

## DP-158 DATALOGGER



- 8/16/32 analogue channels
- 8 switch inputs (no /nc)
- memory 1750-7000 samples per channel
- outputs to printer, pc, and relays
- alphanumeric display, 2 lines - 20 characters
- programmable measurement conditions and display messages

The DP-158 is a programmable 8, 16 or 32 channel measurement and alarm centre. In addition to measurement inputs the centre has inputs for 8 relay contact circuits.

In addition to, the actual measurement and alarm operation, the centre is equipped with memory storage, inhibit, control, and report functions.

Measurement results are channel specific according to the users choice: temperature (Pt-100 ohm RTD / thermocouple) or voltage/current/resistance with scaleable display for pressure, humidity, flow, surface height and other measurements.

Relay contact inputs are voltage free, opening or closing contacts. Contact inputs are used either as independent alarm circuits or in measurement limit value operations for inhibiting or locking actions.

Using the two serial outputs, the DP-158 centre may be connected to a PC or a printer, relay control units, parallel light board, as well as other data handling and transfer equipment.

Reading of values and programming uses the 2 x 20 character alphanumeric display and the 8 front panel push buttons. The center is also equipped with indicator lights to show the most important events and outputs.

The standard power supply is 230V 50Hz mains supply but on separate order the centre may be supplied with 18 –36 VDC.

### DP-158 CONNECTIONS (16 meas. inputs)

ANALOGIATULOT				ANALOG INPUTS				KOSKETINTULOT								DIGITAL INPUTS			
KANAVA CHANNEL	Pt-100 / R 3-JOHDIRIN 3-WIRE	TC	U / I	KANAVA CHANNEL K1 K2 K3 K4 K5 K6 K7 K8 C C															
M1	1 2 3	1 2	1 2	49 50 51 52 53 54 55 56 57 58															
M2	4 5 6	4 5	4 5	SARJALIITÄNNÄT								SERIAL INTERFACES							
M3	7 8 9	7 8	7 8	PORT 1 - not isolated				PORT 2 - Isolated											
M4	10 11 12	10 11	10 11	RS-232 (optio) R T G				RS-232 T R C G											
M5	13 14 15	13 14	13 14	RS-485 S+ S-				RS-485 (optio) S+ S-											
M6	16 17 18	16 17	16 17	HÄLYTYSLÄHDÖT								ALARM OUTPUTS							
M7	19 20 21	19 20	19 20	Maksimi kuorma 230V, 2A Max. load															
M8	22 23 24	22 23	22 23	66 67 68 69				66 67 68 69											
				Lisää RC-suojat induktiivisilla kuormilla Use RC-units for spike protection															
M13	37 38 39	37 38	37 38	SYÖTTÖJÄNNITE				POWER SUPPLY											
M14	40 41 42	40 41	40 41	230V 50 Hz				18-32 VDC (optio)											
M15	43 44 45	43 44	43 44	70 71 72				70 71 72											
M16	46 47 48	46 47	46 47	L N				+ -											
DP-158L-																			
Sarja nro												Serial no							
												CE							

**Note 1** Thermocouple measurements with automatic cold junction compensation

**Note 2** Serial interfaces

Port 1	Port 2
1200 Baud	9600 Baud
No parity	No parity
8 Databit	8 Databit
1 Stopbit	1 Stopbit

## PUSH BUTTONS AND DISPLAY

**Up and down arrow push buttons:** select the correct letter, number or symbol, or alternatively different settings or points when defining the points

**Back and forward arrow push buttons:** during setting are used in the selection of different characters, or during reading transfer to the more display and back

**F(-)Function push button** starts all reading, programming, reporting, and calibration stages starting from the normal level

**SET-push button:** used to approve the selection shown in the display or the setting and to move to the next item

**ESC-push button:** always returns from the sub menu to the main selection menu at the normal level

**ACK-push button:** used to acknowledge alarms and to zero the maximum and minimum values shown in the display

**POWER-light:** shows when the power is ON or OFF

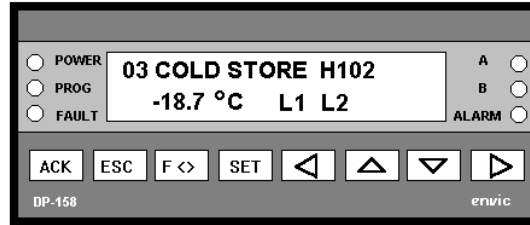
**PROG-light:** shows when the unit is at the programming level

**FAULT-light:** shows when there is a fault in serial port data traffic

**A-light:** shows when there is an unacknowledged priority 1 alarm

**B-light:** shows when there is an unacknowledged priority 2 alarm

**ALARM-light:** shows when there is an active alarm

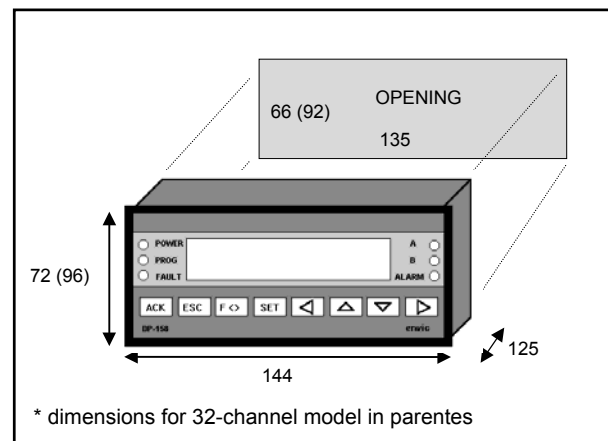


**Display:** alphanumeric digital display, 2 lines - 20 characters /line

## TECHNICAL INFORMATION

DISPLAY	2 rows, 20 chars./row, alphanumeric, background lit LCD display. Freely programmable inputs, outputs, storage/reporting interval, limits in relation To the various measurement points.
INPUTS	8, 16 or 32 analogue and 8 contact inputs. Measurement operation and input selection/programm. using the display and push buttons (or PC). Automatic or manual display stepping of the measured values.  <i>Pt-100 ohm Thermocouple: J,K,S</i> Resolution 0.1°C, meas range -200.0...+850.0°C Resolution 0.1°C, meas range -260.0...+1760.0°C. auto cold junc compensation Resolution 5 /100 uV. Input impedance >100 Mohm Resolution 2 µA. Input impedance 100 ohm Resolution 0.1 ohm
OUTPUTS:	Two serial bus connections, one isolated, for transferring measurement results to printer or PC, the second non-isolated, for relay control units and/or parallel light boards. Both outputs selectable in RS-232 or RS-485 serial bus form.
<i>Alarm operation</i>	Priority (A/B), voltage free relay contact output (max. 48V 0.5A) Sensor break alarm drives an A-class transfer relay
MEMORIES:	
<i>Measurement memory</i>	Measurements stored at a user selected intervals for trend information, memory capacity 7000, 3500 or 1750 samples/channel (depending on the amount of meas. channels 8, 16 or 32). Reading/output of all values or at less frequent n x 2 sample intervals and the n last stored values (n is user selectable number)
<i>Alarm history</i>	Max. 64 last alarm occurrences stored in history data base
<i>Program memory</i>	Measurement parameters (inputs, scaling, limits, time settings, point identification etc.) stored in the non-volatile memory
ALARM OPERATION:	Two adjustable measurement limits/channel: limit, priority, hysteresis, delay, and inhibit/lock settings. Additional external relay unit and parallel light board control possibility
GENERAL:	Power supply 230V 50Hz ±10% or 18-36 VDC Meas. speed > 8 measurements/second Meas. precision 0.1% ± 1 number Operating temp. dependence < 50 ppm/°C Flush mounting case Weight 400 g Spring connectors on the rear panel Operating temp. 0...+50°C, storage temp. -20...+70° C

## DIMENSIONS



## ORDERING INFORMATION

### DP-158L- M - P230

P230 = 230V 50Hz supply  
P24 = 18-36VDC supply

M = PC-interface  
N = standard version

- = 8 analogue channels  
L = 16 analogue channels  
XL = 32 analogue channels

## ACCESSORIES

<b>RIO-8/RRE-8</b>	Relay unit (8 outputs)
<b>CC-10R</b>	Connection cable RIO/RRE
<b>SLP-16</b>	Light indicator board (16-points)
<b>LIC-232/485</b>	Serial interface unit
<b>TP-1/10</b>	Power unit for accessories
<b>MESLOG-S</b>	PC-program