



Pressure Switch

CKB

Pressure switch for R744 (CO₂)

Description

Safety pressure switch CKB are compact disc type pressure switches with fixed set-points for long-standing use in all CO₂ refrigeration systems.

CKB safety pressure switch is used to protect compressor and the system against too high pressure.

CKB safety pressure switch provides excellent performance, ensuring minimal drift of setting and extremely stable operation over the entire lifetime. It provides automatic or manual reset limit protection.

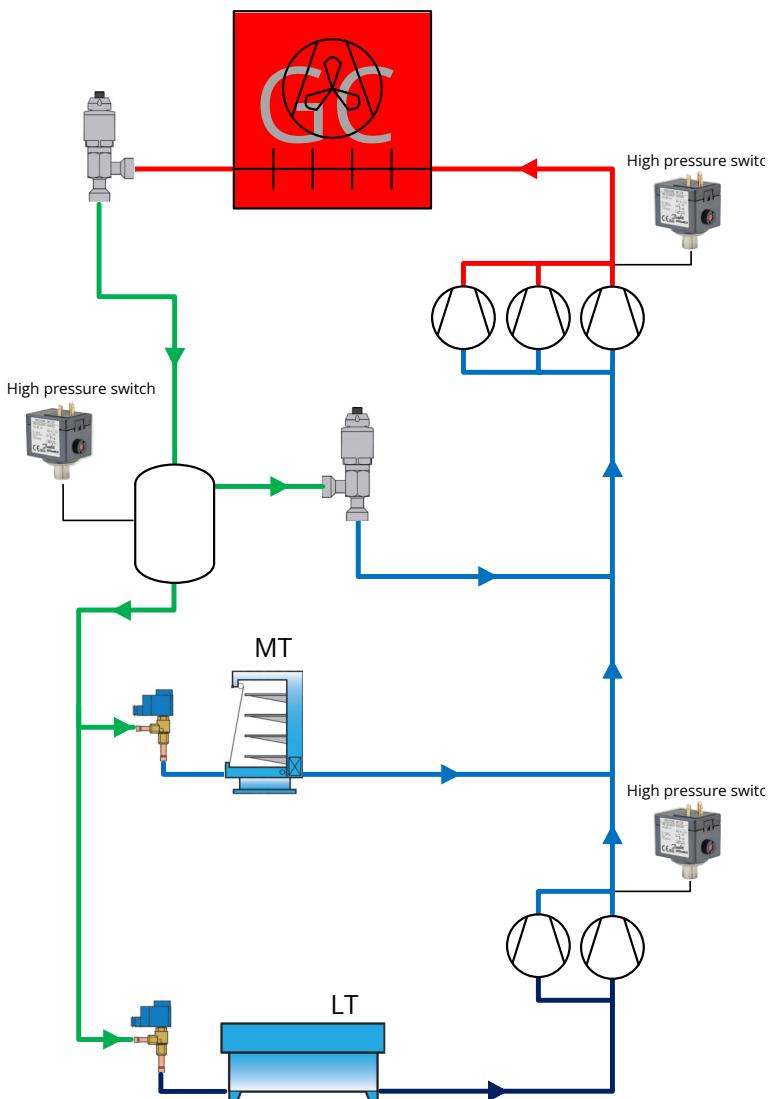
The small size, lightness and high degree of protection means that it can be mounted directly on the refrigeration systems. The switch is available with different pressure settings to suit customer requirements.

Features & benefits

- Electromechanical design with diaphragm as sensing element
- Fixed pressure set points
- SPDT contact system
- Automatic (PSH) or manual reset (PZH / PZHH)
- Electrical connection with DIN plug
- Water-proof enclosure (IP65)
- For use as high pressure cut out
- For CO₂ subcritical and transcritical CO₂ systems up to 143 bar
- Compact design and easy to install
- PED 2014/68/EU Category IV according to EN 12263 and UL approval according to UL60730

Applications

Figure: Safety pressure switch in subcritical and transcritical CO₂ systems



Ordering

Product code numbers

Type	Higher activ. pressure [psi]	Higher activ. pressure [bar]	Reset function	Pressure connection length [mm]	Packing format	Code number
CKB	580	40.00	Auto	14	Multi pack	061Z1001
CKB	667	46.00	Auto	14	Multi pack	061Z1002
CKB	696	48.00	Auto	14	Multi pack	061Z1003
CKB	1523	105.00	Auto	14	Multi pack	061Z1004
CKB	1566	108.00	Auto	14	Multi pack	061Z1005
CKB	783	54.00	Auto	14	Multi pack	061Z1007
CKB	1595	110.00	Auto	14	Multi pack	061Z1011
CKB	725	50.00	Auto	14	Multi pack	061Z1012
CKB	1537	106.00	Auto	14	Multi pack	061Z1016
CKB	1697	117.00	Auto	14	Multi pack	061Z1017
CKB	1653	114.00	Auto	14	Multi pack	061Z1019
CKB	1784	123.00	Auto	14	Multi pack	061Z1021
CKB	580	40.00	Manual	14	Multi pack	061Z2001
CKB	1566	108.00	Manual	14	Multi pack	061Z2002
CKB	1595	110.00	Manual	14	Multi pack	061Z2003
CKB	1886	130.00	Manual	14	Multi pack	061Z2006
CKB	677	46.00	Manual	14	Multi pack	061Z2007
CKB	1711	118.00	Manual	14	Multi pack	061Z2008
CKB	1740	120.00	Manual with tool	14	Multi pack	061Z3001
CKB	1885	130.00	Manual with tool	14	Multi pack	061Z3002
CKB	1697	117.00	Auto	43	Multi pack	061Z4001
CKB	580	40.00	Auto	43	Multi pack	061Z4007
CKB	696	48.00	Auto	43	Multi pack	061Z4008
CKB	667	46.00	Auto	43	Multi pack	061Z4010
CKB	783	54.00	Auto	43	Multi pack	061Z4011
CKB	1537	106.00	Auto	43	Multi pack	061Z4012
CKB	1653	114.00	Auto	43	Multi pack	061Z4013
CKB	1566	108.00	Auto	43	Multi pack	061Z4014
CKB	725	50.00	Auto	43	Multi pack	061Z4016
CKB	667	46.00	Auto	43	Industrial pack	061Z4018
CKB	783	54.00	Auto	43	Industrial pack	061Z4019
CKB	1566	108.00	Auto	43	Industrial pack	061Z4020
CKB	1697	117.00	Auto	43	Industrial pack	061Z4022
CKB	1885	130.00	Auto	43	Multi pack	061Z4023
CKB	1711	118.00	Manual	43	Multi pack	061Z5001
CKB	580	40.00	Manual	43	Multi pack	061Z5002
CKB	667	46.00	Manual	43	Multi pack	061Z5003
CKB	725	50.00	Manual	43	Multi pack	061Z5004
CKB	1668	115.00	Manual	43	Multi pack	061Z5005
CKB	1784	123.00	Manual	43	Multi pack	061Z5006
CKB	783	54.00	Manual	43	Multi pack	061Z5007
CKB	1668	115.00	Manual	43	Industrial pack	061Z5008
CKB	1784	123.00	Manual	43	Industrial pack	061Z5009
CKB	1566	108.00	Manual	43	Multi pack	061Z5012
CKB	1885	130.00	Manual with tool	43	Multi pack	061Z6003
CKB	1740	120.00	Manual with tool	43	Industrial pack	061Z6004
CKB	1885	130.00	Manual with tool	43	Industrial pack	061Z6005

Accessories code numbers



060G0007

Accessories, sensors, Electrical connector

Used for product: AKS/MBS, Parts included: Angular con. PG11 w.knife cont; Gasket, Packing format: Multi pack, Quantity per packing format: 96

Related products

061Z1001	061Z1002	061Z1003	061Z1004
061Z1005	061Z1007	061Z1011	061Z1012
061Z1016	061Z1017	061Z1019	061Z1021
061Z2001	061Z2002	061Z2003	061Z2004
061Z2005	061Z2006	061Z2007	061Z2008
061Z2009	061Z3001	061Z3002	061Z4001
061Z4007	061Z4008	061Z4010	061Z4011
061Z4012	061Z4013	061Z4014	061Z4016
061Z4018	061Z4019	061Z4020	061Z4022
061Z4023	061Z5001	061Z5002	061Z5003
061Z5004	061Z5005	061Z5006	061Z5007
061Z5008	061Z5009	061Z5012	061Z5013
061Z6003	061Z6004	061Z6005	



060G1034

Accessories, sensors, Cable

Used for product: AKS/MBS, Parts included: Plug w. 5,0 m cable, Packing format: Multi pack, Quantity per packing format: 8

Related products

061Z1001	061Z1002	061Z1003	061Z1004
061Z1005	061Z1007	061Z1011	061Z1012
061Z1016	061Z1017	061Z1019	061Z1021
061Z2001	061Z2002	061Z2003	061Z2004
061Z2005	061Z2006	061Z2007	061Z2008
061Z2009	061Z3001	061Z3002	061Z4001
061Z4007	061Z4008	061Z4010	061Z4011
061Z4012	061Z4013	061Z4014	061Z4016
061Z4018	061Z4019	061Z4020	061Z4022
061Z4023	061Z5001	061Z5002	061Z5003
061Z5004	061Z5005	061Z5006	061Z5007
061Z5008	061Z5009	061Z5012	061Z5013
061Z6003	061Z6004	061Z6005	



060G0008

Accessories, sensors, Electrical connector

Used for product: AKS/MBS, Parts included: Gasket; Angular con. PG9 w.knife cont., Packing format: Multi pack, Quantity per packing format: 96

Related products

061Z1001	061Z1002	061Z1003	061Z1004
061Z1005	061Z1007	061Z1011	061Z1012
061Z1016	061Z1017	061Z1019	061Z1021
061Z2001	061Z2002	061Z2003	061Z2004
061Z2005	061Z2006	061Z2007	061Z2008
061Z2009	061Z3001	061Z3002	061Z4001
061Z4007	061Z4008	061Z4010	061Z4011
061Z4012	061Z4013	061Z4014	061Z4016
061Z4018	061Z4019	061Z4020	061Z4022
061Z4023	061Z5001	061Z5002	061Z5003
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061Z5008	061Z5009	061Z5012	061Z5013
061Z6003	061Z6004	061Z6005	

Product details

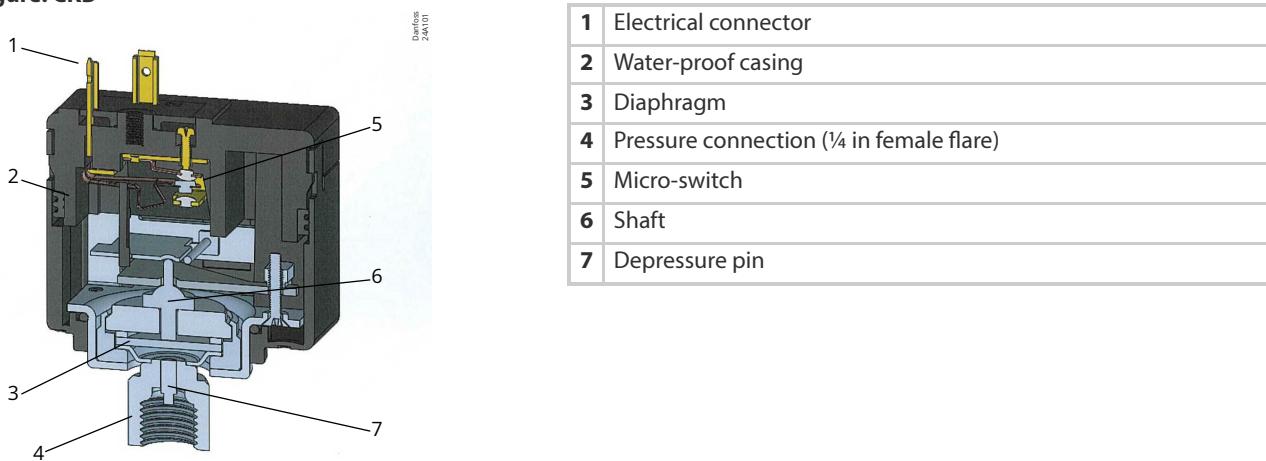
General data

Table: Type CKB

Type	CKB
Medium	R744 (CO ₂)
Range (fixed settings)	40 – 130 bar
Accuracy of setting	0/-8% (EN 12263)
Differential	auto reset: 10 bar / manual reset: 13 bar (setting \leq 70 bar), 25 bar (setting above 70 bar)
Contact function	SPDT
Electrical connections	DIN plug (to be ordered separately)
	Full Load: $\text{Cos}\phi = 0,75$
Contact load - AC	1 to 6 A 240 V AC Inrush current: Maximum 36 A 240 V AC
Contact load - DC	0.1 to 1 A 30 V DC
Pressure connections	7/16"-20UNF female thread with schrader opener
Maximum working pressure PS / MWP	143 bar
Media temperature	-40 – 150 °C (do not freeze)
Ambient humidity	30% RH to 85% RH (do not condense)
Vibrations resistance	4G (at 20 – 250 Hz)
Ambient temperature for storage, transport and using	-40 – 70 °C
Enclosure	IP65, if used with DIN plug (EN175301-803-A (ISO 4400))

Design

Figure: CKB



As pressure is applied through the connection on to the diaphragm, the diaphragm is pushed up against the operation shaft. When the operation shaft rises, it pushes up the contact plate in the micro-switch, so that contacts become connected or disconnected. As the pressure in the connection decreases, the diaphragm returns to its original state, and the operation shaft lowers, causing the contact plate to return to its original position.

Dimensions

Figure: PSH-PZH-PZHH (weight 184g)

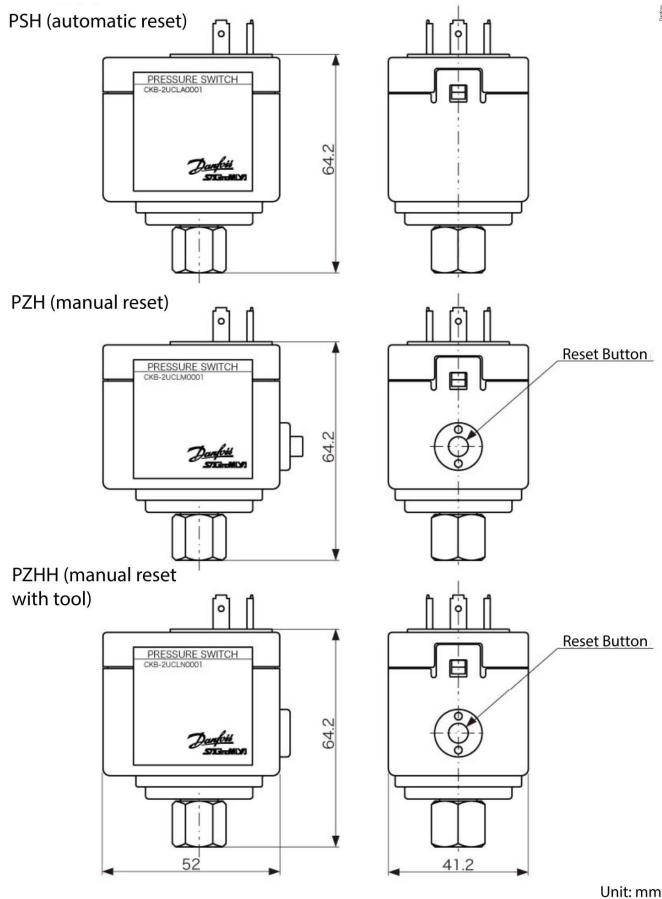


Figure: Pressure admission port (Details)

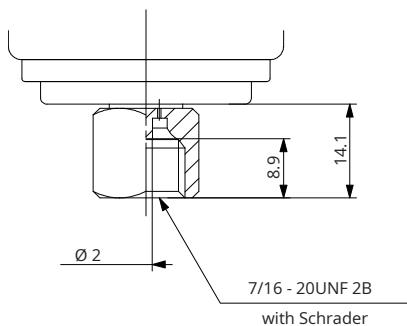
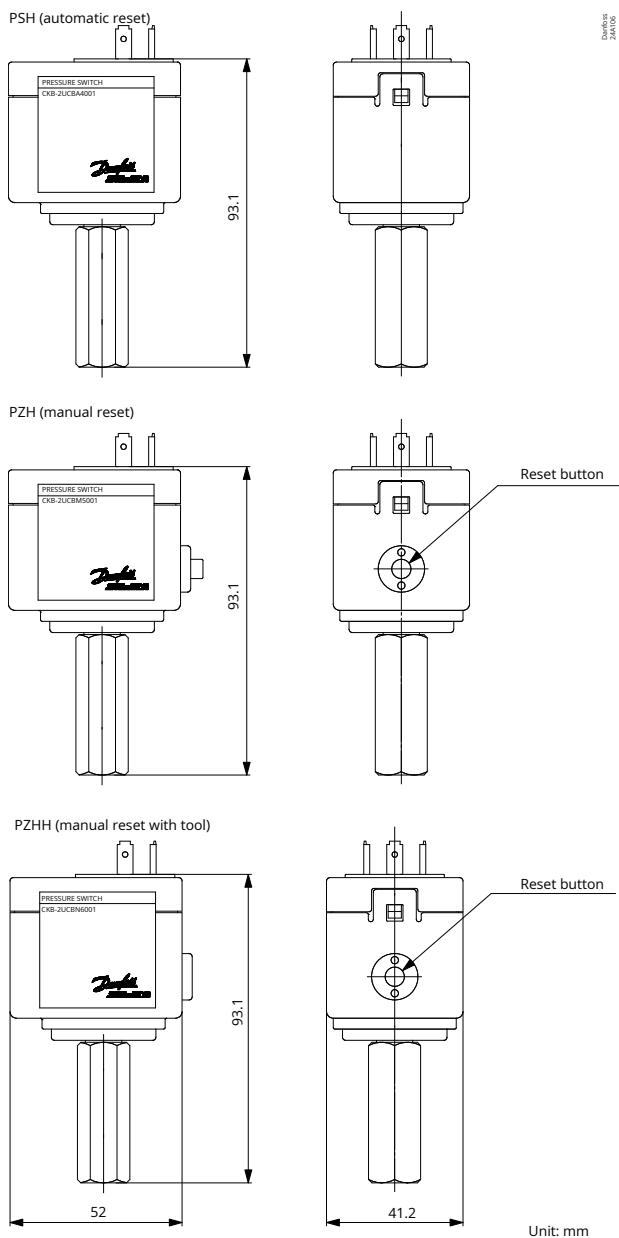
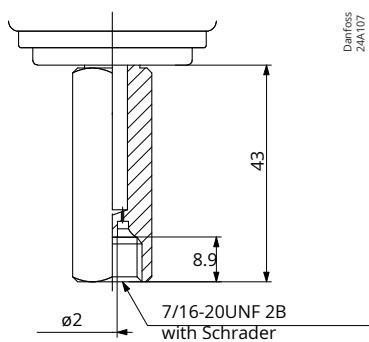
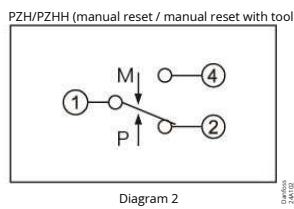
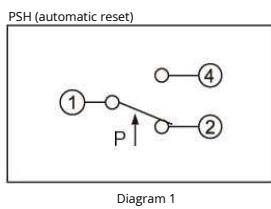


Figure: PSH-PZH-PZHH with extended pressure connector (weight 214g)**Figure: Pressure admission port (details)**

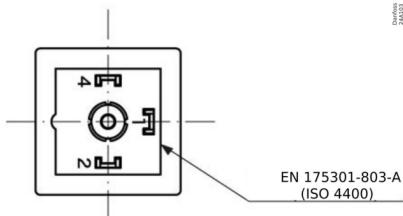
Connections

Figure: Contact functions



P	Operating direction on press. increase at high pressure side
M	Operating direction on manual reset

Figure: Wirings



Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
Electrical Safety Certificate	UL E43867	UL - Underwriters Laboratories inc.	
EU Declaration	Danfoss EU Saginomiya 2024-01-18	Danfoss	LVD
UK Declaration	Danfoss UK Saginomiya 2023.01.30 CKB	Danfoss	UK RoHS
Quality Assurance Certificate	TÜV 01 202 931 Q-04 0018.00	TÜV Rheinland - Technischer ÜberwachungsVerein	PED
UA Declaration	Danfoss UA 2023-01-10 Regulators PL01 PL04	Danfoss	PED
Export Control Declaration	Pressure switches & Thermostats	Danfoss	
Pressure Safety Certificate	LLC CDC EURO-TYSK UA.TR.089.1015.05-22	LLC CDC EURO TYSK - Ukraine	Pressure
Pressure Safety Certificate	TÜV 01 202 641 B-19 0023	TÜV Rheinland - Technischer ÜberwachungsVerein	PED

Contact details

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