

## Microprocessor Display CMD120

Versatile and networkable 20 channel display and power supply. Compatible with a wide range of transducers, including capacitance manometers and flowmeters / controllers.

- **20 channels of voltage input - supports heated capacitance manometers, mass flow meters and mass flow controllers.**

- **Networkable digital communications via Ethernet, also RS232 and RS485**

- **16 bit input, 16 bit setpoint out.**

- **+/- 15 volt transducer supplies**

- **User settable units and ranges.**

- **Supplied with software to allow configuration and data reading on a PC.**

- **All 20 channels can be displayed on screen (scrollable) - possible to operate from the front panel or via comms.**

- **Channels 2-20 can be slaved from channel 1.**



Chell has developed its successful CMD100 controller to interface with up to 20 transducers. These transducers can be anything with a DC voltage output (5 or 10 VDC). The CMD120 also features a setpoint output to enable it to support flow controllers.

The CMD120 can be controlled from the front panel or via digital communications. When controlled over the interface, the communications protocol allows for channels to be addressed simultaneously.

For example, all channels, or a group of channels could be zero'd with one command.

The CMD120 is housed in a metal case, mains power and process connections are located at the rear of the unit, with the user controls and display on the front panel.

When supplied by Chell with transducers, the unit comes pre-configured and displaying the required units.

### Setpoint Operating Modes

The CMD can generate a setpoint output in two ways. The first of these is where the setpoint is simply generated internally and set on the front panel (or from the PC). Alternatively, the setpoints can be configured in a master / slave fashion where the ratio of the controllers can be fixed and the master set by internal / external setpoints. When using the master / slave mode, channel 1 is always the master and channels 2-20 can be configured as the slave.



Chell CMD120 supplied with 20 Hastings MFC's

## Rear Panel Connections

### Transducer

Use 15 Way D (male)

- 1 - Unused
- 2 - Signal+
- 3 - Reserved
- 4 - Reserved
- 5 - Power Ground
- 6 - -15 VDC
- 7 - +15 VDC

- 8 - Setpoint (volt)
- 9 - Unused
- 10 - Unused
- 11 - Signal- isolated from pin5
- 12 - Signal- isolated from pin5
- 13 - Unused
- 14 - Unused
- 15 - Case GND

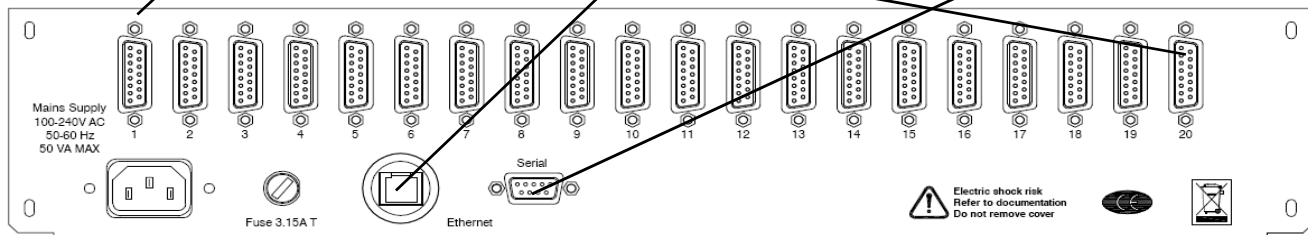
### Serial Comms

Use 9 Way D (male)

- 1 - RS485 TX+
- 2 - RS232 RX
- 3 - RS232TX
- 4 - RS485 TX-
- 5 - RS232 COM
- 6 - RS485 RX+
- 7 - RS485 RX-
- 8 - Unused
- 9 - Chassis

### Ethernet

Use RJ45



## Specifications

Parameter	CMD120
Full scale input	CH 1 - Configurable full scale voltage 0-10 volts CH 2-20 - Select from 5 volt or 10 volt full scale
Input impedance	>50KOhm
Measurement resolution	16 bit
Acquisition speed	20 readings / second
Error	0.05% of reading plus 5mV
Display type	Graphical VFD. Up to 5 digits per channel
Display range	-9999 to +99999
Transducer power	+/- 15 volts 500mA max per channel (up to a system total of 7 Amps)
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
Power supply	100-240 VAC 50/60Hz
Dimensions	19" rack, 2U, 260mm deep
Weight	4 Kg
<b>Digital Communications</b>	
Ethernet (TCP/IP)	Configurable IP address and subnet mask. Single host stack.
Serial	Front panel configurable RS232 or RS485
Baud	19200 to 57600, 8 data bits, no parity, 1 stop bit
Addressing	a to h



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