

DPR 100 G/H FUNCTIONAL SPECIFICATIONS

Technical data	
Analogue inputs DPR 100G pen recorder DPR 100H multipoint recorder Signal source on the linear input boards Signal source on the universal input boards Field calibration Burnout Scanning time Input impedance Stray rejection	1, 2 or 3 continuous traces. 1 up to 6 channels. Inputs are scanned by relays, galvanically isolated and individually configurable to any listed actuation. 4 to 20 mA on 250 ohms, 0 to 20 mA on 250 ohms, 1 to 5 V, 0 to 5 V, 0 to 10 V and mV signals. (conversion resistors on external terminals) Thermocouple with individual cold junction compensation. Line resistance up to 1000 ohms T/C, mV, mA, Volt. RTD Pt 100 3-wire connections, lead resistance per wire 40 Ω balanced. A pen channel field calibration at 0 % and 100 % of the span, may be made to certify the input sensor loop. T/C, mV, Volt; factory set to upscale (configurable to downscale or none) RTD : inherent upscale. mA : inherent downscale. Pen: 330 ms, scanning by solid state relays. Mpt: 5 seconds for 6 channels, scanning by electromechanical relays. 10 Mohm for T/C, mV inputs. >1 Mohm for volt inputs. Series mode \geq 60 db. Common mode at 250 VAC \geq 130 db.
Logic inputs (option) Actions	Up to 2-dry contact inputs (1,5 mA - 12 VDC). Change chart speed 1 to speed 2. Print inhibit.
Display graduations Pen Multipoint	1 analog scale per pen in accordance with the input range configuration. 1 analog scale, 0 to 100 linear.
Recording span Scaling Pen offset Pen carriage speed	Fully configurable per input, from the PC software, and then downloaded thru the front jack. Distance between pens: 2 mm. Chart width definition: 1 step = 0.2 mm. 1 second full scale.
Chart length	Fan fold 18 m. (as DIN 16230) (59 ft.) Roll 24 m (0.100 LIN) (78 ft.) 15 m others (49 ft.)
Chart speed Speed setting Stepping chart motor	1 or 2 chart speeds, fully configurable, selected by a logic input. Speed 1 and Speed 2 : choice as per the model selection guide. Pen: 10 to 6000 mm/h (.5 to 240"/h). Mpt: 10 to 1500 mm/h (.5 to 60"/h). Resolution 0.12 mm.
Alarms (option) Pen 1,2,3 Mpt (6 CH) Hysteresis Outputs Rating contact	2 alarm set-points per channel, (Factory Set* 1 low, 1 high). 1 alarm set-point per channel, (Factory Set* high). 0.5% to 99% of Scale (Factory Set* at 0,5%). 2 or 6 alarm relays output contacts. 1 SPST normally closed contact (may be configured into normally open contact). 2 A, 250 VAC on resistive loads. * other selections configured by PC

Power supply Power consumption	100 to 230 VAC, 50/60 Hz (+10 -15% nominal) 3 pens: 30 VA max. Multipoint : 30 VA max.
Packaging Weight Front face Depth Front window Front protection Lock Cut out Construction Optional	Pen: 3.5 kg Multipoint: 3.5 kg 144 x 144 mm according to DIN 43718. 245 mm/9.7" behind panel, including terminals and line protection cover. Acrylic. IP 54 (IEC 529). Latch or key (DIN 43832-N). DIN 138 x 138 mm. Silicon-free. Chart illumination. Rear terminal cover.
Mounting	Panel mounting $\pm 30^\circ$ from horizontal (DIN 43834).
Wiring	Rear screw terminals. Terminal modules are plugged on the instrument.
Writing Pen Multipoint	1 cartridge per pen, fibre tip. 1400 m of trace per colour (blue, red, green). 1 print wheel, 6 colours, 250 m of trace per colour (purple, red, black, green, blue, brown).
Noise immunity / isolation	CE mark conformity with 73/23/EEC Low Voltage Directive and 89/336/EEC EMC Directive
Safety protection (CE approved)	Complies with 414, 348 and 1010-1 installation category 2 for personal protection. Designed to meet UL and CSA C22.2, N142 standard (CSA approved).
Electrical insulation (CE approved) Input to input Input to ground Input to line voltage Line voltage to ground Alarm relay to ground Logic input to ground	Test voltage 350 VAC for 1 min (except for RTD input) or 280 VAC with option State Relay. Test voltage 2.1 kVDC for 1 min. Test voltage 2.1 kVDC for 1 min. Test voltage 2.1 kVDC for 1 min. Test voltage 2.1 kVDC for 1 min. Test voltage 500 VDC for 1 min.
Temperature Ambient Storage	0 to 50°C (32 to 120°F). Optionally 0 to 60°C (32 to 140°F). -40 to +70°C (0 to +160°F). 10 to 90 % RH non condensing
Humidity Roll Fan fold	10 to 90% RH non-condensing. 15 to 80% RH non-condensing
Vibrations	Frequency 10 to 60 Hz - Amplitude 0.07 mm 60 to 150 Hz - Acceleration 1 g.
Accuracy	
Reference conditions Temperature Humidity Line voltage nominal Source resistance Series mode Common mode Frequency nominal	23°C \pm 2°C (68°F \pm 3°F). 65% \pm 5% RH. \pm 1%. 0 Ω . 0 V. 0 V. \pm 1%.
Accuracy	0.5% of total span (IEC 873). (A/D converter at 0.25 %)

Accuracy

Rated limits and associated drifts	Parameter	Rated limits	Influence on accuracy
	Temperature	0 to 50°C (32 to 120°F)	0.2% per 10°C Cold junction 0.3°C/10°C
	Supply voltage	100 to 230 VAC	No influence
	Source resistance	T/C, mV	6 µV per 100 Ω of line resistance
		RTD	1000 Ω max 0.1°C per Ω in each wire balanced leads, 40 Ω max.
	Humidity	10 to 90% RH at 25°C	0.1% max.
	Long term stability		0.1% per year
	Vibrations	2.5 mm at 0 to 14 Hz 1 g at 14 to 250 Hz	

Extreme conditions		
Operating		
Temperature		0 to +60°C (0 to 140°F).
Humidity		10 to 90% RH non-condensing.
Storage		
Temperature		-40 to +70°C (-40 to 160°F).
Humidity		5 to 95% RH non-condensing.

Available ranges (T/C's and RTD's on the universal input board)

Thermocouples		°C	°F	
J		-50 to +150	-100, 0, 300	
		0 to 400	0 to 800	
	K		0 to 800	0 to 1500
			0 to 400	0 to 800
			0 to 800	0 to 1500
			0 to 1200	0 to 2400
	Nicrosil-Nisil (N)		0 to 1400	0 to 2500
			0 to 400	0 to 800
			0 to 800	0 to 1500
			0 to 1200	0 to 2400
	S		0 to 1400	0 to 2500
			0 to 1600	0 to 3000
R		0 to 1600	0 to 3000	
T		-100 to +200	-150 to +400	
		0 to 150	0 to 300	
		50 to 150	100 to 300	
Note : (Provision to accept T/C input for remote compensation box at fixed temperature of 50°C or 60°C).				
RTD's	Pt 100	-50 to +50°C*	-60 to +140° F*	
		-50 to +150*	100, 0, +300*	
	(Alpha = 0.00385)	0 to 100*	0 to 200*	
		-200 to +200	-300 to +400	
	* accuracy 1°C or 1.8°F	0 to 400	0 to 800	
mV and Volt		0 to 10 mV	0 to 1 V	
		0 to 20 mV	0 to 5 V	
		0 to 50 mV	1 to 5 V	
		10 to 50 mV	0 to 10 V	
		0 to 100 mV		
mA		0 to 20 mA or 4 to 20 mA linear		
		4 to 20 mA SQRT input resistor 250 ohms required		