AC Amps/Volts 2-Wire Transmitters Precision, Isolated, Rangeable Model 20/6, (N)



The model 20/6 is a precision, loop powered 2-wire transmitter with galvanic isolation between its input and the current-loop output signal. The 20/6 provides the necessary circuitry for amplification, rectification and processing of AC Current or Voltage signals from various sensors and signal sources. An optional LCD display is

available on the 20/6 to indicate the output in Engineering Units.

FEATURES:

- 2-wire transmitter system
- Eliminates ground loop errors
- Over 2000 Volts Isolation
- Wide ranging ZERO and SPAN
- Output TEST terminals
- DIN rail mounting

AVAILABLE OPTIONS:

- 3-1/2 digit backlit LCD indicator
- Input currents to 12 Amps
- Input voltage to 750 Volts
- NEMA 4X or NEMA 7 enclosure

The 20/6 can be easily ranged without requiring special tools or board modifications. The model 20/6N is a special version intended for very low current/voltage measurements and higher voltages over a wider frequency range of up to 2KHz.

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



MESCON Technologies, Inc.

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SPECIFICATIONS:

Input Range: 20/6 (50-60 Hz)	Current: 250mA min, 5A max. Voltage: 50V min, 300V max.
Input Range: 20/6N	Current: 10µA min, 250mA max. Voltage: 100mV min, 500V max.
Zero Suppression	to >50% of full range
Output	4-20mA, limiting at <28mA
Supply Voltage: 20/6	8-36 VDC (10-60 optional)
Supply Voltage: 20/6N	10-50 VDC (reverse polarity protected)
Input Voltage Drop	
Input Impedance	
Isolation	
Linearity (BSLF)	
Conversion Method	AC averaging
Adjustements	>±25% for both ZERO and SPAN
Temperature stability	Better than ±0.02% of span/°F
Operating Temp	20°C to 70°C, (0°F to 160°F)
Humidity	0-95%RH, non-condensing
Mounting	DIN rail (35mm) or panel (with adapter)
Maximum Load	R _{max} =(V _{supply} -10V) ÷ 20mA

All specifications are subject to change without notice.



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



Wiring Instructions:

- Connect an input lead to terminal 1.
- 2. Connect the second lead to terminal 3.
- 3. Connect the positive supply lead to terminal 10 (+V).
- 4. Connect the negative supply lead to terminal 11 (-V).
- 6. Connect the system ground to terminal 9.
- 7. 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 an AC calibrator to the 20/6 input terminals
- 2. Complete the output loop using a power supply and a precision digital current indicator. Turn the power on.
- Set the wiper to the desired minimum position and adjust the ZERO pot until the current indicator reads 4.00mA.
- Set the wiper to the desired maximum position 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 transmitter can not be calibrated to the desired range, it should be returned to the workshop for proper ranging.



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