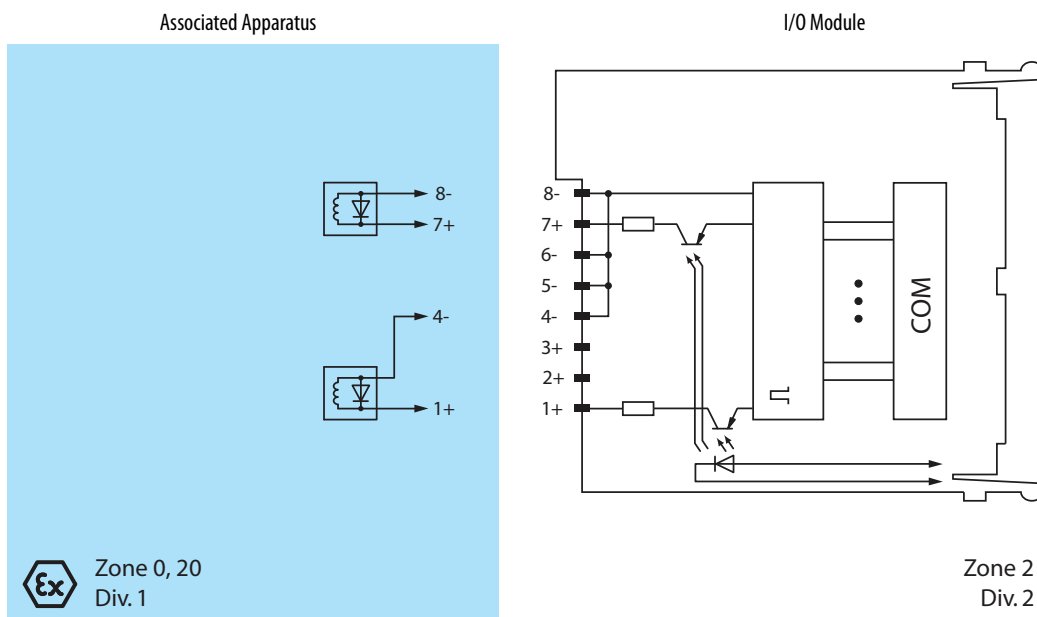


1719 Ex I/O Digital Output

1719-OB2 Ex I/O 2 Point Digital Output 23V - Connection

1719-OB2L Ex I/O 2 Point Digital Output 16.5V - Connection



Technical Specifications

Attribute	1719-OB2	1719-OB2L
Supply		
Connection	Backplane bus	
Rated voltage U_n	Use only in connection with the power supply1719-PSDC	
Power dissipation	2 W	1.5 W
Power consumption	3 W	2.5 W
Wires		
Terminal screw torque	0.22...0.25 N•m (1.95...2.21 lb•in)	
Wire type	Unshielded	
Wire size	0.14...1.5 mm ² (26...16 AWG)	
Internal bus		
Connection	Backplane bus	
Interface	Manufacturer-specific bus to standard adapter	
Output		
Number of channels	2	
Suitable field devices	Solenoid valves, acoustic alarms and LED indicators (without line fault detection)	
Connection	Channel I: 1+, 4/5/6/8-; Channel II: 7+, 4/5/6/8-	
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

Technical Specifications

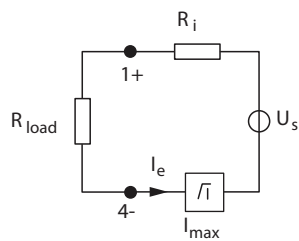
Attribute		1719-0B2	1719-0B2L
Current limit	I _{max}	40 mA (single mode), 80 mA (parallel mode)	50 mA (single mode), 100 mA (parallel mode)
Response time		10 ms (depending on bus cycle time)	
Line fault detection		Can be switched on/off for each channel via the Add-on Profile, also when turned off (every 2.5 s the valve is turned on for 6 ms)	
Short-circuit		< 50 Ω	
Open-circuit		> 10 kΩ	
Indicators/settings			
LED indicator		Power LED (P) green: supply Diagnostic LED (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 LED (1, 2) red: line fault (lead breakage or short circuit), yellow: state of digital I/O (0/1) Mode LED (M) white: Parallel operation of outputs	
Coding		Optional mechanical coding via front socket using coding pins (1719-CP). For more information refer to 1719 Ex I/O Installation Instructions, publication 1719-IN001 .	
Directive conformity			
Electromagnetic compatibility Directive 2014/30/EU		EN 61326-1:2013	
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 when mounted on backplane	
Connection		Removable front connector with screw flange (accessory) Wiring connection (for all terminals): 0.14...1.5 mm ² (28...16 AWG)	
Mass, approx		150 g (5.29 oz)	
Dimensions		16 x 100 x 103 mm (0.63 x 3.9 x 4 in)	

Technical Specifications

Attribute		1719-0B2	1719-0B2L
Data for application in connection with Ex-areas			
EC-Type Examination Certificate Group, category, type of protection, temperature class		EXA 16 ATEX 0025X ⊕ II 3(1) G Ex nA [ia Ga] IIC T4 Gc ⊕ II (1) D [Ex ia Da] IIIC	
Output			
Voltage	U _o	24.2V	17.8V
Current	I _o	108 mA	162 mA
Power	P _o	654 mW	721 mW
Output (both channels parallel)			
Voltage	U _o	24.2V	17.8V
Current	I _o	216 mA	324 mA
Power	P _o	1307 mW	1442 mW
Electrical isolation 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; General Requirements EN 60079-11:2012; Equipment protection by intrinsic safety "i" EN 60079-15:2010; Potentially explosive atmospheres, protection "n"	
International approvals			
UL approval		E106378	
IECEx approval Approved for		IECEx EXA 16.0010X Ex nA [ia Ga] IIC T4 Gc [Ex ia Da] IIIC	
General Information			
System information		The module has to be mounted in appropriate backplanes (1719-A**) in Zone 2, Div 2 or nonhazardous areas. 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. For use in nonhazardous areas, the modules must be installed in a cabinet; no hazardous area rating is required for the cabinet.	
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 1719 Certification Bulletin, publication 1719-CT001 .	

1719-0B2, 1719-0B2L - 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

