

MTL4644A/AS CURRENT REPEATER

4/20mA passive i/p for HART® transmitters

The MTL4644A provides an input for separately powered 4/20mA transmitters and also allows bi-directional transmission of HART communication signals superimposed on the 4/20mA loop current, so that the transmitter can be interrogated either from the operator station or by a hand-held communicator (HHC). Alternatively, the MTL4644AS acts as a current sink rather than driving a current into the load.

SPECIFICATION

See also common specification

Number of channels

Two

Input

Signal range: 4 to 20mA
Under/over-range: 1.0 to 21.5mA

Input impedance for HART signals

at terminals 1, 2 and 4, 5: > 230Ω

Maximum input volt drop

at terminals 1, 2 and 4, 5: < 6.6V
i.e. a transmitter load of 330Ω at 20mA

Output

Signal range: 4 to 20mA
Under/over-range: 1.0 to 21.5mA
Load resistance (MTL4644A)
Conventional transmitters: 0 to 360Ω
Smart transmitters: 250Ω ±10%
Load (MTL4644AS)
Current sink: 600Ω max.
Maximum voltage source: 24V DC
Circuit output resistance: > 1MΩ

Circuit ripple

< 50μA peak-to-peak up to 80kHz

Transfer accuracy at 20°C

Better than 20μA

Temperature drift

< 1μA/°C

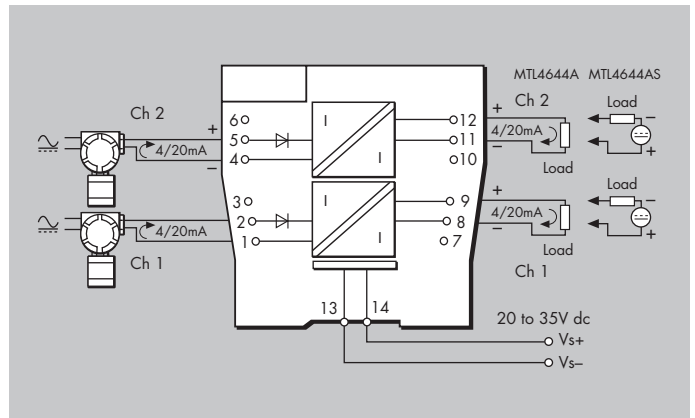
Response time

Settles within 200μA of final value after 20ms

Communications supported

HART

MTL4644A / MTL4644AS



LED indicator

Green: power indication

Power requirement (with 20mA signal)

70mA at 24V
85mA at 20V
50mA at 35V

Power dissipation within unit (with 20mA signals)

MTL4644A 1.5W @ 24V dc
MTL4644AS 2.0W @ 24V dc

The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.



EUROPE (EMEA): +44 (0)1582 723633
enquiry@mtl-inst.com

THE AMERICAS: +1 800 835 7075
csinfo@mtl-inst.com

ASIA-PACIFIC: +65 6 645 9888
sales.mtling@cooperindustries.com

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