



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**

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**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**

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**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

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Air pressure technology, water pressure technology

### MDR 53

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

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Air pressure technology, water pressure technology

## Control pressure switch MDR - F



- 1 SPDT / 2 DPDT - Normally Open / Normally Closed (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

### Applications:

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

Specific applied approval



MDR – F ..H-S

### Application

The Condor pressure switch series MDR-F can be **universally used** and are suitable for:

- **Monitoring and controlling the pressure of liquids or gaseous media** in pipelines, tanks, vats, pressure vessels and installations.
- **Tasks in process control**, cooling, pneumatics and hydraulics.
- **Pressure monitoring of cooling circuits and lubrication systems** on various types of machinery.
- **Automatic switching of pump and compressor motors** for supplying water to dwellings, booster pumps, fire-fighting equipment and on compressed air systems.

### Mode of operation:

The pressure of the monitored medium operates against a diaphragm, bellows or a plunger all of which have different media resistance. Switching operation is carried out with the use of a micro switch ensuring flutter-free switching

When the pressure reaches the upper switching point, the micro switch contacts change position. In normal cases e.g. a connected motor is switched off (up to 550 watts direct or using additional switches like a contactor etc.). Should the pressure fall below the lower switch point, then the micro switch contact returns to its default position and the motor is switched on.

The upper and lower switching points can be set independently using a screw driver. Both switching points can be read off the scale.

Pressure connection, pressure sensing element and electrical connections are all fitted on to a die-cast aluminum base. The sealable transparent, polycarbonate cover protects the scales and switch against environmental effects.

### Standard scope of delivery:

- rubber grommets
- MDR-F.H Die-cast aluminum flange
- MDR-F.Y Plastic flange (in particular for use in water technology applications)
- **With industrial screw connection**  
(Industrial clamp version available upon request)

Besides the standard types with Perbunan diaphragms, the following new types are available:

- **Pressure switch with stainless steel pressure sensing element** e.g. for liquid fuels, oils up to 200°C etc.
- **High pressure switch with plastic plunger press. sensing element** with stainless steel connection up to 250 bar
- **Pressure switch with manual reset function and die-cast aluminum flange** for oil, water and air etc.
- **Pressure switch with Viton diaphragm and die-cast aluminum flange** for increased media resistance
- **Pressure switch with VdS approval** for fire-extinguishing systems / fire protection-installations
- **Pressure switch with GL approval** for ship building and applications intended for use at sea
- **Pressure switch with Atex approval** in mining and chemicals plants that are at risk of explosion
- **Pressure switch with UL approval** for the North American market
- Vacuum
- DPDT

The MDR-F pressure switch program is extended continuously. A current status of the existing designs and approvals is available on our homepage.

## MDR-F standard version with die-cast aluminium flange



MDR-F standard version with die-cast aluminium flange and Perbunan diaphragm - for oil, water and air etc. . Pressure switch with industrial cage clamp version.  
 Connection: H G 3/8" inner thread \*\*  
 - suffix "G" for gold-flashed contacts

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2H-S	MDR-F 2 HAA SAA A 005A015	0,04 ... 1,89	0,07 0,11	0,11 ... 2	460	253501
MDR-F 2HG-S	MDR-F 2 HAA SBA A 005A015	0,04 ... 1,89	0,07 0,11	0,11 ... 2	460	253518
MDR-F 4H-S	MDR-F 4 HAA SAA A 010A030	0,07 ... 3,75	0,15 0,25	0,22 ... 4	460	253525
MDR-F 4HG-S	MDR-F 4 HAA SBA A 010A030	0,07 ... 3,75	0,15 0,25	0,22 ... 4	460	253532
MDR-F 8H-S	MDR-F 8 HAA SAA A 020A060	0,2 ... 7,5	0,3 0,5	0,5 ... 8	460	253549
MDR-F 8HG-S	MDR-F 8 HAA SBA A 020A060	0,2 ... 7,5	0,3 0,5	0,5 ... 8	460	253556
MDR-F 10H-S	MDR-F 10 HAA SAA A 040A050	0,3 ... 9,2	0,4 0,8	0,7 ... 10	460	253563
MDR-F 10HG-S	MDR-F 10 HAA SBA A 040A050	0,3 ... 9,2	0,4 0,8	0,7 ... 10	460	253570
MDR-F 16H-S	MDR-F 16 HAA SAA A 040A120	0,4 ... 15	0,6 1,0	1 ... 16	460	253587
MDR-F 16HG-S	MDR-F 16 HAA SBA A 040A120	0,4 ... 15	0,6 1,0	1 ... 16	460	253594
MDR-F 32H-S	MDR-F 32 HAA SAA A 100A200	0,8 ... 30	1,2 2,0	2 ... 32	460	253600
MDR-F 32HG-S	MDR-F 32 HAA SBA A 100A200	0,8 ... 30	1,2 2,0	2 ... 32	460	253617

\* lower ... upper end of range  
 \*\* G 1/4" + G 1/2" innerthread - on demand

## MDR-F standard version with plastic flange



MDR-F standard version with plastic flange and Perbunan diaphragm - e.g. for demineralized water. Pressure switch with industrial cage clamp version.  
 Pressure connection: Y G 3/8" inner thread \*\* - suffix "G" for gold-flashed contacts

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2Y-S	MDR-F 2 YAA SAA A 005A015	0,04 ... 1,89	0,07 0,11	0,11 ... 2	410	253624
MDR-F 2YG-S	MDR-F 2 YAA SBA A 005A015	0,04 ... 1,89	0,07 0,11	0,11 ... 2	410	253631
MDR-F 4Y-S	MDR-F 4 YAA SAA A 010A030	0,07 ... 3,75	0,15 0,25	0,22 ... 4	410	253648
MDR-F 4YG-S	MDR-F 4 YAA SBA A 010A030	0,07 ... 3,75	0,15 0,25	0,22 ... 4	410	253655
MDR-F 8Y-S	MDR-F 8 YAA SAA A 020A060	0,2 ... 7,5	0,3 0,5	0,5 ... 8	410	253662
MDR-F 8YG-S	MDR-F 8 YAA SBA A 020A060	0,2 ... 7,5	0,3 0,5	0,5 ... 8	410	253679
MDR-F 10Y-S	MDR-F 10 YAA SAA A 040A050	0,3 ... 9,2	0,4 0,8	0,7 ... 10	410	253686
MDR-F 10YG-S	MDR-F 10 YAA SBA A 040A050	0,3 ... 9,2	0,4 0,8	0,7 ... 10	410	253693
MDR-F 16Y-S	MDR-F 16 YAA SAA A 040A120	0,4 ... 15	0,6 1,0	1 ... 16	410	253709
MDR-F 16YG-S	MDR-F 16 YAA SBA A 040A120	0,4 ... 15	0,6 1,0	1 ... 16	410	253716

\* lower ... upper end of range  
 \*\* G 1/4" + G 1/2" innerthread - on demand

# Control pressure switch MDR - F

## MDR-F features Pressure connection and pressure transducer element stainless steel



MDR-F features Pressure connection and pressure transducer element  
Stainless steel for liquid fuels, oils up to 200 ° C, etc..  
Pressure switch equipped with industry-screw  
Pressure connection: G 1/4 "female thread - suffix " G  
"for gold-plated contacts."

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 12HE-S	MDR-F 12 HEC SAA A 060A070	0,5 ... 11,2	0,5 0,8	1 ... 12	520	253723
MDR-F 12HEG-S	MDR-F 12 HEC SBA A 060A070	0,5 ... 11,2	0,5 0,8	1 ... 12	520	253730
MDR-F 30HE-S	MDR-F 30 HEC SAA A 160A200	1 ... 26,4	3,0 3,6	4 ... 30	520	253747
MDR-F 30HEG-S	MDR-F 30 HEC SBA A 160A200	1 ... 26,4	3,0 3,6	4 ... 30	520	253754

\* lower ...upper end of range

## MDR-F high-pressure switch version (up to 250 bar)



MDR-F high-pressure switch version (up to 250 bar)  
with plastic plunger press. sensing element with stainless steel  
connection and Industrial cage clamp version for oil, water and air  
etc. .  
Pressure connection: HH G 3/8" inner thread - suffix " G"  
for gold-flashed contacts

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No
MDR-F 60HH-S	MDR-F 60 HHA SAA A 200A400	4 ... 52	4 8	8 ... 60	570	253761
MDR-F 60HHG-S	MDR-F 60 HHA SBA A 200A400	4 ... 52	4 8	8 ... 60	570	253778
MDR-F 120HH-S	MDR-F 120 HHA SAA A 200A800	8 ... 104	8 16	16 ... 120	570	253785
MDR-F 120HHG-S	MDR-F 120 HHA SBA A 200A800	8 ... 104	8 16	16 ... 120	570	253792
MDR-F 250HH-S	MDR-F 250 HHA SAA A 100B200	14 ... 226	12 24	26 ... 250	570	253808
MDR-F 250HHG-S	MDR-F 250 HHA SBA A 100B200	14 ... 226	12 24	26 ... 250	570	253815

\* lower ...upper end of range

## MDR-F version with reset function (Hmin / Hmax and Htro) with die-cast aluminium flange



MDR-F version with reset function (Hmin / Hmax and Htro) with die-cast aluminium flange and Perbunan diaphragm - for oil, water and air etc. Pressure switch with industrial cage clamp version. Pressure connection: H G 3/8" inner thread

### MDR-F .. Hmax (SPDT with 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.

### MDR-F .. Hmin (SPDT with 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.

### MDR-F .. Htro (SPDT with manual reset as 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.

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2Hmax-S	MDR-F 2 HAA SAH A XXXA015	-	-	0,11 ... 2	430	254065
MDR-F 4Hmax-S	MDR-F 4 HAA SAH A XXXA030	-	-	0,22 ... 4	430	254072
MDR-F 8Hmax-S	MDR-F 8 HAA SAH A XXXA060	-	-	0,5 ... 8	430	254089
MDR-F 10Hmax-S	MDR-F 10 HAA SAH A XXXA075	-	-	0,7 ... 10	430	254096
MDR-F 16Hmax-S	MDR-F 16 HAA SAH A XXXA120	-	-	1 ... 16	430	254102
MDR-F 32Hmax-S	MDR-F 32 HAA SAH A XXXA240	-	-	2 ... 32	430	254119
MDR-F 2Hmin-S *1	MDR-F 2 HAA SAL A 005A015	0,04 ... 1,89	0,07 0,11	0,11 ... 2	430	254126
MDR-F 4Hmin-S *1	MDR-F 4 HAA SAL A 010A030	0,07 ... 3,75	0,15 0,25	0,22 ... 4	430	254133
MDR-F 8Hmin-S *1	MDR-F 8 HAA SAL A 020A060	0,2 ... 7,5	0,3 0,5	0,5 ... 8	430	254140
MDR-F 10Hmin-S *1	MDR-F 10 HAA SAL A 025A075	0,3 ... 9,2	0,4 0,8	0,7 ... 10	430	254157
MDR-F 16Hmin-S *1	MDR-F 16 HAA SAL A 040A120	0,4 ... 15	0,6 1,0	1 ... 16	430	254164
MDR-F 32Hmin-S *1	MDR-F 32 HAA SAL A 080A240	0,8 ... 30	1,2 2,0	2 ... 32	430	254171
MDR-F 2Htro-S	MDR-F 2 HAA SAG A 005AXXX	0,04 ... 1,89	-	-	430	254188
MDR-F 4Htro-S	MDR-F 4 HAA SAG A 010AXXX	0,07 ... 3,75	-	-	430	254195
MDR-F 8Htro-S	MDR-F 8 HAA SAG A 020AXXX	0,2 ... 7,5	-	-	430	254201
MDR-F 10Htro-S	MDR-F 10 HAA SAG A 025AXXX	0,3 ... 9,2	-	-	430	254218
MDR-F 16Htro-S	MDR-F 16 HAA SAG A 040AXXX	0,4 ... 15	-	-	430	254225
MDR-F 32Htro-S	MDR-F 32 HAA SAG A 080AXXX	0,8 ... 30	-	-	430	254232

\* lower ... upper end of range

\*1 The minimum-pressure to be overseen and the operating-pressure must be in the pressure-spectrum of the cut-in-pressure.

Additional MDR-F pressure switch versions .. Reset function are available on request (e.g. as stainless steel bellows version, with gold-flashed contacts, as high pressure switch etc.).

# MDR-F

LARGE NUMBER OF ALTERNATIVES &

UNIVERSAL APPLICATIONS



## MDR-F version with die-cast aluminium flange and Viton diaphragm

for **enhanced media resistance**. Pressure switch with industrial cage clamp version.  
Pressure connection: H G 3/8" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2HV-S	MDR-F 2 HVA SAA A 005A015	0,04 ... 1,89	0,07 0,11	0,11 ... 2	410	253884
MDR-F 4HV-S	MDR-F 4 HVA SAA A 010A030	0,07 ... 3,75	0,15 0,25	0,22 ... 4	410	253891
MDR-F 8HV-S	MDR-F 8 HVA SAA A 020A060	0,2 ... 7,5	0,3 0,5	0,5 ... 8	410	253907
MDR-F10 HV-S	MDR-F 10 HVA SAA A 040A050	0,3 ... 9,2	0,4 0,8	0,7 ... 10	410	253914
MDR-F 16HV-S	MDR-F 16 HVA SAA A 040A120	0,4 ... 15	0,6 1,0	1 ... 16	410	253921
MDR-F 32HV-S	MDR-F 16 HVA SAA A 100A200	0,8 ... 30	1,2 2,0	2 ... 32	410	253938

\* lower ... upper end of range

Additional MDR-F pressure switch versions MDR-F.HV are available on request (e. g. with reset function, with gold-flashed contacts, with plastic flange etc.)

## VdS pressure switches for water extinguishing systems / fire-fighting equipments



These pressure switches are primarily conceived for the use in firmly installed water extinguishing systems / fire-fighting equipments and approved from the VdS damage-prevention under the NO. G 4090008.

In particular, selective examinations, the request-profiles, the quality and the functionality intensively are tested.

Dependent on the use there are:

- Alarm pressure switches (MDR-F 2...VdS...), which are manufactured with a pressure range from 0,35 to 1 bar with minimal difference, and
- Pressure switches (MDR-F X...VdS...), with 10, 12,5 or 16 bar set for X, which limit the maximum pressure



VdS pressure switches for water extinguishing systems / fire-fighting equipments

difference between cut-in and cut-out pressure to 1,5 bar.

As MDR-F...VdS with reset function, standard only the alarm pressure switch is as max.-Reset listed. However, it is all VdS pressure switch with each reset function (see overview MDR-F with reset function), alternatively a Viton diaphragm and / or also a flange with 3/8" inner-screw threads on inquiry available.

Moreover, customer-specific boards with own circuits and LED in integrated design are available as well as realisable. Further information can be seen on our homepage: [www.condor-cpc.com](http://www.condor-cpc.com).

Please take into account that the use of the pressure switch with plastic flange is restricted up to 10 bar.

## MDR-F VdS version for water-based extinguishing systems / fire protection with die-cast aluminium flange

and Perbunan diaphragm for water extinguishing systems. Pressure switch with industrial cage clamp version.  
Pressure connection: H G 1/2" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2H-S VdS	MDR-F 2 HAB SAA A XXXA007 A		0,1	0,35 ... 1	460	259060
MDR-F 2Hmax-S VdS	MDR-F 2 HAB SAH A XXXA007 A		0,1	0,35 ... 1	460	259077
MDR-F 10H-S VdS	MDR-F 10 HAB SAA A 040A050 A	0,3 ... 8,5	0,4 1,5	0,7 ... 10	460	259084
MDR-F 12H-S VdS	MDR-F 12 HAB SAA A 080A090 A	0,4 ... 11	0,6 1,5	1 ... 12,5	460	259091
MDR-F 16H-S VdS	MDR-F 16 HAB SAA A 110A120 A	0,4 ... 14,5	0,6 1,5	1 ... 16	460	259107

## MDR-F VdS overview for water-based extinguishing systems / fire protection MDR-F .. Y... with plastic flange

and Perbunan diaphragm for water extinguishing systems / fire-fighting equipments. Pressure switch with industrial cage clamp version.

Pressure connection: H G 1/2" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2Y-S VdS	MDR-F 2 YAB SAA A XXXA007 A		0,1	0,35 ... 1	410	259145
MDR-F 2Ymax-S VdS	MDR-F 2 YAB SAH A XXXA007 A		0,1	0,35 ... 1	410	259152
MDR-F 10Y-S VdS	MDR-F 10 YAB SAA A 040A050 A	0,3 ... 8,5	0,4 1,5	0,7 ... 10	410	259169

# Control pressure switch MDR - F

## GL Pressure Switch for Ship Building and Applications Intended for Use at Sea



These pressure switches are mostly used in the field of shipping technology, particularly in ship and plant engineering, and are approved by GL (Germanischer Lloyd); one of the largest classification societies in the field of shipping, under No. 86884-10 HH.

The requirement profiles, quality and functionality have been intensively tested by means of specialized, demanding tests.

Our GL pressure switches can be used up to a maximum of 250 bar. Pressure switches fitted with plastic flanges are approved up to 12.5 bar.

All GL pressure switches can also be fitted with a reset button.

Because of the variety of possible pressure switch configurations, please feel free to simply contact us if you have queries regarding special applications or technical requests.



Condor Pressure Switch for ship Building and Applications Intended for Use at Sea are approved by GL (Germanischer Lloyd).

### MDR-F GL version GL - MDR-F..H..GLf - with die-cast aluminium flange

and Perbunan diaphragm, GL cable gland, **for shipbuilding and seaworthy applications**. Pressure switch with industrial cage clamp version. Pressure connection: G 3/8" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2H-S GL	MDR-F 2 HAA SAA H 005A015 G	0,04 ... 1,89	0,07 0,11	0,11 ... 2	540	261766
MDR-F 4H-S GL	MDR-F 4 HAA SAA H 010A030 G	0,07 ... 3,75	0,15 0,25	0,22 ... 4	540	261773
MDR-F 8H-S GL	MDR-F 8 HAA SAA H 020A060 G	0,2 ... 7,5	0,3 0,5	0,5 ... 8	540	261780
MDR-F 10H-S GL	MDR-F 10 HAA SAA H 040A050 G	0,3 ... 9,2	0,4 0,8	0,7 ... 10	540	261797
MDR-F 12H-S GL	MDR-F 12 HAA SAA H 080A090 G	0,4 ... 11	0,6 1,5	1 ... 12,5	540	261896
MDR-F 16H-S GL	MDR-F 16 HAA SAA H 040A120 G	0,4 ... 15	0,6 1,0	1 ... 16	540	261803
MDR-F 32H-S GL	MDR-F 32 HAA SAA H 100A200 G	0,8 ... 30	1,2 2,0	2 ... 32	540	261810

\* lower ...upper end of range

### MDR-F overview GL - MDR-F .. HH..GL - High pressure switch (up to 250 bar) with plastic plunger

sensing element with stainless steel connection, GL Cable gland, **for shipbuilding and seaworthy applications**. Pressure switch with industrial cage clamp version. Pressure Connection: HH G 3/8" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 60HH-S GL	MDR-F 60 HHA SAA H 200A400 G	4 ... 52 bar	4 8	8 ... 60 bar	570	261858
MDR-F 120HH-S GL	MDR-F 120 HHA SAA H 200A800 G	8 ... 104 bar	8 16	16 ... 120 bar	570	261865
MDR-F 250HH-S GL	MDR-F 250 HHA SAA H 100B200 G	14 ... 226 bar	12 24	26 ... 250 bar	570	261872

\* lower ...upper end of range



You need more information? - Request our special catalog - "GL" -products!





# Control pressure switch MDR - F



## MDR-F ATEX version in explosion-risk units for mining and chemical industries

The pressure switch MDR-F serves as a on and off switch for intrinsically safe circuits dependant upon the pressure of various media.

This switch can be used in firedamp-susceptible mines, explosive gas atmospheres and explosive dust atmospheres. (Groups I, II, III)

Because we, as a recognized Atex production plant, are able to manufacture pressure switches with a wide variety of configurations, please feel free to simply contact us if you have queries regarding special applications or technical requests.

### Application: Mining (firedamp, coal dust) Ex I M2 Ex ia I Mb

#### MDR-F overview ATEX - MDR-F .. JG...Ex - with zinc die-cast flange

and NBR diaphragm. Pressure switch with industrial cage clamp version and plastic cover. Pressure connection: G 3/8" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2JG-S Ex I M2	MDR-F 2 JAA SBA J 005A015 B2XX ---1pce.a	0,04...1,89	0,07 0,11	0,11...2	610	262204
MDR-F 4JG-S Ex I M2	MDR-F 4 JAA SBA J 010A030 B2XX ---1pce.a	0,07...3,75	0,15 0,25	0,22...4	610	262213
MDR-F 8JG-S Ex I M2	MDR-F 8 JAA SBA J 020A060 B2XX ---1pce.a	0,2...7,5	0,3 0,5	0,5...8	610	262220
MDR-F 10JG-S Ex I M2	MDR-F 10 JAA SBA J 040A050 B2XX ---1pce.a	0,3...9,2	0,4 0,8	0,7...10	610	262237
MDR-F 16JG-S Ex I M2	MDR-F 16 JAA SBA J 040A120 B2XX ---1pce.a	0,4...15	0,6 1	1...16	610	262251
MDR-F 32JG-S Ex I M2	MDR-F 32 JAA SBA J 100A200 B2XX ---1pce.a	0,8...30	1,2 2	2...32	610	262268

#### MDR-F overview ATEX - MDR-F .. JHG...Ex - High pressure switch (up to 250 bar) with plastic plunger

and stainless steel and zinc die-cast flange. Pressure switch with industrial cage clamp version and plastic cover. Pressure connection: G 3/8" inner thread with choke

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 60JHG-S Ex I M2	MDR-F 60 JHA SBA J 200A400 B2XX ---1pce.a	4...52	4 8	8...60	620	262275
MDR-F 120JHG-S Ex I M2	MDR-F 120 JHA SBA J 200A800 B2XX ---1pce.a	8...104	8 16	16...120	620	262282
MDR-F 250JHG-S Ex I M2	MDR-F 250 JHA SBA J 100B200 B2XX ---1pce.a	14...226	12 24	26...250	620	262299

#### MDR-F overview ATEX - MDR-F .. JEG...Ex - with zinc die-cast flange

Pressure switch with stainless steel pressure transducer with stainless steel and zinc die-cast flange. Pressure switch with industrial cage clamp version and plastic cover. Pressure connection: G 1/4" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 12JEG-S Ex I M2	MDR-F 12 JEC SBA J 060A070 B2XX ---1pce.a	0,5...11,2	0,5 0,8	1...12	670	262503
MDR-F 30JEG-S Ex I M2	MDR-F 30 JEC SBA J 160A200 B2XX ---1pce.a	1...26,4	3,0 3,6	4...30	670	262510

#### MDR-F overview ATEX - MDR-F .. JG...Ex - for Vacuum monitoring with zinc die-cast flange

and Perbunan diaphragm. Pressure switch with industrial cage clamp version and plastic cover. Pressure connection: H G 1/4" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 03JG-S Ex I M2	MDR-F 03 JAC SBA J 010V030 B2XX ---1pce.a	-0,9...0,15	0,15	-0,75...0,3	658	262558
MDR-F 3JG-S Ex I M2	MDR-F 3 JAC SBA J 100V150 B2XX ---1pce.a	-0,9...2,6	0,2 0,4	-0,7...3	672	262565

# Control pressure switch MDR - F

**Application:** Industry (gases, fumes) Ex II 2G Ex ia IIC T6 Gb and industry (dust) Ex II 2D Ex ia IIIC T85°C Db

## MDR-F overview ATEX - MDR-F .. HG...Ex - with zinc die-cast flange

and NBR diaphragm. Pressure switch with industrial cage clamp version and aluminium die-cast cover.  
Pressure connection: G 3/8" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2JG-S Ex II 2 GD	MDR-F 2 JAA SBA J 005A015 C2XX ---1pce.a	0,04...1,89	0,07 0,11	0,11...2	815	278060
MDR-F 4JG-S Ex II 2 GD	MDR-F 4 JAA SBA J 010A030 C2XX ---1pce.a	0,07...3,75	0,15 0,25	0,22...4	815	278072
MDR-F 8JG-S Ex II 2 GD	MDR-F 8 JAA SBA J 020A060 C2XX ---1pce.a	0,2...7,5	0,3 0,5	0,5...8	815	278085
MDR-F 10JG-S Ex II 2 GD	MDR-F 10 JAA SBA J 040A050 C2XX ---1pce.a	0,3...9,2	0,4 0,8	0,7...10	815	278092
MDR-F 16JG-S Ex II 2 GD	MDR-F 16 JAA SBA J 040A120 C2XX ---1pce.a	0,4...15	0,6 1	1...16	815	278108
MDR-F 32JG-S Ex II 2 GD	MDR-F 32 JAA SBA J 100A200 C2XX ---1pce.a	0,8...30	1,2 2	2...32	815	278115

## MDR-F overview ATEX - MDR-F .. HHG...Ex - High pressure switch (up to 250 bar) with plastic plunger

and with stainless steel and zinc die-cast flange. Pressure switch with industrial cage clamp version and aluminium die-cast cover.  
Pressure connection: G 3/8" inner thread with choke

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 60JHG-S Ex II 2 GD	MDR-F 60 JHA SBA J 200A400 C2XX ---1pce.a	4...52	4 8	8...60	910	278122
MDR-F 120JHG-S Ex II 2 GD	MDR-F 120 JHA SBA J 200A800 C2XX ---1pce.a	8...104	8 16	16...120	910	278139
MDR-F 250JHG-S Ex II 2 GD	MDR-F 250 JHA SBA J 100B200 C2XX ---1pce.a	14...226	12 24	26...250	910	278146

## MDR-F overview ATEX - MDR-F .. HEG - Pressure switch with stainless steel pressure transducer

and with stainless steel and zinc die-cast flange. Pressure switch with industrial cage clamp version and aluminium die-cast cover.  
Pressure connection: G 1/4" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 12JEG-S Ex II 2 GD	MDR-F 12 JEC SBA J 060A070 C2XX ---1pce.a	0,5...11,2	0,5 0,8	1...12	860	278153
MDR-F 30JEG-S Ex II 2 GD	MDR-F 30 JEC SBA J 160A200 C2XX ---1pce.a	1...26,4	3,0 3,6	4...30	860	278160

## MDR-F overview ATEX - MDR-F .. HG...Ex - for monitoring vacuum with zinc die-cast flange

and with NBR diaphragm. Pressure switch with industrial cage clamp version and aluminium die-cast cover.  
Pressure connection: G 1/4" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 03JG-S Ex II 2 GD	MDR-F 03 JAC SBA J 010V030 C2XX ---1pce.a	-0,9...0,15	0,15	-0,75...0,3	848	278177
MDR-F 3JG-S Ex II 2 GD	MDR-F 3 JAC SBA J 100V150 C2XX ---1pce.a	-0,9...2,6	0,2 0,4	-0,7...3	862	278184



You need more information? -  
Request our special catalog - "ATEX" -products!



# Control pressure switch MDR - F

## MDR-F UL version for the North American market



Pressure switches are designed for the North American market and were approved by Underwriters Laboratories, Inc. (UL) under the approval number E86689. During special high-demanding examinations, requirements, quality and functionality

were tested intensively. Due to the variety of possible pressure switch versions, please simply contact us for questions about special applications or technical requests.

### MDR-F overview UL - MDR-F .. H...UL - Pressure switch with aluminium die-cast flange

and with NBR diaphragm. Pressure switch with industrial cage clamp version.  
Pressure connection: G 3/8" inner thread\*)

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (psi)	Adjustable cut-out pressure (psi)	Weight (in g)	Part No.
MDR-F 2H-S UL	MDR-F 2 HAA SAA A 008D020 EXXX ---1pce.a	0,6...27	1 2	1,6...29	460	269885
MDR-F 4H-S UL	MDR-F 4 HAA SAA A 015D040 EXXX ---1pce.a	1...54	2 4	3...58	460	269892
MDR-F 8H-S UL	MDR-F 8 HAA SAA A 030D060 EXXX ---1pce.a	3...108	4 8	7...116	460	269908
MDR-F 10H-S UL	MDR-F 10 HAA SAA A 060D075 EXXX ---1pce.a	4...133	6 12	10...145	460	269915
MDR-F 16H-S UL	MDR-F 16 HAA SAA A 080D160 EXXX ---1pce.a	6...217	9 15	15...232	460	269922
MDR-F 32H-S UL	MDR-F 32 HAA SAA A 145D290 EXXX ---1pce.a	12...435	18 29	30...464	460	269939

\*) 1/4"NPT on request

### MDR-F overview UL - MDR-F .. HH...UL - High pressure switch (up to 3625 psi) with plastic plunger

with stainless steel and aluminium die-cast flange. Pressure switch with industrial cage clamp version.  
Pressure connection: G 3/8" inner thread with choke

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (psi)	Adjustable cut-out pressure (psi)	Weight (in g)	Part No.
MDR-F 60HH-S UL	MDR-F 60 HHA SAA A 290D580 EXXX ---1pce.a	58...754	58 116	116...870	570	269946
MDR-F 120HH-S UL	MDR-F 120 HHA SAA A 058E116 EXXX ---1pce.a	116...1508	116 232	232...1740	570	269953
MDR-F 250HH-S UL	MDR-F 250 HHA SAA A 145E290 EXXX ---1pce.a	203...3277	174 348	377...3625	570	269960

### MDR-F overview UL - MDR-F .. H...UL - for monitoring vacuum with aluminium die-cast flange

and with NBR diaphragm. Pressure switch with industrial cage clamp version.  
Pressure connection: G 1/4" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (psi)	Adjustable cut-out pressure (psi)	Weight (in g)	Part No.
MDR-F 03H-S UL	MDR-F 03 HAC SAA A 010V030 EXXX ---1pce.a	-13 ... 2,2	2,2	-10,9...4,4	508	269977
MDR-F 3H-S UL	MDR-F 3 HAC SAA A 100V150 EXXX ---1pce.a	-13 ... 37,7	2,9 5,8	-10,2...43,5	522	269984

# Control pressure switch MDR - F

## MDR-F vacuum monitoring version

These pressure switches can be used as vacuum switches for compressible materials (gases), but also for liquids, within the normal pressure range.

Their range of application includes, for example, the fields of automation, transportation, heating, climate-control and ventilation.

They have been designed primarily for use in the rough vacuum range (technical vacuum) and are distinguished by their small pressure differences and high level of switching precision.

They offer universal application potential as openers, closers or changers.

## MDR-F overview - MDR-F .. H (G) - for Vacuum monitoring with aluminium die-cast flange

and with Perbunan diaphragm - for oil, water and air etc. . Pressure switch with industrial cage clamp version.  
Pressure connection: H G 1/4" inner thread - suffix "G" for gold-flashed contacts

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 03H-S	MDR-F 03 HAC SAA A 010V030 XXXX	-0,9 ... 0,15	0.15	-0.75 ... 0.3	508	264019
MDR-F 03HG-S	MDR-F 03 HAC SBA A 010V030 XXXX	-0,9 ... 0,15	0.15	-0.75 ... 0.3	508	264026
MDR-F 3H-S	MDR-F 3 HAC SAA A 100V150 XXXX	-0,9 ... 2.6	0.2 0.4	-0,7 ... 3	522	264057
MDR-F 3HG-S	MDR-F 3 HAC SBA A 100V150 XXXX	-0,9 ... 2.6	0.2 0.4	-0,7 ... 3	522	264064

## MDR-F DPDT version

This pressure switch is characterized by being equipped with a DPDT. As a result, the switch is even more flexible in its range of applications. Due to the variety of possible

pressure switch versions, please simply contact us for questions about special applications or technical requests.

## MDR-F overview - MDR-F .. H...LF - with aluminium die-cast flange

and with NBR diaphragm - for oil, water and air etc. . Pressure switch with industrial cage clamp version.  
Pressure connection: G 3/8" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2H-2W-S	MDR-F 2 HAA LFA D 005A015 XXXX ---1pce.a	0.04 ... 1.84	0.08 ... 0.16	0.12 ... 2	460	269717
MDR-F 4H-2W-S	MDR-F 4 HAA LFA D 010A030 XXXX ---1pce.a	0.07 ... 3.65	0.18 0.35	0.25 ... 4	460	269724
MDR-F 8H-2W-S	MDR-F 8 HAA LFA D 020A060 XXXX ---1pce.a	0.2 ... 7.3	0.35 0.7	0.55 ... 8	460	269731
MDR-F 10H-2W-S	MDR-F 10 HAA LFA D 040A050 XXXX ---1pce.a	0.3 ... 8.9	0.45 1.1	0.75 ... 10	460	269748
MDR-F 16H-2W-S	MDR-F 16 HAA LFA D 040A120 XXXX ---1pce.a	0.4 ... 14.6	0.7 1,4	1.1 ... 16	460	269755
MDR-F 32H-2W-S	MDR-F 32 HAA LFA D 100A200 XXXX ---1pce.a	0.8 ... 29.2	1.4 2.8	2.2 ... 32	460	269762

## MDR-F Type overview - MDR-F .. H...LF - with plastic flange

and with NBR diaphragm - for example, for purified water. Pressure switch with industrial cage clamp version.  
Pressure connection: G 3/8" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-F 2Y-2W-S	MDR-F 2 YAA LFA D 005A015 XXXX ---1pce.a	0.04 ... 1.84	0.08 0.16	0.12 ... 2	410	269779
MDR-F 4Y-2W-S	MDR-F 4 YAA LFA D 010A030 XXXX ---1pce.a	0.07 ... 3.65	0.18 0.35	0.25 ... 4	410	269786
MDR-F 8Y-2W-S	MDR-F 8 YAA LFA D 020A060 XXXX ---1pce.a	0.2 ... 7.3	0.35 0.7	0.55 ... 8	410	269793
MDR-F 10Y-2W-S	MDR-F 10 YAA LFA D 040A050 XXXX ---1pce.a	0.3 ... 8.9	0.45 1.1	0.75 ... 10	410	269709
MDR-F 16Y-2W-S	MDR-F 16 YAA LFA D 040A120 XXXX ---1pce.a	0.4 ... 14.6	0.7 1,4	1.1 ... 16	410	269716



# Control pressure switch MDR - F

Technical data MDR-F standard version	
Rated operational current $I_e$ AC 1 $U_e=240\text{ V (1~)}$	10 A
Rated operational current $I_e$ AC 15 $U_e=240\text{ V (1~)}$	4 A
Rated operational current $I_e$ DC 13 $U_e=240\text{ V (1~)}$	0,1 A
Permissible motor rating 1~ 230 V	0,55 kW
Motor switching capacity (UL 508, CSA 22.2) $U_e=125\text{ VAC}$	0,5 HP
Motor switching capacity (UL 508, CSA 22.2) $U_e=250\text{ VAC}$	0,5 HP
Rated operational current $I_e$ (UL 508, CSA 22.2) $U_e=250\text{ VAC}$	15 A
Rated operational current $I_e$ (UL 508, CSA 22.2) $U_e=12\text{ VDC}$	6 A

Technical data MDR-F... Ex	
Maximum switching voltage $U_i$	200 V
Maximum switching strength $I_i$	3 A
Maximum internal capacity $C_i$	negligible
Maximum internal conductivity $I_i$	negligible
Ambient temperature $T_a$	$-30\text{ °C} \leq T_a \leq +65\text{ °C}$
Only for connection to a separately examined and certified intrinsically safe circuit in the protection type: Ex ia I Mb (MDR-F... JG... Ex) Ex ia IIC Ex ia IIA, IIB, IIC T6 Gb (MDR-F ... HG...Ex) Ex ia IIIC T85°C Db (MDR-F ... HG...Ex)	

Technical data MDR-F.(G) - gold-flashed contact	
Rated operational current $I_e$ $U_e=30\text{ V (1~)}$	400 mA
Permissible motor rating 1~ 30 V	12 VA
Motor switching capacity (UL 508, CSA 22.2) $U_e=125 - 250\text{ VAC}$	0,5 HP
Rated operational current $I_e$ (UL 508, CSA 22.2) $U_e=250\text{ VAC}$	10 A
Rated operational current $I_e$ (UL 508, CSA 22.2) $U_e=12\text{ VDC}$	6 A

Technical data MDR-F		
Bursting strength / bar	MDR-F.H	4 x max. cut-out pressure
	MDR-F.HE	1,3 x max. cut-out pressure
	MDR-F.Y ( $\leq 12,5\text{ bar}$ )	4 x max. cut-out pressure
	MDR-F.Y ( $> 12,5\text{ bar}$ )	2,5 x max. cut-out pressure

Technical data MDR-F	
Vibration resistance 10 bis 1000 Hz	4 g
Degree of protection acc. to DIN 40 050/IEC 529 With rubber grommets	IP 54
Degree of protection acc. to DIN 40 050/IEC 529 With cable glands M20	IP 65
Ambient temperature range	$-20\text{ °C} \dots +70\text{ °C}$
Cross-sections Cage clamp (without cable end sleeve)	1,5 mm <sup>2</sup>
Cross-sections Screw clamp	2,5 mm <sup>2</sup>

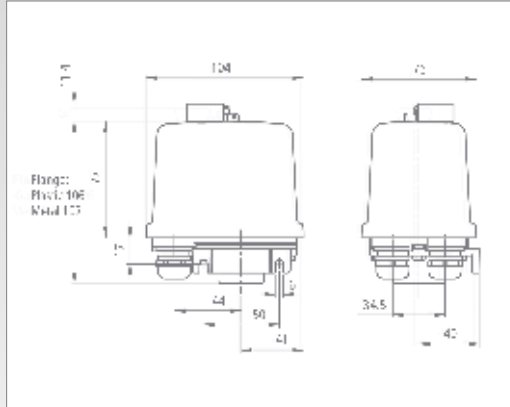
Technical data MDR-F		
Perm. media temperature:	MDR-F.H / HH	+ 70 °C
	MDR-F.HV	+ 130 °C
	MDR-F.HE	+ 200 °C
	MDR-F.Y	+ 50 °C
Repeatability	<2% FS	

**Attention:** Please, regard the MDR-F instructions enclosing the pressure switch for the max. operating pressure and the max. inspection pressure.

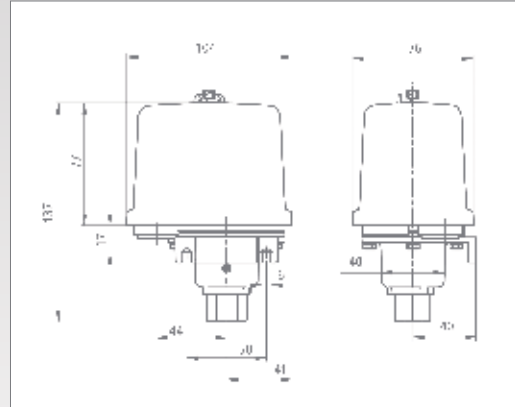
**Media resistance MDR-F.**  
A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22. Please read the information carefully

# Control pressure switch MDR - F

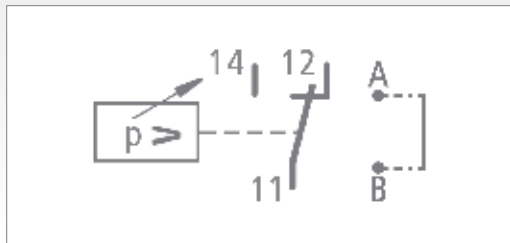
## Dimensions MDR - F / Circuit diagram MDR-F



Pressure switch MDR - F.H / ..Y / ..HV



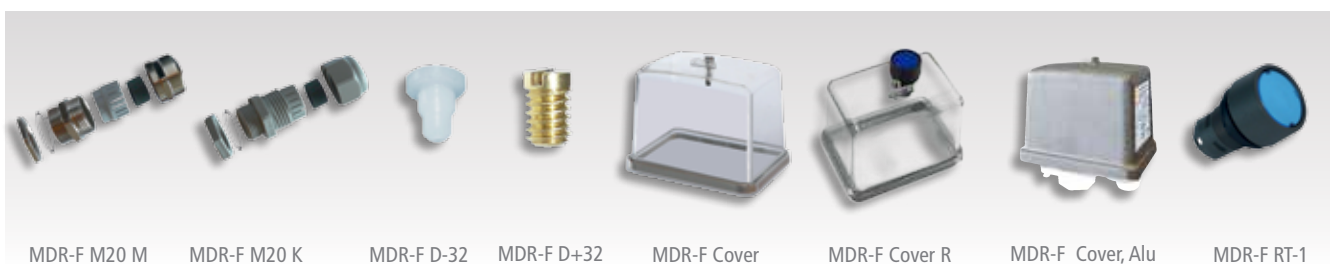
Pressure switch MDR - F..HH / ..HE



## Accessories

Order reference	Description	Weight (in g)	Part No.
	<b>Cable glands</b>		
MDR-F M20 M	Cable gland M20 metal	35	254249
MDR-F M20 K	Cable gland M20 plastic	18	259503
	<b>Throttle</b>		
MDR-F D-32	MDR-F up to 32 bar	1	254256
MDR-F D+32	MDR-F as of 32 bar	2	254263
	<b>Covers</b>		
MDR-F Cover	MDR-F Cover, transparent, Standard	90	254270
MDR-F Cover R	MDR-F Cover, transparent, with Reset push-button - for manual reset	115	254287
MDR-F Cover Alu	MDR-F Cover, Aluminium	252	265436
	<b>Reset push-button</b>		
MDR-F RT-1	Reset push-buttons for mounting on cover R	25	254294

Additional accessories (e.g. pressure connectors) on demand



MDR-F M20 M

MDR-F M20 K

MDR-F D-32

MDR-F D+32

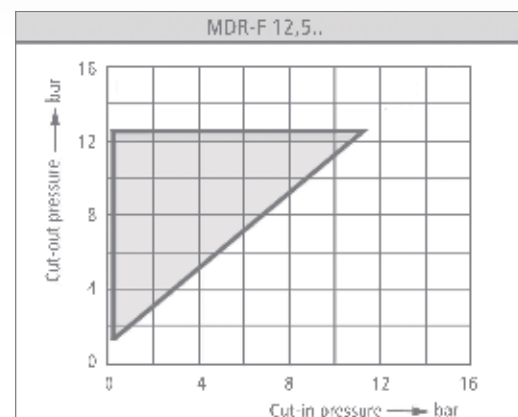
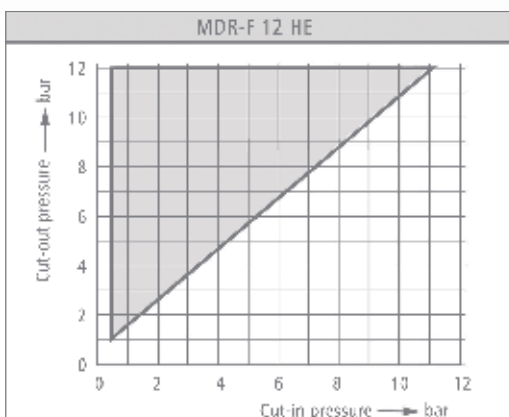
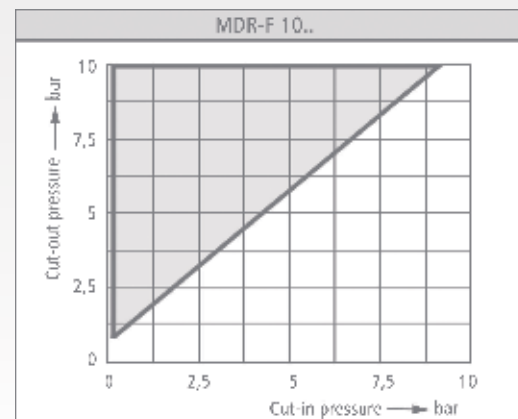
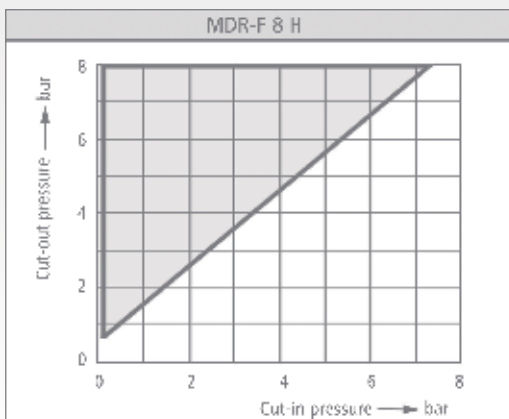
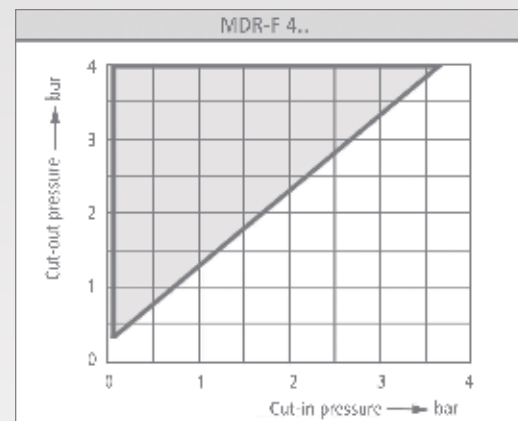
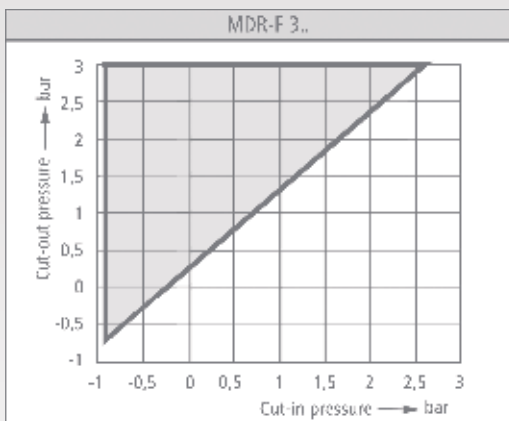
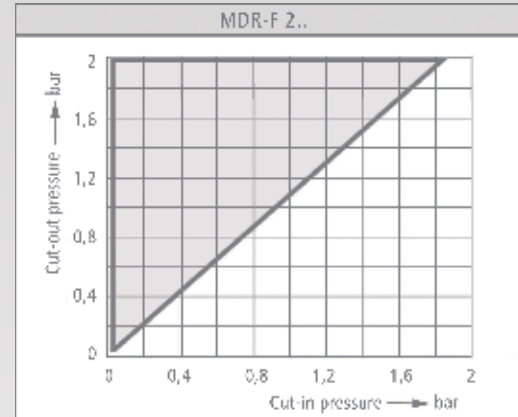
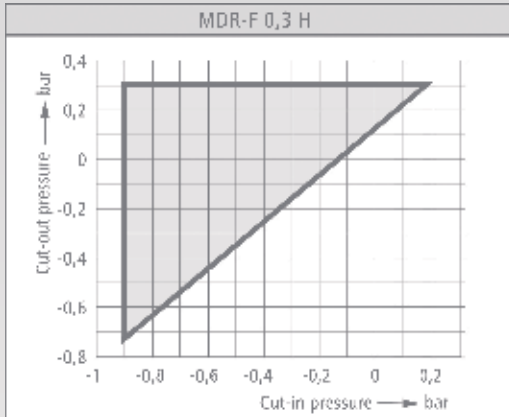
MDR-F Cover

MDR-F Cover R

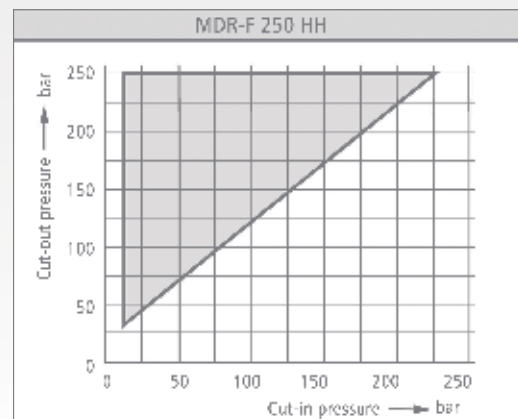
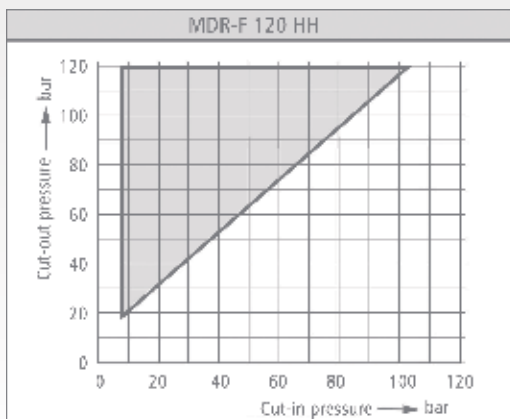
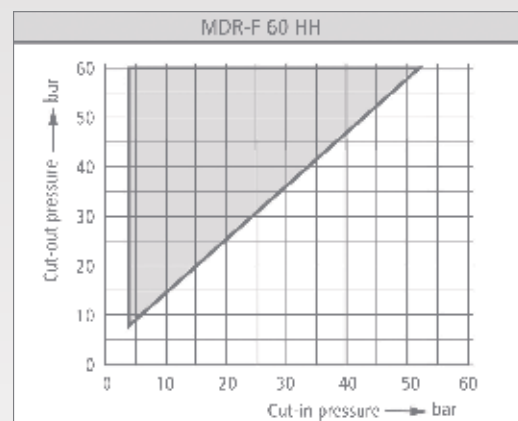
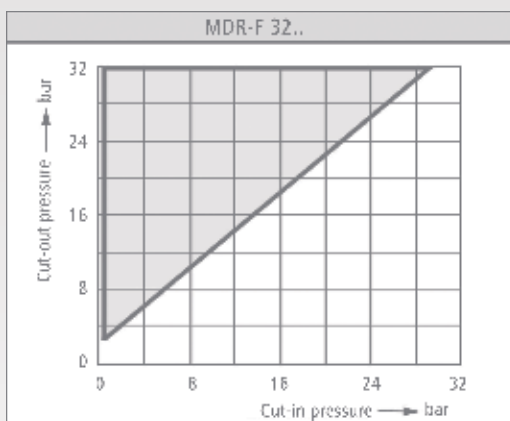
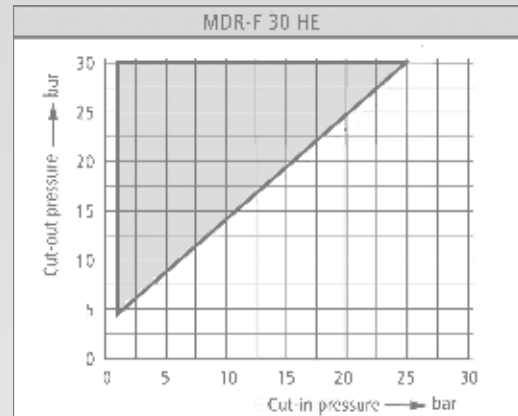
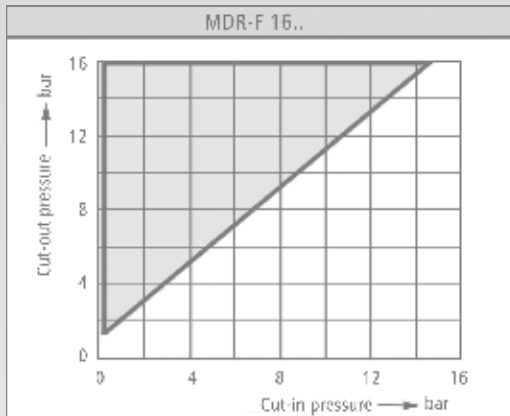
MDR-F Cover, Alu

MDR-F RT-1

## Pressure diagrams MDR-F



## Pressure diagrams MDR-F



Note: All pressure diagrams do not apply to the "DPDT" version and not for "NO / NC". If needed, upon request.



## Control pressure switch MDR - P

...for the mass production, perfect for industrial customers!



- Compact pressure switch - compact and therefore easy to install
- Factory fixed pressure settings (by customer's requirements)
- High repeatability
- Customer-specific configuration
- 1 SPDT
- Acc. to EN 60947
- Degree of Protection IP 65
- Flange = brass

**Primarily for mass production, perfect for industrial customers!**

The CONDOR MDR-P control pressure switch can be universally used. Due to compact design, standardized electrical plug-and-socket connection and high IP protection, this switch is a suitable application for mass productions. The MDR-P is provided with change-over contacts (SPDT) and is suitable for

monitoring and controlling the pressure of liquids or gaseous media. The cut-in and cut-out pressure settings are set at our factory according to the customer's requirements.

Technical data MDR P acc. to EN 60947	
Rated operating current $I_e$ AC 1 $U_e=240\text{ V (1~)}$	10 A
Rated operating current $I_e$ AC 15 $U_e=240\text{ V (1~)}$	4 A
Rated operating current $I_e$ DC 13 $U_e=240\text{ V (1~)}$	0,1 A
Permissible motor rating 1~ 230 V	0,55 kW
Mechanical life (AC 15) Cycles	$> 1 \times 10^6$
Mechanical life Cycles	$> 1 \times 10^6$
Max. electrical cycles Cycles/h	600
Max. mechanical cycles Cycles/h	600
Bursting strength $P_z$	$> 60\text{ bar}$

Technical data MDR P acc. to EN 60947	
Vibration resistance:	4 g (bei 10 bis 1000 Hz)
Temperature range:	- 25 C°** bis + 70 C°
Protection acc. to EN 60529	IP 65

\*\* lower temperatures on request

Media resistance MDR-P
A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22. Please read the information carefully.

## MDR-P

Because the MDR-P was essentially conceived for our product line by the customer, there should be no need to adjust the pressure settings after manufacture.

For the pressure switch to be configured in the CONDOR-factory, the start-up and shutdown pressures are required.

The switching points can be established in two ways, according to the following diagram:

1. Calculation of the possible shutdown pressure with a stated start-up pressure (blue line)

For example, with a start-up pressure of 8 bar, a horizontal line will be plotted in the pressure diagram at the level of the start-up pressure.

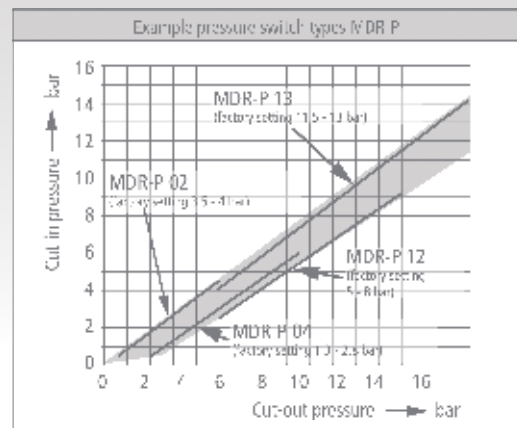
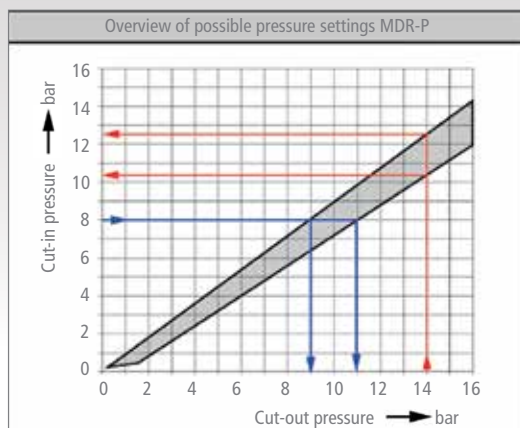
All shutdown pressures in the diagram located on this line, which can be calculated with a vertical line on the coordinates axis, can then be configured. In this case you can select shutdown pressures between 9 and 11 bar.

2. Calculation of the possible start-up pressure with a stated shutdown pressure (red line)

For example, with a shutdown pressure of 14 bar, a vertical line will be plotted in the pressure diagram at the level of the shutdown pressure.

All start-up pressures in the diagram located on this line, which can be calculated with a horizontal line on the coordinates axis, can then be configured.

In this case you can select start-up pressures between 10.4 and 12.5 bar.



## Type Overview MDR-P with brass flange

Pressure Switch with NBR diaphragm, 1 SPST, 10-piece packing unit

Pressure connection: G 1/4" outer thread brass, connection configuration according to DIN

Order reference	Adjustable cut-in pressure (bar)	Pressure difference (bar)*	Adjustable cut-out pressure (bar)	Factory setting (bar)	Weight in g pro 10 Stück	Article number
MDR-P 23	0,2...4,5	0,3 ... 0,5	0,5...5	3,5 - 4,0	1050	270027
MDR-P 24	0,5...6	1,5 ... 2,5	2...8,5	1,3 - 2,8	1050	270034
MDR-P 12	2,5...9,2	2,5 ... 3,8	5...13	5,0 - 8,0	1050	270041
MDR-P 13	4...14,2	1,0 ... 1,8	5...16	11,5 - 13	1050	270058

\* lower ... upper end of range  
More pressure settings on request.

### Sample order:

MDR-P

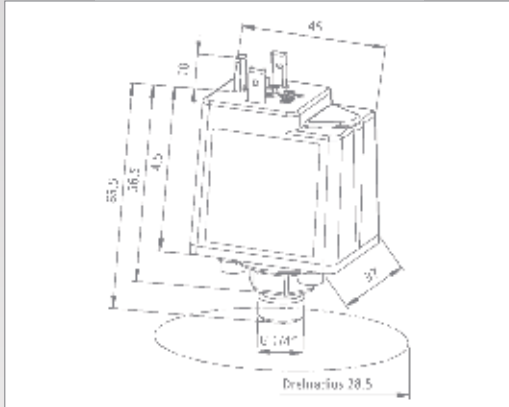
Cut-in pressure setting 1.3 bar or also known as:

Cut-out pressure setting 2.8 bar Article No. 270034

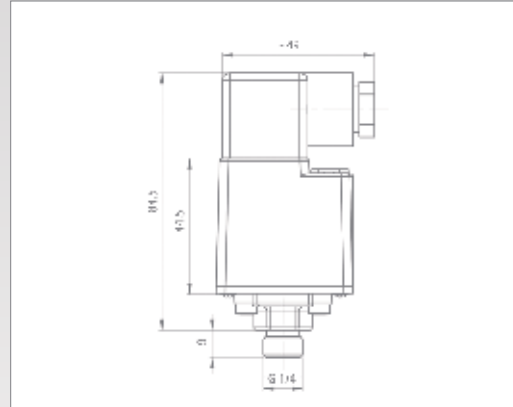
Plug connector according to DIN

Further diaphragm materials and changers with gold contacts available upon request. An available alternative for a DIN plug connection is a special variation (see next page).

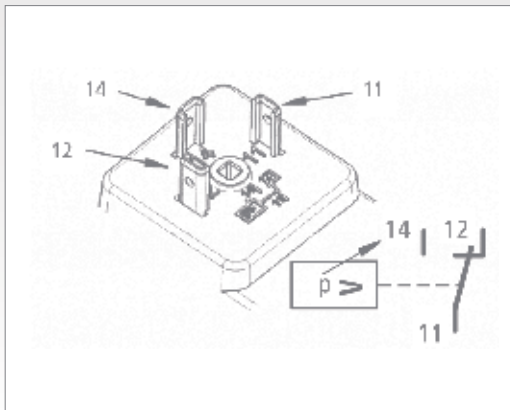
## Dimensions / Circuit diagram MDR-P



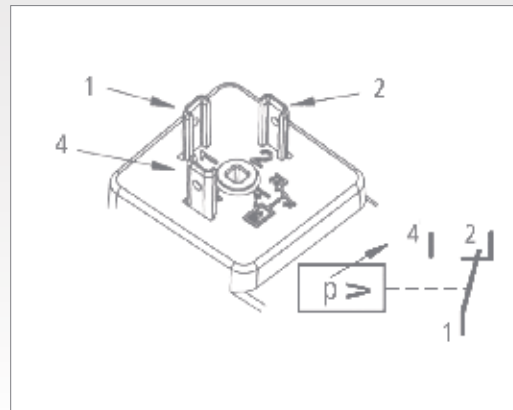
Pressure switch MDR-P



Pressure switch MDR-P



Standard version MDR-P



Special version MDR-P

## Accessories MDR-P

Order reference	Description	Weight (in g)	Part No.
	Connection		
MDR-P LD	MDR-P cable socket, 10 pieces (DIN EN 175301-803)	220 g	263951



MDR-P cable socket

# Control pressure switch MDR - K

## Control pressure switch MDR - K

...for the mass production, perfect for industrial customers!



- OEM applications
- Robust control pressure switch
- Simple assembly
- With bayonet coupling
- 2 SPDT's
- Acc. to EN 60947
- Degree of Protection IP 67
- Flange = aluminium die-cast
- **Factory fixed pressure settings (by customer's requirements)**

The MDR-K control pressure switch is distinguished by its robust construction and the fact that it is fitted with 2 sets of change-over contacts. It is ideally suited for applications for which two galvanically isolated contacts are required, regardless of whether they are openers or closers.

This pressure switch was specially designed for use in critical areas (water) or for use outdoors, as it has the highest possible protection rating, IP 67, combined with an electrical connection in the form of a bayonet coupling.

## Type overview MDR-K with aluminium die-cast flange

and NBR diaphragm. Pressure switch with bayonet coupling.  
Pressure connection: G 3/8" inner thread

Order reference	Type Code	Adjustable cut-in pressure (bar)	Smallest pressure diff. (bar)*	Adjustable cut-out pressure (bar)	Weight (in g)	Part No.
MDR-K 2	MDR-K 2 HAK KCA X 010A020	0,4 ... 1,8	0,1 0,2	0,5 ... 3		264514
MDR-K 6	MDR-K 6 HAK KCA X 030A040	1,3 ... 5,5	0,2 0,5	1,5 ... 7		264521
MDR-K 11	MDR-K 11 HAK KCA X 080A090	5,3 ... 10,4	0,4 0,6	5,7 ... 12		264539

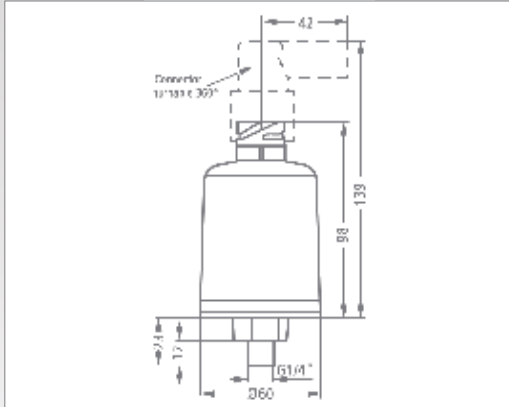
Note: More pressure settings on request.

Technical data MDR K acc. to EN 60947	
Rated operating current $I_e$ AC 1 $U_e=240$ V (1~)	10 A
Rated operating current $I_e$ AC 15 $U_e=240$ V (1~)	4 A
Rated operating current $I_e$ DC 13 $U_e=240$ V (1~)	0,1 A
Permissible motor rating 1~ 230 V	0,55 kW
Mechanical life (AC 15) Cycles	> 1 x 10 <sup>6</sup>
Mechanical life Cycles	> 1 x 10 <sup>6</sup>
Max. electrical cycles Cycles/h	600
Max. mechanical cycles Cycles/h	600
Bursting strength Pz	> 60 bar

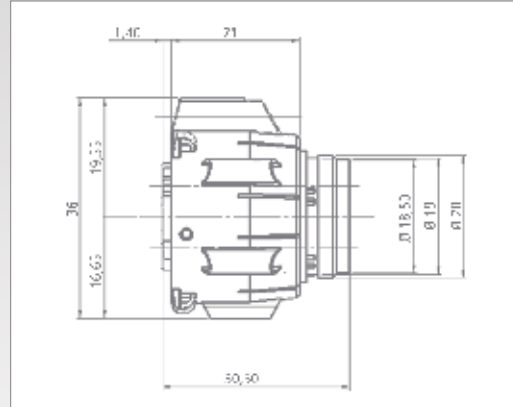
Technical data MDR K acc. to EN 60947	
Vibration resistance	4 g (bei 10 bis 1000 Hz)
Temperature range	- 40 C° bis + 70 C°
Protection acc. to EN 60529	IP 67

Media resistance MDR-K	
A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22. Please read the information carefully.	

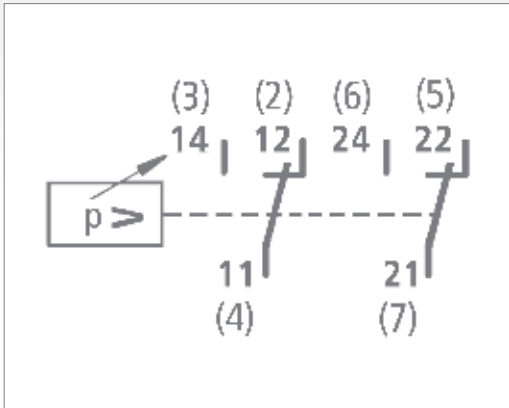
## Dimensions / Circuit diagram MDR - K



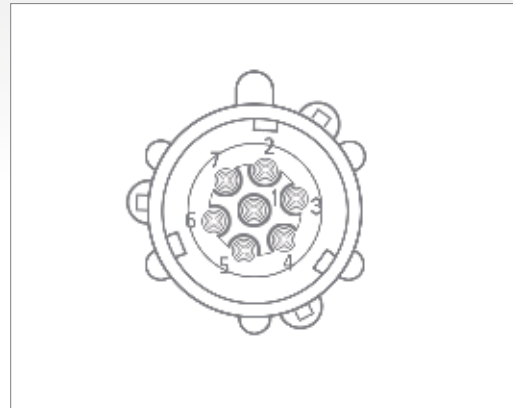
Pressure switch MDR - K



MDR-K bayonet coupling



Circuit diagram MDR - K



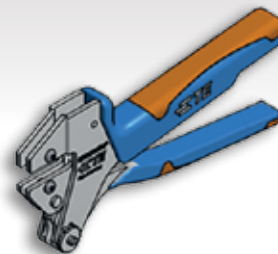
MDR-K bayonet coupling

### Accessories MDR-K

Order reference	Description	Weight (in g)	Part No.
	Connection		
MDR-K BK	MDR-K bayonet coupling (ISO 15170-1)	20 g	264545



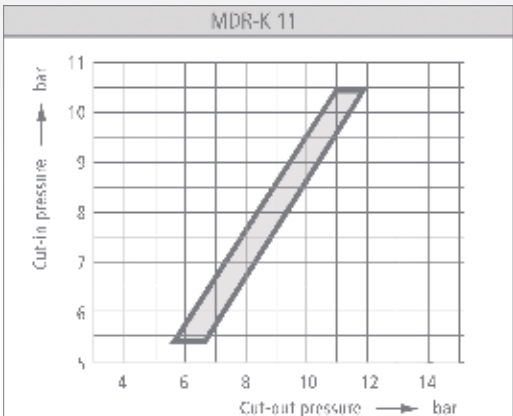
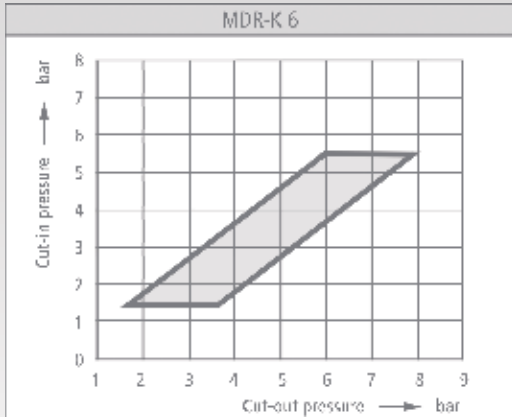
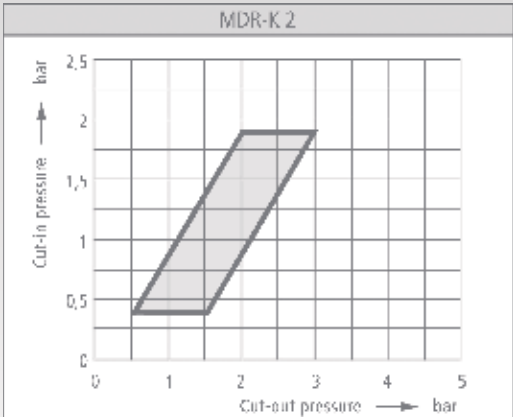
MDR-K bayonet coupling



"Crimping tool"

To connect the six single-core cables 0,75 mm<sup>2</sup> at the bayonet coupling, a crimping tool is needed ( z. Ex. Crimping Hand tool PN539635-1 / Tyco Electronics).

Pressure diagrams MDR - K



Control pressure switches

## Control pressure switch MDR 43



- Max. cut-out pressure 16 bar
- Transparent cover
- 1 N.C. + 1 N.O.
- Acc. to EN 60947
- Flange = Die-cast aluminium

Order reference	Type Code	ON / OFF Rotary knob	Pressure range P <sub>OFF</sub> in bar	Flange	Weight (in g)	Part No.
MDR 43/3	MDR-43 BAA BAAA xxxA020 XAA XXX	-	0,5 - 3	G 1/2" Alu	420	212775
MDR 43/3	MDR-43 BBA BAAA xxxA020 XAA XXX	-	0,5 - 3	G 1/4" Alu	420	212782
MDR 43/6	MDR-43 DAA BAAA xxxA040 XAA XXX	-	2,5 - 6	G 1/2" Alu	420	212799
MDR 43/6	MDR-43 DBA BAAA xxxA040 XAA XXX	-	2,5 - 6	G 1/4" Alu	420	212805
MDR 43/11	MDR-43 GAA BAAA xxxA090 XAA XXX	-	5 - 11	G 1/2" Alu	420	212812
MDR 43/11	MDR-43 GBA BAAA xxxA090 XAA XXX	-	5 - 11	G 1/4" Alu	420	212829
MDR 43/16	MDR-43 HAA BAAA xxxA120 XAA XXX	-	8 - 16	G 1/2" Alu	420	212836
MDR 43/16	MDR-43 HBA BAAA xxxA120 XAA XXX	-	8 - 16	G 1/4" Alu	420	212843

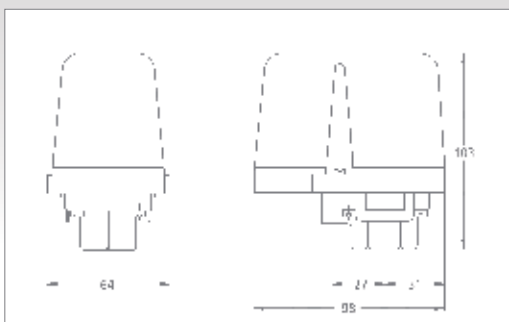
Cut-in pressure is tightest possible pressure differential The cut-out pressure is preset  
 Cable glands for retrofit assembly to be ordered separately, see accessories

Technical Data MDR 43 acc. to EN 60947	
Rated insulation voltage U <sub>i</sub>	500 V
Rated insulation voltage U <sub>e</sub> (AC 15)	250 V
Rated insulation voltage I <sub>the</sub> (AC 15)	8 A
Rated insulation voltage I <sub>e</sub> (max.)	10 A
Mechanical life (AC 15) Cycles	> 1,5 x 10 <sup>5</sup>
Mechanical life Cycles	> 1 x 10 <sup>6</sup>
Max. electrical cycles Cycles/h	120
Max. mechanical cycles Cycles/h	600
Bursting strength P <sub>z</sub>	> 60 bar

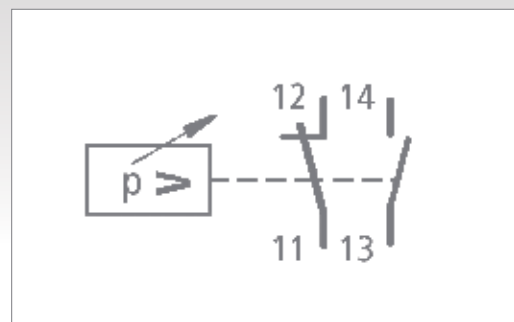
Technical Data MDR 43 acc. to EN 60947	
Permissible medium temperature Air	- 30...+ 80 °C
Permissible medium temperature Water	+ 80 °C
Conductor cross-section 1 .. flexible cable 1 x / 2 x	2,5 / 2,5mm <sup>2</sup>
Conductor cross-section 1 ... rigid cable 1 x / 2 x	2,5 / 2,5mm <sup>2</sup>
Protection acc. to EN 60520	IP 44

Diaphragm media resistance MDR 43	
A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22. Please read the information carefully.	

## Dimensions / Circuit Diagrams MDR 43



Pressure switch MDR 43

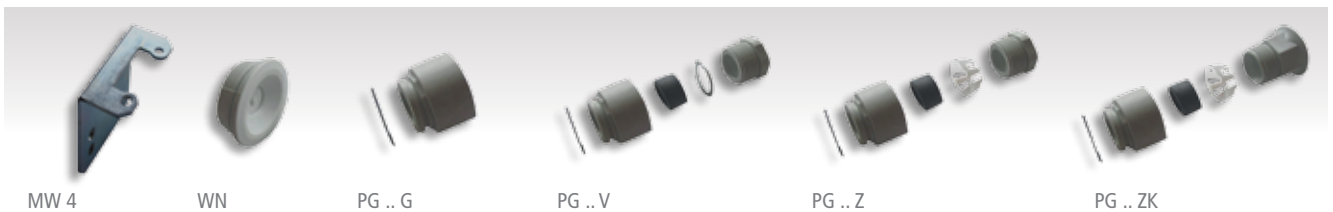


# Control pressure switch MDR 43

## Accessories MDR 43

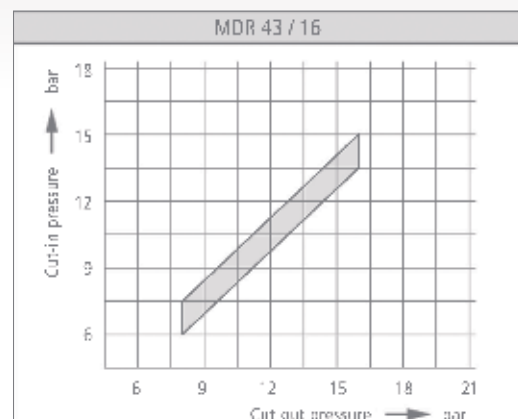
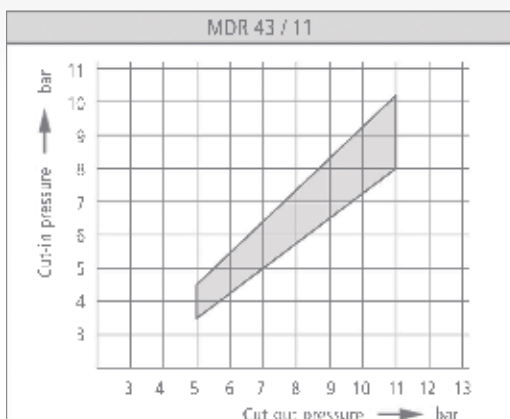
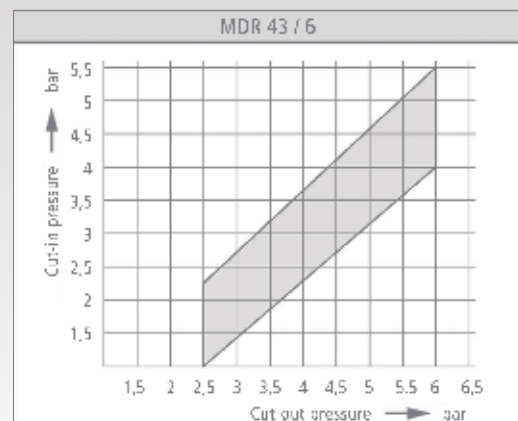
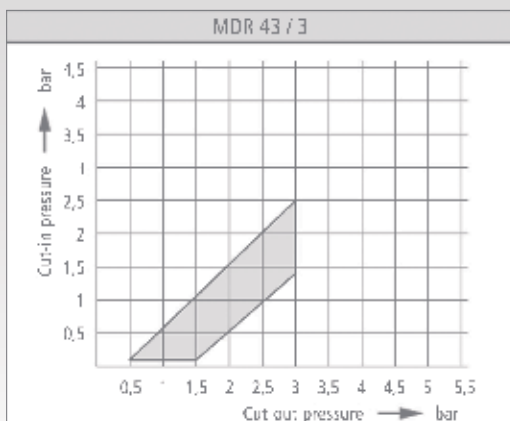
Order reference	Description	Weight (in g)	Part No.
	<b>Cable glands</b>		
WN	Grommet	6	200888
PG 11 G	Conduits for mounting cable glands (inner thread)	6	200895
PG 11 V	Cable glands complete	12	200901
PG 11 Z	With strain relief	12	200925
PG 11 ZK	With strain relief and cable support	12	200918
PG 13,5 G	Conduits for mounting cable glands (inner thread)	6	200963
PG 13,5 V	Cable glands complete	12	200932
PG 13,5 Z	With strain relief	12	200956
PG 13,5 ZK	With strain relief and cable support	12	200949
MW 4	Mounting bracket for MDR 4 and MDR 43	65	230021
	<b>Cover</b>		
H43 (Cover MDR 43)	Cover (Transparent)	70	230038

## Wall-mounting bracket / Cable glands MDR 43



Control pressure switches

## Pressure Diagrams MDR 43





## Control pressure switch MDR 53



- Max. cut-out pressure 16 bar
- Ample wiring room
- High switching accuracy
- 1 SPDT
- Acc. to EN 60947
- Flange = Die-cast aluminium

Order reference	Type Code	ON / OFF Rotary knob	Pressure range P <sub>OFF</sub> in bar	Flange	Weight (in g)	Part No.
MDR 53/8	MDR-53 EAA BAAA xxxA080 XAA XXX	-	0,5 - 8	G 1/2" Alu	740	213079
MDR 53/11	MDR-53 GAA BAAA xxxA110 XAA XXX*	-	6 - 11	G 1/2" Alu	780	216919
MDR 53/16	MDR-53 HAA BAAA xxxA160 XAA XXX	-	6 - 16	G 1/2" Alu	780	213086
MDR 53/25 SO3	MDR-53 NAA BAAA xxxA030 XAA XXX**	-	bis 3	G 1/2" Alu	740	213130
MDR 53/25 SO8	MDR-53 OAA BAAA xxxA080 XAA XXX**	-	bis 8	G 1/2" Alu	740	213147

\* xxx = Cut-out pressure is preset, cut-in pressure is the tightest possible pressure differential.

\*\* xxx = Cut-out pressure is preset, cut-in pressure is the tightest possible pressure differential and pressure-resistant up to 25 bar, SO-Type.

A screw plug is also supplied.

Cable glands for retrofit assembly to be ordered separately, see accessories!

Technical Data MDR 53 acc. to EN 60947	
Rated insulation voltage U <sub>i</sub>	500 V
Rated insulation voltage U <sub>e</sub> (AC 15)	250 V
Rated insulation voltage I <sub>e</sub> (AC 15)	4 A
Rated insulation voltage I <sub>the</sub> (max.)	10 A
Electrical life (AC 15) Cycles	> 2 x 10 <sup>5</sup>
Mechanical life Cycles	> 2 x 10 <sup>6</sup>
Max. electrical cycles Cycles/h	120
Max. mechanical cycles Cycles/h	1200
Bursting strength P <sub>z</sub>	> 40 bar
Protection acc. to EN 60529	IP 54

Technical Data MDR 53 acc. to EN 60947	
Permissible medium temperature Air	- 30...+ 80 °C
Permissible medium temperature Water	+ 80 °C
Conductor cross-section 1 .. flexible cable 1 x / 2 x	2,5 / 2,5mm <sup>2</sup>
Conductor cross-section 1 ... rigid cable 1 x / 2 x	2,5 / 2,5mm <sup>2</sup>

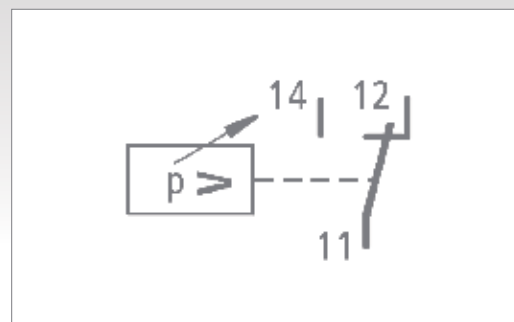
Diaphragm media resistance MDR 53	
A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22. Please read the information carefully.	

A detailed overview of diaphragm media resistance for all pressure switches can be found on page 22.

## Dimensions / Circuit Diagrams MDR 53



Pressure switch MDR-53





## Pressure Diagrams MDR 53

