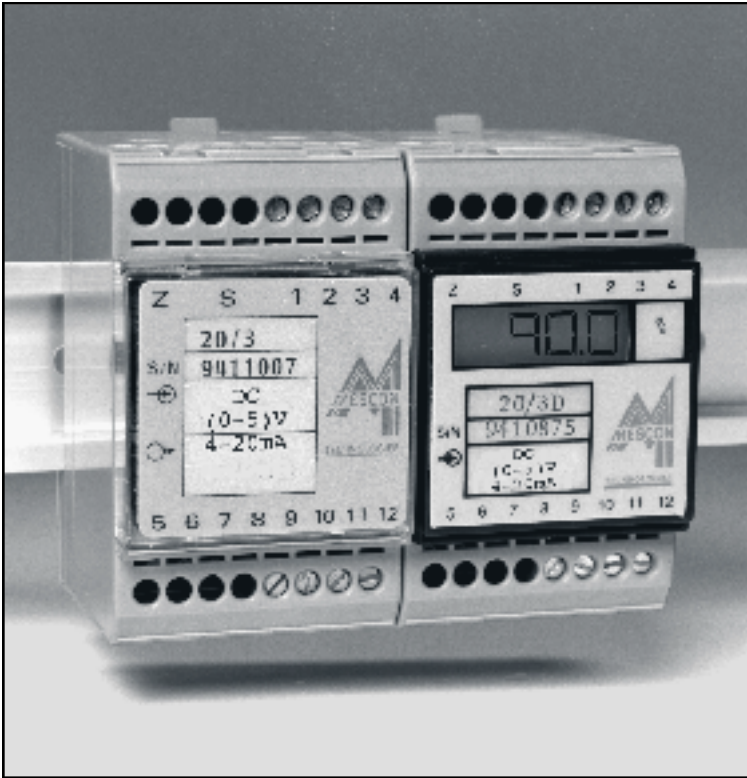


DC Amps/Volts 2-Wire Transmitters

Precision, Isolated, Universal

Model 20/3, (L)



The model 20/3 is a precision, loop powered 2-wire transmitter with galvanic isolation between its input and the current-loop output signal. The 20/3 provides the necessary circuitry for amplification and processing of DC mV/mA/Volt signals from various sensors and signal sources. Model 20/3L also provides input linearization to correct for non-linearity of many input sensors. An optional LCD indicator is available to indicate the output in Engineering Units.

The 20/3 can be easily ranged without requiring special tools or board modifications. The transmitter is a member of Mescon's family of advanced Universal Input 2-wire transmitters and signal conditioners. As such it can be readily reconfigured to accept other popular input types such as RTD, Thermocouples, and Potentiometers.

A TEST terminal provides a 40-200 mV signal proportional to the 4-20mA output. Applying a DVM to the TEST terminals allows monitoring and verification of the output without interrupting or disconnecting the current loop.

FEATURES:

- 2-wire transmitter system
- Eliminates ground loop errors
- User selectable input
- User selectable range
- Over 1000 Volts Isolation
- Wide ranging ZERO and SPAN
- Output TEST terminal
- DIN rail mounting

AVAILABLE OPTIONS:

- 3-1/2 digit backlit LCD indicator
- Input linearization, 20/3L
- Input voltage to 500VDC
- Higher I/O isolation
- NEMA 4X or NEMA 7 enclosure



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DC Amps/Volts 2-Wire Transmitters

Precision, Isolated, Universal

Model 20/3, (L)

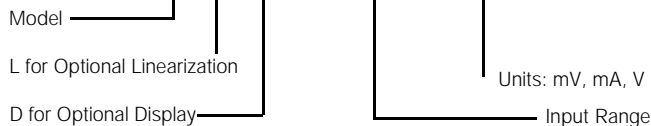
SPECIFICATIONS:

Input	DC mV, mA or Volts
Output	4-20mA, 2-wire, limiting at <28mA
Input Range (std.)	Voltage: 5mV min, 300V max. (500V opt.) Current: 10µA min, 100mA max. (200 mA opt.)
Input protection	Voltage: 20X rated input to 500VDC max. Current: 20X rated input to 500mA max.
Input Impedance	10 M for inputs < 200 mV 1.0 M for inputs > 200 mV
Linearity	Better than ±0.03% of span
Calibration accuracy	±0.1% of span for linear input (incl. linearity) ±0.25% of span for 20/3L (most inputs)
Voltage Drop on Input	200 mV on current inputs
Isolation	>1000 VDC or peak AC
Maximum Load	$R_{max} = (V_{supply} - 10V) \div 20mA$
C.M.R.R.	>120 db, DC to 60 Hz
Output ripple	<0.01% of span (to 5KHz)
Adjustments	> ±25% for both ZERO and SPAN
Power supply range	10 - 50 VDC reverse polarity protected
Operating Temp.	-20°C to 70°C, (0°F to 160°F)
Temperature stability	Better than ±0.02% of span/°F
Humidity	0-95%RH, non-condensing
Mounting	DIN rail (35mm) or panel (with adapter)

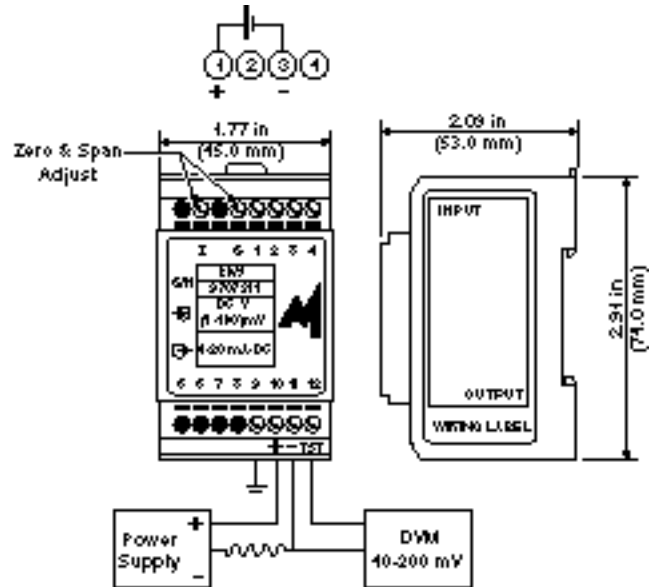
All specifications are subject to change without notice.

ORDERING INFORMATION

20/3(L) (D) - (XXX-XXX) - X



Please request our ordering and calibration diskette describing the rest of Mescon's products.



Wiring Instructions:

1. Connect the positive lead to terminal 1.
2. Connect the negative lead to terminal 3.
3. Connect the positive supply lead to terminal 10 (+V).
4. Connect the negative supply lead to terminal 11 (-V).
5. Connect the system ground to terminal 9.
6. Turn the power on and observe input/output parameters

Note: To monitor the output without breaking the current loop, connect a digital voltmeter between terminal 12 (TST) and terminal 11 (-V). An internal 10.0 ohm resistor in series with the current loop provides a 40-200mV signal for the 4-20mA current output.

Calibration and Adjustments:

It is assumed that the unit undergoing calibration has been properly ranged at the factory or workshop.

1. Connect a DC Voltage simulator to the 20/3 input terminals. Observe for proper polarity.
2. Complete the output loop using a power supply and a precision digital current indicator. Turn the power on.
3. Set the input to the desired minimum signal and adjust the ZERO pot until the current indicator reads 4.00mA.
4. Set the input to the desired maximum signal and adjust the SPAN pot until the current indicator reads 20.00mA.
5. Repeat steps 3 & 4 until no further adjustment is needed.

Note: If the unit can not be calibrated to the desired range, it should be returned to the workshop for proper ranging.



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