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Data Sheet

August 15, 2026

EATON / MTL INSTRUMENTS

Eaton / MTL Instruments MTL4041B Repeater Power Supply

Eaton MTL Instruments MTL4041B Repeater Power Supply The MTL4041B provides a fully floating DC supply for energizing conventional or smart 2- or 3-wire 4/20 mA transmitters in hazardous areas and repeats the current into a safe-area load. Bi-directional HART digital communication is supported on the 4/20 mA loop. Intrinsic-safety transmitter power and 4/20 mA repeating, HART handheld or host interrogation of field transmitters, and Zone 0 / Div 1 certified loops when suitably approved. Supports 2-wire 3-wire and smart HART transmitters. The MTL4041B provides a fully floating DC supply for energizing conventional or smart 2- or 3-wire 4/20 mA transmitters in hazardous areas and repeats the current into a safe-area load. Bi-directional HART digital communication is supported on the 4/20 mA loop. Intrinsic-safety transmitter power and 4/20 mA repeating, HART handheld or host interrogation of field transmitters, and Zone 0 / Div 1 certified loops when suitably approved. Supports 2-wire 3-wire and smart HART transmitters. Bi-directional digital communication on the analog loop.



MODEL

**Eaton / MTL
Instruments
MTL4041B**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

MTL4041B

LISTING

<https://aumictechlabs.com/products/mtl4041b-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Eaton / MTL Instruments MTL4041B is a single-channel repeater power supply that energizes conventional 2- or 3-wire 4/20mA transmitters and smart transmitters installed in hazardous areas, then repeats the current signal in a separate safe-area circuit. The unit supports bi-directional digital communication signals superimposed on the 4/20mA loop, enabling interrogation from operator stations and hand-held communicators. It also accommodates hazardous-area current sources, vortex meters, and turbine meters.

Technical Specifications The MTL4041B delivers a minimum of 15V at 20mA to the transmitter and line, with maximum open-circuit voltage of 28V. Input and output signal range spans 4 to 20mA, with over-/under-range capability from 1.0mA to 21.5mA. Digital signal bandwidth extends from 10Hz to 8kHz. Transfer accuracy at 20°C is better than 20µA, with temperature drift less than 1µA/°C. Response time settles within 200µA of final value in 20ms. For conventional transmitters, safe-area circuit load resistance is 0 to 650Ω; for smart transmitters, 250Ω ±10%. Safe-area output resistance exceeds 1MΩ. Ripple is limited to less than 50µA peak-to-peak up to 80kHz. The supply requires 65mA at 24V dc, 75mA at 20V dc, or 50mA at 35V dc with 20mA signal. Power dissipation reaches 1.2W at 24V with 20mA signal and 1.4W at 35V. Isolation between safe- and hazardous-area circuits is 250V ac.

Key Features Line Fault Detection (LFD) repeats open-circuit or short-circuit currents to the safe-area control system Non-energy storing apparatus design ($\leq 1.2V$, $\leq 0.1A$, $\leq 20\mu J$, $\leq 25mW$) allows direct connection to any intrinsically safe loop with open-circuit voltage $\leq 28V$ Green LED power indicator Compact 16mm module width; 0.24 lbs weight Glass-fibre reinforced polyester base with transparent high-strength polycarbonate lid Fully floating DC supply for hazardous-area installations

Typical Applications Energizing 2- or 3-wire 4/20mA transmitters in Zone 0, IIC, T4-6 or Div. 1, Group A hazardous locations Smart transmitter interrogation systems Vortex and turbine meter signal conversion Current source isolation in intrinsically safe circuits

Compatibility & Integration The MTL4041B is part of the MTL4000 series, now discontinued; the MTL4500 series is the manufacturer's recommended replacement for new installations.

MTL4041B Characteristics / Specifications

PARAMETER	VALUE
Model	MTL4041B
Instrument Type	repeater power supply for 4/20 mA transmitters
Number Of Channels	1
Signal Range	4 to 20 mA
Over Under Range	1.0 mA to 21.5 mA
Transmitter Supply At 20 MA	15 V minimum
Open Circuit Voltage Maximum	28 V
Digital Signal Bandwidth	10 Hz to 8 kHz
Safe Area Load Conventional	0 to 650 ohm
Safe Area Load Smart	250 ohm plus or minus 10 percent
Safe Area Output Resistance	greater than 1 Mohm
Safe Area Ripple	less than 50 uA peak to peak up to 80 kHz
Transfer Accuracy At 20 C	better than 20 uA
Temperature Drift	less than 1 uA perCResponse Time: settles within 200 uA of final value within 20 ms
Supply Current At 24 V	65 mA with 20 mA signal
Supply Current At 20 V	75 mA with 20 mA signal
Supply Current At 35 V	50 mA with 20 mA signal
Power Dissipation At 24 V	1.2 W with 20 mA signal
Power Dissipation At 35 V	1.4 W
Isolation	250 Vac between safe and hazardous area circuits
Safety Description Terminals 2 To 5 And	28 V 300 ohm 93 mA
Hazardous Location Class	Zone 0 IIC T4-6 if suitably certified; Div 1 GroupASupply Voltage Vs: 20 V to 35 V dc
Led Indicator	green power
Bandwidth	10 Hz to 8 kHz

MTL4041B Specifications

PARAMETER	VALUE
Eaton MTL Instruments MTL4041B Repeater Power Supply	Overview
Green power LED indicator	250 Vac isolation between safe and hazardous circuits
Technical Specifications	Model: MTL4041B
Notes	Numeric rows from Eaton/MTL MTL4041B repeater power supply data sheet.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
Specifications	
PARAMETER	VALUE
Model	MTL4041B
Instrument Type	repeater power supply for 4/20 mA transmitters
Number Of Channels	1
Signal Range	4 to 20 mA
Over Under Range	1.0 mA to 21.5 mA
Transmitter Supply At 20 MA	15 V minimum
Open Circuit Voltage Maximum	28 V
Digital Signal Bandwidth	10 Hz to 8 kHz
Safe Area Load Conventional	0 to 650 ohm
Safe Area Load Smart	250 ohm plus or minus 10 percent
Safe Area Output Resistance	greater than 1 Mohm
Safe Area Ripple	less than 50 uA peak to peak up to 80 kHz
Transfer Accuracy At 20 C	better than 20 uA
Temperature Drift	less than 1 uA perCResponse Time: settles within 200 uA of final value within 20 ms
Supply Current At 24 V	65 mA with 20 mA signal
Supply Current At 20 V	75 mA with 20 mA signal
Supply Current At 35 V	50 mA with 20 mA signal
Power Dissipation At 24 V	1.2 W with 20 mA signal
Power Dissipation At 35 V	1.4 W
Isolation	250 Vac between safe and hazardous area circuits
Safety Description Terminals 2 To 5 And 6: 28 V 300 ohm 93 mA	
Hazardous Location Class: Zone 0 IIC T4-6 if suitably certified; Div 1 GroupASupply Voltage Vs: 20 V to 35 V dc	
Led Indicator: green power	
Notes	
Numeric rows from Eaton/MTL MTL4041B repeater power supply data sheet.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.