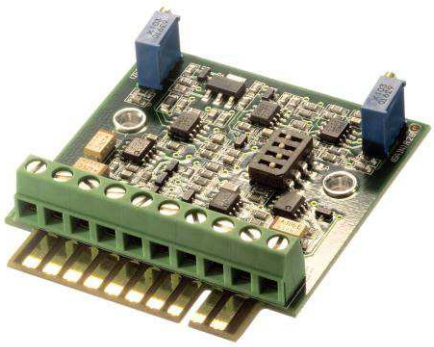


LiM-420

Current Output
LVDT/RVDT OEM Signal Transmitter

SPECIFICATIONS

- **Low cost OEM 4-20mA (3-wire) transmitter**
- **Very compact, open PC board design**
- **DIP switch selectable coarse gain**
- **Zero and span adjustment potentiometers**
- **18 to 30VDC supply voltage**
- **-25º to +85ºC operating temperature range**
- **Card-edge or barrier strip connections**
- **Works with very low input impedance LVDTs and RVDTs**

FEATURES

- Low cost/high performance
- Wide operating temperature range
- Six selectable gain ranges
- 20-turn zero & gain adjustment potentiometers
- Threaded standoffs for panel/box mounting

APPLICATIONS

- Valve position feedback
- Roller gap sensing
- Paper head box position
- Coater knife gap
- Materials testing machines

The **LiM-420** is an LVDT/RVDT signal conditioning transmitter specifically designed for the OEM marketplace. Operating on an 18 to 30VDC unipolar supply voltage, the LiM-420 delivers a low noise 4 to 20mA output signal. Compatible with many 5 and 6 electrical connection LVDT and RVDT transducers (see specifications), this compact transmitter provides excellent performance on a budget. A generous excitation drive current of 20mA, allowing operation with transducer input impedances as low as 175 Ohms.

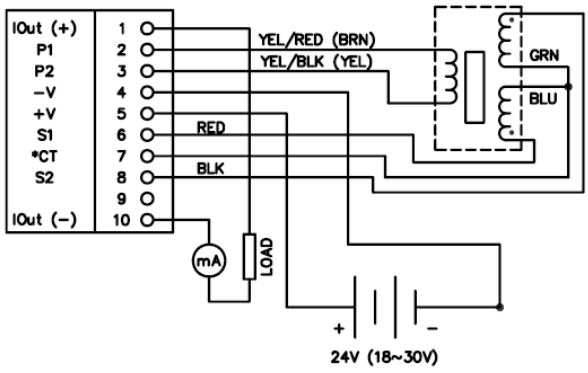
The LiM-420 is designed for easy installation, plugged into a backplane-type connector, or with individual wires connected to the screw terminal barrier strip. Measuring less than 2.5x2.5 inches, the LiM-420 may be mounted or stacked using the permanently attached threaded standoffs, or card-edge guides. All six selectable gain ranges are easily accessed via DIP switches and two multi-turn potentiometers allow for fine zero and gain adjustments.

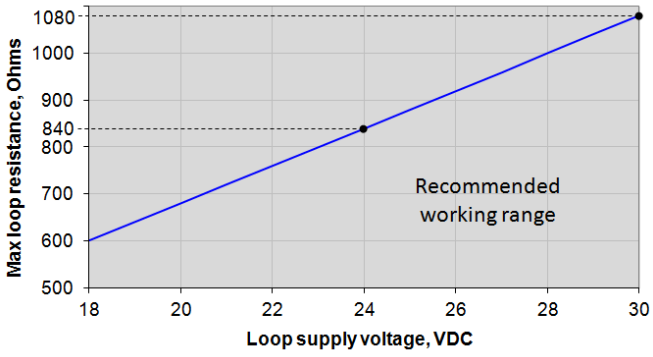
PERFORMANCE SPECIFICATIONS

ELECTRICAL SPECIFICATIONS	
Supply voltage	18 to 30VDC (unipolar)
Supply current	50mA maximum
Output range	4 to 20mA
Temperature coefficient of output	±0.02% of FSO per ºF [±0.036% of FSO per ºC] over operating temperature range
Maximum loop resistance	500Ω (with 24VDC supply)
Output noise and ripple	25µA RMS maximum
Frequency response	50Hz @ -3 dB
Non-linearity	±0.05% of FSO
Stability	±0.05% of FSO maximum (after 30 minute warm-up)
Zero adjustment range	±2.5mA
Transducer excitation	
Voltage	3.5 VRMS ±10%, sine wave
Current	20mA RMS maximum
Frequency	2.5kHz
Transducer requirements	
Transducer type	LVDT or RVDT with 5 or 6 electrical connections
LVDT/RVDT input impedance	175Ω minimum
LVDT/RVDT output range	0.1 to 5.6 VRMS for 20mA full scale output
ENVIRONMENTAL AND MECHANICAL SPECIFICATIONS	
Operating temperature range	-13°F to +185°F [-25°C to 85°C]
Storage temperature range	-40°F to +257°F [-40°C to 125°C]
Gain adjustment	6 DIP switch selectable ranges; 20-turn fine adjustment potentiometer
Zero adjustment	20-turn fine adjustment potentiometer
Electrical connections	PC board edge (to backplane-type connector) or barrier terminal strip (accepts AWG 14 to 30 wire sizes)
Mounting	Use the attached threaded standoffs or card-edge guides

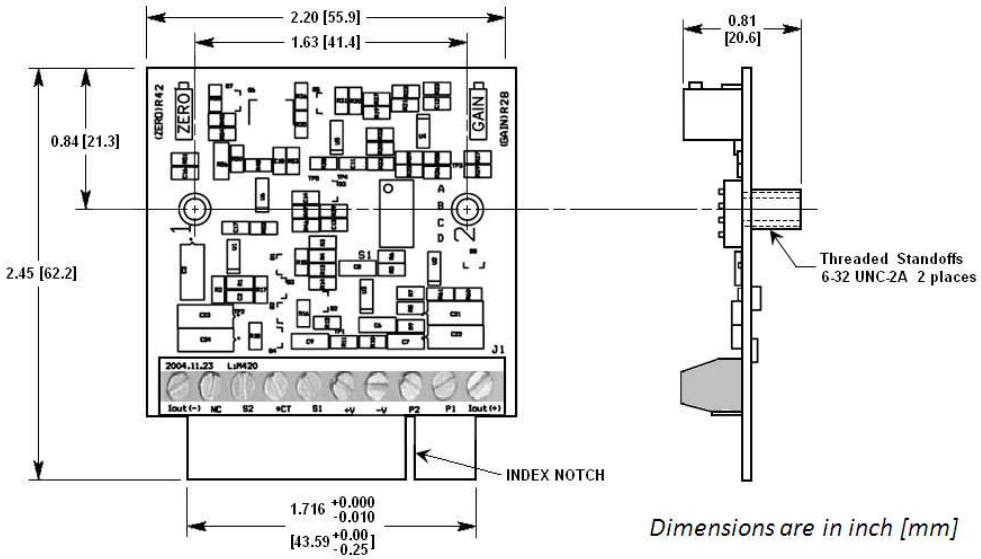
Notes:
All values are nominal unless otherwise noted
FSO (Full Scale Output) is the largest absolute value of the outputs measured at the range ends

WIRING SCHEMATIC & LOOP RESISTANCE (LOAD)





DIMENSIONS



ORDERING INFORMATION

Description	Model/Comments	Part Number
LVDT/RVDT 4-20mA Output, OEM Transmitter Module	LiM-420	72290000-000
Mating Connector *(sold separately)*	CINCH 5010A-20 PCB EDGE 1	62105012-000
Cable to connect HCA/HCI/GCA/R36AS to LiM4-20 *(1)*	PTO6A-10-6S to Stripped & Tinned	04290417-000
Extension cable to connect LBB (option -001) to LiM4-20 *(1)*	PTO6A-10-6S to Stripped & Tinned	04290582-000

(1) All cables are shielded, 10 foot long, and rated 80°C [176°F]. Consult factory for other lengths.

ASIA

ABOUT MACRO SENSORS

Macro Sensors, founded by Howard A. Schaevitz, has more than three hundred man-years of experience in just one thing: the design and manufacture of LVDTs. We believe that you need solutions, not simply products. When you call us, you get the benefit of our experience and our commitment.

Most products listed are in stock for immediate delivery, and we strive to offer the finest customer service in the industry: technical support from people who understand LVDTs and how to apply them to your benefit, and a commitment to excellent pricing, quality products, and deliveries that you can truly rely on. Macro Sensors also has a comprehensive network of representatives and distributors in the U.S. and around the world to provide you with local support.

We manufacture an enormous array of LVDTs, from modified standards to complete custom designs. Our customers consistently tell us it is Macro Sensors? quality and service that keeps them coming back. Let our experience go to work for you.

Macro Sensors · 7300 U.S. Route 130 North, Bldg. 22, Pennsauken, NJ 08110-1541 USA
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