

measuring transducer

universal-measuring transducer UMU 500

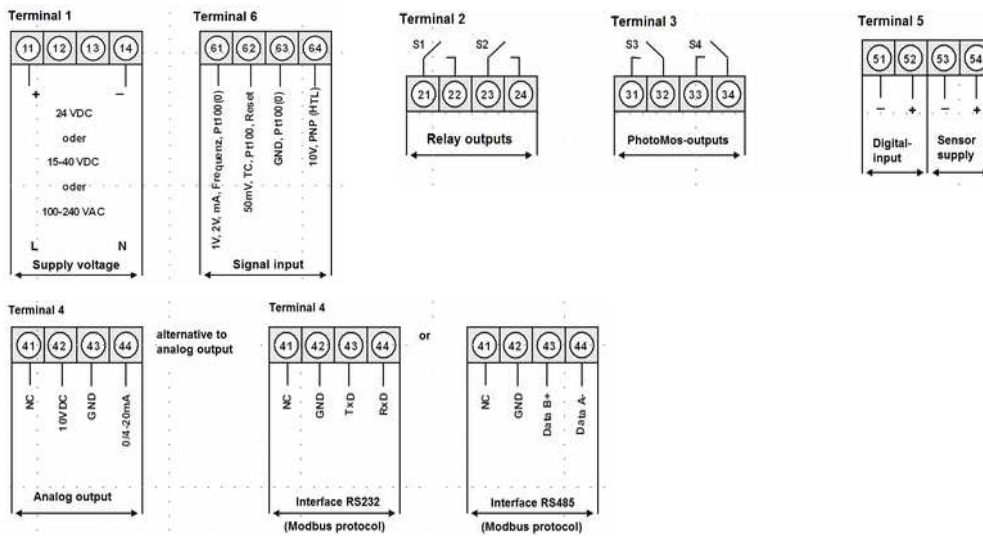
features

- universal measuring transducer for switchboard assembly, can be snapped up on top cap rail
 - width of housing 22,5mm
 - parameterization via display on board or USB interface with software
 - broadband power supply
 - universal input for resistance thermometer, thermocouples, current, voltage, potentiometer, linear resistances
 - universal output voltage, power supply
 - galvanic detachment between input/output and power supply
 - optional: power supply for 2-wire transmitter like KMU100.
 - optional: 2 relay outputs and/of 2 Photo-Mos outputs
 - electrical connection with pluggable coded clamps
- on request equipment can be calibrated in our calibration laboratory and/or for application at ISO9000 on your specifications calibrated



UMU 500-1-B-B-1

terminal pin assignment



order-code UMU 500...

order example: UMU 500-1-B-B-1

voltage supply

- 1 100...240VAC/DC +/-10%
- 2 15...40VDC / 20...30VAC

limit value relay output / photo-mos output

- A without limit value relay
- B with 2 limit value relay
- C with 2 Photo-Mos outputs
- D with 2 limit value relays and 2 Photo-Mos outputs

analog output

- A without analog output
- B with analog output

sensor supply

- 0 without sensor supply
- 1 with sensor supply 24VDC/50mA

measuring transducer

universal-measuring transducer UMU 500

technical specifications

housing	dimensions attachment material of housing connection	B22,5 x H117,2 x T107 mm rail PA6.6, black, UL94V-0 push-wire, cross section up to 1,5 mm ²	
display	display height of digit colour of segment display range switch points overflow underflow display-/measuring time	3-digit 7 mm red -199 up to 999 LED S1, LED S2, LED S3, LED S4 horizontal girders at the top horizontal girders at the bottom 0,1 to 10,0 seconds	
power supply pack	Supply Supply Supply	24 VDC ± 10% galvanically isolated, ≤ 5 VA 100-240 VAC 50/60 Hz DC ± 10%, ≤ 15 VA 15-40 VDC galvanically isolated / 20-30 VAC 50/60 Hz, ≤ 10 VA	
memory	EEPROM	receipt of data ≥ 100 years at 25°C	
environmental conditions	operation temperature storage temperature climatic proofing	0°C...50°C -20°C...80°C relevant damp 0-85% annual average without condensation	
measuring input			
signal	measuring range	measuring span	resolution
voltage	0...10 V (Ri > 100 kOhm)	0...12 V	≥ 14 bit
voltage	0...2 V (Ri ≥ 10 kOhm)	0...2,2 V	≥ 14 bit
voltage	0...1 V (Ri ≥ 10 kOhm)	0...1,1 V	≥ 14 bit
voltage	0...50 mV (Ri ≥ 10 kOhm)	0...75 mV	
current	4...20 mA (Ri = ~125 Ohm)	1...22 mA	
current	0...20 mA (Ri = ~125 Ohm)	0...22 mA	
Pt100-3-wire	-50...200°C -58...392°F	0,1°C / 0,1°F	
Pt100-3-wire	-200...850°C -328...1562°F	1°C / 1°F	
Pt1000-2-wire	-200...850°C -328...1562°F	1°C / 1°F	
Thermo K	-270...1350°C -454...2462°F	1°C / 1°F	
Thermo S	-50...1750°C -328...3182°F	1°C / 1°F	
Thermo N	-270...1300°C -454...2372°F	1°C / 1°F	
Thermo J	-170...950°C -274...1742°F	1°C / 1°F	
Thermo T	-270...400°C -454...752°F	1°C / 1°F	
Thermo R	-50...1768°C -58...3214°F	1°C / 1°F	
Thermo B	80...1820°C 176...3308°F	1°C / 1°F	
Thermo E	-270...1000°C -454...1832°F	1°C / 1°F	
Thermo L	-200...900°C -328...1652°F	1°C / 1°F	
frequency	0...10 kHz 0...10 kHz	0,001 Hz /	
NPN	0...3 kHz 0...3 kHz	0,001 Hz /	
PNP	0...1 kHz 0...1 kHz	0,001 Hz	
speed	0...9999 1/min 0...9999 1/min	0,001 1/min	
counter	0...9999	(divisor up to 1000)	
pulse input	TTL / low <2 V / high >3 V	HTL/PNP / low <6 V / high >8 V	
reset input	NPN / low <0,8 V / high via resistor	Namur / low <1,5 mA / high >2,5 mA	
measuring mistake	active<0,8 V standard Pt100 / Pt1000 thermocouples	0,2% from measuring range ± 1 Digit 0,5% from measuring range ± 1 digit 0,3% from measuring range ± 1 digit	
accuracy	reference junction temperature drift measuring time measurement range	± 1°C 100 ppm/K 0,01...2,0 seconds ca. 1/s with temperature sensor, ca. 100/s with usual signals	
output	measuring principle resolution sensor supply	U/F-conversion ca. 14 Bit / 1s measuring time 24 VDC / 50 mA incl. digital input, <2.4V OFF, > 10V ON, max. 30 VDC / Ri ~ 14 kOhm	
switching points	2x relay outputs with NO contact	switching voltage 30 VDC / AC, max. 2 A resistive load service life < 30 mV/< 10 mA – min. 2,5x10 ⁶ 30 VDC / 1 A – min. 5x10 ⁵ 30 VDC / 2 A – min. 1x10 ⁵	
analog output	2 PhotoMos outputs with NO contact 0-10 VDC / load min. 10 kOhm, 0/4-20 mA / load max. 500 Ohm, 12 bits	switching voltage 30 VDC / AC, max. 0.4 A	
EMV	EN 61326		
CE-marking	conformity in accordance with directive 2014/30/EU		
safety regulations	in accordance with voltage directive 2014/35/EU; EN 61010; EN 60664-1		