Three wire RTD applications

For two wire or 4-wire RTD applications, use one or two ESP 06D protectors respectively. For three wire RTD applications where multiple RTDs are being protected, use the ESP RTDQ.

- ✔ Colour coded terminals give a quick and easy installation check – grey for dirty (line) end and green for the clean end.
- ✔ Substantial earth stud for effective earthing.
- ✔ UK Oftel Approval NS/G/1235/W/100025.

♦ Suitable for three wire RTD installations.
♦ Available for a working voltage of up to 6V.

Application

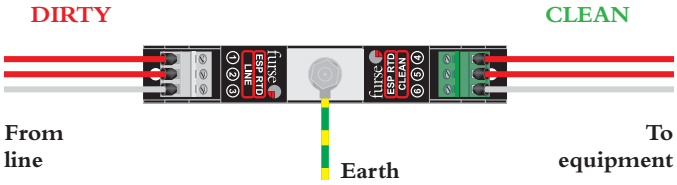
Use on 3 wires to protect monitoring equipment in RTD systems. For further information on RTD applications, see separate Application Note AN001 (contact Furse for a copy).

Features & benefits

- ✔ Protects all three wires on a 3-wire RTD system with a single protector.
- ✔ Low let-through voltage between all lines.
- ✔ Low in-line resistance minimises unnecessary reductions in signal strength.
- ✔ Supplied ready for flat mounting on base or side. Built-in DIN rail foot for simple clip-on mounting to top hat DIN rails.

Installation

Connect in series with the signal line either near where it enters or leaves the building or close to the equipment being protected (eg within its control panel). Either way, it must be very close to the systems earth star point. The screen connection should be made via the earth stud. Install protectors either within an existing cabinet/cubicle or in a separate enclosure.



Suitable accessories

Simultaneously mount and earth up to 4 of these protectors on a CME 4, up to 8 on a CME 8, up to 16 on a CME 16 or up to 32 on a CME 32. Enclosures suitable for up to two (WBX 2/G) or three (WBX 3/G) protectors, or a CME 4 and its associated protectors (WBX 4), CME 8 and protectors (WBX 8) or one or two CME 16 kits and protectors (WBX 16/2/G) are available.

Electrical specification

	ESP RTD
Nominal voltage[1]	6V
Maximum working voltage[2]	7.79V
Current rating (signal)	200mA
In-line resistance (per line ±10%)	10Ω
Bandwidth (-3dB 50Ω system)	800kHz

1 Nominal voltage (DC or AC peak) measured at <200μA. 2 Maximum working voltage (DC or AC peak) measured at <10mA.

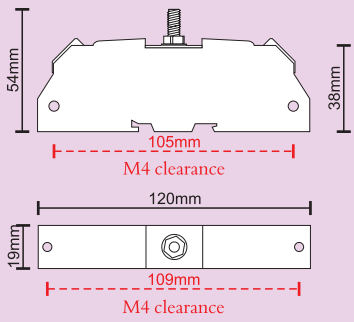
Transient specification

	ESP RTD
Let-through voltage (all conductors)[1]	
5kV, 10/700μs test to:	10.5V
BS 6651:1999 Appendix C, Cat C-High and ITU (formerly CCITT) IX K17	
Maximum surge current[2]	
- per signal wire	10kA
- per pair	20kA

1 The maximum transient voltage let-through the protector throughout the test (±10%), line to line & line to earth. Response time <10ns.
2 Tested with 8/20μs waveshape to ITU (formerly CCITT), BS 6651:1999 Appendix C.

Mechanical specification

	ESP RTD
Temperature range	-25 to +70°C
Connection type	Screw terminal
Conductor size (stranded)	1.5mm²
Earth connection	M6 stud
Weight - unit	0.08kg
- packaged (per 10)	0.85kg



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