

# Current Converter

(4-20 mA input, +40 to +160 mA output)  
IC-DR-18



**Description:** The Current Converter accepts a 24VDC-power supply (nominal) and 4-20mA input signal converting it to a +40 to 160 mA output. Span and zero are user adjustable. Diagnostic LEDs indicate operational status. The load should be floating, isolated from ground. The unit is conformal coated and available in a DIN rail mount housing.

**Ordering Part Number: IC-DR-18**

**Technical Specifications:** Typical at nominal input voltage and 25 degrees C unless otherwise specified.

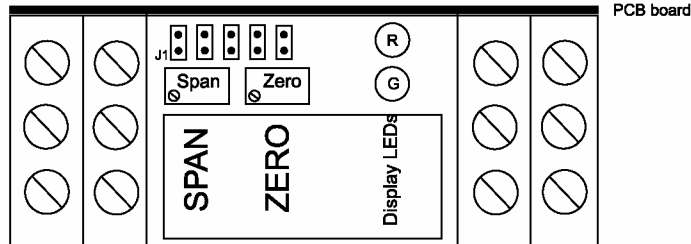
<b>Input Specifications:</b>	
<i>Input</i>	4-20 mA
<i>Input Current Limit</i>	Approx. 25 mA
<i>Compliance Voltage</i>	3.5 V maximum
<i>Open Loop Detection</i>	Provided
<i>Input Resistance</i>	Contact manufacturer
<b>Output Specifications:</b>	
<i>Current Output Settings</i>	+40 mA to 160 mA (factory set by jumpers)
<i>Load Connection</i>	Ungrounded, Floating
<i>Compliance Voltage</i>	12V max.
<i>Output Shut-down</i>	@I-IN < 3.2 mA or @ I-IN > 22 mA
<i>Short Circuit Protection</i>	All ways
<i>Response Time</i>	<5 mSec.
<i>Non-linearity</i>	<0.1% without adjustments performed
<b>Power Supply:</b>	
<i>Power Supply</i>	24VDC nominal (16-32VDC operating range) Transient protection is provided up to 36V.
<i>Reverse Polarity Protection</i>	Provided
<i>Internal Output Voltages</i>	+12.5V/0.5A max. -12.5V/10ma max.
<b>General Specifications:</b>	
<i>Power Consumption</i>	<7 Watts@24VDC, 310 mA
<i>Zero and Span Adjustment</i>	+/-10% of full scale
<i>LED Indication</i>	Red and green LED indication of: Normal operation, Power OK – Both LEDs ON 5% below 4 mA – Green LED slow flash, Red LED ON 5% above 20 mA – Green LED ON, Red LED slow flash 10% below 4 mA – Both Green and Red LEDs slow flash 10% above 20 mA – Both Green and Red LEDs fast flash NB. When both Green and Red LEDs are flashing the output is 100 mA.
<i>Operating Conditions</i>	-40 to 85 degrees C (-40 to 185 degrees F)
<i>Electrical connection</i>	Screw terminals accept 14-24 AWG wire
<i>Packaging and Dimensions (W x H x D)</i>	PCB conformal coated DIN rail mount (75 x 98.5 x 22.5 mm or 2.95 x 3.87 x 0.88 inches) for high profile DIN rail (35 mm)

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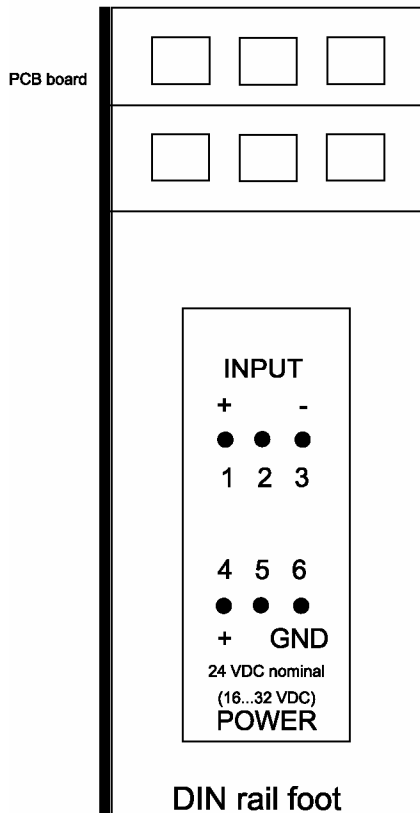
# CONNECTIONS AND ADJUSTMENTS

TOP VIEW



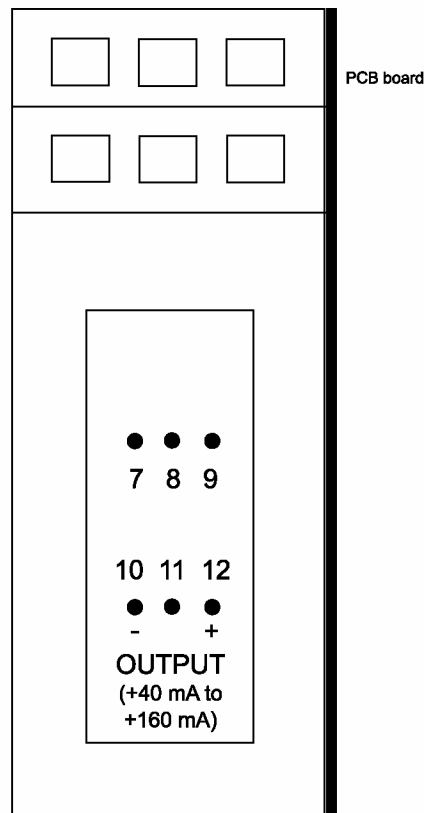
SIDE VIEW

SCREW TERMINALS (in housing)



SIDE VIEW

SCREW TERMINALS (in housing)



Adjustments:	Multi-turn trim pots (10 turns)
Zero	Apply 12mA input current and use the ZERO trimpot to adjust current output to 100 mA.
Span	STEP 1 - Apply 20mA input current and use the SPAN trimpot to adjust current output to match the positive full scale value selected by the jumpers (160 mA). STEP 2 - Apply 4mA input current and use the ZERO trimpot to adjust current output to match the lowest full scale value selected by the jumpers (40 mA). STEP 3 - Repeat steps 1 and 2 if necessary. STEP 4 - Apply 12 mA input current and confirm the output current is 100 mA.

Specifications are subject to update without notice.

Form: TD2305LP-02/20/07