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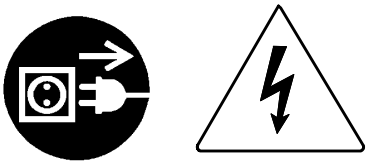
MDR - F..

Application:

- Monitoring and pressure control of liquid and gases in pipe systems, boilers, pressure tanks and devices.
- Pressure monitoring of cooling and greasing systems of different kinds of maschines.
- Automatic switching of compressor and pump motors, e.g. water supply, for additional pumps, fire fighting equipment and air pressure systems.



Safety Instructions:

- The relevant prevailing standards for running and installing electrical appliances are to be observed. Failure to comply can result in malfunction and even destruction of the MDR-F, connected devices or possible personal injury.
- Installation and connection by skilled personnel only; after installing accessories, the function of the device must be checked by skilled personnel only.
- Do not exceed the specified maximum ratings for voltage, current, pressure and temperature.
- Protect against strong pulsations and liquid pressure surges (water hammer).
- Avoid extreme vibrations.
- In case of low operating cycles, as in alarm pressure switches, the correct function of the switch should be checked on a quarterly basis (every 3 months).

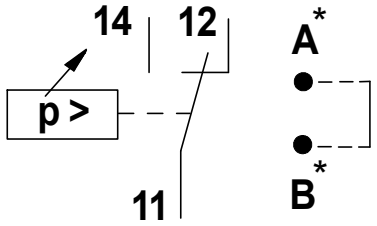


Fig. 1 - Standard Version
* (For special applications e.g. VDS the terminals have an individual configuration)

Mounting:

- The pressure switch can be mounted in any position.
- Do not use sealant on the threads of the plastic flange MDR-F..Y, use an appropriate O-ring instead.

Pressure Setting (see Fig. 2):

- Set the upper pressure P1 using adjusting screw 1. The value will be displayed by the red pointer 2.
- Set the lower pressure P2 using adjusting screw 3. The value will be displayed by the green pointer 4.
- The scales are not calibrated. Use manometer for precise setting.

Electrical Connection:
(see Fig. 1)

Technical Data:	**SPDT***	**SPDT*, gold-plated contact**
Rated operating current Ie, Ue=240V (1~) / AC 1	10 A	-
Rated operating current Ie, Ue=240V (1~) / AC 15	4 A	-
Rated operating current Ie, Ue=240V DC / DC 13	0,1 A	-
Rated operating current Ie, Ue=30 V DC	-	400 mA
Permissible motor switching capacity 1 ~ 230 V	0,55 kW	-
Vibration resistance 10 up to 1000 Hz	4 g	4 g
Repeatability	< 3 % FS	< 3 % FS

* SPDT = Single Pole Double Throw

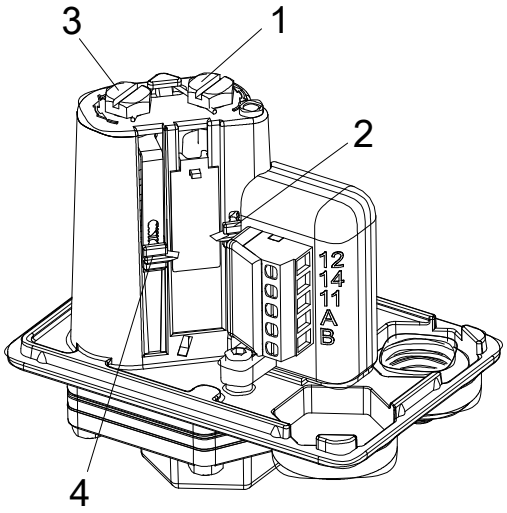


Fig. 2

Type Code: MDR-F a bcd efg h xxxixxx j

a = Pressure range (bar)

	Adjustable cut-out pressure	Adjustable cut-in pressure	Smallest pressure diff.		Flange Die-cast aluminum Max. operating pressure	Flange Die-cast aluminum Max. inspection pressure	Flange Plastic Max. operating pressure	Flange Plastic Max. inspection pressure
2	0,11...2	0,04...1,89	0,07	0,11	20	40	6	12
4	0,22...4	0.07...3,75	0,15	0,25	24	40	8	12
8	0,50....8	0,20...7,50	0,3	0,5	30	40	12	16
10	0,70...10	0,30...9,20	0,4	0,8	32	40	12	16
12	1...12	0,50...11,2	0,5	0,8	12 Stainless Steel	16		
12,5	1...12,5	0,40...11,5	0,6	1	36	48		
16	1...16	0,40...15	0,6	1	36	48	20	24
30	4...30	1...26,4	3	3,6	30 Stainless Steel	42		
32	2...32	0,80...30,0	1,2	2	52	64		
60	8...60	4...52	4	8	100	120		
120	16...120	8...104	8	16	200	240		
250	26...250	14...226	12	24	400	500		

b = Flange / Material
H = Silumin (Die-cast aluminum)
Y = Polyamide (Plastic)

c = Diaphragm	Permissible media temperature metal flange	Permissible media temperature plastic flange
A = Perbunan	+70°C	+50°C
V = Viton	+130°C	+50°C
H = High Pressure	+70°C	-
E = Stainless Steel	+200°C	-

Ambient temperature range	
metal flange	-20°C...+70°C
plastic flange	-20°C...+50°C

d = Flange type / Thread
A = G 3/8" - Female thread
B = G 1/2" - Female thread
C = G 1/4" - Female thread
D = 1/4 "NPT - Female thread

e = Terminals
A = Cage clamps, Industry — Cross sections up to 1,5 mm² without cable end sleeve
S = Screw terminals, Industry — Cross sections up to 2,5 mm² with cable end sleeve

f = Output contacts
A = Microswitch, 1 SPDT
B = Microswitch, 1 SPDT, gold-plated contact

g = Switching function
A = Automatic function - Is carried out when the pressure falls below the lower set switching point.
H = Manual reset max. - When pressure rises above the upper setting value, contact 11-12 opens and contact 11-14 closes and latches. When the pressure falls below the upper setting value, the contact can be released with the manual reset button.
L = Manual reset min. - After pressure rises above the lower setting value, the function is activated by pressing the manual reset button. When the pressure falls, contact 11-12 closes and opens contact 11-14 when reaching the lower cut-in value. Since the upper switching point (cut-out pressure) of the reset pressure switch must lie above the maximum cut-out pressure of the apparatus, the switching state remains until the manual reset button is pressed again.
G= Run-dry protection (typically, the switch is connected in series with the control circuit) - For pressure increase, the manual reset button must be held until the pressure lies beyond the monitoring point . When the pressure falls below the monitoring point, contact 11-12 closes and contact 11-14 opens. When the pressure automatically rises above 10% of the monitored pressure, contact 11-12 opens and contact 11-14 closes again automatically, otherwise, a restart using the manual reset button must be carried out again. **NOTICE:** Should there not be a rise in pressure when pressing the button, discontinue pressing the button as a fault in the system must be present.

h = Cable glands	Degree of Protection according to DIN 40 050 / IEC 529
A = Rubber grommet	IP 54
B = M20 Cable gland	IP 65
C = 2 x Rubber grommets	IP 54
D = 2 x M20 Cable glands	IP 65

xxxixxx = Factory settings pressure range (see Catalogue / Internet)

j = Approval / Customer settings

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