hub Motherboard with Host System Connectors	4 redundant			■	■				■
MBHC-FB-4R.YO	Compact Fieldbus Power Hub Motherboard for Yokogawa ALF111	4 redundant		■						■
MBHC-FB-4R.YO.1	Compact Fieldbus Power Hub Motherboard for Yokogawa ALF111	4 redundant		■						■
MBHC-FB-8R	Compact Fieldbus Power Hub Motherboard with Common Interface	8 redundant	■					■	■	
MBHC-FB-8R.1	Compact Fieldbus Power Hub Motherboard with Common Interface	8 redundant	■					■	■	■
MBHC-FB-8R.HSC	Compact Fieldbus Power Hub Motherboard with Host System Connectors	8 redundant			■	■				■
MBHC-FB-8R.HSC.1	Compact Fieldbus Power Hub Motherboard with Host System Connectors	8 redundant			■	■				■
MBHC-FB-8R.HSC.R	Compact Fieldbus Power Hub Motherboard with Host System Connectors	8 redundant			■	■				■
MBHC-FB-8R.HSC.R.1	Compact Fieldbus Power Hub Motherboard with Host System Connectors	8 redundant			■	■				■
MBHC-FB-8R.RH	Compact Fieldbus Power Hub Motherboard with Redundant Host Terminals	8 redundant	■					■		■
MBHC-FB-8R.RH.R	Compact Fieldbus Power Hub Motherboard with Redundant Host Terminals	8 redundant	■					■		■
MBHC-FB-8R.YO	Compact Fieldbus Power Hub Motherboard for Yokogawa ALF111	8 redundant		■						■
MBHC-FB-8R.YO.1	Compact Fieldbus Power Hub Motherboard for Yokogawa ALF111	8 redundant		■						■

Fieldbus power supply – basic power supplies						
						
Model Number	Description	Function	Output voltage		Output current	
			Fieldbus power supply	25 ... 27 V	12 ... 13 V	360 mA
KLD2-FBPS-1.12.220	Fieldbus Power Supply	■			■	■
KLD2-FBPS-1.25.360	Fieldbus Power Supply	■	■			■
KLD2-PR-1.IEC	Fieldbus Power Repeater	■				

Commissioning tools	
	
Model Number	Description
FDH-1	Fieldbus Diagnostic Handheld
FDH-SW-P	FDH-1 Manager Software, Premium License
ACC-FDH-CTRG	FDH-1 Accessory, Trigger Output Cable
KT-SRT-FF	Starter Kit for FOUNDATION Fieldbus H1 Infrastructure
USB-FBPS-1.11.45.NI	USB Fieldbus Power Supply
BP-FBPS-1.30.1	Portable Fieldbus Battery

Accessories

Enclosure leakage sensors



Model Number	Description
ELS-1	Housing leakage sensor, for operation with FOUNDATION Fieldbus and PROFIBUS PA

Surge protection



Model Number	Description	Diagnostics function	Design / Mounting	
			Cabinet installation	Outside installation
TCP-LBF-IA1.36.IE.0	Surge Protector for Plugging onto the Trunk, Ex ia		■	
TCP-LBF-IA1.36.IE.1	Surge Protector for Plugging onto the Trunk, Ex ia with Integrated Diagnostics	■	■	
SCP-LBF-IA1.36.IE.0	Surge Protector, Pluggable onto the device coupler for the Spur, Ex ia		■	
SCP-LBF-IA1.36.IE.1	Surge Protector, Pluggable onto the device coupler for the Spur, Ex ia with Integrated Diagnostics	■	■	
TPH-LBF-IA1.36.DE.0	Surge Protector, Pluggable onto the Power Hub for the Trunk, Ex ia		■	
TPH-LBF-IA1.36.DE.1	Surge Protector, Pluggable onto the Power Hub for the Trunk, Ex ia with Integrated Diagnostics	■	■	
ACC-LBF-EB.8	8x Grounding Rail for Surge Protection, TPH-LBF* and MBHC-FB*			
DB-LBF-I1	Fieldbus Surge Protector for Cabinet Installation, Ex ia		■	
DB-LBF-I1.I	Fieldbus Surge Protector for Cabinet Installation, Ex ia		■	
DP-LBF-I1.36.DE	Fieldbus Surge Protector for Cabinet Installation, Ex ia, for double-sided grounding		■	
DP-LBF-I1.36.IE	Fieldbus Surge Protector for Cabinet Installation, Ex ia, for Single-Point Grounding, Indirect Shield Grounding for Entity, FISCO, DART		■	
FN-LBF-D1.32	Surge Protector for Field Mounting, Ex d, 1/2" NPT Thread			■
FN-LBF-I1.32	Surge Protector for Field Mounting, Ex ia, 1/2" NPT Thread			■
FS-LBF-D1.32	Surge Protector for Field Mounting, Ex d, ISO 20 mm Thread			■
FS-LBF-I1.32	Surge Protector for Field Mounting, Ex ia, ISO 20 mm Thread			■

Terminator



Model Number	Description	Design / Mounting
		Outside installation
FN-FT-EX1	Fieldbus terminating resistor, field mounted, Ex ia, thread: 1/2 NPT	■
FP-FT-EX1	Fieldbus Terminator, Field Mounting, Ex ia, PG 13.5 thread	■
FS-FT-EX1	Fieldbus Terminator, Field Mounting, Ex ia, ISO 20 mm thread	■
M-FT	Fieldbus terminator	

Additional accessories



Model Number	Description
ACC-LBF-EB.6	6x Grounding Rail for Surge Protection, SCP-LBF*, R2-SP*, and R4D0-FB*
ACC-LBF-EB.8	8x Grounding Rail for Surge Protection, TPH-LBF* and MBHC-FB*
ACC-LBF-SW.3	Separation Wall for Installation on the Surge Protector TCP-LBF*, 3 pcs., Ex ic Applications
ACC-MB-CC	Cover for Power Supply Connector of Motherboards with Screw Terminals, Ex ic applications
ACC-MB-CC.1	Cover for Power Supply Connector of Motherboards with Spring Terminals, Ex ic applications
ACC-MB-HSK	Grounding Rail including 4 Cable Clamps
ACC-MB-SW	Separation Wall for MBHC, Ex ic Applications
ACC-R2-SW.3	Separation Wall for Ex ic Applications
MFT-2L.1600	Multifunction terminal, 4-pin, 2 x bridges
MFT-BASE.4P	Multifunction terminal socket, 4-pin
TP-CON.3	Fieldbus Plug Sockets with Test Points, 4 pcs.
T-CON.3	T-Connector as Accessory, 3 pcs.

Enclosure Solutions for Segment Protectors and Field Barriers

Cable glands for enclosures F.SP* and F.FB*

Cable gland versions

Type	Cable gland					Stopping plug		
	GP2	GB2	GS2	GN2	GA2	H02	H03	H04
Mechanical specifications								
Protection degree	IP66	IP66	IP66	IP66	IP66	IP66	IP66	IP66
Material	polyamide	nickel-plated brass	stainless steel	nickel plated brass	stainless steel	polyamide	nickel-plated brass	stainless steel
Thread	M20	M20	M20	M20	M20	M20	M20	M20
Inner sheath (mm)	–	–	–	7 ... 12	7 ... 12	–	–	–
Outer sheath (mm)	5.5 ... 13	3 ... 12	3 ... 12	10 ... 16	10 ... 16	–	–	–
Cable								
Suitable for armored cable	no	no	no	yes	yes	–	–	–
Data for application in conjunction with hazardous areas								
Type of protection	Ex e	Ex de	Ex de	Ex de	Ex de	Ex e	Ex de	Ex de

Enclosure Solutions for Segment Protectors

Type Code/Order Designation

Type of housing										
F2	Field housing, aluminum, IP66									
Function										
SP	Segment Protector									
Type of protection										
IC	Ex ic, non-incendive field wiring rated spur outputs									
Number of outputs										
04	4 spurs									
06	6 spurs									
08	8 spurs									
10	10 spurs									
Terminal options										
0	Screw terminal, non-pluggable									
1	Screw terminal, pluggable									
2	Spring terminal									
Trunk entry options ³										
00	M20 stopping plug, plastic									
02	M20 cable gland, plastic									
03	M20 cable gland, nickel plated brass									
04	M20 cable gland, stainless steel									
05	M20 cable gland, nickel plated brass for armored cable									
06	M20 cable gland, stainless steel for armored cable									
09	M12 plug connection, nickel plated brass FOUNDATION Fieldbus ²									
10	M12 plug connection, nickel plated brass PROFIBUS PA ²									
11	M12 plug connection, stainless steel FOUNDATION Fieldbus ¹									
12	M12 plug connection, stainless steel PROFIBUS PA ¹									
Spur cable entry options ³										
00	M20 stopping plug, plastic									
02	M20 cable gland, plastic									
03	M20 cable gland, nickel plated brass									
04	M20 cable gland, stainless steel									
05	M20 cable gland, nickel plated brass for armored cable									
06	M20 cable gland, stainless steel for armored cable									
09	M12 plug connection, nickel plated brass FOUNDATION Fieldbus									
10	M12 plug connection, nickel plated brass PROFIBUS PA									
11	M12 plug connection, stainless steel FOUNDATION Fieldbus									
12	M12 plug connection, stainless steel PROFIBUS PA									
Accessory options										
0	No tag plate									
1	Tag plate stainless steel incl. printing									
2	Tag plate stainless steel excl. printing									
0	No trunk surge protector									
1	Trunk surge protector									
F2	-	SP	-	IC		.		.		.
A	-	B	-	C	D	.	E	.	F	.
							</			

Note:

¹ If no surge protector is selected, one trunk entry is closed with a stainless steel stopping plug.

² If no surge protector is selected, one trunk entry is closed with a plastic stopping plug.

³ Only options with cable glands are permitted for dust hazardous areas.

Type Code/Model Number

Electronic type

F.SP5 Enclosure solution for R2-SP-IC**

Enclosure material

P Glass-fiber reinforced polyester, IP66

Number of installed devices

12.B04 1 x R2-SP-IC4

12.B06 1 x R2-SP-IC6

12.B08 1 x R2-SP-IC8

12.B10 1 x R2-SP-IC10

12.B12 1 x R2-SP-IC12

20.B16 2 x R2-SP-IC8

20.B20 2 x R2-SP-IC10

20.B24 2 x R2-SP-IC12

Fieldbus type

1 Suitable for FOUNDATION Fieldbus H1 and PROFIBUS PA

Terminals

0 Screw terminals

3 Spring terminals

Trunk entries

Spur entries

H02 H02 Stopping plug M20, polyamide, Ex e, IP66

H03 H03 Stopping plug M20, nickel plated brass, Ex e, IP66

H04 H04 Stopping plug M20, stainless steel, Ex e, IP66

GP2 GP2 Cable gland M20, polyamide, Ex de, IP66

GB2 GB2 Cable gland M20, nickel plated brass, Ex de, IP66

GS2 GS2 Cable gland M20, stainless steel, Ex e, IP66

GN2 GN2 Cable gland M20, nickel plated brass, Ex de, IP66, for armoured cables

GA2 GA2 Cable gland M20, stainless steel, Ex de, IP66, for armoured cables

Tag plate

D Stainless steel, 95 x 20 mm

C Plastic, 95 x 20 mm

0 No tag plate

Grounding bar

2 Grounding bar, isolated

1 Grounding bar, connected to PA

0 No grounding bar

Surge protection

D Surge protection trunk with diagnostics (TCP-LBF-IA1.36.IE.1) and spurs with diagnostics (SCP-LBF-IA1.36.IE.1)

C Surge protection trunk (TCP-LBF-IA1.36.IE.0) and spurs with diagnostics (SCP-LBF-IA1.36.IE.1)

B Surge protection trunk with diagnostics (TCP-LBF-IA1.36.IE.1) and spurs (SCP-LBF-IA1.36.IE.0)

9 Surge protection trunk (TCP-LBF-IA1.36.IE.0) and spurs (SCP-LBF-IA1.36.IE.0)

7 Surge protection spurs with diagnostics (SCP-LBF-IA1.36.IE.1)

6 Surge protection trunk with diagnostics (TCP-LBF-IA1.36.IE.1)

5 Surge protection spurs (SCP-LBF-IA1.36.IE.0)

4 Surge protection trunk (TCP-LBF-IA1.36.IE.0)

0 No surge protection

Additional accessories

5 Enclosure leakage sensor (ELS-1) + document pocket (A4)

D Document pocket (A4)

L Enclosure leakage sensor (ELS-1)

0 No accessory

F.SP5 . P . 1

Predefined characters indicate pre-set attributes.

Type Code/Model Number

Electronic type

F.SP5

Enclosure solution for R2-SP-IC**

Enclosure material

S

Stainless steel, 1.4404 (AISI 316L), IP66

Number of installed devices

13.B04 1 x R2-SP-IC4

13.B06 1 x R2-SP-IC6

13.B08 1 x R2-SP-IC8

13.B10 1 x R2-SP-IC10

13.B12 1 x R2-SP-IC12

20.B16 2 x R2-SP-IC8

20.B20 2 x R2-SP-IC10

20.B24 2 x R2-SP-IC12

Fieldbus type

1

Suitable for FOUNDATION Fieldbus H1 and PROFIBUS PA

Terminals

0

Screw terminals

3

Spring terminals

Trunk entries

Spur entries

H02

H02

Stopping plug M20, polyamide, Ex e, IP66

H03

H03

Stopping plug M20, nickel plated brass, Ex e, IP66

H04

H04

Stopping plug M20, stainless steel, Ex e, IP66

GP2

GP2

Cable gland M20, polyamide, Ex de, IP66

GB2

GB2

Cable gland M20, nickel plated brass, Ex de, IP66

GS2

GS2

Cable gland M20, stainless steel, Ex e, IP66

GN2

GN2

Cable gland M20, nickel plated brass, Ex de, IP66, for armoured cables

GA2

GA2

Cable gland M20, stainless steel, Ex de, IP66, for armoured cables

Tag plate

D

Stainless steel, 95 x 20 mm

C

Plastic, 95 x 20 mm

0

No tag plate

Grounding bar

2

Grounding bar, isolated

1

Grounding bar, connected to PA

0

No grounding bar

Surge protection

D

Surge protection trunk with diagnostics (TCP-LBF-IA1.36.IE.1) and spurs with diagnostics (SCP-LBF-IA1.36.IE.1)

C

Surge protection trunk (TCP-LBF-IA1.36.IE.0) and spurs with diagnostics (SCP-LBF-IA1.36.IE.1)

B

Surge protection trunk with diagnostics (TCP-LBF-IA1.36.IE.1) and spurs (SCP-LBF-IA1.36.IE.0)

9

Surge protection trunk (TCP-LBF-IA1.36.IE.0) and spurs (SCP-LBF-IA1.36.IE.0)

7

Surge protection spurs with diagnostics (SCP-LBF-IA1.36.IE.1)

6

Surge protection trunk with diagnostics (TCP-LBF-IA1.36.IE.1)

5

Surge protection spurs (SCP-LBF-IA1.36.IE.0)

4

Surge protection trunk (TCP-LBF-IA1.36.IE.0)

0

No surge protection

Additional accessories

5

Enclosure leakage sensor (ELS-1) + document pocket (A4)

D

Document pocket (A4)

L

Enclosure leakage sensor (ELS-1)

0

No accessory

F.SP5 . S . 1

Predefined characters indicate pre-set attributes.

Type code/model number

Electronic type

F.SPE	Enclosure solution for R-SP-E12																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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P	Glass-fiber reinforced polyester, IP66																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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GB2	GB2	Cable gland M20, nickel plated brass, Ex e, IP66																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
GS2	GS2	Cable gland, M20, stainless steel, Ex e, IP66																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
GN2	GN2	Cable gland M20, nickel plated brass, Ex de, IP66, for armoured cable																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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A	Tag plate, traffolyte, 120 x 30 mm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
B	Tag plate, stainless steel, 120 x 30 mm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
0	No tag plate																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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1	Grounding bar 10 x 3 mm, equipped with grounding terminals																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
0	No grounding bar installed																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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3	Surge protection for Trunk FS-LBF-D1.32 installed ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
0	No surge protection																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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1	Fieldbus terminator FS-FT-Ex1.D.IEC installed ¹																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
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¹ In conjunction with version 12.A12 surge protection and external terminator are available on request.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
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Type code/model number

Electronic type

F.SPE Enclosure solution for R-SP-E12

Enclosure material

S Stainless steel 316, electropolished, IP66

Number of installed devices

12.A12 1 x R-SP-E12 ¹

20.A24 2 x R-SP-E12

Fieldbus type

1 Suitable for FOUNDATION Fieldbus H1 and PROFIBUS PA

Spur terminals

0 Spurs directly wired to R-SP-E12

Trunk entries

Spur entries

GP2	GP2	Cable gland M20, polyamide, Ex e, IP66
GB2	GB2	Cable gland M20, nickel plated brass, Ex e, IP66
GS2	GS2	Cable gland, M20, stainless steel, Ex e, IP66
GN2	GN2	Cable gland M20, nickel plated brass, Ex de, IP66, for armoured cable
GA2	GA2	Cable gland M20, stainless steel, Ex de, IP66, for armoured cable
H02	H02	Stopping plug M20, polyamide, Ex e, IP66
H03	H03	Stopping plug M20, nickel plated brass, Ex de, IP66
H04	H04	Stopping plug M20, stainless steel, Ex de, IP66

Tag plate

A	Tag plate, traffolyte, 120 x 30 mm
B	Tag plate, stainless steel, 120 x 30 mm
0	No tag plate

Grounding bar

1	Grounding bar 10 x 3 mm, equipped with grounding terminals
0	No grounding bar installed

Surge protection Trunk

3	Surge protection for Trunk FS-LBF-D1.32 installed ¹
0	No surge protection

External terminator

1	Fieldbus terminator FS-FT-Ex1.D.IEC installed	1
0	No terminator installed	

¹ In conjunction with version 12.A12 surge protection and external terminator are available on request.

Predefined characters indicate pre-set attributes.

F.SPE	.	S		.	1	.	0	.		.		.									
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Enclosure Solutions for Segment Protectors, with North American certification only

Type code/model number

Electronic type

SPJB

Enclosure solution for R2-SP-IC**

Number of spurs

44 spurs

66 spurs

88 spurs

1010 spurs

1212 spurs

Enclosure material

ALAluminum, anodized, IP67

Connection type

NFNo fitting

CGPCable gland M16, polyamide

CGBCable gland M16, nickel-plated brass

CGSCable gland M16, stainless steel

7/8SPlug connection M16, stainless steel, 7/8" thread

M12SPlug connection M16, stainless steel, M12 thread

1/2CBConduit connection M16, nickel-plated brass, 1/2" NPT conduit adapter

SPJB

-

-

AL

-

Predefined characters indicate pre-set attributes.

Type code/model number

Electronic type

SPJB

Enclosure solution for R2-SP-IC**

Number of spurs

44 spurs

66 spurs

88 spurs

1010 spurs

1212 spurs

Enclosure material

FBGlass-fiber reinforced polyester, NEMA 4X, NEMA 6P, NEMA 12

Window

-No window

WWith window

Connection type

NFNo fitting

CGPCable gland M16, polyamide

CGBCable gland M16, nickel-plated brass

CGSCable gland M16, stainless steel

7/8SPlug connection M16, stainless steel, 7/8" thread

M12SPlug connection M16, stainless steel, M12 thread

1/2CBConduit connection M16, nickel-plated brass, 1/2" NPT conduit adapter

SPJB

-

-

FB

-

Predefined characters indicate pre-set attributes.

84

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Type code/model number

Electronic type

SPJB Enclosure solution for R2-SP-IC**

Number of spurs

4	4 spurs
6	6 spurs
8	8 spurs
10	10 spurs
12	12 spurs

Enclosure material

PC Polycarbonate, painted, IP67, NEMA 4, NEMA 4x, NEMA 6, NEMA 12, NEMA 13

Window

W With window

Connection type

NF	No fitting
CGP	Cable gland M16, polyamide
CGB	Cable gland M16, nickel-plated brass
CGS	Cable gland M16, stainless steel
7/8S	Plug connection M16, stainless steel, 7/8" thread
M12S	Plug connection M16, stainless steel, M12 thread
1/2CB	Conduit connection M16, nickel-plated brass, 1/2" NPT conduit adapter

SPJB	-		-	PC	W	-	
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Predefined characters indicate pre-set attributes.

Type code/model number

Electronic type

SPJB Enclosure solution for R2-SP-IC**

Number of spurs

4	4 spurs
6	6 spurs
8	8 spurs
10	10 spurs
12	12 spurs

Enclosure material

SS Stainless steel, brushed, IP66, NEMA 4, NEMA 4X, NEMA 12

Window

- No window
W With window

Connection type

NF	No fitting
CGP	Cable gland M16, polyamide
CGB	Cable gland M16, nickel-plated brass
CGS	Cable gland M16, stainless steel
7/8S	Plug connection M16, stainless steel, 7/8" thread
M12S	Plug connection M16, stainless steel, M12 thread
1/2CB	Conduit connection M16, nickel-plated brass, 1/2" NPT conduit adapter

SPJB	-		-	SS		-	
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Predefined characters indicate pre-set attributes.

Type code/model number

Electronic type

SPJB

Enclosure solution for R2-SP-IC**

Number of spurs

44 spurs

66 spurs

88 spurs

1010 spurs

1212 spurs

Enclosure material

CSCarbon steel, painted, IP66 , NEMA 4, NEMA 4X, NEMA 12

Window

-No window

WWith window

Connection type

NFNo fitting

CGPCable gland M16, polyamide

CGBCable gland M16, nickel-plated brass

CGSCable gland M16, stainless steel

7/8SPlug connection M16, stainless steel, 7/8" thread

M12SPlug connection M16, stainless steel, M12 thread

1/2CBConduit connection M16, nickel-plated brass, 1/2" NPT conduit adapter

SPJB	-		-	CS		-	
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Predefined characters indicate pre-set attributes.

Enclosure Solutions for Field Barriers

Type code/model number

Type of housing

F2D0Field housing, aluminum, IP67

Type of device

FBFieldBarrier, 4 outputs Ex ia, trunk Ex e

Type of protection

Exintrinsically safe outputs Ex ia

Number of outputs

4

Fieldbus type (omit if cable glands are used)

FFField housing with plug connection for FOUNDATION Fieldbus

PAField housing with plug connection for PROFIBUS PA

Connection of trunk (omit if identical with the type code in G)

CGCable gland, plastic, M20

CGBCable gland, nickel plated brass, M20

CGSCable gland, stainless steel, M20

CGABCable gland for armored cables, nickel plated brass, M20

Connection of output cable

COMVariant without field housing, plug-in terminals

CGCable gland, plastic, M16

CGBCable gland, nickel plated brass, M16

CGSCable gland, stainless steel, M16

CGABCable gland for armored cables, nickel plated brass, M20

CG2Cable gland, plastic, M20

CGS2Cable gland, stainless steel, M20

7/8SPlug connection, stainless steel, 7/8"

M12BPlug connection, nickel plated brass, M12 x 1

M12SPlug connection, stainless steel, M12 x 1

F2D0	-	FB	-	Ex	4	.		.		.	
A		B		C	D		E		F		G

Example:

F2D0-FB-EX4.PA.CG.M12B: FieldBarrier with aluminum housing, connection of trunk, cable gland plastic M20, 4 intrinsically safe outputs, plug connection nickel plated brass M12, pinout for PROFIBUS PA.

F.FB0 Enclosure solution for RD0-FB-Ex4.COM

Enclosure material

Number of installed devices

30.A12 3 x RD0-FB-Ex4.COM

1 Suitable for FOUNDATION Fieldbus H1 and PROFIBUS PA

0 Spurs directly wired to RD0-FB-Ex4.COM

Spur entries

H04	H04	Stopping plug M20, stainless steel, Ex de, IP66
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0 No tag plate

0 No grounding bar installed

0 No surge protection

0 No terminator installed

Predefined characters indicate pre-set attributes.

Type code/model number

Electronic type

F.FB0 Enclosure solution for RD0-FB-Ex4.COM

Enclosure material

S Stainless steel 316, electropolished, IP66

Number of installed devices

11.A04 1 x RD0-FB-Ex4.COM ¹

20.A08 2 x RD0-FB-Ex4.COM

30.A12 3 x RD0-FB-Ex4.COM

Fieldbus type

1 Suitable for FOUNDATION Fieldbus H1 and PROFIBUS PA

Spur terminals

0 Spurs directly wired to RD0-FB-Ex4.COM

Trunk entries

Spur entries

GP2	GP2	Cable gland M20, polyamide, Ex e, IP66
GB2	GB2	Cable gland M20, nickel plated brass, Ex e, IP66
GS2	GS2	Cable gland, M20, stainless steel, Ex e, IP66
GN2	GN2	Cable gland M20, nickel plated brass, Ex de, IP66, for armoured cable
GA2	GA2	Cable gland M20, stainless steel, Ex de, IP66, for armoured cable
H02	H02	Stopping plug M20, polyamide, Ex e, IP66
H03	H03	Stopping plug M20, nickel plated brass, Ex de, IP66
H04	H04	Stopping plug M20, stainless steel, Ex de, IP66

Tag plate

A	Tag plate, traffolyte, 120 x 30 mm
B	Tag plate, stainless steel, 120 x 30 mm
0	No tag plate

Grounding bar

1	Grounding bar 10 x 3 mm, equipped with grounding terminals
0	No grounding bar installed

Surge protection Trunk

3	Surge protection for Trunk FS-LBF-D1.32 installed ¹
0	No surge protection

External terminator

T	Fieldbus terminator FS-FT-Ex1.D.IEC installed ¹
0	No terminator installed

¹ In conjunction with version 11.A04 surge protection and external terminator are available on request.

F.FB0	.	S		.	1	.	0	.		.		.					
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Predefined characters indicate pre-set attributes.

Type code/model number

Electronic type

F.FB1 Enclosure solution for R4D0-FB-IAxx.x

Enclosure material

S Stainless steel 316 electropolished, IP66**P** Glass-fiber reinforced polyester, IP66

Installed device with number of outputs

14.A08 1 x R4D0-FB-IA08.x**14.A10** 1 x R4D0-FB-IA10.x**14.A12** 1 x R4D0-FB-IA12.x

Fieldbus type

1 Suitable for FOUNDATION Fieldbus H1 and PROFIBUS PA

Terminals + trunk options

0 Screw terminals (R4D0-FB-IAxx.0)**3** Spring terminals (R4D0-FB-IAxx.1)**6** Screw terminals + multi function terminal (MFT) for trunk disconnection**8** Screw terminals + multi function terminal (MFT) for trunk disconnection + spare terminals**A** Spring terminals + multi function terminal (MFT) for trunk disconnection**C** Spring terminals + multi function terminal (MFT) for trunk disconnection + spare terminals

Trunk entries

Spur entries

GP2 **GP2** Cable gland M20, polyamide**GB2** **GB2** Cable gland M20, nickel plated brass**GS2** **GS2** Cable gland M20, stainless steel**GN2** **GN2** Cable gland M20, nickel plated brass for armored cable**GA2** **GA2** Cable gland M20, stainless steel for armored cable**H02** **H02** Stopping plug M20, polyamide**H03** **H03** Stopping plug M20, nickel plated brass**H04** **H04** Stopping plug M20, stainless steel

Tag plate

A Tag plate, traffolyte**B** Tag plate, stainless steel**0** No tag plate

Grounding bar

0 No grounding bar installed

Surge protection

0 No surge protection**3** Surge protection on the trunk**5** Surge protection on spurs**7** Surge protection on spurs with diagnosis**8** Surge protection on the trunk and spurs**A** Surge protection for trunk and spurs with diagnosis

Additional accessories

0 No additional accessories**L** Enclosure Leakage Sensor**D** Document pocket (A4)**5** Enclosure Leakage Sensor + document pocket (A4)

F.FB1	.		.	1	.	.	.	.	.	0		
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Predefined characters indicate preset attributes.

Enclosure Solutions for Process Interfaces

Cable glands

Cable gland versions								
Type	Cable gland					Stopping plug		
	GP2	GB2	GS2	GN2	GA2	H02	H03	H04
Mechanical specifications								
Protection degree	IP66	IP66	IP66	IP66	IP66	IP66	IP66	IP66
Material	polyamide	nickel-plated brass	stainless steel	nickel plated brass	stainless steel	polyamide	nickel-plated brass	stainless steel
Thread	M20	M20	M20	M20	M20	M20	M20	M20
Inner sheath (mm)	–	–	–	7 ... 12	7 ... 12	–	–	–
Outer sheath (mm)	5.5 ... 13	3 ... 12	3 ... 12	10 ... 16	10 ... 16	–	–	–
Cable								
Suitable for armored cable	no	no	no	yes	yes	–	–	–
Data for application in conjunction with hazardous areas								
Type of protection	Ex e	Ex de	Ex de	Ex de	Ex de	Ex e	Ex de	Ex de

Enclosure Solutions for Foundation Fieldbus H1

Type code/model number

Housing type

F2Field housing, aluminum, IP66

Function

MIOMultiple inputs and outputs

Hazardous area protection

ExIntrinsically safe (Ex ia) rated inputs and outputs

Number of channels

1212 inputs and outputs

Fieldbus type

FFFOUNDATION Fieldbus
PAProfibus PA

Terminal options

1Screw terminals, pluggable
2Spring terminals, pluggable

Cable entry options

001 x M20, 8 x M16 stopping plugs, plastic
01n/a
021 x M20, 8 x M16 cable glands, plastic
031 x M20, 8 x M16 cable glands, nickel-plated brass
041 x M20, 8 x M16 cable glands, stainless steel
055 x M20 cable glands, plastic

F2	-	D0-MIO	-	Ex	12	.	.	.	.		
A	-	B	-	C	D	.	E	.	F	.	G

Example:

F2D0-MIO-Ex12.FF.1.02: Multi-input/output in aluminum housing with cable glands made of plastic and 12 inputs/outputs with pluggable screw terminals.

Note:

Contact your Pepperl+Fuchs representative to check the availability of individual variants.

Type code/model number													
Electronic type													
F.MIO		Enclosure solution for R8D0-MIO-Ex12.FF*											
Enclosure material													
S		Stainless steel 316L, electropolished, IP66											
Number of installed devices													
12.A12		1 x R8D0-MIO-Ex12.FF* for installation in Zone 1											
12.B12		1 x R8D0-MIO-Ex12.FF* for installation in Zone 2											
Fieldbus type													
F		Suitable for FOUNDATION Fieldbus											
Terminals													
0		Screw terminals											
3		Spring terminals											
Bus line entries													
Field signal line entries													
GP2		GP2		Cable gland M20, polyamide, Ex e, IP66									
GB2		GB2		Cable gland M20, nickel plated brass, Ex e, IP66									
GS2		GS2		Cable gland, M20, stainless steel, Ex e, IP66									
GN2		GN2		Cable gland M20, nickel plated brass, Ex de, IP66, for armored cable									
GA2		GA2		Cable gland M20, stainless steel, Ex de, IP66, for armored cable									
H02		H02		Stopping plug M20, polyamide, Ex e, IP66									
H03		H03		Stopping plug M20, nickel plated brass, Ex de, IP66									
H04		H04		Stopping plug M20, stainless steel, Ex de, IP66									
Tag plate													
D		Tag plate, stainless steel, 95 mm x 20 mm											
C		Tag plate, plastic, 95 mm x 20 mm											
0		No tag plate											
Grounding bar													
2		With isolated grounding bar											
1		With grounding bar connected to potential equalization											
0		No grounding bar installed											
Predefined characters indicate pre-set attributes.													

F.MIO	.	S		.	F	.		.		.		.		0	0
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Type code/model number

Electronic type

F.MIO

Enclosure solution for R8D0-MIO-Ex12.FF*

Enclosure material

P

Glass fiber reinforced polyester, IP66

Number of installed devices

12.A12

1 x R8D0-MIO-Ex12.FF* for installation in Zone 1

12.B12

1 x R8D0-MIO-Ex12.FF* for installation in Zone 2

Fieldbus type

F

Suitable for FOUNDATION Fieldbus

Terminals

0

Screw terminals

3

Spring terminals

Bus line entries

Field signal line entries

GP2

GP2

Cable gland M20, polyamide, Ex e, IP66

GB2

GB2

Cable gland M20, nickel plated brass, Ex e, IP66

GS2

GS2

Cable gland, M20, stainless steel, Ex e, IP66

GN2

GN2

Cable gland M20, nickel plated brass, Ex de, IP66, for armored cable

GA2

GA2

Cable gland M20, stainless steel, Ex de, IP66, for armored cable

H02

H02

Stopping plug M20, polyamide, Ex e, IP66

H03

H03

Stopping plug M20, nickel plated brass, Ex de, IP66

H04

H04

Stopping plug M20, stainless steel, Ex de, IP66

Tag plate

D

Tag plate, stainless steel, 95 mm x 20 mm

C

Tag plate, plastic, 95 mm x 20 mm

0

No tag plate

Grounding bar

2

With isolated grounding bar

1

With grounding bar connected to potential equalization

0

No grounding bar installed

F.MIO

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P

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F

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0

0

Predefined characters indicate pre-set attributes.

Type code/model number

Housing type

F2Field housing, aluminum, IP66

Function

MIOMultiple inputs and outputs

Hazardous area protection

ExIntrinsically safe (Ex ia) rated inputs and outputs

Number of channels

1212 inputs and outputs

Fieldbus type

FFFOUNDATION Fieldbus

PA

PROFIBUS PA

Terminal options

1Screw terminals, pluggable

2Spring terminals, pluggable

Cable entry options

001 x M20, 8 x M16 stopping plugs, plastic

01n/a

021 x M20, 8 x M16 cable glands, plastic

031 x M20, 8 x M16 cable glands, nickel-plated brass

041 x M20, 8 x M16 cable glands, stainless steel

055 x M20 cable glands, plastic

F2	-	D0-MIO	-	Ex	12	.		.		.	
A	-	B	-	C	D	.	E	.	F	.	G

Example:
F2D0-MIO-Ex12.FF.1.02: Multi-input/output in aluminum housing with cable glands made of plastic and 12 inputs/outputs with pluggable screw terminals.

Note:
Contact your Pepperl+Fuchs representative to check the availability of individual variants.

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95

Enclosure Solutions for PROFIBUS PA

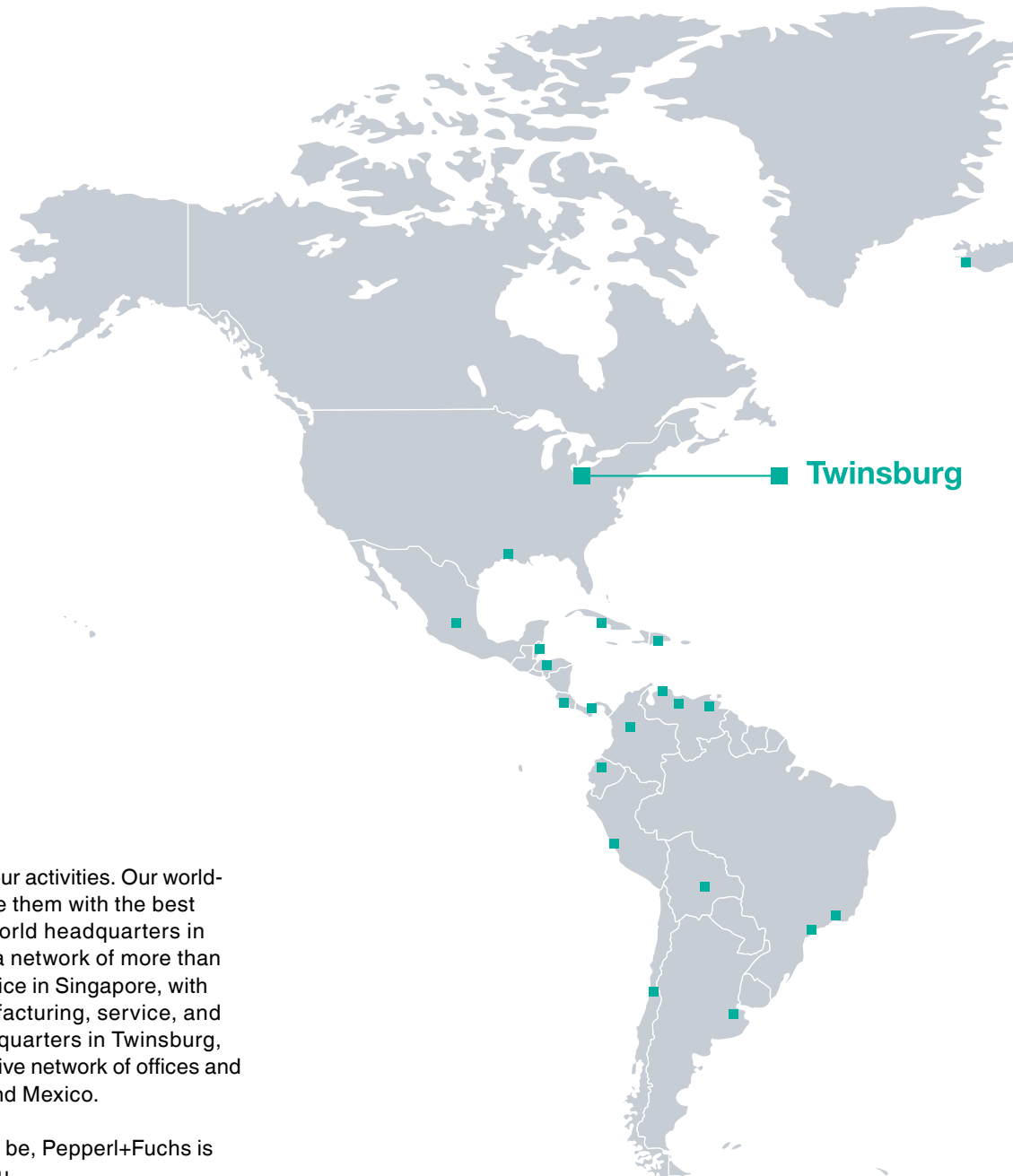
Type code/model number											
Electronic type											
F.MIO		Enclosure solution for R8D0-MIO-Ex12.PA*									
		Enclosure material									
		P Glass fiber reinforced polyester, IP66									
		Number of installed devices									
		12.A12 1 x R8D0-MIO-Ex12.PA* for installation in Zone 1									
		12.B12 1 x R8D0-MIO-Ex12.PA* for installation in Zone 2									
		Fieldbus type									
		P Suitable for PROFIBUS PA									
		Terminals									
		0 Screw terminals									
		3 Spring terminals									
		Bus line entries									
		Field signal line entries									
		GP2 GP2 Cable gland M20, polyamide, Ex e, IP66									
		GB2 GB2 Cable gland M20, nickel plated brass, Ex e, IP66									
		GS2 GS2 Cable gland, M20, stainless steel, Ex e, IP66									
		GN2 GN2 Cable gland M20, nickel plated brass, Ex de, IP66, for armored cable									
		GA2 GA2 Cable gland M20, stainless steel, Ex de, IP66, for armored cable									
		H02 H02 Stopping plug M20, polyamide, Ex e, IP66									
		H03 H03 Stopping plug M20, nickel plated brass, Ex de, IP66									
		H04 H04 Stopping plug M20, stainless steel, Ex de, IP66									
		Tag plate									
		D Tag plate, stainless steel, 95 mm x 20 mm									
		C Tag plate, plastic, 95 mm x 20 mm									
		0 No tag plate									
		Grounding bar									
		2 With isolated grounding bar									
		1 With grounding bar connected to potential equalization									
		0 No grounding bar installed									
F.MIO . P . P 0 0											
Predefined characters indicate pre-set attributes.											

Type code/model number												
Electronic type												
F.MIO Enclosure solution for R8D0-MIO-Ex12.PA*												
Enclosure material												
S Stainless steel 316L, electropolished, IP66												
Number of installed devices												
12.A12 1 x R8D0-MIO-Ex12.PA* for installation in Zone 1												
12.B12 1 x R8D0-MIO-Ex12.PA* for installation in Zone 2												
Fieldbus type												
P Suitable for PROFIBUS PA												
Terminals												
0 Screw terminals												
3 Spring terminals												
Bus line entries												
Field signal line entries												
GP2 GP2 Cable gland M20, polyamide, Ex e, IP66												
GB2 GB2 Cable gland M20, nickel plated brass, Ex e, IP66												
GS2 GS2 Cable gland, M20, stainless steel, Ex e, IP66												
GN2 GN2 Cable gland M20, nickel plated brass, Ex de, IP66, for armored cable												
GA2 GA2 Cable gland M20, stainless steel, Ex de, IP66, for armored cable												
H02 H02 Stopping plug M20, polyamide, Ex e, IP66												
H03 H03 Stopping plug M20, nickel plated brass, Ex de, IP66												
H04 H04 Stopping plug M20, stainless steel, Ex de, IP66												
Tag plate												
D Tag plate, stainless steel, 95 mm x 20 mm												
C Tag plate, plastic, 95 mm x 20 mm												
0 No tag plate												
Grounding bar												
2 With isolated grounding bar												
1 With grounding bar connected to potential equalization												
0 No grounding bar installed												
F.MIO	.	S		.	P	.		.		.		0 0

Predefined characters indicate pre-set attributes.

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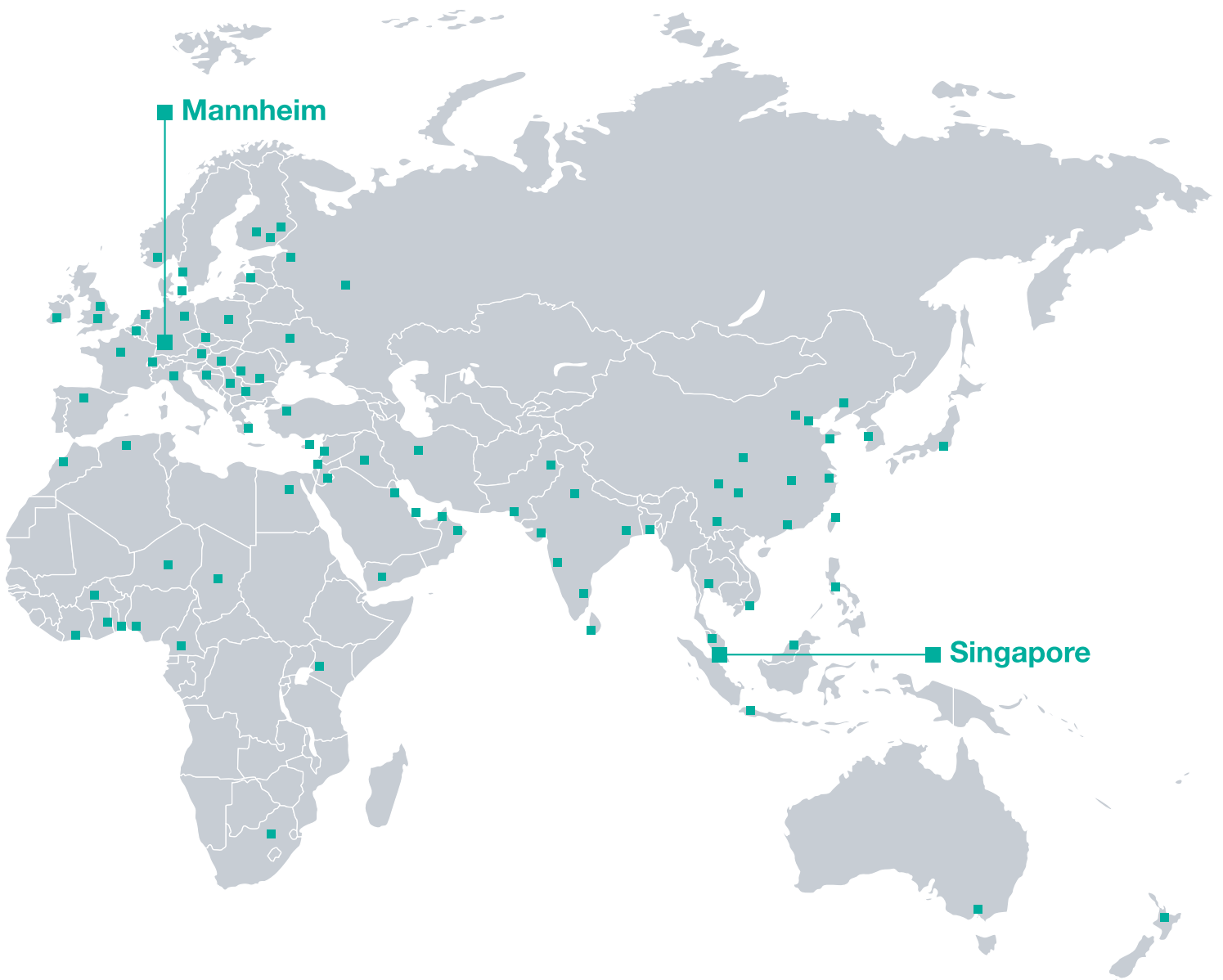
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- HART Interface Solutions
- Surge Protection
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- Photoelectric Sensors
- Industrial Vision
- Ultrasonic Sensors
- Rotary Encoders
- Positioning Systems
- Inclination and Acceleration Sensors
- Fieldbus Modules
- AS-Interface
- Identification Systems
- Displays and Signal Processing
- Connectivity

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