Allen-Bradley

1718 Ex I/O

Communication Adapter Catalog Number 1718-AENTR

I/O Module Catalog Numbers 1718-IJ, 1718-OB2, 1718-OB2L, 1718-IBN8, 1718-IBN8B, 1718-IT4B, 1718-IR4B, 1718-IF4HB, 1718-CF4H

Power Supply Catalog Number 1718-PSDC

Backplane Catalog Numbers 1718-A20, 1718-A10

Connection Cable Catalog Number 1718-CBL65, 1718-CBL3

Placeholder Module Catalog Number 1718-ARM

Additional Resources

These documents contain additional information concerning related products from Rockwell Automation®.

Resource	Description
1718 Ex I/O Installation Instructions, publication 1718-IN001	Describes how to install and wire the 1718 Ex I/O input and output modules.
1718 Ex I/O User Manual, publication 1718-UM001	Provides information on using the 1718 Ex I/O modules, backplanes, and accessories.
1718 Certification Bulletin, publication 1718-CT001	Provides 1718 Ex I/O certification information and links to control drawings.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.

You can view or download publications at http://www.rockwellautomation.com/literature/. For Release Notes and other publications specific to your module, search the catalog number of the module. To order paper copies of technical documentation, contact your local Allen-Bradley® distributor or Rockwell Automation sales representative.

Available 1718 Ex I/O Products

1718 Ex I/O Product Features

Type	Function	Features
Communication Adapter		
1718-AENTR	The EtherNet/IP adapter forms the interface between the I/O modules on the backplane and the process control system. Via this interface signals from NAMUR sensors, mechanical contacts, high-power solenoid drivers, power relays, sounders, and alarm LEDs are transported to the higher-level bus system.	• Communication via EtherNet/IP • Communication via EtherNet/IP • Installation in suitable enclosures in Zone 1 • HART communication via EtherNet/IP • Interface between the I/O modules and the PCS/PLC
Digital Input		
1718-IJ 1718-IBN8B 1718-IBN8	The device accepts digital input signals of NAMUR sensors or mechanical contacts from the hazardous area. Open and short-circuit line faults are detected. The inputs are galvanically isolated from the bus and the power supply (EN 60079-11).	• Inputs Ex ia • Installation in suitable enclosures in Zone 1 • Module can be exchanged under voltage (hot swap) • Positive or negative logic selectable • Simulation mode for service operations (forcing) • Line fault detection (LFD) • Permanently self-monitoring • 1-channel (**1718-IJ**); 8-channel (**1718-IBN8B, 1718-IBN8**) • Input for frequency, counter, direction of rotation (**1718-IJ**) • Digital input max. 15 kHz (**1718-IJ**) • Dry contact or NAMUR inputs (**1718-IBN8, 1718-IBN8B**) • On/Off delay (**1718-IBN8, 1718-IBN8B**)
Analog Input		
1718-IF4HB	The transmitter power supply feeds 2 and 3-wire transmitters. Active signals from separately powered field devices and 4-wire transmitters can be connected. Open and short-circuit line faults are detected. The intrinsically safe inputs are galvanically isolated from the bus and the power supply.	• 4-channel • Inputs Ex ia • Installation in suitable enclosures in Zone 1 • Module can be exchanged under voltage (hot swap) • Simulation mode for service operations (forcing) • Line fault detection (LFD) • Permanently self-monitoring • Power supply for 2-wire transmitters with 4... 20 mA (**1718-IF4HB**) • Supply circuit 15V (20 mA) (**1718-IF4HB**) • Input from active signals of 4-wire transmitters (**1718-IF4HB**) • HART communication via field bus or service bus (**1718-IF4HB**) • Converter for 2, 3, and 4-wire RTDs (Pt100 ... Pt1000), slide wire sensors, and so on (**1718-IR4B**) • Converter for thermocouples and mV-signals (**1718-IT4B**)
1718-IR4B	The RTD converter accepts 2, 3, or 4-wire RTD signals (Pt100... Pt1000) and slide-wire sensors from the field. Ni100 through Ni1000 can also be connected. Open and short-circuit line faults are detected. The intrinsically safe inputs are galvanically isolated from the bus and the power supply.	
1718-IT4B	The thermocouple converter accepts thermocouple or mV signals from the field. Open circuit line fault alarms are detected. The inputs are galvanically isolated from the bus and the power supply (EN 60079-11). There is a functional isolation between the channels.	

1718 Ex I/O Product Features

Type	Function	Features
Configurable Analog Input/Output		
1718-CF4H	The device is a configurable universal module. Each channel can operate in the following modes: • As an analog input (AI) it feeds 2-wire transmitters. • As an analog output (AO) it can drive proportional valves, I/P converters, or local indicators. • As a digital input (DI) it reads dry contacts. • As a digital output (DO) it can drive solenoids, sounders, or LED. A combination of analog and digital I/O is possible. Channel LEDs indicate the status of each channel. White LEDs indicate whether AI, AO, DI, DO are selected. The intrinsically safe signals are galvanically isolated from the bus and the power supply.	• 4-channel • Inputs Ex ia, Outputs Ex ia • Installation in suitable enclosures in Zone 1 • Module can be exchanged under voltage (hot swap) • Analog input, digital input, analog output, digital output • Supply circuit 21.5 V (4 mA) • HART communication via field bus or service bus • Simulation mode for service operations (forcing) • Line fault detection (LFD): one LED per channel • Permanently self-monitoring
Digital Output		
1718-OB2 1718-OB2L	The digital output features 4 independent channels. The device can be used to drive solenoids, sounders, or LEDs. Open and short-circuit line faults are detected. The outputs are galvanically isolated from the bus and the power supply. The output can be switched off via a contact. This can be used for bus-independent safety applications.	• Outputs Ex ia • Installation in suitable enclosures in Zone 1 • 4-channel • Module can be exchanged under voltage (hot swap) • Line fault detection (LFD) • Positive or negative logic selectable • Simulation mode for service operations (forcing) • Permanently self-monitoring • Output with watchdog (deactivation feature?) • • Output with bus-independent safety shutdown input
Power Supply		
1718-PSDC	The power supply provides power for the I/O modules and adapters that are mounted on the backplane. Power supplies can be connected in parallel to achieve redundancy. Input supply and output supply are galvanically isolated from each other (EN 61010-1).	• Power supply for 24V DC • Installation in suitable enclosures in Zone 1 • Module can be exchanged under voltage (hot swap) • Suitable for the supply of 24 I/O modules and 1 bus coupler • Use two power supplies for redundancy • Installation in suitable enclosures in Zone 1 or Zone 21
Backplane		
1718-A20 1718-A10	Backplanes are used to hold adapters, power supplies, and I/O modules. Fixed slots are reserved on the backplane for adapters and power supplies. Slots for I/O modules have equal status; functions can be arranged in any sequence, as required.	• Max. 20 slots for I/O modules (**1718-A20**); Max. 10 slots for I/O modules (**1718-A10**); • Redundancy (field bus and power supply) • For PROFIBUS DP and PROFIBUS DP V1 • For Modbus RTU and MODBUS TCP/IP • Can also be used as extension backplane • Installation in Zone 1

1718 Ex I/O Product Features

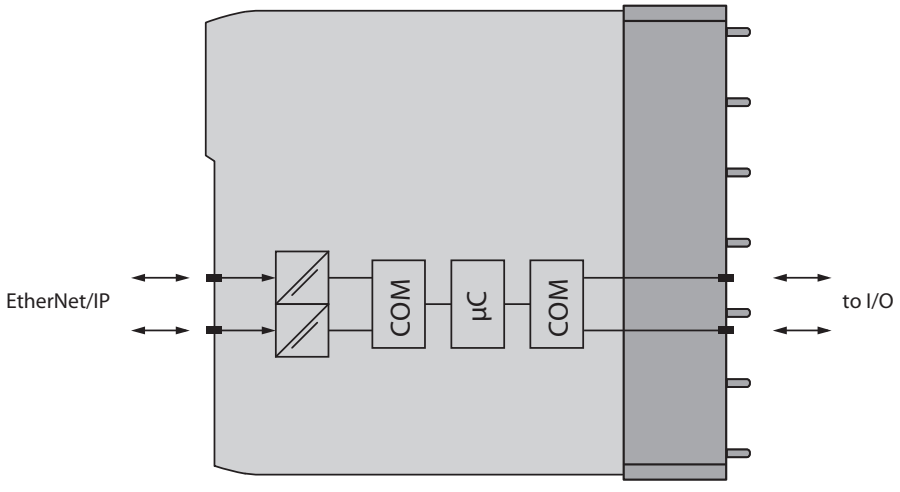
Type	Function	Features
Connection Cable		
1718-CBL3 1718-CBL65	1718-CBL* backplane cordsets, for redundancy unit to extension unit.	• For connection of base and extension backplanes
Placeholder		
1718-ARM	Placeholder modules are used to cover empty slots on the backplane and fix unused field wiring, if needed. This module does not reserve an address. This module can be placed in any sequence on the chassis.	• Parking of field circuits • Blue screw terminal • Installation in suitable enclosures in Zone 1 • Module can be exchanged under voltage (hot swap)

1718 Ex I/O Modules

Type	Catalog Number	Description	Page
Communication Adapter	1718-AENTR	Ex I/O EtherNet/IP Adapter	5
Digital Input	1718-IJ	Ex I/O Frequency/Counter Input	9
	1718-IBN8B	Ex I/O 8 Point Digital Input NAMUR Wide	
	1718-IBN8	Ex I/O 8 Point Digital Input NAMUR	10
Analog Input	1718-IF4HB	Ex I/O HART Transmitter Power Supply, Input Isolator	13
	1718-IR4B	Ex I/O 4 Channel RTD Input	
	1718-IT4B	Ex I/O 4 Channel Thermocouple Input	
Configurable Analog Input/Output	1718-CF4H	Ex I/O 4 Channel HART Analog Configurable	20
Digital Output	1718-OB2	Ex I/O 2 Point Digital Output 23V	24
	1718-OB2L	Ex I/O 2 Point Digital Output 16.5V	
Power Supply	1718-PSDC	Ex I/O DC Power Supply	
Backplane	1718-A20	Ex I/O 20 Slot Chassis	
	1718-A10	Ex I/O 10 Slot Chassis	
Connection Cable	1718-CBL3	Ex I/O Backplane Connection Cable 3 m (xx in)	
	1718-CBL65	Ex I/O Backplane Connection Cable 0.65 m (xx in)	
Placeholder	1718-ARM	Ex I/O Empty Slot Cover	32

1718 Ex I/O Communication Adapter

1718-AENTR Ex I/O EtherNet/IP Adapter - Connection



Zone 1

Technical Specifications

Attribute		1718-AENTR
Supply		
Connection		Backplane bus
Nominal voltage	U_n	12 V DC, use only with the power supply module 1718-PSDC
Maximum safe voltage	U_m	60 V DC (SELV/PELV)
Power dissipation		4.4 W
Power consumption		4.4 W
Fieldbus interface		
Fieldbus type		EtherNet/IP
Ethernet interface		
Connection type		M12, via front connector
Transfer rate		10BASE-T, 100BASE-TX 100 MBit/s
Station connection		Directly to PCS or PLC or via hubs or switches
Cable type		SFTP in accordance with ISO/IEC 11801 for Cat 5e or better
Bus length		≤ 100 m (≤ 328 ft) per link
Addressing		DHCP or fixed IP address
Ethernet address		IP V4 address (default setting: 0.0.0.0, auto IP, DHCP)
HART Communication		Via Ethernet
Internal bus		
Connection		Backplane bus
Galvanic isolation		
Ethernet/other circuits		basic insulation according to IEC/EN 61010-1, rated insulation voltage 32 V DC (SELV/PELV)
RS 485 interface/other circuits		basic insulation according to IEC/EN 61010-1, rated insulation voltage 50 V DC
Insulation voltage		1500 V AC acc. to IEEE 802.3u
Electrical isolation		
Power supply, internal bus/other circuits		basic insulation according to IEC/EN 61010-1, rated insulation voltage 30 V DC

Technical Specifications

Attribute	1718-AENTR
Indicators/settings	
Status indicator	• LED green (power supply): On = operating, fast flash = cold start • LED red (collective alarm): On = internal fault, flashing = no Modbus TCP connection • LED yellow (operating mode): flashing 1 (1:1 ratio) = active, normal operation; flashing 2 (7:1 ratio) = active, simulation
Directive conformity	
Electromagnetic compatibility Directive 2014/30/EU	 EN 61326-1
Conformity	
Electromagnetic compatibility	NE 21
Degree of protection	IEC 60529
Fieldbus standard	IEEE 802.3
Environmental test	EN 60068-2-14
Shock resistance	EN 60068-2-27
Vibration resistance	EN 60068-2-6
Damaging gas	EN 60068-2-42
Relative humidity	EN 60068-2-56
Ambient conditions	
Ambient temperature	-20...+60 °C (-4...+140 °F)
Storage temperature	-25...+85 °C (-13...+185 °F)
Relative humidity	95% noncondensing
Shock resistance	Shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18
Vibration resistance	Frequency range 10...150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles Frequency range 5...100 Hz; transition frequency: 13.2 Hz, amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance
Damaging gas	Designed for operation in environmental conditions according to ISA-S71.04-1985, severity level G3
Mechanical specifications	
Degree of protection	IP20 (module), a separate housing is required acc. to the system description
Connection	Via backplane
Mass, approx	965 g (34.04 oz)
Dimensions	57 x 107 x 132 mm (2.2 x 4.2 x 5.2 in)
Data for application in connection with hazardous areas	
Certificate Marking	In process In process
Directive conformity Directive 2014/34/EU	 EN IEC 60079-0:2018 EN 60079-1:2014 EN 60079-5:2015 EN 60079-7:2015 EN 60079-11:2011
International approvals	
ATEX approval	In process

Technical Specifications

Attribute	1718-AENTR
IECEx approval	In process
Approved for	IEC 60079-0:2017 IEC 60079-1:2014 IEC 60079-5:2015 IEC 60079-7:2015 IEC 60079-11:2011
General Information	
System information	The module may be installed only in the associated backplanes 1718A-*** in Zone 1, Zone 2, or outside the hazardous area. Observe the corresponding EC-type examination certificate.
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For certification information and links to control drawings with complete entity parameter details, refer to the 1718 Certification Bulletin, publication 1718-CT001.

1718 Ex I/O Digital Input

Figure 1 - 1718-IJ Ex I/O Frequency Counter – Connection

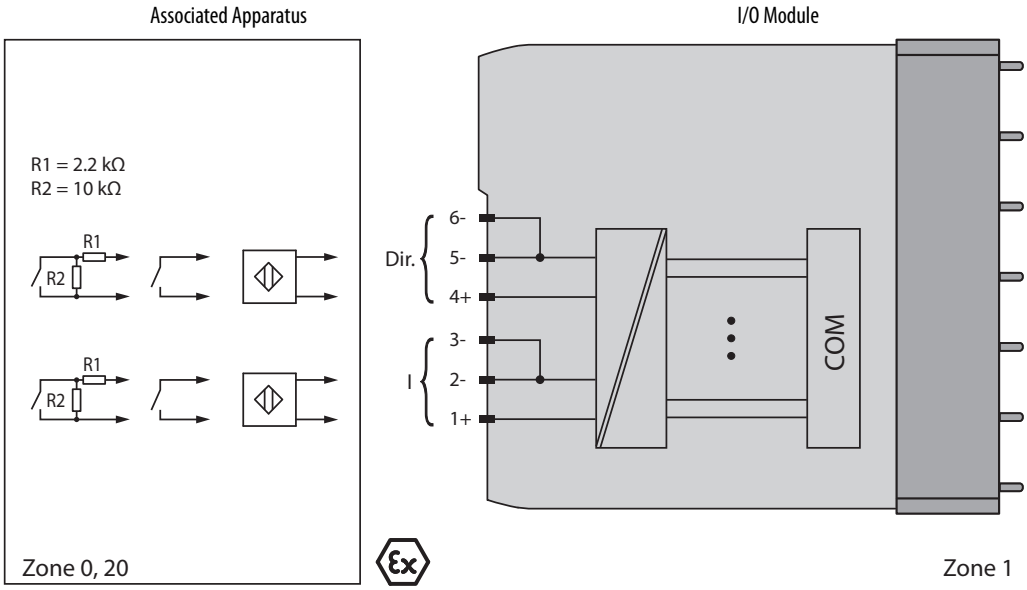


Figure 2 - 1718-IBN8B Ex I/O 8 Point Digital Input NAMUR-Wide – Connection

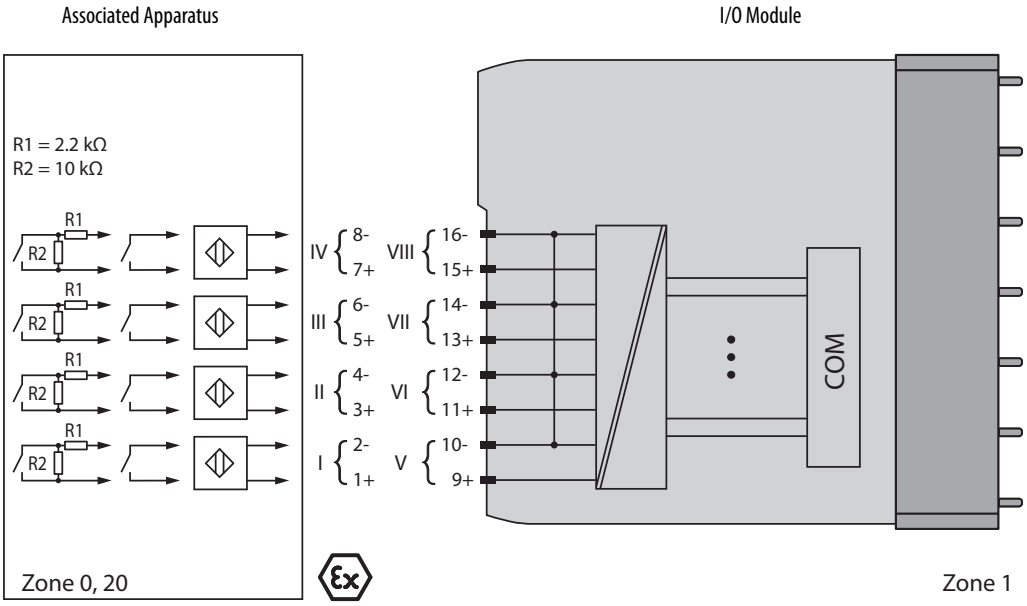
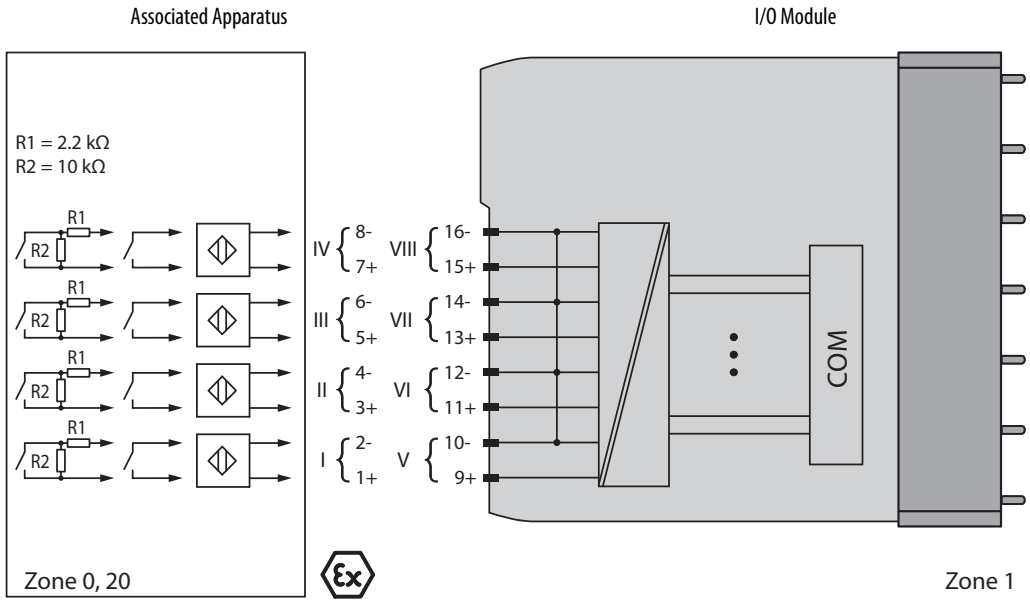


Figure 3 - 1718-IBN8 Ex I/O 8 Point Digital Input NAMUR – Connection



Technical Specifications

Attribute	1718-IJ	1718-IBN8B	1718-IBN8
Slots			
Occupied slots	1	2	1
Supply			
Connection	Backplane bus		
Rated voltage U_r	Use only with the power supply 1718-PSDC		
Power consumption	0.6 W	1.0 W	1.5 W
Power dissipation	0.6 W	1.0 W	1.5 W
Internal bus			
Connection	Backplane bus		
Interface	Manufacturer-specific bus		
Digital input			
Number of channels	1	8	
Function	Counter, frequency, direction of rotation	–	
Suitable interface Connections	NAMUR sensor, volt-free contact		
Connection	channel I: 1+, 2-; direction: 4+, 5-	channel I: 1+, 2-; channel II: 3+, 4-; channel III: 5+, 6-; channel IV: 7+, 8-; channel V: 9+, 10-; channel VI: 11+, 12-; channel VII: 13+, 14-; channel VIII: 15+, 16-	Terminals 1+, 2-, 3+, 4-, 5+, 6-, 7+, 8-, 9+, 10-, 11+, 12-, 13+,14-, 15+, 16-
Rated values	According to EN 60947-5-6 (NAMUR)		
Switching point/switching hysteresis	1.2...2.1 mA / ± 0.2 mA		

Technical Specifications

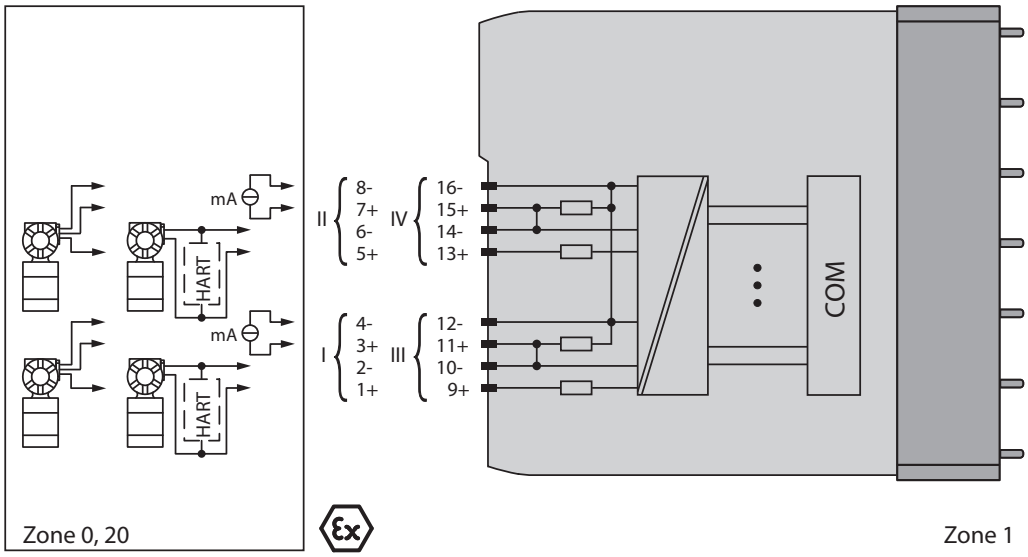
Attribute	1718-IJ	1718-IBN8B	1718-IBN8
Internal resistor R_i	1 kΩ		
Line fault detection	–	can be switched on/off for each channel via the Add-on Profile	–
Connection Short-circuit Open-circuit	mechanical switch with additional resistors (see connection diagram) proximity switches without additional wiring < 360 Ω < 0.35 mA		
Minimum pulse duration	in frequency + counter mode: 12.5 ms; otherwise 20 µs	1 ms	15 ms
Operating frequency	0 ... 15 kHz ; in frequency + counter mode ... 40 Hz	–	
Indicators/settings			
Status indicator	Green: supply Red: line fault		Green: supply Red: line fault, per channel
Coding	Optional mechanical coding via front socket		
Directive conformity			
Electromagnetic compatibility Directive 2014/30/EU	EN 61326-1		
Conformity			
Electromagnetic compatibility	NE 21		
Degree of protection	IEC 60529		
Environmental test	EN 60068-2-14		
Shock resistance	EN 60068-2-27		
Vibration resistance	EN 60068-2-6		
Damaging gas	EN 60068-2-42		
Relative humidity	EN 60068-2-56		
Ambient conditions			
Ambient temperature	-20...+60 °C (-4...+140 °F)		
Storage temperature	-25...+85 °C (-13...+185 °F)		
Relative humidity	95% noncondensing		
Shock resistance	Shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18		
Vibration resistance	Frequency range 10...150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles Frequency range 5...100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance		
Damaging gas	Designed for operation in environmental conditions per ISA-S71.04-1985 severity level G3		
Mechanical specifications			
Degree of protection	IP20 (module), a separate housing is required according to the system description		
Connection	Removable front connector with screw flange (accessory) Wire connection via spring terminals: 0.14...1.5 mm^2 (26...16 AWG) Wire connection via screw terminals: 0.08...1.5 mm^2 (28...16 AWG)		
Mass, approx.	420 g (14.82 oz)	940 g (33.16 oz)	420 g (14.82 oz)
Dimensions	28 x 107 x 132 mm (1.1 x 4.2 x 5.2 in.)	57 x 107 x 132 mm (2.2 x 4.2 x 5.2 in.)	28 x 107 x 132 mm (1.1 x 4.2 x 5.2 in.)
Data for application in connection with hazardous area			

Technical Specifications

Attribute	1718-IJ	1718-IBN8B	1718-IBN8
EU-Type Examination Certificate	Presafe 19 ATEX 14058U		Presafe 19 ATEX 14055U
Marking	Ⓔx II 2(1)G Ex db eb q [ia Ga] IIC Gb II (1)D [Ex ia Da] IIIC I (M1) [Ex ia Ma] I		Ⓔx II 2(1)G Ex db eb q [ia Ga] IIC Gb II (1)D [Ex ia Da] IIIC I (M1) [Ex ia Ma] I
Input			
Voltage U_0	10.5V	14.9V	10V
Current I_0	23.34 mA	15.7 mA	13 mA
Power P_0	61.27 mW (linear characteristic)	58.2 mW (linear characteristic)	33 mW (linear characteristic)
Electrical/Galvanic isolation			
Input/power supply, internal bus	Safe electrical isolation according to EN 60079-11, voltage peak value 375V		
Directive conformity			
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-5:2015 EN 60079-7:2015 EN 60079-11:2012		EN 60079-0:2012 + A11:2013, EN 60079-11:2012 EN 60079-1:2014 EN 60079-5:2015 EN 60079-7:2015
International approvals			
ATEX approval	Presafe 19 ATEX 14058U		Presafe 19 ATEX 14055U
IECEx approval	IECEx PRE 19.0013U		IECEx PRE 19.0010U
Approved for	Ex db eb q [ia Ga] IIC Gb [Ex ia Da] IIIC [Ex ia Ma] I		Ex db eb q [ia Ga] IIC Gb [Ex ia Da] IIIC [Ex ia Ma] I
General Information			
System information	The module may be installed only in the associated backplanes 1718-A*** in Zone 2 or outside the hazardous area. The corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.		
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For certification information and links to control drawings with complete entity parameter details, refer to the 1718 Certification Bulletin, publication 1718-CT001.		

1718 Ex I/O Analog Input

Figure 4 - 1718-IF4HB Ex I/O 4 Channel HART Analog Input Wide - Connection



Technical Specifications

Attribute	1718-IF4HB
Slots	
Occupied slots	2
Supply	
Connection	backplane bus
Rated voltage U_n	Use only with the power supply 1718-PSDC
Power dissipation	1.5 W
Power consumption	3.0 W
Internal bus	
Connection	Backplane bus
Interface	manufacturer-specific bus
Analog input	
Number of channels	4
Suitable field devices	pressure converter, flow converter, level converter, temperature converter
Field device interface	2-wire transmitter, 3-wire transmitter, 4-wire transmitter
Connection	**2-wire transmitter (HART):** Supply circuit: channel I 1+, 2-, channel II 5+, 6-, channel III 9+, 10-, channel IV 13+, 14- **3-wire transmitter:** Supply circuit: channel I 1+, 4-, channel II 5+, 8-, channel III 9+, 12-, channel IV 13+, 16- Measurement loop: channel I 3+, 4-, channel II 7+, 8-, channel III 11+, 12-, channel IV 15+, 16- **4-wire transmitter (powered externally):** Measurement loop: channel I 3+, 4-, channel II 7+, 8-, channel III 11+, 12-, channel IV 15+, 16-
Transmitter supply voltage	≥15V at 20 mA; 21.5V at 4 mA
Input resistance	15 Ω

Technical Specifications

Attribute	1718-IF4HB
Line fault detection Short-circuit Open-circuit	can be switched on/off for each channel via the Add-on Profile, configurable via the Add-on Profile default setting: > 22 mA configurable between 0... 26 mA default setting: < 1 mA configurable between 0... 26 mA
HART communication	yes
HART secondary variable	yes
Transfer characteristics	
Deviation After calibration Influence of ambient temperature	 0.1% of the signal range at 20 °C (68 °F) 0.1%/10 K of the signal range
Resolution	12 Bits (0... 26 mA)
Refresh time	100 ms
Indicators/settings	
Status indicator	Power status indicator (P) green: supply Diagnostic status indicator (I) red: module fault, red flashing: communication error, white: fixed parameter set (parameters from the adapter are ignored), white flashing: requests parameters from the adapter Status indicator (1...4) red: line fault (lead breakage or short-circuit)
Coding	Optional mechanical coding via front socket
Directive conformity	
Electromagnetic compatibility Directive 2014/30/EU	 EN 61326-1:2006
Conformity	
Electromagnetic compatibility	NE 21:2007
Degree of protection	IEC 60529:2000
Environmental test	EN 60068-2-14:2009
Shock resistance	EN 60068-2-27:2009
Vibration resistance	EN 60068-2-6:2008
Damaging gas	EN 60068-2-42:2003
Relative humidity	EN 60068-2-78:2001
Ambient conditions	
Ambient temperature	-20... +60 °C (-4... +140 °F)
Storage temperature	-25... +85 °C (-13... +185 °F)
Relative humidity	95% noncondensing
Shock resistance	shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18
Vibration resistance	frequency range 10... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance
Damaging gas	designed for operation in environmental conditions acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications	
Degree of protection	IP20 (module), a separate housing is required acc. to the system description
Connection	Removable front connector with screw flange (accessory) Wire connection via spring terminals: 0.14...1.5 mm^2 (26...16 AWG) Wire connection via screw terminals: 0.08...1.5 mm^2 (28...16 AWG)
Mass, approx	955 g (33.7 oz)

Technical Specifications

Attribute		1718-IF4HB
Dimensions		57 x 107 x 132 mm (2.2 x 4.2 x 5.2 in.)
Data for application in connection with hazardous areas		
EU-Type Examination Certificate		Presafe 19 ATEX 14056U
Marking		Ⓔx II 2(1)G Ex db eb q [ia Ga] IIC Gb II (1)D [Ex ia Da] IIIC I (M1) [Ex ia Ma] I
Supply		
Voltage	U_o	27V
Current	I_o	90 mA
Power	P_o	588 mW (linear characteristic)
Input		
Voltage	U_o	0.7V
Current	I_o	2.78 mA
Power	P_o	2 mW (trapezoid characteristic curve)
Internal capacitance	C_i	242 nF
Power	L_i	0 mH
Galvanic/Electrical isolation		
Input/power supply, internal bus		Safe electrical isolation according to EN 60079-11, voltage peak value 375V
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-5:2015 EN 60079-7:2015 EN 60079-11:2012
International approvals		
ATEX approval		Presafe 19 ATEX 14056U
IECEx approval		IECEx PRE 19.0011U
Approved for		Ex db eb q [ia Ga] IIC Gb [Ex ia Da] IIIC [Ex ia Ma] I
General Information		
System information		The module may be installed only in the associated backplanes 1718-A*** in Zone 2 or outside the hazardous area. The corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.
Supplementary information		EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For certification information and links to control drawings with complete entity parameter details, refer to the 1718 Certification Bulletin, publication 1718-CT001.

Figure 5 - 1718-IR4B Ex I/O 4 Channel RTD Input - Connection

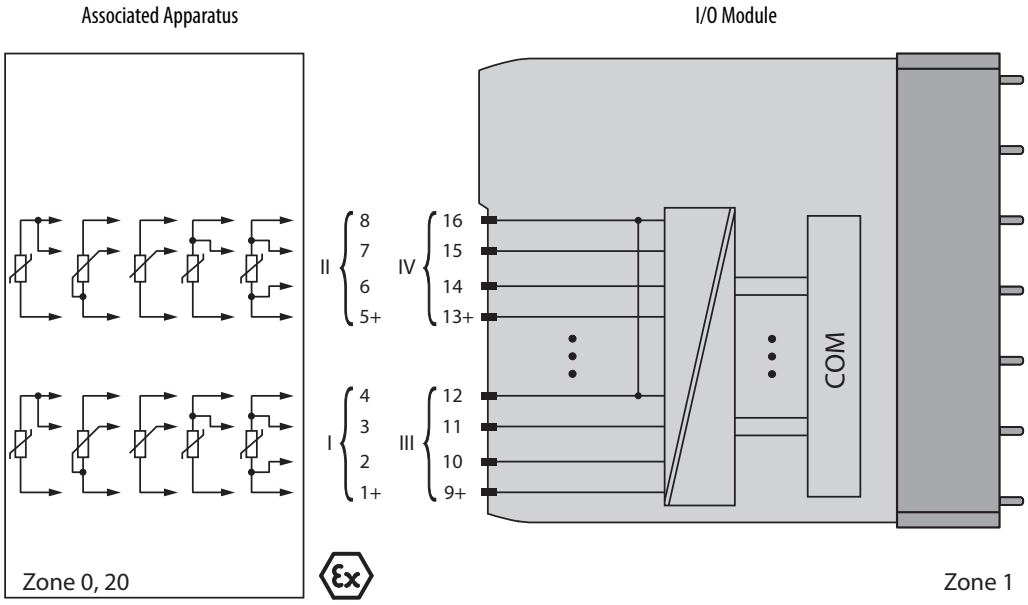
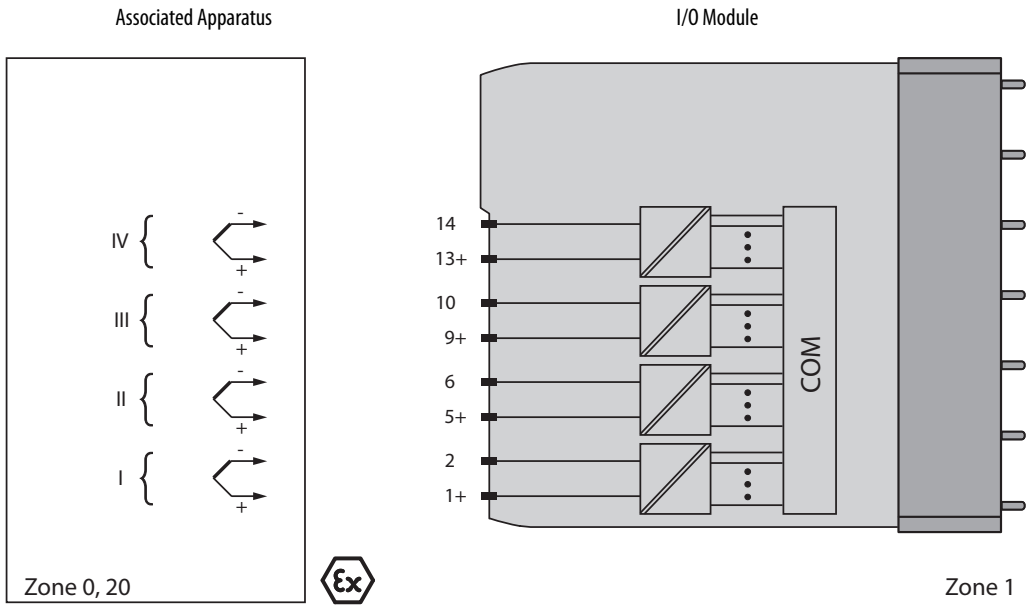


Figure 6 - 1718-IT4B Ex I/O 4 Channel Thermocouple Input - Connection



Technical Specifications

Attribute	1718-IR4B	1718-IT4B
Slots		
Occupied slots	2	
Supply		
Connection	backplane bus	

Technical Specifications

Attribute	1718-IR4B	1718-IT4B
Rated voltage U_r	Use only with the power supply module 1718-PSDC	
Power consumption	0.6 W	1.0 W
Power dissipation	0.6 W	1.0 W
Internal bus		
Connection	backplane bus	
Interface	manufacturer-specific bus	
Temperature input		
Number of channels	4	
Suitable field devices	resistance thermometer, slide-wire sensors, potentiometer	Thermocouple, mV source
Suitable sensors Sensor	 –	 thermocouples U, B, E, T, K, S, R, L, J, N, Pallaplat and mV sources
Field device interface	2-wire sensor, 3-wire sensor, 4-wire sensor	–
Connection	channel I: resistance/potentiometer input 1... 4 channel II: resistance/potentiometer input 5... 8 channel III: resistance/potentiometer input 9... 12 channel IV: resistance/potentiometer input 13... 16	channel I: 1+, 2-; channel II: 5+, 6-; channel III: 9+, 10-; channel IV: 13+, 14-
Measurement range	Pt100 (18...390 Ω) (500 Ω including line resistance) Pt200 (37...780 Ω) Pt500 (92...1952 Ω) Pt1000 (185...3905 Ω) Ni100 (69...270 Ω) Ni500 (345...1350 Ω) Ni1000 (690...2700 Ω)	-65...+ 75 mV with LFD , -75 ... +75 mV without LFD
Slide-wire sensor	0... 10 kΩ	–
Measuring current	200 µA	–
Smallest span	50 Ω for 0.1% accuracy	5 mV for 0.1% accuracy
Linearity error	0.1%	
Conversion time	≤ 500 ms (4 channels) ≤ 1 s (for 4x 3-wire Pt100)	≤ 300 ms (4 channels) without LFD ≤ 600 ms (4-channel) with LFD
Compensation (reference junction CJC)	–	internal cold junction compensation or external cold junction
Busy after download	5... 15 s	–
Lead resistance	≤ 50 Ω per strand	–
Line fault detection Short-circuit Open-circuit	can be switched on/off for each channel via the Add-on Profile < 10 Ω > 1 Ω	can be switched on/off for each channel via the Add-on Profile – > 1 kΩ
Transfer characteristics		
Deviation Influence of ambient temperature	 max. 0.1%/10 K	

Technical Specifications

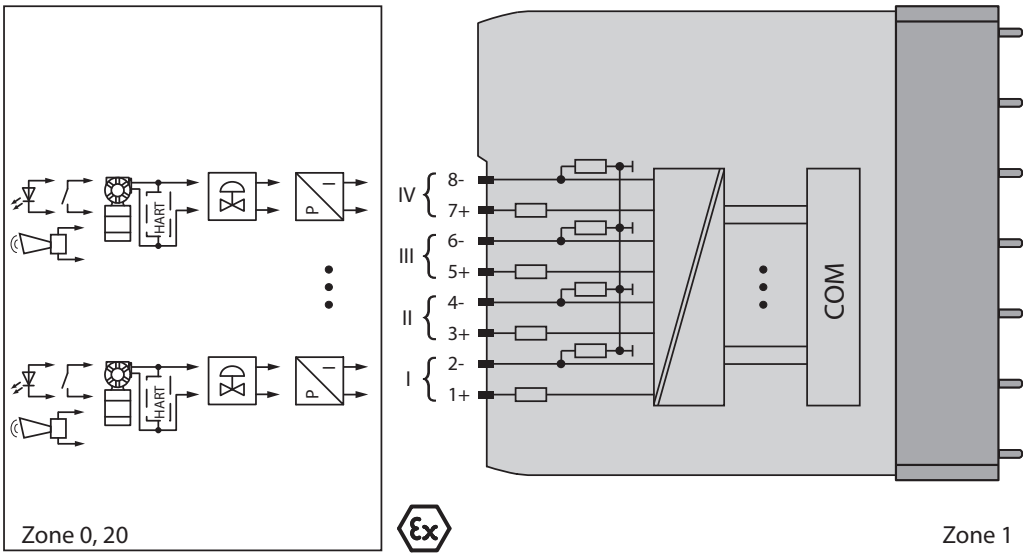
Attribute	1718-IR4B	1718-IT4B
Indicators/settings		
LED indicator	Status indicator green: supply Status indicator red: line fault, collective alarm Status indicator flashing: communication error	
Coding	Optional mechanical coding via front socket	
Directive conformity		
Electromagnetic compatibility Directive 2014/30/EU	EN 61326-1	
Conformity		
Electromagnetic compatibility	NE 21	
Degree of protection	IEC 60529	
Environmental test	EN 60068-2-14	
Shock resistance	EN 60068-2-27	
Vibration resistance	EN 60068-2-6	
Damaging gas	EN 60068-2-42	
Relative humidity	EN 60068-2-56	
Ambient conditions		
Ambient temperature	-20... +60 °C (-4... +140 °F)	
Storage temperature	-25... +85 °C (-13... +185 °F)	
Relative humidity	95% non-condensing	
Shock resistance	shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18	
Vibration resistance	frequency range 10... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance	
Damaging gas	designed for operation in environmental conditions according to ISA-S71.04-1985, severity level G3	
Mechanical specifications		
Degree of protection	IP20 (module), a separate housing is required according to the system description	
Connection	Removable front connector with screw flange (accessory) Wiring connection via spring terminals: 0.14...1.5 mm^2 (26...16 AWG) Wiring connection via screw terminals: 0.08...1.5 mm^2 (28...16 AWG)	
Mass, approx	950 g (33.5 oz)	750 g (24.46 oz)
Dimensions	57 x 107 x 132 mm (2.2 x 4.2 x 5.2 in.)	
Data for application in connection with hazardous areas		
EU-Type Examination Certificate Marking	Presafe 19 ATEX 14058U Ⓔx II 2(1)G Ex db eb q [ia Ga] IIC Gb II (1)D [Ex ia Da] IIIC I (M1) [Ex ia Ma] I	
Input		
Voltage U_0	7.14V	1V
Current I_0	70 mA	71 mA
Power P_0	123 mW (linear characteristic)	62 mW (trapezoid characteristic curve)

Technical Specifications

Attribute	1718-IR4B	1718-IT4B
Galvanic/Electrical isolation		
Input/power supply, internal bus	Safe electrical isolation according to EN 60079-11, voltage peak value 375 V	safe electrical isolation acc. to EN 60079-11, voltage peak value 375 V
Input/input	–	functional insulation acc. to IEC 60664-1:2007, rated insulation voltage 50 V, testing voltage 500 V
Directive conformity		
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-5:2015 EN 60079-7:2015 EN 60079-11:2012	
International approvals		
ATEX approval	Presafe 19 ATEX 14058U	
IECEx approval	IECEx PRE 19.0013U	
Approved for	Ex db eb q [ia Ga] IIC Gb [Ex ia Da] IIIC [Ex ia Ma] I	
General Information		
System information	The module may be installed only in the associated backplanes 1718-A*** in Zone 2 or outside the hazardous area. The corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For certification information and links to control drawings with complete entity parameter details, refer to the 1718 Certification Bulletin, publication 1718-CT001.	

1718 Ex I/O Universal Input/Output (HART)

1718-CF4H Ex I/O Universal Input/Output (HART) - Connection



Technical Specifications

Attribute	1718-CF4H
Slots	
Occupies slots	1
Supply	
Connection	Backplane bus
Rated voltage U_r	Use only in connection with the power supply 1718-PSDC
Power dissipation	1.5 W
Power consumption	3 W
Internal bus	
Connection	Backplane bus
Interface	Manufacturer-specific bus
Analog input	
Number of channels	4
Suitable field devices	pressure converter, flow converter, level converter, temperature converter
Field device interface	2-wire transmitter
Connection	terminals 1+, 2-; 3+, 4-; 5+, 6-; 7+, 8-
Transmitter supply voltage	≥15 V at 20 mA ; 21.5 V at 4 mA
Input resistance	15Ω
Line fault detection Short-circuit Open-circuit	can be switched on/off for each channel via configuration tool , configurable via configuration tool default setting: > 21 mA Can be parameterized in the range 0 ... 22 mA default setting: < 3.6 mA Can be parameterized in the range 0 ... 22 mA

Technical Specifications

Attribute	1718-CF4H
HART communication	yes
HART secondary variable	yes
Analog output	
Number of channels	4
Suitable field devices	Proportional valves, IP converters, on-site display
Connection	terminals 1+, 2-; 3+, 4-; 5+, 6-; 7+, 8-
Line fault detection Short-circuit Open-circuit	can be switched on/off for each channel via the Add-on Profile, configurable via the Add-on Profile default setting: < 50 Ω configurable between 0 ... 26 mA deviation of preset output value > 0.5 mA
Load, max	750 Ω
HART communication	yes
HART secondary variable	yes
Watchdog	output off 0.5 s after serious fault
Transfer characteristics	
Deviation After calibration Influence of ambient temperature	 0.1% of the signal range at 20 °C (68 °F) 0.1%/10 K of the signal range
Resolution	12 Bit (0 ... 26 mA)
Refresh time, approx	100 ms (4 channels)
Indicators/settings	
LED indicator	Power indicator (P) green: supply Diagnostic indicator (I) red: module fault, red flashing: communication error, white: fixed parameter set (parameters from the adapter are ignored), white flashing: requests parameters from the adapter Status indicator (1...4) red: line fault (lead breakage or short circuit) Configuration indicator(AI, AO) white: selected channel mode
Coding	optional mechanical coding via front socket
Directive conformity	
Electromagnetic compatibility Directive 2014/30/EU	 EN 61326-1
Conformity	
Electromagnetic compatibility	NE 21
Degree of protection	IEC 60529
Environmental test	EN 60068-2-14
Shock resistance	EN 60068-2-27
Vibration resistance	EN 60068-2-6
Damaging gas	EN 60068-2-42
Relative humidity	EN 60068-2-56
Ambient conditions	
Ambient temperature	-20...60 °C (-4...140 °F)
Storage temperature	-25...85 °C (-13...185 °F)
Relative humidity	95% noncondensing
Shock resistance	Shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18

Technical Specifications

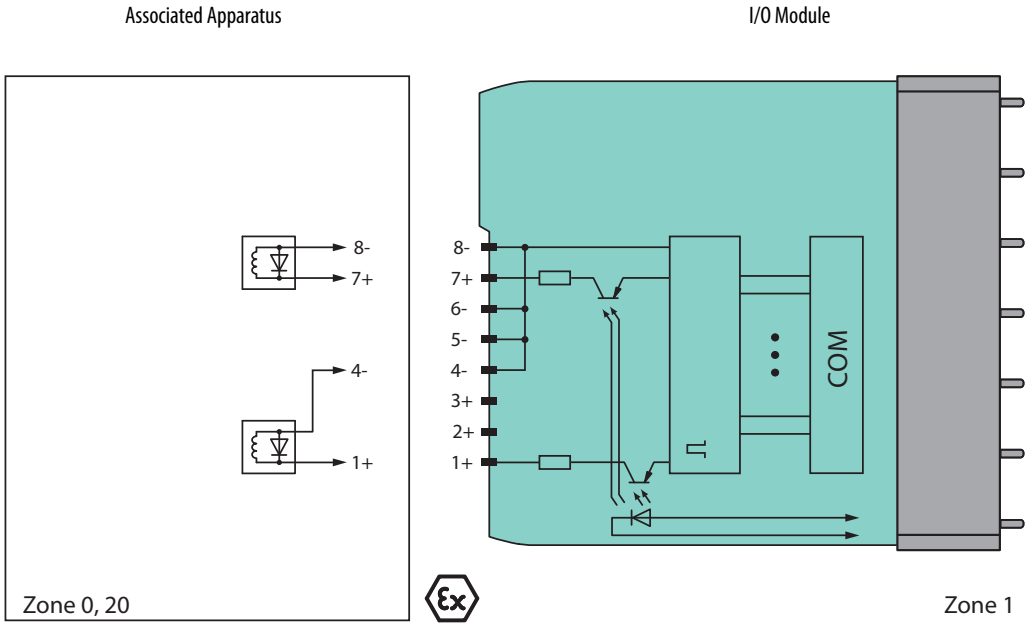
Attribute		1718-CF4H
Vibration resistance		Frequency range 10...150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles Frequency range 5...100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance
Damaging gas		Designed for operation in environmental conditions per ISA-S71.04-1985 severity level G3
Mechanical specifications		
Degree of protection		IP20 (module), a separate housing is required according to the system description
Connection		Removable front connector with screw flange (accessory) Wiring connection via spring terminals: 0.14...1.5 mm^2 (26...16 AWG) Wiring connection via screw terminals: 0.08...1.5 mm^2 (28...16 AWG)
Mass, approx		425 g (15 oz)
Dimensions		28 x 107 x 132 mm (1.1 x 4.2 x 5.2 in.)
Data for application in connection with hazardous areas		
EU-Type Examination Certificate		Presafe 19 ATEX 14057U
Marking		Ⓔx II 2(1)G Ex db eb q [ia Ga] IIC Gb II (1)D [Ex ia Da] IIIC I (M1) [Ex ia Ma] I
Supply		
Voltage	U_o	27 V
Current	I_o	87 mA
Power	P_o	575 mW (linear characteristic)
Input		Ex ia
Voltage	U_o	27V
Current	I_o	87 mA
Power	P_o	575 mW (linear characteristic)
Internal capacitance	C_i	0 nF
Internal inductance	L_i	0 mH
Output		Ex ia
Voltage	U_o	27V
Current	I_o	87 mA
Power	P_o	575 mW (linear characteristic)
Galvanic isolation		
Rated voltage	U_m	250V field circuits to control and supply circuits
Input/power supply, internal bus		Safe electrical isolation according to EN 60079-11, voltage peak value 375V
Output/power supply, internal bus		Safe electrical isolation according to EN 60079-11, voltage peak value 375V
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-5:2015 EN 60079-7:2015 EN 60079-11:2012
International approvals		
ATEX approval		Presafe 19 ATEX 14057U
IECEx approval		IECEx PRE 19.0012U
Approved for		Ex db eb q [ia Ga] IIC Gb [Ex ia Da] IIIC [Ex ia Ma] I

Technical Specifications

Attribute	1718-CF4H
General Information	
System information	The module may be installed only in the associated backplanes 1718-A*** in Zone 2 or outside the hazardous area. The corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For certification information and links to control drawings with complete entity parameter details, refer to the 1718 Certification Bulletin, publication 1718-CT001.

1718 Ex I/O Digital Output

Figure 7 - 1718-OB2 and 1718-OB2L Ex I/O 2 Point Digital Output Connection



Technical Specifications

Attribute		1718-OB2	1718-OB2L
Slots			
Occupied slots		1	
Supply			
Connection		backplane bus / booster terminals	
Rated voltage	U_r	Use only in connection with the power supply1718-PSDC	
Power dissipation		2 W	1.5 W
Power consumption		3 W	2.5 W
Internal bus			
Connection		Backplane bus	
Interface		Manufacturer-specific bus	
Digital Output			
Number of channels		2	
Suitable field devices		Solenoid valves, acoustic alarms and visual alarms	
Connection		Channel I: 1+, 4/5/6/8-; channel II: 7+, 4/5/6/8-	
Current limit	I_{max}	40 mA (single mode), 80 mA (parallel mode)	50 mA (single mode),100 mA (parallel mode)
Internal resistor	R_i	258 Ω (single mode), 129 Ω (parallel mode)	131 Ω (single mode), 66 Ω (parallel mode)
Open loop voltage	U_s	23V	16.5V
Line fault detection		Can be switched on/off for each channel via the Add-on Profile, also when turned off (every 2.5 s the valve is turned on for 2 ms)	

Technical Specifications

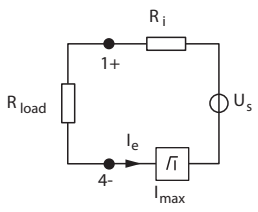
Attribute	1718-OB2	1718-OB2L
Short-circuit Open-circuit	< 50 Ω > 10 kΩ	
Response time	10 ms (depending on bus cycle time)	
Watchdog	within 0.5 s the device goes in safe state, e.g. after loss of communication	
Indicators/settings		
LED indicator	Power indicator (P) green: supply Diagnostic indicator (I) red: module fault, red flashing: communication error, white: fixed parameter set (parameters from the adapter are ignored), white flashing: requests parameters from the adapter Status indicator(1, 2) red: line fault (lead breakage or short circuit), yellow: state of digital I/O (0/1) Mode indicator (M) white: Parallel operation of outputs	
Coding	Optional mechanical coding via front socket	
Directive conformity		
Electromagnetic compatibility Directive 2014/30/EU	 EN 61326-1	
Conformity		
Electromagnetic compatibility	NE 21	
Degree of protection	IEC 60529	
Environmental test	EN 60068-2-14	
Shock resistance	EN 60068-2-27	
Vibration resistance	EN 60068-2-6	
Damaging gas	EN 60068-2-42	
Relative humidity	EN 60068-2-56	
Ambient conditions		
Ambient temperature	-20...+60 °C (-4...+140 °F)	
Storage temperature	-25...+85 °C (-13...+185 °F)	
Relative humidity	95% noncondensing	
Shock resistance	Shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18	
Vibration resistance	Frequency range 10...150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles Frequency range 5...100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance	
Damaging gas	Designed for operation in environmental conditions per ISA-S71.04-1985 severity level G3	
Mechanical specifications		
Degree of protection	IP20 (module), a separate housing is required acc. to the system description	
Connection	Removable front connector with screw flange (accessory) wiring connection via spring terminals: 0.14...1.5 mm^2 (28...16 AWG) wiring connection via screw terminals: 0.08... 1.5 mm^2 (28...16 AWG)	
Mass, approx	425 g (15 oz)	
Dimensions	28 x 107 x 132 mm (1.1 x 4.2 x 5.2 in.)	
Data for application in connection with hazardous areas		
EU-Type Examination Certificate Marking	Presafe 19 ATEX 14054U Ⓔx II 2(1)G Ex db eb q [ia Ga] IIC Gb II (1)D [Ex ia Da] IIIC I (M1) [Ex ia Ma] I	

Technical Specifications

Attribute		1718-OB2	1718-OB2L
Output			
Voltage	U_o	24.2V	17.8V
Current	I_o	108 mA	162 mA
Power	P_o	654 mW	721 mW
Internal capacitance	C_i	12 nF	12 nF
Internal inductance	L_i	0 mH	0 mH
Output (both channels parallel)			
Voltage	U_o	24.2V	17.8V
Current	I_o	216 mA	324 mA
Power	P_o	1308 mW	1442 mW
Internal capacitance	C_i	24 nF	24 nF
Internal inductance	L_i	0 mH	0 mH
Galvanic isolation			
Output/power supply, internal bus		Safe electrical isolation acc. to EN 60079-11, voltage peak value 375 V	
Directive conformity			
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-5:2015 EN 60079-7:2015 EN 60079-11:2012	
International approvals			
ATEX approval		Presafe 19 ATEX 14054U	
IECEx approval		IECEx PRE 19.0009U	
Approved for		Ex db eb q [ia Ga] IIC Gb [Ex ia Da] IIIC [Ex ia Ma] I	
General Information			
System information		The module may be installed only in the associated backplanes 1718-A*** in Zone 2 or outside the hazardous area. The corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.	
Supplementary information		EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For certification information and links to control drawings with complete entity parameter details, refer to the 1718 Certification Bulletin, publication 1718-CT001.	

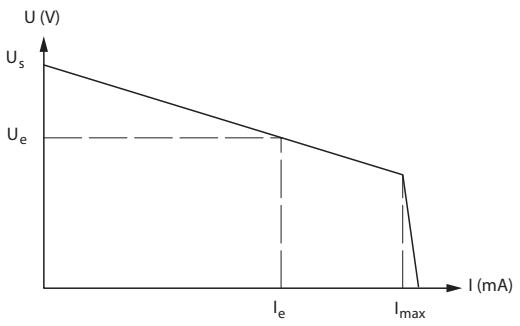
Figure 8 - 1718-OB2 and 1718-OB2l Output Data

Load calculation



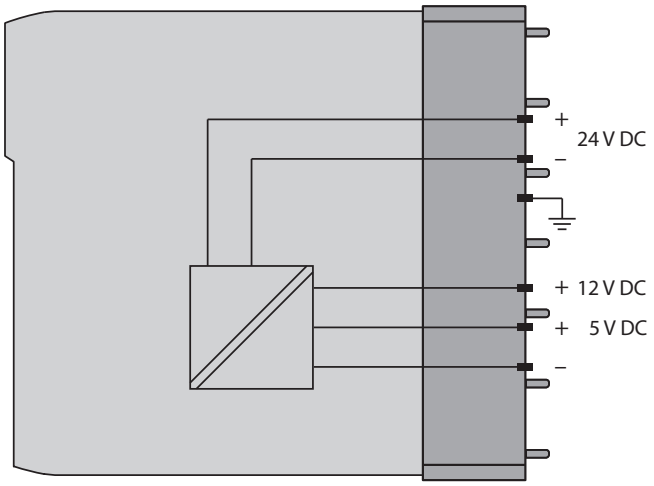
R_{load} = Field loop resistance
$U_e = U_s - R_i \times I_e$
$I_e = U_s/(R_i + R_{load})$

Output characteristics



1718 Ex I/O Power Supply

Figure 9 - 1718-PSDC Ex I/O DC Power Supply - Connection



Zone 1

Technical Specifications

Attribute		1718-PSDC
Slots		
Occupied slots		2
Supply		
Connection		wired to Ex e terminals via backplane
Maximum safe voltage	U_m	60 V DC (SELV/PELV)
Input voltage range	U	18... 32V DC (SELV/PELV)
Power dissipation, approx.		15% of power consumption
Power consumption		≤45 W parallel connection with other 1718-PSDC (automatic power sharing)
Inrush current		1.5 A (10 ms)
Output		
Voltage		5.4 V DC +/- 5%, 12 V DC + 4/- 2%
Power		$P_{5V} \leq 5.4$ W, $P_{12V} \leq 39$ W - P_{5V}
Indicators/settings		
Status indicator		Status indicator green: OFF in case of loss of 24V or 12V or 5V
Directive conformity		
Electromagnetic compatibility Directive 2014/30/EU		EN 61326-1
Conformity		
Electromagnetic compatibility		NE 21
Degree of protection		IEC 60529

Technical Specifications

Attribute	1718-PSDC
Environmental test	EN 60068-2-14
Shock resistance	EN 60068-2-27
Vibration resistance	EN 60068-2-6
Damaging gas	EN 60068-2-42
Relative humidity	EN 60068-2-56
Ambient conditions	
Ambient temperature	-20... +60 °C (-4... +140 °F)
Storage temperature	-25... +85 °C (-13... +185 °F)
Relative humidity	95% noncondensing
Shock resistance	shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18
Vibration resistance	frequency range 10... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance
Damaging gas	designed for operation in environmental conditions according to ISA-S71.04-1985, severity level G3
Mechanical specifications	
Degree of protection	IP20 (module), a separate housing is required according to the system description
Mass, approx	970 g (34.22 oz)
Dimensions	57 x 107 x 132 mm (2.2 x 4.2 x 5.2 in.)
Data for application in connection with hazardous areas	
EU-Type Examination Certificate Marking	 II 2G Ex db eb q IIC Gb
Galvanic isolation Output/power supply, internal bus	EN 60950-1 (safety requirement < 60 V, external power supply SELV/PELV)
Directive conformity Directive 2014/30/EU	EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-5:2015 EN 60079-7:2015
International approvals	
ATEX approval	Presafe 19 ATEX 14059U
IECEx approval	IECEx PRE 19.0014U
Approved for	Ex db eb q IIC Gb
General Information	
System information	The module may be installed only in the associated backplanes 1718-A*** in Zone 2 or outside the hazardous area. The corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For certification information and links to control drawings with complete entity parameter details, refer to the 1718 Certification Bulletin, publication 1718-CT001.

1718 Ex I/O Backplane

Figure 10 - 1718-A10 Ex I/O 10 Slot Chassis - Assembly

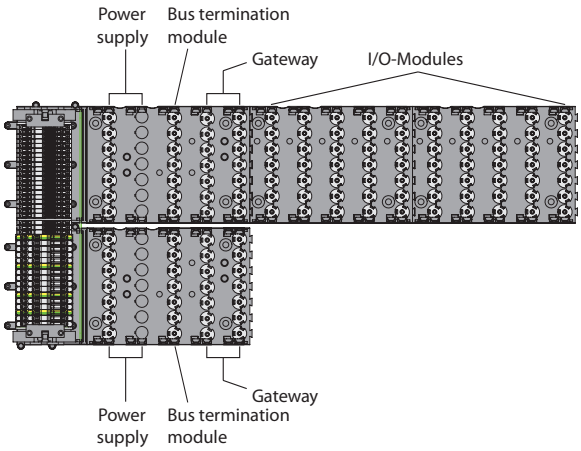
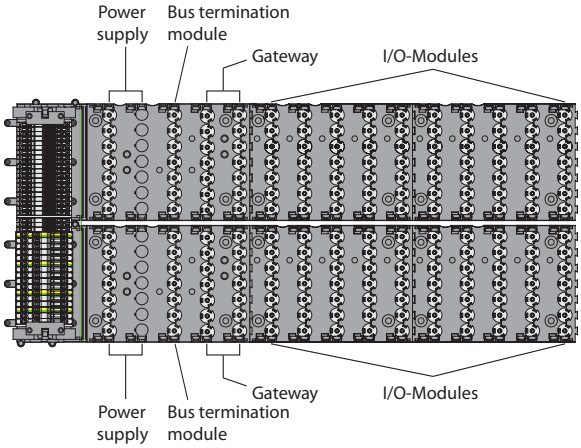


Figure 11 - 1718-A20 Ex I/O 10 Slot Chassis - Assembly



Technical Specifications

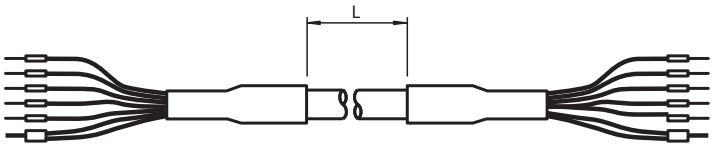
Attribute		1718-A20	1718-A10
Available slots			
Bus coupler		2	
Bus termination		2	
Supply		2	
I/O modules (single width), max		20	10
I/O modules (dual width), max		10	5
Supply			
Maximum safe voltage	U_m	60V DC (SELV/PELV) / 253V AC, depending on power supply	
Input voltage range	U	18... 32V DC (SELV/PELV) / 95... 253V AC; depends on power supply	
Redundancy		yes	
Fieldbus interface			
Redundancy		none	

Technical Specifications

Attribute	1718-A20	1718-A10
Directive conformity		
Electromagnetic compatibility Directive 2014/30/EU	EN 61326-1:2006	
Conformity		
Degree of protection	EN 60529	
Ambient conditions		
Ambient temperature	-20... +65 °C (-4... +149 °F)	
Shock resistance	shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18	
Vibration resistance	frequency range 10 ... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5 ... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance	
Mechanical specifications		
Degree of protection	IP30	
Mass, approx	2725 g	2735 g
Dimensions, (W x H x D)	511 x 212 x 142 mm, without modules	
Data for application in connection with hazardous areas		
EU-Type Examination Certificate Marking	BVS 11 ATEX E 041 X Ⓔx II 2 G Ex d e m IIC T4	
International approvals		
IECEx approval Approved for	BVS 11.0019X International: Ex db eb mb IIC T4 ; Ex db eb IIC T4	
INMETRO	Brazil: TÜV 14.1598X	
General Information		
Supplementary information	EU-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For certification information and links to control drawings with complete entity parameter details, refer to the 1718 Certification Bulletin, publication 1718-CT001.	

1718 Ex I/O Backplane Connection Cables

Figure 12 - 1718-CBL3 and 1718-CBL65 Backplane Connection Cables



Technical Specifications

Attribute	1718-CBL3	1718-CBL65
General Specifications		
Number of pins	6	
Connections	cable end	
Ambient conditions		
Ambient temperature	-20... +60 °C (-4... +140 °F)	
Storage temperature	-25... +85 °C (-13... +185 °F)	
Mechanical specifications		
Cable Color Length L	 gray 300 cm (9.84 ft)	 gray 65 cm(2.13 ft)
Mass	530 g (18.7 oz)	60 g (2.12 oz)
International approvals		
Marine approval Bureau Veritas Marine	 22449/B0 BV	

1718 Ex I/O Placeholder

1718-ARM Ex I/O Placeholder Module

Technical Specifications

Attribute	1718-ARM
Slots	
Occupied slots	1
Supply	
Connection	backplane bus
Rated voltage U_r	Use only in connection with the power supply 1718-PSDC
Ambient conditions	
Shock resistance	shock type I, shock duration 11 ms, shock amplitude 15 g, number of shocks 18
Vibration resistance	frequency range 10... 150 Hz; transition frequency: 57.56 Hz, amplitude/acceleration ± 0.075 mm/1 g; 10 cycles frequency range 5... 100 Hz; transition frequency: 13.2 Hz amplitude/acceleration ± 1 mm/0.7 g; 90 minutes at each resonance
Mechanical specifications	
Connection	Removable front connector with screw flange (accessory) Wire connection via spring terminals: 0.14...1.5 mm^2 (26...16 AWG) Wire connection via screw terminals: 0.08...1.5 mm^2 (28...16 AWG)
Mass, approx	160 g (5.64 oz)
Dimensions	57 x 107 x 132 mm (2.2 x 4.2 x 5.2 in.)
General Information	
System information	The module may be installed only in the associated backplanes 1718-A*** in Zone 2 or outside the hazardous area. The corresponding declaration of conformity has to be observed. For use in hazardous areas (e. g. Zone 2, Zone 22 or Div. 2) the module must be installed in an appropriate enclosure.
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For certification information and links to control drawings with complete entity parameter details, refer to the 1718 Certification Bulletin, publication 1718-CT001.

Notes:

Important User Information

Solid-state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://www.rockwellautomation.com/literature/) describes some important differences between solid-state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid-state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

In no event will Rockwell Automation, Inc. be responsible or liable for indirect or consequential damages resulting from the use or application of this equipment.

The examples and diagrams in this publication are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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At the end of its life, this equipment should be collected separately from any unsorted municipal waste.

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