

AMR

MA2490 Portable Indicating Instrument

1 or 2 Input Channels, memory for 100 measured values

DESCRIPTION

Model MA2490 is an economical and versatile tool. As part of the ALMEMO family of measuring instruments, virtually any sensor may be connected. The MA24901 has one input socket for one ALMEMO sensor and the MA24902 has two. The units have two output sockets and standard cables are available for analog, V24, USB and ethernet interface.

The MA2490 uses the patented ALMEMO connection system, whereby sensor-specific parameters are stored in non-volatile memory in the sensor's connection plug and remain with the sensor! More than 65 measuring ranges are available for the MA2490, as are a wide variety of factory-made sensors including those to measure pressure, liquid and air flow, temperature, light intensity, pH, conductivity, gas concentration (CO₂, O₂, and CO), relative humidity, rotational speed, linear displacement, etc. Also, inexpensive ALMEMO connection plugs are available for connecting devices with electrical outputs to the logger. With these "blank" plugs, virtually any sensor with a linear signal output may be connected and programmed to display in correct engineering units and scaling factor.

Sensor calibration changes may be made via microprocessor interface, whereby zero and span changes may be made easily and accurately. The changes remain with the sensor because they are stored in the sensor's connection plug. For certain sensors, multiple measurements (4 max.) are available from each input channel. For instance, with a relative humidity probe the air temperature and the relative humidity as well as the calculated variables dew point, mixture ratio, or partial vapor pressure may be viewed. All from a sensor plugged into one input socket.



SPECIFICATIONS

Measuring Inputs: 1 (MA2490-1) or 2 (MA2490-2) ALMEMO Input Sockets for ALMEMO Sensors

Channels: Per sensor, max. 4 channels (sensor-type-specific, measuring and function channels)

Outputs: Two ALMEMO sockets for all ALMEMO interface cables

Power Requirements- 3 AA Alkaline batteries or AC/DC Adapter(7-13VDC), 150mA

Current Consumption- Approx. 20 mA without anything connected to inputs or output

A/D Converter- delta-sigma, 16-bit

Measurement Rate- 2.5 or 10 Measurements per Second

System Accuracy- +/-0.03% of Measured Value +/-3 Digits

Cold-Junction Compensation- +/-0.2°C, +/-0.01°C/°C In The Range Of -30...+80°C

Automatic Sensor Burnout Indication

LC Display- 7 segments: Measured value 5 char., 15 mm

Function 4 1/2 char., 9mm

16 segments: Units 2 char., 9mm

9 symbols

Keypad- 7 silicone keys

Enclosure- ABS plastic, high impact strength, max 70°C

Dimensions- 127 mm L x 83 mm W x 42 mm H

ORDERING INFORMATION

Model

MA24901	1 input socket, 2 output socket, 3 AA batteries, operating instructions and test certificate
MA24902	2 input sockets, 2 output socket, 3 AA batteries, operating instructions and test certificate
MA24901L	1 input socket, no output socket, 3 AA batteries, operating instructions and test certificate
MA24902L	2 input sockets, no output socket, 3 AA batteries, operating instructions and test certificate
OA2490HS	Top rail mounting option for MA 2490-1,2 (must be ordered with unit)

Accessories

29-013	110VAC to 120 VDC Adaptor
ZB2490TK	Instrument Case
ZA1909DK5	ALMEMO® RS232 data cable, electrically isolated, max. 115.2kbaud, 1.5m
ZA1606-RK	Analog Output Cable, Output voltage -1.250 to 2.00V, 0.1 mV/digit
ZA1909DK5USB	V24 data cable, electr. isol., maximum 115.2 KB
ZA1919DKU	USB data cable, electr. isol., maximum 115.2 KB

FEATURES

- 1 or 2 ALMEMO®input sockets for ALMEMO®sensors, 8 channels, 4 internal function channels (e.g. differential values)
- Memory sufficient for 100 measured values, can be called up and viewed in the display
- High-resolution A/D converter, 16-bit, 10 mops
- More than 65 standard measuring ranges
- Support for ALMEMO®connectors with multi-point calibration, special linearization, and special measuring ranges
- Generously dimensioned 2-row static 7 / 16 segment display including units
- Easy and convenient to operate by means of 7 keys
- Measuring functions : Measured value, zero-setting, sensor adjustment, saving of maximum / minimum values, memory for 100 measured values, cold junction compensation, and temperature compensation
- Test functions : Segment monitoring, range monitoring, sensor breakage indication, battery voltage check and display

