

## Discover a variety of built-in benefits



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.

- 1 Low differential switching**  
Pressure and temperature controls have either fixed or adjustable differential settings, good readability, and high accuracy of range setting with use of the scale.
- 2 Bellows technology**  
The lifetime of a pressure and temperature switch is determined by the quality of the bellows. Using advanced technology, and being world leader, Danfoss' bellows are manufactured without any welding points, which makes them stress free and completely tight.

- 3 Designed for various applications**  
Danfoss offers a very broad range of purpose-specific enclosures and connections.
- 4 Snap action contacts**  
All contacts are "snap-action" types, maintaining the contact force until the moment of contact break. Units with gold-plated contacts are ideal for low electrical loads while the silvercadmium contacts are developed for high loads.

**15 international approvals**  
Danfoss offers a wide range of approvals suited for specific applications and geographical markets.

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

**Wide pressure ranges**  
The programme covers working ranges from -1 bar up to 400 bar.

**High reliability**  
All switches feature high accuracy, repeatability and stability over time.

**Different sensing elements**  
As experts in charging technologies, Danfoss offers temperature switches that operate in a wide temperature range.

## Engineering Tomorrow



Danfoss is a leading global player within the development and production of mechanical and electronic products and controls. Since 1933, our extensive know-how has made modern life easier and we continue to break new ground within our core business areas.

Every day, more than 250,000 items are produced at 70 factories in 25 countries. Impressive as these figures are, we are most proud of the way our dedicated employees apply the high-quality components in customer solutions, adding value to the end products. Building strong partnerships is of great importance to us, because it is purely by understanding our customers' needs that we can meet the expectations of tomorrow.

This is also true in Industrial Automation, a Danfoss entity dedicated to focusing on the industrial world of today. Through us, you gain access to the entire Danfoss pool of technologies, with special emphasis on sensors and controls.

**We offer safer, more reliable and more efficient solutions in a close cooperation based on firm values.**

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

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## Switch to a **reliable solution** **Approved** by the toughest

Wide range of Danfoss Pressure switches and Thermostats



# Switch to a reliable supplier

When it comes to demanding applications, Danfoss' know-how and expertise is unsurpassed. Our robust switches offer flawless performance day after day and are trusted in the

most challenging situations in a variety of industries and applications, of which some are mentioned in the following.

## Marine and railway equipment



Break down of essential functions in trains and ships due to failures in the controls and safety equipment can be dangerous, very costly and time consuming. These customers therefore choose partners who have a good reputation and superior products to offer, among others:

- Temperature and pressure control and alarm functions in lubrication oil systems – type KPS, CAS and MBC
- Pressure control for air compressors – type MBC, KP and RT
- Essential safety control on trains – type RT and CAS

## Industrial boilers and boiler room equipment



For boilers and in boiler rooms, accurate monitoring of steam/hot water installations, heat exchangers and water treatment equipment for feed water is vital. Danfoss' programme for steam and high-pressure hot water boilers and burners includes:

- Safety approved pressure controls – type BCP and RT
- Reliable alarm and safety functions – type BCP, RT and KP

## Autoclaves and sterilisers



High control and safety are essential within the autoclave process. Temperatures and pressures must be controlled within narrow limits over time by products with high repeatability and trustworthy performance:

- Check of door sealing – type KP, BCP and RT
- Pressure controls of steam supply – type KP, RT and BCP
- Control and alarm of pressure in the process chamber – type BCP, KP and RT

## Water pumps and air compressors



In water pumps and air compressors it is important to keep a constant pressure and a continuous flow. To ensure this Danfoss offers a range of switches for:

- Monitoring and direct start/stop of single or three phase motors – type RT, MBC, CS, CAS and KP/KPI
- Dry run protection of pumps – type KP/KPI and RT

## Hydraulic equipment and windmills



Danfoss switches are intended for flawless alarm indication, shut down, control and diagnostics in a variety of demanding applications:

- Cooling and lubrication systems for generators and gearboxes – type MBC, KPS, KPI, KP, CAS and RT
- Hydraulic units such as disk brakes and pitch cylinders – type MBC, KPS and RT
- Power packs – type MBC and KP

# Choose the optimal solution

## PRESSURE SWITCHES

## DIFFERENTIAL PRESSURE SWITCHES

## TEMPERATURE SWITCHES



	TYPE	KP/KPI	BCP	RT	MBC	KPS	CAS	CS	MBC	CAS	RT	KP	RT	MBC	KPS	
Segments	Marine and railway equipment			Anchor/Ship	Anchor/Ship	Anchor/Ship	Anchor/Ship		Anchor/Ship	Anchor/Ship	Anchor/Ship			Anchor/Ship	Anchor/Ship	
	Industrial boilers and boiler room equipment	Fire	Fire	Fire							Fire	Fire	Fire			
	Autoclaves and sterilisers	Autoclave	Autoclave	Autoclave							Autoclave	Autoclave	Autoclave			
	Water pumps and air compressors	Pump/Compressor		Pump/Compressor				Pump/Compressor	Pump/Compressor	Pump/Compressor	Pump/Compressor	Pump/Compressor	Pump/Compressor	Pump/Compressor	Pump/Compressor	Pump/Compressor
	Hydraulic equipment	Hydraulic		Hydraulic	Hydraulic	Hydraulic	Hydraulic		Hydraulic			Hydraulic		Hydraulic	Hydraulic	
	Windmills				Windmill	Windmill	Windmill		Windmill			Windmill		Windmill	Windmill	Windmill
Characteristics	Setting range	-0.2 – 28 bar	0 – 40 bar	1 – 30 bar	-0.2 – 400 bar	0 – 60 bar	0 – 60 bar	2 – 20 bar	0.3 – 5 bar	0.2 – 2.5 bar	0 – 11 bar	0 – 150 °C	-60 – 300 °C	-10 – 200 °C	-10 – 200 °C	
	Contact system	SPDT	SPDT	SPDT	SPDT	SPDT	SPDT	TPST and SPST	SPDT	SPDT	SPDT	SPDT	SPDT	SPDT	SPDT	
	Electrical rating AC-3	16 / 6 A, 400 V	–	4 A, 400 V	–	6 A, 400 V	–	12 A, 400 V	–	–	4 A, 400 V	16 A, 400 V	4 A, 400 V	–	6 A, 400 V	
	Electrical rating AC-15	10 / 4 A, 400 V	1 A, 250 V	3 A, 400 V	0.5 A, 250 V	4 A, 400 V	0.1 A, 220 V	–	0.5 A, 250 V	0.1 A, 220 V	3 A, 400 V	10 A, 400 V	3 A, 400 V	0.5 A, 250 V	4 A, 400 V	
	Electrical connection	Screw terminals	DIN plug	Screw terminals	DIN plug	Screw terminals	Screw terminals	Screw terminals	DIN plug	Screw terminals	Screw terminals	Screw terminals	Screw terminals	Screw terminals	DIN plug	Screw terminals
	Contact material	Silver or Gold	Gold	Silver or Gold	Silver	Gold	Silver	Silver	Silver	Silver	Silver or Gold	Silver	Silver or Gold	Silver	Gold	
	Differential	Adjustable	Adjustable	Adjustable	Fixed	Adjustable	Fixed	Adjustable	Fixed	Fixed	Fixed	Adjustable	Adjustable	Fixed	Adjustable	
	Special approvals	Marine	TÜV	Marine, TÜV	Marine	Marine, UL	Marine	–	Marine	Marine	Marine	Marine, UL	Marine	Marine	Marine	Marine, UL
	Degree of enclosure	IP30, IP44 or IP55	IP65	IP66 or IP54	IP65	IP67	IP67	IP43 or IP55	IP65	IP67	IP66	IP30, IP44 or IP55	IP66 or IP54	IP65	IP67	
	Design	Box	Box industrial	Box industrial	Compact	Box heavy duty	Box heavy duty	Box	Compact	Box heavy duty	Box industrial	Box	Box industrial	Compact	Box heavy duty	
Adjustable neutral zone			Yes							Yes		Yes				