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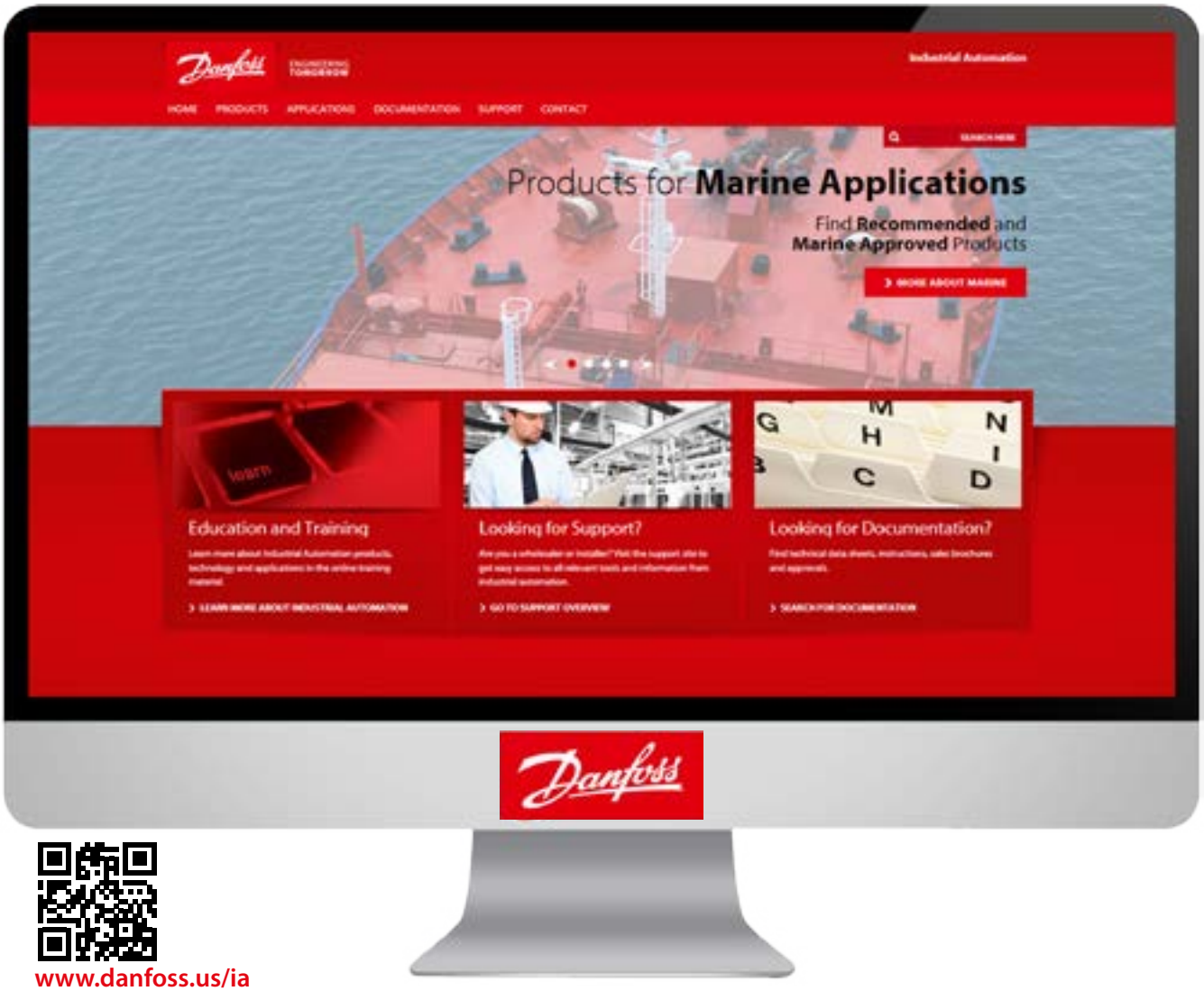

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Pressure Transmitters

Product Overview



Type	**Standard**	**MBS 1200**	**MBS 3000**	**MBS 3200**
	Pulse-snubber	**MBS 1250**	**MBS 3050**	**MBS 3250**
Industries	**See key below for description of symbols used**			
Characteristics	**Sensor technology**	Thin Film	Piezo resistive	Piezo resistive
	Accuracy Full Scale (typical)	± 0.5%	± 0.5%	± 0.5%
	Maximum measuring range	31900 psi 2200 bar	9000 psi 600 bar	9000 psi 600 bar
	Output signal	4–20 mA, absolute voltage and Ratiometric	4–20 mA and absolute voltage	4–20 mA and absolute voltage
	Medium temperature	-40 to 257°F -40 to 125°C	-40 to 185°F -40 to 85°C	-40 to 257°F -40 to 125°C
	Enclosure	NEMA3 NEMA6	NEMA3 NEMA6	NEMA3 NEMA6
	Wetted parts material	AISI 316L	AISI 316L	AISI 316L
	Housing material	AISI 316L, PA 6.6	AISI 316L, PA 6.6	AISI 316L, PA 6.6
	Zero point and span adjustment			
	Approvals	UL	UL, CSA and ATEX[1]	UL, CSA and ATEX[1]

[1] *Minimum medium temperature = 14°F (-10 °C)*

Key

Railways

Marine

Electric power and wind turbines

Electric power and wind turbines

Industrial hydraulics

Water pumps

Air Compressors

Boiler and boiler room equipment

Sterilizers and autoclaves

Industrial engines

Hydraulic equipment

			
MBS 4510	**MBS 3100** **MBS 3150**	**MBS 5100** **MBS 5150**	**EMP 2**
Piezo resistive	Piezo resistive	Piezo resistive	Piezo resistive
± 0.2%	± 0.5%	± 0.3%	± 0.3
360 psi 25 bar	9000 psi 600 bar	9000 psi 600 bar	6000 psi 400 bar
4–20 mA	4–20 mA	4–20 mA	4–20 mA
-40 to 185°F -40 to 85°C	-40 to 185°F -40 to 85°C	-72 to 153°F -40 to 85°C	-40 to 212°F -40 to 100°C
NEMA3 NEMA6	NEMA3 NEMA6	NEMA3 NEMA6	NEMA6
AISI 316L	AISI 316L	AISI 316L	AISI316L
AISI 316L, PA 6.6	AISI 316L, PA 6.6	AISI 316L, PA 6.6	Al
✓		✓	✓
UL, CSA, ATEX[1] and USDA	UL, CSA, ATEX[1] and Marine	UL, CSA and Marine	ATEX[1] and Marine

MBS 3000 General Industry
MBS 3050 General Industry with Pulse Snubber
MBS 3100 General Industry with Marine Approvals

The MBS 3000, MBS 3050 and MBS 3100 are pressure transmitters designed for use in general industries and including mobile, industrial and marine applications. They offer reliable pressure measurement, even under harsh environmental conditions.

- Output signals available: 4-20 mA and voltage
- Measuring ranges: -14.5 to 8700 psi (-1 to 600 bar) with absolute or gauge (relative) pressure reference
- Accuracy: +/- 0.5% Full Scale (typical)
- Media temperature: -40 to 185°F (-40 to 85°C)
- Excellent vibration stability, robust construction, and a high degree of EMC/EMI protection equip the pressure transmitter to meet the most stringent requirements.
- Millions of cycles, high overpressure and long term stability
- Laser trimmed electronic circuitry for high accuracy and low thermal shift
- Fully welded 316L stainless steel sensor and housing
- Approvals: UL, CSA, ATEX Zone 2 and CE
- Marine approvals (MBS 3100): LR, DNV, GL, RINA, ABS, BV, NKK, RMRS, KRS, CCS

Code Number	Type	Pressure Range (psig)	Pressure Range (bar)	Process Connection	Output Signal	Electrical Connection
060G3502	MBS 3000	-14.5 to 185	-1 to 13	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G5516	MBS 3000	-14.5 to 185	-1 to 13	¼ - 18 NPT	1-5 Vdc	Pg 9 DIN
060G3503	MBS 3000	-14.5 to 485	-1 to 33.4	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G1563	MBS 3000	0 to 14.5	0 to 1	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G5547	MBS 3000	0 to 14.5[1]	0 to 1[1]	9⁄16 - 18 UNF	0.5-4.5 Vdc	M12X1 4 pin
060G1444	MBS 3000	0 to 30	0 to 2	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G1140	MBS 3000	0 to 60	0 to 4	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G5770	MBS 3000	0 to 60[1]	0 to 4[1]	¼ - 18 NPT	4-20 mA	DIN[2]
060G1135	MBS 3000	0 to 87	0 to 6	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G1141	MBS 3000	0 to 100	0 to 7	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G1720	MBS 3000	0 to 100	0 to 7	¼ - 18 NPT	4-20 mA	2m screened cable
060G3945	MBS 3000	0 to 145	0 to 10	¼ - 18 NPT	4-20 mA	DIN[2]
060G1125	MBS 3000	0 to 145	0 to 10	G ¼A	4-20 mA	Pg 9 DIN
060G1142	MBS 3000	0 to 150	0 to 10.4	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G1143	MBS 3000	0 to 200	0 to 14	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G1413	MBS 3000	0 to 232	0 to 16	G ½A	4-20 mA	Pg 9 DIN
060G1163	MBS 3000	0 to 232	0 to 16	¼ - 18 NPT	4-20 mA	2m screened cable
060G3946	MBS 3000	0 to 232	0 to 16	¼ - 18 NPT	4-20 mA	DIN[2]
060G1137	MBS 3000	0 to 232	0 to 16	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G1144	MBS 3000	0 to 300	0 to 20.7	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G3947	MBS 3000	0 to 363	0 to 25	¼ - 18 NPT	4-20 mA	DIN[2]
060G1145	MBS 3000	0 to 500	0 to 35	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G1105	MBS 3000	0 to 580	0 to 40	G ¼A	4-20 mA	Pg 9 DIN
060G3948	MBS 3000	0 to 870	0 to 60	¼ - 18 NPT	4-20 mA	DIN[2]
060G1107	MBS 3000	0 to 1450	0 to 100	G ¼A	4-20 mA	Pg 9 DIN
060G1349	MBS 3000	0 to 3625	0 to 250	G ½A	4-20 mA	Pg 9 DIN
060G1109	MBS 3000	0 to 5800	0 to 400	G ¼A	4-20 mA	Pg 9 DIN
060G6319	MBS 3050	0 to 375	0 to 26	¼ - 18 NPT	1-11 Vdc	2m screened cable
060G5709	MBS 3050	0 to 507	0 to 35	9⁄16 - 18 UNF	4-20 mA	Bayonet, DIN 72585
060G5549	MBS 3050	0 to 725	0 to 50	9⁄16 - 18 UNF	0.5-4.5 Vdc	M12 X 1, 4 pin
060G5513	MBS 3050	0 to 1000	0 to 69	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G6320	MBS 3050	0 to 1450	0 to 100	¼ - 18 NPT	1-11 Vdc	2m screened cable
060G3557	MBS 3050	0 to 3625	0 to 250	G ¼A	0-10 Vdc	Pg 9 DIN
060G5510	MBS 3050	0 to 3000	0 to 207	7⁄16 - 20 UNF	4-20 mA	Pg 9 DIN
060G5550	MBS 3050	0 to 5075	0 to 350	9⁄16 - 18 UNF	0.5-4.5 Vdc	M12 X 1, 4 pin
060G1408	MBS 3050	0 to 8702	0 to 600	G ¼A	4-20 mA	Pg 9 DIN
060G3747	MBS 3100	0 to 23	0 to 1.6	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G3748	MBS 3100	0 to 87[1]	0 to 6[1]	¼ - 18 NPT	4-20 mA	Pg 9 DIN
060G3749	MBS 3100	0 to 145	0 to 10	¼ - 18 NPT	4-20 mA	Pg 11 DIN

[1] *Absolute pressure reference*

[2] *Male electrical connection only. DIN plugs and cable are available in the Spare Parts and Accessories section on page 33.*

MBS 1200 Compact
MBS 1250 Compact with Pulse Snubber

The MBS 1200 and MBS 1250 pressure transducers are based on a thin-film technology ensuring an excellent vibration stability and an exceptional robustness as well as a high degree of EMI protection which enable them to meet the most severe applications. They are designed for use in mobile hydraulic applications in harsh environments and meet the requirement set by original equipment manufacturers. The compact designs make them ideal for installations where space is at a premium.

- Output signals available: 4-20 mA, voltage and ratiometric
- Measuring ranges: 0 to 31900 psi (0 to 2200 bar) with gauge (relative) pressure reference
- Accuracy: +/- 0.5% Full Scale (typical)
- Media temperature: -40 to 257°F (-40 to 125°C)
- Fully welded 316L stainless steel sensor and housing
- Approvals: UL and CE

Code Number	Type	Pressure Range		Process Connection	Output Signal	Electrical Connection
		(psig)	(bar)			
063G1410	MBS 1200	0 to 3620	0 to 250	G ¼A	4-20 mA	M12 X 1, 4 pin
063G1266	MBS 1250	0 to 145	0 to 10	7/16 - 20 UNF	Ratiometric	Deutsch DT04
063G1727	MBS 1250	0 to 145	0 to 10	⅛ - 27 NPT	Ratiometric	Deutsch DT04
063G1461	MBS 1250	0 to 507	0 to 35	9/16 - 18 UNF	Ratiometric	Deutsch DT04
063G1342	MBS 1250	0 to 580	0 to 40	7/16 - 20 UNF	1 to 5 Vdc	Deutsch DT04
063G1274	MBS 1250	0 to 580	0 to 40	7/16 - 20 UNF	Ratiometric	Deutsch DT04
063G1282	MBS 1250	0 to 2320	0 to 160	7/16 - 20 UNF	Ratiometric	Deutsch DT04
063G1374	MBS 1250	0 to 3000	0 to 207	9/16 - 18 UNF	Ratiometric	Deutsch DT04
063G1289	MBS 1250	0 to 3625	0 to 250	G ¼A	Ratiometric	Deutsch DT04
063G1290	MBS 1250	0 to 3625	0 to 250	7/16 - 20 UNF	Ratiometric	Deutsch DT04
063G1344	MBS 1250	0 to 3625	0 to 250	7/16 - 20 UNF	1 to 5 Vdc	Deutsch DT04
063G1298	MBS 1250	0 to 5800	0 to 400	7/16 - 20 UNF	Ratiometric	Deutsch DT04
063G1299	MBS 1250	0 to 5800	0 to 400	7/16 - 20 UNF	4-20 mA	M12 X 1, 4 pin
063G1345	MBS 1250	0 to 5800	0 to 400	7/16 - 20 UNF	1 to 5 Vdc	Deutsch DT04
063G1413	MBS 1250	0 to 5800	0 to 400	9/16 - 18 UNF	1 to 5 Vdc	Deutsch DT04
063G1719	MBS 1250	0 to 5800	0 to 400	9/16 - 18 UNF	0 to 5 Vdc	Deutsch DT04
063G1462	MBS 1250	0 to 7250	0 to 500	9/16 - 18 UNF	Ratiometric	Deutsch DT04
063G1882	MBS 1250	0 to 7250	0 to 500	7/16 - 20 UNF	0 to 10 Vdc	Deutsch DT04
063G1458	MBS 1250	0 to 7500	0 to 517	7/16 - 20 UNF	Ratiometric	Deutsch DT04
063G1354	MBS 1250	0 to 8700	0 to 600	9/16 - 18 UNF	Ratiometric	Deutsch DT04

MBS 4510 Flush Diaphragm

The MBS 4510 are high accuracy flush diaphragm pressure transmitters designed for use in non-uniform, high viscous or crystallizing media primarily used within industrial and food and beverage industries. These transmitters offer a reliable pressure measurement, even under harsh environmental conditions.

- Output signals available: 4-20 mA
- Measuring ranges: 0 to 363 psi (0 to 25 bar) with gauge (relative) and absolute pressure reference
- Accuracy: +/- 0.2% Full Scale (typical)
- Media temperature: -40 to 185°F (-40 to 85°C)
- Media temperature (ATEX) : 14 to 185°F (-10 to 85°C)
- Zero point and span adjustment
- Excellent vibration stability, robust construction, and a high degree of EMC/EMI protection equip the pressure transmitter to meet the most stringent industrial requirements.
- Millions of cycles, high overpressure and long term stability
- Laser trimmed electronic circuitry for high accuracy and low thermal shift
- Fully welded 316L stainless steel sensor and housing
- Approvals: CSA, Hazardous location (ATEX Ex nA IIA T3 Gc), USDA-H and CE

Code Number	Type	Pressure Range		Process Connection	Output Signal	Electrical Connection
		(psig)	(bar)			
060G1844	MBS 4510	-3.6 to 7.25	-0.25 to 0.50	G 1A flush	4-20 mA	Pg 9 DIN
060G1605	MBS 4510	0 to 23[1]	0 to 1.6[1]	G 1A flush	4-20 mA	Pg 9 DIN
060G2426	MBS 4510	0 to 145	0 to 10	G 1A flush	4-20 mA	Pg 9 DIN
060G2428	MBS 4510	0 to 362	0 to 25	G 1A flush	4-20 mA	Pg 9 DIN

[1] *Absolute pressure reference*

MBS 5100 Block Design
MBS 5150 Block Design with Pulse Snubber

The MBS 5100 and MBS 5150 are high accuracy ship and marine approved pressure transmitters. They are designed for use in most marine applications and offer a reliable pressure measurement under harsh environmental conditions.

- Output signals available: 4-20 mA
- Measuring ranges: 0 to 8700 psi (0 to 600 bar) with gauge (relative) or absolute pressure reference
- Accuracy: +/- 0.1% Full Scale (typical)
- Media temperature: -40 to 185°F (-40 to 85°C)
- Zero point and span adjustment
- Excellent vibration stability, robust construction, and a high degree of EMC/EMI protection equip the pressure transmitter to meet the most stringent industrial requirements.
- Millions of cycles, high overpressure and long term stability
- Laser trimmed electronic circuitry for high accuracy and low thermal shift
- Fully welded 316L stainless steel sensor and housing
- Approvals: CSA, UL and CE
- Marine approvals: LR, DNV, GL, RINA, ABS, BV, NKK, RMRS, KRS, CCS

Code Number	Type	Pressure Range		Process Connection	Output Signal	Electrical Connection
		psig	bar			
060N1053	MBS 5100	0 to 87[1]	0 to 6[1]	G ¼ with flange	4-20 mA	Pg 11 DIN
060N1036	MBS 5100	0 to 145	0 to 10	G ¼ with flange	4-20 mA	Pg 11 DIN
060N1039	MBS 5100	0 to 580	0 to 40	G ¼ with flange	4-20 mA	Pg 11 DIN
060N1040	MBS 5100	0 to 870	0 to 60	G ¼ with flange	4-20 mA	Pg 11 DIN
060N1087	MBS 5150	0 to 1450	0 to 100	G ¼ with flange	4-20 mA	Pg 11 DIN

[1] *Absolute pressure reference*
All Code Numbers in table above (Process Connection with flange) must be used with MBV 5000 pressure test valve. See page 30 for MBV 5000.

Mobile Hydraulic Applications

Pump pressure and temperature
Transmission pressure and temperature
Hydraulic oil temperature
Stabilizer pressure
Air system pressure
Suspension pressure
Engine intake air temperature
Engine exhaust gas temperature
Weighing
Hydraulic cylinder pressure
Agricultural Sprayers

Danfoss Products

Pressure and temperatures sensors
Pressure and temperatures sensors
Temperature sensors
Pressure sensors
Pressure sensors
Pressure sensors
Temperature sensors
Temperature sensors
Pressure sensors
Pressure sensors
Pressure sensors and solenoid valves

Temperature Sensors

Product Overview

Type		MBT 5250	MBT 153	MBT 3270	MBT 5252	MBT 3560
Industries	See key below for description of symbols used					
Characteristics	Pt 100/Pt 1000	✓	✓	✓	✓	
	NTC/PTC	✓	✓	✓	✓	
	Transmitter					mA / V d.c.
	Transmitter as option				mA	
	Measuring insert	Changeable	Fixed	Fixed	Changeable	Fixed
	Medium temperature	-58 – 392 °F -50 – 200 °C	-58 – 392 °F -50 – 200 °C	-58 – 572 °F -50 – 300 °C	-58 – 752 °F -50 – 400 °C	-58 – 392 °F -50 – 200 °C
	Enclosure	NEMA 3	NEMA 6	NEMA 3	NEMA 3	NEMA 3 NEMA 6
	Material protection tube	W.no. 1.4571 (AISI 316 Ti)	W.no. 1.4571 (AISI 316 Ti)	W.no. 1.4571 (AISI 316 Ti)	W.no. 1.4571 (AISI 316 Ti)	W.no. 1.4571 (AISI 316 Ti)
	Reaction time t0.5 in water (sec)	9	1	1.5	12	10
	Marine approvals	✓			✓	

Key

- *Railways*
- *Marine*
- *Electric power and wind turbines*
- *Electric power and wind turbines*
- *Industrial hydraulics*
- *Water pumps*
- *Air compressors*
- *Boiler and boiler room equipment*
- *Sterilizers and autoclaves*
- *Industrial engines*
- *Hydraulic equipment*

MBT 5250 General Industry and Marine

The MBT 5250 is a heavy-duty temperature sensor that can be used for controlling cooling water, lubrication oil, hydraulic oil and refrigeration plants within general industry and marine applications. This temperature sensor is based on a standardized Pt100 or Pt1000 element, which gives a reliable and accurate measurement. The MBT 5250 can be delivered with NTC/PTC elements on request. The measuring insert is based on a silicone cable, which makes the sensor very resistant towards vibrations.

- All parts in contact with the media are made of stainless steel (AISI 316 Ti).
- For gaseous or liquid media (air, gas, vapour, water or oil)
- Can be used with 2 or 3 wire connections
- Gold plated male and female connector
- Interchangeable measuring insert
- Approvals: CE
- Marine approvals: LR, DNV, GL, RINA, ABS, BV, NKK, KRS, CCS

Code Number	Insertion Length (in.)	Process Connection	Measuring Range		Output Signal	Resistance Element	Electrical Connection
			°F	°C			
084Z8066	2	½ - 14 NPT	-58 to 392	-50 to 200	Ohm	1 X Pt 100	Pg 11 DIN
084Z8067	4	½ - 14 NPT	-58 to 392	-50 to 200	Ohm	1 X Pt 100	Pg 11 DIN
084Z8065	6	½ - 14 NPT	-58 to 392	-50 to 200	Ohm	1 X Pt 100	Pg 11 DIN
084Z8068	8	½ - 14 NPT	-58 to 392	-50 to 200	Ohm	1 X Pt 100	Pg 11 DIN

MBT 3270 Mobile Hydraulic

The MBT 3270 are robust temperature sensor that are used in many industrial applications such as: air compressors, mobile hydraulics and exhaust gas return systems where robustness, size and performance are essential.

- Sensing elements available: PT 100 / 1000, NTC
- Electrical connection available: Cable, Delphi Metri Pack, AMP junior power Timer, Deutsch DT04, 2 pin
- Robust, high protection against moisture
- Fixed measuring insert
- Brass or stainless steel
- Very low response times

Code Number	Insertion Length (in.)	Process Connection	Protection Tube Material	Measuring Range		Output Signal	Resistance Element	Electrical Connection
				(°F)	(°C)			
084Z7284	0.8	G ¼A	316 SS	-58 to 302	-50 to 150	Ohm	1 x Pt 100	3m screened cable
084Z7138	0.86	G ¼A	Brass	-58 to 392	-50 to 200	Ohm	1 x Pt 100	AMP Junior Power Timer
084Z3075	0.94	M10 x 1.5	316 SS	-58 to 302	-50 to 150	Ohm	1 x NTC 3000	AMP
084Z3098	1.1	G ¼A	Brass	-58 to 302	-50 to 150	Ohm	1 x Pt 1000	AMP
084Z2019	1.57	M10 x 1	316 SS	-58 to 572	-50 to 300	Ohm	1 x Pt 100	Deutsch DT04, 2pins
084Z7052	3.15	M10 x 1	316 SS	-58 to 302	-50 to 150	Ohm	1 x KTY 2000	AMP Flying Lead (4 in.)

MBT 3560 Mobile Hydraulic with Built-in Transmitter

With the MBT 3560, we have combined the technology of our standard temperature sensors with a built-in transmitter. The MBT 3560 is designed for use in harsh industrial enviroments where reliable, robust and accurate measurement is required. When applicable, the sensors are delivered with a 1.3 inch (33 mm) extension length which makes it possible to measure temperatures up to 392°F (200°C) without damaging the built-in electronics.

- Ultra compact design
- Available with a wide selection of process and electrical connections.
- Pt 1000 resistance element
- Output signal: 4-20 mA, ratiometric (available upon request)
- Protection tube diameter: 0.31 inch
- Multiple insertion lengths available: 1.2 to 10 inch
- Wetted parts: Stainless steel (AISI 316)

Code Number	Insertion Length (in.)	Extention Length (in.)	Process Connection	Measuring Range		Transmitter Range		Output Signal	Electrical Connection
				(°F)	(°C)	(°F)	(°C)		
084Z4035	2	1.3	G ¼A	-58 to 392	-50 to 200	32 to 392	0 to 200	4-20mA	Pg 9 DIN
084Z4158	2	1.3	½ - 14 NPT	-58 to 392	-50 to 200	-58 to 392	-50 to 200	4-20mA	2 m screened cable
084Z4114	2	1.3	½ - 14 NPT	-58 to 392	-50 to 200	-58 to 302	-50 to 150	4-20mA	Pg 9 DIN
084Z4104	2.68	-	¾ - 16 UNF	-58 to 248	-50 to 120	-40 to 302	-40 to 150	4-20mA	M12 X 1, 4 pin
084Z4036	4	1.3	G ¼A	-58 to 392	-50 to 200	32 to 392	0 to 200	4-20mA	Pg 9 DIN
084Z4037	6	1.3	G ¼A	-58 to 392	-50 to 200	32 to 392	0 to 200	4-20mA	Pg 9 DIN
084Z4038	8	1.3	G ¼A	-58 to 392	-50 to 200	32 to 392	0 to 200	4-20mA	Pg 9 DIN
084Z4039	10	1.3	G ¼A	-58 to 392	-50 to 200	32 to 392	0 to 200	4-20mA	Pg 9 DIN

Industrial Switches

Product Overview

		Pressure Switches			
					
Type		**RT**	**KPS**	**CAS**	**KP/KPI**
Industries	**See key below for description of symbols used**				
Characteristics	**Setting range**	-14.5 to 435 psi -1 to 30 bar	0 to 870 psi 0 to 60 bar	0 to 870 psi 0 to 60bar	-2.9 to 406 psi -0.2 to 28 bar
	Contact system	SPDT	SPDT	SPDT	SPDT
	Electrical rating AC-3 **Electrical rating AC-15**	4 A, 400 V 3 A, 400 V	6 A, 400 V 4 A, 400 V	- 0.1 A, 220 V	16/ 6 A, 400 V 10/4 A, 400 V
	Electrical connection	Screw terminals	Screw terminals	Screw terminals	Screw terminals
	Contact material	Silver or Gold	Gold	Silver	Silver or Gold
	Differential	Adjustable	Adjustable	Fixed	Adjustable
	Approvals	Marine	Marine and UL	Marine	UL and FM
	Degree of enclosure	IP66 or IP54	IP67	IP67	IP30, IP44 or IP55
	Design	Box industrial	Box heavy duty	Box heavy duty	Box
	Adjustable neutral zone	Yes			

Key

- *Railways*
- *Marine*
- *Electric power and wind turbines*
- *Electric power and wind turbines*
- *Industrial hydraulics*
- *Water pumps*
- *Air compressors*
- *Boiler and boiler room equipment*
- *Sterilizers and autoclaves*

	Differential Pressure Switches		Temperature Switches			
						
MBC 5100	**RT**	**MBC 5180**	**RT**	**KPS**	**KP**	**MBC 8100**
-2.9 to 5800 psi - 0.2 to 400 bar	0 to 160 psi 0 to 11 bar	4.4 to 73 psi 0.3 to 5 bar	-76 to 572 °F -60 to 300 °C	14 to 392 °F -10 to 200 °C	0 to 302 °F 0 to 150 °C	14 to 392 °F -10 to 200 °C
SPDT	SPDT	SPDT	SPDT	SPDT	SPDT	SPDT
- 0.5 A, 250 V	4 A, 400 V 3 A, 400 V	- 0.5 A, 250 V	4 A, 400 V 3 A, 400 V	6 A, 400 V 4 A, 400 V	16 A, 400 V 10 A, 400 V	- 0.5 A, 250 V
DIN plug	Screw terminals	DIN plug	Screw terminals	Screw terminals	Screw terminals	DIN plug
Silver	Silver or Gold	Silver	Silver or Gold	Gold	Silver	Silver
Fixed	Fixed	Fixed	Adjustable	Adjustable	Adjustable	Fixed
Marine	Marine	Marine	Marine	Marine and UL	UL	Marine
IP66	IP66	IP64	IP66 or IP54	IP67	IP30, IP44 or IP55	IP65
Compact	Box industrial	Compact	Box industrial	Box heavy duty	Box	Compact
	Yes		Yes			

RT Pressure Switch

RT switches are used in general industrial, heating and marine markets. The RT single pressure switches series consist of a variety of controls including neutral zone pressure switches and safety pressure switches for steam boiler plant.

- Setting range: -14.5 to 435 psi (-1 to 30 bar)
- Ambient temperature: -58 to 158°F (-50 to 70°C)
  (RT 113 only): 14 to 158°F (-10 to 70°C)
- Media temperature: -40 to 212°F (-40 to 100°C)
  (RT 113 only): 14 to 194°F (-10 to 90°C)
- Fail-safe design
- Adjustable differential
- Adjustable neutral zone
- Enclosure rating: IP66
- Contact system: Single pole, double throw (SPDT)
- Approvals: CE
- Marine approvals: LR, DNV, GL, RINA, BV, NKK, RMRS

Code Number	Type	Setting Range		Differential		Reset	Process Connection
		(psig)	(bar)	(psig)	(bar)		
017-521566	RT 121	-14.5 to 0	-1 to 0	1.3 to 5.8	0.09 to 0.4	Automatic	G ⅜A
017-520366	RT 116	14.5 to 145	1 to 10	4.8 to 18.9	0.3 to 1.3	Automatic	G ⅜A
017-523766	RT 200	2.9 to 87	0.2 to 6	3.6 to 17.4	0.25 to 1.2	Automatic	G ⅜A
017-519666	RT 113	0 to 4.4	0 to 0.3	0.1 to 0.7	0.01 to 0.05	Automatic	G ⅜A
017-519166	RT 112	1.5 to 16	0.1 to 1.1	1 to 2.3	0.07 to 0.16	Automatic	G ⅜A
017-525566	RT 5	58 to 247	4 to 17	17.4 to 58	1.2 to 4	Automatic	G ⅜A
017-529566	RT 117	145 to 435	10 to 30	14.5 to 58	1 to 4	Automatic	G ⅜A
017-529166	RT 110	2.9 to 43.5	0.2 to 3	1.2 to 3.6	0.08 to 0.25	Automatic	G ⅜A

KPS Heavy-Duty Pressure Switch

The KPS pressure switches meet the demands for robust enclosure, compact construction and resistance to shock and vibration. It's designed for high pulsations and pressure peaks. The KPS switches range covers most outdoor as well as indoor application requirements, and are suitable for use in alarm and regulation systems in factories, diesel plant, compressors, power stations and marine.

- Setting range: 0 to 870 psi (0 to 60 bar)
- Ambient temperature:
  KPS 31, KPS 35: -40 to 158°F (-40 to 70°C)
  KPS 43-47: -13 to 158°F (-25 to 70°C)
- Gold plated contact systems
- Adjustable or fixed differential
- Enclosure rating: IP67
- Contact system: Single pole, double throw (SPDT)
- Automatic reset
- Approvals: UL and CE
- Marine approvals: LR, DNV, GL, RINA, ABS, BV, NKK, RMRS, KRS, CCS

Code Number	Type	Setting Range		Differential		Media Temperature (°F)	Process Connection
		(psig)	(bar)	(psig)	(bar)		
060-311066	KPS 31	0 to 36	0 to 2.5	1.5	0.1	-40 to 212	G ¼
060-310566	KPS 35	0 to 116	0 to 8	6 to 22	0.4 to 1.5	-40 to 212	G ¼
060-310066	KPS 35	0 to 116	0 to 8	6 to 22	0.4 to 1.5	-40 to 212	G ⅜A
060-312066	KPS 43	14.5 to 145	1 to 10	10 to 41	0.7 to 2.8	-13 to 212	G ¼
060-312166	KPS 45	58 to 580	4 to 40	32 to 160	2.2 to 11	-13 to 212	G ¼
060-312266	KPS 47	87 to 870	6 to 60	51 to 247	3.5 to 17	-13 to 212	G ¼

KP Light Industry Pressure Switch

KP pressure switches are used for regulating, monitoring and alarm systems in industrial applications. The KP series are suitable for gaseous media and air. Due to its compact design, it offers space saving and ease of installation.

- Setting range: 2 to 300 psi (0.14 to 21 bar)
- Ambient temperature: -40 to 150°F (-40 to 66°C)
- Media temperature: -40 to 212°F (-40 to 100°C)
- Contact system: Single pole, double throw (SPDT)
- Electrical coupling nut: ½ - 14 NPSM female
- Approvals: UL, FM and CE

Code Number	Type	Setting Range		Differential		Reset	Process Connection
		(psig)	(bar)	(psig)	(bar)		
060-214866	KP 34	2 to 15	0.14 to 1.07	3	0.21	Manual	¼ - 18 NPT female
060-214966	KP 34	2 to 15	0.14 to 1.07	2 to 6	0.14 to 0.42	Automatic	¼ - 18 NPT female
060-215166	KP 35	6 to 50	0.4 to 3.5	6 to 32	0.4 to 2.2	Automatic	¼ - 18 NPT female
060-214566	KP 36	14.5 to 150	1 to 10.5	10	0.7	Manual	¼ - 18 NPT female
060-214466	KP 36	14.5 to 150	1 to 10.5	10 to 58	0.7 to 4	Automatic	¼ - 18 NPT female
060-214766	KP 37	58 to 300	4 to 21	44	3	Manual	¼ - 18 NPT female
060-214666	KP 37	58 to 300	4 to 21	26 to 44	1.8 to 3	Automatic	¼ - 18 NPT female

MBC 5100 Block-Design Pressure Switch

The MBC 5100 pressure switches are block-design switches used in industrial and marine applications where space and reliability are of upmost importance.

- Setting ranges: -2.9 to 5800 psi (-0.2 to 400 bar)
- Ambient temperature:
  - Belllows version: -40 to 185°F (-40 to 85°C)
  - Diaphragm version: -23 to 185°F (-10 to 85°C)
  - Piston version: -40 to 185°F (-40 to 85°C)
- Maximum media temperature: 185°F (85°C)
- Available block test valve mount or with flange
- High vibration resistance
- The adjustable pressure range provides accurate monitoring of critical pressures.
- Enclosure rating: IP65
- Contact system: Single pole, double throw (SPDT)
- Automatic reset
- Approvals: CE
- Marine approvals (MBC 5100): LR, DNV, GL, RINA, ABS, BV, NKK, RMRS, KRS, CCS

Code Number	Sensor Type	Setting Range		Fixed Differential[1]		Process Connection	Electrical Connection
		(psig)	(bar)	(psig)	(bar)		
061B000566	Bellows	-2.9 to 14.5	-0.20 to 1	4.35 to 6.5	0.3 to 0.45	G ¼ with flange	Pg 11 DIN
061B100566	Diaphragm	72.5 to 580	5 to 40	29 to 101.5	2 to 7	G ¼ with flange	Pg 11 DIN
061B000466	Bellows	-2.9 to 58	-0.20 to 4	4.35 to 6.5	0.3 to 0.45	G ¼ with flange	Pg 11 DIN
061B100466	Diaphragm	14.5 to 145	1 to 10	14.5 to 36	1 to 2.5	G ¼ with flange	Pg 11 DIN

[1] *Lowest differential at minimum setting range, highest differential at maximum setting range.*
All Code Numbers in table above (Process Connection with flange) must be used with MBV 5000 pressure test valve.
See page 30 for MBV 5000.

KPS Heavy-Duty Temperature Switch

The KPS temperature switches meet the demands for robust enclosure, compact construction and resistance to shock and vibration. The KPS switches range covers most outdoor as well as indoor application requirements, and are suitable for use in alarm and regulation systems in factories, diesel plant, compressors, power stations and marine.

- Setting range: 14 to 302°F (-10 to 150°C)
- Ambient temperature: -40 to 158°F (-40 to 70°C)
- Gold plated contact systems
- Adjustable or fixed differential
- Enclosure rating: IP67
- Contact system: Single pole, double throw (SPDT)
- Automatic reset
- Approvals: UL and CE
- Marine approvals: LR, DNV, GL, RINA, ABS, BV, NKK, RMRS, KRS, CCS

Code Number	Type	Setting Range		Differential		Sensor Type	Capilllary Tube Length (feet)	Suitable Sensor Pocket Length[3] (in.)
		(°F)	(°C)	(°F)	(°C)			
060L311866	KPS 77	68 to 140	20 to 60	5.4 to 25.2	3 to 14	Rigid[1]	-	2.95
060L310166	KPS 77	68 to 140	20 to 60	5.4 to 25.2	3 to 14	Armored[2]	6.5	2.56 to 6.3
060L310466	KPS 79	122 to 212	50 to 100	7.2 to 28.8	4 to 16	Armored[2]	6.5	2.56 to 6.3
060L312166	KPS 79	122 to 212	50 to 100	7.2 to 28.8	4 to 16	Rigid[1]	-	2.95
060L312866	KPS 80	158 to 248	70 to 120	8.1 to 32.4	4.5 to 18	Armored[2]	6.5	2.56 to 6.3
060L310666	KPS 81	140 to 302	60 to 150	9.0 to 45	5 to 25	Armored[2]	6.5	2.56 to 6.3

[1] *Rigid sensor type is depicted below.*

[2] *Armored sensor type is depicted.*

[3] *Sensor pockets are available in the Spare Parts and Accessories section on page 33.*

MBC 8100 Block-Design Temperature Switch

The MBC 8100 temperature switches are used in industrial and marine applications where space and reliability are of upmost importance. MBC 81000 switches are compact block style switches designed to survive in the harsh conditions in machine rooms located on ships.

- Setting range: 14 to 302°F (-10 to 150°C)
- Ambient temperature: -40 to 158°F (-40 to 70°C)
- The fixed, but low differential guarantees accurate monitoring of critical temperatures.
- Enclosure rating: IP65
- Contact system: Single pole, double throw (SPDT)
- Automatic reset
- Approvals: CE
- Marine approvals: LR, DNV, GL, RINA, ABS, BV, NKK, RMRS, KRS, CCS

Code Number	Setting Range		Differential		Sensor Type	Capilllary Tube Length (feet)	Suitable Sensor Pocket Length[3] (in.)	Electrical Connection
	(°F)	(°C)	(°F)	(°C)				
061B800466	158 to 248	70 to 120	9	5	Rigid[1]	-	2.95	Pg 11 DIN
061B810466	158 to 248	70 to 120	9	5	Armored[2]	6.5	2.95 to 6.3	Pg 11 DIN

[1] *Rigid sensor type is depicted below.*

[2] *Armored sensor type is depicted.*

[3] *Sensor pockets are available in the Spare Parts and Accessories section on page 33.*

Fluid Controls

Product Overview

Type		EV250B 2/2-way	EV220B 6-22 2/2-way	EV220B 15-50 2/2-way	EV225B 2/2-way
Media	See table below for description of symbols used				
Characteristics	Dirty media	✓	✓	✓	
	Long lifetime	✓	✓	✓	✓
	Soft closing (Low water hammer)	✓	✓	✓	
	System suitability	Closed and drain	Open	Open	Open
	Connection	⅜ to 1 NPT	¼ to 1 NPT	½ to 2 NPT	¼ to 1NPT
	Function	NC or NO	NC or NO	NC or NO	NC
	Orifice size (in.)	0.39 to 0.87	0.24 to 0.87	0.59 to 1.97	0.24 to 0.98
	Pressure range	0 to 145 psi 0 to 10 bar	1.45 to 435 psi 0.1 to 30 bar	4.35 to 232 psi 0.3 to 16 bar	2.9 to 145 psi 0.2 to 10 bar
	Maximum medium temperature	284 °F 140 °C	212 °F 100 °C	284 °F 140 °C	365 °F 185 °C
	Flow Rate (Cv / Kv)	2.9 to 8.2 gal/min 2.5 to 7 m^3/hr	0.82 to 7 gal/min 0.7 to 6 m^3/hr	4.7 to 46.8 gal/min 4 to 40 m^3/hr	0.35 to 7 gal/min 0.3 to 6 m^3/hr
	Special features				
	Approvals	WRAS[1], VA and UL	WRAS[1], VA, UL, and Marine	GL, WRAS[1], UL VA and Marine	UL
Material	Valve body	DZR Brass	Brass or DZR brass	Brass or DZR Brass	DZR Brass
	Internal	Stainless steel	Stainless steel	Stainless steel	Stainless steel
	Seal material	EPDM or FKM	EPDM or FKM	EPDM, FKM or NBR	PTFE

[1] *WRAS approval only applied to valves with EPDM seal material and Normally Closed (NC).*

Media	Symbol	Seal Materials							
		EPDM		FKM		NBR		PTFE	
		°F	°C	°F	°C	°F	°C	°F	°C
Water		- 22 to 284	-30 to 140	32 to 212	0 to 100	14 to 194	-10 to 90		
Oil				32 to 212	0 to 100	14 to 194	-10 to 90		
Air and Neutral Gases				32 to 212	0 to 100	14 to 194	-10 to 90		
Steam		< 284	< 140					< 365	< 185

			
EV260B 2-way proportional	**EV210B 2/2-way**	**AVTA 2-way proportional**	**AV210**
✓	✓	✓	✓
✓	✓	✓	✓
✓			
Open	Closed and drain	Closed and drain	Closed and drain
¼ to ¾ NPT	⅛ to 1NPT	⅜ to 1 NPT	½ to 1 NPT
NC	NC or NO	Thermostatic	NC or NO
0.24 to 0.79	0.06 to 0.98	0.39 to 0.98	0.59 to 1.97
7.25 to 145 psi 0.5 to 10 bar	0 to 435 psi 0 to 30 bar	0 to 145 psi 0 to 10 bar	0 to 232 psi 0 to 16 bar
176 °F 80 °C	284 °F 140 °C	266 °F 130 °C	356 °F 180 °C
0.9 to 6 gal/min 0.8 to 5.2 m^3/hr	0.09 to 9.4 gal/min 0.08 to 8.1m^3/hr	1.6 to 6.4 1.4 to 5.5 m^3/hr	5.20 to 85 4.5 to 73.3 m^3/hr
	Isolating diaphragm		Options: Manual override position indicator
	GL, WRAS[1], VA, UL, and Marine		
Brass	Brass	Brass	Gun metal
Stainless steel	Stainless steel	Stainless steel	Stainless steel
FKM or PTFE	EPDM or FKM	EPDM or NBR	PTFE

EV220B 6-22 Servo-Operated 2/2 Way

The EV220B 6-22 are direct servo-operated 2/2-way solenoid valves that offers high performance in a broad variety of applications. These valves are especially designed for applications demanding a robust solution and moderate flow rates.

- Ambient temperature: Up to 175°F (80°C)
- Media temperature: -22° to 212°F (-30° to 100°C)
- Seal material: FKM and EPDM
- Insensitive to water hammer
- Insensitive to dirt
- Stainless steel internal workings
- Approvals: UL (dependent upon coil) and CE
- Marine approvals: DNV (EV220B 6, 10, 12)

Code Number[1]	Type	Function	Seal Material	Orifice Size		Flow Factor		Opening Differential Pressure		Process Connection
				(in.)	(mm)	Cv (US gal/min)	Kv (m^3/hr)	(psi)	(bar)	
032U6513	EV220B 6	Normally Closed	EPDM	¼	6	0.8	0.7	4.35 to 145	0.3 to 10	¼ - 18 NPT
032U6515	EV220B 6	Normally Closed	FKM	¼	6	0.8	0.7	4.35 to 145	0.3 to 10	¼ - 18 NPT
032U6516	EV220B 6	Normally Closed	FKM	¼	6	0.8	0.7	4.35 to 145	0.3 to 10	⅜ - 18 NPT
032U6517	EV220B 10	Normally Closed	EPDM	⅜	10	1.7	1.5	4.35 to 145	0.3 to 10	⅜ - 18 NPT
032U6520	EV220B 10	Normally Closed	FKM	⅜	10	1.7	1.5	4.35 to 145	0.3 to 10	½ - 14 NPT
032U6521	EV220B 12	Normally Closed	EPDM	½	12	2.9	2.5	4.35 to 145	0.3 to 10	½ - 14 NPT
032U6523	EV220B 18	Normally Closed	EPDM	¾	18	7	6	4.35 to 145	0.3 to 10	¾ - 14 NPT
032U6524	EV220B 18	Normally Closed	FKM	¾	18	7	6	4.35 to 145	0.3 to 10	¾ - 14 NPT
032U6525	EV220B 22	Normally Closed	EPDM	⅞	22	7	6	4.35 to 145	0.3 to 10	1 - 11 ½ NPT
032U6526	EV220B 22	Normally Closed	FKM	⅞	22	7	6	4.35 to 145	0.3 to 10	1 - 11 ½ NPT
032U6528	EV220B 6	Normally Open	EPDM	¼	6	0.8	0.7	1.4 to 143	0.1 to 10	⅜ - 18 NPT
032U6529	EV220B 6	Normally Open	FKM	¼	6	0.8	0.7	1.4 to 143	0.1 to 10	⅜ - 18 NPT
032U6530	EV220B 10	Normally Open	FKM	⅜	10	1.75	1.5	1.4 to 143	0.1 to 10	½ - 14 NPT

[1] *All Code Numbers listed in table above are Normally Closed, Brass body valves.*
DZR brass versions available upon request.
Coils for solenoid valves are on page 27.

EV220B 15-50 Servo-Operated 2/2 Way

The EV220B 15-50 are indirect servo-operated 2/2-way solenoid valves that offers high performance in a broad variety of applications.

- Ambient temperature: Up to 175°F (80°C)
- Media temperature: -22° to 284°F (-30° to 140°C)
- Seal material: FKM and EPDM
- Insensitive to water hammer
- Normally Closed and Normally Open versions
- Insensitive to dirt
- Stainless steel internal workings
- Standard built-in pilot filters
- Adjustable closing time
- Approvals: UL (dependent upon coil) and CE
- Marine approvals: DNV (all types) and GL (all types)

Code Number[1]	Type	Function	Seal Material	Orifice Size		Flow Factor		Opening Differential Pressure		Process Connection
				(in.)	(mm)	Cv (US gal/min)	Kv (m^3/hr)	(psi)	(bar)	
032U6532	EV220B 15	Normally Closed	EPDM	⅝	15	4.6	4	4.35 to 145	0.3 to 10	½ - 14 NPT
032U6538	EV220B 15	Normally Closed	FKM	⅝	15	4.6	4	4.35 to 145	0.3 to 10	½ - 14 NPT
032U6533	EV220B 20	Normally Closed	EPDM	¾	20	9.3	8	4.35 to 145	0.3 to 10	¾ - 14 NPT
032U6539	EV220B 20	Normally Closed	FKM	¾	20	9.3	8	4.35 to 145	0.3 to 10	¾ - 14 NPT
032U6534	EV220B 25	Normally Closed	EPDM	1	25	12.7	11	4.35 to 145	0.3 to 10	1 - 11 ½ NPT
032U6540	EV220B 25	Normally Closed	FKM	1	25	12.7	11	4.35 to 145	0.3 to 10	1 - 11 ½ NPT
032U6535	EV220B 32	Normally Closed	EPDM	1 ¼	32	21	18	4.35 to 145	0.3 to 10	1 ¼ - 11 NPT
032U6541	EV220B 32	Normally Closed	FKM	1 ¼	32	21	18	4.35 to 145	0.3 to 10	1 ¼ - 11 NPT
032U6536	EV220B 40	Normally Closed	EPDM	1 ½	40	28	24	4.35 to 145	0.3 to 10	1 ½ - 11 ½ NPT
032U6542	EV220B 40	Normally Closed	FKM	1 ½	40	28	24	4.35 to 145	0.3 to 10	1 ½ - 11 ½ NPT
032U6537	EV220B 50	Normally Closed	EPDM	2	50	46	40	4.35 to 145	0.3 to 10	2 - 11 ½ NPT
032U6543	EV220B 50	Normally Closed	FKM	2	50	46	40	4.35 to 145	0.3 to 10	2 - 11 ½ NPT
032U6544	EV220B 15	Normally Open	EPDM	⅝	15	4.6	4	4.3 to 143	0.3 to 10	½ - 14 NPT
032U6550	EV220B 15	Normally Open	FKM	⅝	15	4.6	4	4.3 to 143	0.3 to 10	½ - 14 NPT
032U6545	EV220B 20	Normally Open	EPDM	¾	20	9.25	8	4.3 to 143	0.3 to 10	¾ - 14 NPT
032U6551	EV220B 20	Normally Open	FKM	¾	20	9.25	8	4.3 to 143	0.3 to 10	¾ - 14 NPT
032U6552	EV220B 25	Normally Open	FKM	1	25	12.7	11	4.3 to 143	0.3 to 10	1 - 11 ½ NPT
032U6547	EV220B 32	Normally Open	EPDM	1 ¼	32	20.8	18	4.3 to 143	0.3 to 10	1 ¼ - 11 NPT
032U6553	EV220B 32	Normally Open	FKM	1 ¼	32	20.8	18	4.3 to 143	0.3 to 10	1 ¼ - 11 NPT
032U6548	EV220B 40	Normally Open	EPDM	1 ½	40	27.7	24	4.3 to 143	0.3 to 10	1 ½ - 11 ½ NPT
032U6549	EV220B 50	Normally Open	EPDM	2	50	46.2	40	4.3 to 143	0.3 to 10	2 - 11 ½ NPT
032U6555	EV220B 50	Normally Open	FKM	2	50	46.2	40	4.3 to 143	0.3 to 10	2 - 11 ½ NPT

[1] *All Code Numbers listed in table above are Normally Closed, Brass body valves.*
DZR brass versions available upon request.
Coils for solenoid valves are on page 27.

EV210B Direct-Operated 2/2 Way

The EV210B covers a wide range of direct-operated 2/2-way solenoid valves for universal use. EV210B is a robust valve with high performance in severe working conditions.

- Ambient temperature: Up to 175°F (80°C)
- Media temperature: -22° to 284°F (-30° to 140°C)
- Seal material: FKM and EPDM (available upon request)
- Insensitive to dirt
- Stainless steel internal workings
- Approvals: UL (dependent upon coil) and CE
- Marine approvals: DNV (all types), GL (EV 210B 3, 6)

Code Number[1]	Type	Function	Seal Material	Orifice Size		Flow Factor		Opening Differential Pressure		Process Connection
				(in.)	(mm)	Cv (US gal/min)	Kv (m^3/hr)	(psi)	(bar)	
032U6502	EV210B 1.5	Normally Closed	FKM	1/16	1.5	0.09	0.08	0 to 290	0 to 20	1/8 - 27 NPT
032U6503	EV210B 2	Normally Closed	FKM	1/12	2	0.17	0.15	0 to 20	0 to 20	1/8 - 27 NPT
032U6505	EV210B 3	Normally Closed	FKM	1/8	3	0.35	0.3	0 to 20	0 to 20	1/4 - 18 NPT
032U6565	EV210B 6	Normally Closed	FKM	1/4	6	0.8	0.7	0 to 17	0 to 1.2	3/8 - 18 NPT
032U6567	EV210B 10	Normally Closed	FKM	3/8	10	1.8	1.5	0 to 11	0 to 0.8	1/2 - 14 NPT
032U6509	EV210B 1.5	Normally Open	FKM	1/16	1.5	0.06	0.05	0 to 286	0 to 20	1/8 - 27 NPT
032U6511	EV210B 3	Normally Open	FKM	1/8	3	0.35	0.3	0 to 86	0 to 6	1/4 - 18 NPT

[1] *All Code Numbers listed in table above are Normally Closed, Brass body valves.*
Coils for solenoid valves are on page 27.

Coils and Plugs for Solenoid Valves

Code Number	Type	Descriptio of Coil Type	Voltage (V)	Fre-quency (Hz)	Power Consumption (W)	UL Approved
018F4102	BX024CS	Conduit boss with 18″ wire	24 ac	50/60	14	✓
018F4112	BX120CS	Conduit boss with 18″ wire	110 ac 120 ac	50 / 60 60	16 15	✓
018F4122	BX240CS	Conduit boss with 18″ wire	208 - 240 ac 230 ac	60 50	14 17	✓
018F4100	BJ024CS	Junction box with 7″ wire	24 ac	50/60	14	✓
018F4110	BJ120CS	Junction box with 7″ wire	110 ac 120 ac	50/60 60	16 15	✓
018F4120	BJ240CS	Junction box with 7″ wire	208 - 240 ac 230 ac	60 50	14 17	✓
018F7655	BY024CS	DIN spades	24 ac	50/60	14	✓
018F7663	BY120CS	DIN spades	110 ac 120 ac	50/60 60	14 14	✓
018F7658	BY240CS	DIN spades	208 - 240 ac 230 ac	60 50	14 14	✓
018F6715	BE024BS	Terminal box	24 ac	50/60	10	
018F6710	BE115BS	Terminal box	115 ac	60	10	
018F6714	BE220BS	Terminal box	220 ac	60	10	
018F6756	BE012DS	DIN spades	12 dc	-	18	
018F6757	BE024DS	DIN spades	24 dc	-	18	
018F7396	BB012DS	DIN spades	12 dc	-	18	
018F7397	BB024DS	DIN spades	24 dc	-	18	

Code Number	Description
042N0156	DIN plug for coils with DIN spades
018F0091	Permanent magnet coil for testing only. No power required.

AVTA Thermostatic Operated Valves

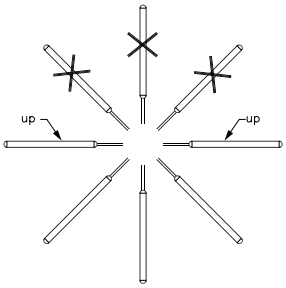
The AVTA are used for proportional regulation of flow volume, depending on the temperature setting. These valves are used for industrial and hydraulic applications.

- Media temperature: -13° to 266°F (-25° to 130°C)
- Maximum sensor tempetature: 266°F (130°C)
- Insensitive to water hammer
- Insensitive to dirt
- Brass valve body
- Stainless steel internal workings
- Self-acting for accurate cooling flow control based on media temperature

Code Number	Type	Regulation Range		Maximum Sensor Temperature		Orifice Size		Flow Factor		Charge Type	Process Connection
		(°F)	(°C)	(°F)	(°C)	(in.)	(mm)	Cv (US gal/min)	Kv (m^3/hr)		
003N6162	AVTA 15	77 to 149	25 to 65	194	90	9⁄16	15	2.2	1.87	Universal[2]	½ - 14 NPT
003N6132	AVTA 15	32 to 86	0 to 30	194	90	9⁄16	15	2.2	1.87	Universal[2]	½ - 14 NPT
003N6115	AVTA 15	50 to 176	10 to 80	266	130	9⁄16	15	2.2	1.87	Adsorption[1]	½ - 14 NPT
003N6182	AVTA 15	122 to194	50 to 90	194	90	9⁄16	15	2.2	1.87	Universal[2]	½ - 14 NPT
003N7162	AVTA 20	32 to 86	0 to 30	194	90	¾	20	4	3.4	Universal[2]	¾ - 14 NPT
003N7182	AVTA 20	122 to194	50 to 90	194	90	¾	20	4	3.4	Universal[2]	¾ - 14 NPT
003N7120	AVTA 20	50 to 176	10 to 80	266	130	¾	20	4	3.4	Adsorption[1]	¾ - 14 NPT
003N8162	AVTA 25	77 to149	25 to 65	194	90	1	25	6.4	5.44	Universal[2]	1 - 11 ½ NPT
003N8132	AVTA 25	32 to 86	0 to 30	194	90	1	25	6.4	5.44	Universal[2]	1 - 11 ½ NPT
003N8125	AVTA 25	50 to 176	10 to 80	266	130	1	25	6.4	5.44	Adsorption[1]	1 - 11 ½ NPT

[1] *Adsorption charge type is depicted below and the sensor can be installed in ay position as far as orientation and temperature are concerned.*

[2] *Universal charge type is depicted below and the sensor can be installed colder or warmer than the valve and oriented as shown below.*



Marine Applications	Danfoss Products
Engines	Pressure and temperature sensors and switches
Propulsion	Pressure and temperature sensors, switches and solenoid valves
Boilers	Pressure and temperature sensors, switches and solenoid valves
Oil treatment	Solenoid valves
Pump systems	Pressure and temperature sensors, switches and solenoid valves

Spare Parts & Accessories

MBV 5000 Pressure Test Valve

The MBV 5000 are block valves used in conjunction with block pressure transmitters and switches.

- Media temperature: -4° to 184°F (-20° to 120°C)
- Operating pressure: 0 to 2610 psi (0 to 180 bar)
- Available as common or separate inputs
- Available as common or separeate test ports

Code Number	Type	Number of Outputs	Pressure Connection (input)	Pressure Connection (test)
061B7001	Separate inputs and separate test functions	2	G ¼ female	G ¼
061B7005	Common input and separate test functions	2	G ¼ female	G ¼
061B7009	Common input and common test function	2	G ¼ female	G ¼
061B7006	Common input and separate test functions	3	G ¼ female	G ¼
061B7003	Separate inputs and separate test functions	4	G ¼ female	G ¼
061B7007	Common input and separate test functions	4	G ¼ female	G ¼
061B7011	Common input and common test function	4	G ¼ female	G ¼

Spare Parts for Pressure Transmitters

Code Number	Type(s) applied to	Description
060G0008	all with DIN spade terminals	Pg 9 DIN plug
060G000812	all with DIN spade terminals	DIN plug with ½ - 14 NPT conduit
060G0009	all with DIN spade terminals	DIN plug with 6′ cable

Spare Parts for Temperature Sensors

Code Number	Type(s) applied to	Description	Insertion Length[1] (in.)	Pocket Insertion Length[2] (in.)	Pocket Material	Process Connection[3]
084Z3033	MBT 3560	Sensor pocket	2	1.5	Stainless Steel	½ - 14 NPT
084Z3053	MBT 3560	Sensor pocket	4	3.5	Stainless Steel	½ - 14 NPT
084Z7260	MBT 3560	Sensor pocket	6	5.5	Stainless Steel	G ½
084Z7261	MBT 3560	Sensor pocket	8	7.5	Stainless Steel	G ½
084Z7262	MBT 3560	Sensor pocket	10	9.5	Stainless Steel	G ½

[1] *Insertion length includes process connection and tube.*
[2] *Pocket insertion length is tube only.*
[3] *Internal thread of sensor pocket is G ¼.*

Spare Parts for Industrial Switches

Code Number	Type(s) applied to	Description	Insertion Length (in.)	Pocket Material	Process Connection
060L326566	all temperature switches	Sensor pocket	2.5	Brass	½ - 14 NPT
060L326466	all temperature switches	Sensor pocket	3	Brass	½ - 14 NPT
060L328066	all temperature switches	Sensor pocket	4.5	Brass	½ - 14 NPT
060L036666[1]	KPS and MBC with armourned capillary tube	Capillary tube gland	n/a	n/a	n/a
060L327366	KP, RT, KPS and MBC without armourned capillary tube	Capillary tube gland	n/a	n/a	n/a

[1] *Threaded piece not included nor needed with switches supplied with armoured capillary tube.*

Spare Parts for Fluid Controls

Code Number	Type(s) applied to	Description	Seal Material	Function
032U1062	EV220B 6	Spare parts kit	EPDM	Normally Closed
032U1063	EV220B 6	Spare parts kit	FKM	Normally Closed
032U1065	EV220B 10	Spare parts kit	EPDM	Normally Closed
032U1066	EV220B 10	Spare parts kit	FKM	Normally Closed

Spare part kit contains locking button with nut for coil, armature with spring, diaphragm and O-ring.

Code Number	Type(s) applied to	Description	Seal Material	Function
032U1068	EV220B 12	Spare parts kit	EPDM	Normally Closed
032U1067	EV220B 12	Spare parts kit	FKM	Normally Closed
032U1070	EV220B 18	Spare parts kit	EPDM	Normally Closed
032U1069	EV220B 18	Spare parts kit	FKM	Normally Closed

Spare part kit contains locking button with nut for coil, armature with spring and diaphragm.

Code Number	Type(s) applied to	Description	Seal Material	Function
032U0165	EV220B 6	Spare parts kit	EPDM	Normally Open
032U0166	EV220B 6	Spare parts kit	FKM	Normally Open
032U0167	EV220B 10	Spare parts kit	FKM	Normally Open

Spare part kit contains normally open actuator unit, locking button with nut for coil and O-ring.

Code Number	Type(s) applied to	Description	Seal Material	Function
032U1071	EV220B 15	Spare parts kit	EPDM	Normally Closed
032U1072	EV220B 15	Spare parts kit	FKM	Normally Closed
032U1073	EV220B 20	Spare parts kit	EPDM	Normally Closed
032U1074	EV220B 20	Spare parts kit	FKM	Normally Closed
032U1075	EV220B 25	Spare parts kit	EPDM	Normally Closed
032U1076	EV220B 25	Spare parts kit	FKM	Normally Closed
032U1077	EV220B 32	Spare parts kit	EPDM	Normally Closed
032U1078	EV220B 32	Spare parts kit	FKM	Normally Closed
032U1079	EV220B 40	Spare parts kit	EPDM	Normally Closed
032U1080	EV220B 40	Spare parts kit	FKM	Normally Closed
032U1081	EV220B 50	Spare parts kit	EPDM	Normally Closed
032U1082	EV220B 50	Spare parts kit	FKM	Normally Closed

Spare part kit contains locking button with nut for the coil, armature with spring, spring, diaphragm, O-ring for the armature tube, 2 O-rings for the equalizing orifice, and 2 O-rings for the pilot system.

Code Number	Type(s) applied to	Description	Seal Material	Function
032U0296	EV220B 15-50	Spare parts kit	EPDM	Normally Open
032U0295	EV220B 15-50	Spare parts kit	FKM	Normally Open
032U0299	EV220B 15-50	Spare parts kit	NBR	Normally Open

Spare part kit contaions locking button with nut for the coil, normally open actuator unit and O-ring.

Code Number	Type(s) applied to	Description	Seal Material	Function
032U2003	EV210B 1.5, 2, 3, 4.5	Spare parts kit	FKM	Normally Closed
032U2011	EV210B 6, 8, 10	Spare parts kit	FKM	Normally Closed

Spare part kit contains locking button with nut for coil, armature with valve plate and spring and O-ring.

Code Number	Type(s) applied to	Description	Seal Material	Function
032U2004	EV210B 1.5, 2, 3	Spare parts kit	FKM	Normally Open

Spare part kit contains locking button with nut for coil, normally open actuator unit and 2 O-rings.

Code Number	Type(s) applied to	Description	Flow Factor		Process Connection
			Cv (US gal/min)	Kv (m3/hr)	
003N6100	AVTA 15	Valve body	2.2	1.9	½ - 14 NPT
003N7100	AVTA 20	Valve body	3.9	3.4	¾ - 14 NPT
003N8100	AVTA 25	Valve body	6.4	5.5	1 - 11 ½ NPT

Code Number	Type(s) applied to	Description	Insertion Length (in.)	Pocket Material	Process Connection
017-436766	AVTA with adsorption charge	Sensor pocket	7.2	Brass	G ½
003N0196	AVTA with adsorption charge	Sensor pocket	7.2	Stainless Steel	G ½
003N0051	AVTA with universal charge	Sensor pocket	8.7	Brass	¾ - 14 NPT
003N0053	AVTA with universal charge	Sensor pocket	8.7	Stainless Steel	¾ - 14 NPT

Code Number	Type(s) applied to	Description
017-422066	AVTA with adsorption charge	Capillary tube glands
003N0155	AVTA with universal charge	Capillary tube glands

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