

DIGITAL PANEL METERS

programmable -2000 to +10000 points

format 24x48 mm



series DGS

The DGS are highly accurate **universal programmable digital panel meters**, with IP 65 front face protection.

These instruments are equipped with a display of four 10mm high red digits, whose brightness suits applications in industrial control rooms perfectly, and a 4-key keyboard allowing an easy programming.

They allow the display and control of all measurable magnitudes.



PANEL METER

INTRODUCTION

Universal power supply:

20...270 Vac 50/60/400 Hz and 20...300 Vdc

Power draw: 1 W max. 3 VA max.

Input:

• Direct current or voltage

$\pm 100\text{mV}$, $\pm 1\text{V}$, $\pm 10\text{V}$, $\pm 300\text{V}$, $\pm 0/20\text{mA}$

• Temperature: thermocouple (J, K, N, S, B, W5, T, R, E, W, W3, L), 3 wire PT100 Ω , 3 wire NI100 Ω , 2 wire Δ Pt 100 Ω

• Potentiometer: from 100 Ω to 10 k Ω

• Resistance: caliber 0-400 Ω , 0-2 k Ω (8 k Ω optional)

Linearisations

- Linear input.
- Extraction of the square root (current or voltage inputs).
- Special linearisation in 20 points (in X and in Y).
(Inputs voltage or current or potentiometer or resistance).

Features

- Sampling time: 100ms.
- Zero drift compensation.
- Rejection rate:
common mode: 130dB, serial mode: 40dB 50/60Hz

Sensor rupture or line rupture detection

- Can be detected on the inputs mV, TC, Pt 100, Ni 100, Δ Pt100, resistance (0-400 Ω) and current (4-20mA).

Self-diagnosis:

- Permanently watches any drifts of the components. Serves to warn the user before they may provoke false measures.

Input scale overrange

Visualised on the display by a blinking measure.

Galvanic partition:

2.5 kV eff 50 Hz 1 Mn, between supply and input.

Functions:

- Programmable filter: allows stabilising the display in case of unsteady input.
- Process calibration (slope and offset) programmable on all the input types.
- Quick reading of the input signal electrical value, as well as the min. and max. values
- Adjusting of the display brightness.
- Programming protected by access code.

Display:

Electroluminescent red (green on request)
-2000 / + 10 000 points (10 mm)

Environment:

- IP65 front face protection.
- Installation category: II
- Degree of pollution: 1
- Operating temperature: -5 to 55°C.
- Storage temperature: -30°C to +80°C.
- Relative dampness: 80% annual average.
- Wiring on plug-in screw terminals (for 2,5 mm² cable, flexible or rigid).
- Case of self-extinguishing UL 94 VO polycarbonate.
- Weight: 100g (with packaging).

Standards:

CE marking according to the directive 2004/108/CE and the directive 2006/95/CE.

EMC: standards IEC61000-6-4 on rejections and IEC61000-6-2 immunity (industrial environment) (IEC 61000-4-2 level 3, IEC 61000-4-3 level 3, IEC 61000-4-4 level 4, IEC 61000-4-6 level 3)

Electrical safety: EN61010-1

CODING

Type:

- DGS2 (process input)
- DGS3 (temperature input)
- DGS4 (universal input)



The friendly interface

CA
IN/58

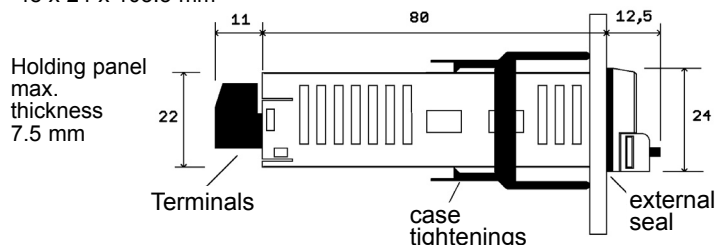
TECHNICAL FEATURES AT 23°C

Process inputs DGS2 and 4	Temperature inputs DGS3 and 4	Potentiometer and resistance inputs DGS4																																							
Unidirectional direct current or voltage 0-100mV, 0-1V, 0-10V, 0-300V, 0-20mA Accuracy 0.1% of the FS Bidirectional ±100mV, ±1V, ±10V, ±300V, ±20mA Accuracy 0.05% of the FS - Input impedance > 1MΩ for the voltage inputs, 0.9V max. drop for the current input - Thermic drift <150ppm - Permanent overload: ±100mA for current input ±1V for the mV input ±50V for the inputs 1 and 10V ±600V for the input 300V - Measurable overrange -10 to +10% FS: full scale	Thermocouples: <table border="1"> <thead> <tr> <th>Types</th><th>min.</th><th>max.</th></tr> </thead> <tbody> <tr><td>J</td><td>-160 °C</td><td>+1200 °C</td></tr> <tr><td>K</td><td>-270 °C</td><td>+1370 °C</td></tr> <tr><td>N</td><td>0 °C</td><td>+1300 °C</td></tr> <tr><td>S</td><td>-50 °C</td><td>+1770 °C</td></tr> <tr><td>B</td><td>+200 °C</td><td>+1820 °C</td></tr> <tr><td>W5</td><td>0 °C</td><td>+2300 °C</td></tr> <tr><td>T</td><td>-270 °C</td><td>+410 °C</td></tr> <tr><td>R</td><td>-50 °C</td><td>+1770 °C</td></tr> <tr><td>E</td><td>-120 °C</td><td>+1000 °C</td></tr> <tr><td>W</td><td>+1000 °C</td><td>+2300 °C</td></tr> <tr><td>W3</td><td>0 °C</td><td>+2480 °C</td></tr> <tr><td>L</td><td>-150 °C</td><td>+910 °C</td></tr> </tbody> </table> - Accuracy: 0.1% of the FS or 30μV typical (60μV max.) - Thermic drift < 150 ppm CJC efficiency: <0.03°C/°C+/-0.5°C from -5° to +55°C Sensors: Pt100 : -200°C to +850°C Ni100 : -60°C to +260°C - Accuracy: 0.1% of the FS - Influence of the line resistance in 3-wire measurement within the range for 0<LR<25Ω - Max. measure current: 250μA - Thermic drift< 150ppm - 2 wire ΔPt100 meas. -200°C to +270°C (R max 400Ω) with 0<LR<10Ω	Types	min.	max.	J	-160 °C	+1200 °C	K	-270 °C	+1370 °C	N	0 °C	+1300 °C	S	-50 °C	+1770 °C	B	+200 °C	+1820 °C	W5	0 °C	+2300 °C	T	-270 °C	+410 °C	R	-50 °C	+1770 °C	E	-120 °C	+1000 °C	W	+1000 °C	+2300 °C	W3	0 °C	+2480 °C	L	-150 °C	+910 °C	Resistive sensors: Calibers 0-440Ω and 0-2KΩ (0-8KΩ optional) - Accuracy: 0.1% of the FS for 0-400Ω and 0-8KΩ, 0.5% for 0-2 KΩ - Thermic drift < 150ppm Potentiometer: - From 100Ω to 10KΩ - Accuracy: 0.1% of the FS - Thermic drift < 150ppm
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WIRING / DIMENSIONS

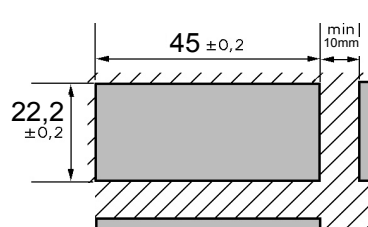
Dimensions of the case: (with terminals)

48 x 24 x 103.5 mm



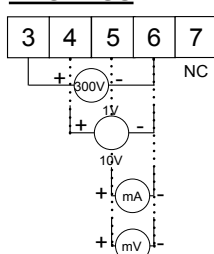
Panel mounting

cut out 22.2 x 45 mm

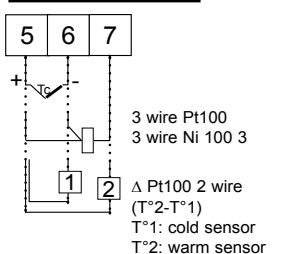


INPUTS

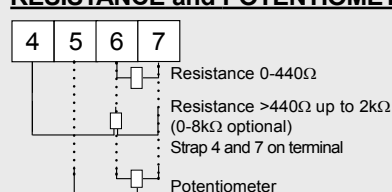
PROCESS DGS 2/4



TEMPERATURE DGS 3/4



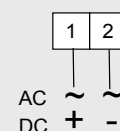
RESISTANCE and POTENTIOMETER DGS4



1 2 3 4 5 6 7

Location of the terminals
(view of case rear side)

POWER SUPPLY



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