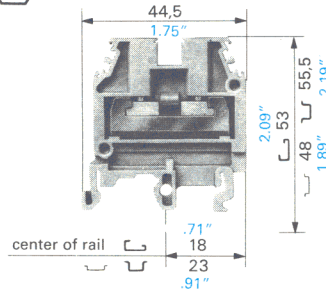


Thermocouple terminal blocks

427-8150

MTC 6

Spacing 6 mm + 0,05 (.238")



Thermocouple terminal block
6 mm block for thermocouple wires

Type	Part number
Grey body	
MTC 6	115 206.22

IMPORTANT:
The 2 conductors are superimposed on 31 mm/1.22" and tightened at 2 points by the round-tip screws for solid wire of DIA. 0,9 to 1,5 mm.

Characteristics

Wire size
(see generalities)

DIN-VDE	UL	CSA	NFC-UTE
2 conductors for thermocouple (DIA. 0,9 - 1,5 mm)			

Rated voltage

V

~ AC

750 Gr.C

= DC

500 Gr.C

Rated current

A

Rated wire size

Other characteristics

For compression clamp connection

Wire stripping length	Recommended screwdriver	Recommended torque	Protection
31 mm max 1.22" max	4 mm	0,4-0,6 Nm 3.5-5.3 lb.in.	IP 20 NEMA 1

Approvals (Contact Entelec)

Accessories

	Type	Part number
1 Rail	32 x 15 DIN 1	PR1 Z2 163 050.04
2 Rail	35 x 7,5 x 1 DIN 3	PR30 prepunched 173 220.05
3 Rail	35 x 15 x 2,3 DIN 3	PR4 168 500.12
4 Rail	35 x 15 x 1,5	PR5 prepunched 101 598.26
5 End stop (all rails)	BAM th. 9,1 mm	103 002.26
6 End section	grey FEM6 th. 2,5 mm	118 368.16
7 Shield connector	CBM	(see access)

Thermocouple terminal blocks

Entelec's MTC 6 thermocouple terminal block provides an interface for connecting thermocouple wire with virtually no loss of signal integrity. The interface design ensures positive wire continuity and allows selection and inventory of one terminal block for all thermocouple material.

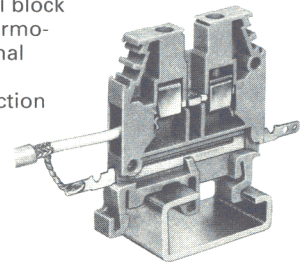


Figure 1. MTC 6 with Shield Connector

The thermocouple principle is based on the reaction of different metals to temperature. When thermocouple wires are terminated or connected, the "metal balance" must be maintained. The introduction of a foreign material (such as copper) results in loss of signal strength and integrity.

When running extended or intermittent lengths of thermocouple wire, to a measurement instrument, two solutions are available.

1. When signals are carried over a long distance, a thermocouple transmitter is required. The thermocouple signal, in millivolts (mV), is converted to a milliampere (mA) signal (i.e. 4-20 mA) for ease of transmission. See Product Guide pages 2.149 and 2.150 for thermocouple transmitters.
2. When thermocouple wire is of insufficient length, termination and interconnection, using terminal blocks, will extend its length.

Universal Terminal Block

Other thermocouple terminal blocks are available with hardware (screws, clamps, and connecting bar) which match the thermocouple material being used. This requires inventory of many different terminal block types.

Entelec's MTC 6 terminal block adapts to all thermocouple material. Its "neutral" method of connection limits the introduction of foreign materials to an insignificant level. The thermocouple wire insulation is stripped (31 mm maximum) and the bare wires are superimposed on one another. The thermocouple wires are in contact over their

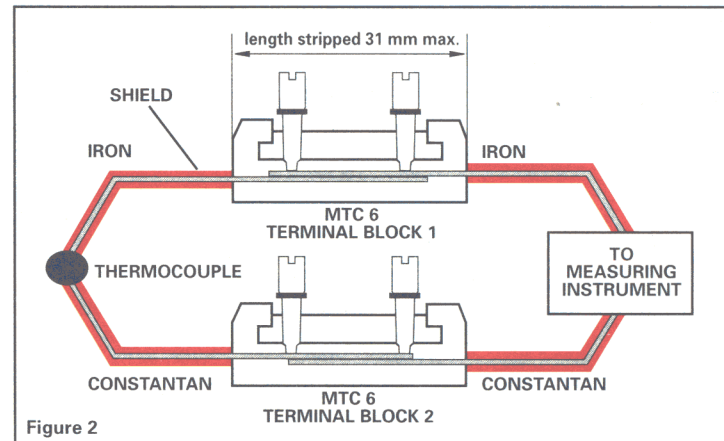


Figure 2

complete 31 mm length and tightened at two points by round tip screws (See Figure 2). The screws, made of plated brass, have only a mechanical function, that of holding the wires together with a point contact. Thus, the pressure points are not relevant in the connection environment.

One thermocouple lead connects through one terminal block (See Figure 2). The MTC 6 requires only 6 mm of space, allowing 50 terminals per foot of rail.

Thermocouple Shield Wire Connector Bar

The MTC 6 can be field or factory equipped with a shield connector bar. (See Figure 1). This bar, made of treated brass, mounts in the lower part of the terminal block. It ensures the continuity of the thermocouple wire shield through the terminal block or to ground with no additional spacing. See Product Guide page 3.11 for a description of the shield connector.