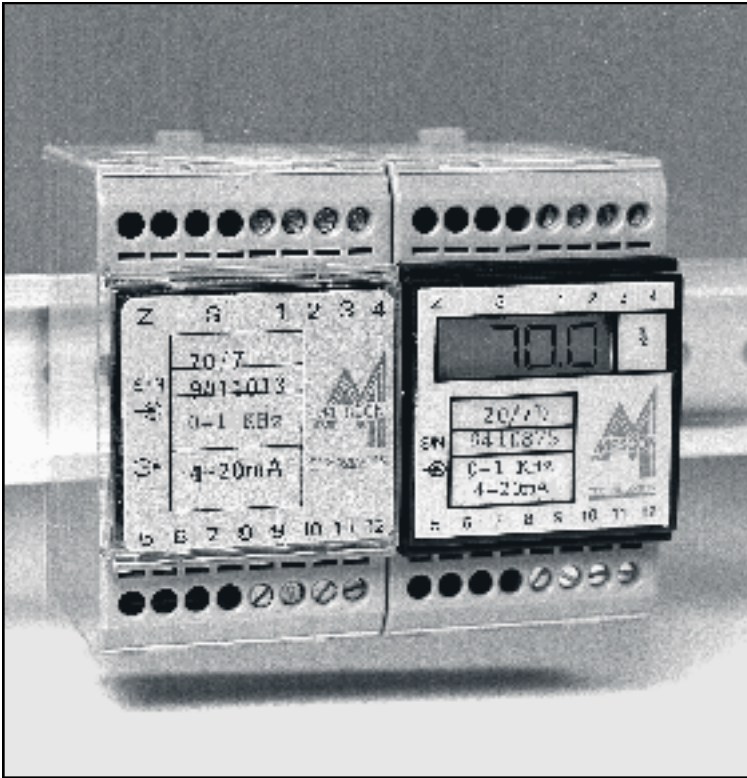


Frequency Input 2-Wire Transmitters

Precision, Isolated, Rangeable

Model 20/7, (L)



The model 20/7 is a precision, loop powered 2-wire transmitter with galvanic isolation between its input and the current-loop output signal. The 20/7 provides the necessary circuitry for amplification and processing of Frequency/Pulse signals from various sensors such as flowmeters, cams, encoders, tachogenerators and many other types of rotating machinery. The output is a 4-20mA output signal which is linearly proportional to the input frequency or pulse rate. An optional LCD indicator is available on the 20/7 to indicate the output in Engineering Units.

The 20/7 can be easily ranged without requiring special tools or board modifications.

The model 20/7L also provides signal linearization to correct for the inherent non-linearity of sensors such as turbine/paddle flowmeters.

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

FEATURES:

- 2-wire transmitter system
- Eliminates ground loop errors
- User selectable ranges
- Over 1000 Volts Isolation
- Wide ranging ZERO and SPAN
- DIN rail mounting

AVAILABLE OPTIONS:

- 3-1/2 digit backlit LCD indicator
- Input sensor linearization
- Input voltage to 750 Volts
- Higher I/O isolation
- NEMA 4X or NEMA 7 enclosure



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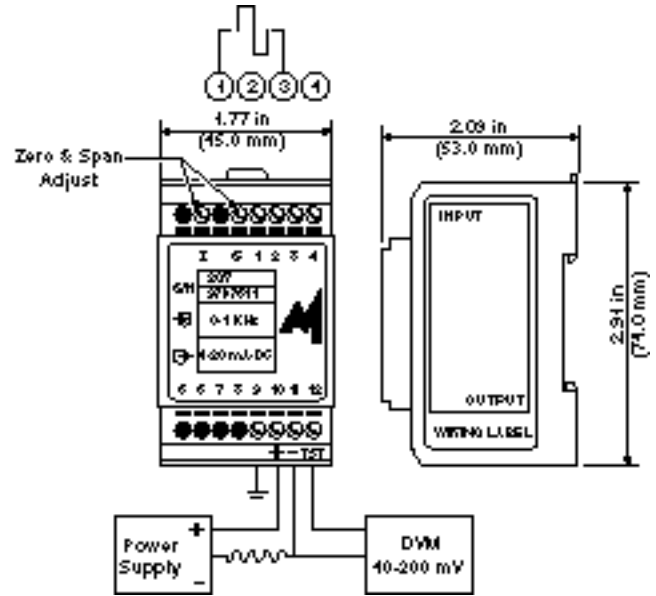
Frequency Input 2-Wire Transmitters

Precision, Isolated, Rangeable

Model 20/7, (L)

SPECIFICATIONS:

Input	Frequency/Pulse
Output	4-20mA, 2-wire, limiting at <28mA
Input Range	0-50Hz min, 0-20,000Hz max. (other ranges on request)
Linearity	Better than $\pm 0.1\%$ of span (BSLF)
Calibration Accuracy	$\pm 0.15\%$ of span for linear input $\pm 0.25\%$ of span for 20/7L (most inputs)
Input Impedance	250K for all input ranges
Input Levels	50mV min, 250V max. (peak voltage)
Response Time	From 100mS for 20KHz to 500mS for 50Hz
Output Ripple	<0.02% for 20KHz to <0.2% for 50Hz
Isolation	>1000VDC or peak AC
Adjustments	$\pm 25\%$ for both ZERO & SPAN
Maximum Load	$R_{max} = (V_{supply} - 10V) \div 20mA$
Power Supply Range	10-50VDC (reverse polarity protected)
Operating Temperature	-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)



Wiring Instructions:

1. Connect the leads from the frequency source to terminals 1 & 3.
2. Connect the positive supply lead to terminal 10.
3. Connect the negative supply lead to terminal 11.
4. Connect the system ground to terminal 9.
5. 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:

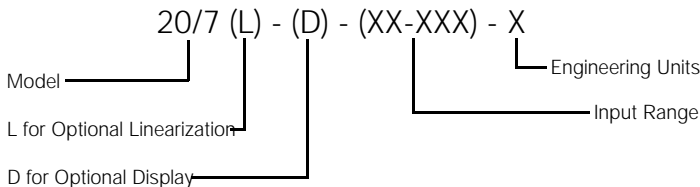
It is assumed that the unit undergoing calibration has been properly ranged at the factory or workshop.

1. Connect a frequency simulator to input terminals 1 and 3.
2. Complete the output loop using a power supply and a precision digital current indicator.
3. Set the frequency simulator to the desired minimum input and adjust the ZERO pot until the output reads 4.00mA.
4. Set the frequency simulator to the desired maximum input and adjust the SPAN pot until the output reads 20.00mA.
5. Repeat steps 3 & 4 until no further adjustment is needed.

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

All specifications are subject to change without notice.

ORDERING INFORMATION



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



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