



Linearising Transducer Display CLD100

Self contained linearising displays for pressure and flow transducers

- **Fully integrated 5 digit display and power supply for a wide choice of gas mass flowmeters, capacitance manometers and all-media pressure transducers.**
- **Display can be calibrated (with linearisation) to display units of choice.**
- **Digital communications via RS232, RS485 and DeviceNet available.**
- **+/- 15 volt , 500mA transducer supply.**
- **Totalising function as standard.**
- **Two set-point alarm outputs available.**
- **16 bit resolution, 0.03% of reading accuracy.**
- **Voltage and current measurement versions available.**
- **Re-transmitted analogue output (after linearisation) available.**



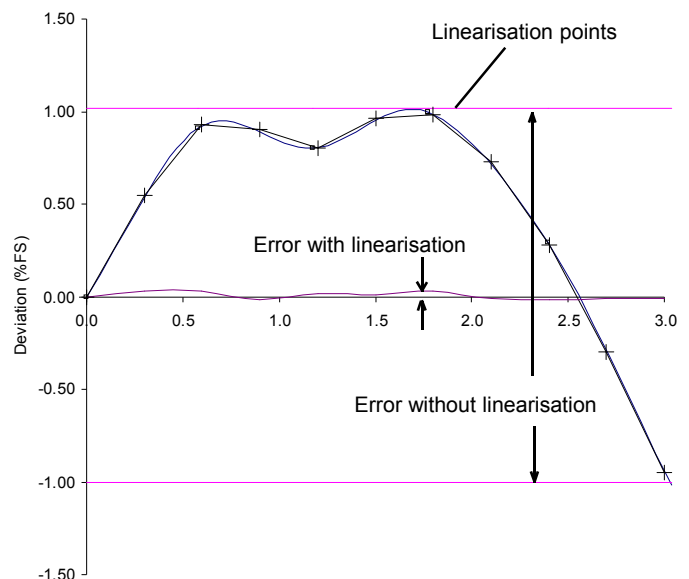
Linearisation

The linearising functions available in the CLD100 can result in dramatic reductions in error. The graph below shows an output from a flowmeter versus the deviation from the true flow. The error before linearisation is +/-1% FS but after linearisation, repeatable errors can be dramatically reduced.

The Chell CLD100 display is a self contained power supply and display for gas mass flowmeters, pressure transducers or any device with a voltage or current output. The unit features a 16 point linearisation routine which can be used to remove any repeatable non-linearities in the device being read. The display can be re-zeroed and configured from the front panel buttons.

The display and power supply are housed in a metal case with a mains input, a Chell transducer connector and serial communications connector. When supplied by Chell with a transducer, the unit comes fully configured as a system, linearised (if necessary) and displaying the required units.

The display is available with a variety of options including current measurement, re-transmission of the linearised signal (current or voltage) and digital communication.



Specifications

Parameter	CLD100	Order Codes
Full scale input	+/- 10 Volt, 0-20mA or 4-20mA	CLD100 - AABBCDD AA Input measurement 01 = Voltage (0-10V) 02 = Current 4-20mA 03 = Current 0-20mA BB Serial communications 00 = None 01 = RS232 02 = RS485 03 = DeviceNet CC Analogue output 00 = None 01 = Voltage (0-10V) 02 = Current DD Relay 00 = None 01 = 2 Relay Outputs 02 = Sinking open collector o/p 03 = Sourcing open collector o/p
Input impedance	>1Mohm	
Measurement resolution	16 bit	
Acquisition speed	20 readings/second	
Error	0.03% of reading plus 3mV	
Display type	5 digit, 14.2mm red LED	
Display range	-19999 to 99999	
Transducer power supply	+/- 15 volts at 500mA (24VDC also available)	
Operating temperature range	+5 to+50°C	
Storage temperature range	-20 to+70°C	
Maximum relative humidity	95% at 50°C (non-condensing)	
Warm up tme	20 mins	
Decimal piont selection	Operator selectable from front panel	
Power supply	100-240 VAC 50VA, 50 / 60Hz	
Dimensions	205mm x 89mm x 136mm	
Weight	1.6Kg	
Totalizer functions	Time base: second, minute, hour or day with an accuracy of 0.01% Decimal point : 0 to 0.0000	

Connectors

Transducer	Interface
15 Way D (Female)	15 Way High Density D (Female)
1 - Unused	1 - Txd (RS232 / 485)
2 - Signal+	2 - Rxd (RS232 / 485)
3 - Unused	3 - Unused
4 - Unused	4 - Unused
5 - +/-15 V rtn	5 - Digital GND / Relay com
6 - -15 VDC	6 - Analogue GND
7 - +15 VDC	7 - Unused
8 - Unused	8 - Unused
9 - Unused	9 - Unused
10 - Unused	10 - Reserved
11 - Unused	11 - Analogue Output
12 - Signal-	12 - Relay 1 NO
13 - Unused	13 - Relay 1 NC
14 - Unused	14 - Relay 2 NO
15 - Case GND	15 - Relay 2 NC

Options	
Relay Card	Specifications
Number of relays	2
Contact rating	2 amps @ or 28VDC (resistive load), total current with both relays not to exceed 2 amps.
Life expentancy	100,000 cycles
Response time	200 msec.
Analog Output Card	
Types	0-20mA, 4-20mA and 0-10 VDC (Scaleable)
Accuracy	0.017% of full scale.
Resolution	1/3500
Update time	200 msec maximum.
Compliance	10 VDC : 10Kohm load minimum 20mA : 500 ohm load maximum.
Digital Communications Card	
Types	RS 232 and RS485
Baud rate	300 to 19200 (no parity 7/8 data bits)
Addressing	Selectable from 0-99, maximum of 32 per line (RS485)
Transmit delay	Selectable from 2 to 50 msec or 50 to 100 msec (RS485)
DeviceNet Card	
Compatibility	Group 2 server only, not UCMM capable
Baud rate	125K, 250K or 500Kbaud