



Pressure Measurement/ Monitoring

Pressure Sensor Precision Piezoresistive/Thin Film

Stainless steel
Model: SEN-3290, -3390



Measuring range:
-0.25 ... 0 bar ... 0 ... +1000 bar
Membrane: internal
Overload protected: 1.5-3.5 times
Connection: G 1/2 male thread
Accuracy: ± 0.1 % of full scale

Pressure Sensor Piezoresistive/Thin Film - Flush Mounted

Stainless steel
Model: SEN-3344, -3386



Measuring range:
0 ... +40 bar ... 0 ... +600 bar
Membrane: flush mounted
Overload protected: 2 times
Connection: G 1/2 male thread
Accuracy: Cl. 0.25; 0.5

Pressure Hand-Held Unit for External Sensors

Model: HND-P210, -215



Measuring range:
-1.99 ... +2.5 mbar ... 0 ... +400 bar (sensor dependent)
Option: logger, alarm, control function
Accuracy: ± 0.1 % of full scale

Differential Pressure Hand-Held Unit with 2 Integrated Sensors

Model: HND-P121, -123, 126



Measuring range:
-1 ... +25 mbar ... -10.0 ... +2000 mbar
Option: logger, alarm, control function
Accuracy: ± 0.2 % of full scale

Pressure Hand-Held Unit with 1 Integrated Sensor

Model: HND-P129, -239



Measuring range: 0 ... +1300 mbar
Option: logger, alarm, control function
Accuracy: ± 0.2 % of full scale

Pressure Switch with Ceramic Cell

Stainless Steel
Model: PDD



Measuring range:
-1 ... 0 bar ... 0 ... +400 bar
Display: 3-digit LED
Overload protected: 1.5-2 times
Connection:
G 1/4, G 1/2, 1/4" NPT, 1/2" NPT male thread
Accuracy: ± 0.5 - 1 % of full scale

Electronic Pressure Switch - Thin Film/Ceramic

Stainless Steel
Model: PSC



Measuring range:
-1 ... +2 bar ... 0 ... +700 bar
Display: 4-digit LED
Connection:
G 1/4, G 1/2, 1/4" NPT, 1/2" NPT male thread
Accuracy: ± 1 % of full scale ... ±1 Digit

Pressure Switch with Hall Sensor

Brass, aluminium
Model: PDL-0/-1



Switching range:
-0.9 ... -0.05 bar ... +30 ... +600 bar
Switching function: N/O/N/C
Connection: G 1/4, 1/4" NPT male thread
Repeatability: < 1 % of full scale

Pressure Switch - mechanical

Stainless Steel
Model: SCH-27



Switching range:
0,7 ... 6 mbar ... 8 ... 160 bar
Switching function: micro switch
Connection: 1/2" NPT female, 1/4" NPT female, 1/2" NPT male, G 1/2 male
Repeatability: < 1% of switching point

Differential Pressure Switch - mechanical

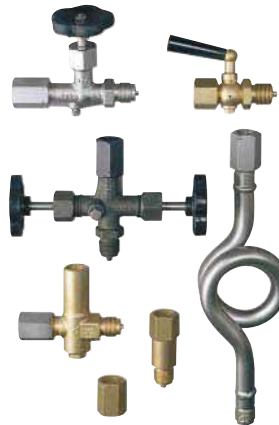
Stainless Steel
Model: SCH-28



Switching range:
0,1 ... 1 bar ... 0,2 ... 10 bar
Switching function: micro switch
Connection: 1/2" NPT female, 1/4" NPT female, 1/2" NPT male, G 1/2 male
Repeatability: < 1% of switching point

Pressure Gauges Accessories

Brass, steel, stainless steel
Model: MZB



Shut off cocks and valves, syphons, trottle and overpressure protection equipment, adapters

Sandwich Plug-On Display

Model: AUF



Input: 4-20 mA loop powered
Option: Open-Collector
No additional power supply required



Level Switches

Float Magnet Switch

Brass, stainless steel, PVC, PPH, PVDF

Model: M



Density: 0.5 kg/dm³
t_max 150°C; p_max 100 bar
Connection: thread /NPT, flange DIN/ANSI

Float Magnet Switch

Brass, stainless steel, PVC, PP

Model: MS



Density: from 0.6 kg/dm³
t_max 150°C; p_max 100 bar
Connection: G 3/8 male thread

Float Bypass Switch

Aluminium, stainless steel

Model: NBA/NBE



Density: 0.65 kg/dm³
t_max 90°C; p_max 10 bar
Connection: G 3/8 female, R 1/2 male

Plastic Level Switch

Polypropylene, PVDF

Model: NKP



Density: 0.6 kg/dm³
t_max 100°C; p_max 10 bar
Connection: G 1/2, 1/2" NPT, M16

Float Switch

Stainless steel

Model: RFS



Density: 0.7 kg/dm³
t_max 120°C; p_max 5 bar
Connection: 1/2" NPT male thread

Float Switch

Brass, stainless steel

Model: NV



Density: 0.7 kg/dm³
t_max 110°C; p_max 16 bar
Connection: G 3/4 male, M27x1,5 male

Float Switch

Polyethylene, Polypropylene

Model: NSP-S



Density: 0.6 kg/dm³
t_max 85°C; p_max 1 bar
Connection: Cable

Float Switch

Polypropylene

Model: NAB



Density: 0.5... 1.15 kg/dm³
t_max 85°C; p_max 5 bar
Connection: Cable

Float Switch

Polypropylene

Model: NSM



Density: 0.6 kg/dm³
t_max 95°C; p_max 3 bar
Connection: Cable

Float Switch

Polypropylene, Hypalon

Model: NEC



Density: 0.7... 1.4 kg/dm³
t_max 95°C; p_max 5,5 bar
Connection: Cable

Float Switch

PTFE

Model: NST



Density: 0.79 kg/dm³
t_max 150°C; p_max 1 bar
Connection: Cable

Float Switch

Stainless steel

Model: NSE



Density: 0.8 kg/dm³
t_max 150°C; p_max 15 bar
Connection: G 1/2 male thread

Dual Magnet Float Switch

Stainless steel

Model: NGS



Density: 0.7 kg/dm³
t_max 250°C; p_max 25 bar
Connection: Square box flange, DIN-flange, DN80/100, BSP 2", 2" NPT

Conductive Switch

Stainless steel, Hastelloy, Titanium, Coating: Polypropylene, PTFE

Model: NES



t_max 150°C; p_max 30 bar
Connection: G 1/2, G 1 1/2 male thread

Conductive Suspended Electrodes

Stainless steel, Hastelloy, Titanium, Neoprene, PVC

Model: NEH



t_max 150°C; p_max 6 bar
Connection: G 1/2, G 1 1/2 male thread

Conductive Switch § 19 WHG

Stainless steel, Hastelloy, Titanium Coating: Polypropylene, PTFE

Model: NEW



t_max 60°C; p_max atmospheric
Connection: G 1, G 1 1/2 male thread





Level Switches

Conductive Switch PP, PPS

Model: NEK



t_{max} 85 °C; p_{max} 20 bar
Connection:
G 3/4 male thread, 3/4" NPT male
Open-Collector or relay

Conductive Switch Stainless steel, PEEK

Model: LNK



Measuring range: 4 - 1500 mm
 t_{max} 150 °C; p_{max} 10 bar
Connection:
G 1/2, G 1 male thread, hygienic
installation system LZE
Open-Collector

Conductive Switch Compact Probe

Stainless steel, PEEK

Model: LNK-K



Measuring range: 4 - 1500 mm
 t_{max} 150 °C; p_{max} 10 bar
Connection: G 1/2 male thread, hygienic
installation system LZE
Open-Collector

Electrode Relays for Conductive Switches

Model: NE-104, -304



2 limit contacts or
2 Min/Max control switches
Switch capacity: max. 250 V_{AC},
5 A, 600 VA

Electrode Relay § 19 WHG

Model: NE-204



2 limit contacts or
2 Min/Max control switches
Switch capacity: max. 250 V_{AC},
5 A, 600 VA

Head Mounted Transmitter for Conductive Probes

Model: LNR



t_{max} 80 °C
Open-Collector

Microwave Switch Stainless steel, PEEK

Model: LNM



t_{max} 100 °C (150 °C for CIP); p_{max} 10 bar
Connection: G 1/2, M12 x 1,5 male thread,
hygienic installation system LZE
Open-Collector

Capacitive Switch Liquids Stainless steel, PEEK

Model: LNZ



t_{max} 100 °C (150 °C for CIP); p_{max} 10 bar
Connection: G 1/2 male thread, hygienic
installation system LZE
Open-Collector

Capacitive Switch Liquids Stainless steel, PVDF

Model: NCW



t_{max} 90 °C; p_{max} 10 bar
Connection: G 1, G 2 male thread,
Adapter: G 1 1/4, G 1 1/2, round flange,
weld-in sleeve
1 relay, SPDT

Capacitive Switch Liquids - High Temperature

Stainless steel

Model: NCW-H



t_{max} 125 °C; p_{max} 10 bar
Connection: G 1, G 2 male thread,
Adapter: G 1 1/4, G 1 1/2, round flange,
weld-in sleeve
1 relay, SPDT

Ultrasonic Switch Liquids

Stainless steel

Model: NQ-1000



t_{max} 125 °C; p_{max} 20 bar
Connection: R 1 male thread
1 switch output

Optical Switch Liquids

Polypropylene, stainless steel

Model: OPT



t_{max} 80 °C; p_{max} 10 bar
Connection: G 1/2, 1/2" NPT male thread or
M14 with bulkhead nut
Open-Collector

Vibration Switch Liquids

Stainless steel

Model: NWS-***20



t_{max} 130 °C (150 °C for CIP); p_{max} 50 bar
Viscosity: max. 5000 mm²/s
Connection: R-/NPT-thread, DIN-/ANSI-
flange, Tri-Clamp®, milk connection DIN
11851, Aseptic DIN 11864, DRD-flange

Vibration Switch Liquids - Plug Connection

Stainless steel

Model: NWS-***2*ES...



t_{max} 90 °C (150 °C for CIP); p_{max} 45 bar
Viscosity: max. 5000 mm²/s
Connection: R-/NPT-thread, DIN-/ANSI-
flange, Tri-Clamp®, milk connection DIN
11851, Aseptic DIN 11864, DRD-flange

Vibration Switch Liquids - Cable Connection

Stainless steel

Model: NWS-***2*F...



t_{max} 90 °C (150 °C for CIP); p_{max} 45 bar
Viscosity: max. 5000 mm²/s
Connection:
R-/NPT-thread, DIN-/ANSI-flange,
Tri-Clamp®, sanitary connection DIN
11851, Aseptic DIN 11864, DRD-flange

Vibration Switch - Bulk Materials

Stainless steel

Model: NSV



Switching range: 230 - 3000 mm
Density: 0.06 kg/dm³
 t_{max} 80 °C; p_{max} atmospheric
Connection: G 1 1/2 male
1 relay, SPDT



Level Switches/Transmitters

Vibration Switch - Bulk Materials

Stainless steel

Model: NVI



Switching range: 235 mm
Density: 0.05 kg/dm³
t_max 160 °C; p_max 25 bar
Connection: G 1½, 1½" NPT male
1 relay, SPDT

Diaphragm Switch - Bulk Materials

Neoprene, FPM, steel, st. steel

Model: NMF



t_max 200 °C; p_max 1 bar (over-pressure secure)
Connection: flange

Rotation Vane Switch - Bulk Materials

Stainless steel

Model: NIR-9/NIR-E9



Switching range: 65 - 4000 mm
t_max 200 °C; p_max 0.5 bar
Connection: G 1 male, Adapter: G 1¼, G 1½, round flange, weld-in sleeve
1 relay, SPDT

Capacitive Switch - Bulk Materials

Stainless steel, PTFE

Model: NSC



Switching range: 265 - 3000 mm
t_max 80 °C; p_max 0.5 bar
Connection: G 1 male, Adapter: G 1¼, G 1½, round flange, weld-in sleeve
1 relay, SPDT

Pendulum Level Monitor Bulk Materials

Aluminium, EPDM

Model: PLS



Pendulum length up to 2000 mm
t_max 80 °C; p_max -0.1 ... 0.5 bar
Process connection: aluminium flange
Contact: max. 250 V_AC/3A

Float Transducer - Reed Chain Bulk Materials

Stainless steel, PVC, PP, PTFE, PE

Model: NM



Measuring range: 300 - 6000 mm
Density: 0.6 kg/dm³
t_max 130 °C; p_max 20 bar
Connection: G ¾ ... 2 male thread, flange DN 50 ... 100
Accuracy: ±10 mm

Float Transducer - Reed Chain with Transmitter Bulk Materials

Stainless steel, PVC, PP, PTFE

Model: NM and ADI



Measuring range: 300 - 6000 mm
Density: 0.6 kg/dm³
t_max 130 °C; p_max 20 bar
Connection: G ¾ ... 2 male, flange DN 50 ... 100
Accuracy: ±10 mm

Float Magnetostrictive Bulk Materials

Stainless steel

Model: NMT



Measuring range: 300 - 4000 mm
Density: 0.7 kg/dm³
t_max -20 ... +70 °C; p_max PN 10
Connection: G 2, 2" NPT male
Analogue output
Accuracy: ±1 mm

Capacitive Measurement Bulk Materials

Stainless steel, PVDF

Model: NMC



Measuring range: 265 - 4000 mm
t_max 125 °C; p_max 10 bar PN 10
Connection: G 1, G 2 male thread, Adapter: G 1¼, G 1½, round flange, weld-in sleeve
Analogue output
Measuring error: 1.5% of probe length

Potentiometric Measurement Bulk Materials

Stainless steel

Model: LNP



Measuring range: 200 - 2000 mm
t_max 120 (150) °C; p_max 10 bar
Connection: G 1, 1" NPT male thread, hygienic installation system LZE
Analogue output
Accuracy: ±1 % of probe length

Bypass Glass Gauge Bulk Materials

Stainless steel, PP

Model: SZM

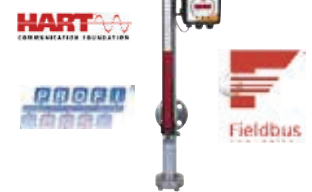


Measuring range: 370 - 3080 mm
t_max 0 ... 100 °C; p_max 10 bar
Connection: flange DN 15 ... 32

Mini Bypass with Roller Indicator Bulk Materials

Stainless steel

Model: NBK-M



Measuring range: 200 - 3000 mm
Density: 0.8 kg/dm³
t_max 200 °C; p_max PN 40
Connection: flange DN 10 ... 25, ANSI ½" ... 1"
Accuracy: ±1 mm (transmitter)

Bypass with Roller Indicator Bulk Materials

Stainless steel

Model: NBK-03,-06,-07,-10,-31,-32,-33



Measuring range: 300 - 5500 mm over 5500 mm 2-piece or multipart
Density: min. 0.54 kg/dm³
t_max 400 °C; p_max PN 320
Accuracy: ±1 mm (transmitter)

Bypass with Roller Indicator Bulk Materials

Stainless steel

Model: NBK-ATEX, -GL



Measuring range: 300 - 5500 mm over 5500 mm 2-piece or multipart
Density: 0.54 kg/dm³
t_max 400 °C; p_max PN 100
Accuracy: ±10 mm (transmitter)

Bypass Over-Top Tank Measurement Bulk Materials

Stainless steel

Model: NBK-04



Measuring range: 300 - 4000 mm
Density: 0.43 kg/dm³
t_max 120 °C; p_max PN 16
Connection: flange DN 50, 65 ANSI 2", 2½"
Accuracy: ±10 mm (transmitter)

Bypass Level Roller Indicator Measurement - Plastic Bulk Materials

PP, PVC, PVDF

Model: NBK-15,-16,-17



Measuring range: 200 - 4000 mm
Density: 0.57 kg/dm³
t_max 80 °C; p_max 4 bar
Connection: flange DN 20 ... 50, ANSI ¾" ... 2"
Accuracy: ±10 mm





Level Switches/Transmitters

Bypass Roller Indicator Low Cost

Stainless steel
Model: NBK-01



Measuring range: 300 - 5500 mm over 5500 mm 2-piece or multipart
Density: 0.54 kg/dm³
t_{max} 400 °C; p_{max} PN 100
Accuracy: ±1 mm (transmitter)

Bypass Roll Measuring Rope PVC

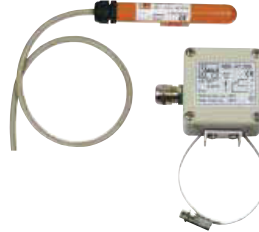
Model: NBK-19



Measuring range: 0.2 - 4,8 m
Density: 1 kg/dm³
t_{max} 60 °C; p_{max} atmospheric
Accuracy: ± 1 mm (transmitter)

Limit Contact for Bypass Measurement

Aluminium, Polycarbonate
Model: NBK-R, RT



t_{max} 400 °C
Switch capacity: 80 VA, 250 V_{AC/DC}, 1 A

Limit Contact for Bypass Measurement

Model: NBK-RA



t_{max} 85 °C
Switch capacity: 45 VA, 230 V_{AC/DC}, 0,6 A

Limit Contact for Bypass Measurement

Model: NBK-RV, -RN



t_{max} 200 °C
Switch capacity:
5 W, 400 V_{DC}/ 230 V_{AC}, 0,5 A

Displacement Level Meter Stainless steel

Model: BA



Measuring range: 300 - 6000 mm
Density range: 400 - 2000 g/l
t_{max} 250 °C; p_{max} PN 400
Connection: flange DN 50, ANSI 2"
Analogue output, 2 limit contacts
Accuracy: ± 5 mm

Guided Wave Radar (TDR) for process industry - rod probe

Stainless steel, PTFE

Model: NGM



Measuring range: 100 - 3000 mm (liquids)
t_{max} 250 °C; p_{max} 40 bar
Connection: thread, flange
Analogue output, switching output
Accuracy:
±3 mm or 0,03 % of measured value

Guided Wave Radar (TDR) for process industry - coax probe

Stainless steel

Model: NGM



Measuring range: 100 - 6000 mm (liquids)
t_{max} 250 °C; p_{max} 40 bar
Connection: thread, flange
Analogue output, switching output
Accuracy:
±3 mm or 0,03 % of measured value

Guided Wave Radar (TDR) for process industry - rope sensor

Stainless steel

Model: NGM



Measuring range:
1000 - 20000 mm (solids)
t_{max} 150 °C; p_{max} 40 bar
Connection: thread, flange
Analogue output, switching output
Accuracy:
±3 mm or 0,03 % of measured value

Guided Wave Radar (TDR) for process industry - with Bypass

Stainless steel

Model: NGM



Measuring range: 100 - 3000 mm (liquids)
t_{max} 250 °C; p_{max} 40 bar
Connection: thread, flange
Accuracy:
±3 mm or 0,03 % of measured value

Guided Wave Radar (TDR) for engineering/factory automation

Stainless steel, PTFE

Model: NGF



Measuring range: 200 - 2000 mm (liquids)
t_{max} 100 °C; p_{max} 10 bar
Connection: G ¾, ¾" NPT male
Analogue output, switching output
Accuracy: ±5 mm

Ultrasonic Measurement PP

Model: NUS-4



Measuring range: 0.2 - 25 m (liquids)
t_{max} 90 °C; p_{max} 3 bar abs
Connection:
G 1½, G 2, 1½" NPT, 2" NPT male, DN 80, DN 125, DN 150, ANSI 3", 5", 6"
Analogue output
Accuracy: ±0.2 % of reading ±0.05 % of f. s.

Pressure Transmitter with Diaphragm Seal

St. steel, Monel, Tantalum, Hastelloy, PTFE

Model: PAD-...N

High Quality - Low Cost



Level:
0 ... +2500 mmWC ... 0 ... +150 mWC
t_{max} 200 °C
Connection: flange via neck tube DN 50 or bigger
Accuracy: ±0.075% of calibrated span + influence of diaphragm seal

Pressure Transmitter with Diaphragm Seal

St. steel, Monel, Tantalum, Hastelloy, PTFE

Model: PAS-...N

High Quality - Low Cost



Level:
0 ... +2500 mmWC ... 0 ... +150 mWC
t_{max} 350 °C
Connection: Thread or flange DN 50 or bigger
Accuracy: ±0.075% of calibrated span + influence of diaphragm seal

Deep-Well Probe

Stainless steel, cable polyurethane

Model: NTB



Measuring range: 0 - 1 ... 0 - 200 mWS
Cable length 200 m
Accuracy: ± 0.5 % of full scale

Hydrostatic Diaphragm Measurement

Stainless steel

Model: NPF



Measuring range:
0 - 600 ... 0 - 10000 mmWS
t_{max} 80 °C
Connection: G ½ male, ½" NPT, DN 50 ... DN 100, ANSI 2" ... 4"
Accuracy: ± 1.6 % of full scale



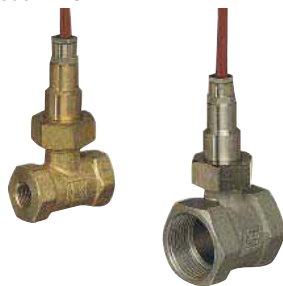
Temperature Switches/indicators

Bi-metal Switch
Brass, stainless steel
Model: TWR



Switching range: +30 ... +120 °C
t_{max} 150 °C; p_{max} 64 bar
Connection: G 3/4 male thread

Thermal Reed Switch
Brass, stainless steel
Model: TRS



Switching range: +10 ... +120 °C
t_{max} 120 °C; p_{max} 25 bar
Connection: G 1/4...1, 1/2...1 NPT

Temperature Switch Digital
Stainless steel
Model: TDD-1, -3, -5, -7



Measuring range: -20 ... +120 °C
t_{max} 125 °C; p_{max} 80 bar
Connection: G 1/2, G 3/4, 1/2 NPT, 3/4 NPT
male thread
2 limit contacts
Accuracy: ±0.5 °C

Temperature Switch Digital
Stainless steel
Model: TDD-...D6



Measuring range: -50 ... +125 °C
t_{max} 125 °C; p_{max} 80 bar
Connection: smooth probe Ø 6 mm
2 limit contacts
Accuracy: ±0.5 °C

V-Form - Machinery Glass Thermometer
Aluminium casing, brass
Model: TGL



Measuring range:
-60 ... +40 °C ... 0 ... +200 °C
Connection: G 1/2, 1/2 NPT male thread
Accuracy: ± 1 % of full scale

V-Form - Machinery Glass Thermometer
Plastic casing, brass
Model: TGK



Measuring range:
-60 ... +40 °C ... 0 ... +200 °C
Connection: G 1/2, 1/2 NPT male thread
Accuracy: ± 1 % of full scale

Bi-metal Thermometer
Copper alloy, steel, stainless steel
Model: TBI-I/ TBI-S



Measuring range: -30 ... +500 °C
p_{max} 25 bar
Connection:
G 1/2 male thread, welding sleeve
Accuracy: Cl. 1.0 according to VDI

Bi-metal Thermometer
Stainless steel
Model: TBE



Measuring range:
-50 ... +50 °C... 0... +600 °C
p_{max} 15 bar
Connection: G 1/2...3/4, 1/2" ... 3/4" NPT,
fixed, rotatable, slidable
Accuracy: Cl. 1,0

Shaft Thermometers according to DIN 16205
Stainless steel
Model: TNS



Measuring range:
-40...+40 °C ... 0 ... +600 °C
p_{max} 25 bar
Connection: G 1/2...1, 1/2...1 NPT, DIN
11851, Tri-Clamp®, helix probe
Accuracy: Cl. 1.0 ; 1.6

Capillary Thermometer according to DIN 16206
Stainless steel
Model: TNF



Measuring range:
-40...+40 °C ... 0 ... +600 °C
p_{max} 25 bar
Connection: G 1/2...1, 1/2...1 NPT, DIN
11851, Tri-Clamp®, helix probe
Accuracy: Cl. 1.0 ; 1.6

Safety Thermometer with Contacts
Stainless steel
Model: TNS, TNF



Measuring range:
-40...+40 °C ... 0 ... +600 °C
p_{max} 25 bar
Connection: G 1/2...1, 1/2...1 NPT, DIN
11851, Tri-Clamp®, helix probe
Accuracy: Cl. 1.0 ; 1.6

Shaft Thermometer for Diesel Engines
Steel, stainless steel
Model: TND



Measuring range:
0 ... +600 °C ... 0 ... +800 °C
p_{max} 25 bar
Connection: G 1/2, G 3/4 male thread
Accuracy: Cl. 1.0 ; 1.6

Thermowells for Shaft and Capillary Thermometer
Stainless steel
Model: TSH



p_{max} 25 bar
Connection:
G 1/2 male thread, welding sleeve

Electronic Temperature Sensor
Stainless steel
Model: TDA



Measuring range: -20 ... +120 °C
p_{max} 80 bar
Connection:
G 1/2, G 3/4, 1/2 NPT, 3/4 NPT male
Analogue output, limit contact
Accuracy: ± 0.5 °C

Electronic Temperature Sensor
Stainless steel
Model: TDA-...D6



Measuring range: -50 ... +125 °C
p_{max} 80 bar
Connection: smooth probe Ø 6 mm
Analogue output, limit contact
Accuracy: ±0.5 °C

Infrared Fixed Thermometer
Stainless steel
Model: TIR-SA



Measuring range:
0 ... +120 °C ... 100 ... +500 °C
4...20 mA, 10 mV/K or
voltage model J, K
Accuracy: ± 1.5 % of full scale





Temperature Switches/indicators

Infrared Fixed Thermometer
Stainless steel

Model: TIR-S



Measuring range:
-20...+300 °C ... +1100 ... +2500 °C
Analogue output
Accuracy: ± 1.5 % of full scale

Precision Hand-Held Thermometer

Model: HND-T120



Measuring range: -50...+1150 °C
Sensor: Type K (NiCr-Ni)
Accuracy: 0.1 – 1.5 % of reading

Precision Hand-Held Thermometer

Model: HND-T125



Measuring range: -50...+1150 °C
Sensor: Type K (NiCr-Ni)
Accuracy: ± 0.1 – 1.5 % of reading

Precision Hand-Held Thermometer

Model: HND-T105, -T205, -T110



Measuring range: -65...+1768 °C)
Sensor:
Pt 100 or thermocouple types K, N, S
Option: Logger, alarm, control function
Accuracy: ± 0.03 % of full scale

Double/Differential Hand-Held Thermometer

Model: HND-T115, -T215



Measuring range: -220 ... +1750 °C
Sensor: thermocouple types K, N, S, J, T
Accuracy: ± 0.03 % of full scale

Digital Thermometer
Stainless steel

Model: DTM



Measuring range:
-30 ... +40 °C ... 0 ... +400 °C
p_{max} 25 bar
G ½...1, ½...1 NPT
Analogue output, limit switches
Accuracy: Cl. 0,5

Temperature Sensor
Brass, stainless steel

Model: TSA



Measuring range: -40 ... +150 °C
t_{max} 150 °C; p_{max} 25 bar
G ¼...1, ¼...1 NPT
Accuracy: from 0.7 °C

Resistance Thermometer
Brass, bronze, stainless steel

Model: TNK



Measuring range: -80 ... +150 °C
t_{max} 150 °C; p_{max} 50 bar
M18x1.5; G ½; ½ NPT
Accuracy: Cl. A or B

Screw-In Resistance Thermometer
Brass, stainless steel

Model: TMA with AUF and KUG-S



Measuring range:
0 ... +50 °C ... -200 ... +600 °C
p_{max} 36 bar
Accuracy: Cl. B

Resistance Temperature Probe with Connection Box

Model: LTS-A



Measuring range: -50 ... +250 °C
p_{max} 10 bar
Connection: G ½, M12 x 1,5 male thread,
hygienic installation system LZE
Accuracy: Cl. A

Resistance Temperature Probe - Compact Version
Stainless steel

Model: LTS-K



Measuring range: -50 ... +250 °C
p_{max} 10 bar
Connection: G ½, M12 x 1,5 male thread,
hygienic installation system LZE
Pt 100, 4...20 mA
Accuracy: Cl. A

Temperature Transducer - Head Mounting

Model: KM-1/-3



Measuring range:
-200 ... +250 °C ... -50 ... +1768 °C
Input: RTD, TC, Ω, mV
Analogue output

Temperature Transducer Rail or Wall Mounting

Model: KM-6



Measuring range:
-200 ... +250 °C ... -50 ... +1768 °C
Input: RTD, TC, Ω, mV
Analogue output

Screw-In Resistance Thermometer according to DIN
Stainless steel

Model: TWD-B



Measuring range: -80 ... +600 °C
p_{max} 25 bar (40 bar)
Connection: G ½...1, ½...1 NPT
Analogue output
Accuracy: Cl. A or B

Weld-In and Insertion Resistance Thermometer according to DIN
Stainless steel

Model: TWD-D, -F



Measuring range: -80 ... +600 °C
p_{max} 25 bar (40 bar)
Analogue output
Accuracy: Cl. A or B

Pipe Resistance Thermometer
Stainless steel

Model: TWP



Measuring range: -20 ... +200 °C
Connection: A 11887, Clamp ISO 2852
Accuracy: Cl. A or B



Temperature Indicators

Screw-In Resistance Thermometer

Stainless steel

Model: TWE-1



Measuring range: -20 ... +600°C
Connection: G 1/4, G 1/2, M 10
Accuracy: Cl. A or B

Screw-In Resistance Thermometer

Stainless steel

Model: TWE-2



Measuring range: -20 ... +400°C
Connection: M 10
Accuracy: Cl. A or B

Screw-In Resistance Thermometer

Stainless steel

Model: TWE-3



Measuring range: -20 ... +300°C
Connection: M 8
Accuracy: Cl. A or B

Insertion Resistance Thermometer

Stainless steel

Model: TWE-5



Measuring range: -20 ... +350°C
Accuracy: Cl. A or B

Immersion-/Insertion Resistance Thermometer

Stainless steel

Model: TWE-5



Measuring range: -20 ... +350°C
Accuracy: Cl. A or B

Screw-In Resistance Thermometer

Stainless steel

Model: TWE-5



Measuring range: -20 ... +150°C
Connection: G 1/4, G 1/2, G 3/4, M 12
Accuracy: Cl. A or B

Sheath Resistance Thermometer

Stainless steel

Model: TWM



Measuring range: -20 ... +600 °C
Accuracy: Cl. A or B

Resistance Temperature Measuring Unit

Stainless steel

Model: TWL



Measuring range: -200 ... +750°C
p_{max} 250 bar
Connection: Thread, flange, weld-in sleeve
Pt 100, 4...20 mA
Accuracy: Cl. A or B

Room Thermometer

Aluminium

Model: TWL-ST



Measuring range: -20 ... +60°C
p_{max} atmospheric
Wall socket
Pt 100, 4...20 mA
Accuracy: Cl. A or B

Contact Resistance Thermometer

Aluminium, stainless steel

Model: TWA



Measuring range: -20 ... +260°C
Accuracy: Cl. A or B

Weld-In and Insertion Thermocouples according to DIN

Steel, stainless steel, ceramic

Model: TTD



Measuring range: -200 ... +1 150 °C
p_{max} 25 bar (40 bar)
Connection: G 1/2 male thread
Accuracy: Cl. 1.0

Screw-In Thermocouples with Compensating Lead

Stainless steel

Model: TTE-1



Measuring range: -200 ... +600°C
Connection: G 1/2, M10x1
Accuracy: Cl. 1.0

Insertion Thermocouples with Bayonet Lock

Stainless steel

Model: TTE-1



Measuring range: 0 ... +400°C
Accuracy: Cl. 1.0

Immersion-/Insertion Thermocouples with Compensating Lead

Stainless steel

Model: TTE-1



Measuring range: 0 ... +600°C
Accuracy: Cl. 1.0

Immersion and Insertion Thermocouples

Stainless steel

Model: TTL



Measuring range: -200 ... +1 600 °C
p_{max} 250 bar
Connection: thread, flange, weld-in sleeve
4...20 mA
Accuracy: Cl. 1.0 or 2.0

Sheath - Thermocouples

Brass, stainless steel

Model: TTM



Measuring range: -50 ... +1 100 °C
Accuracy: Cl. 1.0





Analysis

Transmitter for pH-Value and ORP

Model: APM-1



Outputs: 1 binary output,
2 analogue outputs
Switch output:
2 relays with adjustable setpoints

pH-Combined Electrodes

Glass, plastic

Model: APS



Measuring range: pH 1...12
 t_{max} 80 °C; p_{max} 10 bar
Diaphragm: PTFE-ring or ceramic

pH-, Redox- and Temperature Hand-Held Measurement

Model: HND-R



Measuring range: pH: 0...14;
Redox: -1999...+2000 mV
Temperature: -100...+250 °C
Accuracy: ± 0.01 pH; ± 0.1 % of reading

Transmitter for Specific Conductivity

Model: ACM-1



Measuring range: 0...200 mS/cm
Outputs: 1 binary output,
2 analogue outputs,
Switch output:
2 relays with adjustable setpoints

Conductive/Inductive Conductivity Measuring Cells

Stainless steel, graphite

Model: ACS



Measuring range:
0.05 μ S/cm... 15 mS/cm
 t_{max} 150 °C; p_{max} 16 bar
Process connection G $\frac{3}{4}$ male

Inductive Conductivity Measuring System

PEEK, PVDF, stainless steel

Model: LCI



Measuring range: 0...2000 mS/cm
 t_{max} 150 °C; p_{max} 10 bar
integrated Pt 100
Accuracy: $\pm 0.5 - 1$ % of full scale

Hand-Held Conductivity Measuring Unit

Model: HND-C



Measuring range:
0...200 μ S/cm -0... 200 mS/cm
Options: Resistance, salinity, TDS
Accuracy: from ± 0.1 %

Humidity/Temperature Transmitter

Model: AFK-G2



Measuring range:
0...100 % rH; -60...200 °C
 t_{max} 200 °C; p_{max} 25 bar
Outputs: 2 x 4...20 mA
Accuracy: ± 2 % rH

Humidity Transmitter with Display

Model: AFA-G



Measuring range: 5...95 % rH; 0...60 °C
 t_{max} 80 °C
Outputs: 4...20 mA
Accuracy: ± 2 % rH

Humidity/Temperature Transmitter

Model: AFK-E



Measuring range: 0...100 % rH;
-40...+180 °C
 t_{max} 180 °C; p_{max} 15 bar
Outputs: analogue outputs and switches
Accuracy: ± 1.6 % of reading % rH

Hygrostat, Humidity Annex Switch

Model: AFS-G1, AFS-G2, AFS-G3



Measuring range: 30...100 % rH
 t_{max} 60 °C
Switch output: 1 SPDT
Accuracy: 3 % rH

Hand-Held Humidity Precision Measuring Unit

Model: HND-F



Measuring range: 0... 100% rH
Integrated Pt 1000
Accuracy: $\pm 0.1 - 0.2$ %

Turbidity Measuring System

Stainless steel

Model: ATA-K, ATS-K



Measuring range: 0...500 ppm;
0...4 CU, 0... 10 - 200 FTU
 t_{max} 150 °C; p_{max} 16 bar
Output: 4...20 mA
Accuracy: ± 2 % of full scale

Transmitter for Turbidity Measuring System

Model: ATT-K



Output: 4...20 mA
Switching Output:
2 Alarm contacts (potential-free SPDT),
1 Alarm (lamp and function control)

Turbidity Probe

Stainless steel

Model: ATL



Measuring range:
0...500 ppm; 0...4 CU
 t_{max} 90 °C; p_{max} 10 bar
Outputs: 4...20 mA
Accuracy: ± 2 % of full scale

Density Meter

Stainless steel

Model: DWF



Measuring range: 700... 1900 g/L
 t_{max} 150 °C
Process connection
flange DN 25...50, ANSI 1"...2"
Accuracy: $\pm 1.25...6$ g/L



Food and Pharmaceutical

Calimetric Meter/Switch
Stainless steel

Model: KAL-K4440



Water: 0.04 – 2 m/s
 t_{max} 120°C; p_{max} 100 bar
 Connection:
 G 1/4 ... 1 1/2, 1/4 ... 3/4 NPT, M12, Tri-Clamp®

Variable Area - All Metal

Stainless steel, special material

Model: BGN-...E



Water: 0.5 – 5 L/h ... 13000 – 130000 L/h
 Air:
 0.015 – 0.15 Nm³/h ... 240 – 2400 Nm³/h
 t_{max} 350°C; p_{max} PN 40
 Connection:
 Union nut DIN 11851 DN 20...100
 Accuracy: ± 1.6 – 2.2 % of full scale

Electromagnetic Measurement

Stainless steel, PTFE, PVDF

Model: DMH



Water: 0 – 1 m³/h ... 0 – 280 m³/h
 t_{max} 150°C; p_{max} PN 40
 Connection: 1/2" ... 4" Tri-Clamp®,
 DN 15 ... DN 100 sanitary acc. to DIN 11851
 Accuracy: ± 0,3 % of reading
 ± 0.01 % of full scale

Contact Pressure Gauge with Diaphragm Seal, DIN 11851

Stainless steel

Model: MAN-RF...M21...DRM-602



Measuring range: 0 ... +1 bar ... 0 ... +40 bar
 Housing: Ø 100, 160 mm
 Connection:
 Union nut DIN 11851 DN 20...100
 Accuracy: Cl. 1.6

Digital Pressure Gauges with Diaphragm Seals for Homogenizing Machines

Stainless steel

Model: SEN...DRM-189...AUF



Measuring range:
 0 ... +100 bar ... 0 ... +600 bar
 Membrane: flush mounted
 t_{max} 100°C
 Connection: for block flange
 Accuracy: Cl. 1.0

Conductive Switch / Compact Probe

Stainless steel, PEEK

Model: LNK-K



Measuring range: 4 – 1 500 mm
 t_{max} 150°C; p_{max} 10 bar
 Connection: G 1/2 male G 1 male, hygienic
 installation system LZE
 Open-Collector

Microwave Switch

Stainless steel, PEEK

Model: LNM



t_{max} 100°C (150°C for CIP); p_{max} 10 bar
 Connection:
 G 1/2, M12 x 1,5 male thread, hygienic
 installation system LZE
 Open-Collector

Capacitive Switch Liquids

Stainless steel, PEEK

Model: LNZ



t_{max} 100°C (150°C for CIP); p_{max} 10 bar
 Connection: G 1/2 male thread, hygienic
 installation system LZE
 Open-Collector

Capacitive Switch Bulk Materials

Stainless steel, PTFE

Model: NSC



Switching range: 265 – 3000 mm
 t_{max} 80°C; p_{max} 0.5 bar
 Connection: G 1 male thread, Adapter:
 G 1 1/4, G 1 1/2, round flange, weld-in sleeve
 1 relay, SPDT

Potentiometric Measurement

Stainless steel, PEEK

Model: LNP



Measuring range: 200 – 2000 mm
 t_{max} 120°C; p_{max} 10 bar
 Connection: G 1, 1 NPT male thread
 Accuracy: ± 1 % of probe length

Vibration Switch Bulk Materials

Stainless steel

Model: NSV



Switching range: 230 – 3000 mm
 Density: 0.06 kg/dm³
 t_{max} 80°C; p_{max} atmospheric
 Connection: G 1 1/2 male
 1 relay, SPDT

Vibration Switch Liquids

Stainless steel

Model: NWS-...2ES



t_{max} 130°C (150°C for CIP); p_{max} 50 bar
 Connection: R-/NPT-thread, DIN-/
 ANSI-flange, Tri-Clamp®, milk connection
 DIN 11851, Aseptic DIN 11864, DRD-flange

Rotation Vane Switch - Bulk Materials

Stainless steel

Model: NIR-9/E9



Switching range: 65 – 4000 mm
 t_{max} 200°C; p_{max} 0.5 bar
 Connection: G 1 male, Adapter: G 1 1/4,
 G 1 1/2, round flange, weld-in sleeve
 1 relay, SPDT

Resistance Temperature Probe with Connection Box / Compact Version

Stainless steel

Model: LTS-A/-K



Measuring range: -50 ... +250°C
 p_{max} 10 bar
 Connection: G 1/2, M12 x 1,5 male thread,
 hygienic installation system LZE
 Pt 100, 4 ... 20 mA
 Accuracy: Cl. A

Capillary Thermometer according to DIN 16206

Steel, aluminium, stainless steel

Model: TNF



Measuring range:
 -40 ... +40°C ... 0 ... +600°C
 p_{max} 25 bar
 Connection: G 1/2 ... 1, 1/2 ... 1 NPT,
 DIN 11851, Tri-Clamp®, helix probe
 Accuracy: Cl. 1.0 ; 1.6

Hygienic Mounting Systems

Stainless steel

Model: LZE



t_{max} 250°C; p_{max} 10 bar
 M12 x 1,5; G 1/2; G 1
 Seals: metallic, PEEK-ring

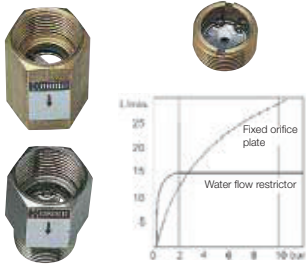


Assemblies

Flow Regulators

Brass, stainless steel

Model: REG



Viscosity range: 1 – 30 mm²/s
Flow rates: 0.5 – 40 L/min
t_{max} 300 °C; p_{max} 200 bar
G ½, G ¾, ¼ NPT

Flow Regulators - Multiple Element

Brass, stainless steel

Model: REG-8



Viscosity range: 1 – 30 mm²/s
Flow rates: 1 – 280 L/min
t_{max} 300 °C; p_{max} 200 bar
Flange DN 20...50

Flow Regulators - Multiple Element

Brass, stainless steel

Model: REG-9



Viscosity range: 1 – 30 mm²/s
Flow rates: 1 – 280 L/min
t_{max} 300 °C; p_{max} 200 bar
G 1½...G 2½

Brass/Stainless Steel Ball Valves

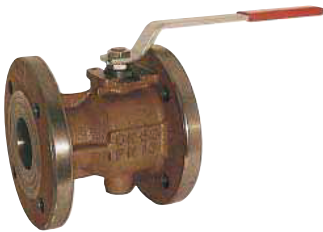
Model: KUG-TB,-VN,-VC/KUG-ZE,-KD



t_{max} 180 °C; p_{max} PN 64
G ¼ ... 4 female thread
hand lever, 1-, 2- and 3-piece versions

Grey Cast Iron/Stainless steel- Flange-Ball Valves

Model: KUG-VO, -VK



t_{max} 180 °C; p_{max} PN 40
Flange DN 15...200
according to DIN 3202 F4/5

Ball Valves Shut-off for Measuring Device

Brass, stainless steel

Model: KUG-S



t_{max} 120 °C; p_{max} PN 25
G ½ ... 2 female thread
Sensor support: G ¼, G ½

Brass/Stainless steel Ball Valves with Pneumatic Actuator

Model: KUP-KA, -VN, -ZA, -VH, -PD



t_{max} 120 °C; p_{max} PN 16
G ½...4 female thread
Control pressure: 6 – 8 bar
Single or Double acting
T- and L-bore

Grey Cast Iron/ Stainless steel- Flange Ball Valves with Pneumatic Actuator

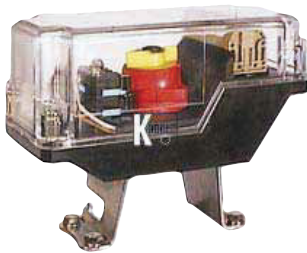
Model: KUP-VO, -VK



t_{max} 160 °C; p_{max} PN 16
Flange DN 15...200
Control pressure: 6 – 8 bar
Single or double acting

Accessories for Pneumatic Actuator

Model: KUP-RE



3/2- and 5/2-way solenoid valve several voltages, mechanical limit switch and proximity switch

Butterfly Valves

Aluminium, GGG-40

Model: KLA



t_{max} 200 °C; p_{max} PN 16
Flange DN 40...300
Seals: NBR, FKM, PTFE

Butterfly Valves with Pneumatic Actuator

Aluminium, GGG-40

Model: KLP



t_{max} 200 °C; p_{max} PN 16
Flange DN 40...300
Seals: EPDM, FKM
Control pressure: 6 – 8 bar
Double acting or spring resetting

Needle Valve

Brass

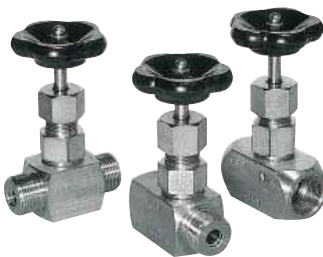
Model: NAD-AC



t_{max} 100 °C; p_{max} PN 100
G ¼...2 female thread

Needle Valve - Stainless Steel

Model: NAD-M, -Z



t_{max} 120 °C; p_{max} PN 250
G ¼...1¼, ½...1 NPT

Angle Seat Valves

Brass, stainless steel

Model: NAD-AD, -BE



t_{max} 180 °C; p_{max} PN 16
G ¾...3 female thread

Outlet Globe Valves

Brass, stainless steel

Model: NAD-AB, -BF



t_{max} 130 °C; p_{max} PN 16
G ¼...3

Check Valves

Red cast iron, brass, stainless steel

Model: KUR-TD, KUR-MR



t_{max} 110 °C; p_{max} PN 25
G ¼...4 female thread



Assemblies, Control Devices and Relays

Threaded Magnetic Filter
Bronze, brass
Model: MFR



t_{max} 200°C; p_{max} PN 16
Rp ½...3 female thread
Filter grade: 280 µm

Magnetic Filter Dirt Trap
Brass, stainless steel
Model: MFR-IG, MFR-EA



t_{max} 180°C; p_{max} PN 40
G ¾...2 female thread
Filter grade: 250 µm

Flange Magnetic Filter
Grey cast iron
Model: MFF



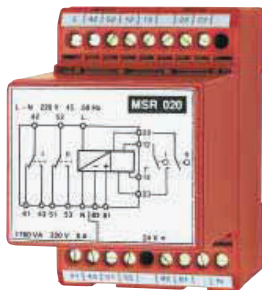
t_{max} 200°C; p_{max} PN 16
R ½...3, soldering connection
22...35 mm, flange DN 50...200
Filter grade: 750 µm

Air Eliminator
Aluminium
Model: ZAL



t_{max} 70°C; p_{max} 10 bar
Flange ANSI 1" ... 4"
Filter grade: 40 – 200 µm

Contact Protection Relay
Model: MSR



Input: potential-free contacts
1 or 2 relay outputs, SPDT

Isolation Switching Amplifier for Initiators
Model: KFD-2, KFA-6



Input:
Initiators (Namur), potential-free contacts
1 relay, SPDT

Sandwich Plug-On Display
Model: AUF



Input: 4-20 mA loop powered
Option: Open-Collector
Without additional power supply

KOBUS KOBOLD - BUS-System
Model: BUS



2-wire, Min/Max-values available
configuration with RS232
Plug- & Play-Software

Digital - Panel Mount - Indicators
Model: DAG-A/S/M



Input: current, voltage,
Temperatur, frequency, resistance
Analogue output, limit contacts,
Min/Max-memory

Universal Indicator
Model: ADI-1



Input: current, voltage, frequency
Analogue output, 2 limit contacts, sensor
supply

Universal Indicator
Model: ADI-1...S



Input: current, voltage, frequency
Analogue output, 2 limit contacts, sensor
supply

Industrial Dosing, Counter and Flow Indicator
Model: ZOD



Input: frequency
Analogue output, limit contacts, sensor
supply, battery powered

Electronic for Measuring and Monitoring
Model: ZED-K



Input: frequency
Analogue output, 2 limit contacts, sensor
supply

Counter Electronics / Batch Controller
Model: ZED-Z / -D



Input: frequency
Analogue output, 2 limit contacts,
sensor supply

Industrial Dosing, Counter- and Flow Indicator
Model: DAG-AXI



Input: frequency
4 limit contacts

Electronic Multi-Channel Data Logger
Model: ZLS



Input: 4-20 mA, Pt 100, Pt 500, Pt 1000
interface, sensor supply

