Pneumatic pressure switch 33D
Electronic

-1 to 16 bar

Display of system pressure (pressure unit bar, psi, mpa programmable)

Compact and robust design

Easy programming of switchpoints and extra functions

Economic solution for industrial applications

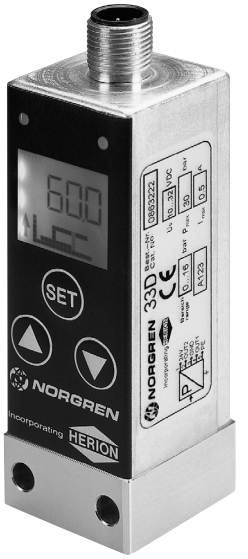
Electronic lock

Switching status indicated by LCD

Standard M 12 x 1 el. connection (IP 65)

With digital and analogue output

Application: not for outdoor use



c UL US LISTED

Technical data

Medium:
For filtered, lubricated or non lubricated compressed air and neutral gases

Mounting:
Optional

Pressure range:
-1 to 1 bar, 0 to 16 bar

Temperature:

Fluid	Ambient
-10 to + 80°C	-10 to + 60°C

(please contact our technical service for use below +2°C)

Temperature sensitivity:

Zero point	Range
±0,4% of final value/10 K	±0,4% of final value/10 K

Switching point:	Reset point:
Adjustable between	Adjustable between
0 to 100% FS*1)	0 to 100% FS*1)

(smallest adjustable pressure switching difference between switching point and reset point ⩾0,5% FS*1)

Display:
LCD 4 digits, illuminated,
pressure unit programmable bar, psi, mpa
(customer specific pressure unit avalable on request)

Total accuracy:
⩽±1,5% FS*1) (without temperature sensitivity)

Linearity:
⩽±0,2% + 1 indicator step

Degree of protection acc. to DIN 40050:
IP65 (with plug mounted)

Shockproof:
30 g, xyz, DIN EN 60068-2-27

Vibrationproof:
3 g, 5 to 500 Hz, xyz, DIN EN 60068-2-6

Weight:
0,09 kg

*1) FS = full scale

Materials:
Sensor (fluid-affected parts):
silizium/aluminium
Housing: aluminium/stainless steel/polyester film

Ordering example

See page 3

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document.

Electronical parameters

Electrical connection:
M 12 x 1

Power supply:
UB = 10 to 32 V DC
15 to 32 V DC (analogue) polarity safe

Permissible residual ripple:
10% (within UB)

Current consumption:
< 50 mA

Switching mode:
PNP, potential-bound
open collector switching to + UB

Output signal:
Digital: UB minus 1,5 V
Analogue: 4 to 20 mA

Contact rating:
Imax = 500 mA (short-circuit proof)

Switching time:
< 10 ms

Signal delay:
On/off 0 to 20 s

Service life:
Min. 100 million switching cycles

Switching logic:
N.O./N.C. programmable

Operating mode:
Standard, hysteresis and window mode
separately selectable for each output

Electromagnetic compatibility:
Interface emission EN 61326
Interface emission EN 61326, part 1

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under '**Technical Data**'.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN. Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.
System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.
System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.

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Standard versions *2)

Output signal 1 x PNP

Type *1) *4)	Switching pressure range (bar)	Final value/ Over pressure (bar) *5)	Fluid connection	Output signal	Display step size (bar)
0863012 *3)	- 1 to + 1	10	G 1/4	1 x PNP	0,005
0863016	- 1 to + 1	10	Flange	1 x PNP	0,005
0863212 *3)	0 to 16	30	G 1/4	1 x PNP	0,050
0863216	0 to 16	30	Flange	1 x PNP	0,050

Output signal 2 x PNP

Type *1)	Switching pressure range (bar)	Final value/ Over pressure (bar) *5)	Fluid connection	Output signal	Display step size (bar)
0863022	- 1 to + 1	10	G 1/4	2 x PNP	0,005
0863026	- 1 to + 1	10	Flange	2 x PNP	0,005
0863222 *3)	0 to 16	30	G 1/4	2 x PNP	0,050
0863226	0 to 16	30	Flange	2 x PNP	0,050

Output signal 1 x PNP/1 x analogue 4 to 20 mA

Type *1)	Switching pressure range (bar)	Final value/ Over pressure (bar) *5)	Fluid connection	Output signal	Display step size (bar)
0863042	- 1 to + 1	10	G 1/4	1 x PNP/4 to 20 mA	0,005
0863046	- 1 to + 1	10	Flange	1 x PNP/4 to 20 mA	0,005
0863242 *3)	0 to 16	30	G 1/4	1 x PNP/4 to 20 mA	0,050
0863246	0 to 16	30	Flange	1 x PNP/4 to 20 mA	0,050

*1) Connector not included. Please see table »accessories««
*2) Versions with fluid connection 1/4 NPT on request
*3) Preferential type
*4) Don't use for outdoor applications
*5) Short-term pressure peaks are not allowed to exceed this limit value during operation. Operative utilization of the limit value is not permitted. The limit value corresponds to the maximum testing pressure

Option selector

0863★★★

Switching pressure range (bar)	Substitute
-1 to 1	0
0 to 16	2

Fluid connection	Substitute
G 1/4	2
Flange	6

Output signal	Substitute
1 x PNP	1
2 x PNP	2
1 x PNP/1 x analogue 4 to 20 mA	4

Ordering example

Electronical pressure switch,
pressure range 0 to 16 bar,
2 switching points, G1/4
Type: 0863222

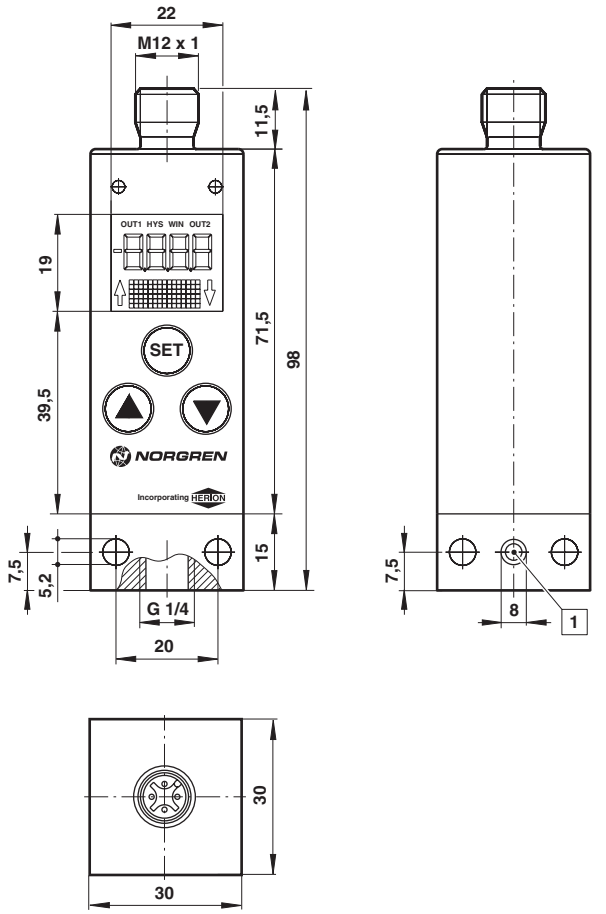
Accessories

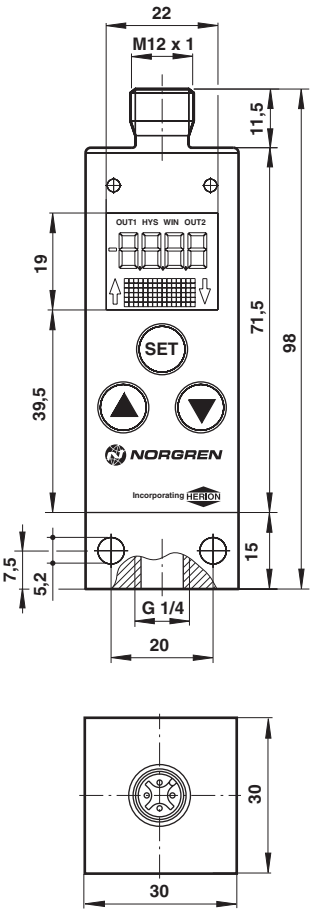
Pressure port Reducing nipple	Snubber	Connector M 12 x 1 90°		Connector M 12 x 1 straight	
					
See page 4	**See page 4**				
0574767 (brass)	0574773 (brass)	0523058 (2 m cable length, 4-core)	0523056 (90° without cable)	0523057 (2 m cable length, 4-core)	0523055 (without Kabel)
0550083 (stainless steel)	0553258 (stainless steel)	0523053 (5 m cable length, 4-core)		0523052 (5 m cable length, 4-core)	
		0799845 (2 m cable length, 5-core, on PE-requirement *1)			
		0250081 (5 m cable length, 5-core, on PE-requirement *1)			

*1) Cable with screening

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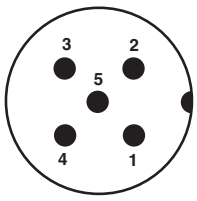
Basic dimensions





1	O-ring 5 x 1,5 (NBR 70)

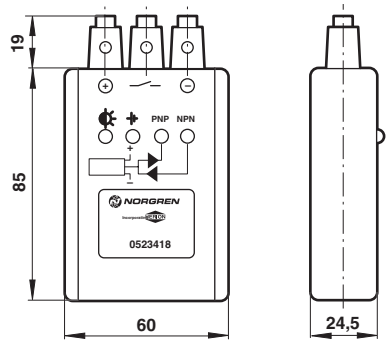
Electrical connection M 12 x 1



Elektrical connection M 12 x 1		
Pin	**Signal**	**Cable**
1	+ U_B	brown
2	Out 2 (PNP) / analogue 4 to 20 mA	white
3	0 Volt	blue
4	Out 1 (PNP)	black
5	PE	grey

Sensor tester

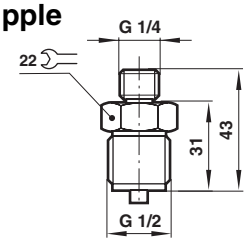
Incl. 2 x 9 V batteries for 33D demo
Type 0523418



Accessories

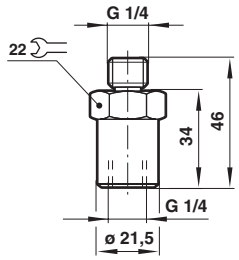
Pressure port reducing nipple

Material: brass
Type: **0574767**



Snubber

Material: brass
Type: **0574773**



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