

**BCS Italia srl**

I-20099 SESTO S.GIOVANNI (MI)  
 Via Pisa, 170  
 tel +39 - 02 - 22.475.545  
 fax +39 - 02 - 22.470.870  
 E-mail bcsitaly@tin.it

**DIGITAL INDICATOR type M748**

Digital indicator type M748 has been specifically designed to operate in connection to load cells or other strain-gauges transducers.

The instrument is compact, rugged, reliable, with a very good noise immunity, manufactured with first-class components and carefully assembled and tested.

The analog-to-digital conversion of the input signal is effected by a sigma-delta A/D converter, with a 16-bit internal resolution; the instrument is a ratio meter, using the transducer supply voltage as reference voltage, so compensating any error due to voltage drops along the connecting cable.

The instrument can be provided with two analog inputs, for the acquisition of the signals of two load cells or load cell groups.

The digital functions of the instrument are carried out by a CHMOS single-chip microprocessor; several options are available (see relevant list).

Instrument setup and calibration, commands and parameter settings are carried out through a polycarbonate keyboard, with 16 numeric and function keys.

The built-in stabilized and short-circuit protected power supply unit, 5 V DC 60 mA max, is suitable to energize up to six strain-gauges bridges, 350 ohms, parallel connected.

The indicator consists of a motherboard with a display board; it can be assembled in several types of metal or plastic boxes.

**TECHNICAL SPECIFICATIONS**

<u>Display</u>	5 digits, LED 7 segments, 14 mms high, red; adjustable brightness
<u>Range</u>	internal 16 bit, engineering unit to be stated; resolution 1, 2, 5, 10; programmable decimal point
<u>Zero and calibration</u>	through keyboard
<u>Accuracy</u>	$\pm (0.01\% \text{ of reading} + 1 \text{ unit of LSD})$
<u>Sensitivity</u>	1 $\mu\text{V/LSD}$
<u>Reading rate</u>	up to 100 readings/second
<u>Input impedance</u>	greater than 100 Mohms

<u>Common mode rejection</u>	100 db
<u>Room temperature</u>	operating 0 ÷ 55 °C; storage -10 ÷ 70 °C
<u>Relative humidity</u>	max. 80%
<u>Temperature coefficient</u>	4 ppm/°C on zero; 4 ppm/°C on span
<u>Line voltage</u>	115 or 230 V ± 10% - 50/60 cycle, or 12 or 24 V DC consumption: 5 VA max
<u>Connections</u>	removable binding post connectors

## **OPTIONS**

<b>-TAD</b>	Zeroing of net weight, through keyboard or remote command (free contact), with selection of indication of gross or net weight
<b>-S1-S2-S3-S4</b>	One, two, three or four alarms for minimum or maximum load, with settable alarm value and time delay; each alarm is provided with an SPDT relay, 2 A capacity @ 110/220 V AC
<b>-RS232</b>	RS232C serial output, without control signals, with programmable transmission parameters
<b>-RS485</b>	RS485 serial output, with programmable transmission parameters
<b>-DP</b>	Profibus DP serial output
<b>-UA/V-UA/mA</b>	analog output, 0÷10 V or 0÷20 or 4÷20 mA, with programmable parameters
<b>-IA2</b>	Dual analog input

