

Pressure Switches

Product information for five Danfoss industrial pressure switches

This sheet covers three Danfoss pressure-switch families. The **KP 1** and **KP 35** belong to the KP range for refrigeration and industrial use, the **KPS 43** is a heavy-duty, higher-protection switch from the KPS range, and the **MBC 5100** is a marine-approved switch shown here in 1 to 10 bar and 5 to 25 bar versions.

At a glance

Product	Range	Differential	Enclosure	Typical use
KP 1	About -0.9 to 7 bar*	Adjustable; 0.7 bar (10 psi) typical	Open / ~NEMA 1	Refrigeration
KP 35	-0.2 to 7.5 bar	0.7 to 4.0 bar	IP30 (IP44 / IP55 options)	Pumps, compressors, industry
KPS 43	1 to 10 bar	0.7 to 2.8 bar	IP67 (IPX6)	Marine, compressors, diesel plants
MBC 5100 (1-10 bar)	1 to 10 bar	Depends on sensing element	IP65	Marine, pumps, compressors
MBC 5100 (5-25 bar)	5 to 25 bar	Depends on sensing element	IP65	Marine, pumps, compressors

Common features

- Mechanical pressure switches with a single-pole changeover (SPDT) contact
- Adjustable setpoint, with a differential set by the model or by an adjustment spindle
- G 1/4 pressure connection on the KP 35, KPS 43 and MBC 5100
- KPS and MBC models carry marine approvals (ABS, DNV, BV, RINA, Lloyd's Register and others)

Product profiles

KP 1

Low-pressure switch for refrigeration

Compact pressure switch from Danfoss' KP family, used for low-pressure cut-out and control in refrigeration systems. It is available with automatic or manual reset.

- Regulating range depends on the version; low-pressure type listed at about -0.9 to 7 bar*
- Differential 0.7 bar (10 psi) for manual-reset models; adjustable on automatic-reset versions
- Test pressure 20 bar (285 psig); ambient temperature -40 to +65 C
- Contact rating 120 V AC 16 FLA or 240 V AC 8 FLA; screw terminals
- Compatible with R22, R134a, R404A, R407C, R448A, R449A, R507A, R513A and other refrigerants; not for ammonia
- Automatic or manual reset versions

KP 35

Industrial pressure switch for gaseous media

Industrial pressure switch from the KP range, used to control, monitor and raise alarms on pumps, compressors and other equipment with gaseous media.

- Regulating range -0.2 to 7.5 bar; differential 0.7 to 4.0 bar
- Maximum working pressure 17 bar; test pressure 22 bar
- SPDT contact: AC-1 16 A at 400 V, AC-15 10 A at 400 V, DC-13 12 W at 220 V
- Ambient -40 to +65 C; media -40 to +100 C; G 1/4 A connection
- IP30 standard, IP44 with top cover and IP55 with accessories; automatic or manual reset
- CE-marked (LVD 2014/35/EU); UL and CCC approvals

KPS 43

Heavy-duty industrial and marine pressure switch

Rugged pressure switch from the KPS family, built for monitoring and control in factories, diesel plants, compressors, power stations and on board ships.

- Regulating range 1 to 10 bar; differential 0.7 to 2.8 bar
- Withstands 120 bar overpressure (180 bar test, 240 bar burst) and pulsating media
- Enamelled die-cast aluminium housing, IP67 (including IPX6)
- SPDT contact: 10 A at 440 V AC-1, 6 A at 440 V AC-3, 12 W at 220 V DC-13
- Ambient -25 to +70 C; media -25 to +100 C; G 1/4 connection; automatic reset
- Marine approvals include ABS, DNV, GL, RINA, BV, KR and Lloyd's Register; recommended for seawater

MBC 5100 (1-10 bar)

MBC 5100 pressure switch, 061B104066

Pressure switch from the MBC 5000/5100 range for alarm, shutdown and control on motors, gears, thrusters, pumps, filters and compressors.

- Range of 1 to 10 bar with G 1/4 connection and IP65 protection, as listed for this part number
- Sensing element (bellows, diaphragm or piston) sets the differential and maximum working pressure
- SPDT contact rated AC-15 0.5 A at 250 V and DC-13 12 W at 125 V
- Operating temperature -40 to +85 C (bellows and piston) or -10 to +85 C (diaphragm)
- Anodised aluminium or stainless-steel housing with FKM and NBR seals
- Marine approvals include DNV GL, ABS, BV, RINA, LR, KR, NKK, CCS and RMRS

MBC 5100 (5-25 bar)

MBC 5100 pressure switch, higher range

The higher-range version of the MBC 5100 for pumps, compressors and filters running at medium pressures.

- Range of 5 to 25 bar with G 1/4 connection and IP65 protection, as listed**
- Same housing, contact system, materials and marine approvals as the 1 to 10 bar version
- SPDT contact rated AC-15 0.5 A at 250 V and DC-13 12 W at 125 V
- Operating temperature -40 to +85 C (bellows and piston) or -10 to +85 C (diaphragm)
- Part number was not visible in the list provided**

Notes and sources

* The KP 1 regulating range is shown as given in the product list provided. Danfoss' KP 1 data sheet does not state a single range, and the range depends on the version, so confirm against the part number.

** The fifth item in the product list was cut off after "MBC 5100", so it is shown as the 5 to 25 bar, G 1/4, IP65 variant. Confirm the part number before ordering.

The MBC 5100 differential and maximum working pressure depend on the sensing element (bellows, diaphragm or piston) and range; Danfoss' MBC 5100 datasheet lists several ranges, including 1.0 to 6.0 and 5.0 to 30 bar versions. Max working pressure on the MBC 5100 runs from 15 bar to 600 bar depending on type.

Compiled from Danfoss data sheets for the KP, KPS and MBC 5000/5100 ranges and Danfoss store listings. Confirm against the current Danfoss documentation before quoting or ordering.