| | Z-DAQ | Z-PID | Z-4AI | Z-4TC |
|---|---|---|---|---|
| |  |  |  |  |
| | Universal Input module // RS485 | Analogue I / O module + PID control // RS485 | 4 Analogue Input module // RS485 | 4 Thermocouple Input module // RS485 |
| ORDER CODE | Z-DAQ | Z-PID | Z-4AI | Z-4TC |
| **SIGNALS** | | | | |
| INPUTS | ▪ Single (user configurable) input channel.<br>▪ Thermocouples<br>▪ J, K, R, S, T, E; B & N.<br>▪ RTDs<br>▪ Ni100 & PT100, 3/4 wires<br>▪ Resistance<br>▪ To 15K Ohms Max<br>▪ Current ± 20 mA max.<br>▪ Voltage 10 V max.<br>▪ Resolution: 0.1°C for thermocouples and RTDs, 10,000 parts for resistance, 10,000 bipolar points for current and voltage<br>▪ Input Impedance:<br>▪ 2.5 Ohm for current;<br>▪ 1 M Ohm for Voltage.<br>▪ Overload Protection to 60 V continuous (max) | ▪ Single (user configurable) input channel<br>▪ Thermocouples<br>▪ J, K, R, S, T, E; B & N<br>▪ RTDs<br>▪ Ni100 & PT100, 3/4 wires<br>▪ Resistance<br>▪ To 15K Ohms Max<br>▪ Current ± 20 mA max.<br>▪ Voltage 10 V max.<br>▪ Resolution: 0.1°C for thermocouples and RTDs, 1 in 10,000 for resistance, 1 in 10,000 (bipolar) for current and voltage<br>▪ Input Impedance:<br>▪ 2.5 Ohm for current;<br>▪ 1 M Ohm for Voltage.<br>▪ Overload Protection<br>▪ to 60 V continuous (max) | ▪ 4 (user configurable) input channels.<br>▪ Voltage<br>▪ 2 to 10 Vdc full scale.<br>▪ Current, ±20 mA bipolar<br>▪ Resolution 1 in 16,000 (bipolar) for current and voltage (15 bit).<br>▪ Input Impedance:<br>▪ 100 Ohm for current<br>▪ 100 K Ohm for Voltage.<br>▪ Overload Protection<br>▪ to 60 V continuous (max) | ▪ 4 (user configurable) input channels.<br>▪ Thermocouples<br>▪ J, K, R, S, T, E; B & N<br>▪ Voltage ± 80 mV max.<br>▪ Input Impedance<br>▪ 10 M Ohm<br>▪ Overload<br>▪ Protected to 60 V max<br>▪ Isolated Thermocouples required (Negative connections are commoned). |
| OUTPUTS | | ▪ Single analogue output 0/4 to 20 mA for PID control.<br>▪ Resolution better than 1 in 3,200 | | |
| **COMMUNICATION** | | | | |
| INTERFACE | 2 wire RS485 | 2 wire RS485 | 2 wire RS485 | 2 wire RS485 |
| PROTOCOL | ModBUS RTU Slave | ModBUS RTU Slave | ModBUS RTU Slave | ModBUS RTU Slave |
| SPEED | 4800 to 57600 bps | 4800 to 57600 bps | 4800 to 57600 bps | 4800 to 57600 bps |
| COMMS DISTANCE (MAX) | 1,200 m | 1,200 m | 1,200 m | 1,200 m |
| SAMPLING TIME | 300 ms | 300 ms | 200 / 400 ms | 240 / 450 ms |
| COMMUNICATION TIME | < 20 ms @ 38,400 Baud | < 20 ms @ 38,400 Baud | < 20 ms @ 38,400 Baud | < 20 ms @ 38,400 Baud |
| SOFTWARE | ▪ For Parameter setting<br>▪ (Filter time, input type, scaling, serial interface and address). | ▪ For Parameter setting<br>▪ (Filter time, input type, scaling, PID settings serial interface and address). | ▪ For Parameter setting<br>▪ (Filter time, input type, scaling, serial interface and address). | ▪ For Parameter setting<br>▪ (Filter time, input type, scaling, serial interface and address). |
| **GENERAL DATA** | | | | |
| POWER SUPPLY | ▪ 19 to 40 Vdc (9 to.30 opt.)<br>▪ 19 to 28 Vac, 50-60 Hz | ▪ 19 to 40 Vdc (9 to.30 opt.)<br>▪ 19 to 28 Vac, 50-60 Hz | ▪ 19 to 40 Vdc (9 to.30 opt.)<br>▪ 19 to 28 Vac, 50-60 Hz | ▪ 19 to 40 Vdc (9 to.30 opt.)<br>▪ 19 to 28 Vac, 50-60 Hz |
| POWER CONSUMPTION | 2.5 W | 2.5 W | 2.5 W | 2.5 W |
| GALVANIC ISOLATION | 1,500 Vac | 1,500 Vac | 1,500 Vac | 1,500 Vac |
| TRANSDUCER POWER SUPPLY | 20 mA @18 V min | 20 mA @18 V min | 40 mA @18 V min | none |
| FRONT PANEL INDICATION | ▪ Power On<br>▪ Failure / Error<br>▪ Transmit Data (Tx)<br>▪ Receive Data (Rx) | ▪ Power On<br>▪ Failure / Error<br>▪ Transmit Data (Tx)<br>▪ Receive Data (Rx) | ▪ Power On<br>▪ Failure / Error<br>▪ Transmit Data (Tx)<br>▪ Receive Data (Rx) | ▪ Power On<br>▪ Failure / Error<br>▪ Transmit Data (Tx)<br>▪ Receive Data (Rx) |
| OPERATING TEMP | 0 to +55 °C | 0 to +55 °C | 0 to +55 °C | 0 to +55 °C |
| STORAGE | -20 to +70 °C | -20 to +70 °C | -20 to +70 °C | -20 to +70 °C |
| MAX HUMIDITY | 90% @ + 40 °C non condensing | 90% @ + 40 °C non condensing | 90% @ + 40 °C non condensing | 90% @ + 40 °C non condensing |
| PROTECTION | IP20 | IP20 | IP20 | IP20 |
| CONNECTIONS | Screw clamp, plug in connectors, 2.5 $mm^2$ max | Screw clamp, plug in connectors, 2.5 $mm^2$ max | Screw clamp, plug in connectors, 2.5 $mm^2$ max | Screw clamp, plug in connectors, 2.5 $mm^2$ max |
| MOUNTING | 35mm symmetrical DIN rail | 35mm symmetrical DIN rail | 35mm symmetrical DIN rail | 35mm symmetrical DIN rail |
| DIMENSIONS | 17.5 x 100 x 112 mm | 17.5 x 100 x 112 mm | 17.5 x 100 x 112 mm | 17.5 x 100 x 112 mm |
| HOT SWAPPING | yes | yes | yes | yes |
| WEIGHT | 200 g | 200 g | 200 g | 200 g |
| STANDARDS | ▪ EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141 | ▪ EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141 | ▪ EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141 | ▪ EN 50081-2, EN 55011, EN 50082-2, EN 61000-2-2/4, EN 50140/141 |