

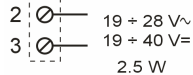
### General Features



The Z-4TC data acquisition module allows the simultaneous acquisition of up to 4 thermocouple or low level voltage signals. Each channel can be configured to a different thermocouple type and selectable software filters ensure reliable values from real world applications. High speed and robust ModBus RS485 serial communications offers almost universal connectivity. Connections are via quality, plug in screw terminals although enormous savings can be 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

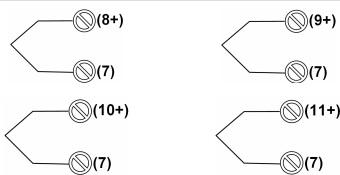
### Electrical connections

#### Power



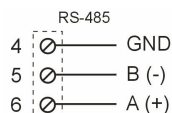
Supply must be within the specified tolerance of 19 to 40 Vdc (not polarity conscious), or 19 to 28 Vac. **Failure to observe these precautions will result in serious damage to the instrument.** The equipment must be protected by a suitably sized fuse.

#### Inputs



**Please Note:-** the negative terminals (7 & 12) are internally connected, so care must be taken to maintain electrical isolation between the thermocouple hot junctions. This is normally achieved by using standard isolated junction thermocouple assemblies, or by careful installation of grounded junction sensors.

#### Serial Interface



**QuickFix Bus**  
The Power and Serial interface connections are also 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. Also allows hot swapping of modules.

### Technical Specifications

ELECTRICAL		MECHANICAL DATA	
<b>Power Supply</b>	19 – 40 Vdc / 19 – 28 Vac / 50-60 Hz 9-28 Vdc option	<b>Operating Temperature</b>	0 ~ +55 °C
<b>Power Consumption</b>	Max 2.5W; 1.6W @ 24 Vdc	<b>Storage Temperature</b>	-20 ~ +70 °C
<b>Isolation</b>	1,500 Vac between inputs // all other low voltage circuits	<b>Humidity</b>	30 ~ 90% @ +40 °C (non condensing)
<b>Overload Protection</b>	Inputs protected against overloads to 60 V	<b>Dimensions</b>	17.5 x 100 x 112 mm (W x H x D)
<b>Power Supply Transients</b>	Transient protection to 400 W/ms	<b>Weight</b>	140 g Approx
<b>Transducer Power Supply</b>	None	<b>Case</b>	Nylon 6, 30% fibreglass filled – Self Extinguishing class V0
<b>Status Indicators</b>	<ul style="list-style-type: none"> <li>Power ON</li> <li>Error</li> <li>Data Transmit (Tx)</li> <li>Data Receive (Rx)</li> </ul>	<b>Hot swapping</b>	Yes
<b>Installation Category</b>	II	<b>Connections</b>	Plug in, screw terminals for 2.5mm <sup>2</sup> conductors (max)
<b>Pollution Category</b>	2	<b>Mounting</b>	Symmetrical 35mm DIN rail (Top Hat section)
<b>Ingress Protection</b>	IP20		
COMMUNICATIONS, PROCESSING, MEMORY		SIGNALS & MEASUREMENT	
<b>Interface</b>	2 wire RS485 serial comms	<b>Number of Channels</b>	4
<b>Baud Rates</b>	1,200, 2,400, 4,800, 9,600, 19,200, 38,400, 57,600 bps	<b>Type</b>	<ul style="list-style-type: none"> <li>Thermocouples: J, K, R, S, T, B, E, N</li> <li>Voltage: Bipolar</li> </ul>
<b>Parity</b>	None, even, odd	<b>Range</b>	± 80 mVdc
<b>Protocol</b>	ModBUS RTU slave	<b>Input Impedance</b>	> 10MΩ
<b>Message turn round time</b>	< 20 ms (@ 38400 baud)	<b>Resolution</b>	5µV (10µV @ 14 bit)
<b>Input Sample Time</b>	200 / 400 ms (to update all 4 channels))	<b>Accuracy</b>	0.1% of range
<b>Communication Distance</b>	1, 200 m maximum without line repeater	<b>Linearity</b>	0.02%
<b>Connectivity</b>	Max 32 nodes	<b>Stability</b>	<ul style="list-style-type: none"> <li>Thermal stability : 0.01%/°C</li> </ul>
<b>Data Retention</b>	EEPROM storage of configuration parameters, minimum 10 years retention	<b>Response time</b>	-
		<b>Other Features</b>	Thermocouple burnout detection Cold Junction Compensation Selectable input filter (1-60 sec)
Configurations & standards			
<b>Programming software</b>	Configure and set online parameters via serial connection with the Z-Setup package or Ethernet with the Z-NET package (requires Z-TWS)		
<b>DIP Switch</b>	Force default communication parameters		
<b>Accessories &amp; options</b>	9-28Vdc		
<b>Standards CE</b>	EN50081-2 55011 EN 50082-2 61000-2-2/4 EN 50140/141 61010-1 EN 60742	EN EN EN	