

Large-size displays single-line

- 4-digit with dimension field
- operation via keys on front side



Different measuring inputs:

- Standard signals 0/4 up to 20 mA, 0/10 V
- PT100, 2-, 3- / 4-wire
- Frequency from 0.01 Hz up to 100 kHz
- Counter; impulse rate up to 10.000 Imp/s max. / timer from 10 ms
- Interface triggering RS232 / RS485
- BCD triggering
- Profibus DP

Large size displays, 4-digit, for indoor use, digit heights 57 mm, 100 mm (200 mm on demand)

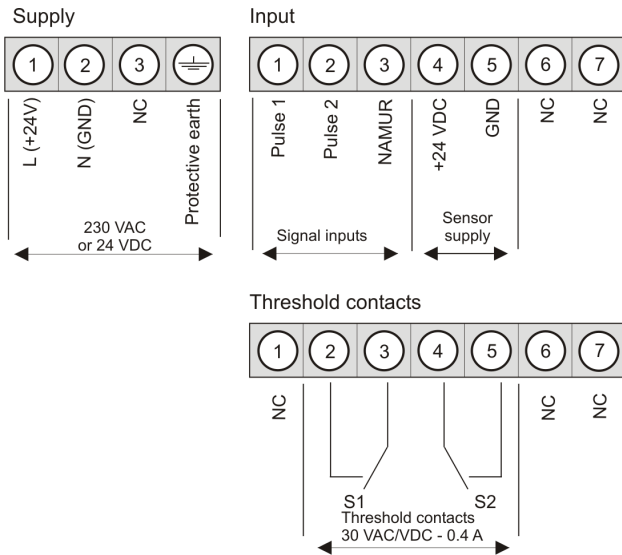
- Input: Standard signals 0/4 up to 20 mA, 0 up to 10 V
(Transmitter connection see page 11)

Supply	Measuring input	Digit height	Supply	Ordering number	EUR
Build-up housing					
		57 mm	85-264 VAC	MG-AVR41.0001.S10BD1	730,00
		57 mm	18-36 VDC	MG-AVR41.0001.710BD1	820,00
		100 mm	85-264 VAC	MG-AVR42.0001.S10BD1	990,00
		100 mm	18-36 VDC	MG-AVR42.0001.710BD1	1.080,00
Build-in housing					
		57 mm	85-264 VAC	MG-BVR41.0001.S10BD3	680,00
		57 mm	18-36 VDC	MG-BVR41.0001.710BD3	770,00
		100 mm	85-264 VAC	MG-BVR42.0001.S10BD3	940,00
		100 mm	18-36 VDC	MG-BVR42.0001.710BD3	1.030,00

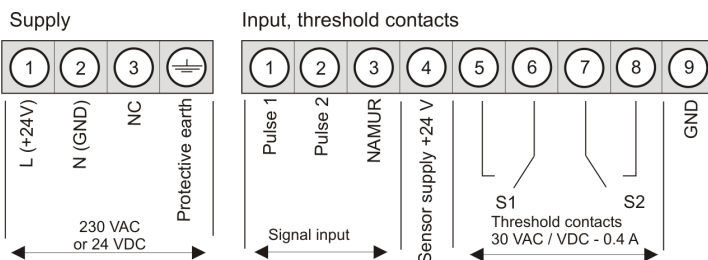
- Input: PT100, 2-, 3- / 4-wire (-99.9 °C...850.0 °C)

Supply	Measuring input 2-wire	Measuring input 3-wire	Measuring input 4-wire	Digit height	Supply	Ordering number	EUR
Build-up housing							
				57 mm	85-264 VAC	MG-ATR41.000C.S10BD1	730,00
				57 mm	18-36 VDC	MG-ATR41.000C.710BD1	820,00
				100 mm	85-264 VAC	MG-ATR42.000C.S10BD1	990,00
				100 mm	18-36 VDC	MG-ATR42.000C.710BD1	1.080,00
Build-in housing							
				57 mm	85-264 VAC	MG-BTR41.000C.S10BD3	680,00
				57 mm	18-36 VDC	MG-BTR41.000C.710BD3	770,00
				100 mm	85-264 VAC	MG-BTR42.000C.S10BD3	940,00
				100 mm	18-36 VDC	MG-BTR42.000C.710BD3	1.030,00

• **Input: Frequency from 0.01 Hz up to 100 kHz**

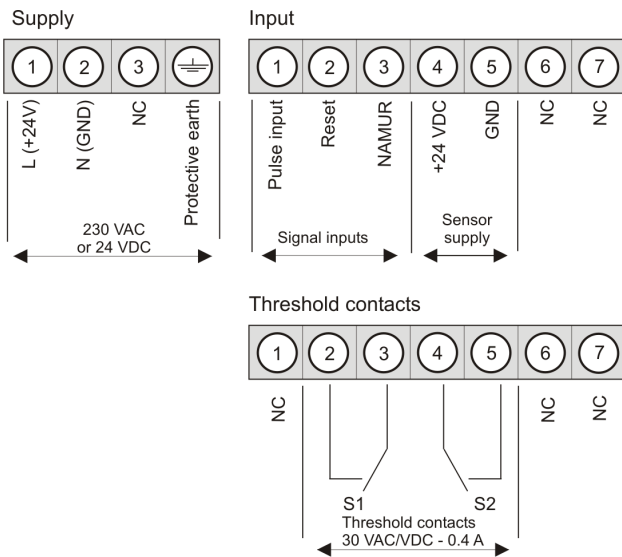


Digit height	Supply	Ordering number	EUR
Build-up housing			
57 mm	85-264 VAC	MG-AFR41.0J07.S10BD1	750,00
57 mm	18-36 VDC	MG-AFR41.0J07.710BD1	840,00
100 mm	85-264 VAC	MG-AFR42.0J07.S10BD1	1.040,00
100 mm	18-36 VDC	MG-AFR42.0J07.710BD1	1.130,00

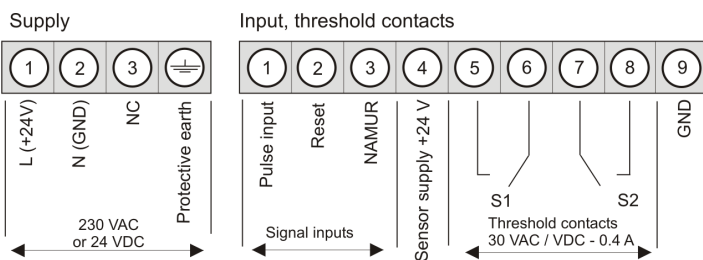


Build-in housing			
57 mm	85-264 VAC	MG-BFR41.0J07.S10BD3	660,00
57 mm	18-36 VDC	MG-BFR41.0J07.710BD3	750,00
100 mm	85-264 VAC	MG-BFR42.0J07.S10BD3	960,00
100 mm	18-36 VDC	MG-BFR42.0J07.710BD3	1.050,00

• **Counter input; Impulse rate up to 10.000 Impulses/s max. / Timer from 10 ms**

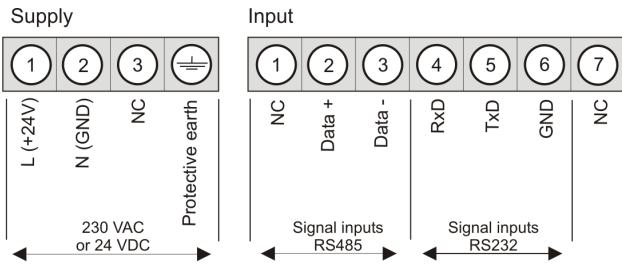


Build-up housing			
57 mm	85-264 VAC	MG-ACR41.0J03.S10BD1	750,00
57 mm	18-36 VDC	MG-ACR41.0J03.710BD1	840,00
100 mm	85-264 VAC	MG-ACR42.0J03.S10BD1	1.040,00
100 mm	18-36 VDC	MG-ACR42.0J03.710BD1	1.130,00

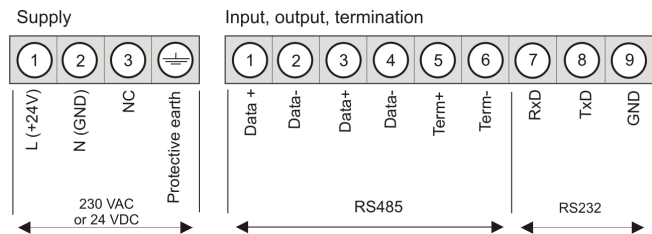
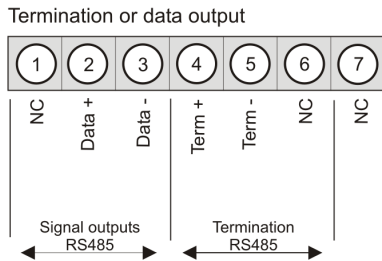


Build-in housing			
57 mm	85-264 VAC	MG-BCR41.0J03.S10BD3	660,00
57 mm	18-36 VDC	MG-BCR41.0J03.710BD3	750,00
100 mm	85-264 VAC	MG-BCR42.0J03.S10BD3	960,00
100 mm	18-36 VDC	MG-BCR42.0J03.710BD3	1.050,00

• **Input: Interface triggering RS232 / RS485**

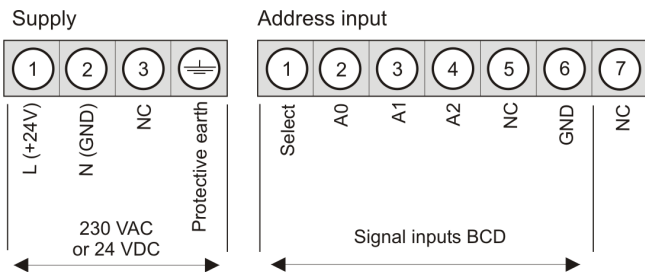


Digit height	Supply	Ordering number	EUR
Build-up housing			
57 mm	85-264 VAC	MG-ABR41.A000.S10BD1	710,00
57 mm	18-36 VDC	MG-ABR41.A000.710BD1	800,00
100 mm	85-264 VAC	MG-ABR42.A000.S10BD1	970,00
100 mm	18-36 VDC	MG-ABR42.A000.710BD1	1.060,00

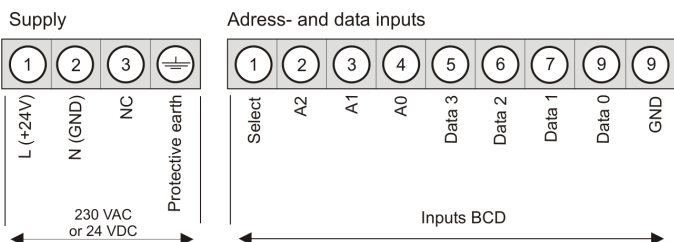
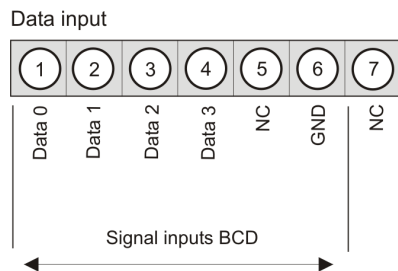


Digit height	Supply	Ordering number	EUR
Build-in housing			
57 mm	85-264 VAC	MG-BBR41.A000.S10BD3	660,00
57 mm	18-36 VDC	MG-BBR41.A000.710BD3	750,00
100 mm	85-264 VAC	MG-BBR42.A000.S10BD3	920,00
100 mm	18-36 VDC	MG-BBR42.A000.710BD3	1.010,00

• **Input: BCD triggering**

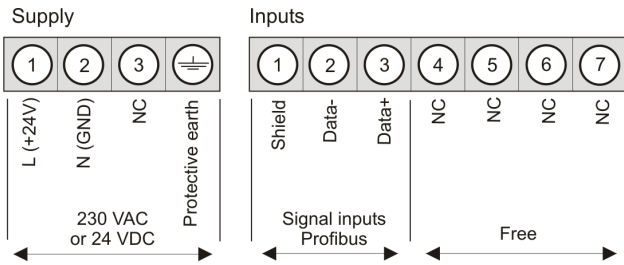


Digit height	Supply	Ordering number	EUR
Build-up housing			
57 mm	85-264 VAC	MG-ABR41.B000.S10BD1	730,00
57 mm	18-36 VDC	MG-ABR41.B000.710BD1	820,00
100 mm	85-264 VAC	MG-ABR42.B000.S10BD1	1.000,00
100 mm	18-36 VDC	MG-ABR42.B000.710BD1	1.090,00



Digit height	Supply	Ordering number	EUR
Build-in housing			
57 mm	85-264 VAC	MG-BBR41.B000.S10BD3	660,00
57 mm	18-36 VDC	MG-BBR41.B000.710BD3	750,00
100 mm	85-264 VAC	MG-BBR42.B000.S10BD3	920,00
100 mm	18-36 VDC	MG-BBR42.B000.710BD3	1.010,00

• Input: Profibus DP



Digit height

Supply

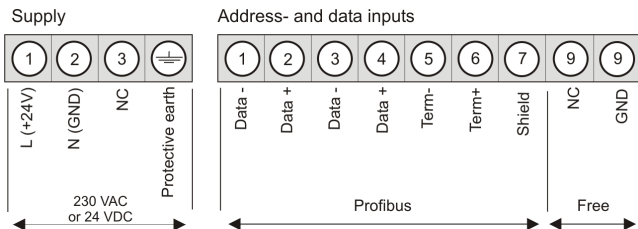
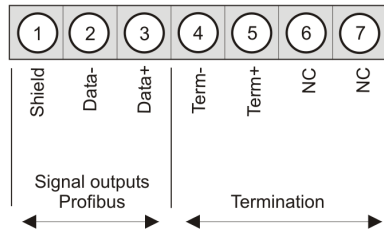
Ordering number

EUR

Build-up housing

57 mm	85-264 VAC	MG-ABR41.9000.S10BD1	950,00
57 mm	18-36 VDC	MG-ABR41.9000.710BD1	1.030,00
100 mm	85-264 VAC	MG-ABR42.9000.S10BD1	1.180,00
100 mm	18-36 VDC	MG-ABR42.9000.710BD1	1.270,00

Output, termination



Build-in housing

57 mm	85-264 VAC	MG-BBR41.9000.S10BD3	900,00
57 mm	18-36 VDC	MG-BBR41.9000.710BD3	990,00
100 mm	85-264 VAC	MG-BBR42.9000.S10BD3	1.130,00
100 mm	18-36 VDC	MG-BBR42.9000.710BD3	1.260,00

Options on demand

- Enlargement over 4 digits
- Green display (same price)
- Digit height from 200 mm LED
- Digit height 60, 100, 150 and 250 mm LCD
- 2 relay outputs
- Outdoor use

Technical data

Dimensions

Build-up housing	57 mm display	W 316 mm x H 124 mm x D 82 mm
	100 mm display	W 526 mm x H 176 mm x D 82 mm
	Fixing	via fixing flange at the back
	Housing material	Aluminium, black
	Protection	IP65
	Weight	
	57 mm display	approx. 3.0 kg
	100 mm display	approx. 5.0 kg
	Connection	3-pole multipole connector for voltage supply in execution IP65, for conductor diameter 5.5 – 10 mm
	57 mm display	6-pole multipole connector for in- and outputs in execution IP65, for conductor diameter 4 – 7.5 mm
	100 mm display	

Connection

57/100 mm display	Type of plug	Circular plug-in connector Binder-Series 693
	Cable admission	PG9 (6.0 ... 9.5 mm)
	Protection class	IP65
	Mechanic life expectancy	> 500 contact durability
	Connection type	Screws

Connection

Voltage supply	Number of poles	3 + PE
	Cable cross section	0.5...2.5 mm (AWG 20...14)
	Rating	400 V
	Rating current	12 A

Connection

In-/output	Number of poles	7
	Cable cross section	0.34...1.5 mm (AWG 22...16)
	Rating	250 V
	Rating current	8 A

Build-in housing (incl. plug-in terminal)	57 mm display	W 316 mm x H 124 mm x D 104 mm
	100 mm display	W 526 mm x H 176 mm x D 104 mm

Panel cut-out	57 mm display	W 310.0 x H 118.0 ^{+/-0.5} mm
	100 mm display	W 520.0 x H 176.0 ^{+/-0.5} mm

Fixing	Housing material	Aluminium, black, pulverbeschichtet
	Protection	Front IP65
	Connection	IP00

Weight	57 mm display	approx. 3.0 kg
	100 mm display	approx. 5.0 kg
Connection	57 mm display	4-pole removable screwclamp for voltage supply for conductor diameter up to 2.5 mm ²
	100 mm display	9-pole removable screwclamp for in- and outputs for conductor diameter up to 1.5 mm ²

Input

Standard signals

Display	Display	7-segment LED
	Digit height	57 mm, 100 mm
	Segment colour	red
	Number of digits	4 digits
	Display range	-999...9999
	Overflow	Indication of transversal bars at the top
	Underflow	Indication of transversal at the bottom
	Display time	0.1...10.0 seconds
	Field	Indoor

Measuring input	Measuring range	R, approx.	Measuring error [%] MR	Digit
	0...10 V	150 kΩ	0.1	± 1
	0...5 V	150 kΩ	0.1	± 1
	0...20 mA	100 Ω	0.1	± 1
	4...20 mA	100 Ω	0.1	± 1

Temperature drift	all measuring inputs ~ 50 ppm/K
Measuring-/display time	0.01...10.0 seconds
Measuring principle	Voltage-/frequency converter

Resolution (at 1 second measuring time)	approx. 20 bit	
Memory	Data life	Parameter memory EEPROM > 20 years
Output	Sensor supply	12...24 VDC; 50 mA (galvanic not insulated)
Input PT100		
Display	Display Digit height Segment colour Number of digits Display range Wire break Display time Field	7-segment LED 57 mm, 100 mm red 4 digits -99.9...850.0 Indication of transversal bars on all display digits 0.1...10.0 seconds Indoor
Measuring input	Measuring range Measuring cycle Wire resistance Resolution Measuring fault 850 °C	-99.9...850.0 °C max. 10 measurements per second ≤ 50 Ohm each wire 12 bit +/- 0.1 % of final value; +/- 3 digit
Accuracy	Temp. coefficient Measuring principle	~ 130 ppm/K gradual approximation
Memory	Data life	Parameter memory EEPROM > 20 years
Input Frequency		
Display	Display Digit height Segment colour Number of digits Display range Overflow Display time Field	7-segment LED 57 mm, 100 mm red 4 digits -999...9999 Indication of transversal bars on all display digits 0.1...10.0 seconds Indoor
Measuring input	Signal Level Input frequency	Impulse input, Namur, 3-wire initiator High/Low level ⇒ 10 V / < 6 V 0.01 Hz...100 kHz
Accuracy	Resolution Measuring fault Temp. coefficient	0...9999 digit +/-0.04 % of input frequency ~ 40 ppm/K
Output	Sensor supply	12...24 VDC; 50 mA (galvanic not insulated)
Memory	Data life	Parameter memory EEPROM > 30 years
Input Counter		
Display	Display Digit height Segment colours Number of digits Display range Overflow Field	7-segment LED 57 mm, 100 mm, 200 mm red 4 digits -999...9999 Indication of transversal bars on all display digits Indoor
Measuring input	Impulse rate Time basis timer Input resistance Input voltage HIGH- / LOW level	10,000 impulses/s max. 30 impulses/s with active damping 10 ms / 100 ms / 1 second ca. 10 kOhm +/- 5...24 V ≥ 4.5 V / < 4 V
Output	Sensor supply 57/100 mm display 200 mm display NAMUR-supply Setpoints Photo Mos	12...24 VDC; 50 mA (galvanic not insulated) 24 VDC; 50 mA (galvanic not insulated) approx. 3 mA 30 VAC / 0.4 A – 30 VDC / 0.4 A Input - output voltage / disruptive discharge 100 VAC
Memory	Data life	Parameter memory EEPROM > 30 years

**Input
Interface triggering
RS232/RS485**

Display	Display Digit height Segment colour Number of digits Field	7-segment LED 57 mm, 100 mm red 4 digits Indoor
Interface seriell	Protocol Baud rates Interfaces Length/conductor RS232 Length/conductor RS485 Bus participants Termination	parametricable ASCII-report 300, 1200, 2400, 4800, 9600, 19200, 38400, 57600 RS232 / RS485 parametricable max. 3 m max. 1000 m max. 32 to get activated via connection terminal
Memory	Data life	Parameter memory EEPROM > 30 years

**Input
BCD triggering**

Display	Display Digit heights Segment colours Number of digits Field	7-segment LED 57 mm, 100 mm red 4 digits Indoor
Interface BCD	HIGH / LOW	$\geq 4.5 \text{ V} / \leq 2.4 \text{ V}$
Memory	Data life	Parameter memory EEPROM > 30 years

**Input
Profibus DP**

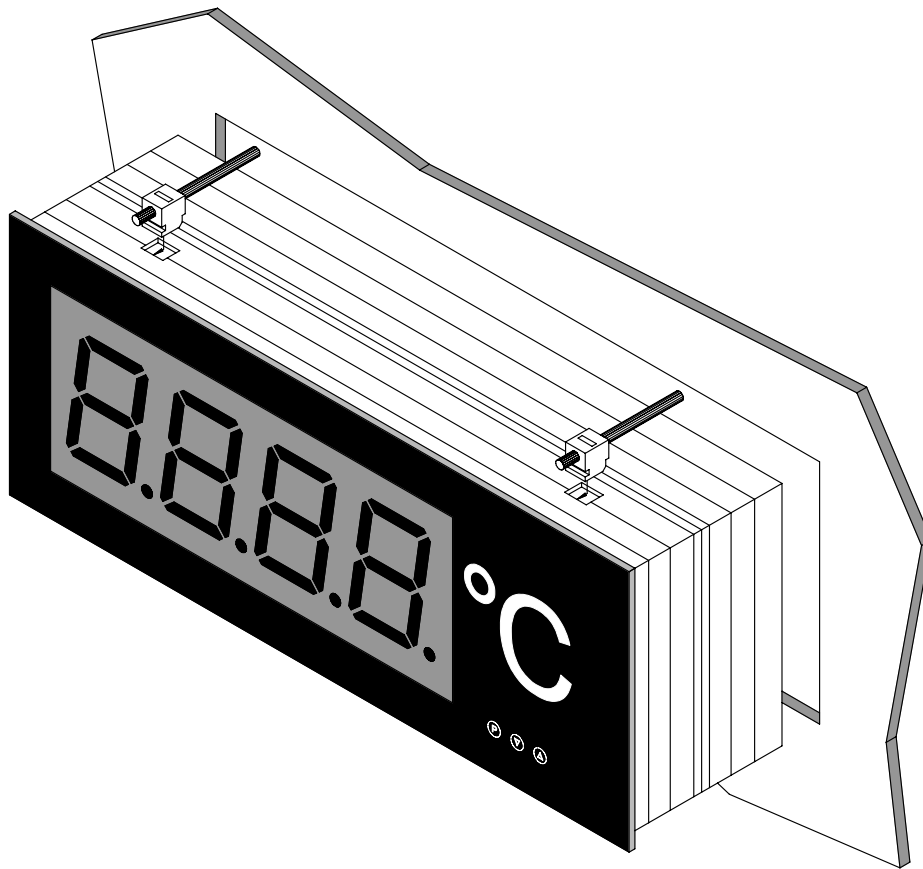
Display	Display Digit heights Segment colour Number of digits Field	7-segment LED 57 mm, 100 mm red 4 digits Indoor
Profibus	Protocol Baud rates Interfaces Length/conductor Bus termination Termination	Profibus DP Auto recognition up to 12 Mbaud RS485 max. 1000 m Pullup/-down to EN50170 to get activated via connection terminal
Memory	Data life	Parameter memory EEPROM > 100 years

Technical data for all types

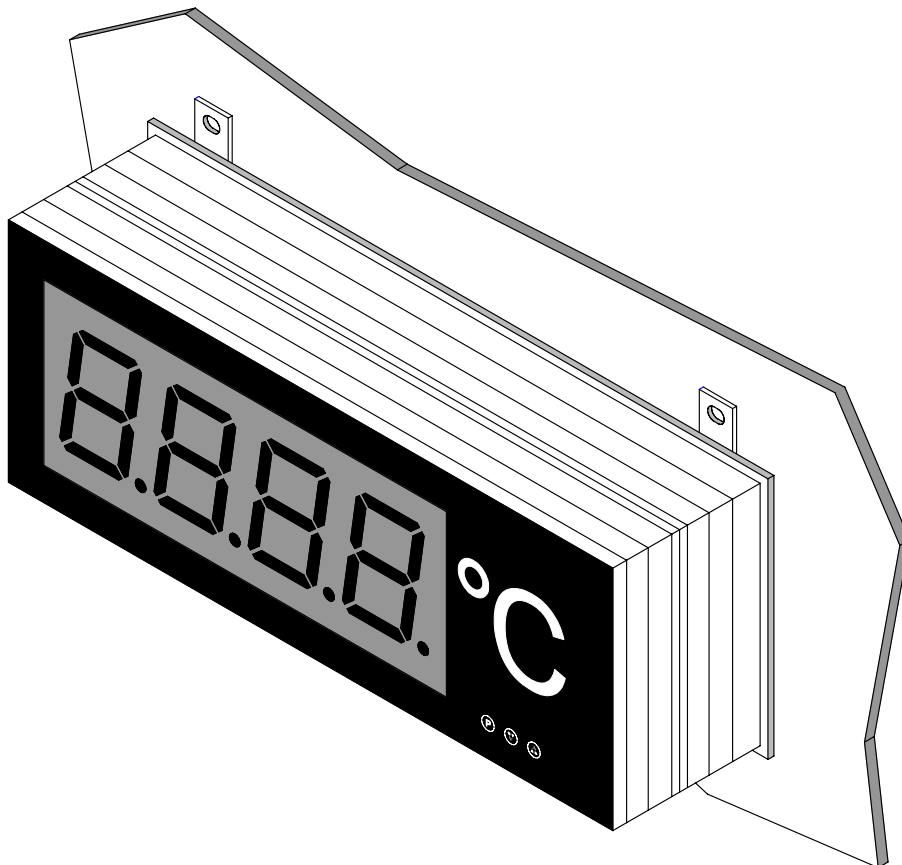
Power unit	Power supply Power consumption	88...264 VAC / 50/60 Hz 18-36 VDC max. 30 VA
Ambient conditions	Working temperature Storing temperature Climatic resistance	0...60 °C -20...80 °C rel. humidity $\leq 75 \%$ on year average without dew
EMV CE-sign		DIN 61326 Conformity to 89/336/EWG
Safety standard		DIN 61010

Housing fixing

- Build-in housing with 57 mm and 100 mm digit height
(Screw-/clamp fixing inclusive)



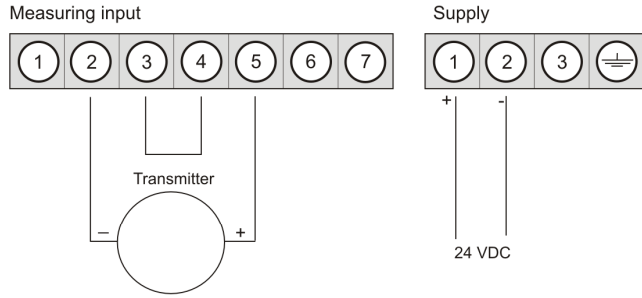
- Build-up housing with 57 mm and 100 mm digit height



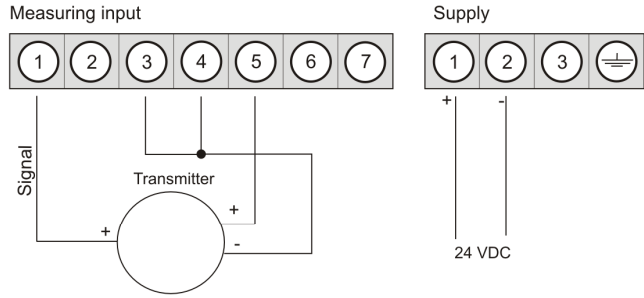
Connection pictures

Terminal connection for transmitter connections with/without sensor supply

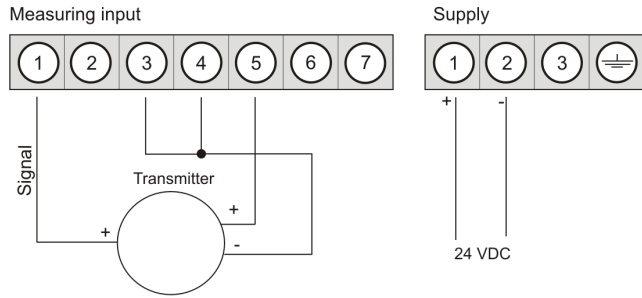
2-wire: 4-20 mA



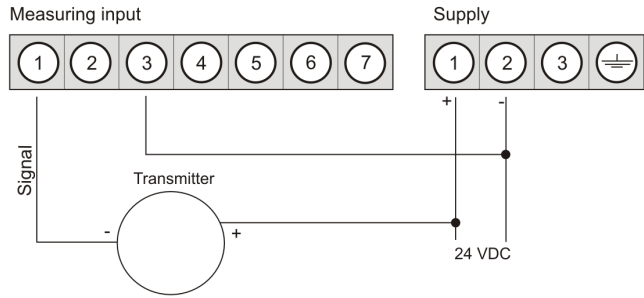
3-wire: 0-20 mA



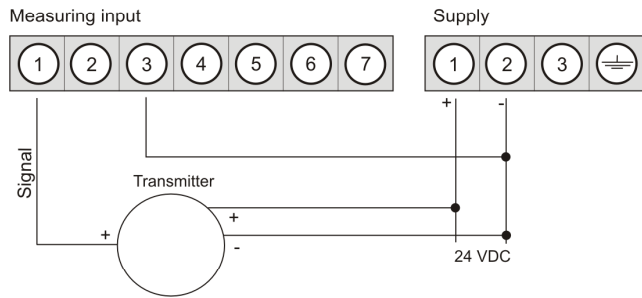
3-wire: 0-10 V / 0-5 V / 0-1 / 1-6 V



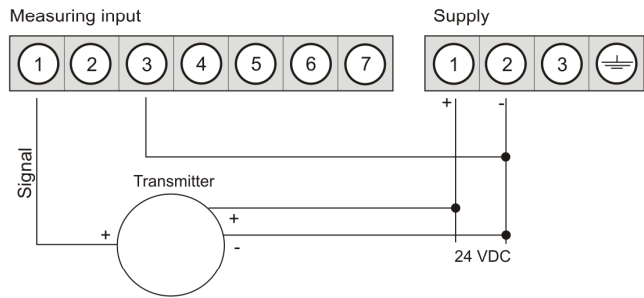
2-wire: 4-20 mA



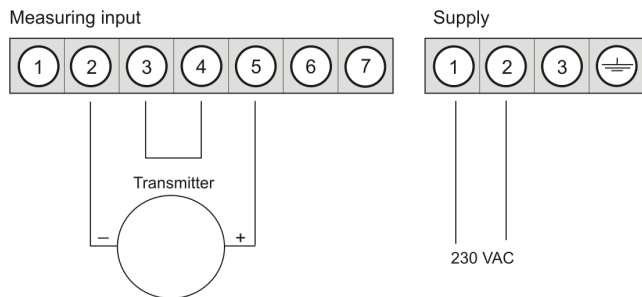
3-wire: 0-20 mA



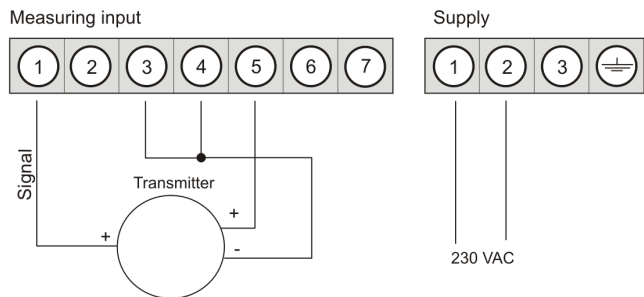
3-wire: 0-10 V / 0-5 V / 0-1 V / 1-6 V



2-wire: 4-20 mA



3-wire: 0-20 mA



3-wire: 0-10 V / 0-5 V / 0-1 / 1-6 V

