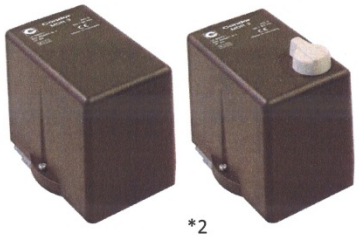
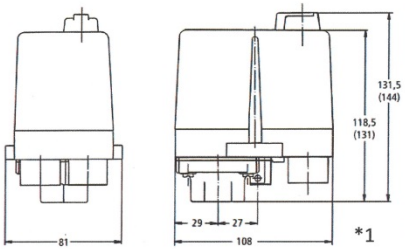
OPERATING INSTRUCTION **MDR-3**

Condor pressure switches were built according to the relative and approved regulations of the time period when they were developed and produced and are considered to be safe during operation. However, this device can present risks if it is used by personnel without specialist training, or is used inappropriately or in an unapproved manner. The **safety data sheet** and the local legal regulations are to be strictly observed. The pressure switches serve the surveillance and control of processes, operations of pumps and compressors in dependence on the prevailing pressure.



*2



*1

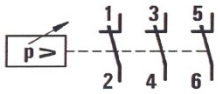
Technical Data (DIN EN 60947-4-1)	
Rated operational power (AC 3) Ue =230 V (3~) / 400 V (3~) / 690 V (3~)	5,5 kW / 7,5 kW / 7,5 kW
Rated frequency	50 Hz
Rated insulation voltage Ui	690 V
rated conditional short-circuit current (Iq)	50 kA
Rated impulse withstand voltage (Uimp)	6 kV
Pollution degree	3
Protection class	I
Mechanical durability operating cycles	> 1 x 10^6
Maximum mechanical switching frequency operating cycles / h	600
Electrical durability (AC 3) operating cycles	> 5 x 10^4
Rated operating mode (Class 120) operating cycles / h	120
Permissible medium temperature (air)	-5°C - +80°C
Degree of protection	IP 54
Contact material	Silver alloy

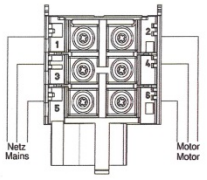
*1: If air out of the tank is released through the release valve after shutting off the switch, the non-return valve on the compressor is to be checked.

*2: The pressure values shown on the label are the factory settings set by Condor. These can be adjusted. See the pressure setting diagram.

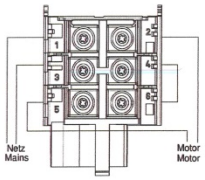
Conductor cross-section:
fine stranded cable 1x / 2x 4/2,5 mm²
rigid cable 1x / 2x 6/4 mm²

Terminal torque:
2 Nm

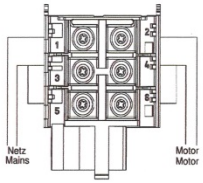




3-phase (3~)



1-phase (1~)

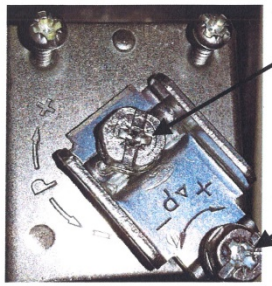


SK–R3/30/2 (1~)

The following material are available for flanges:
Die-cast aluminium
Diaphragm: NBR
!!! Watch out for any electrochemical corrosion when connected with other metals !!!

Tighten the cover screws to a torque of 1 Nm

<u>Caution:</u> Pressure setting is only possible when applying pressure



Cut-out pressure p higher:
Turn screw to the right
Cut-out pressure p lower:
Turn screw to the left

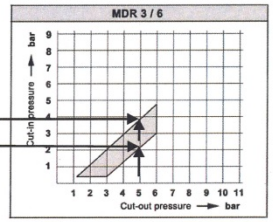
Cut-in pressure higher:
Pressure difference Δp lower
Turn screw to the left
Cut-in pressure lower:
Pressure difference Δp higher
Turn screw to the right

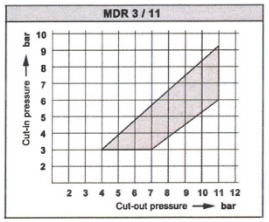
How-to videos: Adjust pressure values – You Tube
https://www.youtube.com/channel/UC10vgkmZlH3gxVIxZ5B5WDQ/videos?shelf_id=0&view=0&sort=dd

Pressure diagrams

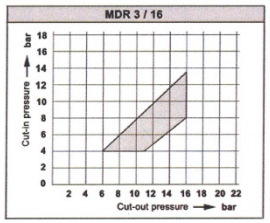
3.8 maximum cut-in

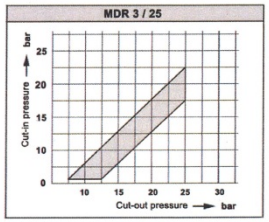
2.2 minimum cut-in

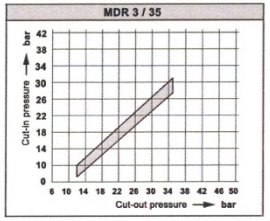


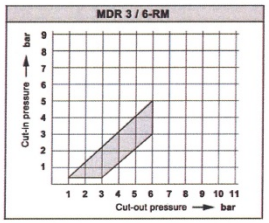


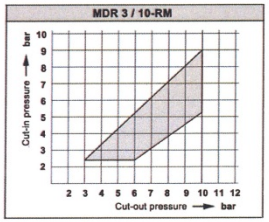
Example: Cut-out pressure p = 5 bar, cut-in pressure p_E between 2,2 and 3,8 bar possible, all values can be adjusted in the grey field.

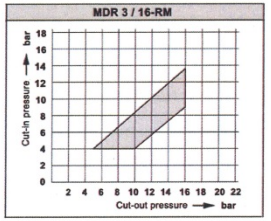












Protection against short-circuit for MDR-3 Iq = 50 kA

	Co-ordination- Type "1"		Co-ordination- Type "2"	
Overload relais	max. Fuse (slow) or		MVB (400 V)	
	400 V	690 V	400 V	690 V
Sk-R3/1.0	80 A	63 A	6 A	4 A
Sk-R3/1.6	80 A	63 A	10 A	6 A
Sk-R3/2.5	80 A	63 A	20 A	10 A
Sk-R3/4.0	80 A	63 A	35 A	20 A
Sk-R3 (H)/6.3...24	80 A	63 A	35 A	35 A
Sk-3 (H), SK-3S (H)	80 A	63 A	35 A	35 A

Use dial to adjust the overload relay SK-R3... to threated motor current as shown. For example 2,5 A. Dial without figures are used for SK-3S (H).

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OPERATING INSTRUCTION **MDR-3 UL**

These devices are pressure operated switches for direct control of motors connected across-the-line. They are provided with integral ambient compensated, nonreplaceable thermal trip features and are suitable for providing motor overload protection. All devices: A600 Pilot Duty; Enclosure Rating: Type 1

Horsepower Ratings and Short Circuit Protection acc. to UL 508										
Contact Block	110 - 120 V		220 - 240 V		440 - 480 V		550 - 600 V		Short Circuit Protection	
Type	1-ph	3-ph	1-ph	3-ph	1-ph	3-ph	1-ph	3-ph	max. V	max. Fuse
SK-3 and SK-3-S	2	-	5	7 1/2	7 1/2	-	10	-	600	100
SK-3H and SK-3H-S	2	-	3	7 1/2	7 1/2	15	10	20	600	100
SK-3-S/2 Pole	2	-	5	-	7 1/2	-	10	-	600	100
SK-3/2 Pole	2	-	5	-	7 1/2	-	10	-	600	100
SK-R3/1	-	-	-	-	-	1/2	-	½	600	15 A
SK-R3/1,6	-	-	1/10	1/3	-	3/4	-	1	600	15 A
SK-R3/2,5	-	-	1/6	1/2	1/2	1	1/2	1 1/2	600	15 A
SK-R3/4	1/8	1/2	1/3	1	1	2	1 1/2	3	600	15 A
SK-R3/6,3	1/4	3/4	1/2	1 1/2	2	3	2	5	600	25 A
SK-R3/10	1/2	1	1 1/2	3	3	5	3	7 1/2	600	40 A
SK-R3/16	1	2	2	5	5	10	7 1/2	10	600	60 A
SK-R3/20	1 1/2	3	3	-	-	-	10	-	600	80 A
SK-R3/24	2	-	-	7 1/2	7 1/2	-	10	-	600	100 A
SK-R3H/16	1	2	2	5	5	10	7 1/2	10	600	60 A
SK-R3H/20	1 1/2	3	3	-	-	-	10	15	600	80 A
SK-R3H/24	2	-	-	7 1/2	7 1/2	15	10	20	600	100 A
SK-R3/30/2	2	-	5	-	-	-	-	-	240	110 A

1. Suitable for use on a circuit capable of delivering not more than 5000 rms symmetrical amperes, 600 V maximum (240 V maximum 1-ph for SK-R3/30/2) when protected by noontime delay fuses as noted in the table above.
2. Suitable for group fusing of 5 kA rms symmetrical amperes 600 V, 3-ph maximum (SK-R3/30/2 240V, 1-ph max.) when protected by time delay fuses rated max. 100A.
3. Use 75°C copper wire AWG 10 – AWG 14
4. AC Motor Load
5. Break all lines
6. Trip current is 125 % of dial setting

Max. operating pressure	
MDR 3/6	90 psi / 600 kPa
MDR 3/16	230 psi / 1600 kPa

Max. operating pressure	
MDR 3/11	160 psi / 1100 kPa
MDR 3/25	360 psi / 2500 kPa

Max. operating pressure	
MDR 3/35	500 psi / 3500 kPa

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