Universal ALMEMO® transmitter 2490 with analog output



- **1 or 2 measuring inputs.**
- **Built-in analog output 2 x 10 V or 20 mA (programmable)**
- **Display and keypad.**

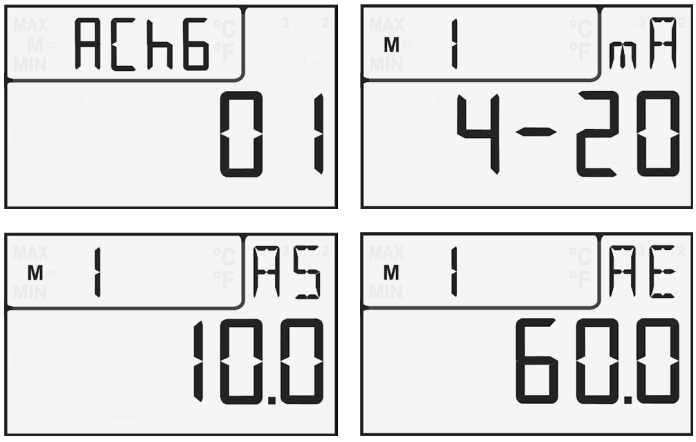
Technical features

- Analog transmitter with built-in double analog output.
- Analog output range and measuring channel assignment programmable via keyboard.
- Basic measuring instrument with over 65 standard measuring ranges.
- Good measuring accuracy, measuring rate up to 10 measurements/s.
- Support of ALMEMO® connectors with multipoint adjustment, special linearization and special ranges.
- Measuring functions: Measured value, zeroing, sensor calibration, max. and min. value storage.
- Full sensor and instrument programming via interface

Technical data

Precision class	B, see general technical specifications
Measuring rate	10 and 2.5 mops
Measuring ranges	over 65 measuring ranges, inter alia thermocouples, Pt100, Pt1000, NTC temperature / humidity, (capacitive or psychrometric)
Measuring inputs 2490-1R02U 2490-2R02U	via ALMEMO® connector 1 ALMEMO® socket 2 ALMEMO® sockets, electrically isolated with semiconductor relay (50 V).
Additional channels	4 function channels internal to the device
Sensor supply	9 V, max. 80 mA for power supply operation
Analog outputs	via ALMEMO® socket P0: 2 x 10 V or 20 mA (programmable), both outputs with common ground.
0.0 to 10.0 V 0.0 / 4.0 to 20.0 mA	16 bit DAC, electrically isolated. 0,5 mV/digit, load > 100 kOhm. 1 µA/digit, load < 500 Ohm. Accuracy: 0.1 % of meas. v. +0.1 % of final v Temperature drift: 10 ppm/K. Time constant: 100 µs.
Digital outputs	via ALMEMO® sockets A1 and A2 for PC cable USB or RS232 and relay cable
Power supply	via ALMEMO® socket DC 10 … 30 V DC, electrically isolated to analog outputs and measuring input
Standard equipment	LCD screen, keypad
Housing	ABS, L127 x W83 x H42 mm
Environmental conditions	see general technical data

Programming the analog output (Example)



Analog start

Analog end

ALMEMO® 2490-1R02U



Analog transmitter, 1 measuring input
Double analog output

ALMEMO® 2490-2R02U



Analog transmitter, 2 Measuring inputs
Double analog output

Accessories

	Order no.
Power supply: (via ALMEMO® socket DC)	
100 to 240 V AC via mains unit 12 V, 1.5 A, with ALMEMO® connector	**ZA1312NA12**
10 to 30 VDC, maximum 80 mA, electrically isolated, via ALMEMO® clamp connector ZA1000FSV	included in delivery
Digital interface: (via ALMEMO® socket A1)	
USB interface via ALMEMO® USB cable	**ZA1919DKU**
RS232 interface via ALMEMO® RS232 cable	**ZA1909DK5**
Limit value contact: (via ALMEMO® socket A2)	
(see chapter „Output modules“)	
(Programming via digital interface, see above)	
2 normally open contacts, 50 VDC / 500 mA (can also be programmed as inverted)	
via ALMEMO® relay cable, V6, clamped connection	**ZA1006EKG**
ALMEMO® limit value cable with banana plugs (for electrical socket adapter)	**ZA1006GK**
Electrical safety socket adapter, 250 V / 6 A (for ALMEMO® limit value cable)	**ZB2280RA**
Installation:	
DIN rail	**ZB2490HS**
Magnet	**ZB2490MH**

Standard delivery

	Order no.
Analogue transmitter, measuring input via ALMEMO® plug.	
Double analogue output incl. ZA1000KS clamping plug.	
Electrically isolated power supply incl. ZA1000FSV terminal plug.	
Operating instructions, manufacturer‘s test certificate.	
Analog transmitter ALMEMO® 2490-1R02U, 1 measuring input	**MA24901R02U**
Analog transmitter ALMEMO® 2490-2R02U, 2 measuring inputs	**MA24902R02U**

DAkkS accredited calibration or factory calibration KE90xx, electrical, for measuring instruments, see chapter „Calibration certificates“.
The DAkkS accredited calibration meets the requirements of DIN EN ISO/IEC 17025 for test equipment.