

Series MAG-35

Panel meters for PT100 / RTD signals

MAG-35-20 for PT100/RTD resolution 1°, max. 650°
MAG-35-21 for PT100/RTD resolution 0.1°, max. 199.9°



IDEAL SOLUTION to display temperatures using standard PT100 / RTD probes with 2 and 3 wires, with automatic compensation of the wire resistance, and available correction of the display value operating the front trimmer. Available options for relay output, analogue output, serial outputs and others.



FEMA ELECTRÓNICA, S.A.

USER'S MANUAL
(HT5493-r011206)

Series MAG-35

Instruments for PT100 / RTD

Panel meters to measure temperatures from standard PT100 / RTD probes, with 2 and 3 wires. Automatic compensation of the resistance of the cable and linearization of the probe response. Display is directly in degrees centigrades when the probe is connected (special units available for Fahrenheit degrees). Automatic response in case the probe breaks and overrange.

Additional options with relay outputs (1 or 2 relay), analogue outputs (in mA and Vdc), digital outputs in serial code (RS232 or RS485), parallel BCD code, display «Hold» function and power options in AC and DC.



GENERAL SPECIFICATIONS

DISPLAYS	Led 7 Segments Red Color
DIGITHEIGHT	14 mm (0.55")
DISPLAY	±1.8.8.8
POLARITY	Automatic ±
DECIMALPOINTS	Jumper selectable
INPUT CONFIGURATION	Bipolar Simple
A/D CONVERTER	Dual slope
INTEGRATION TIME	80 mSec.
NUMBER OF READINGS	3.12 per second
WARM-UP TIME	2 minutes
NMRR	50 dB
THERMAL DRIFT	150 ppm
TEMP CO ZERO	0.13% /°C F.S.
OVERRANGE	+1999 flash
UNDERRANGE	-1999 flash
WORKING TEMP.	0°C to +50°C
STORAGE TEMP.	-40°C to +80°C
BURN-IN	48 hours
RECALIBRATION	Yearly
HOUSING	DIN 43700
DIMENSIONS	96 x 48 x 117 mm
PANEL CUT-OUT	44.5 x 92.5 mm
WEIGHT	310 gr.
CONNECTIONS	Plug-in screw clamps
CONSUMPTION	5.5 VA in AC 3.5 W in DC

OUTPUT AND CONTROL OPTIONS

MAG-35 instruments can be supplied with different options for data output and control. Compatibility between them is indicated at the «Ordering Reference» section down on this page. Technical data and operating instructions for these options are indicated in a separate user's manual.

«SP11»	1 Relay Output
«SP21»	2 Relay Output
«SAR»	Analogue Output
«HM»	Hold of display
«MPA2»	Detection of «peak and drop» signals
«SDA»	Parallel BCD
«RS2»	Serial RS232 output
«RS4»	Serial RS485 output

POWER OPTIONS

MAG-35 instruments can be supplied with different power options, for different AC and DC power ranges. The instruments do not have internal protection fuse. The value and type of the recommended fuse for each power type is indicated below.

Ref.	Power	Recommended Fuse
«0»	230 Vac 50/60 Hz	50 mA Time Lag
«1»	115 Vac 50/60 Hz	100 mA Time Lag
«2»	24 Vac 50/60 Hz	300 mA Time Lag
«3»	48 Vac 50/60 Hz	150 mA Time Lag
«6»	24 Vdc (15/30 Vdc Isolated)	350 mA Fast Fuse
«8»	48 Vdc (24/65 Vdc Isolated)	200 mA Fast Fuse

ORDERING REFERENCE

Model	Power	Option1	Option2	Option3
MAG-35 - [] - [] - [] - [] - []				
20	0	SP11	SAR	HM
21	1	SP21	MPA2	
	2	SDA		
	3	RS2		
	6	RS4		
	8			

MODELS - RANGES - ACCURACY

MODEL	RESOLUTION	RANGE	ACCURACY
MAG-35-20	1°C	-200 to +650°C	1°C ±1 digit
MAG-35-21	0.1°C	-150.0 to +199.9°C	0.4°C ±1 digit

SIGNALS RTD / PT100 standard DIN43760 with 2 and 3 wires
 CABLE COMPENSATION automatic up to 10 Ohms (for 3 wire probes)
 SENSOR BREAK Flash display «+1999»

READJUSTING THE READING

Potentiometers located on module «MM» allow the readjustment of the display, operating «P1» to adjust the display for «zero» signal, and operating «P2» to adjust the display for «full-scale» signal. Select jumpers «D» to light the decimal point (see figure1). Potentiometer «SPAN» at the front of the instrument is for small «on-the-field» manual error corrections on the scaled display.

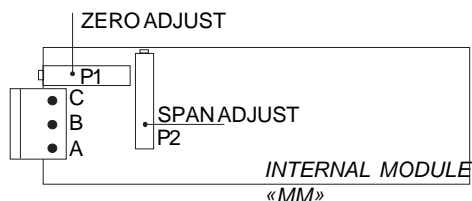


FIGURE1 - DECIMAL POINT SELECTION

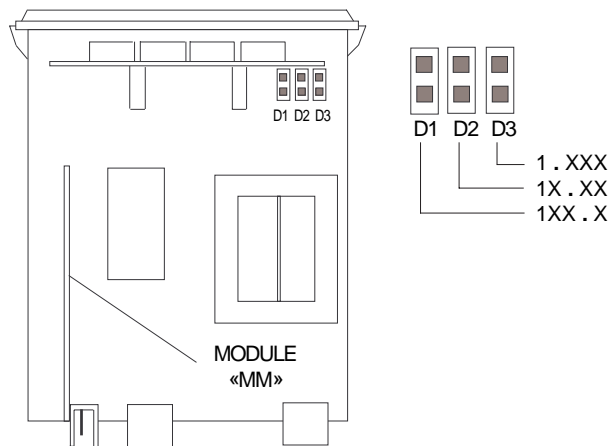
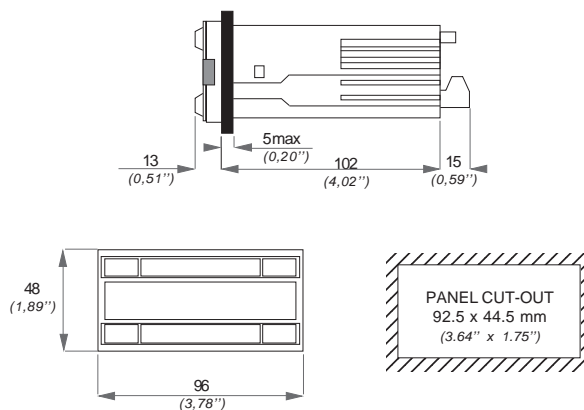
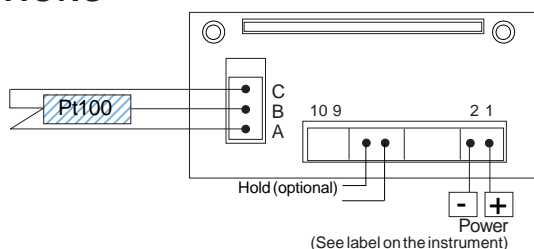


FIGURE2 - SIZES in mm (inches)

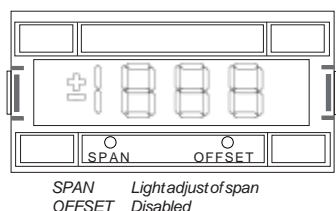


CONNECTIONS



Note .- To connect RTD / PT100 probes with 2 wires, shortcircuit terminals «A» and «C». If this connection is not implemented, the instrument will show incorrect values.

FRONT VIEW



CE DECLARATION OF CONFORMITY

Manufacturer.- **FEMA ELECTRÓNICA, S.A.**
 Address .- Pol. Ind. Santiga - Altimira 14 (T14 - N2)
 E-08210 Barberà - BARCELONA
 ESPAÑA - SPAIN

Conforming Products
 Series .- MAG-35
 Models .- 01, 02, 03, 04, 06, 07, 08, 10, 11, 12, 15, 16, 17, 20, 21, 22, 23, 24, 25, 26, 27, 32, 35, 36, 80, 90, 95

We hereby declare that the above products conform to the essential protection requirements of Directives and Standards stated below.

DIRECTIVES

EUROPEAN DIRECTIVE FOR LOW VOLTAGE D73/23/CEE AMENDED BY D93/68/CEE. Equipments powered from 50 to 1000 Vac and/or from 75 to 1500 Vdc

ELECTROTECHNICAL REGULATION FOR LOW VOLTAGE (RBT) ITC21, ITC29, ITC35. Equipments with power supply lower than 50 Vac and/or 75Vdc.

EUROPEAN DIRECTIVE FOR ELECTROMAGNETIC COMPATIBILITY D89/336/CEE AMENDED BY D93/68/CEE

STANDARDS

IMMUNITY
UNE EN 50082-1 (1997)

ELECTRICAL SAFETY
UNE EN 61010-1 (1996)
UNE EN 60204-1 (1997)

EMMISSIONS
UNE EN 50081-1 (1993)

Signed .- D. Juncà
 Position .- Quality Manager
 Barberà, 2005

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ELECTRONIC INSTRUMENTATION FOR INDUSTRY

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