



# MP10 - DIGITAL INDICATOR FOR LABORATORY

MP10 digital indicator has been realised to be used in metrological laboratories and in most advanced high-accuracy static and dynamic measurement systems as materials testing machines, test benches etc. It is ideal to be used as first-line sample (periodically certified by SIT center) used in combination with dynamometers, load cells (4 or 6 wires) or non amplified pressure transducers.

Input consists of a chain of:

- a high-precision and long-term stability analogue circuit
- a frequency generator used to supply dynamometers and 6 wires load cells
- an A/D converter with a resolution of  $\pm 500.000$  divisions.

In order to work at a stable resolution of  $\pm 200.000$  divisions ( at 2mV/V ) indicator is supported by an internal reference ( guaranteed for a 1 ppm°C variation) which is periodically checked with self-calibration. User interface is managed by a retro-illuminated graphic LCD display (240 x 64 resolution) and by 5 function keys which ensure the full programming of channels.

The indicator is available in two different models:

- *MP10/2 BASIC version:* provided with 2 programmable channels that can be separately programmed by the operator. ON REQUEST this version can be provided with RS232C serial output and the 24 columns PRINTER output with remote printing input.
- *MP10 FULL version:* provided with 10 channels that can be separately programmed by the operator either with a calibration by points (5 known points) or by a 3rd degree polynomial printed in SIT certificates. These kind of calibrations enable the linearization of the signal of dynamometer with consequent decrease of measurement uncertainty. Serial output RS232C and output for 24 columns printer with remote printing input are included.

DYNAMOMETERS      TORQUE TRANSDUCERS      PRESSURE TRANSDUCERS



2mV/V



2mV/V



2mV/V



PRINTER OUT

RS232C



$\leq \pm 0.0025\%$  ACCURACY

$\pm 200.000$  div STANDARD RESOLUTION

Code MP10 BASIC version:  
**EMP102A230**

Code MP10 BASIC with Serial Printer out:  
**EMP102A230S3**

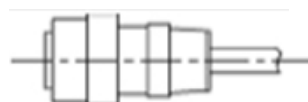
Code MP10 FULL version:  
**EMP10A230S3**

## SPECIFICATIONS & ACCESSORIES

TYPE	MP10/2	MP10
Programmable Channels	2	10
Linearization	No	Yes
Accuracy	≤ ±0.025%	
Linearity Error	≤ ±0.015%	
Input Signal	2mV/V	
Connectable Load Cells	1 (350 or 700Ω, 4/5 wires)	
Bridge Excitation Voltage	5Vac±3%	
Carrier Frequency	440Hz	
Standard Resolution (2mV/V)	± 200,000 div.	
Internal Resolution	± 500,000 div.	
Readings per sec. (0 filter)	50 (20ms)	
Nominal working temperature range	0/ +50°C	
Max working temperature range	0/ +50°C	
Storage temperature range	-20/ -70°C	
Temperature effect (10°C)		
a) on zero	≤ ±0.005%	
b) on full scale	≤ ±0.005%	
Serial Interface	OPTIONAL	RS232C
Programmable baud rate	OPTIONAL	19200, 9600, 4600
Printer interface	OPTIONAL	24 columns
Custom data printing	OPTIONAL	company name & address
Graphic retroilluminated LCD	240 x 64 dots	
Programmable full scale	Max. ± 999 995 div. (Res. 5)	
Programmable decimal points	Yes	
Programmable units of measurement	kgf, tf, N, daN, kN, div, bar	
Programmable measurement resolution	1, 2, 5, 10, 20, 50, 100	
Programmable digital filter	0 ÷ 8	
Tare function (zero)	100% (each channel)	
Peak function	MIN/MAX	
Programmable transducer type	each Channel	
Programmable transducer serial no.	each Channel	
Zero key input	Yes	
Print key input	Yes	
Peak key input	Yes	
Hold function input	Yes	
Power supply	230 Vac±10% 50 : 60 Hz 10VA	—
Protection class (EN 60520)	IP40	
Metal Case	Aluminium	
Dimensions (HxLxW)	125 x 210 x 204 mm	
Weight	- 2.5 kg	
VDE power supply cable	1.5 m	
<b>OPTIONS:</b>		
Input Signal	1 mV/V or 3m V/V	
Serial Interface	RS232C	
Printer Interface	24 columns company name and address	

## ACCESSORIES

- Input Connector
- Mil 7 poles flying male
- Series: MS3106A16S1P



AEP code: EMP10ACCMIL7MV