

1791DS/ES CompactBlock Guard I/O

Specifications

CompactBlock Guard I/O DeviceNet Safety Module Specifications

Cat. No.	1791DS-IB12	1791DS-IB16	1791DS-IB8XOB8	1791DS-IB8XOBV4	1791DS-IB4XOW4
Description	24V DC Input Module on DeviceNet Networks	24V DC Input Module on DeviceNet Networks	24V DC Input/Solid-State Output Module on DeviceNet Networks	24V DC Input/Output Module on DeviceNet Networks	24V DC Input / Relay Output Module for DeviceNet Networks
Current Consumption	110 mA at 24V DC	85 mA at 24V DC	110 mA at 24V DC	85 mA at 24V DC	110 mA at 24V DC
Operating Voltage Range	20.4...26.4V DC (24V DC, -15...+10%)	19.2...28.8V DC (24V DC, -20...+20%)	20.4...26.4V DC (24V DC, -15...+10%)	19.2...28.8V DC (24V DC, -20...+20%)	20.4...26.4V DC (24V DC, -15...+10%)
Digital Inputs					
Number of Inputs (single-channel)	12 safety	16 safety	8 safety	8 safety	4 safety
Input Type	current sinking	current sinking	current sinking	current sinking	current sinking
Voltage, On-State Input, Min.	11 V DC	11 V DC	11 V DC	11V DC	11V DC
Voltage, Off-State Input, Max.	5V DC	5V DC	5V DC	5V DC	5V DC
Current, On-State Input, Min.	6 mA	3.3 mA	6 mA	3.3 mA	6 mA
Digital Outputs					
Number of Outputs	—	—	8 single-channel, safety solid-state	4 dual channel, safety solid-state	4 single-channel, safety relay
Output Type	—	—	Current sourcing	Current sinking/Current sourcing	Relay Output
Output Current Rating	—	—	0.5 A per point	2.0 A continuous	2 A max. per contact
Output Leakage Current, Max.	—	—	0.1 mA	± 1.0 mA	—
Electrical Service Life	—	—	—	—	100,000 operations min
Short Circuit Protection	—	—	Yes	Yes	No
Standard Pulse Test Outputs					
Number of Pulse Test Sources	4	16	4	8	4
Pulse Test Output Current	0.7 A per point	0.7 A per point	0.7 A per point	0.7 A per point	0.7 A per point
Short Circuit Protection	Yes	Yes	Yes	Yes	Yes
General					
Operating Temperature	-10...55° C (14...131 °F)	-20...60 °C (-4...140 °F)	-10...55° C (14...131 °F)	-20...60 °C (-4...140 °F)	-10...55° C (14...131 °F)
Relative Humidity	10...95% noncondensing	5...95% noncondensing	10...95% noncondensing	5...95% noncondensing	10...85% noncondensing
Vibration	5 g at 10...500 Hz	5 g at 10...500 Hz	5 g at 10...500 Hz	5 g at 10...500 Hz	5 g at 10...500 Hz
Operating Shock	15 g	30 g	15 g	30 g	10 g
Enclosure Protection	IP20	IP20	IP20	IP20	IP20
Dimensions (HxWxD), Metric	68 x 170 x 72 mm*	81 x 170 x 76 mm*	68 x 170 x 72 mm*	81 x 170 x 76 mm*	95 x 170 x 83 mm*
Certifications§	UL, CE, C-Tick, CSA, UL NRGF, ODVA Conformance, certified by TÜV for Functional Safety up to SIL 3 and Cat. 4, PLe				UL, CE, C-Tick, CSA, UL NRGF, ODVA Conformance, certified by TÜV for Functional Safety up to SIL 3 and Cat. 4, PLe

* Includes DIN latch and connectors.

§ When product is marked. See the Product Certification link at <http://www.ab.com/certification> for Declarations of Conformity, Certificates, and other certification details. All specifications are subject to change. Refer to product installations instructions.

CompactBlock Guard I/O EtherNet/IP Safety Module Specifications

Cat. No.	1791ES-IB16	1791ES-IB8XOBV4
Description	24V DC Input Module on EtherNet/IP	24V DC Input/Output Module on EtherNet/IP
Current Consumption	250 mA at 24V DC	250 mA at 24V DC
Operating Voltage Range	19.2...28.8V DC (24V DC, -20...+20%)	19.2...28.8V DC (24V DC, -20...+20%)
Digital Inputs		
Number of Inputs	16 single channel; 8 dual channel	8 single channel; 4 dual channel
Input Type	current sinking	current sinking
Voltage, On-State Input, Min.	11 V DC	11 V DC
Voltage, Off-State Input, Max.	5V DC	5V DC
Current, On-State Input, Min.	3.3 mA	3.3 mA
Digital Outputs		
Number of Outputs	0	4 dual channel
Output Type	—	Current sourcing/current sinking - bipolar pair
Output Current Rating	—	2.0 A continuous
Short Circuit Protection	—	Yes
Standard Pulse Test Outputs		
Number of Pulse Test Sources	16 current sourcing	8 current sourcing
Pulse Test Output Current	0.7 A per point	0.7 A per point
Short Circuit Protection	Yes	Yes
General		
Operating Temperature	-20...60 °C (-4...140 °F)	-20...60 °C (-4...140 °F)
Relative Humidity	5...95% noncondensing	5...95% noncondensing
Vibration	5 g at 10...500 Hz	5 g at 10...500 Hz
Operating Shock	30 g	30 g
Enclosure Protection	IP20	IP20
Dimensions (HxWxD), Metric	80 x 196 x 77 mm*	80 x 196 x 77 mm*
Certifications§	cULus, CE, C-Tick, CSA, UL Class I Div 2 Hazardous, UL NRGF, ODVA Conformance, TÜV and UL certified for functional safety up to SIL 3 and Cat. 4, PLe	cULus, CE, C-Tick, CSA, UL Class I Div 2 Hazardous, UL NRGF, ODVA Conformance, TÜV and UL certified for functional safety up to SIL 3 and Cat. 4, PLe

* Includes terminal block.

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