

## Main Features

Ongoing development of new technology and new features is at the very heart of Danfoss. We want our switches to be among the very best on the market – living up to your expectations.

### Low differential switching

Danfoss pressure controls and thermostats have either fixed or adjustable differential settings, good readability, and high accuracy of range setting with use of the scale

the moment the contact breaks. Units with gold-plated contacts are ideal for low electrical loads while the AgCdO (silver cadmium oxide) contacts are developed for high loads

### Different sensing elements

As experts in charging technologies, Danfoss offers temperature switches that operate in a wide temperature range

### Designed for various applications

Danfoss offers a very broad range of purpose-specific enclosures and connections

### Wide range of approvals

Danfoss offers a wide range of approvals suited for specific applications and geographical markets

### High reliability

All switches feature high accuracy, repeatability and stability over time

### High vibration stability

Outstanding vibration stability in switches ensures flawless operation even in heavy-duty applications

### Snap action contacts

All contacts are snap-action, maintaining the contact force until

### Wide pressure ranges

The programme covers working ranges from -0.9 bar up to 46.5 bar

## A world leader in climate and energy technology

The Danfoss Group operates globally with the primary aims of making modern living possible for our stakeholders and being a leader in refrigeration, heating, power electronics, and mobile hydraulics.

We employ 24,000 people and produce approximately 250,000 components each day at our 76 factories in 25 countries.

We promise leadership in our businesses through reliability, excellence, and innovation – driving true customer satisfaction and solutions within climate and energy.

### Extensive experience in all key HVAC/R segments

Danfoss plays a leading role in research, development and production in a wide spectrum of industries, and has been a key player in the HVAC/R field for more than 75 years. Our Refrigeration & Air Conditioning Division designs, produces and markets a comprehensive range of automated solutions and compressors for a wide variety of HVAC/R segments, including

- Heat Pumps
- Commercial Air Conditioning
- Residential Air Conditioning
- Commercial Refrigeration
- Household, Light Commercial and Mobile Refrigeration
- Wholesalers & Installers
- Industrial Refrigeration
- Food Retail



Learn more at [www.danfoss.com](http://www.danfoss.com)

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Your system will **never be more reliable**, with a control designed for **flawless performance**

Wide range of Danfoss Pressure switches and Thermostats





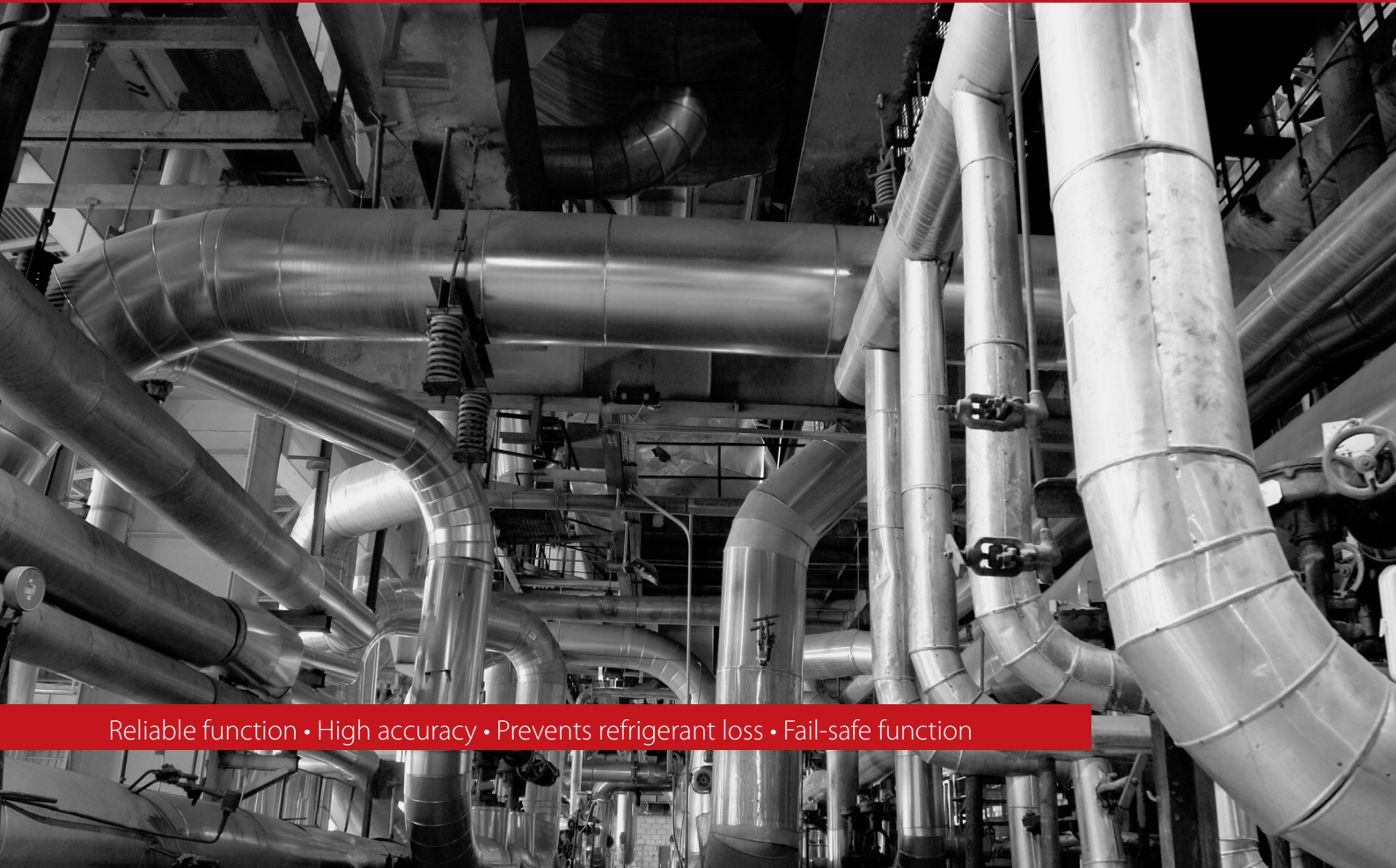
# Pressure switches and Thermostats

Danfoss Pressure switches and Thermostats cover many applications within Refrigeration and Air Conditioning and can be used with all low and high pressure fluorinated refrigerants as well as ammonia and hydrocarbons.

The Danfoss Pressure switches and Thermostats feature either fixed or adjustable differential settings, good readability and high accuracy of range setting with use of the scale. Using advanced technology, and being a world leader, Danfoss controls are manufactured with bellows without any welding points, which make them stress free, completely tight and assure a long lifetime.


















































Ongoing development of new technology is at the very heart of Danfoss. Our Pressure switches and Thermostats are among the very best on the market – living up to your expectations.

Danfoss components are constructed to perform under the most difficult operating conditions, to monitor your processes and to protect your equipment. Our production utilises state of the art processes and every product is designed on the basis of decades of global experience in Refrigeration and Air Conditioning applications.



Reliable function • High accuracy • Prevents refrigerant loss • Fail-safe function

## Choose the optimal solution

Choose the optimal solution			PRESSURE SWITCHES					DIFFERENTIAL PRESSURE SWITCHES		THERMOSTATS			
													
TYPE			KP SINGLE	KP DUAL	KPU SINGLE <sup>1)</sup>	KPU DUAL <sup>1)</sup>	RT	MP	RT	KP	KPU <sup>1)</sup>	UT	RT
			<ul style="list-style-type: none"><li>Ideal for starting and stopping refrigeration compressors and fans on air-cooled condensers</li><li>Offer protection against excessively low suction pressure or excessively high discharge pressure</li></ul>					<ul style="list-style-type: none"><li>Used as safety switches to protect refrigeration compressors against low lubricating oil pressure</li></ul>	<ul style="list-style-type: none"><li>Used as protection against differential pressure that is too low or as protection against low lubricating oil pressure in refrigeration compressor.</li></ul>	<ul style="list-style-type: none"><li>Used for regulation and safety monitoring systems</li><li>Available with vapour charge or with adsorption charge</li><li>Typical applications are frost protection, defrost control, case and room control.</li></ul>	<ul style="list-style-type: none"><li>Can be used for wide range of applications including cold rooms, beverage coolers, ice cream makers, milk coolers, refrigerated counters, air-conditioning plant and heat recovery systems.</li></ul>	<ul style="list-style-type: none"><li>Used for regulation and safety monitoring systems in general industrial and marine sectors</li></ul>	
Applications	Marine Applications												
	Industrial Applications												
	Air Conditioning Systems												
	Commercial Refrigeration												
	Food Retail												
Technical Specifications	Refrigerants	HCFC	•	•	•	•	•	•	•				
		HFC (Flammable / non-flammable)	•	• <sup>2)</sup>	•	•	• <sup>2)</sup>	•	•	–	–	–	–
		HC	•				•	•	•				
		R717 (NH <sub>3</sub> )	•				•	•	•				
	Setting		-0.9 – 42 bar	-0.9 – 32 bar	-0.2 – 42 bar	-0.2 – 42 bar	-0.8 – 30 bar	0.3 – 4.5 bar	0.1 – 11 bar	-50 – 180 °C	-50 – 60 °C	-30 – 40 °C	-60 – 150 °C
	Maximum working pressure (PS) / Maximum sensor temp.		46.5 bar	17 bar / 35 bar	46.5 bar	17 bar / 46.5 bar	42 bar	17 bar	42 bar	200 °C	130 °C	90 °C	300 °C
	Main pressure connectors / sensor types		Flare · Solder · M10 Capillary tube · Cutting ring	Flare · Solder · M10 Capillary tube · Cutting ring	Flare · Capillary tube	Flare · Capillary tube	Flare · G 1/2 G 3/8 with weld nipple · Cutting ring	Flare · Solder · M10 Capillary tube · Cutting ring	Cutting ring · G 1/2 G 3/8 with weld nipple	Remote bulb · Room sensor · Capillary tube · Remote air / duct coil	Remote bulb · Room sensor · Capillary tube · Remote air / duct coil	Remote bulb	Remote bulb · Room sensor · Capillary tube · Remote air / duct coil
	Electrical rating AC-3		16 A / 400 V	16 A / 400 V	16 A / 400 V	16 A / 400 V	4 A / 400 V	–	4 A / 400 V	16 A / 400 V	16 A / 400 V	–	4 A / 400 V
	Electrical rating AC-15		10 A / 400 V	10 A / 400 V	10 A / 400 V	10 A / 400 V	3 A / 400 V	2 A / 250 V	3 A / 400 V	10 A / 400 V	10 A / 400 V	2.5 A / 250 V	3 A / 400 V
	Contact material		Silver or Gold	Silver or Gold	Silver	Silver	Silver or Gold	Silver	Silver or Gold	Silver or Gold	Silver	Silver	Silver or Gold
Degree of enclosure		IP30 · IP44 · P55	IP30 · IP44 · IP55	IP30	IP30	IP54 · IP66	IP20	IP66	IP30 · IP44	IP30	IP20	IP66	
Reset	Automatic	•	•	•	•	•	•	•	•	•	•	•	
	Manual	•	•	•	•	•	•	•	•	•			
	Convertible		•		•								
Special approvals		PED · UL · CCC · Marine	PED · UL · CCC · Marine	PED · UL	PED · UL	PED · ATEX · CCC · Marine	UL · CCC · Marine	ATEX · CCC · Marine	UL · CCC · Marine	UL	–	ATEX · CCC · Marine	
Accessories		Capillary tubes Brackets IP55 Enclosure	Capillary tubes Brackets IP55 Enclosure	Capillary tubes Brackets	Capillary tubes Brackets	Contact system Capillary tubes Setting knob	Capillary tubes Brackets	Capillary tubes Contact system	Brackets Sensor pockets Sensor clamp	Brackets Sensor pockets Sensor clamp	Setting knob Sensor clamp	Setting knob Sensor pockets Sensor clamp Contact system	

<sup>1)</sup> Dedicated for US market • <sup>2)</sup> Excluding R410A