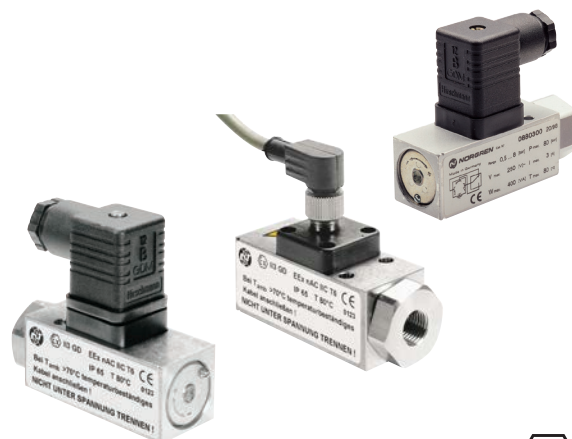


Herion 18D Type Pressure Switch



Seal: NBR **Body:** Aluminium  **Temperature Range:** -10°C to +80°C

- > 5 ... 420 bar
Port size: G1/4 or flange
- > Microswitch with gold plated contacts
- > Vibration resistant to 15 g
- > Microswitch approved by UL and CSA
- > Intrinsically safe operation
- > For Ex applications conforming to ATEX 100a: Zone 2 category ATEX 3G (gases): II3G Ex nAC IIC T6 X Zone 22 category ATEX 3D (dusts): II3D Ex tD A22 IP65/IP67 T80°C X
Special condition to be observed during the installation



Technical features

Medium:

For neutral, self lubricating fluids, e.g. hydraulic oil, lube oil, light fuel oil

Operation:

Softseal piston

Operating pressure:

5 ... 420 bar (72 ... 6091 psi)

Repeatability:

±3% of final value
(depending on regulating pressure)

Media viscosity:

Up to 1000 mm²/s

Switching cycles:

100 1/min

Switching pressure difference/hysteresis:

Fixed

Life cycle of mechanical parts:

10⁷ switching cycles

Switching element:

Microswitch with gold plated contacts

Degree of protection:

IP65 for DIN EN 175301-803 (DIN 43650) form A connection
IP67 for M12 x 1 connection

Mounting position:

Optional

Weight:

0,2 kg (0.44 lbs)

Electrical connection:

DIN EN 175301-803 (DIN 43650) form A or M12 x 1 IEC 947-5-2

Ambient/Media temperature:

0 ... +80°C (0 ... +176°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F)

Materials:

Body: Aluminium/steel
Seals: PTFE, NBR

Technical data

DIN plug connection – plug included in scope of supply

Symbol	Port size	Pressure range *1)		Switching pressure difference				Max. Over pressure *2)		Materials press sensor		Drawing No.	Model
		(bar)	(psi)	Lower range (bar)	(psi)	Upper range (bar)	(psi)	(bar)	(psi)	Body	Seal		
	G1/4	5 ... 70	72 ... 1015	10,5	152	15	217	400	5801	AL/steel	PTFE/NBR	1	0882180
	Flansch	5 ... 70	72 ... 1015	10,5	152	15	217	400	5801	AL/steel	PTFE/NBR	2	0883180
	G1/4	10 ... 160	145 ... 2320	11	159	17	246	400	5801	AL/steel	PTFE/NBR	1	0882280
	Flansch	10 ... 160	145 ... 2320	11	159	17	246	400	5801	AL/steel	PTFE/NBR	2	0883280
	G1/4	25 ... 250	362 ... 3625	11	159	17	246	400	5801	AL/steel	PTFE/NBR	1	0882380
	Flansch	25 ... 250	362 ... 3625	11	159	17	246	400	5801	AL/steel	PTFE/NBR	2	0883380
	G1/4	40 ... 420	580 ... 6091	17	246	38	551	600	8702	AL/steel	PTFE/NBR	1	0882480
	Flansch	40 ... 420	580 ... 6091	17	246	38	551	600	8702	AL/steel	PTFE/NBR	2	0883480

Electrical connection M12 x 1 nach IEC 947-5-2 - plug not included, max. allowable voltage 30 V

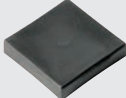
The pressure switch will loose the Ex approval when using other wire sockets than those listed in data sheet.

Symbol	Port size	Pressure range *1)		Switching pressure difference				Max. Over pressure *2)		Materials press sensor		Drawing No.	Model
		(bar)	(psi)	Lower range (bar)	(psi)	Upper range (bar)	(psi)	(bar)	(psi)	Body	Seal		
	G1/4	5 ... 70	72 ... 1015	10,5	152	15	217	400	5801	AL/steel	PTFE/NBR	1	0882181
	G1/4	10 ... 160	145 ... 2320	11	159	17	246	400	5801	AL/steel	PTFE/NBR	1	0882281
	G1/4	25 ... 250	362 ... 3625	11	159	17	246	400	5801	AL/steel	PTFE/NBR	1	0882381
	G1/4	40 ... 420	580 ... 6091	17	246	38	551	600	8702	AL/steel	PTFE/NBR	1	0882481

*1) Setpoints should be ideally in the middle of the switching pressure range. Reference pressure = atmospheric pressure. Switching pressure must not exceed the indicated values.

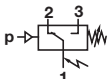
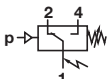
*2) Max. values

Accessories

Pressure port reducing nipple	Surge damper	Cover
		
Page 3	Page 3	Page 3
0574767 (brass)	0574773 (brass)	0554737
0550083 (stainless steel)	0553258 (stainless steel)	

Connector DIN EN 175301-803	Connector M 12 x 1 4-pin, 90°	4-pin, straight		
				
0570110 (Form A)	0523058 (2 m cable,4-core)	0523056 (without cable)	0523057 (2 m cable, 4-core)	0523055 (without cable)
	0523053 (5 m cable,4-core)		0523052 (5 m cable, 4-core)	

Switching function

	Connector DIN EN 175301-803, form A Microswitch SPDT Terminals 1 - 3: Contacts close on rising pressure. Terminals 1 - 2: Contacts open on rising pressure.		Connector IEC 947-5-2, M12 x 1 Microswitch SPDT Terminals 1 - 4: Contacts close on rising pressure. Terminals 1 - 2: Contacts open on rising pressure.
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Switching capacity

Commutator with gold plated contacts

Current type	Load type *2)	U min [V]	Max. permissible persistent current I _{max} [A] at U *1) (UL & CSA)					Electrical life-time
			M12 x 1 30 V	DIN EN 175301-803, form A 30 V	48 V	125 V	250 V	
a.c.	Ohmic, inductive	6	0,1	0,1	0,1	0,1	0,1	≥ 2 x 10 ⁵ Switching cycles
d.c.	Ohmic, inductive	6	0,1	0,1	—	—	—	

Reference number: 20/min, Reference temperature: +20°C.

I_{min} = 1 mA at 24 V d.c. or 5 mA at 6 V d.c.

*1) Higher currents (5 A max) will cause a reduction of the durability of the micro-switch contacts. Futhermore additional measures has to be taken to fulfil the EMV regulation 2004/108/EG by the manufacturer

*2) Spark quenching/overload protection will be necessary using inductive loads.

Recommended circuit

Spark quenching and EMV intrinsically safe

1. Quick diode (D) with tv ≤ 200 ns, parallel to inductive load.

2. RC link in parallel to load in parallel to switching contact.

Dimensioning principles:

R_L in Ω ≈ 0,2 x R_{Load} in Ω

C in [μF] ≈ I_{Load} in [A]

