

Pressure switches-information

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Pressure switch setting references

Pressure switches

Pressure switches are typically used to maintain pressure in a tank (or similar closed system) between a pre-set upper and lower pressure value. In a "standard action" or Normally Closed (NC) pressure switch application, the upper pressure value at which a pressure switch breaks an electric circuit is called the cut-out pressure. The lower pressure value by which the pressure switch makes an electric circuit is called the cut-in pressure. Both cut-out and cut-in pressures within a given range can be adjusted on the pressure switch. In a "reverse action" or Normally Open (NO) pressure switch application, the upper setting point makes an electric circuit and the lower setting point breaks the electric circuit. The pressure switch related difference between cut-in and cut-out pressures is called "hysteresis". Every pressure switch allows the natural differential or hysteresis to be increased by a differential adjustment screw. An easy two-point control with a pressure switch is thus feasible.

Control pressure switches

Control pressure switches represent a special group within pressure switches. These devices are especially suitable for monitoring and controlling purposes. Depending on the model, SPDT's with or without gold flashed contacts, for example, for PLC applications or isolated NO and NC contacts are available. Depending on the pressure switch type, loads with a max. power consumption of 1.1 kW can be started directly.

Unloader valves- (EV) and delayed unloader valves (AEV)

Air compressor applications particularly reciprocating compressors, often use what is called an unloader valve. The function of the unloader valve is to remove the pressure from the piston of a compressor so that when it re-starts it can move freely and prevent the motor from stalling. The delayed unloader valve, on the other hand, additionally assists the motor when starting in that it remains open until a certain pressure (approx. 2 bars) is reached, thus giving the motor additional time to reach its full speed and torque.

The Installation instructions for our unloader valves, containing all the technical data and variations, are available for download on our homepage.

Pressure switch settings

Please make sure all power is disconnected before attempting to adjust pressure settings! When calibrating the pressure switch it will be necessary to apply pressure to the device. Use a calibrated pressure gage to adjust the switches set points.

When the main pressure spring is adjusted, the cut-in and cut-out value of all pressure switches change proportionally. In other words, the differential pressure remains the same. If the range between cut-in and cut-out value is to be increased, the differential pressure screw must be used.

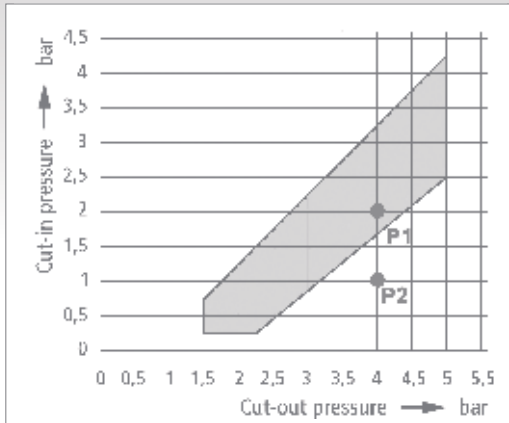
When carrying out a differential pressure adjustment on the pressure switch types MDR 1, MDR 11, MDR 2 and MDR 21 the cut-out pressure value changes and the cut-in pressure value remains constant. For all other pressure switch types the cut-in pressure value changes and the cut-out pressure value remains constant.

In the pressure diagram, each pair of cut-in and cut-values are represented by a point. If the point is within the shaded area of the diagram, then these pair of values can be set on the pressure switch. If the point is outside the shaded area, then these pair of values cannot be set on the pressure switch.

On **YouTube** you will find instructions for pressure adjustment as well as other information videos - QR-Code.



Example of a pressure setting using the MDR 5 pressure diagram



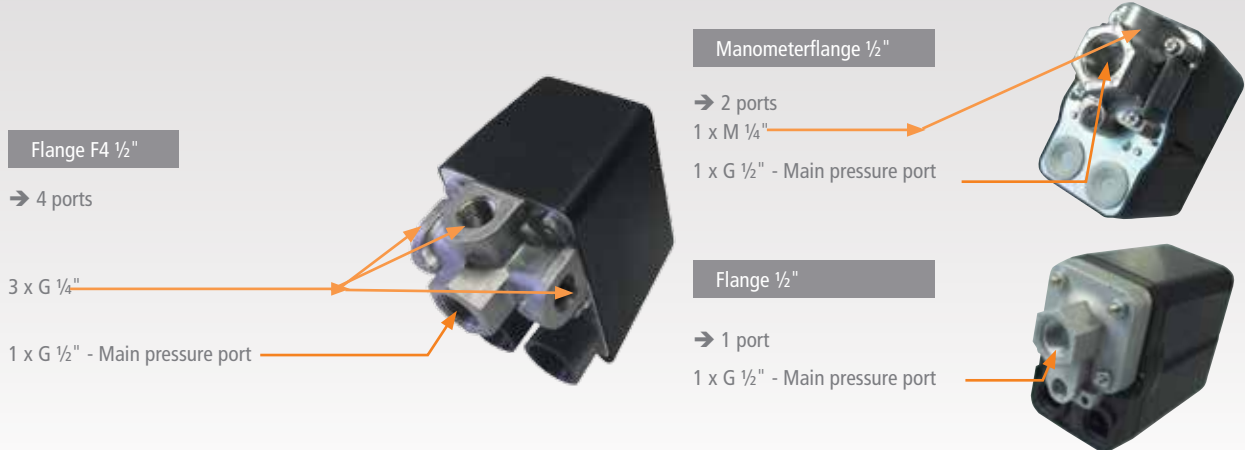
The coordinates of a cut-out pressure of 4 bar and a cut-in pressure of 2 bar intersect at a point P1 which lies within the shaded pressure range (pressure diagram of the respective pressure switch).

These two values can be adjusted on the pressure switch MDR 5/5. The coordinates of a cut-out pressure of 4 bar and a cut-in pressure of 1 bar intersect at a point P2 which lies outside the shaded pressure range of the diagram. Accordingly, this pair of pressure values cannot be adjusted on the pressure switch MDR 5/5.

Flange versions

Many pressure switches are available with different flanges. The (first) dimension refers always to the main pressure port. All other ports are always 1/4" ports.

The name F4 1/2" means that there is a flange with 4 ports, in which the main pressure port is 1/2" female and the remaining 3 ports are 1/4" female. The example illustrates this fact:



Repeatability

The permissible tolerance of the switching values (repeatability) is < 3% less than the upper range value.

Service

Our service offers you the possibility of carrying out pressure settings depending on your requirements.

Of course, we can also mount any accessories you may need on demand, profiting at the same time from a complete warranty.



High performance pressure switches



MDR 1



MDR 11



MDR 2



MDR 21

High performance pressure switches for AC currents

Industries



MDR 1	AC current; switching capacity 4.0 kW Max. cut-out pressure 11 bar <i>Now with an operator hourmeter</i>	NEW!	P. 25	Compressors, pumps
MDR 11	AC current; switching capacity 4.0 kW Max. cut-out pressure 11 bar / 160 psi UL / CSA-approval optional		P. 28	Compressors, pumps
MDR 2	current; switching capacity 2.2 kW Max. cut-out pressure 12 bar <i>Now with an operator hourmeter</i>	NEW!	P. 31	Compressors, pumps
MDR 21	AC current; switching capacity 4.0 kW Max. cut-out pressure 12 bar / 175 psi UL / CSA-approval optional		P. 34	Compressors, pumps



MDR 3



MDR 4



MDR 5

High performance pressure switches for 3-phase currents

Industries



MDR 3	3-phase; switching capacity 7.5 (11) kW available with overload relays Max. cut-out pressure 35 bar UL / CSA-approval optional <i>Now with star/delta version</i>	NEW!	P. 37	Compressors, pumps
MDR 4	3-phase; switching capacity 4.0 / 5.5 kW Max. cut-out pressure 25 bar		P. 44	Compressors, pumps
MDR 5	3-phase; switching capacity 5.5 kW available with overload relays Max. cut-out pressure 45 bar	NEW!	P. 50	Compressors, pumps



MDR-F...H-S



MDR-P



MDR-K



MDR 43



MDR 53

Control pressure switches

Industries



MDR-F

1 SPDT / 2 DPDT
Normally Closed / Normally Open (NO/NC)
Pressure range up to 250 bar
ATEX / GL / VdS / UL approvals -optional
Scale for simple adjustments
Wide range of variations
Acc. to EN 60947

P. 57

Air pressure technology, water pressure technology, construction machinery, water-based extinguishing systems, fire protection units, oil pressure monitoring, mining, chemical, industry, railway vehicles, offshore, shipping, vacuum technology, calibration technology, heating systems

MDR-P

1 SPDT
Pressure range up to 16 bar
Compact pressure switch with coupling DIN EN 175301
Fixed pressure setting, **OEM applications**

P. 72

For the series production, perfect for industrial customers!

Air pressure technology, water pressure technology, construction machinery, breweries, heating systems, calibration technology

MDR-K

2 DPDT
Pressure range up to 11 bar
Bayonet coupling ISO 15170-1
OEM applications

P. 75

For the series production, perfect for industrial customers!

Air pressure technology, water pressure technology

MDR 43

1 N.O. + 1 N.C.
Pressure range up to 16 bar

P. 78

Air pressure technology, water pressure technology

MDR 53

1 SPDT
Maximum shut-off pressure setting 16 bar
CSA approval optional
Pressure adjustment without tools

P. 80

Air pressure technology, water pressure technology

High performance pressure switches for AC currents

Overview



Type designation	MDR 1	MDR 1	MDR 11	MDR 11	MDR 2	MDR 21
Media *1	air	water	air	water	air / water	air / water
No. of poles	2 pole	2 pole	2 pole	2 pole	2 pole	2 pole
Contact function	2 N.C.	2 N.C.	2 N.C.	2 N.C.	2 N.C.	2 N.C.
Voltage	230 V	230 V	230 V	230 V	230 V	230 V
Motor switching capacity	4,0 kW	4,0 kW	4,0 kW	4,0 kW	2,2 kW	2,2 kW
Rated current	20 A	20 A	20 A	20 A	16 A	24 A
Flange types *2	G 1/4" F4 1/4" F4 3/8" F4 1/4" NPT Innerthread (Die-cast aluminium)	G 1/4" steel G 1/4" steel Ü	G 1/4" F4 1/4" F4 3/8" F4 1/4" NPT Innerthread (Die-cast aluminium)	G 1/4" steel G 1/4" steel Ü	G 1/4" F4 1/4" F4 3/8" F4 1/2" Innerthread (Die-cast aluminium)	G 1/4" F4 1/4" F4 3/8" F4 1/2" NPT
Pressure ranges (bar) Cut-out pressure from - to	1 2,5 - 11	1 2,5 - 6	1 2,5 - 11	1 2,5 - 6	2 1,5 - 12	2 1,5 - 12
Degree of Protection	IP 44	IP 44	IP 41/44	IP 41/44	IP 44	IP 41/44
Permissible media temperature: Air	-5...80 °C		-5...80 °C		-5...80 °C	-5...80 °C
Permissible media temperature: Water		70 °C		70 °C		
Max. cross-section (fine stranded)	2,5 mm ²	2,5 mm ²	2,5 mm ²	2,5 mm ² *	2,5 mm ²	2,5 mm ²
Standard Cable glands	with PG 11 Z/ZK	with PG 11 Z/ZK	with PG 13,5 Z/ZK	with PG 13,5 Z/ZK	with 2 x WN *4 (Accessory PG11 – 13,5)	with 2 x WN *4 (Accessory PG11 – 13,5)
Standard On / Off lever	with/without EA	with/without EA	with EA	with EA	with/without EA	with/without EA
Standard Differential setting	with differential setting	with differential setting	with differential setting	with differential setting	with differential setting	with differential setting
Standard Delayed (AEV) Unloader valve (EV)	with AEV (Accessory EV)	without	with AEV (Accessory EV)	without	without (Accessory EV, AEV)	without (Accessory EV, AEV)
Type designation	KEMA	KEMA	CSA / UL / KEMA	CSA / UL / KEMA	KEMA	CSA / UL / KEMA

* Table refers to catalogue product

*1 Preferred / most used media, further media, see table on page 22 or on demand

*2 e.g. four-way flange F4 3/8" (main connection G3/8", additionally 3 x G 1/4" ports)

*3 Ü = switch need not be turned, use swivel nut for mounting

*4 WN = grommet

Overview



Type designation	MDR 3	MDR 4	MDR 4 SD	MDR 4 SU	MDR 5
Media ^{*1}	Air and water	Air and water	Air and water	Air and water	Air and water
No. of poles	3 pole	3 pole	3 pole	3 pole	3 pole
Contact function	3 NC	3 NC	3 NC	3 NO	3 NC
Voltage ^{*3}	400 V	400 V	400 V	400 V	400 V
Motor switching capacity	7,5 kW (11 kW ^{*6})	5,5 kW	5,5 kW	4 kW	5,5 kW
Rated current	24 A	20 A	20 A	16 A	16 A
Flange types ^{*2}	G 1/2" G 1/4" F4 1/2" F4 3/8" F4 1/4" F4 1/4" NPT Innerthread - Die-cast aluminium	G 1/2" G 1/4" G 1/2" + G 1/4" F4 1/2" F4 3/8" F4 1/4" Innerthread - Die-cast aluminium	G 1/2" G 1/4" Innerthread - Die-cast aluminium	G 1/2" Innerthread - Die-cast aluminium	G 1/2" G 1/2" + G 1/4" Innerthread - Die-cast aluminium - Stainless steel - brass
Pressure ranges (bar)	5	3	2	3	5
Cut-out pressure from - to	1,3 - 35	1,5 - 16	1,5 - 11	1,5 - 16	1,5 - 45
Degree of protection	IP 54	IP 44	IP 44	IP 44	IP 54 / IP 65 ^{*5}
Permissible media temperature: Air	-5...80 °C	-5...80 °C	-5...80 °C	-5...80 °C	-5...80 °C
Permissible media temperature: Water	80 °C	80 °C	80 °C	80 °C	80 °C
max. cross-section (fine stranded)	4,0 mm ²	2,5 mm ²	2,5 mm ²	2,5 mm ²	2,5 mm ²
Standard Cable glands	with 2 x WN ^{*4} (Accessory PG11 - 16)	with 2 x WN ^{*4} (Accessory PG11 - 13,5)	with 2 x WN ^{*4} (Accessory PG11 - 13,5)	with 2 x WN ^{*4} (Accessory PG11 - 13,5)	without (Accessory M 20)
Standard On / Off lever	with/without EA	with/without EA	without EA	without EA	with/without EA
Standard Differential setting	with differential setting with	with differential setting	with differential setting	with differential setting	with differential setting
Type designation	CSA / UL / KEMA	KEMA			KEMA
Standard delayed (AEV) – unloader valve (EV)	without (Accessory EV, AEV)	without (Accessory EV, AEV)	without (Accessory EV, AEV)	without (Accessory EV, AEV)	without (Accessory EV, AEV)

* Table refers to catalogue product

^{*1} Preferred / most used media, further media, see table on page 22 or on demand

^{*2} e.g. four-way flange F4 3/8" (main connection G3/8", additionally 3 x G 1/4" ports)

^{*3} Higher voltages on demand

^{*4} WN = grommets

^{*5} Special execution without on / off switch

^{*6} 11 kW on request

Overview



Type designation	MDR F..H Die-cast aluminum	MDR-F..Y Plastic	MDR-F..HE Stainless steel	MDR-F..HH High pressure	MDR-F.. Reset function
Contact function	1 SPDT*1	1 SPDT*1	1 SPDT*1	1 SPDT*1	1 SPDT*1
Voltage	230 V	230 V	230 V	230 V	230 V
Motor switching capacity	0,55 kW	0,55 kW	0,55 kW	0,55 kW	0,55 kW
Current AC 15	4 A	4 A	4 A	4 A	4 A
Flange types Standard (bold)	G 3/8" G 1/2" G 1/4" 1/4" NPT Inner thread (Die-cast aluminum)	G 3/8" Inner thread (plastic)	G 1/4" Inner thread (Stainless steel)	G 3/8" Inner thread (Stainless steel + throttle)	Flanges on demand
Pressure ranges (bar) Cut-out pressure from - to	6 0,11 - 32	5 0,11 - 16	2 1 - 30	3 8 - 250	Pressure ranges on demand
Degree of Protection	IP 54 / IP 65	IP 54 / IP 65	IP 54 / IP 65	IP 54 / IP 65	IP 54 / IP 65
Cable glands	WN / M 20	WN / M 20	WN / M 20	WN / M 20	WN / M 20
Permissible media temperature *2	- 25 .. + 70 °C	- 20 .. + 50 °C	200 °C	70 °C	according to selection
Type designation	VdS to 16 bar UL/GL Atex	VdS to 10 bar GL to 12,5 bar Atex	- - Atex	UL / GL Atex	- GL on request Atex on request

*1 = SPDT with gold-flashed contacts / 2 SPDT / NC + NO for special applications - on request

*2 = Other diaphragms and further temperature ranges on request

Connection system



Industrial screw version
(standard)



Industrial clamp version
(upon request)



Connector according to
ISO 15170-1 (DIN 72585-1)
-on request



Connector according to
DIN EN 175301 (DIN 43650)
-on request



Connector according to
M 12 x 1 DIN EN 61076
-on request

Overview



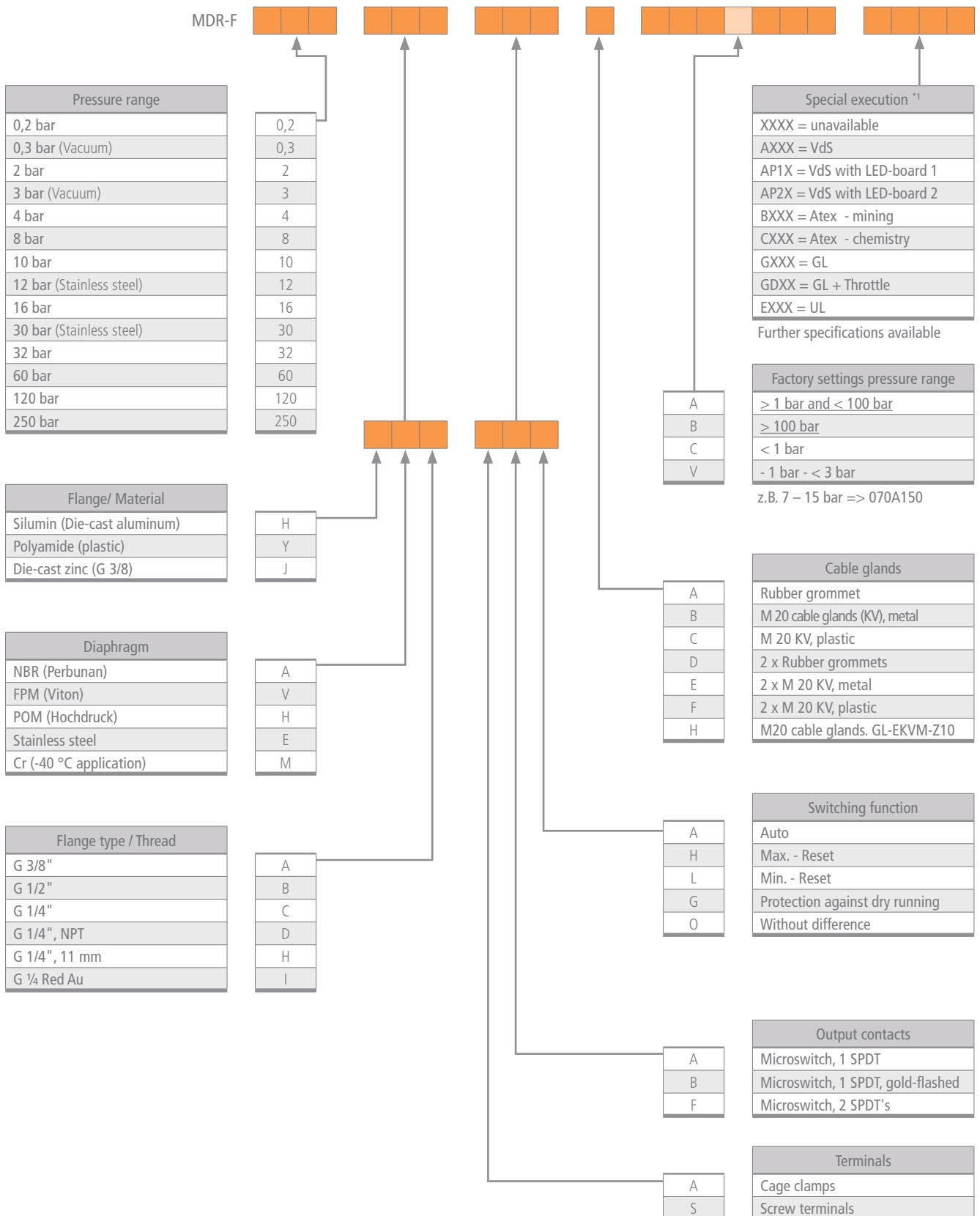
Type designation	MDR – F Vacuum	MDR - P	MDR - K	MDR 43	MDR 53
Contact function	1 SPDT ^{*1} / 2 SPDT's	1 SPDT ^{*1}	2 SPDT's	1 N:C: 1 N.O.	1 SPDT
Voltage	230 V	230 V	230 V	230 V	230 V
Motor switching capacity	0,55 kW	0,55 kW	0,55 kW	1,1 kW	0,55 kW
Current AC 15	4 A	4 A	4 A	8 A	4 A
Flange types Standard (bold)	G 1/4" Inner thread	G 1/4" Outer thread	G 1/4" Outer thread	G 1/2" G 1/4" Inner thread (Die-cast aluminium)	G 1/2" Inner thread (Die-cast aluminium)
Pressure ranges Cut-out pressure from ... to	2 - 0,7 - 3 bar	optional 0,3 - 16 bar	3 0,5 - 11 bar	4 0,5 - 16 bar	4 0,3 - 16 bar
Degree of Protection	IP 54 / IP 65	IP 65	IP 67	IP 44	IP 54
Cable glands	WN / M 20	Coupling	Coupling	optional	optional
Permissible media temperature ^{*2}	- 25 .. + 70 °C	- 25 .. + 70 °C	- 40 .. + 70 °C	- 30 .. + 80 °C	- 30 .. + 80 °C
Type designation	- - Atex				- - KEMA

^{*1} = SPDT with gold-flashed contacts for special applications on request

^{*2} = further temperature ranges on request

Type code for control pressure switch MDR-F

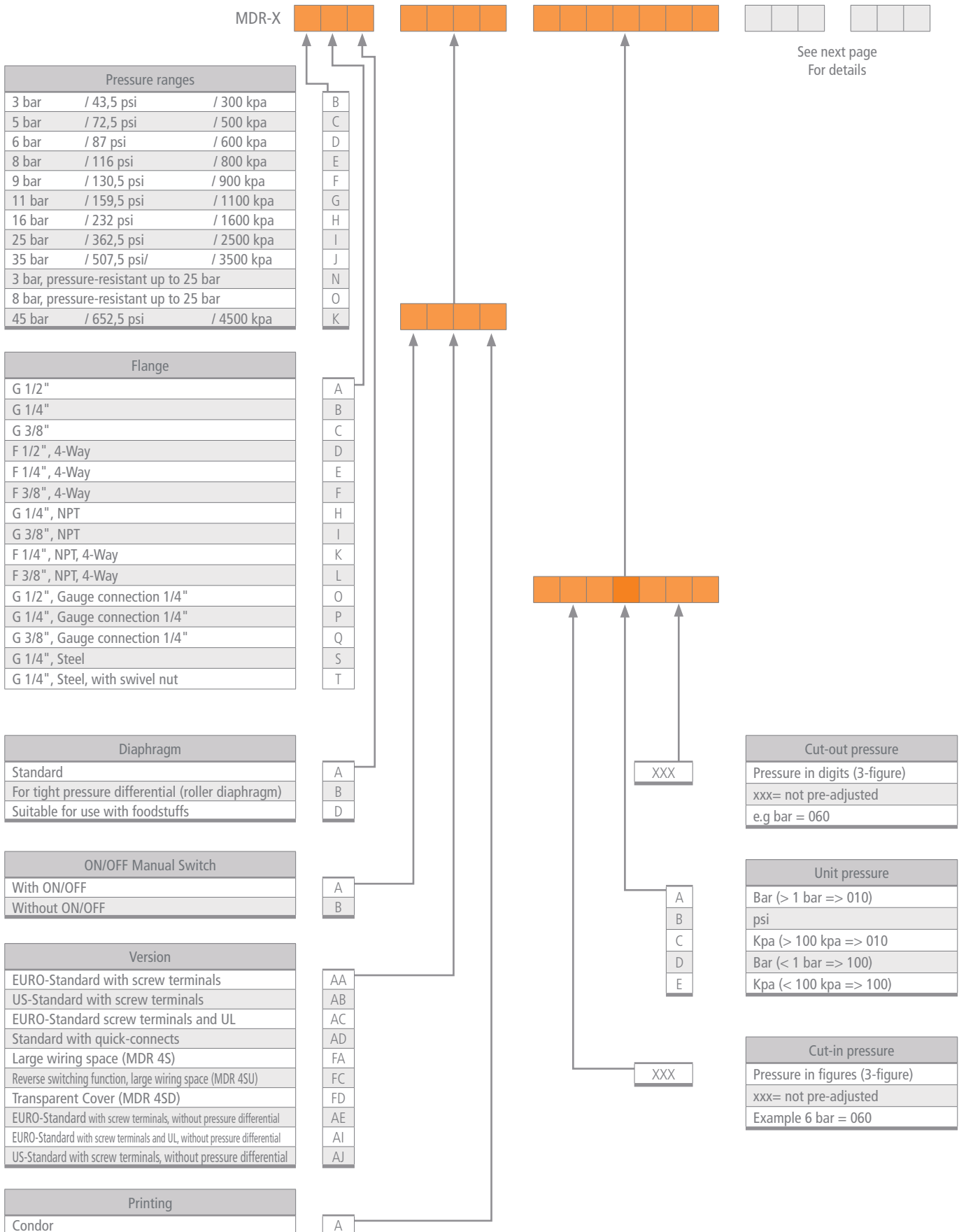
For decoding pressure switch types:
Standard settings, Accessories and Special Execution





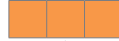
Type code

For high performance pressure switches MDR 1 up to MDR 5 and control pressure switches MDR 43 and MDR 53 For decoding of pressure switch types: Standard settings



For high performance pressure switches MDR 1 up to MDR 5 and control pressure switches MDR 43 und MDR 53 For decoding of pressure switch types: Accessories

MDR-X



Valves
Without unloader valves
Unloader valves EV, screw fitting 6 mm
Unloader valves EV i, screw fitting 1/4"
Unloader valves EV S, quick-connect 6 mm
Unloader valves EV W, 90°, screw fitting 6 mm
Unloader valves EV Wi, 90°, screw fitting 1/4"
Unloader valves EV WS, 90°, quick-connect. 6 mm
Unloader valves EV M5, screw fitting 6 mm, port fitting M5
Unloader valves EVi M5, screw fitting 1/4", port fitting M5
Unloader valves EV WSi, 90°, quick-connect 1/4"
Unloader valves EV Ei, screw fitting 1/4"
Unloader valves EV H, screw fitting 6 mm
Unloader valves EV L, screw fitting 6 mm, port fitting 6 mm
Unloader valves EV Li, screw fitting 1/4", port fitting 6 mm
Unloader valves AEV, screw fitting 6 mm
Unloader valves AEV i, screw fitting 1/4"
Unloader valves AEV S, quick connect 6 mm
Unloader valves AEV W, 90°, screw fitting 6 mm
Unloader valves AEV Wi, 90°, screw fitting 1/4"
Unloader valves AEV WS90°, quick-connect 6 mm
Unloader valves AEV WSi, 90°, quick-connect 1/4"
Unloader valves EV E, screw fitting 6 mm for MDR 5, 6
Unloader valves EV 5, screw fitting 6 mm, port fitting 6 mm
Unloader valves EV Si, quick-connect 6 mm

Cable glands
Without cable glands
Cable grommets / blanking plug
PG 11 conduit
PG 11 complete
PG 11 Z with strain relief
PG 11 ZK with strain relief and cable support
PG 13.5 conduit
PG 13.5 complete
PG 13.5 Z with strain relief
PG 13.5 ZK with strain relief and cable support
PG 16 conduit
PG 16 complete
PG 16 Z with strain relief
PG 16 ZK with strain relief and cable support
PG 16/13,5 ZK with strain relief and cable support
PG 16/13,5 Z with strain relief
PG 16/11 complete

X
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D D
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J J
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M M
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Special Accessories
Without special accessories
ST Mini Barb EV/AEV connector for plastic tubing
Terminal cover, VBG 4 MDR 2
Additional cable glands PG 9V MDR 3
Hourmeter kit 400 V / 50 Hz
Hourmeter kit 230 V / 50 Hz
Hourmeter kit / battery supplied
auxiliary switch
scale

Releases
Without release
Undervoltage release 230 V / 50 Hz
Undervoltage release 400 V / 50 Hz
Undervoltage release 480 V / 60 Hz
Undervoltage release 240 V / 60 Hz
Shunt release 24 V / 50 Hz
Shunt release 110 V / 50 Hz
Shunt release 230 V / 50 Hz
Undervoltage release 24 V / 50 Hz
Shunt release 400 V / 50 Hz
Undervoltage release 400 V / 50 Hz + phase monitoring board

Releases (Note: use off small/capital initial letters)
Without overload relay
Without contact block
Overload relay 0.63 – 1.0 A
Overload relay 1.0 – 1.6 A
Overload relay 1.6 – 2.5 A
Overload relay 2.5 – 4.0 A
Overload relay 4.0 – 6.3 A
Overload relay 6.3 – 10.0 A
Overload relay 10.0 – 16.0 A
Overload relay 16.0 – 20.0 A
Overload relay 20.0 – 24.0 A
Overload relay 20.0 – 30.0 A, 2 pole
Overload relay 10,0 – 16,0 A, for higher switching capacity
Overload relay 16,0 – 20,0 A, for higher switching capacity
Overload relay 20,0 – 24,0 A, for higher switching capacity
Overload relay 0,86 - 1,5 A
Overload relay 1,5 - 2,45 A
Overload relay 2,4 - 4,2 A
Overload relay 4,0 - 7,0 A
Overload relay 6,1 - 10,3 A
Overload relay 9,0 - 14,0 A
Overload relay 11,0 - 18,0 A
Overload relay 18,0 - 25,0 A, 2 pole

Overview of media resistance

Important NOTE

The combination of pressure connection and pressure transducer material is of fundamental importance in determining the media resistance. The following table shows the resistances of various media.

The data of a.m. table does not only result from laboratory tests but also from long-lasting experiences. These are reference points. As the chemical effect of a given media may be affected by additives, temperature differences and mixtures

amongst themselves, we recommend to carry out a media resistance test before using the product. Please pay special attention to the electrochemical corrosive effect in combination with other metals and existing and corrosive medium. The use must be in accordance with the appropriate standards.

The aforementioned details do not entitle for any legal claim. We definitely do neither take over any warranty nor liability.

Medium *	Diaphragm material / Membran								Pressure connection					
	CR	Stain- less steel	EPDM	FKM	NBR	NBR/ SBR	POM	TPE	Aluminium die-cast	Stainless steel	Stainless steel / brass	Brass	PA 66 +GF	Steel, galvanised
Aceton CH_3COCH_3 _{3Aceton}		1	1	X					1	1	1	1	1	
Acetylene $\text{HC} = \text{CH}$ Acetylen		1	1				1	1	1	1	1	1	1	1
Ammonia, liquid 100%		1		X						1			1	
Ammonia, 25 % (Salmiakgeist)	1	1							1	1			1	
Petrol (Benzin)	1	1	X	2	2		2	2	1	1	1	1	1	1
Benzene (Benzol)		1	X	2					1	1	1	1	1	
Butane (Butan) C_4H_{10} _{10Butan}	1	1	X	1	1		2	1	1	1	1	1	1	1
Butyl acetate (Butylacetat) $\text{CH}_3\text{COOC}_4\text{H}_9$ _{9Butylacetat}		1	X	X			2	2	2	1			1	
Butyl alcohol (Butylalkohol) $\text{CH}_3\text{-CH}_2\text{-CH}_2\text{-CH}_2\text{-OH}$ Butylalkohol	1	1		2	2		2		1	1	1	1	1	
Chlorine (Chlor) Cl_2 Chlor		1	X	2						1				
Diesel		1	X	1	1	2	1		1	1			1	
Dimethylbenzene (Dimethylben- zol) $\text{C}_6\text{H}_4(\text{CH}_3)_2$ _{2Dimethylbenzol}		1	X	2					1	1				
Natural gas (Erdgas)	1	1	X	1	2		1		2	1			1	
Petroleum (Erdöl)	1	1	X	1			1		1	1			1	
Vinegar (Essig) 25 %		1	1				2		2	1				
Ethylene glycol (Ethylenglycol) $\text{CH}_2\text{OH-CH}_2\text{OH}$ _{Ethylenglycol}	1	1	1	1	1		1	1	2	1				
Ethyl acetate (Ethylacetat) $\text{CH}_3\text{COOC}_2\text{H}_5$ _{5Ethylacetat}		1	X				1	2	1	1				
Glycerol $\text{CH}_2\text{OH-CHOH-CH}_2\text{OH}$ _{Glycerol}	1	1		1	1		1							
Fuel oil (Heizöl)		1	X	1	1		1		1	1			1	
Urine (Harn /Urin)	1	1	1	1	1		1		2	1			1	
Carbone dioxide (Kohlendioxid) CO_2 _{2Kohlendioxid}	1	1	2	1	1		1	1		1			1	
Carbonic acid (Kohlensäure) H_2CO_3 _{3Kohlensäure}	1	1	2	1	1		1			1			2	
Cooling liquid (Kühlflüssigkeit)		1		1		2				1				
Air (Luft)	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Methyl chloride (Methylchlorid) CH_3Cl		1	X				1			1				
Mineral oil (Mineralöle)	2	1	X	1	1	2	1	1	1	1			1	1
Ozone (Ozon)		1	1	1					2	1				

1 = resistant, 2 = limited resistance, x = not resistant, empty field = not tested

*) Made of corrosion-chemical point of view please note when installing the pressure switch (G-ALSi 12) on pipes, fittings or fittings material selection. The installation must be in accordance with the relevant standards - Flange.

Overview of media resistance

Medium*	Diaphragm material / Membran								Pressure connection					
	CR	Stain- less steel	EPDM	FKM	NBR	NBR/ SBR	POM	TPE	Aluminium die-cast	Stainless steel	Stainless steel / brass	Brass	PA 66 +GF	Steel, galvanised
Perchloroethylen $CCl_2=CCl_2$ <small>2Perchloroethylen</small> $CCl_2=CCl_2$		1	X							1				
Vegetable oil (Pflanzenöl)		1	X	1	1		2		1	1				
Phenolic acid (Phenolsäure) $C_6H_5(OH)$ <small>Phenolsäure</small> $C_6H_5(OH)$		1								1				
Propane (Propan) C_3H_8	1	1	X	1	1		1		1	1	1	1	1	
Oxygen (Sauerstoff) O		1	1	1			1		1	1	1	1	1	
Schielding gases (Schutzgase)		1								1				
Sulfur dioxide (Schwefeldioxid) SO_2		1	X	2						1				
Silicone oil (Silikonöl)	1	1	1	1	1		1		1	1	1	1	1	
Nitrogen (Stickstoff) N_2	1	1	1	1	1		1		1	1	1	1	1	
Synthetic oil (Synthetische Öle)		1		1	1	2	1		1	1			1	
Toulouene (Toluen /Phenylmet- han) $C_6H_5CH_3$		1	X						1	1	1	1	1	
Trichlorethene $CHCl=CCl_2$		1	X							1				
Water (Wasser) H_2O	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Water Distilled, aired (Wasser Destilliert, entlüftet)	1	1	1	1	1		1	1	2	1			1	1
Hydrogem (Wasserstoff) H_2	1	1	1	1	1		1	1	1	1	1	1	2	
Water - Sea water (Wasser Meerwasser)	1	2	1	1	1		1	1	2	2			1	
Water - vapor (Wasserdampf)		1		1					1	1	2	2		

Pressure switches	Pressure connection	Diaphragm material / Membran							
	material	CR	Stain- less steel	EPDM	FKM	NBR	NBR / SBR	POM	TPE
MDR 1	Aluminium die-cast								X
MDR 11	Aluminium die-cast								X
MDR 1	Steel, galvanised								X
MDR 11	Steel, galvanised								X
MDR 2	Aluminium die-cast						X		
MDR 21	Aluminium die-cast						X		
MDR 3	Aluminium die-cast	X					X	X	
MDR 4	Aluminium die-cast						X		
MDR 43	Aluminium die-cast	X							
MDR 5	Aluminium die-cast			X			X		
MDR 5	Stainless steel / PA 66 + GF			X			X		
MDR 5	Brass / PA 66 + GF						X		
MDR 53	Aluminium die-cast	X							
MDR P	Brass	X			X	X			
MDR K	Aluminium die-cast					X			X
MDR F	Aluminium die-cast	X			X	X			
MDR F	PA 66 + GF	X			X	X			
MDR F (>32 bar)	Stainless steel / Brass							X	
MDR F	Stainless steel		X						X

1 = resistant, 2 = limited resistance, x = not resistant, empty field = not tested

*) Made of corrosion-chemical point of view please note when installing the pressure switch (G-AlSi 12) on pipes, fittings or fittings material selection. The installation must be in accordance with the relevant standards - Flange.