ESP RTD

LPZ $0_A \rightarrow 3$

FULL MODE Bonding + Equipment Protection

SIGNAL/ TELECOM TEST CAT D + C + B

e ENHANCED Low let-through voltage

CURRENT 200mA RATING

LOW INLINE 10Ω RESISTANCE

Combined Category D, C, B tested protector (to BS EN 61643-21) suitable for 3 wire RTD systems to protect monitoring equipment. For use at boundaries up to LPZ 0_A to protect against flashover (typically the service entrance location) through to LPZ 3 to protect sensitive electronic equipment.

Features and benefits

- ✔ Protects all three wires on a 3-wire RTD system with a single protector
- ✔ Very low let-through voltage (enhanced protection to BS EN 62305) between all lines – Full Mode protection
- ✔ Full mode design capable of handling partial lightning currents as well as allowing continual operation of protected equipment
- ✔ Repeated protection in lightning intense environments
- ✔ Low in-line resistance minimises 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
- ✔ Colour coded terminals give a quick and easy installation check

Electrical specification	ESP RTD
Nominal voltage[1]	6V
Maximum working voltage *Uc*[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] *Up*	
C2 test 4kV 1.2/50µs, 2kA 8/20µs to BS EN/EN/IEC 61643-21	12.0V
C1 test 1kV, 1.2/50µs, 0.5kA 8/20µs to BS EN/EN/IEC 61643-21	11.5V
B2 test 4kV 10/700µs to BS EN/EN/IEC 61643-21	10.0V
5kV, 10/700µs[2]	10.5V
Maximum surge current D1 test 10/350µs to BS EN/EN/IEC 61643-21	
– per signal wire / per pair	2.5kA/5kA
8/20µs to ITU (formerly CCITT), BS 6651:1999 Appendix C	
– per signal wire / per pair	10kA/20kA

[1] The maximum transient voltage let-through the protector throughout the test (±10%), line to line & line to earth, both polarities. Response time <10ns.
[2] Test to BS 6651:1999 Appendix C, Cat C-High, IEC 61000-4-5:1995, ITU-T (formerly CCITT) K.20, K.21 and K.45,Telcordia GR-1089-CORE, Issue 2:2002, ANSI TIA/EIA/IS-968-A:2002 (formerly FCC Part 68).

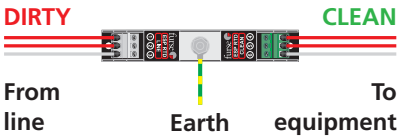
Mechanical specification	ESP RTD
Temperature range	–25 to +70°C
Connection type	Screw terminal
Conductor size (stranded)	2.5mm²
Earth connection	M6 stud
Case material	ABS UL94 V-0
Weight – unit / packaged (per 10)	0.08kg / 0.85kg

Application

For further information on RTD applications, see separate Application Note AN001 (contact Furse for a copy).

Installation

Connect in series with the signal line either near where it enters or leaves the building or close to the equipment being protected ensuring it is very close to the systems earth star point. Screen connection should be made via the earth stud.



Accessories

Combined Mounting/Earthing kits

CME 4
Mount & earth up to 4 protectors

CME 8
Mount & earth up to 8 protectors

CME 16
Mount & earth up to 16 protectors

CME 32
Mount & earth up to 32 protectors

Weatherproof enclosures

WBX 2/G
For use with up to 2 protectors

WBX 3, WBX 3/G
For use with up to 3 protectors

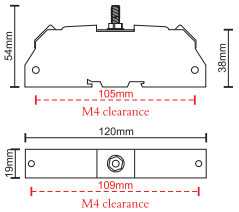
WBX 4, WBX 4/GS
For use with a CME4 and up to 4 protectors

WBX 8, WBX 8/GS
For use with a CME 8 and up to 8 protectors

WBX 16/2/G
For use with one or two CME 16 and up to 32 protectors

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

Dimensions



TSC-0808