

## 6 TECHNICAL SPECIFICATIONS

### 6.1 ANALOG CIRCUITS

<b>Measuring method :</b>	Successive approximation 11 bits + sign	
<b>Measurement interval :</b>	Off-line :	Min 1 ms per channel. Max 1000ms
	On-line :	Min NA Max 1000ms
<b>Inputs :</b>	8 <b>differential</b> inputs	
	Impedance:	min 400k $\Omega$ betw. + and - min 5M $\Omega$ betw. + and GND and betw. - and GND Current inputs are shunted by 51 $\Omega$
	Max overvoltage :	30V
	Max overcurrent :	
	(20mA range)	80mA
<b>Ranges :</b> (Factory set or programmable)	Voltages :	+/- 50mV +/- 100mV +/- 1000mV +/- 10V
	Current :	+/- 20mA
<b>Dynamic range :</b> (No of divisions)	Min. +/- 1800 divs. on all ranges	
Resultant resolution :	50mV range	+/-30 $\mu$ V
	100mV range	+/-55 $\mu$ V
	1000mV range	+/-0.55mV
	10V range	+/-5.5mV
	20mA range	+/-11 $\mu$ A
<b>Uncertainty :</b> @ 25°C (all ranges)	0.25% of FSR	
	Tempco : 100ppm + offset drift	

<b>Offset: (@ 25°C)</b>	Initial :	+/-½ division (=bit)
	Drift :	
	50mV range	72ppm/°C
	100mV range	36ppm/°C
	1000mV range	3.6ppm/°C
	10V range	0.4ppm/°C
	20mA range	3.6ppm/°C
<b>Common mode range</b>		
at the:	50mV range	+/-10V
	100mV range	+/-10V
	1000mV range	+/-10V
	10V range	+/-5V
	20mA range	+/-10V
<b>CMRR (DC)</b>	all ranges	min. 80dB

## 6.2 Auxiliary voltage source

<b>Voltage :</b>	2 - 10V adjustable Max 100mA using supplied PSU
<b>Current :</b>	Max 200mA using PSU with higher power rating

## 6.3 Trigger input/output

<b>Trigger input</b>	HC-CMOS Schmitt trigger input with 100kΩ series resistor and 100kΩ pulldown.	
<b>Trigger output</b>	HC-CMOS output.	Low < 0.1V (Io > -4mA) High > 4.7V (Io < +4mA)

## 6.4 Storage memory (optional)

**Sizes :** 0k bytes (only on-line usage)  
64k bytes  
544k bytes  
1046k bytes

Every stored measurement value occupies two bytes.

## 6.5 Computer communication

Data is transferred in a serial form to and from the computer. The serial standard conforms to a subset of RS-232.

**Format :** 8 bit ASCII  
1 start bit  
8 data bits  
1 stop bit  
19200 baud

**Signals :** Tx (2)  
(pin no.) Rx (3)  
CTS (5)  
DTR (6)  
GND (7)

**Handshaking :** Hardware handshaking is employed.  
DTR : Signals that the logger is operational (output)  
CTS : Signal allowing the logger to transmit (input)

## 6.6 Commands

See separate manual: "Command manual".