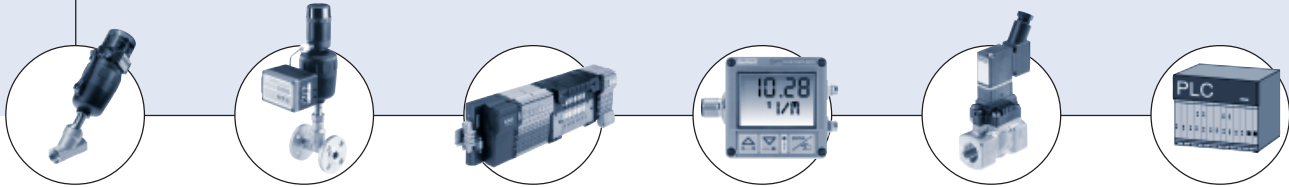




- Indication, Monitoring, Transmitting, continuous or On/Off control in one device
- Output signal 4–20 mA, 2-Wire for continuous control
- Transistor or relay outputs for ON/OFF control or alarm function
- AS-Interface for On/Off control

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 especially designed to switch alarms and to establish a monitoring system or an On/Off or Continuous control loop.

The different setpoints can be programmed with the 3 keys. Additionally the process value (4–20 mA) can be transmitted to a PLC. The connection to the process is done with standard fittings.

Technical data		Outputs	
Pipe diameter	Any pipe with sensor connection 1/2"	Transmitter 2-wire version	2 NPN or 2 PNP, open collector, 700 mA max., NPN: [(V+) minus 0.5 VDC] - 0 VDC, PNP: 0.5 VDC - (V+) protected against short circuits 4-20 mA, Loop resistance max.: 18 VDC: 300W 24 VDC: 550W 30 VDC: 800W (For more details, see instruction manual)
Measuring range	up to 29, 73, 145, 290 or 725 PSI	Transistor (programmable)	
Typical accuracy	Transmitter 2-wire version for +32°F < T < +158°F for -4°F < T < +32°F for +158°F < T < +212°F Switch version	Process Value	NPN/ PNP, open collector, 700 mA max., NPN: 0.2 - 30 VDC, PNP: (V+) protected against short circuits 3A/250 VAC or 3A/30VDC (Relay) 3A/48VAC or 3A/30VDC (Relay+AS-Interface)
Typical repeatability	± 1% fs* ± 1% ± 0.03% fs* / F° ± 1% ± 0.03% fs* / F° ± 1.5% fs*	Switch version	
Medium temperature	± 0.06 % Transmitter 2-wire version ± 0.25 % Switch version	Transistor (programmable)	Optional Relay (programmable)
Ambient temperature	-4°F (-20°C) to 212°F (+100°C) (212°F for an ambient temperature of max. 104°F)		
Storage temperature	-4°F (-20°C) to 176°F (+80°C) (104°F max. if the medium temperature near of 212°F)	Current consumption	Transmitter 2 wire version Switch version
Sensor element	-4°F (-20°C) to 140°F (+60°C) (104°F max. if the medium temperature near of 212°F)		
Service life of pressure cell	Ceramic cell (AL ₂ O ₃)		
Materials	Min. 100 million cycles	AS-Interface	Fielbus
Housing	PC	Electrical connections	DIN 43650A 5 pin, M12 ¹⁾
Wetted parts	Stainless steel 316L (1.4404) FPM seal (EPDM option)	Cable plug	
Front panel foil	Polyester	Multipin	
Voltage supply (V+)	12–30 VDC	Protection class	IP65 with connector plugged-in
Reversed polarity of DC	Protected (for power supply and all outputs)	Standards:	EN 50081-1, 50082-2, 61000-6-2 EN 61010-1 EN 60068-2-6 EN 60068-2-27
Overtoltage protection	Yes, for power supply and for transistor outputs	EMC	
Voltage supply cable		Security	
Cross-section	0.14 up to 0.5 mm ²	Vibration	
Recommended length	unshielded: max. 10 m, shielded: max. 50 m	Shock	

*full scale = max. measuring range

¹⁾ Has to be ordered separately

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

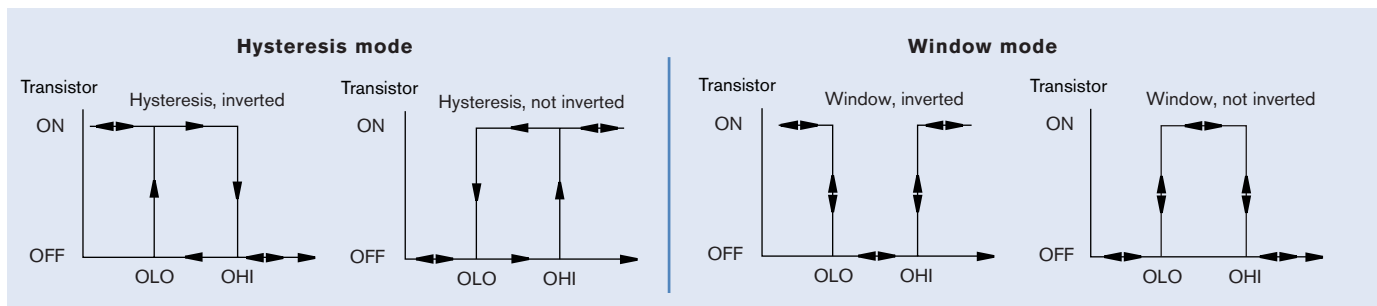
- International measuring units
- 10-segment bargraph
- Teach-In for an improved accuracy
- Simulation mode to test the programming of the switching points in dry conditions

Transmitter

- International measuring units
- 10-segment bargraph
- Teach-In for an improved accuracy
- Simulation mode to test the programming of the switching points and 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

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

Nominal pressure range [PSI]	Pressure max. [PSI]	Bursting Press. [PSI]	Power supply	Output signal	Electrical connection	Item-No. for corresponding Sensor connection		
						G 1/2	NPT 1/2	Rc 1/2
Transmitter								
0 - 29	58	102	12 - 30 VDC	4-20mA + 2 NPN or 2 PNP ¹⁾	M12 - 5 pin	444 507 U	444 762 A	551 739 E
				4-20mA	Cable plug	444 635 T	444 640 L	444 768 Q
0 - 73	145	174	12 - 30 VDC	4-20mA + 2 NPN or 2 PNP ¹⁾	M12 - 5 pin	444 506 T	444 763 B	551 740 K
				4-20mA	Cable plug	444 636 U	444 641 H	444 769 R
0 - 145	290	363	12 - 30 VDC	4-20mA + 2 NPN or 2 PNP ¹⁾	M12 - 5 pin	444 503 Y	444 764 C	551 741 G
				4-20mA	Cable plug	550 338 E	444 642 A	444 770 N
0 - 290	580	725	12 - 30 VDC	4-20mA + 2 NPN or 2 PNP ¹⁾	M12 - 5 pin	444 504 Z	444 765 D	551 742 H
				4-20mA	Cable plug	550 339 F	444 760 L	551 737 U
0 - 725	1450	1740	12 - 30 VDC	4-20mA + 2 NPN or 2 PNP ¹⁾	M12 - 5 pin	444 505 S	444 767 F	551 743 A
				4-20mA	Cable plug	444 637 V	444 761 H	551 738 D
Switch								
0 - 29	58	102	12 - 30 VDC	NPN / PNP	M12	439 908 H	439 916 Q	439 912 L
				NPN	Cable plug*	439 909 A	439 917 R	439 913 M
				PNP	Cable plug*	439 910 W	439 918 S	439 914 N
				Relay	M12 + Cable plug*	439 911 K	439 919 T	439 915 P
				ASi powered	ASi + Relay	M12 + Cable plug *	440 471 F	440 475
0 - 73	145	174	12 - 30 VDC	NPN / PNP	M12	439 920 Y	439 928 U	439 924 Q
				NPN	Cable plug*	439 921 M	439 929 V	439 925 R
				PNP	Cable plug*	439 922 N	439 930 S	439 926 J
				Relay	M12 + Cable plug*	439 923 P	439 931 P	439 927 K
				ASi powered	ASi + Relay	M12 + Cable plug*	440 477 D	440 481 S
0 - 145	290	363	12 - 30 VDC	NPN / PNP	M12	439 932 Q	439 940 C	439 936 L
				NPN	Cable plug*	439 933 R	439 941 Z	439 937 M
				PNP	Cable plug*	439 934 J	439 942 S	439 938 W
				Relay	M12 + Cable plug*	439 935 K	439 943 T	439 939 X
				ASi powered	ASi + Relay	M12 + Cable plug*	440 483 U	440 487 Y
0 - 290	580	725	12 - 30 VDC	NPN / PNP	M12	439 944 U	439 952 U	439 948 G
				NPN	Cable plug*	439 945 V	439 953 V	439 949 H
				PNP	Cable plug*	439 946 W	439 954 W	439 950 E
				Relais	M12 + Cable plug*	439 947 X	439 955 X	439 951 T
				ASi powered	ASi + Relais	M12 + Cable plug*	440 489 A	440 493 W
0 - 725	1450	1740	12 - 30 VDC	NPN / PNP	M12	439 956 Y	439 964	439 960
				NPN	Cable plug*	439 957 Z	439 965	439 961
				PNP	Cable plug*	439 958 A	439 966	439 962
				Relais	M12 + Cable plug*	439 959 B	439 967	439 963
				ASi powered	ASi + Relais	M12 + Cable plug*	440 495 Y	440 499

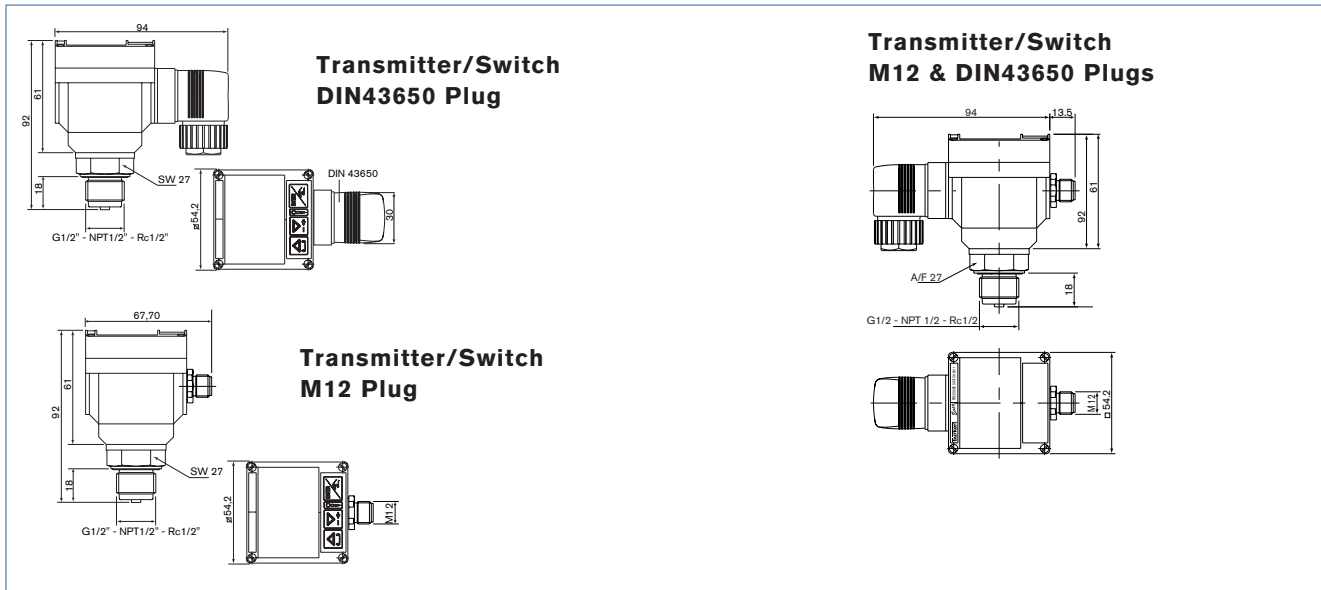
¹⁾ PNP standard, can be change in NPN with jumpers on electronic board

* Type 2508: NPT connection comes with 1/2" NPT conduit plug
G & RC connection comes with cable grommet plug
M12 plug must be ordered seperately

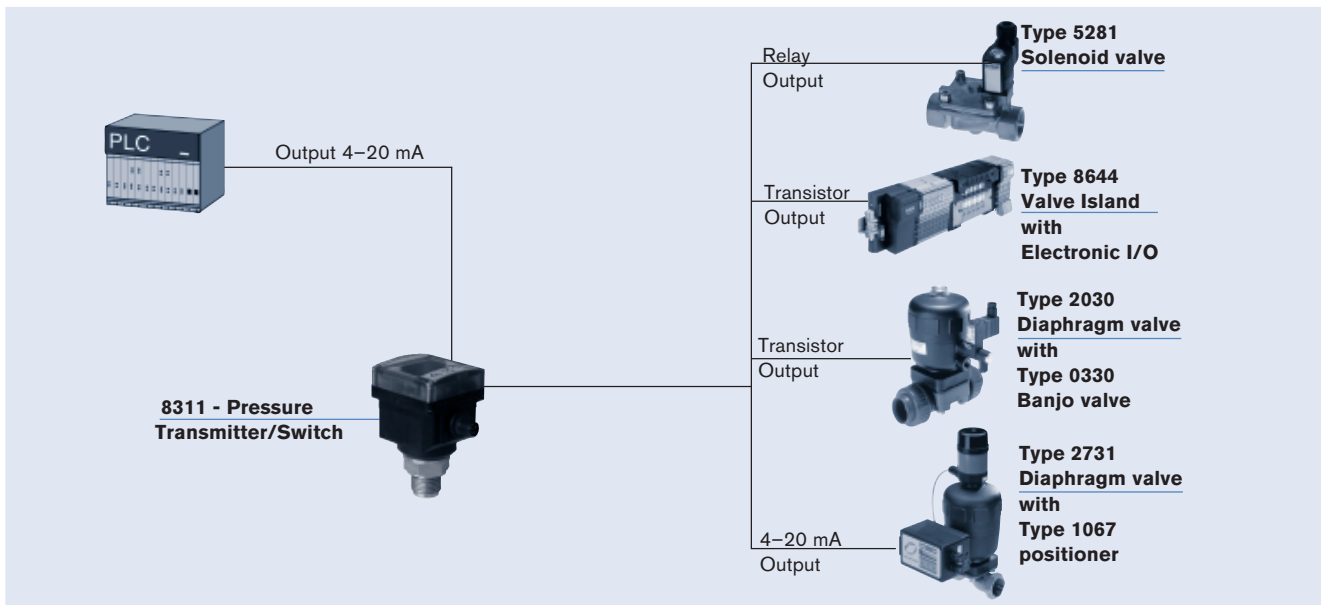
Ordering chart for Accessories for Type 8311 (to be ordered separately)

Description	Item-No. (standard)
5 pin M12 female cable connector with plastic threaded locking ring	917 116
5 pin M12 female connector moulded on cable (2 m., shielded)	438 680
2 pin M12 female coupler module for ribbon cable (AS-Interface version only)	440 653
Cable grommet plug DIN 43650 -Standard	438 811
Cable plug DIN 43650 - with NPT 1/2" conduit - USA version - UL approval	162 673

Dimensions [mm] Type 8311



Interconnection possibilities with the Type 8311



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

We reserve the right to make technical changes without notice.

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