Operating Instructions No. 20603e Issue 19.10.2017

Programmable Process Display, Alarms Control

PMO 5005 S4

Dimensions of Instruments

	Front Dimensions (W x H) in mm	Depth in mm	Display Height in mm	Panel Cut-out (W x H) in mm
PMO5005 S4	48 x 24	95	8	$44^{+0,6}$ x $20^{+0,3}$

Technical Data

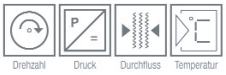
Current/Voltage Measurement PMO 5005 S4

Measurement range	± 30mA, ± 3VDC, ± 30VDC, smallest span 100,0 mV with 0,1 mV resolution
Display Range	-1999....9999, freely programmable, programmable decimal point
Accuracy	± 0,05% ± 1 Digit at Tv = 23°C
Sampling rate	adjustable 1 - 8 measurements/s or averaging period of 2, 3, 4, 5, 10 or 20 seconds programmable
Indication of measuring- or display- overrange display underrange display	 "- o -" "- u -"
Transducer supply (S4)	+24V (-20%/+15%) / 25mA (2 and 3 wires)
Power supply	18 - 30 VDC, 2VA 24 VAC (-20%/+10%), 2VA
Isolation group	VDE 0110 Group A in installed state
Protection class	front side IP50, back side IP10 according to DIN 40050
Connection	pluggable terminal block 1,5mm^2
Ambient temperature	0...55°C
Storage temperature	-10...+70°C
Relative humidity	≤ 75% annual average, infrequent and slight condensation

Options

G2	Two independent alarm relays, Make Contact (n.o.), hysteresis 0...99 digits Max. load: 24V AC/DC, 1A; 60V DC, 0,5A
S137	Control input "seven segment test" instead of limit alarm relays G1 and G2
S143	Alarm relays G2 as Break Contact (n-c. normally closed)
S167	Mosaic raster mounting
S172	External switchable decimal point
SM	Black front panel

Rev-Nr.: FP P1 2005-03-29



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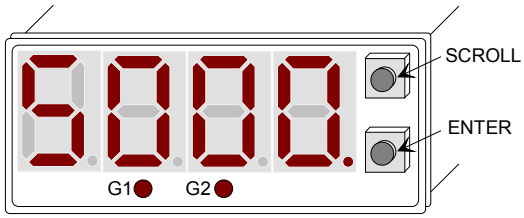
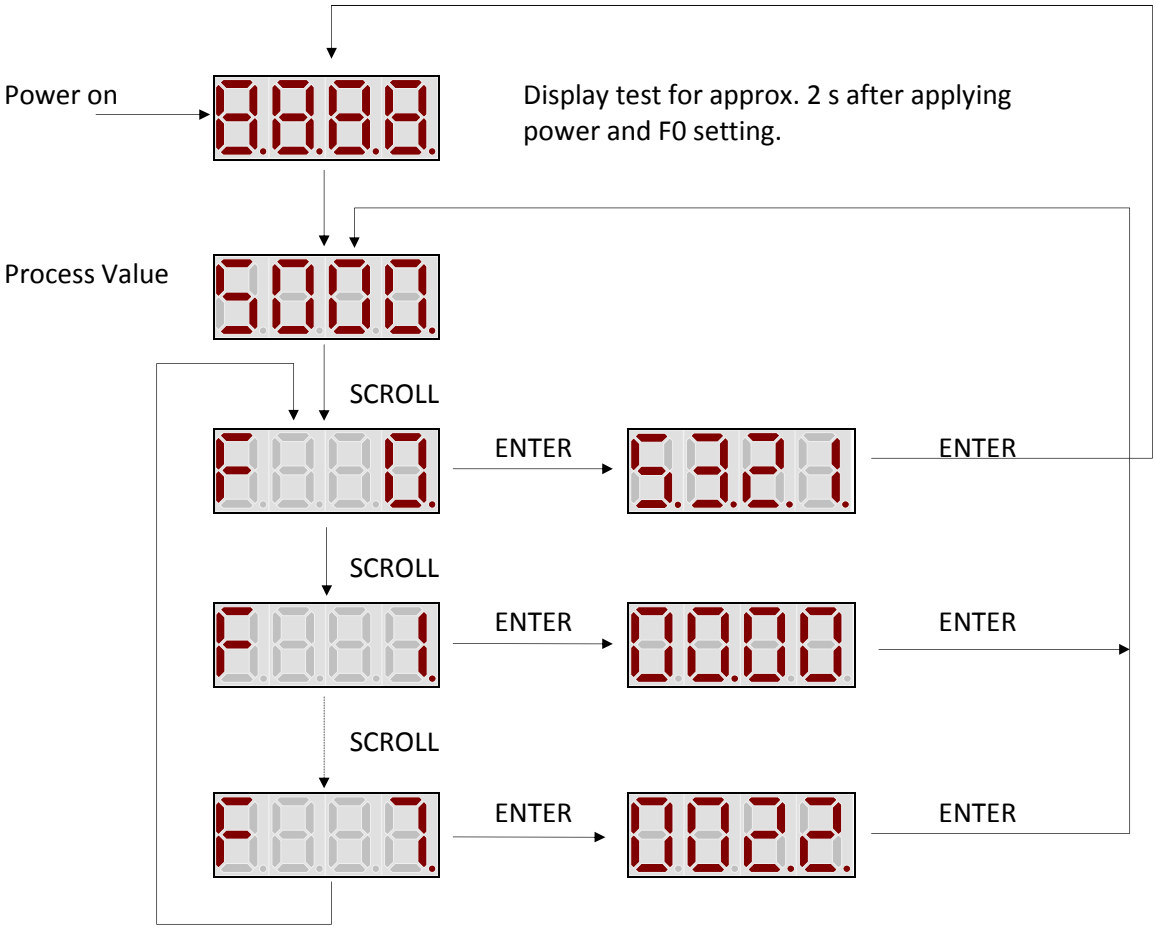
Configuration

There are two keys behind the front panel, which are used for programming the instrument.

After connecting the power supply the display test is performed. The instrument is ready for operation after approx. 2 s. After pressing the SCROLL key F0 will appear blinking. The parameters F0 - F7 are selected through the scroll key. When pressing the Enter key, the selected parameter is displayed. Each blinking digit is adjusted with the SCROLL key and confirmed with the ENTER key. After setting the 4th digit the parameter is stored and the device continues with displaying the process value.
The individual functions are programmed according to the following instructions.





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Configuration Current/Voltage

Function 0	

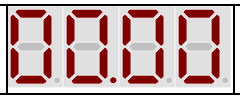
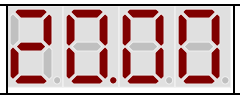
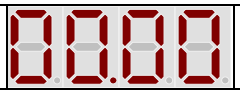
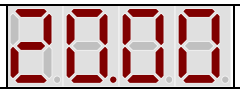
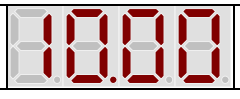
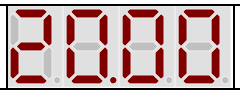
Basic setting of measurement range
- 0 = ± 30mA
- 1 = ± 30mA with wire-break indication <0,13mA (displays: "-.--")
- 2 = ± 3V
- 3 = ± 30V

Decimal point setting
- 0= none (xxxx.)
- 1= 1 digit behind decimal point (xxx.x)
- 2= 2 digits behind decimal point (xx.xx)
- 3= 3 digits behind decimal point (x.xxx)

This parameter defines the decimal point position for measurement display, indicating range setting and limit value setting.

Sampling rate setting
- 0 or 1= 1 measurement/sec
- 2 = 2 measurements/sec
- ::
- 8 = 8 measurement/s
- A = averaging period 2 seconds, average of 20 readings
- b = averaging period 3 seconds, average of 30 readings
- C = averaging period 4 seconds, average of 40 readings
- d = averaging period 5 seconds, average of 50 readings
- E = averaging period 10 seconds, average of 100 readings
- F = averaging period 20 seconds, average of 200 readings

Display intensity
- 0 = lowest intensity
- ::
- 7 = highest intensity

Function 1		Lower bound measuring value of the measuring range scaling -1999...9999 The decimal point is fixed in this function - (Function 0). This value must be less than the value set in function 2
Function 2		Upper bound measuring value of the measuring range scaling -1999...9999 The decimal point is fixed in this function - (Function 0). This value must be greater than the value set in function 1
Function 3		Display value at the lower bound measuring value (function 1) -1999...9999
Function 4		Display value for the upper bound measuring value (function 2) -1999...9999
Function 5		Limit value for alarm G1 -1999...9999
Function 6		Limit value for alarm G2 -1999...9999
Function 7		

Alarm mode 1: 0 = inactive, 1 = min., 2 = max.

Alarm mode 2: 0 = inactive, 1 = min., 2 = max.

Alarm-hysteresis: 0...99 digits
(effects both alarms)

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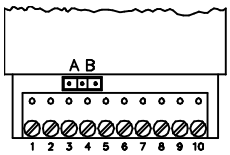
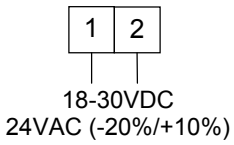
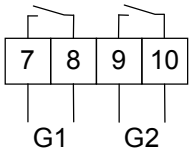
Connection Diagram PMO 5005 S4 G2



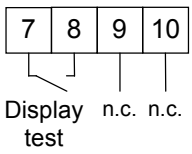
Power supply



Relay output

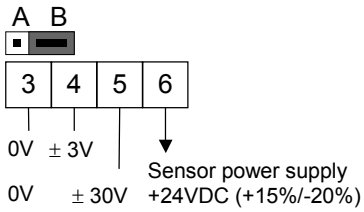


Option S137 (LED - Test)

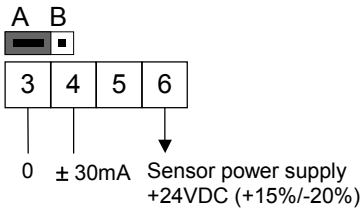


Measurement input and transducer power supply output

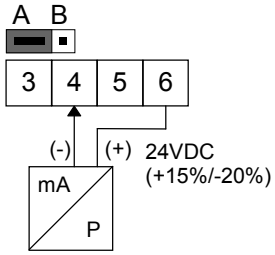
Measurement input voltage



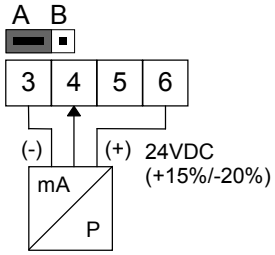
Measurement input current



2 wire transducer



3 wire transducer



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