

Z-10-D-IN

Data Acquisition Module - 10 Digital Inputs

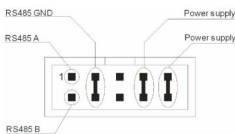
General Features



The Z-10-D-IN data acquisition module accepts up to 10 digital inputs from a wide variety of standard sensors. High speed and robust ModBus RS485 serial communications offers almost universal connectivity. Connections to inputs are via high quality plug in screw terminals. Power and comms connections are made using the innovative "QuickFix" bus system. This passive bus clips into standard DIN rail and provides both the power and serial communications connections. Modules can be freely added and removed from the bus without interruption of the communications or power to other modules

Electrical connections

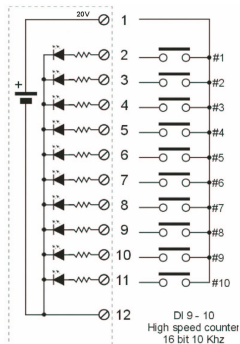
Power & serial interface



QuickFix Bus

The Power and Serial interface connections are available on a recessed plug in the base of the unit. The QuickFix bus clips into 35mm DIN rail and is designed to allow fast, easy installation of a group of modules. It also allows convenient hot swapping of modules. The bus pinouts are shown for information only. Supply must be within the specified tolerance of 19 to 40 Vdc (not polarity conscious), or 19 to 28 Vac. **Failure to observe these precautions will result in serious damage to the instrument.** The equipment must be protected by a suitably sized fuse.

Inputs



The inputs may be powered from the supply at Terminal 1. The negative side of all the inputs are commoned together internally and brought out on terminal 12(GND). The current draw of a closed input is 7mA

Technical Specifications

ELECTRICAL

Power Supply	19 – 40 Vdc / 19 – 28 Vac / 50-60 Hz; 9-28 Vdc option
Power Consumption	Max 2.5W; 1.6W @ 24 Vdc
Isolation	1,500 Vac between inputs // all other low voltage circuits
Overload Protection	Inputs protected transients up to 400 W/ms
Power Supply Transients	Transient protection to 400 W/ms
Transducer Power Supply	20 Vdc @80mA max
Status Indicators	<ul style="list-style-type: none"> Power ON Error Data Transmit (Tx) Data Receive (Rx) 10 Input status
Installation Category	II
Pollution Category	2
Ingress Protection	IP20

MECHANICAL DATA

Operating Temperature	0 ~ +55 °C
Storage Temperature	-20 ~ +70 °C
Humidity	30 ~ 90% @ +40 °C (non condensing)
Dimensions	17.5 x 100 x 112 mm (WxHxD)
Weight	140 g Approx
Case	Nylon 6, 30% fibreglass filled – Self Extinguishing class V0
Hot swapping	Yes
Connections	Plug in, screw terminals for 2.5mm ² conductors (max)
Mounting	Symmetrical 35mm DIN rail (Top Hat section)

COMMUNICATIONS, PROCESSING, MEMORY

Interface	2 wire RS485 serial comms
Baud Rates	1,200, 2,400, 4,800, 9,600, 19,200, 38,400, 57,600 bps
Parity	Selectable as None, Even, Odd
Protocol	ModBUS RTU slave
Message turn round time	< 10 ms (@ 38,400 baud)
Input Sample Time	-
Communication Distance	1, 200 m maximum without line repeater
Connectivity	Max 32 nodes
Data Retention	EEPROM storage of configuration parameters, minimum 10 years retention

SIGNALS & MEASUREMENT

Number of Channels	10 optoisolated inputs
Type	<ul style="list-style-type: none"> 10 optoisolated inputs suitable for reed switches, PNP & NPN Proximity switches, contact closure. 8 inputs with 16 bit counters at a max frequency of 100Hz 2 inputs with 32 bit counters at a max frequency of 10kHz
Range	
Input Impedance	
Resolution	
Accuracy	
Linearity	
Stability	
Response time	
Other Features	<ul style="list-style-type: none"> Measures Frequency to 10 kHz Measures Period, Frequency, Ton and Toff to 100Hz Count on leading or trailing edge Overflow indication on all counters

Configurations & standards

Programming software	Configure and set online parameters via the serial connection with the Z-PROG package or Ethernet with the Z-NET package	Standards CE	EN50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141, EN 61010-1, EN 60742
DIP Switch	Force default communication parameters	Accessories & options	9-28Vdc