

MTL4755ac for 3-wire RTDs



The MTL4755ac is a 3-channel barrier designed particularly for use with 3-wire RTDs with earthed or floating bridges. As each loop generally needs three barrier channels, a single module interfaces with one 3-wire RTD. It has a low end-to-end resistance of only 18Ω/channel to minimise span changes while two of the channels track within 0.15Ω (from -20 to +60°C) to minimise zero shift with temperature. It is not designed to accept bussed power.

SPECIFICATION

(See also common specification)

Channel numbers	Channel numbers
1	2 and 3
Safety description	Safety description
3V, 10Ω, 300mA	3V, 10Ω, 300mA
Polarity	Polarity
ac	ac
Max. end-to-end resistance	Max. end-to-end resistance
18.2Ω	18.5Ω*
V_{wkg} at 1μA	V_{wkg} at 1μA
0.6V	0.6V
V_{max}	V_{max}
2.3V	2.3V
Fuse rating	Fuse rating
100mA	100mA
Matched power	Matched power
0.23W	0.23W

*Tolerance ±0.15Ω at 20°C, channels track within 0.15Ω from -20 to +60°C

MAXIMUM CABLE PARAMETERS

(for three channels)

	BASEEFA (group IIC)			FM (groups A & B)	
	Capacitance (μF)	Inductance (mH) or L/R ratio (μH/Ω)		Capacitance (μF)	Inductance (mH)
1	40	0.27	42	-	-
2	-	-	-	19.9	0.02

1: Without earth return

2: With earth return (FM includes an earth return in its calculations)

ANALOGUE INPUTS (LOW LEVEL)

