



Pressure Sensors

	Series	Material	Connection	Pressure	Temperature	Function	Page
	18 S Allfluid	Stainless steel	G 1/4 male	0 - 800 bar	+85 °C	–	228
	33 D	Aluminium, Stainless steel, Polyester foil	G 1/4 Flange	-1 - 630 bar	+80 °C	–	230

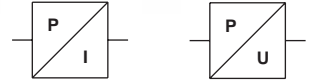
18 S Allfluid Series

Allfluid/hydraulic applications with relative pressure
 Allfluid pressure sensor analog
 0 to 800 bar

Robust sensor for hydraulic applications
 Temperature compensated

Description

Medium:	for neutral and aggressive gases or liquids
Fluid connection:	G 1/4 male with nipple manometer connection
Pressure range:	0 to 800 bar
Fluid temperature:	-20 °C to +85 °C
Ambient temperature:	-20 °C to +85 °C
Mounting position:	as required



Consult our Technical Services for use below +2 °C

Protection class:	IP 65 (according to DIN 60529) with mounted plug
Shock protection:	30G, XYZ, to DIN EN 60068-2-27
Vibration protection:	3G, 5 to 500Hz, XYZ, DIN EN 60068-2-6
Electrical connection:	M12 x 1/cable (on request)
Supply voltage:	UB = 12 to 30V DC (current output) UB = 15 to 30V DC (voltage output) maximum 10% residual ripple within UB
Output signal:	4 to 20mA (two-wire technology) 0 to 10V (three-wire technology)

Varying frequency output on request

Electromagnetic compatibility:	Interference immunity according to EN 50081. Part 1 Interference immunity according to EN 50082. Part 2
Load resistance:	see diagram
Polarity:	short-circuit proof
Measuring range:	see table below
Linearity:	< ±0.5% final value
Hysteresis:	< 0.15%
Temperature sensitivity (zero point):	zero point < ± 0.4% FS/10K range < ± 0.2% FS/10K

Material

Housing:	stainless steel 1.4571/1.4542
Sensor:	stainless steel membrane 1.4542

Features

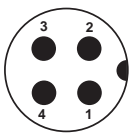
- 3-wire technology (0 to 10V)
- 2-wire technology (4 to 20mA)
- Excellent long-term stability
- Stainless steel measuring element: not oil-filled

Standard versions (electrical connection M12 x 1)*

Series	Measuring range (Relative pressure) bar	Value max. (Gauge pressure) bar	Output signal
0862170	0 - 10	40	4 - 20mA
0862180	0 - 10	40	0 - 10V
0862370	0 - 25	50	4 - 20mA
0862380	0 - 25	50	0 - 10V
0862470	0 - 100	200	4 - 20mA
0862480	0 - 100	200	0 - 10V
0862670	0 - 250	500	4 - 20mA
0862680	0 - 250	500	0 - 10V
0862770	0 - 400	750	4 - 20mA
0862780	0 - 400	750	0 - 10V
0862970	0 - 800	1000	4 - 20mA
0862980	0 - 800	1000	0 - 10V

* Plug not included, please see below

Electrical connection M12 x 1



Signal	4 - 20mA	0 - 10V
+ UB	1	1
GND	-	3
Signal	4	4

Options selector

Measuring range relative pressure	Code
0 to 10 bar	1
0 to 25 bar	3
0 to 100 bar	4
0 to 250 bar	6
0 to 400 bar	7
0 to 800 bar	9

Output signal	Code
4 to 20mA	7
0 to 10V	8

0862**0

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Electronic pressure switches 33 D (pneumatic/allfluid)

-1 to 630 bar

Description

Pneumatic: filtered compressed air, lubricated or unlubricated, neutral gases
 Allfluid: neutral or aggressive liquids and gases
 Display: LCD 4 digits illuminated, pressure unit programmable for bar, psi, MPa

Customer-specific pressure unit available on request

Operating pressure: -1 to 16 bar (pneumatic)
 0 to 630 (hydraulic/allfluid)
 Temperature sensitivity (zero point): 0.4% of final value/10 K
 Temperature sensitivity (range): 0.4% of final value/10 K
 Fluid temperature: -10 °C to 80 °C
 Ambient temperature: -10 °C to 60 °C
 Mounting position: as required

Consult our Technical Services for use below +2 °C

Switching point: adjustable between 0 and 100% of full scale
 Reset point: adjustable between 0 and 100% of full scale
 Electrical connection: M12 x 1
 Linearity: < 0.2% of final value ±1 digit
 Protection class according to DIN 60529: IP 65 (with mounted plug)

Material

Housing: aluminium/stainless steel/polyester foil
 Seal: pneumatic: NBR 70
 hydraulic/allfluid: FPM
 Sensor elements: pneumatic: silicium/aluminium
 hydraulic/allfluid: stainless steel 1.4571
 (0 to 250 bar versions),
 stainless steel 1.4542
 (400 to 630 bar versions)

NPT versions with integrated damping element

Features

- Display of system pressure and unit (pressure unit programmable)
- Compact and robust design
- Easy programming of set points and additional functions
- Transistor output signals 1 x PNP/2 x PNP/1 x PNP + 4 to 20mA
- Electronic lock
- Switching status indicated by LED
- Standard M12 x 1 electrical connection (IP 65)
- For pneumatic, all fluid and hydraulic applications

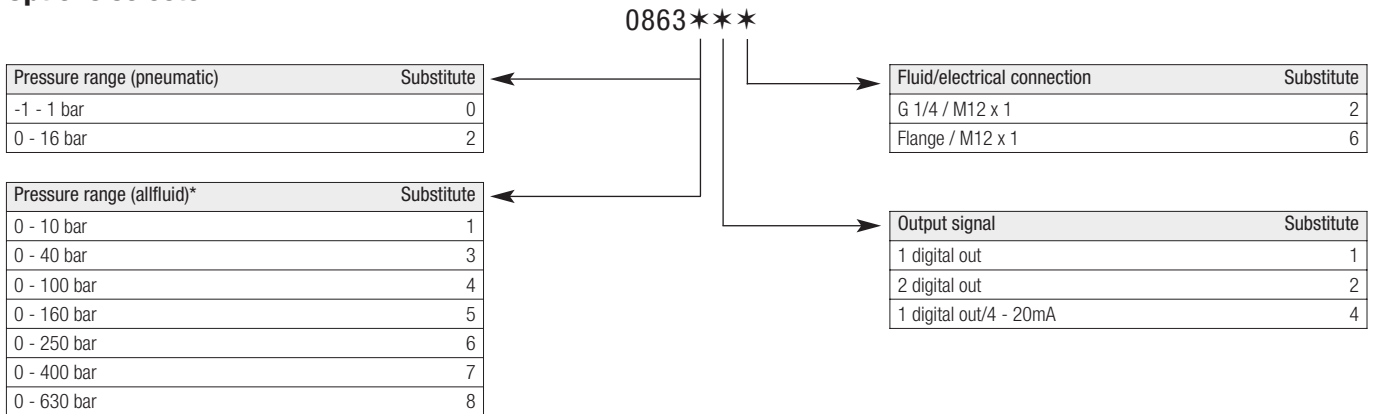


Electrical connection M12 x 1 (standard pneumatic models)*

Connection size	Measuring range (Relative pressure)** bar	Value max. (Gauge pressure) bar	Output signal	Series
G 1/4	-1 - 1	10	1 x PNP	0863012
Flange	-1 - 1	10	1 x PNP	0863016
G 1/4	-1 - 1	10	2 x PNP	0863022
Flange	-1 - 1	10	2 x PNP	0863026
G 1/4	-1 - 1	10	1 x PNP / 4-20mA	0863042
Flange	-1 - 1	10	1 x PNP / 4-20mA	0863046
G 1/4	0 - 16	30	1 x PNP	0863212
Flange	0 - 16	30	1 x PNP	0863216
G 1/4	0 - 16	30	2 x PNP	0863222
Flange	0 - 16	30	2 x PNP	0863226
G 1/4	0 - 16	30	1 x PNP / 4-20mA	0863242
Flange	0 - 16	30	1 x PNP / 4-20mA	0863246

* M12 x 1 connector not included, please see table on next page

Options selector



* In the case of pressure peaks, please use NPT version (with damping) or external reducer 0550083

Electrical parameters

Electrical connection:	M12 x 1
Power supply:	10 - 32V DC (polarity safe) digital models 15 - 32V DC (polarity safe) analogue models
Permissible residual ripple:	10% (within 12 to 32V)
Current consumption:	< 50mA (plus load current)

Electromagnetic compatibility

Interference emission	Conforming to EN 50081. Part 1
Interference immunity	Conforming to EN 50082. Part 2

Electrical connection M12 x 1

Pin	Signal	Cable
1	Supply voltage	Brown
2	Out 2 (PNP) / analog 4 - 20mA	White
3	0V	Blue
4	Out 1 (PNP)	Black
5	PE	Grey

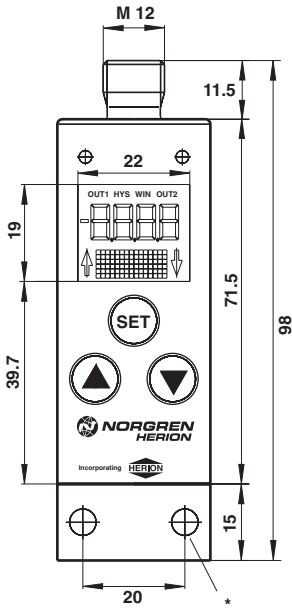
Switching output

Switching mode:	Potential-bound open collector switching to UB, suitable for inductive load
Output voltage:	Supply voltage - 1.5V
Analog output:	4 - 20mA
Contact rating:	I _{max} = 500mA (short-circuit proof)
Switching time:	< 10 ms
Damping:	5 ms - 0.64 sec
Signal delay:	On/off 0 - 20 sec
Service life:	min. 100 million switching cycles
Switching logic:	NO/NC programmable
Operating mode:	Standard, hysteresis and window mode Separately selectable for each output

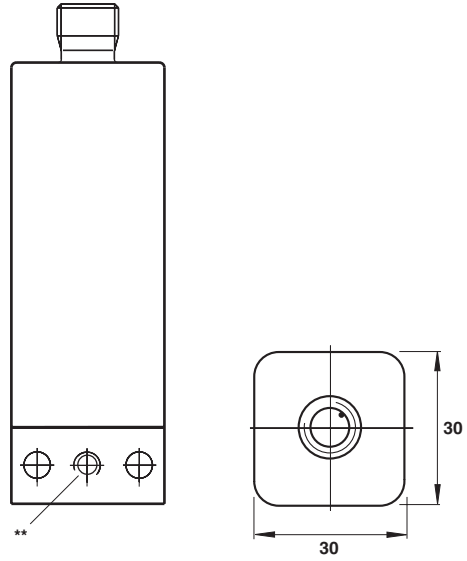
Accessories - Plugs

Description	Series
M12 x 1, straight without cable	0523055
M12 x 1, straight 2 m cable, 4-core	0523057
M12 x 1, straight 5 m cable, 4-core	0523052
M12 x 1, 90° without cable	0523056
M12 x 1, 90° 2 m cable, 4-core	0523058
M12 x 1, 90° 5 m cable, 4-core	0523053

Front view



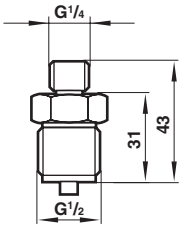
Rear view (flange version)



* Suitable for M5 x 35 screws

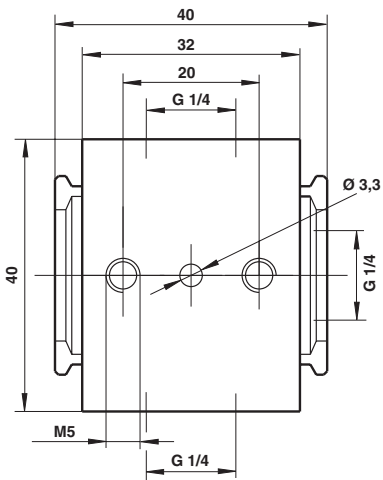
** Flange diameter 8 x 1.2, O-ring 5 x 1.5 (NBR 70) - pneumatic version,
O-ring 4.47 x 1.78 (FPM) - hydraulic/allfluid version

Reducer G 1/2 to G 1/4, external thread – 0550083

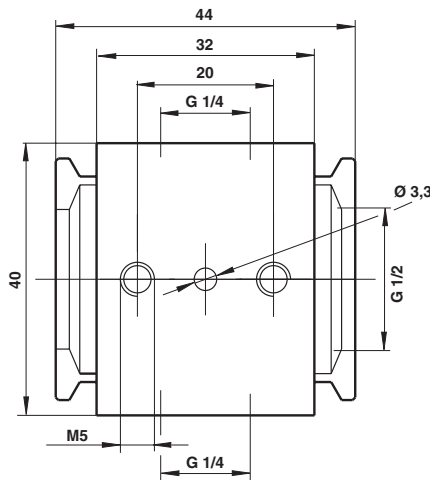


Porting blocks

Adaptor for use with Excelon 72, 73, 74 air preparation systems



Excelon 72 0523109



Excelon 73 and 74 0523110





Special Approvals

We will gladly provide you with any further information required.