Programmable Isolating Signal Converter/Lineariser L900

Function: The L900 is a programmable microprocessor based isolating signal converter which will convert a range of process signals into standard transmission voltage or current signals. The programming function is resident in memory. The L900 can carry out: signal conversion; thermocouple linearisation; special functions, such as Square Root Extraction, etc. Both the input and the output stages of the instrument are powered from separate secondaries of the transformer thus maintaining 3 port isolation. Connect the L900 to a terminal via a Lee-Dickens MicroLEAD and change the input and output type and range and the function required.

SPECIFICATIONS

INPUTS:

DC Current
Between -100mA and +100mA
Minimum input span 0.5mA
Input can be offset from 0mA
Input impedance 10 ohms

DC Voltage
Between –100V and +100V
Minimum voltage span 1V
Input impedance >100K ohms

DC mVolts
Between –1V and +1V
Minimum voltage span 4mV
Input impedance > 1M ohms

Resistance (2 wire)
Between 0 and 10K ohms
Minimum span 100 ohms

Potentiometers (3 wire)
Between 0 and 10K ohms
Minimum span 100 ohms

Resistance Thermometers (RTDs, PT100s)
2 or 3 wire, 100 ohms at 0ºC
Temperature ranges between –200 and +1000ºC
Minimum temperature span 10ºC

Thermocouples
Type B, E, J, K, N, R, S & T
Automatic Cold Junction Compensation: On or Off
Burnout Protection: Upscale, Downscale or Off

Type	Range	Min Temp Change
B	600 to 1800ºC	400ºC
E	–260 to 1000ºC	65ºC
J	–200 to 1200ºC	80ºC
K	–260 to 1370ºC	100ºC
N	0 to 1300ºC	150ºC
R	50 to 1760ºC	400ºC
S	80 to 1760ºC	400ºC
T	–260 to 400ºC	100ºC

SPECIAL FUNCTIONS:
Square Root Extraction
Square Law
3/2 Rectangular Wier
5/2 V-Notch Weir
Straight Line Approximation
Enter up to 99 points on an X-Y curve

OUTPUTS:

DC Current
Between 0 and 20mA
Minimum span 1mA
20mA into 10 to 1000 ohms
10mA into 10 to 2000 ohms

DC Voltage
Between 0 and 10 Volts
into 1K ohms minimum
Minimum span 1 Volt

Input/Output/Supply Isolation
600 Volts > 20M ohms

SUPPLY:

Power Supplies
100 to 120 Volt 50/60 Hz
200 to 240 Volt 50/60 Hz
or 24 Volt DC with converter to maintain signal to power supply isolation

Power Required
3 Watts Maximum

Pilot Light
Green LED shows Power ON

GENERAL:

Linearity Error
Proportional to input ±0.1% of span

Temperature Coefficient
±0.1% of span/ △10ºC
(for inputs > 100mV)
+ Cold junction error, for thermocouple inputs

Ripple Rejection
Greater than 60dB at 50 Hz

Operating Temperature Range
0 to +50ºC

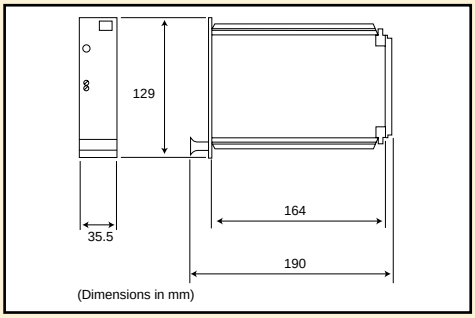
Storage Temperature Range
–20 to +85ºC

Operating Humidity Range
0 to 95% RH non-condensing

Storage Humidity Range
0 to 95% RH non-condensing

Weight
L900 290 gms

MECHANICAL DETAILS



TERMINATION DETAILS

Termination details are dependent upon input type and upon type of housing chosen (19" rack or DIN rail mounting enclosure) and, if 19" rack, screw terminals or solder terminals. Further details upon request from our internal sales department.

ORDERING DETAILS

(a) Give identification code, i.e. L900
(b) Give power supply voltage, i.e. 240 Volt 60 Hz
(c) Give details of input signal, i.e. Chromel/Alumel thermocouple, span 0. to 250ºC. (If thermocouple input please specify Upscale, Downscale or Off for the burnout drive, and, On or Off for the Cold Junction Compensation)
(d) Give details of output required, i.e. 4 to 20mA
(e) Give details of SPECIAL FUNCTION linearisation curve (if required), i.e. up to 99 points on an X-Y plot
(f) If programming yourself then please just specify items (a) and (b) , and, if programming for the first time, please specify a MicroLEAD

LEE-DICKENS LTD
Desborough, Kettering, Northants NN14 2QW U.K.
Tel: (01536) 760156 Fax (01536) 762552