Digital panel meter
3½-digit

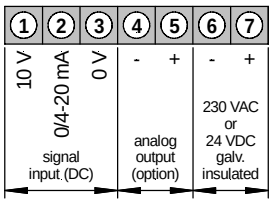
DV3, DT3

- Without setpoints
- Analog output

Digital panel meter

- Direct voltage
- Alternating voltage
- Resistance
- PT100/PT1000
- Direct current
- Alternating current
- Potentiometer
- Thermocouple
- Shunt

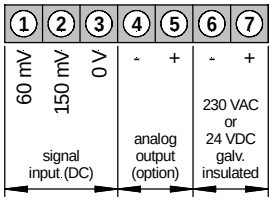
• *Direct voltage, direct current*



Transmitter connections see page 6

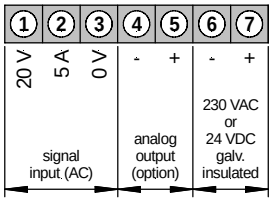
	ORDER NUMBER OF TYPE (without options)	EUR
Power supply 230 VAC	**DV 3.001.850B**	**130,40**
Power supply 24 VDC (galv. insulated)	**DV 3.001.870B**	**150,85**

• *Direct voltage (Shunt)*



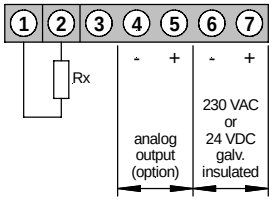
		ORDER NUMBER OF TYPE (without options)	EUR
Power supply 230 VAC		**DV 3.002.850B**	**145,70**
Power supply 24 VDC (galv. insulated)		**DV 3.002.870B**	**166,15**

• *Alternating voltage, alternating current*



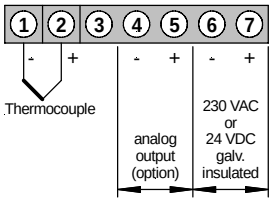
		ORDER NUMBER OF TYPE (without options)	EUR
Power supply 230 VAC	Standard	**DV 3.004.850B**	**161,05**
	True effective value RMS	**DV 3.104.850B**	**181,50**
Power supply 24 VDC (galv. insulated)	Standard	**DV 3.004.870B**	**181,50**
	True effective value RMS	**DV 3.104.870B**	**217,30**

• *Resistance, potentiometer*



		ORDER NUMBER OF TYPE (without options)	EUR
Power supply 230 VAC	Measuring range ≤10kΩ	**DV 3.506.850B**	**145,70**
	Measuring range ≤100kΩ	**DV 3.606.850B**	**145,70**
	Measuring range ≤1MΩ	**DV 3.706.850B**	**145,70**
Power supply 24 VDC (galv. insulated)	Measuring range ≤10kΩ	**DV 3.506.870B**	**166,15**
	Measuring range ≤100kΩ	**DV 3.606.870B**	**166,15**
	Measuring range ≤1MΩ	**DV 3.706.870B**	**166,15**

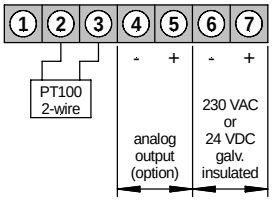
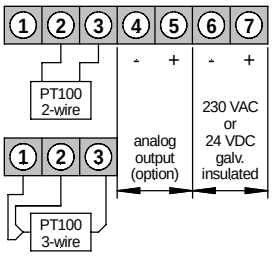
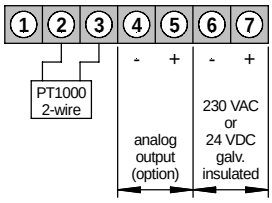
• *Thermocouple L, J or K*



	ORDER NUMBER OF TYPE (without options)	EUR
Power supply 230 VAC	**DT 3.40x.850B**	**148,25**
Power supply 24 VDC (galv. insulated)	**DT 3.40x.870B**	**176,40**

Type **L** (FeCuNi - DIN) -50 up to +500°C
Type **J** (FeCuNi - americ.)-50 up to +500°C
Type **K** (NiCrNi) -100 up to +800°C

(Fill in the desired type of thermocouple in the order number instead of **x**)

		ORDER NUMBER OF TYPE (without options)	EUR
• ***PT100 (2-wire)***			
	Power supply 230 VAC	2 wire **DT 3.202.850B** (199.9°C)	**143,15**
		2 wire **DT 3.206.850B** (600°C)	**143,15**
		3+2 wire **DT 3.302.850B** (199.9°C)	**163,60**
		3+2 wire **DT 3.306.850B** (600°C)	**163,60**
	Power supply 24 VDC	2 wire **DT 3.202.870B** (199.9°C)	**171,30**
• ***PT100 (2+3-wire)***	(galv. insulated)	2 wire **DT 3.206.870B** (600°C)	**171,30**
		3+2 wire **DT 3.302.870B** (199.9°C)	**191,75**
		3+2 wire **DT 3.306.870B** (600°C)	**191,75**
			
• ***PT1000 (2-wire)***			
	Power supply 230 VAC	2-wire **DT 3.602.850B** (199.9°C)	**143,15**
	Power supply 24 VDC (galv. insulated)	2-wire **DT 3.602.870B** (199.9°C)	**171,30**
	Power supply 230 VAC	2-wire **DT 3.606.850B** (600°C)	**143,15**
	Power supply 24 VDC (galv. insulated)	2 wire **DT 3.606.870B** (600°C)	**171,30**

OPTIONS	DV 3 001.... Direct voltage	DV 3.002.... Shunt	DV 3.004.... Alternating voltage	DV 3.006.... Resistance	DT 3.40x... Thermocouple	DT 3.x02.../3.x06... PT100/0 (2 +3 wire)	Additional price EUR
Green LED	x	x	x	x	x	x	
Protection IP54 at the front	x	x	x	x	x	x	6,15
Protection IP65 at the front	x	x		x			28,10
Plug-in terminal	x	x	x	x		x	9,20
Analog output 0-10 VDC/2 mA	x	x	x	x	x	x	32,70
Analog output 0-20 mA/load 500 Ω	x	x	x	x	x	x	32,70
Analog output 4-20 mA/load 500 Ω	x	x	x	x	x	x	32,70
Analog output 0-10 VDC/2 mA (supply voltage 24 VDC galv. insulated)	x	x	x	x	x	x	61,35
Analog output 0-20 mA/load 500 Ω (supply voltage 24 VDC galv. insulated)	x	x	x	x	x	x	61,35
Analog output 4-20 mA/load 500 Ω (supply voltage 24 VDC galv. insulated)	x	x	x	x	x	x	61,35
Analog output with customer specified offset (S26)	x	x	x	x	x	x	10,25
Analog output and protection IP65	See PVE range						
Measuring range 1 A on demand (S108)			x				
Dimension strip selectable (max. 8 signs)	x	x	x	x	X	x	
Other power supplies on demand!	x	x	x	x	X	x	
Setpoints	See PVE range						

Technical data

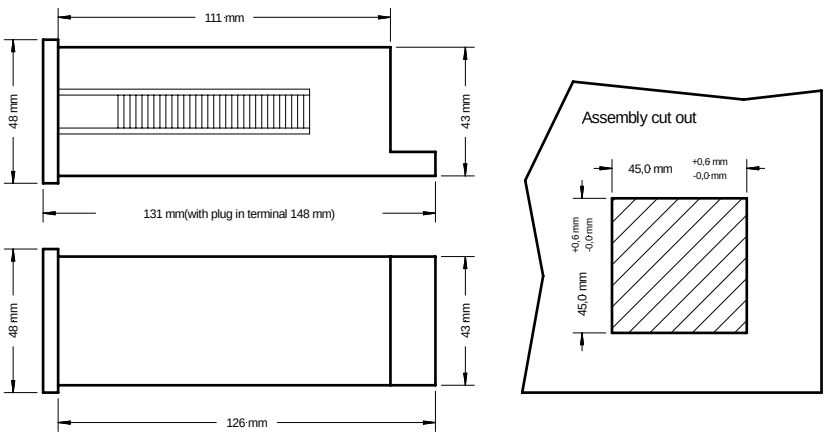
for all units of the DV3, DT3 range, if not indicated otherwise

Dimensions	Housing	W 48 x H 48 x D 131 mm, including screw terminal (D = 147 mm, including plug-in terminal)
	Assembly cut out	$45.0^{+0.6}$ x $45.0^{+0.6}$ mm
	Fastening	special quick plastic clamp proper to fix in wall thickness up to 50 mm
	Housing material	PC/ABS-plastic blend, colour black, UL94V-0
	Protective system	at the front IP40 connection IP00
	Weight	approx. 0.18 kg
	Connection	at the rear side via terminals up to 2.5 mm^2
Input		
DV3.001.... Direct voltage, Direct current	Measuring range	0-10 V, 0-20 mA - 4-20 mA - all ranges selectable via connection terminal Offset adjustment supported by offset potentiometer (-500 up to +500)
	Input resistance	Ri with 10 V = ~55 kΩ 20 mA = ~100 Ω
DV3.002.... Direct voltage (Shunt)	Measuring range	0-60 mV, 150 mV - all ranges selectable via connection terminal Offset adjustment supported by offset potentiometer (-100 up to +100)
	Input resistance	Ri with 60 mV= ~15 kΩ 150 mV= ~39 kΩ
DV3.004.... Direct voltage, Direct current	Measuring range	20 V, 1 A (option), 5 A – all ranges selectable via connection terminal Offset adjustment supported by offset potentiometer (-100 up to +100)
	Input resistance	Ri with 20 V= ~200 kΩ 1 A = ~276 mΩ 5 A = ~56 mΩ
DV3.006.... Resistance	Measuring range	≤10 kΩ, ≤100 kΩ, ≤1 MΩ Offset adjustment supported by offset potentiometer (-100 up to +100)
DT3.x02.... PT100	Sensor	2-wire, 3-wire
	Measuring range	-50.0 up to 199.9°C
	Sensor current	approx. 1 mA
DT3.x06.... PT100	Sensor	2-wire, 3-wire
	Measuring range	-100 up to + 600°C
	Sensor current	approx. 1 mA
DT3.602.... PT1000	Sensor	2-wire
	Measuring range	-55 up to + 199,9°C
	Sensor current	approx. 0.1 mA
DT3.606.... PT1000	Sensor	2-wire
	Measuring range	-100 up to + 600°C
	Sensor current	approx. 0.1 mA
DT3.40x.... Thermocouple	**L** FeCuNi (DIN)	-50 up to + 500°C
	J FeCuNi (americ.)	-50 up to + 500°C
	K NiCrNi	-100 up to + 800°C
Output		
For all versions	Analog output	0-10 VDC/2 mA (0.1% of measuring value, +/-0.05% of full scale) 0-20 mA, 4-20 mA - load 500 Ω (0.1% of measuring value, +/-0.05% of full scale)
	Offset	Not changeable, offset analog output corresponds to 0 digit, see options.
	Final value	Adjustable to 10 V or 20 mA, within the indication range 350 to 1999. (**The measuring inputs are not galvanic insulated from the analogue output!)**
DT3.x02....	Final value 200°C	10 V or 20 mA adjustable for range from 35.0°C up to 199.9°C
DT3.x06....	Final value 600°C	10 V or 20 mA adjustable for range from 180°C up to 600°C
DT3.40x....	Final value 500°C	10 V or 20 mA adjustable for range from 180°C up to 500°C
	Final value 800°C	10 V or 20 mA adjustable for range from 180°C up to 800°C

Technical data

Accuracy		
For all versions	Measuring principle	Dual-Slope-Integration
DV3.001....	Temp. drift	~ 100 ppm/K
DV3.002....		~ 150 ppm/K
DV3.004....		**I** ~ 200 ppm/K / **U** ~ 100 ppm/K
DV3.006....		~ 100 ppm/K
DT3.40x....		~ 100 ppm/K
DT3.x02....		~ 100 ppm/K
DT3.x06....		~ 100 ppm/K
For all versions	Measuring fault	+/-0.1% of measuring value, +/-1 digit
DV3.0x4....	Frequency range	Nominal precision 40 Hz up to 100 Hz
	Measuring fault	Voltage range: +/-1,0% of final value, +/-1digit
		1 A range: +/-1,0% of final value, +/-1digit
		5 A range: +/-1,0% of final value, +/-1digit
	Measuring principle (input)	precision rectifier – effective value with sine waveform only
DV3.1x4....	Frequency range	Nominal precision 40 Hz up to 1000 Hz
	Measuring fault	Voltage range: +/-0,7% of final value, +/-1digit, crest factor 3
		1 A range: +/-0,7% of final value, +/-1digit, crest factor 3
		5 A range: +/-0,7% of final value, +/-1digit, crest factor 3
	Measuring principle (input)	True effective value **RMS**
DT3.x02....	Measuring fault	max. +/-0.5°C, +/- 1 digit
DT3.x06....	Measuring fault	max. +/-1°C, +/-1 digit
DT3.60x....	Measuring fault	$R_L \leq 10\ \Omega$ = +/-1K
		$R_L > 10\ \Omega \leq 20\ \Omega$ = +/-2K
DT3.40x....	Measuring fault type **J, L**	max. 5°C
	Measuring fault type **K**	range from -100°C up to -50°C max. 15°C
		range > -50°C up to 600°C max 5°C
		range > 600°C up to 800°C max 15°C
For all versions	Resolution	+/-1999 digit
DT3.x02....		0.1°C
DT3.x06....		1°C
DT3.40x....		1°C
Power unit	Supply voltage	230 VAC +/- 10% (50-60 Hz), 24 VDC (18-30 V), 24 VDC (+/-10%) galvanic insulated
	Consumption	max. 5 VA
Indication	Display	LED with 7 segments, 10 mm high, red
		3½-digit = indication 1999
	Overflow	by showing „**1**“ on the fourth digit
DV3.001....		
DV3.002....		
DV3.006....	Decimal point	adjustable by bridging on front side.
	Measuring time	1 second
	Blanking	blanking out of last digit (selectable by bridge).
	Plus sign	selectable by bridging on front side
DV3.004....	Decimal point	adjustable by bridging on front side.
	Measuring time	1 second
	Blanking	blanking out of last digit (selectable by bridge).
DT3.xx2....		
DT3.xx6....	Measuring time	1 second
Ambient conditions	Working temperature	0 up to + 60 °C
	Storing temperature	-20 up to + 80 °C

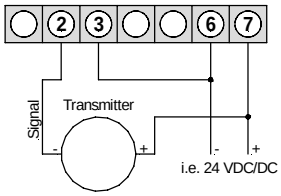
Housing:



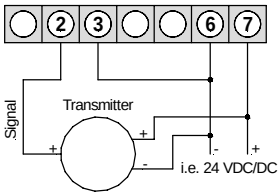
Connection diagrams

DV3.001....

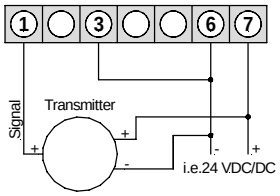
2-wire: 4-20 mA



3-wire: 0-20 mA
4-20 mA



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



Ordering code DV3, DT3

Digital panel meter

D	V	3	0	0	1	8	5	0	B

Basic model

Voltage metering V
Temperature metering T

Number of digits
3½ digits 3

Sensor supply
no sensor supply 0

Temperature devices
PT100 2-wire 2
PT100 3-wire 3
PT1000 2-wire 6
Thermocouple 4

Resistance
Measuring range up to 10 kΩ 5
Measuring range up to 100 kΩ 6
Measuring range up to 1 MΩ 7

Alternating voltage, current
Standard 0
True effective RMS 1

Outputs
no output 0
0-10 V 1
0-20 mA 2
4-20 mA 3

Internal index

Mechanical options
0 Protection IP40
1 Protection IP65
3 Protection IP54
5 Plug-in terminal, protection IP54
6 Plug-in terminal, protection IP40
7 Plug-in terminal, protection IP65

Power supply
5 230 VAC
7 24 VDC (galvanic insulated)

Size of housing
8 48x48

Measuring input
1 Direct voltage, direct current
2 Direct voltage, shunt measuring
4 Alternating voltage, alternating current
6 Resistance
2 Range PT100/1000 (200°C) – for DT
6 Range PT100/1000 (600°C) – for DT
L Thermocouple type L – for DT
J Thermocouple type J – for DT
K Thermocouple type K – for DT