



**Digital panel meter
3¹/₂-digit**

DV3, DT3

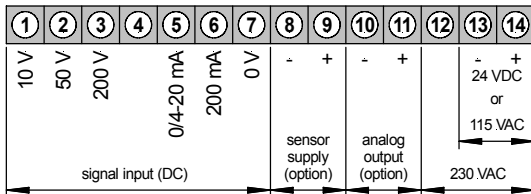
- Without setpoints
- Analog output
- Sensor supply

Digital panel meter

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



• Direct voltage, direct current

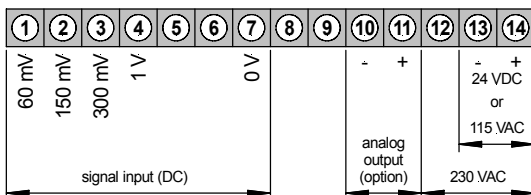


Power supply 230/115 VAC
 Power supply 24 VDC
 Power supply 24 VDC (galv. insulated)

ORDER NUMBER (without option)	EUR
DV 3.001.110C	140,60
DV 3.001.130C	140,60
DV 3.001.170C	166,15

Transmitter connections see page 6

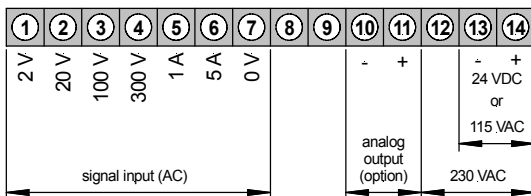
• Direct voltage (Shunt)



Power supply 230/115 VAC
 Power supply 24 VDC
 Power supply 24 VDC (galv. insulated)

DV 3.002.110C	155,95
DV 3.002.130C	155,95
DV 3.002.170C	181,50

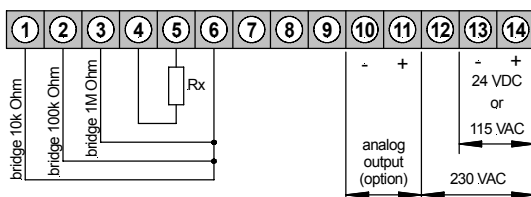
• Alternating voltage, alternating current



Power supply 230/115 VAC
 Power supply 24 VDC (galv. insulated)
 Standard True effective value RMS
 Standard True effective value RMS

DV 3.004.110C	171,30
DV 3.104.110C	191,75
DV 3.004.170C	196,85
DV 3.104.170C	217,30

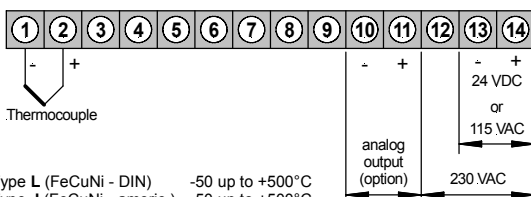
• Resistance, potentiometer measurement



Power supply 230/115 VAC
 Power supply 24 VDC
 Power supply 24 VDC (galv. insulated)

DV 3.006.110C	155,95
DV 3.006.130C	155,95
DV 3.006.170C	181,50

• Thermocouple L, J or K



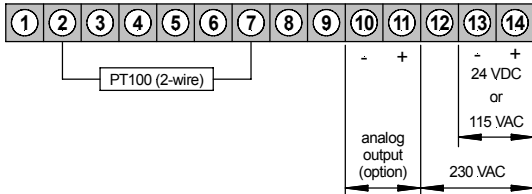
Power supply 230/115 VAC
 Power supply 24 VDC (galv. insulated)

DT 3.40x.110C	155,95
DT 3.40x.170C	181,50

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!)

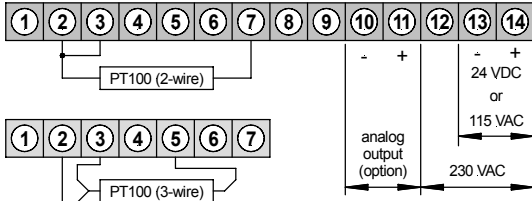
• **PT100 (2 wire)**



Power supply 230/115 VAC

Wiring	Model	Temp. Range	Price (EUR)
2 wire	DT 3.202.110C	(199.9°C)	138,05
2 wire	DT 3.206.110C	(600°C)	138,05
3+2 wire	DT 3.302.110C	(199.9°C)	158,50
3+2 wire	DT 3.306.110C	(600°C)	158,50

• **PT100 (3+2 wire)**

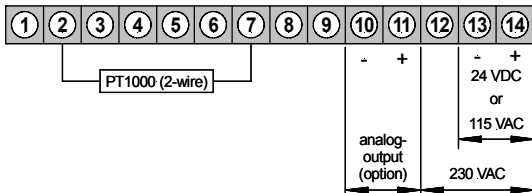


Power supply 24 VDC
(galv. insulated)

Wiring	Model	Temp. Range	Price (EUR)
2 wire	DT 3.202.170C	(199.9°C)	163,60
2 wire	DT 3.206.170C	(600°C)	163,60
3+2 wire	DT 3.302.170C	(199.9°C)	184,05
3+2 wire	DT 3.306.170C	(600°C)	184,05

• **PT100 (4 wire) see panel meter with microprocessor based technology**

• **PT1000 (2 wire)**



Power supply 230/115 VAC
Power supply 24 VDC
(galv. insulated)
Power supply 230/115 VAC
Power supply 24 VDC
(galv. insulated)

Wiring	Model	Temp. Range	Price (EUR)
2 wire	DT 3.602.110C	(199.9°C)	138,05
2 wire	DT 3.602.170C	(199.9°C)	163,60
2 wire	DT 3.606.110C	(600°C)	138,05
2 wire	DT 3.606.170C	(600°C)	163,60

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 (see following table)	x	x	x	x	x	x	28,10
Plug in terminal	x	x	x	x		x	12,25
Sensor supply 24 VDC/50 mA (supply voltage 230/115 VAC and 24 VDC)	x						24,55
Sensor supply 10 VDC/20 mA (supply voltage 230/115 VAC and 24 VDC)	x						24,55
Sensor supply 24 VDC/50 mA (supply voltage 24 VDC galv. insulated)	x						35,80
Sensor supply 10 VDC/20 mA (supply voltage 24 VDC galv. insulated)	x						35,80
Sensor supply 24 VDC/100 mA (supply voltage 230/115 VAC and 24 VDC galv. insulated)	x						56,25
Sensor supply 10 VDC/120 mA (supply voltage 230/115 VAC and 24 VDC galv. insulated)	x						56,25
<i>With supply voltage AC and DC (galvanic insulated) the sensor supply is galvanic insulated from the measuring input!</i>							
Analog output 0-10 VDC/2 mA (supply voltage 230/115 VAC and 24 VDC)	x	x	x	x	x	x	39,90
Analog output 0-20 mA/load 500 Ω (supply voltage 230/115 VAC and 24 VDC)	x	x	x	x	x	x	39,90
Analog output 4-20 mA/load 500 Ω (supply voltage 230/115 VAC and 24 VDC)	x	x	x	x	x	x	39,90
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
Measuring input 0-1 mA (S10)	x						15,35
Figures height 20 mm – adjustment by potentiometer at the rear side (S33)	x	x	x	x	x	x	23,00
Dimension strips selectable	x	x	x	x	x	x	
Other power supplies on demand	x	x	x	x	x	x	
Setpoints	See type PVE....						

• Settings ex works with protective system IP65, adjustable on rear side

Settings deviating from the standard settings must be indicated in the order description.	Standard	As desired	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)
Sign plus	active	inactive	X	X		X	X	X
Blanking	no	yes	X	X	X	X		
Indication time	0.25 sec.	1 sec.	X	X	X	X		

Technical data

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

Dimension	Housing Assembly cut out Fastening Housing material Protective system	W 96 x H 48 x D 134 mm, including screw terminal (D = 148 mm, including plug in terminal) 92.0 ^{+0.8} x 45.0 ^{+0.6} mm special quick plastic clamp proper to fix in wall thickness up to 50 mm PC/ABS-blend, colour black, UL94V-0 at the front IP40 connection IP00
	Weight Connection	approx. 0.35 kg at the rear side via terminals up to 2.5 mm ²
Input		
DV3.001... Direct voltage, Direct current	Measuring range Input resistance	0-10 V, 50 V, 200 V, 0/4-20 mA, 0-200 mA – all ranges selectable via connection terminal Offset adjustment supported by offset potentiometer (-500 up to +500) Ri with 10 V = ~55 kΩ 50 V = ~290 kΩ 20 mA = ~100 Ω 200 V = ~1.8 MΩ 200 mA = ~10 Ω
DV3.002... Direct voltage (Shunt)	Measuring range Input resistance	0-60 mV, 150 mV, 300 mV, 1V - all ranges selectable via connection terminal Offset adjustment supported by offset potentiometer (-100 up to +100) Ri with 60 mV = ~15 kΩ 300 mV = ~75 kΩ 150 mV = ~39 kΩ 1V = ~320 kΩ
DV3.004... Alternating voltage, Alternating current	Measuring range Input resistance	0-2 V, 20 V, 100 V, 300 V, 1 A, 5 A - all ranges selectable via connection terminal Offset adjustment supported by offset potentiometer (-100 up to +100) Ri with 2 V = ~20 kΩ 300 V = ~4 MΩ 20 V = ~200 kΩ 1 A = ~276 mΩ 100 V = ~1 MΩ 5 A = ~56 mΩ
DV3.006... Resistance	Measuring range	≤10 kΩ, ≤100 kΩ, ≤1 MΩ all ranges selectable via connection terminal Offset adjustment supported by offset potentiometer (-100 up to +100)
DT3.x02... PT100	Sensor Measuring range Sensor current	2-wire, 3-wire -50.0 up to 199.9°C approx. 1 mA
DT3.x06... PT100	Sensor Measuring range Sensor current	2-wire, 3-wire -100 up to + 600°C approx. 1 mA
DT3.602... PT1000	Sensor Measuring range Sensor current	2-wire -50 up to + 199,9°C approx. 0.1 mA
DT3.606... PT1000	Sensor Measuring range Sensor current	2-wire -100 up to + 600°C approx. 0.1 mA
DT3.40x... Thermocouple	L FeCuNi (DIN) J FeCuNi (americ.) K NiCrNi	-50 up to + 500°C -50 up to + 500°C -100 up to + 800°C
Output		
DV3.001... <i>For all versions</i>	Sensor supply Analog output Offset Final value	(galvanic insulated for 230/115 VAC and 24 VDC/DC from the measuring input) 24 VDC/50 mA – 10 VDC/20 mA (other sensor supplies/performances on demand) 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) Not changeable, offset analog output corresponds to 0 digit, see options Adjustable to 10 V or 20 mA, within the indication range 350 to 1999

(The measuring inputs are not galvanic insulated from the analog output!)

Technical data

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 200°C up to 600°C
DT3.40x....	Final value 500°C	10 V or 20 mA adjustable for range from 200°C up to 500°C
	Final value 800°C	10 V or 20 mA adjustable for range from 200°C up to 800°C

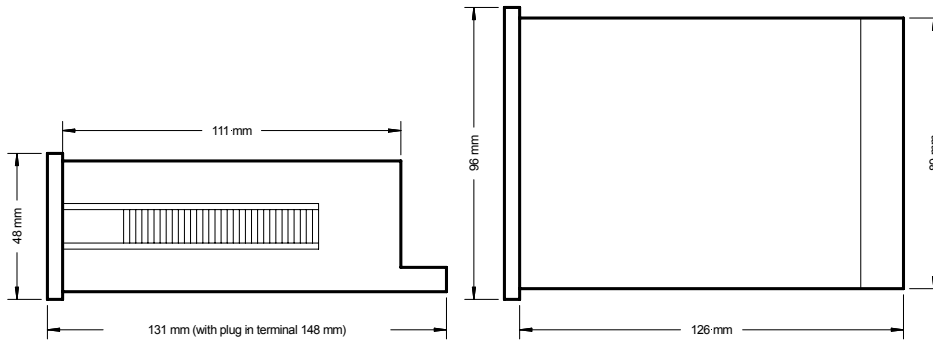
Accuracy

<i>For all versions</i>	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
<i>For all versions</i>	Measuring fault	+/-0.1% of measuring value, +/-1 digit
DV3.0x4....	Frequency range	Nominal precision 40 Hz up to 1000 Hz
	Measuring fault	+/-1.0% of final value, +/-1 digit
	<i>Measuring principle (input)</i>	Via rectifier – (effective value with sine waveform only)
DV3.1x4....	Frequency range	Nominal precision 40 Hz up to 1000 Hz
	Measuring fault	+/-0.7% of final value, +/-1 digit, crestfactor 3
	<i>Measuring principle (input)</i>	True effective value RMS

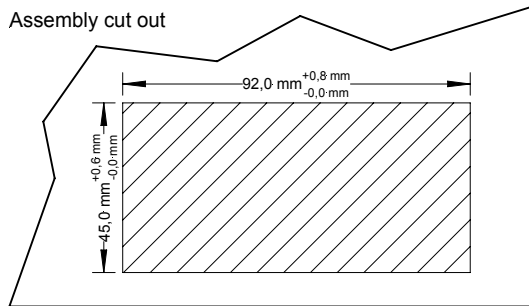
Accuracy

DT3.x02....	Measuring fault	max. +/-0.5°C, +/- 1 digit
DT3.x06....	Measuring fault	max. +/-1°C, +/-1 digit
DT3.60x....	Measuring fault	$R_L \leq 10 \Omega = +/-1 K$
		$R_L > 10 \Omega \leq 20 \Omega = +/-2 K$
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
<i>For all versions</i>	Resolution	+/-1999 digit
DT3.x02....		0,1°C
DT3.x06....		1°C
DT3.40x....		1°C
Power unit	Supply voltage	230/115 VAC +/- 10% (50-60 Hz), 24 VDC (18-30 V), 24 VDC (+/-10%) galv. insulated
	Consumption	max. 5 VA
Indication	Display	LED with 7 segments , 14 mm high (optionally 20 mm), 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	selectable 0.25 or 1 second
	Blanking	blanking out of last digit (selectable by bridge on front side)
	Plus sign	selectable by bridging on front side
DV3.004....	Decimal point	adjustable by bridging on front side
	Measuring time	selectable 0.25 or 1 second
	Blanking	blanking out of last digit (selectable by bridge on front side)
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:



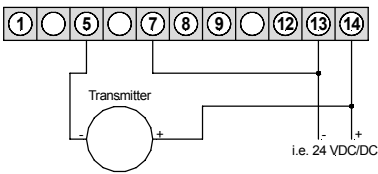
Assembly cut out



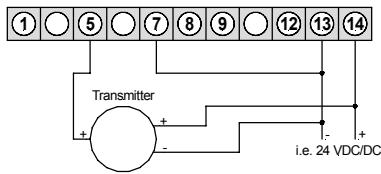
Connection diagrams

DV instruments without sensor supply

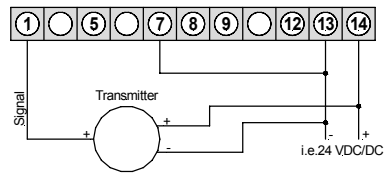
2-wire: 4-20 mA



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

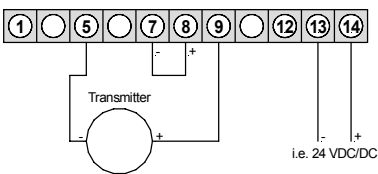


3-wire: 0-10 V / 0-5 V
0-1 V / 1-6 V

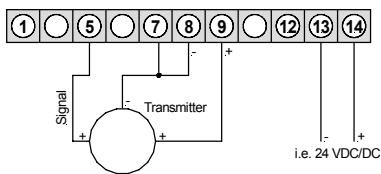


DV instruments with sensor supply

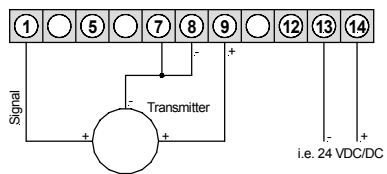
2-wire: 4-20 mA



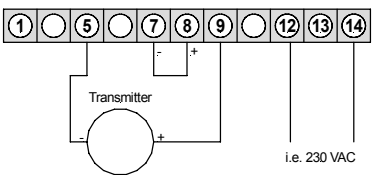
3-wire: 0-20 mA
4-20 mA



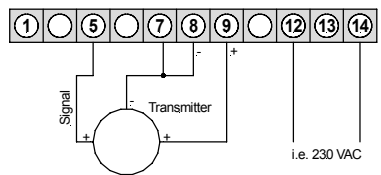
3-wire: 0-10 V / 0-5 V
0-1 V / 1-6 V



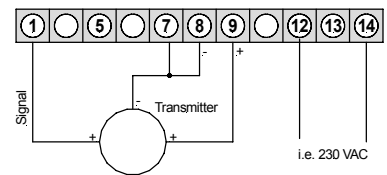
2-wire: 4-20 mA



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 1 1 0 C

Basic model		Internal index	
Voltage metering	V	Mechanical options	
Temperature metering	T	0	Standard 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
Number of digits		Power supply	
3½ digits	3	1	230/115 VAC
4½ digits	4	3	24 VDC
		7	24 VDC (galv. insulated)
Sensor supply		Size of housing	
No sensor supply	0	1	96x48
10 V / 50 mA	2		
24 V / 50 mA	3		
Temperature device		Measuring input	
PT100 - 2 wire	2	1	Direct voltage, direct current
PT100 - 3 wire	3	2	Direct voltage, shunt measuring
PT1000 - 2 wire	6	4	Alternating voltage, current
Thermocouple	4	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
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		