


Eight Channel Isolator E8

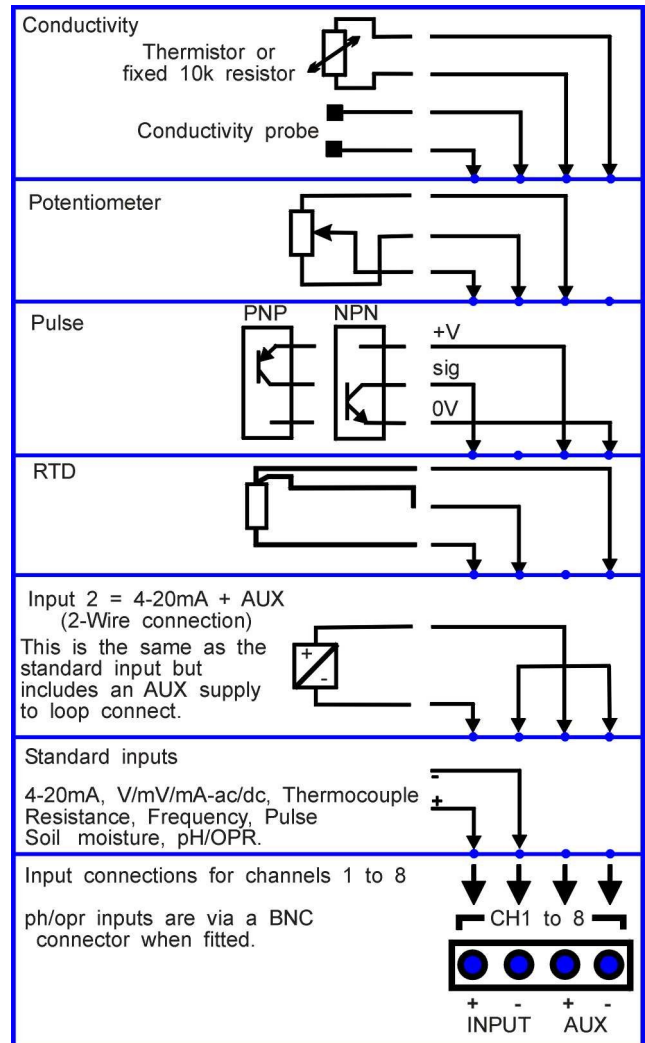
The E8 contains eight loop powered signal isolators transmitters with a 4-20mA or MODBUS radio link output. There are also two extra non isolated channels normally used to measure barometric pressure and ambient temperature. The eight isolated channels can be fitted with a sensor card that enables the E8 to be used with a large range of industrial and environmental sensors. The two optional relays are controlled by the MODBUS radio link to remotely perform a local control function. One of the relays could be used to power up and down all the ten input circuits to reduce power consumption during periods when monitoring is not required or between measurement samples.



General Specifications

Size:	255 x 180 x 100mm
Mounting:	Four 4mm holes at 240 x 164mm
Protection category:	IP66 (IEC529).
Housing material:	Glass filled polycarbonate
Colour:	Grey
Connection:	Screw terminals 1.5mm ²
Cable entry	PG9 cable glands
Calibration accuracy:	<0.5% of range.
Power supply:	10-40Vdc
Linearity:	<0.5% of range.
Ambient operating temperature range:	-10...+65°C.
Temperature drift error:	<0.02% /°C within operating range.
Load for 4-20mA output:	$RL_{max} = \frac{SupplyVoltage - 8.5}{0.02} \Omega$
Load change effect:	0.1% up to RL_{max} .
Response time:	0.2 sec for T90.
Zero adjustment:	+/- 10%.
Span adjustment:	+/- 25% .
Input range:	See input options on next page.
Input/output isolation:	>2kV rms.
Electromagnetic compatibility:	Complies with AS/NZS 4251.1 (EN 50081.1) 

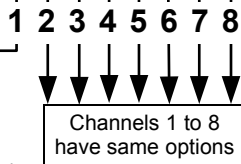
Input Connections Channels 1 to 8



E8- X X X X X X X X X X X X

Type No. Description

Channel 1:



- 0 = Not fitted
 - *) 1 = 4-20mA
 - #*) 2 = 4 - 20mA (+ AUX terminals)
 - *) 3 = DC mA 1mA to 100mAdc.
 - *) 4 = Bipolar ±1mA to ±100mAdc.
 - *) 5 = DC voltage 1V to 100Vdc
 - *) 6 = DC mV /Bipolar ±10mV to ±100Vdc.
 - *) 7 = ac Voltage. 10mV up to 70Vac
 - *) 8 = mAac 1mA up to 70mAac
 - *) 9 = True r.m.s.
 - *) A = Thermocouple
 - *) B = RTD
 - *) C = Frequency sine, 5Hz up to 5kHz span.
 - *) D = Pulse (NAMUR, Contact)
 - #*) E = Pulse (NPN Prox 15V)
 - #*) F = Pulse (PNP Prox 15V)
 - *) G = Resistance 2W const. current exc.
 - *) H = Potentiometer 3W voltage exc.
 - *) J = Conductivity 50uS/cm to 100mS/cm (k=1.0)
 - *) K = pH/ORP electrode
 - *) L = Watermark Soil Moisture Sensor SMS009.
 - *) Z = Other
- # = This type of input requires the use of the internally generated auxiliary power supply. All channels using this supply will have their inputs joined (they will not be isolated from each other). Also the internally generated auxiliary supply is limited to 15V at 50mA.
- *) = Price Extra
L.O.S.=Open space and line of sight, distance can be achieved using external 5dBi antenna at both ends.

Radio Interface:

- 0 = Not fitted
- *) 1 = MODBUS ZigBee 2.4GHz 100mW EIRP (up to 1Km L.O.S.) RPSMA connector.
- *) 2 = MODBUS 9XStream 922MHz 140mW EIRP (up to 10Km L.O.S.) TNC connector.
- *) 3 =MODBUS 9XTend 922MHz 1mW to 1W EIRP (up to 30Km L.O.S.) TNC connector.
- *) Z = Other

Outputs:

- 0 = Not fitted
 - *) 1 = Relay 1
 - *) 2 = Relay 1, Relay 2.
 - *) 3 = Power SW
 - *) 4 = Power SW, Relay 1.
 - *) 5 = 4-20mA.
 - *) 6 = 4-20mA, Relay1
 - *) 7 = 4-20mA, Relay1, Relay2
 - *) 8 = 4-20mA, Power SW
 - *) 9 = 4-20mA, Power SW, Relay1
 - *) Z = Other
- Power SW = Relay 2 controls power to measurement channels to reduce power consumption
Relay 1 Includes the bucket input connector

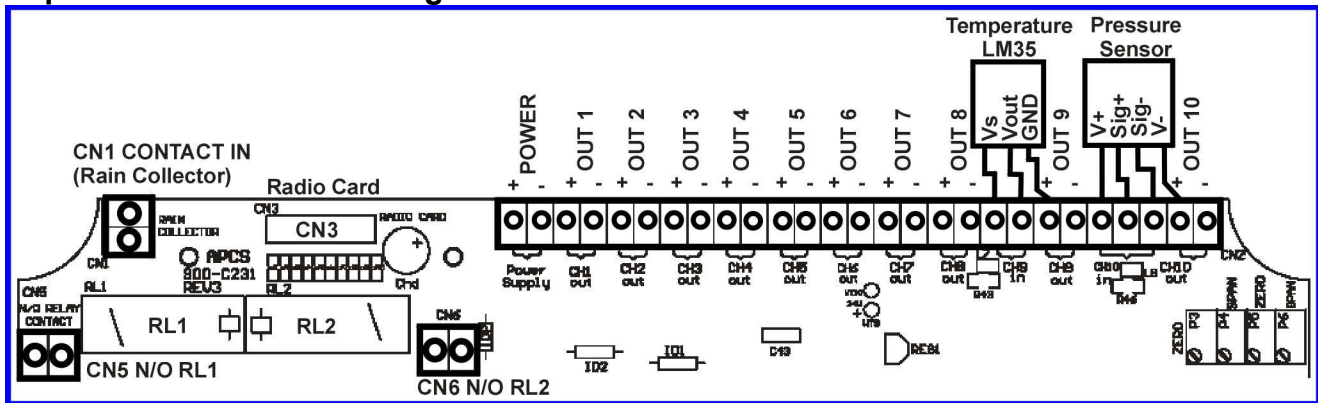
Channel 10:

- 0 = Not fitted
- *) 2 = Barometric pressure
- *) Z = Other

Channel 9:

- 0 = Not fitted
- *) 1 = Air temperature (LM35 sensor).
- *) Z = Other

Top section of PCB Showing Connections



Refer to front page for input connections to channels 1 to 8.

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