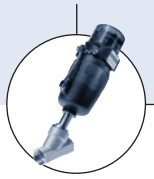


Pressure transmitter (2-wire) / switch for continuous or On/Off Control



- Indication, monitoring, transmitting and continuous or On/Off control in one device
- Output signal 4...20 mA, 2-wire for continuous control
- Transistor or relay outputs for On/Off control or alarm function

Type 8311 can be combined with...



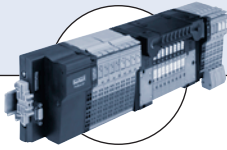
Type 2702 (8630)

Control valve with TopControl



Type 2712 (1067)

Control valve with SideControl



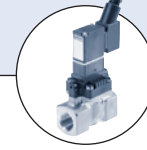
Type 8644-P AirLINE

Valve Island with electronic I/O



Type 8624-2

PI pressure controller



Type 6213

Solenoid valve



PLC

This intelligent mini transmitter / switch with an extra-large display is specially designed to switch alarms and to establish a monitoring system or an On/Off control loop.

The switching points can be programmed with the 3-key keypad under

the display. In addition, the process value can be transmitted to the PLC (4-20 mA).

The connection to the process in the piping is made using standard fittings.

General data	
Materials	
Housing	PC +20% glass fiber
Front panel foil	Polyester
Screws	Stainless steel
Cable plug / Multipin	PA
Materials wetted parts	Stainless steel 1.4404 (316L)
Seal	FKM (EPDM option)
Sensor element	Ceramic cell (AL ₂ O ₃)
Service life of pressure cell	Min. 100 million cycles
Electrical connections	Cable plug EN 175301-803, multipin: 5 pin M12 ¹⁾
Voltage supply cable	
Max. length / Cross-section	50 m, shielded / 0.14 up to 0.5 mm ² max.
Complete device data (pipe + electronic module)	
Pipe diameter	Any pipe with sensor connection 1/2"
Measuring range	up to 2, 5, 10, 20 or 50 bar
Medium temperature	-20 °C up to 100 °C (+100 °C for an ambient temperature of max. 40 °C)
Typical accuracy	
Transmitter 2-wire version	
for 0 °C < T < 70 °C	≤ ±1% of F.S.*
for -20 °C < T < 0 °C	≤ ±1% ± 0.03% of F.S.* / °C
for 70 °C < T < 100 °C	≤ ±1% ± 0.03% of F.S.* / °C
Switch version	≤ ±1.5% of F.S.*
Typical repeatability	
Transmitter 2-wire version	≤ ±0.06%
Switch version	≤ ±0.25%

¹⁾ Has to be ordered separately

* F.S.=Full scale (10 m/s)

Electrical data	
Power supply	12-30 V DC, filtered and regulated
Reversed polarity of DC	Protected (for power supply and all outputs)
Overvoltage protection	Yes, for power supply and for transistor outputs
Current consumption	
Transmitter 2-wire version	< 30 mA (+700 mA max. per transistor output used)
Switch version	< 750 mA (with load - Output PNP configuration) < 80 mA (with load - Relay version)
Output	
Transmitter 2-wire version	
Transistor - programmable	open collector, 2 NPN or 2 PNP, 700 mA max., NPN: [(V+) minus 0.5 VDC] - 0 VDC PNP: 0.5 VDC - (V+) protected against short circuit
Process value	4-20 mA, Loop resistance: 800 Ω at 30 V DC, 550 Ω at 24 V DC, 300 Ω at 18 V DC (For more details, see instruction manual)
Switch version	
Transistor - programmable	open collector, NPN / PNP, 700 mA max., NPN: 0.2 - 30 VDC ; PNP: (V+) protected against short circuit
Optional relay - programmable	3 A / 250 V AC or 3 A / 30 V DC (relay)
Environment	
Ambient temperature	-20 °C up to +60 °C (+40 °C max. if the medium temperature near 100 °C)
Storage temperature	-20 °C up to +80 °C
Relative humidity	≤ 80%, non condensated
Standards and approvals	
Protection class	IP65 with connector plugged-in
Standards	
EMC	EN 50081-1, 50082-2, 61000-6-2
Security	EN 61010-1
Vibration / Shock	EN 60068-2-6 / EN 60068-2-27

Main features

Display



- Large digital display with 8 characters (4 digital characters and 4 alphanumeric characters)
- Bargraph (always activated)
- 3 keys to go through the menus and program the device

Software main features

Switch and transmitter

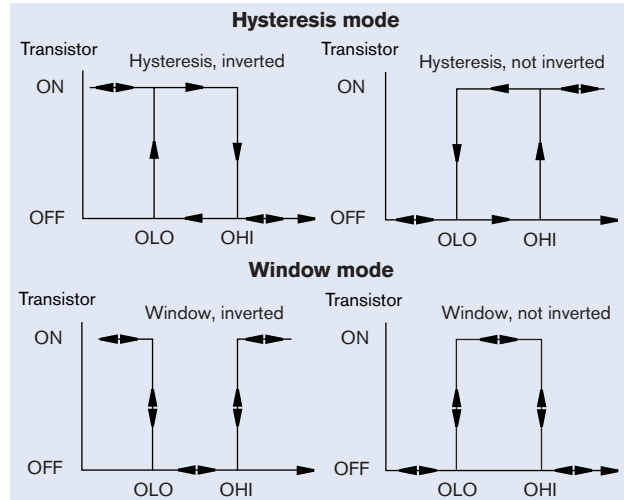
- International measuring units
- 10-segment bargraph
- TEACH-IN for an improved accuracy
- Simulation mode to test the programming of the switching points, in dry conditions

Transmitter

- Simulation mode to test the programming of 4-20 mA output, in dry conditions
- Display and storage of min/max value
- Protection by code against unauthorized access
- Reset function to default parameters
- Alarm output programmable as internal default alarm

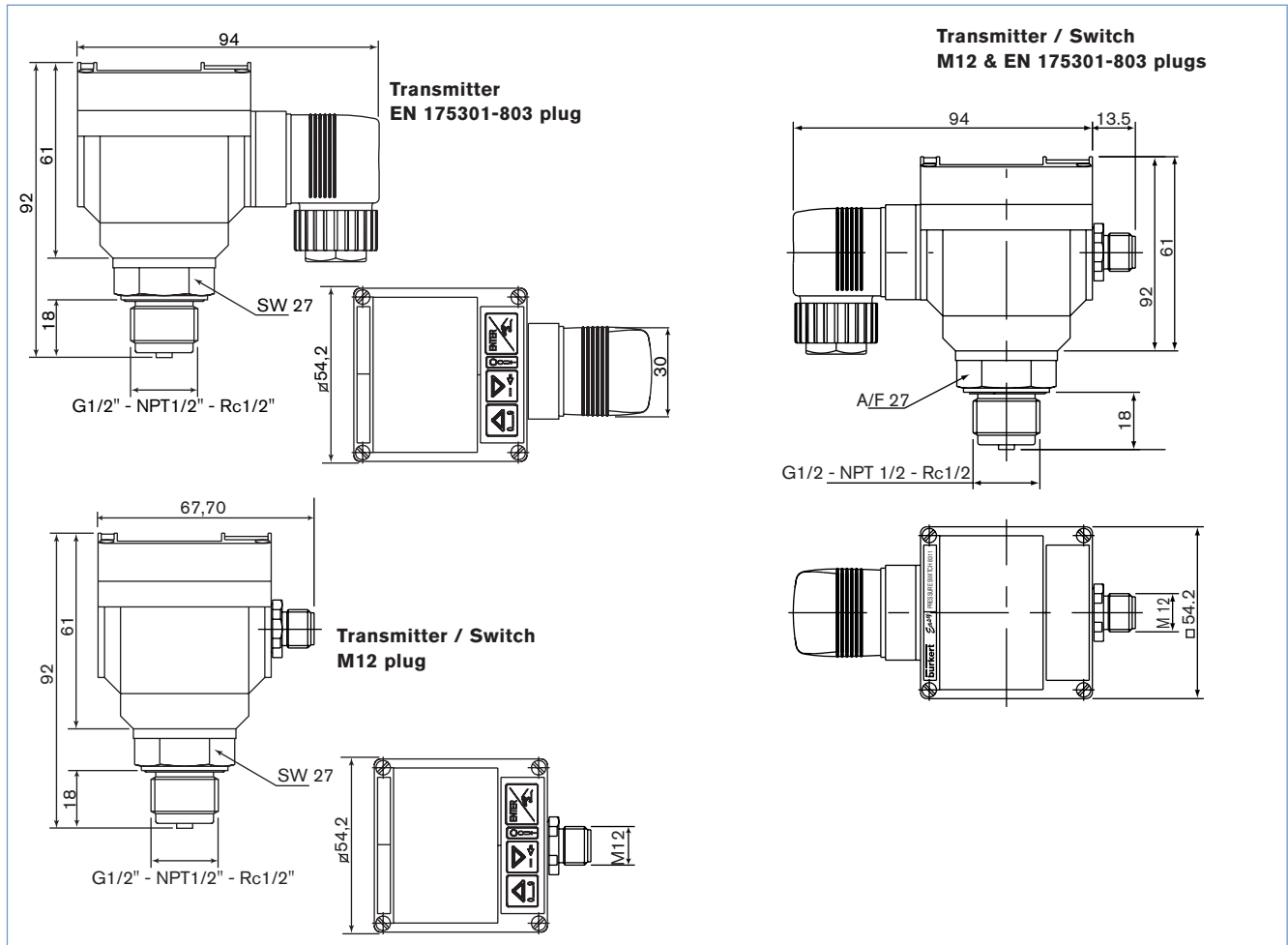
Working mode of alarm outputs

- 2 switching modes for the output, either hysteresis or window, inverted or not



- Programmable delay before switching
- Output available as transistor NPN or PNP, relay (up to 3A)
- Outputs can be programmed as internal default alarm.

Dimensions [mm]



Specifications - Ordering chart for Type 8311 (other versions on request)

Transmitter version

Nominal pressure range [bar]	Pressure max. [bar]	Burst pressure [bar]	Power supply	Output signal	Electrical connection	Item no. for corresponding sensor connection		
						G 1/2	NPT 1/2	Rc 1/2
0 - 2	4	7	12 - 30 VDC	4-20 mA + 2 NPN or 2 PNP ¹⁾	M12 plug 5 pins	444 507	444 762	551 739
				4-20 mA	Cable plug Type 2508*	444 635	444 640	444 768
0 - 5	10	12	12 - 30 VDC	4-20 mA + 2 NPN or 2 PNP ¹⁾	M12 plug 5 pins	444 506	444 763	551740
				4-20 mA	Cable plug Type 2508*	444 636	444 641	444 769
0 - 10	20	25	12 - 30 VDC	4-20 mA + 2 NPN or 2 PNP ¹⁾	M12 plug 5 pins	444 503	444 764	551741
				4-20 mA	Cable plug Type 2508*	550 338	444 642	444 770
0 - 20	40	50	12 - 30 VDC	4-20 mA + 2 NPN or 2 PNP ¹⁾	M12 plug 5 pins	444 504	444 765	551 742
				4-20 mA	Cable plug Type 2508*	550 339	444 760	551 737
0 - 50	100	120	12 - 30 VDC	4-20 mA + 2 NPN or 2 PNP ¹⁾	M12 plug 5 pins	444 505	444 767	551 743
				4-20 mA	Cable plug Type 2508*	444 637	444 761	551 738

¹⁾ PNP standard, can be change in NPN with jumpers on electronic board

* Acc. EN175301-803 Europe / Asia (G / Rc) : with cable gland
USA / CDN (NPT) : with reduction NPT^{1/2}

Switch version

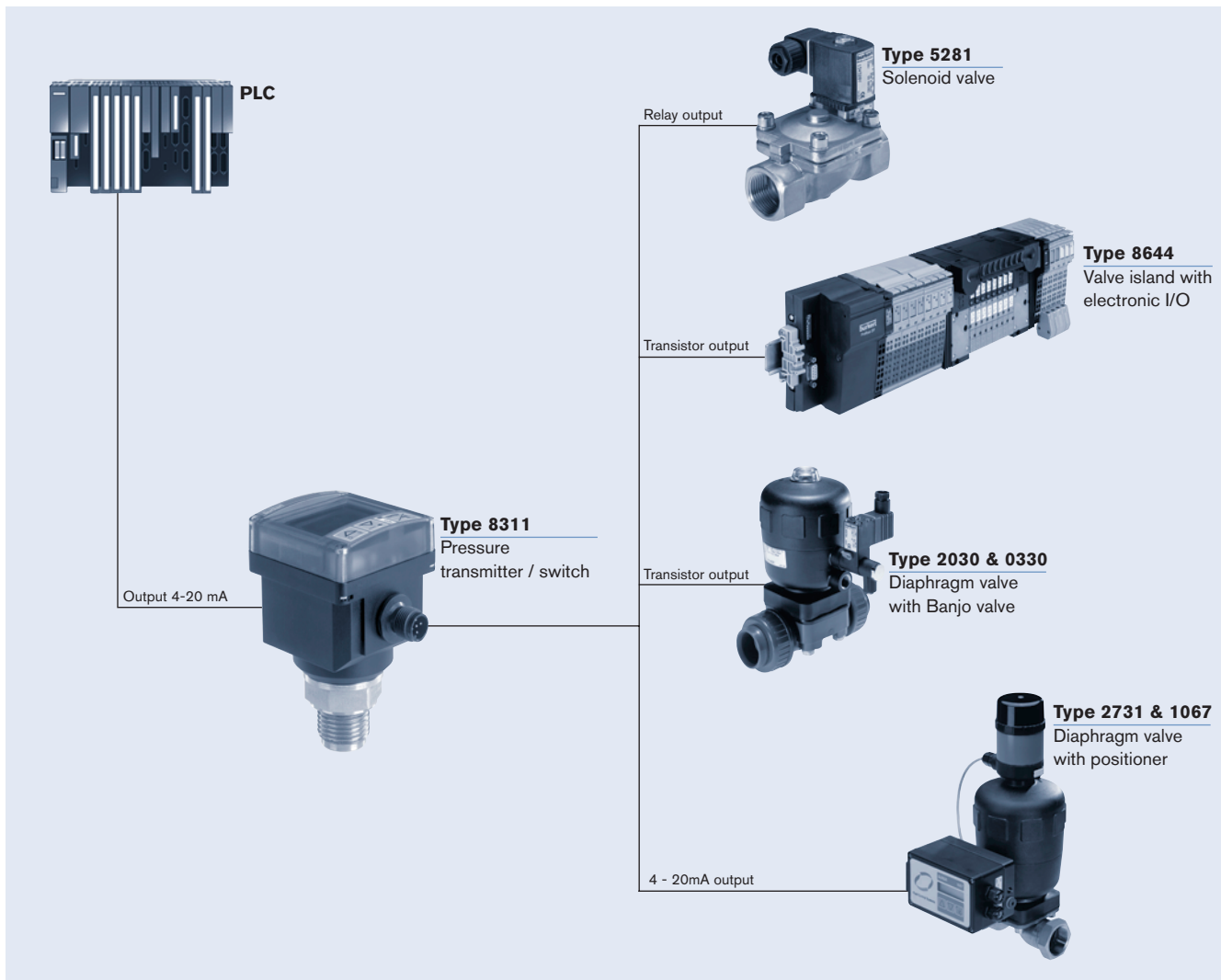
Nominal pressure range [bar]	Pressure max. [bar]	Burst pressure [bar]	Power supply	Output signal	Electrical connection	Item no. for corresponding sensor connection		
						G 1/2	NPT 1/2	Rc 1/2
0 - 2	4	7	12 - 30 VDC	NPN / PNP	M12 plug 5 pins	439 908	439 916	439 912
				Relay	M12 plug 5 pins + cable plug Type 2508*	439 911	439 919	439 915
0 - 5	10	12	12 - 30 VDC	NPN / PNP	M12 plug 5 pins	439 920	439 928	439 924
				Relay	M12 plug 5 pins + cable plug Type 2508*	439 923	439 931	439 927
0 - 10	20	25	12 - 30 VDC	NPN / PNP	M12 plug 5 pins	439 932	439 940	439 936
				Relay	M12 plug 5 pins + cable plug Type 2508*	439 935	439 943	439 939
0 - 20	40	50	12 - 30 VDC	NPN / PNP	M12 plug 5 pins	439 944	439 952	439 948
				Relay	M12 plug 5 pins + cable plug Type 2508*	439 947	439 955	439 951
0 - 50	100	120	12 - 30 VDC	NPN / PNP	M12 plug 5 pins	439 956	439 964	439 960
				Relay	M12 plug 5 pins + cable plug Type 2508*	439 959	439 967	439 963

* Acc. EN175301-803 Europe / Asia (G / Rc) : with cable gland
USA / CDN (NPT) : with reduction NPT^{1/2}

Ordering chart for accessories for Type 8311 (to be ordered separately)

Specifications	Item no.
5 pin M12 female cable connector with plastic threaded locking ring	917 116
5 pin M12 female connector moulded on cable (2m. shielded)	438 680
Female cable plug type 2508 - EN 175301-803 with cable gland	438 811
Female cable plug type 2509 - EN 175301-803 with reduction NPT 1/2", without cable gland	162 673

Interconnection with other Bürkert products



To find your nearest Bürkert facility, click on the orange box → www.burkert.com

In case of special application conditions, please consult for advice.

We reserve the right to make technical changes without notice.

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