IMO Isolating Terminal Blocks 420TW

The 420TW range of DIN-rail terminals provide input isolation and signal conversion

- Voltage, current and thermocouple inputs
- RFI protection, input isolation
- Replace standard DIN-rail terminals
- Simple 2 wire connection
- High noise immunity
- Low cost solution

Options and ordering codes

420TW HL-A **A XX** – **9**

Input	
4-20mA	420TW HL-A
0-5 Volts	420TW HL-E
1-5 Volts	420TW HL-F
0-10 Volts	420TW HL-G
Thermocouple	420TW TC-J
RTD	420TW RTD-J

Description

The 420TW series of isolating terminal blocks can replace standard DIN-rail terminals to provide input isolation and signal conversion.

The units are powered from the output side, making them ideal for PLC and data acquisition applications.

Inputs available include thermocouple, RTD, current and voltage and the standard output is 4-20mA.

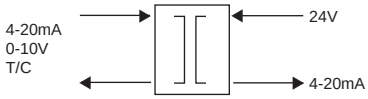
For thermocouple inputs, internal rotary switches allow the user to select virtually any type of thermocouple and the temperature range required.

A typical wiring arrangement is shown opposite.

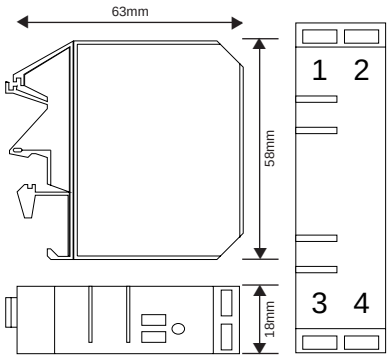
The device is housed in an ultra-compact DIN-rail mounted enclosure only 18mm wide.

Input types
The 420TW device can accept J, K, T, R, S, E and N type thermocouples. The RTD input accepts a PT100 2 wire sensor.

Wiring diagram



Dimensions and connections



Specifications

Parameter	Min	Typ	Max	Comments
Supply voltage	11V	24V	32V	Powered from output side
Input current	0mA	0-20mA	29mA	
Full scale volt drop		0.2V	0.3V	On input side (20mA input)
Input impedance (volt in)		1MΩ		Voltage input
Input impedance (mA in)		10Ω		mA input
Output linearity error		±0.1%		
Temp coefficient			100ppm/˚C	
Load resistance error			±5ppm/Ω	0<R_L <600Ω
Time constant (10-90%)		30ms		300ms for thermocouple input
Operating ambient	-15˚C		70˚C	
Relative humidity	0%		90%	
Isolation voltage	1kV			
Surge voltage	2.5kV for 50µS			Transient of 10kV/µS
Notes	Absolute maximum ratings indicate sustained limits beyond which damage to the device may occur Device is protected against reverse polarity connection Accuracy figures based on 0-20mA input, 250Ω load resistance, and an ambient temperature of 20˚C			