

PMX420 Series

Universal, four-digit, current/voltage display

The current/voltage displays of the PMX420 Series are available as a pure PMX420 display unit or optionally with analogue outputs/four alarm outputs.

The basic model is suitable for displaying all normalized current or voltage signals. The input signals are electrically isolated, smoothed and scaled. An integrated power supply can be used for supplying external sensors and input devices.

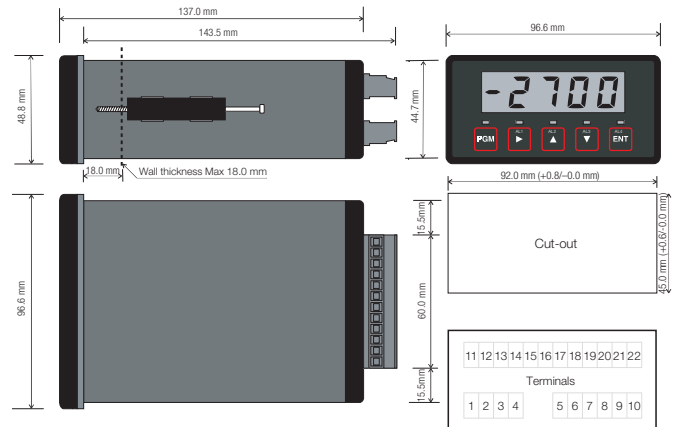
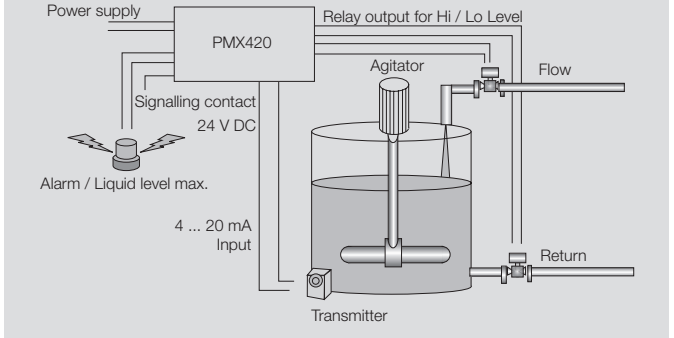
The PMX420Plus adds four alarm channels (each with its own status indicator and relay contact outputs) and a fully isolated analogue current/voltage output.

Device functions can be configured, specifically for the application, using the integrated keypad on the front panel. There are also several other handy features like maximum and minimum value recall, integrated linearization, an acoustic alarm, a group alarm function, and the option for manual or automatic alarm reset.

Technical features:

- Four-digit digital LED display
- Suitable for current and voltage signals
- Bipolar inputs
- Integrated square root function
- Retrieval of min. and max. values
- Integral power supply for active sensors
- DC power supply
- Complete electrical isolation
- Four alarm channels and an analogue current/voltage output (PMX420Plus)
- LED alarm status indication
- DIN-standard 1/8 front panel with IP65 protection
- Decimal point can be adjusted to any position
- Configurable via front-panel keypad

Typical application of PMX 420 Plus



Common technical data

Display	
Type	4 Digits, red LED, 14.2 mm
Display value	Percent or real-value displayed
Display range	9999 to +9999
Status indicator	Alarm channel 1-4; status LED
Input	
Type	Current or voltage input is programmable
Input current limits	-22...+22 mA (preset for 4...20 mA)
Input voltage limits	-11...+11 V
Input resistance	25 Ω (current input) or 1.5 MΩ (voltage input)
Resolution	4 µA / 2 mV
Sensor current	4...20 mA
Feed voltage	24 V DC ±1.5 V DC (to 25 mA)
Attenuation factor	0...99; programmable digital filter
Functions	
Values	Linear or √
General information	
Supply voltage	18...50 V DC, other voltages on request
Power input	8.5 W at 24 V DC
Accuracy	Typically ± 0.1 % of signal range
Linearity	< 0.05 %
Repeat accuracy	±0.02 of signal range
Humidity	0...90 % (no condensation)
Temperature coefficient	< 0.02 % / °C at 100 %
Long-term drift	0.1 % / 10,000 h
Cut-off frequency (-3 dB)	5 Hz
Step response time	300 ms (10...90 %)
Impulse withstand voltage	4 kV (1.2/50 µs)
Isolation voltage	2 kV between ports
Data backup	> 10 years without power supply
Operating temperature / storage temperature	0 °C...60 °C / -25 °C...+70 °C
EMC standard	DIN EN 61326
Approvals	CE, cULus

Terminal		Signal	
1	-	Supply voltage	
2	+	High level	
3	+	Supply voltage	
4	-	Low level	
5		Signal + sensor supply	Inputs
6		Configuration	
7		Signal + voltage input	
8		Signal + current input	
9		Signal 0 V	
10		Not used	
11		NC contact	Alarm channel 1 (only PMX420Plus)
12		Common	
13		NO contacts	Alarm channel 2 (only PMX420Plus)
14		NC contact	
15		Common	Alarm channel 3 (only PMX420Plus)
16		NO contacts	
17		NO contacts	Alarm channel 4 (only PMX420Plus)
18		Common	
19		NO contacts	Analogue Output (only PMX420Plus)
20		Common	
21		Signal +	
22		Signal -	

MANN SERIES – Indicators and configurable displays for analogue signals

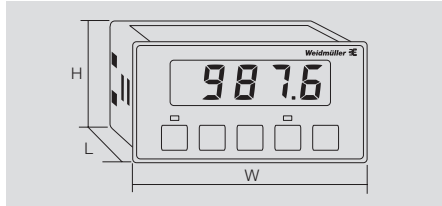
PMX420 Series

Universal, 4-digit current/voltage display

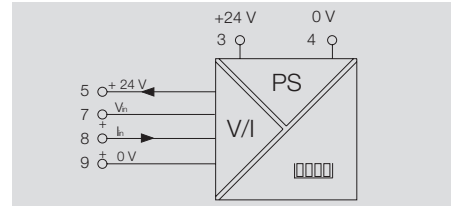
- Display instrument for control panel installation
- 1/8 DIN standard front
- IP65 front protection
- Pluggable connection terminals

PMX420

Display



- Four-digit scalable display
- Simple menu-driven configuration
- Single channel input



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Technical data

Output	
Type	Not available
Scaling	
Output current	
Output voltage	
Transmit function	
Load resistance	
Residual ripple	
Alarm	
Type	Not available
Number of channels	
Type of contact	
Specifications	
Isolation	
Suppression of leakage current	
Housing specifications	
Clamping range (nom. / min. / max.)	mm ² 1.5 / 0.5 / 2.5
Connection type / Mounting rail	Screw connection / panel assembly
Housing type / Weight	Plastic housing / 480 g
Length x width x height	137 x 96.6 x 48.8 mm
Note	

Connections

Terminal	Signal	
1	-	Supply voltage
2	+	High level
3	+	Supply voltage
4	-	Low level
5	Signal + sensor supply	Inputs
6	Configuration	
7	Signal + voltage input	
8	Signal + current input	
9	Signal 0 V	
10	Not used	

Ordering data

Type	
	Voltage input/Current input
	Special adjustment
Note	

Type	Qty.	Order No.
PMX420	1	7940018956
PMX420 Variabel	1	8945030000
Additional input/output range versions available on request		

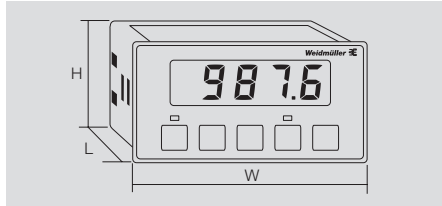
Accessories

Note

PMX420 Series

Universal, 4-digit current/voltage display

- Display instrument for control panel installation
- 1/8 DIN standard front
- IP65 front protection
- Pluggable connection terminals



Technical data

Output	
Type	Programmable voltage or current output
Scaling	variable
Output current limits	0...22 mA
Output voltage limits	0...11 V
Transmit function	Direct or reverse
Load resistance	850 Ω @ 20 mA (current output) / > 500 Ohm (current output)
Residual ripple	20 mV _{ss}
Alarm	
Type	Internal alarm via LED, or output signal to external controller
Number of channels	4
Type of contact	2 CO and 2 NO
Specifications	3 A @ 240 V AC (NO / CO) 3 A @ 24 V DC (CO), 3 A @ 24 V DC (NO)
Isolation voltage	2 kV between ports
Suppression of leakage current	internal

Housing specifications	
Clamping range (nom. / min. / max.)	mm² 1.5 / 0.5 / 2.5
Connection type / Mounting rail	Screw connection / panel assembly
Housing type / Weight	Plastic housing / 480 g
Length x width x height	137 x 96.6 x 48.8 mm
Note	

Ordering data

Type	Qty.	Order No.
Voltage input/Current input	1	7940018957
Special adjustment	1	8945030000
Note		
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Accessories

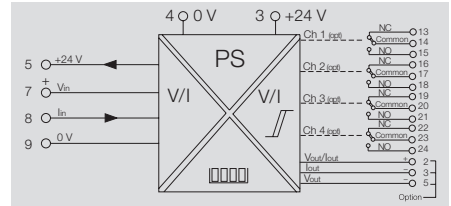
Note

PMX420Plus

Display with analogue output and four alarm channels



- Four-digit scalable display
- Simple menu-driven configuration
- Single channel input



Connections

Terminal	Signal	
1	-	Supply voltage
2	+	High level
3	+	Supply voltage
4	-	Low level
5	Signal + sensor supply	Inputs
6	Configuration	
7	Signal + voltage input	
8	Signal + current input	
9	Signal 0 V	
10	Not used	
11	NC contact	
12	Common	Alarm channel 1
13	NO contacts	
14	NC contact	
15	Common	Alarm channel 2
16	NO contacts	
17	NO contacts	Alarm channel 3
18	Common	
19	NO contacts	Alarm channel 4
20	Common	
21	Signal +	Analogue Output
22	Signal -	