

measuring transducer

universal-measuring transducer UMU 500

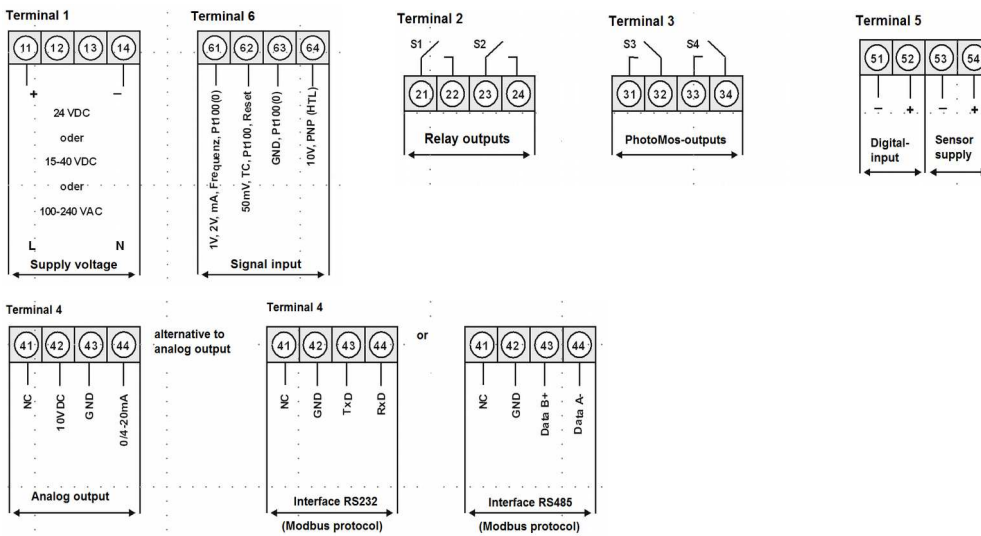
features

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

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

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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	operation temperature	100...240 VAC/DC 0°C...50°C 15...40 VDC/20...30 VAC 0°C...60°C -20°C...80°C
conditions	storage temperature	-20°C...80°C
measuring input	climatic proofing	relevant damp 0-85% annual average without condensation
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	
accuracy	standard	0,2% from measuring range ± 1 Digit
	Pt100 / Pt1000	0,5% from measuring range ± 1 digit
	thermocouples	0,3% from measuring range ± 1 digit
	reference junction	± 1°C
	temperature drift	100 ppm/K
	measuring time	0,01...2,0 seconds
	measurement range	ca. 1/s with temperature sensor, ca. 100/s with usual signals
	measuring principle	U/F-conversion
output	resolution	ca. 14 Bit / 1s measuring time
	sensor supply	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	switching voltage 30 VDC / AC, max. 0.4 A
	0-10 VDC / load min. 10 kOhm,	
	0/4-20 mA / load max. 500 Ohm, 12 bits	
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	