

MTL4641A/AS CURRENT REPEATER

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

The MTL4641A 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. Alternatively, the MTL4641AS acts as a current sink rather than driving a current into the load.

SPECIFICATION

See also common specification

Number of channels

One

Input

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

Input impedance for HART signals

at terminals 1, 2: > 230Ω

Maximum input volt drop

at terminals 1, 2: < 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 (MTL4641A)
Conventional transmitters: 0 to 360Ω
Smart transmitters: 250Ω ±10%
Load (MTL4641AS)
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

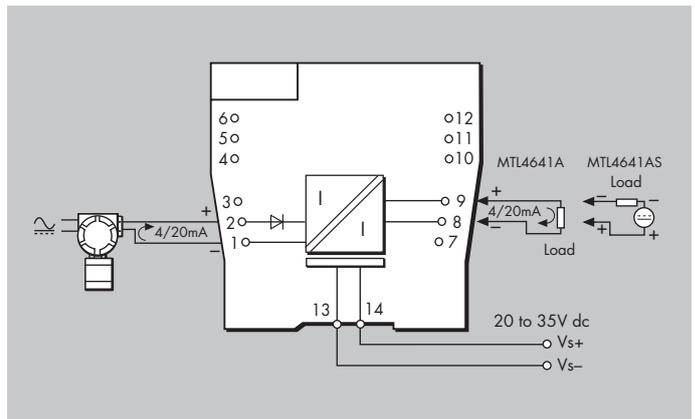
Response time

Settles within 200μA of final value after 20ms

Communications supported

HART

MTL4641A / MTL4641AS



LED indicator

Green: power indication

Power requirement (with 20mA signal)

50mA at 20V
45mA at 24V
35mA at 35V

Power dissipation within unit (with 20mA signals)

MTL4641A 0.8W @ 24V dc
MTL4641AS 1.1W @ 24V dc



Powering Business Worldwide

Eaton Electric Limited,

Great Marlings, Butterfield, Luton
Beds, LU2 8DL, UK.
Tel: + 44 (0)1582 723633 Fax: + 44 (0)1582 422283
E-mail: mtlenquiry@eaton.com
www.mtl-inst.com

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EUROPE (EMEA):

+44 (0)1582 723633 mtlenquiry@eaton.com

THE AMERICAS:

+1 800 835 7075 mtl-us-info@eaton.com

ASIA-PACIFIC:

+65 6 645 9888 sales.mtlsing@eaton.com

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In the interest of further technical developments, we reserve the right to make design changes.