SENSORTRONICS

Our people make the difference.

MODEL 2520

LOAD CELL SUMMING TRANSMITTER

APPLICATIONS

- Precision weighing with load cells
- Process control add-on loops
- Can be used with all types of low output sensors

FEATURES

- Summing of up to 4 load cells
- Complete strain gage bridge signal conditioner
- High gain, low drift, low temperature coefficient precision amplifiers, with low input current (10 pA typical)
- Wide input range from 5 mV to 50 mV full scale
- 4-20 mA or 0-20 mA output; capable of driving 1000 ohm loop
- 2 to 10 V or 0 to 10 V output
- Excitation supply capable of driving four load cells
- Both AC & DC power capability
- Surge voltage suppression
- Input, output and power three way isolation
- NEMA 4 enclosure for use in rugged environments

ISO 9001

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Performance Specifications

ACCURACY

10 to 35°C, at 10 V Excitation ..... Less than ±0.1%
Total Temperature Coefficient ..... 0.0025%/°C typical

ISOLATION

AC or DC Powered - Three Way Isolated
AC to Input and Output ..... 750 VAC
DC to Input and Output ..... 750 VAC; 500 pF

AMPLIFIER SECTION

Gain
Input Range ..... 5mV to 50mV
Linearity ..... ±0.01% of Full Scale
TC ..... 0.0015%/°C typical
Input Noise - 0.1 Hz to 10 Hz ..... 2µV P-P
0.1 Hz to 10 Hz ..... 2µV P-P
Tare Adj. Range; 3 Settings ..... -3 mV to +65 mV
(Equals 80% F.S of ..... +6.5 mV to +16 mV
3mV/V cell) ..... +16 mV to +25 mV
Temperature Coefficient ..... 0.0015%/°C typical
Common Mode Rejection, DC ..... 100 dB, minimum
Common Mode Input ..... +5 Volts, maximum

OUTPUT

Zero Selection ..... 0 or 4 mA; 0 or 2 V
Temperature Coefficient ..... 0.001%/°C Typical
Test Signal Output ..... Add 8 mA or 4 V to Output
Current Output Span
Current ..... 0 or 4 to +20 mA Available 0 to -0.3 mA for zero monitor
Compliance Voltage ..... 0 to +20 Volts Available 0 to -0.3 V for zero monitor
Loop Resistance ..... 0 to 1000 ohms
Voltage Output Span
Voltage ..... 0 or 2 to 10V . Available -2 V to 10 V
Maximum Load Current ..... 5 mA

OUTPUT

Frequency Response
2 Poll roll off ..... -3dB at 10 Hz typical
Response Time
Rise Time 10% to 90% ..... 35 mS
To 0.1% of final value ..... 100 mS

COMPARATOR OUTPUT

Optional with Opto22 I/O Module

Comparative Voltage ..... 0 to 10 V
Hysteresis Voltage ..... 0.07 V typical
Comparator Output ..... see the application of Opto22 output module
Input/Output Isolation ..... 300 V

BRIDGE EXCITATION SUPPLY

Voltage Adjustment Range ..... 5 to 10 V
Temperature Coefficient ..... 0.001% typical at 10 V
Load Current ..... 0 to 120 mA
Remote Sense for Excitation Supply
Current Leads Volt Drop ..... Maximum 1 V drop
Sensing Leads Resistance ..... Maximum 1 kohm
Line Regulation ..... ≥ 0.01%, typ. 0.002%
Load Regulation ..... ≥ 0.03%, typ. 0.005%
Output Noise ..... ≥ 1 mV RMS
120 Hz Bandwidth

POWER INPUT

LED power on indicator

AC ..... 115V (90 to 130 V)/ . 230 V (180 to 260 V) . 50/60 Hz, 10 W typ.
DC ..... 11 to 30 V, 8W

ENVIRONMENT

Operating Temperature ..... -25°C to + 55°C
Storage Temperature ..... -25°C to + 85°C
Weight ..... 10.5 lb (4.7 kg)
Junction Box ..... 10" L x 8" W x 4" H NEMA 4 Box or NEMA 4 X Stainless Steel Box
Total Size ..... 12.5" x 9: x 4.4" (318 mm x 229 mm x 112 mm

ORDERING INFORMATION

2520-NE ..... Printed Circuit Board without NEMA 4 Enclosure
2520-W4 ..... Printed Circuit Board with NEMA 4 Painted Enclosure
2520-WS ..... Printed Circuit Board with NEMA 4 S.S. Enclosure

Note: Unless otherwise noted, specifications apply after half hour warm up at 23°C ±2°C ambient. Temperature coefficients apply between 0°C and 55°C ambient.