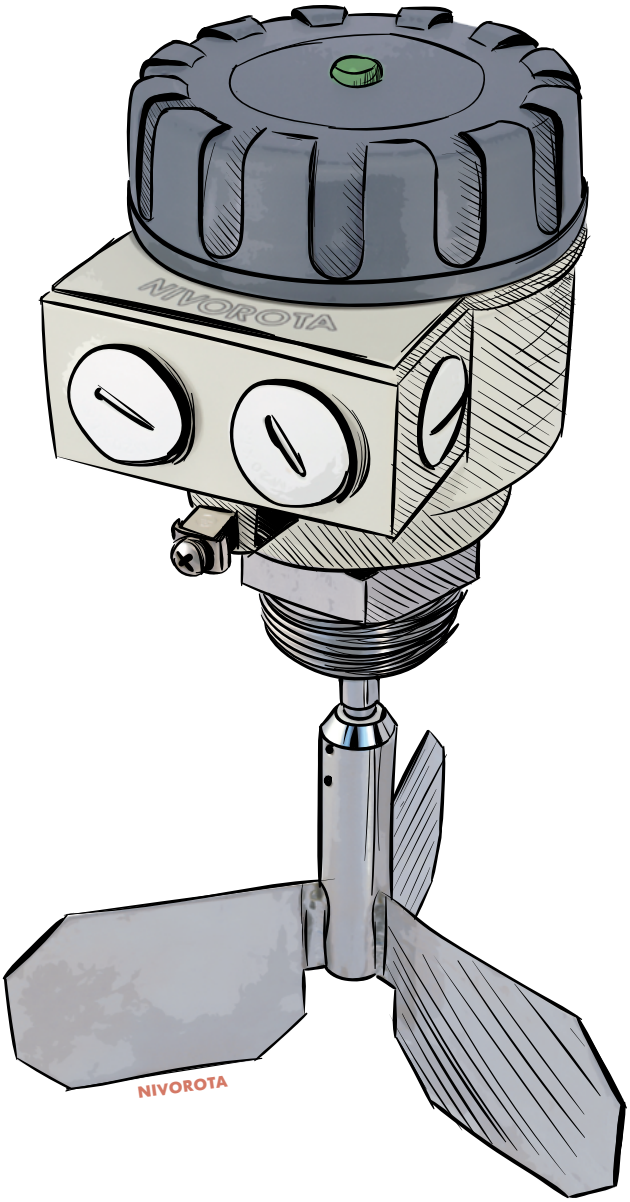


PRODUCT OVERVIEW

2021

Quality and innovation since 1939

NIVELCO

OPERATING PRINCIPLE	NON-CONTACT MICROWAVE	
	COMPACT	INTEGRATED
FEATURES	▪ Plastic, aluminum or stainless steel housing ▪ Stainless steel parabolic, horn or plastic enclosed antenna ▪ Plug-in graphic display module ▪ High-temperature range	▪ Plastic housing ▪ Horn, planar or parabolic antenna ▪ Stainless steel or plastic encapsulated sensor ▪ Where IP68 is needed

▪ 2-wire transmitters
▪ 25 GHz (K-band) measuring signal
▪ Non-contact level metering
▪ Accuracy up to ±3 mm
▪ Measuring range up to 23 m
▪ 99-point linearisation
▪ Explosion-proof variants available

APPLICATION	▪ Level measurement of liquids, emulsions and other chemicals ▪ Agriculture ▪ Construction materials ▪ Chemical industry ▪ Pharmaceutical industry ▪ Food and beverage ▪ Power plants ▪ Oil industry ▪ Water / wastewater industry	▪ Level measurement of liquids, emulsions and other chemicals ▪ Food and beverage ▪ Chemical industry ▪ Oil industry ▪ Water / wastewater industry
SPECIFICATION	Power Supply: **20–36 VDC** Ambient Temperature: **–20°C…+60°C** Process Temperature: **–30°C…+180°C** Process Pressure: **–1–25 bar** Output: **4…20 mA + HART®** Process Connection: **1½", 2" or flanges or sanitary** Ingress Protection: **IP67** Certificates: **ATEX, IEC Ex, FCC, FM, INMETRO**	Power Supply: **20–36 VDC** Ambient Temperature: **–20°C…+60°C** Process Temperature: **–30°C…+100°C** Process Pressure: **–1–3 bar** Output: **4…20 mA + HART®** Process Connection: **1½", 2" or flanges or sanitary** Ingress Protection: **IP68** Certificates: **ATEX, IEC Ex, FCC, INMETRO**

PiloTREK

LEVEL TRANSMITTERS

GUIDED MICROWAVE

- 2-wire compact transmitter
- Accuracy: ±5 or ±20 mm
- High pressure
- High-temperature range
- Wide range of probes
- Extremely small deadband
- Rod, cable, or coaxial probe versions
- Plug-in graphic display module
- Explosion-proof variants available
- Plastic, aluminum or stainless steel housing
- Media with turbulent surface, dense dust, vapor or pressurized gas layers above the product surface
- For all tank shapes, for narrow vessels
- Heavy industrial applications

- Level, distance or volume measurement of liquids, powders, granules with $\varepsilon_r > 1.4$
- Agriculture
- Construction materials
- Chemical industry
- Food and beverage
- Power plants
- Oil industry
- Water / wastewater industry

Power Supply:
18–35 VDC
Ambient Temperature:
–30°C…+60°C
Process Temperature:
–30°C…+200°C
Process Pressure:
–1–40 bar
Measuring Range:
0–24 m
Output:
4…20 mA + HART®
Ingress Protection:
IP67
Certificates:
ATEX, IEC Ex, INMETRO

MicroTREK

CAPACITIVE

- 2-wire compact transmitter
- High sensitivity
- Rod (0.2–3 m) or cable (1–20 m) probe
- Plastic, aluminum or stainless steel housing
- Partially or fully insulated probe
- Plug-in display module
- 32-point linearisation
- Explosion-proof variants available
- Chemicals with dense gas layers above the surface
- High pressure, high-temperature or vacuum
- Viscous or corrosive media

- Distance, level and volume measurement of liquids, powders, granules, with $\varepsilon_r > 1.5$ relative dielectric constant
- Chemical industry
- Food and beverage
- Power plants
- Oil industry
- Water / wastewater industry

Power Supply:
12–36 VDC
Ambient Temperature:
–25°C…+70°C
Process Temperature:
–30°C…+200°C
Process Pressure:
up to 40 bar
Output:
4…20 mA, HART®
Process Connection:
1", 1½"
Ingress Protection:
IP67
Certificate:
ATEX

NIVOCAP

HYDROSTATIC

- 2-wire compact transmitter
- Stainless steel diaphragm
- Accuracy: 0.25%
- High overload capability
- Level and pressure management
- Plug in display module
- High-temperature range
- Explosion-proof variants available
- Viscous or corrosive materials
- Chemicals with dense vapor or gas layers above the surface

- Level measurement of most foaming liquids and masses in tanks and vessels
- Chemical industry
- Food and beverage
- Power plants
- Oil industry
- Water / wastewater industry

Power Supply:
10–36 VDC
Ambient Temperature:
–40°C…+70°C
Process Temperature:
–25°C…+125°C
Process Pressure:
up to 400 bar
Output:
4…20 mA, HART®
Process Connection:
1", 1½", flanges, hygienic fittings
Ingress Protection:
IP65
Certificate:
ATEX

NIVOPRESS D

HYDROSTATIC

- 2- or 3-wire submersible transmitter
- Capacitive ceramic, piezoresistive stainless steel and piezoresistive ceramic sensor
- Stainless steel or fully plastic body
- Venting tube in cable
- Reverse polarity protection
- Optional lightning protection
- Linearity error: ±0.25%
- Integrated Pt100 temperature sensor
- Explosion-proof variants available
- Borehole transmitter for the water industry

- Level metering of small diameter pipes, sewage water, saline solutions, sea water, potable water
- Chemical industry
- Water / wastewater industry

Power Supply:
12–30 VDC
Process Temperature:
–30°C…+60°C
Measuring Range:
0–200 m
Output:
4…20 mA + HART®, 0–10 V
Ingress Protection:
IP68
Certificate:
ATEX

NIVOPRESS N

MAGNETO-STRICTIVE

- 2-wire compact, mini compact or integrated transmitter
- 0.1 mm or 1 mm resolution
- Wetted parts: stainless steel or plastic
- Plug-in graphic display module
- 99-point linearisation
- Distance, level and volume measurement
- Explosion-proof variants available
- Interface measurement
- Chemicals, solvents, hydrocarbons
- Custody transfer measurement (OIML R 85)

- Level measurement of normal and flammable liquids, with min. 0.4 kg/dm³ density
- Chemical industry
- Power plants
- Oil industry
- Water industry

Power Supply:
12.5–36 VDC
Ambient Temperature:
–40°C…+70°C
Process Temperature:
–40°C…+90°C
Process Pressure:
up to 25 bar
Measuring Range:
0–15 m
Output:
4…20 mA, HART®
Process Connection:
1", 2" or flanges
Ingress Protection:
IP67 (IP68)
Certificates:
ATEX, FM, IEC Ex, EAC, OIML R 85

OIML

FM APPROVED

NIVOTRACK

LEVEL TRANSMITTERS

BYPASS LEVEL INDICATORS	ULTRASONIC INTEGRATED		ULTRASONIC COMPACT	
	FOR LIQUIDS	FOR SOLIDS	FOR LIQUIDS	FOR SOLIDS
▪ Operation without power supply ▪ Clearly visible display ▪ Stainless steel bypass chamber ▪ Error indication ▪ Optional Strap-on level switches ▪ Optional magnetostrictive level transmitter ▪ Accuracy: ±10 mm ▪ Stainless steel or titanium float ▪ High-temperature version ▪ Explosion-proof version	▪ 2-wire transmitter ▪ Non-contact level metering ▪ Narrow 5° beam angle ▪ Excellent signal processing via QUEST+ software ▪ Temperature compensation ▪ Secondary lightning protection ▪ 32-point linearisation ▪ PP, PVDF, PTFE housing and transducers ▪ Explosion-proof variants available ▪ Level and volume measurement ▪ Open-channel flow metering ▪ Fail-safe indication ▪ For challenging applications such as vapor, fume, mixing blades, and light foam	▪ 4-wire transmitter ▪ Non-contact level metering ▪ Narrow 5° beam angle ▪ Excellent signal processing ▪ Temperature compensated ▪ Secondary lightning protection ▪ 32-point linearisation ▪ PP and aluminum housing transducers with PVC foam ▪ Joystick aiming device ▪ Explosion-proof variants available ▪ Level and volume measurement ▪ Fail-safe indication ▪ For challenging applications such as long distance measurement and light dust during filling	▪ 2- or 4-wire transmitter ▪ Non-contact level metering ▪ Narrow 5° beam angle ▪ Excellent signal processing ▪ Temperature compensated ▪ Secondary lightning protection ▪ 32-point linearisation ▪ PP, PVDF, PTFE housing and transducers ▪ Plug-in display module ▪ Plastic, aluminum or stainless steel housing ▪ Explosion-proof variants available ▪ Level and volume measurement and display ▪ Open channel flow measurement ▪ Fail-safe indication ▪ For challenging applications such as vapor, fume, mixing blades, and light foam	▪ 4-wire transmitter ▪ Non-contact level metering ▪ Narrow 5° beam angle ▪ Excellent signal processing ▪ Temperature compensated ▪ Secondary lightning protection ▪ 32-point linearisation ▪ PP and aluminum housing transducers with PVC foam ▪ Joystick aiming device ▪ Plug-in display module ▪ Powder-coated aluminum housing ▪ Explosion-proof variants available ▪ Level and volume measurement and display ▪ Fail-safe indication ▪ For challenging applications such as long distance measurement and light dust during filling
▪ Level measurement of pressurized vessels, boilers and tanks ▪ Chemical industry ▪ Power plants ▪ Oil industry ▪ Water industry	▪ Level measurement of liquids, wastewater, aggressive chemicals and slurries ▪ Agriculture ▪ Construction materials ▪ Chemical industry ▪ Food and beverage ▪ Oil industry ▪ Paper mill ▪ Water / wastewater industry	▪ Level measurement of free flowing solids ▪ Chemical industry ▪ Food and beverage ▪ Mining industry	▪ Level measurement of liquids and slurries ▪ Agriculture ▪ Construction materials ▪ Chemical industry ▪ Food and beverage ▪ Oil industry ▪ Paper mill ▪ Water / wastewater industry	▪ Level measurement of free flowing solids ▪ Chemical industry ▪ Food and beverage ▪ Mining industry
Flange distance (CL to CL): **500–5500 mm** Process Connection: **DIN, ANSI flanges** Process Pressure: **up to 100 bar** Process Temperature: **–60°C…+250°C** Medium density: **0.55–1.25 kg/dm³** Certificates: **ATEX, PED**	Power Supply: **11–36 VDC** Ambient Temperature: **–30°C…+80°C** Process Temperature: **–30°C…+90°C** Process Pressure (absolute): **0.5–3 bar** Measuring Range: **0.15–25 m** Process Connection: **1" BSP, 1½" and 2" NPT** Output: **4…20 mA, HART®, relay** Ingress Protection: **IP68** Certificates: **ATEX, INMETRO**	Power Supply: **11.4–40 VDC, 11.4–28 VAC** Ambient Temperature: **–30°C…+60°C** Process Temperature: **–30°C…+60°C** Measuring Range: **0.6–60 m** Process Connection: **1" BSP and joystick aiming device** Output: **4…20 mA, HART®, relay** Ingress Protection: **IP65** Certificate: **ATEX**	Power Supply: 2-wire: **12–36 VDC** 4-wire: **85–255 VAC, 20–28 VAC/DC** Ambient Temperature: **–30°C…+70°C** Process Temperature: **–30°C…+100°C** Process Pressure (absolute): **0.5–3 bar** Measuring Range: **0.2–25 m** Process Connection: **1½", 2" BSP / NPT, flange** Output: **4…20 mA, HART®, relay** Ingress Protection: **IP67** Certificates: **ATEX, INMETRO**	Power Supply: **85–255 VAC; 11.4–40 VDC; 11.4–28 VAC** Ambient Temperature: **–30°C…+60°C** Process Temperature: **–30°C…+75°C** Measuring Range: **0.6–60 m** Process Connection: **joystick aiming device** Output: **4…20 mA, HART®, relay** Ingress Protection: **IP65** Certificate: **ATEX**
				
NIVOFLIP	**EasyTREK**		**EchoTREK**	

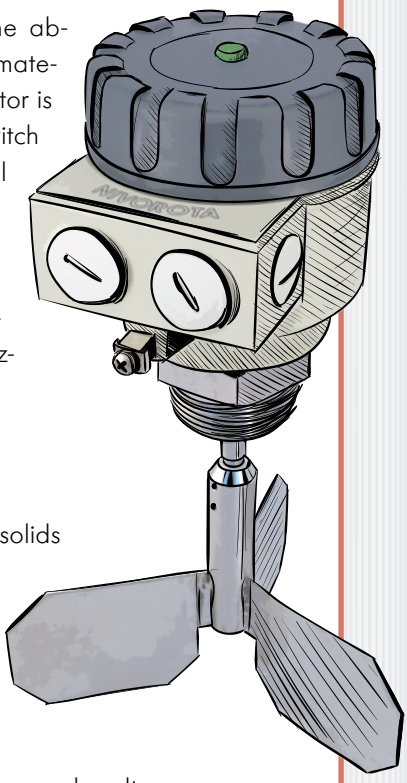
NIVOROTA

ROTARY PADDLE LEVEL SWITCH

The redesigned **NIVOROTA** rotary paddle level switch returns with an extended rotary paddle range and an even more reliable internal design.

NIVOROTA detects the level of lumpy materials, powders, grains, and granules. Mounted onto tanks, silos, and hoppers, it monitors and controls the level, filling, and dumping of the materials such as pebbles, ash, sand, coal, feed, beet slices, etc.

The paddle is driven by a small electric motor and rotates freely in the absence of materials. When the material reaches the paddle, the motor is switched off, and the output switch is triggered. When the material level drops, the paddle is free to spin again, the motor is reactivated, and the switch returns to its original state. Dust-Ex versions are available for use in hazardous environments.



FEATURES

- Level switching of free flowing solids
- Cable or rod extended versions up to 3 m (10 feet)
- Automatic motor shutdown
- High-temperature version
- IP67
- Dust-Ex certified version
- Rotary force independent of the supply voltage
- Low supply voltage is indicated by a blinking LED

APPLICATIONS

- **Food industry:**
  sunflower seeds, sunflower hulls, coffee and, cocoa powder, flour, sugar, etc.
- **Chemical industry:**
  plastic powders, granules, pellets
- **Construction materials:**
  cement, sand, calcium powder, gypsum
- **Energy industry:**
  active soot, coal powder, fly ash

LEVEL SWITCHES

	FLOAT	CONDUCTIVE	MAGNETIC COUPLING	MAGNETIC TRACKING
OPERATING PRINCIPLE				
FEATURES	▪ Operation without power supply ▪ Low cost polypropylene level switch ▪ Air-tight design dual-chamber ▪ Mercury free microswitch ▪ Adjustable switch differential ▪ For low density liquids	▪ Affordable choice ▪ Limit switch or differential switch versions ▪ Adjustable sensitivity ▪ Adjustable delay ▪ High or low fail-safe mode ▪ All wetted parts stainless steel ▪ Compact unit with two independent relays ▪ Separate probe and relay unit ▪ Rod probes up to 3 m	▪ Operation without power supply ▪ Microswitch separated from the process ▪ All wetted parts stainless steel ▪ Side or top mounting ▪ Fixed or adjustable switch differential ▪ Submersible versions ▪ Various process connections ▪ Operational check via optional tester ▪ Flame-proof variants available ▪ SIL1 approval	▪ Operation without power supply ▪ Reed switch output ▪ Wetted parts stainless steel or plastic ▪ Up to 5 switching points ▪ Vertical adjustability of all switch points ▪ Various process connections ▪ Flame-proof variants available
APPLICATION	▪ Level switch from potable water to sewage ▪ Suitable also for tanks and basins ▪ Fail-safe indication and pump control ▪ Water / wastewater industry	▪ Conductive liquids with minimum 1 x 10^{-5} S/cm conductivity ▪ Fail-safe indication and pump control ▪ Chemical industry ▪ Water / wastewater industry	▪ Liquids with minimum 0.7 kg/dm^3 density ▪ Fail-safe and control level switches in closed tanks ▪ Ballast tanks on ships ▪ Chemical industry ▪ Food and beverage ▪ Power plants ▪ Oil industry ▪ Water industry	▪ Liquids with minimum 0.4 kg/dm^3 density ▪ Multi-point level switch in closed tanks ▪ Foaming liquids, chemicals with dense vapor or gas layer above the surface ▪ Chemical, oil industry ▪ Food and beverage ▪ Power plants ▪ Oil industry ▪ Water industry
SPECIFICATION	Switch rating: **250 VAC, 10(3)A** Process Temperature: **0°C…+50°C** Process Pressure: **up to 1 bar** Ingress Protection: **IP68**	Switch rating: **250 VAC, 16A or 8A** Power Supply: **24–240 VAC/DC** Ambient Temperature: **–20°C…+50°C** Process Temperature: **up to +200°C** Process Pressure: **up to 16 bar** Process Connection: **⅜", 1½"** Ingress Protection: **IP65 / IP67, IP20**	Switch rating: **250 VAC, 10A NO/NC** Ambient Temperature: **–20°C…+80°C** Process Temperature: **–40°C…+250°C** Process Pressure: **up to 25 bar** Process Connection: **flanges or 2" thread** Ingress Protection: **IP65, IP68** Certificates: **ATEX, IEC Ex, INMETRO, EAC, DNV GL (Marine), BV (Marine), SIL1**	Switch rating: **250 VAC, 3A** Ambient Temperature: **–40°C…+95°C** Process Temperature: **–40°C…+150°C** Process Pressure: **up to 25 bar** Process Connection: **1" or 2" or flanges** Ingress Protection: **IP67, IP68** Certificates: **ATEX, BV (Marine)**
				
	NIVOFLOAT NL / NW	**NIVOCONT K**	**NIVOMAG**	**NIVOPOINT**

LEVEL SWITCHES

VIBRATING FORK		VIBRATING ROD	ROTARY PADDLE	RF–CAPACITANCE
FOR LIQUIDS	FOR SOLIDS			
▪ No moving parts ▪ Self-cleaning in most mediums ▪ Stainless steel and plastic-coated probes ▪ Rod extension up to 3 m ▪ Various output configurations ▪ High or low fail-safe mode ▪ Plastic, aluminum or Stainless steel housing ▪ Explosion-proof variants available ▪ For corrosive, thick, turbulent, flowing liquids ▪ Medium pressure: up to 40 bar, RU☐ type: up to 100 bar	▪ No moving parts ▪ Self-cleaning for most mediums ▪ Stainless steel probes ▪ Rod extension up to 3 m ▪ Various output configurations ▪ Selectable density ▪ High or low fail-safe mode ▪ Plastic, aluminum or Stainless steel housing ▪ Dust-Ex variants available	▪ No moving parts ▪ Self-cleaning for most mediums ▪ Stainless steel vibrating section ▪ Rod (0.3–3 m) or flexible cable extension (1–20 m) ▪ Plastic or aluminum housing ▪ Selectable density ▪ High or low fail-safe mode ▪ Selectable switching delay ▪ Dust-Ex variants available ▪ For grain, flour, plastic granules, cement, fly ash, etc.	▪ Plastic or aluminum housing ▪ Long service time ▪ Motor shut-off feature ▪ Flexible coupling ▪ Solid rod or flexible cable extension (0.3–3 m) ▪ Sealed bearings ▪ High-temperature version ▪ Dust-Ex variants available ▪ High or low fail-safe ▪ Feed, coal, sand, rocks, limestone, metals, rubber ▪ Rotary force independent of the supply voltage ▪ Low supply voltage is indicated by a blinking LED	▪ Intelligent electronic level switch ▪ Build-up immunity ▪ Easy calibration ▪ Selectable sensitivity ▪ Fail-safe operation mode ▪ Solid rod (0.7–3 m) or flexible cable extension (1–10 m) ▪ High-temperature version ▪ Dust-Ex variants available ▪ For high viscosity, sticky materials ▪ For special applications such as blockage detection in hopper and hot ash
▪ Most liquids with minimum 0.7 kg/dm³ density and maximum 10^4 mm²/s viscosity ▪ Chemical industry ▪ Food and beverage ▪ Power plants ▪ Oil industry ▪ Water industry	▪ Granular material particulate and powder with minimum 0.01 kg/dm³ bulk density ▪ Chemical industry ▪ Food and beverage ▪ Power plants ▪ Paper mill ▪ Plastic industry	▪ Granular material and powder with min. 0.05 kg/dm³ bulk density ▪ Agriculture ▪ Construction materials ▪ Chemical industry ▪ Food and beverage ▪ Mining industry ▪ Power plants ▪ Paper mill ▪ Recycling ▪ Plastic industry	▪ Granular material and powder with minimum 0.1 kg/dm³ density ▪ Agriculture ▪ Construction materials ▪ Chemical industry ▪ Food and beverage ▪ Mining industry ▪ Paper mill ▪ Recycling ▪ Plastic industry	▪ For solids with $\varepsilon_r \geq 1.5$ and liquids ▪ Agriculture ▪ Construction materials ▪ Chemical industry ▪ Pharmaceutical industry ▪ Food and beverage ▪ Mining industry ▪ Power plants ▪ Paper mill ▪ Plastic industry
Power Supply: **20–255 VAC, 20–60 VDC** Ambient Temperature: **–40°C…+70°C** Process Temperature: **–40°C…+130°C** Process Pressure: **up to 40 bar (100 bar)** Process Connection: **1", 1½", 2" or flanges or hygienic fittings** Output: **1 or 2 relays (SPDT), 2-wire AC / DC, transistor (PNP, NPN)** Ingress Protection: **IP67, IP68, IP65** Certificates: **ATEX, IEC Ex, FM, DNV GL (Marine)**	Power Supply: **20–255 VAC, 20–60 VDC** Ambient Temperature: **–40°C…+70°C** Process Temperature: **–40°C…+130°C** Process Pressure: **up to 40 bar** Process Connection: **1", 1½", 2" or flanges** Output: **1 or 2 relays (SPDT), 2-wire AC or DC, transistor (PNP, NPN)** Ingress Protection: **IP67, IP68, IP65** Certificate: **ATEX**	Power Supply: **20–255 VAC/DC** Ambient Temperature: **–30°C…+60°C** Process Temperature: **–30°C…+160°C** Process Pressure: **up to 25 bar** Process Connection: **1½"** Output: **relay (SPDT) or electronic switch (SPST)** Ingress Protection: **IP67** Certificates: **ATEX, IEC Ex**	Power Supply: **24 VAC/DC, 120 VAC, 230 VAC** Ambient Temperature: **–30°C…+60°C** Process Temperature: **–20°C…+200°C** Process Pressure: **up to 3 bar** Process Connection: **BSPT 1", 1½", mounting plate** Output: **relay (SPDT) 250 VAC, 5A, AC1** Ingress Protection: **IP67** Certificate: **ATEX**	Power Supply: **20–250 VAC/DC** Ambient Temperature: **–30°C…+65°C** Medium Temperature: **–30°C…+235°C** Process Pressure: **up to 25 bar** Process Connection: **¾", 1", 1½"** Output: **relay (SPDT) or electronic switch (SPST)** Ingress Protection: **IP67** Certificates: **ATEX, IEC Ex**
				
NIVOSWITCH		**NIVOCONT R**	**NIVOROTA**	**NIVOCAP CK**

ANALYTICAL TRANSMITTERS

OPERATING PRINCIPLE	pH / ORP	DISSOLVED OXYGEN	CONDUCTIVITY	TEMPERATURE SENSOR
FEATURES	▪ 2-wire compact and integrated transmitter ▪ Plug-in graphic display module ▪ Separated version up to 10 m ▪ Temperature compensated ▪ Application oriented probes ▪ Wide selection of accessories ▪ Power relay output, programmable ▪ Explosion-proof variants available	▪ 2-wire compact transmitter ▪ Plug-in graphic display module ▪ Separated version up to 10 m ▪ Temperature compensated ▪ Power relay output, programmable ▪ Wide selection of accessories ▪ Explosion-proof variants available	▪ 2-wire mini compact transmitter ▪ Wide range of measurement ▪ Plug-in display ▪ Wide selection of accessories	▪ Single or dual Pt100 sensor versions ▪ 2- or 4-wire types ▪ Double sensor protection tube ▪ Fast response sensor version ▪ St. Steel protection tube ▪ Max. 3 m probe length ▪ Vibration-resistant version ▪ Explosion-proof variants available ▪ Can be mounted to special technological places, tanks, tubes, furnaces or boilers ▪ Temp. metering in bearings ▪ Special versions for unique applications
APPLICATION	▪ Continuous pH or redox potential (ORP) measurement of highly alkaline mediums, suspensions, contaminated fluids, emulsions. ▪ Chemical industry ▪ Pharmaceutical industry ▪ Food and beverage ▪ Power plants ▪ Water / wastewater industry	▪ Continuous dissolved oxygen measurement of surface waters, aeration processes, swimming pool equipments ▪ Chemical industry ▪ Pharmaceutical industry ▪ Food and beverage ▪ Water / wastewater industry	▪ Continuous conductivity measurement of swimming pool technology and drinking water equipment ▪ Water purification ▪ Chemical industry ▪ Pharmaceutical industry ▪ Food and beverage ▪ Water / wastewater industry	▪ Temperature measurement of liquids, gases, vapors ▪ Construction materials ▪ Chemical industry ▪ Food and beverage ▪ Oil industry ▪ Metallurgy ▪ Recycling
SPECIFICATION	Power Supply: **12–36 VDC** Ambient Temperature: **–30°C…+70°C** Medium Temperature: **–15°C…+100°C** Process Pressure: **up to 16 bar** Measuring Range: **pH: 0–14 pH** **ORP: +/-1000 mV** Output: **4…20 mA, relay, HART®** Ingress Protection: **IP67, IP68** Certificate: **ATEX**	Power Supply: **12–36 VDC** Ambient Temperature: **–30°C…+70°C** Medium Temperature: **0°C…+50°C** Process Pressure: **up to 1 bar** Measuring Ranges: **0–10 ppm** **0–20 ppm** Output: **4…20 mA, relay, HART®** Ingress Protection: **IP67, IP68** Certificate: **ATEX**	Power Supply: **12–36 VDC** Ambient Temperature: **0°C…+70°C** Medium Temperature: **–10°C…+70°C** Process Pressure: **up to 16 bar** Measuring Ranges: **1 µS/cm– 20 µS/cm** **10 µS/cm– 200 µS/cm** **100 µS/cm–2000 µS/cm** Output: **4…20 mA, HART®** Ingress Protection: **probe: IP68,** **electronic: IP65**	Measuring Ranges: **–50°C…+600°C** Ambient Temperature: **–20°C…+80°C** Sensor Type: **"A" or "B" class Pt100** Process Pressure: **up to 25 bar** Process Connection: **M20x1.5; ½"; flange** Ingress Protection: **IP67** Certificate: **ATEX**
				
	AnaCONT LEP / LER	**AnaCONT LED**	**AnaCONT LCK**	**THERMOCONT TS / TP**

TEMPERATURE MEASUREMENT

INDUSTRIAL SENSORS

STRENGTHENED PROBE TEMPERATURE SENSOR	TEMPERATURE INDICATORS / TRANSMITTERS	MULTI-POINT TEMPERATURE TRANSMITTERS		ULTRASONIC PROXIMITY SENSORS
		FOR LIQUIDS	FOR SOLIDS	
▪ Robust design for heavy chemical industry ▪ Stainless steel, drilled, tapered thermowell case ▪ Up to 800 mm insertion length ▪ Sensor can be replaced without removing the instrument from the process ▪ Vibration-resistant version ▪ 2- or 4-wire types ▪ Welded flange ▪ Gas thermometer version ▪ Explosion-proof variants available	▪ 2-wire compact temperature display, transmitter ▪ Integral Pt100 probe ▪ Fully programmable ▪ Plug-in display module ▪ Probe length up to 3 m ▪ Aluminum or plastic housing ▪ Heavy duty field mountable housing ▪ Explosion-proof variants available ▪ Transmission to long distances ▪ Versions for tanks, vessels, pipelines	▪ 2-wire multi-point temperature transmitter ▪ Digitally addressed sensors ▪ Up to 15 sensors ▪ Average, max, min temperature measurement ▪ Plug-in graphic display ▪ Rigid or flexible probes ▪ System capability ▪ Replaceable sensors ▪ Intrinsically safe variants available	▪ 2-wire multi-point temperature transmitter ▪ Digitally addressed sensors ▪ Up to 15 sensors ▪ Average, max, min temperature measurement ▪ Plug-in graphic display ▪ Flexible plastic-coated probe version ▪ Rigid or flexible probes ▪ System capability ▪ Replaceable sensors ▪ Intrinsically safe and Dust-Ex variants available	▪ Non-contact distance metering ▪ Analogue or switch output ▪ Narrow 5° beam angle ▪ Fully temperature compensated ▪ Metal or PP body ▪ Magnet or cable programming ▪ Short circuit and reverse polarity protection ▪ Status indication LED ▪ Maintenance-free
▪ Temperature measurement of liquids, gases, vapors ▪ Special versions for unique applications ▪ For applications exposed to mechanical damage ▪ Chemical industry ▪ Oil industry	▪ Temperature measurement and local indication of normal and hazardous liquid and gaseous mediums ▪ Food and beverage ▪ Water / wastewater industry ▪ Oil industry	▪ Continuous multi-point temperature measurement, indication, transmission and trend monitoring of normal and hazardous liquids ▪ Chemical industry ▪ Food and beverage ▪ Oil industry	▪ Continuous multi-point temperature measurement, indication, transmission and trend monitoring of powdered, granular solids in storage silos, grain mills, animal feed ▪ Agriculture ▪ Chemical industry ▪ Food and beverage	▪ Position, distance detection used in packaging equipment ▪ Monitoring of: filling equipment, small transport vehicles, trolleys, fork-lifts, material or object detection on conveyor belts
Measuring Ranges: **−50°C…+600°C** Ambient Temperature: **−30°C…+80°C** Sensor Type: **"A" or "B" class Pt100, or J, K thermocouple** Process Pressure: **up to 80 bar** Process Connection: **1" or flange** Ingress Protection: **IP65, IP67** Certificate: **ATEX**	Measuring Range: **−50°C…+600°C** Power Supply: **10–36 VDC** Ambient Temperature: **−40°C…+70°C** Process Pressure: **up to 25 bar** Output: **4…20 mA, HART®** Process Connection: **M20x1.5, ½", flange** Ingress Protection: **IP65** Certificate: **ATEX**	Power Supply: **12–36 VDC** Ambient Temperature: **−30°C…+65°C** Measuring Range: **−30°C…+125°C** Number of sensors: **up to 15** Probe Length: **rigid probe: 1–4 m** **flexible probe: 1–50 m** Output: **4…20 mA + HART®** Process Connection: **1"; 1½" BSP / NPT; M20x1.5** Ingress Protection: **IP67** Certificate: **ATEX**	Power Supply: **12–36 VDC** Ambient Temperature: **−30°C…+65°C** Measuring Range: **−30°C…+85°C** Number of Sensors: **up to 15** Probe Tensile Force: **35 kN** Probe Length: **1–50 m** Output: **4…20 mA + HART®** Process Connection: **1½" BSP / NPT** Ingress Protection: **IP67** Certificate: **ATEX**	Power Supply: **10.8–30 V** Ambient Temperature: **−20°C…+70°C** Ranges: **0.2–1 m / 0.4–6 m** Output: **0–10 V, 4…20 mA, NPN or PNP switch** Ingress Protection: **IP67, IP68**
				 
THERMOCONT TN / TX	**THERMOCONT TT**	**THERMOPOINT**		**MICROSONAR**

PRESSURE SENSORS

OPERATING PRINCIPLE	PRESSURE SWITCHES	PRESSURE TRANSMITTERS	DIFFERENTIAL PRESSURE TRANSMITTERS	MULTICHANNEL PROCESS CONTROLLER
FEATURES	▪ Relative or absolute measuring mode ▪ Rotatable and configurable 4-digit display module ▪ Configurable via PC or programming device ▪ Stainless steel housing versions ▪ Ex ia versions* ▪ Integrated cable version	▪ Relative or absolute measuring mode ▪ For high pressure (up to 2200 bar) ▪ For vacuum, overpressure and absolute pressure measurement ▪ Measurement range turndown ▪ Two-chamber aluminum die cast or stainless steel housing ▪ Ex ia or Ex d versions* ▪ SIL2 version*	▪ Relative measuring mode ▪ Measurement range turndown ▪ Up to 2 contacts ▪ Aluminum die cast housing ▪ Static overpressure 400 bar ▪ High accuracy ▪ Mechanical robust versions ▪ Hastelloy® sensor version ▪ Ex ia versions*	▪ Programmer, indicator and controller for single transmitters and for transmitter groups ▪ Large, easy to read backlit LCD or OLED display ▪ Tank visualisation ▪ Simple 6-key programming ▪ Datalogger memory: built-in 4 MB Flash memory SD card slot: max. 64 GB ▪ Transmitter diagnostic capabilities ▪ Ex flameproof input variants available
APPLICATION	▪ Gases, steam, liquids, viscous, pasty or highly contaminated media ▪ Pneumatic, hydraulic and mechanical engineering applications ▪ Plant and machine engineering, HVAC, environmental engineering ▪ For rough and difficult installing conditions ▪ Hygienical versions	▪ Water, waste water, fuel and oil, aggressive media, gases ▪ Plant and machine engineering, hydraulics, HVAC ▪ Environmental engineering, medical technology, laboratory techniques ▪ Energy industry, food and beverage industry ▪ For potable water	▪ Measurement of pressure difference of gases, compressed air and liquids in closed, pressurized tanks ▪ Plant and machine engineering, HVAC ▪ Chemical industry, energy industry, food and beverage industry ▪ Compact design versions for integration in applications with limited space	▪ Remote programming, displaying of transmitters ▪ Agriculture ▪ Construction materials ▪ Chemical industry ▪ Food and beverage ▪ Power plants ▪ Oil industry ▪ Plastic industry ▪ Water / wastewater industry
SPECIFICATION	Sensor: **silicon, ceramic, stainless steel** Nominal pressure gauge: **−1–600 bar** Accuracy: **0.25%; 0.5% or 1%** Ambient Temperature: **−40°C…+85°C** Process Temperature: **−40°C…+125°C** Output: **1, 2 or 4 PNP contacts** Process Connection: **⅛", ¼", ½", ¾", 1", 1½", 2" or flanges or sanitary** Ingress Protection: **IP54, IP65, IP67**	Sensor: **ceramic, stainless steel** Nominal pressure gauge: **0–2200 bar** Accuracy: **0.1%; 0.2%; 0.25%; 0.5%** Ambient Temperature: **−40°C…+85°C** Process Temperature: **−40°C…+300°C** Output: **4…20 mA, 0–10 V, HART®** Process Connection: **¼", ½", ¾", 1", 1½" or flanges 2", 3" RF; M20x1.5 internal thread** Ingress Protection: **IP65, IP67, IP68**	Sensor: **silicon, stainless steel** Nominal pressure gauge: **0–70 bar** Accuracy: **0.075%, 0.1%, 0.5%, 1%** Ambient Temperature: **−40°C…+85°C** Process Temperature: **−40°C…+125°C** Output: **4…20 mA, 0–10 V, HART®** Process Connection: **¼", ½" BSP; ¼", ½" NPT; M20x1.5 Ø6.6x11 (for flex. tubes Ø6); Ø4.45x1 (for flex. tubes Ø4)** Ingress Protection: **IP54, IP65, IP67**	Power Supply: **11.4–40 VDC; 11.4–28 VAC; 85–255 VAC** Ambient Temperature: **−20°C…+50°C** Input from transmitters: **max. 15× HART® devices** Outputs, internal: **max. 2× 4…20 mA** **max. 5× relays (SPDT)** Outputs, external: **max. 16× 4…20 mA via RS485** **max. 64× relays (SPDT)** Communication with host: **RS485** Storage medium: **SD card (max. 64 GB) Flash Memory » USB** Ingress Protection: **IP65** Certificates: **ATEX, IEC Ex, INMETRO**
	 	 	 	
	NIPRESS DK	**NIPRESS D**	**NIPRESS DD**	**MultiCONT**

If Ex version is required, please request a custom quotation based on the data in the price list.
Orders based on the quotation will be considered official.

SIGNAL PROCESSING UNITS

SYSTEM COMPONENTS

UNIVERSAL PROCESS CONTROLLERS / INDICATORS	ULTRASONIC PUMP CONTROL SYSTEM	UNIVERSAL INTERFACE MODULES	CURRENT CONTROLLED SWITCH MODULES	LOOP INDICATORS
▪ Dual LED display, 4-digits ▪ Universal input: Pt100, Ni100, J, K, S type sensors or 4…20 mA current, 0–10 V voltage output ▪ ON-OFF, PD or PID control ▪ Auto tuning ▪ 32-point linearization ▪ Transmitter power supply ▪ Up to 3 power relays ▪ Displaying of process values ▪ Heating / cooling control ▪ Alarm	▪ Low cost automatic pump control system ▪ Ultrasonic level measurement ▪ 0.4–3 m measurement range ▪ Programmable pump cycling ▪ Optional dry-run or overfill protection ▪ Maintenance-free ▪ Max. 1 kW switching rate ▪ Motor or cable protection ▪ IP68 sensor ▪ Integrated circuit breaker	▪ Universal expander module for: MultiCONT process controller, automated systems operating on RS485, PLC process control systems ▪ RS485 communication ▪ 4…20 mA current outputs ▪ Programmable relay outputs	▪ Suitable interface for devices having 4…20 mA or on-off outputs ▪ Can power 2-wire transmitters ▪ Galvanic isolation ▪ 4…20 mA input ▪ Power relay (SPDT) output ▪ Limit, differential or window switch capabilities ▪ Programmable damping ▪ Explosion-proof variants available	▪ Loop operated ▪ Operation without external power supply in 2-wire type ▪ Field display for transmitters ▪ Scalable display ▪ 20 mm digit height ▪ 4…20 mA to HART® converter version ▪ Heavy duty field mountable housing ▪ Stainless steel housing ▪ Flameproof variants available
▪ Displaying of process values ▪ Heating / cooling control ▪ Alarm ▪ Agriculture ▪ Construction materials ▪ Chemical industry ▪ Food and beverage ▪ Oil industry ▪ Water / wastewater industry ▪ Plastic industry	▪ Water, waste water Industry ▪ Domestic sewage shafts, wetwells ▪ Controlling of one-phase pumps (max. 1 kW) ▪ Sumps, tanks, flood storages ▪ Drainage sumps, pools	▪ Expanding a process control system with 2 relays or 2 current outputs ▪ For mixed systems: with 1 relay and 1 current output version ▪ Provides galvanic isolation	▪ Power supply and switching amplifier for 2-wire transmitters ▪ Switching amplifier for 4-wire active transmitters ▪ Dedicated switching amplifier version for the RC-400 range of Ex rated vibrating forks ▪ Wire state monitoring ▪ ON-OFF control	▪ Universal field indicator for any transmitters ▪ Selectable physical parameter set ▪ Display of process values supplied by any transmitter ▪ If used as HART® converter, powers 2-wire transmitters
Power Supply: 100–240 VAC, 20–48 VAC 22–65 VDC Ambient Temperature: –10°C…+55°C Input: universal Output: relay, 4…20 mA, RS485, power supply for transmitters, SSR driver Display: dual 4-digits LED display Ingress Protection: IP20 / IP66	Power Supply: 230 VAC Ambient Temperature: (Control Unit) –25°C…+45°C Process Temperature: (Ultrasonic Transmitter) –25°C…+60°C Output: 1× relay NC contact, 250 VAC, 8A, AC1 Process Connection: Control unit: wall mountable Ultrasonic transmitter: 1" Ingress Protection: Control unit: IP65 Ultrasonic transmitter: IP68	Power Supply: 24 VDC Ambient Temperature: –10°C…+50°C Input: RS485 Interface Output: – 2× relay 250 VAC, 8A, AC1 – 2× current outputs (4…20 mA) – 1× relay + 1 current output Process Connection: DIN rail mounted (module width: 36 mm) Ingress Protection: IP20	Power Supply: 110 V, 230 VAC, 24 VAC/DC Ambient Temperature: –25°C…+55°C Input: 4…20 mA Switch rating: 250 VAC, 8A, AC1 Ingress Protection: IP20 Process Connection: DIN rail mounted (module width: 36 mm) Certificate: ATEX	Power Supply: 10–36 VDC Ambient Temperature: –40°C…+70°C Input: 4…20 mA Output: 4…20 mA, 4…20 mA + HART® Display: 6-digits LCD Ingress Protection: IP67 Certificates: ATEX, INMETRO
 				 
UNICONT PM	**UNICONT PSW**	**UNICONT PJK**	**UNICONT PKK**	**UNICONT PDF / PLK**

SYSTEM COMPONENTS

OPERATING PRINCIPLE	INTRINSICALLY SAFE ISOLATOR MODULES	POWER SUPPLY MODULES	TIME RELAY MODULES	COMMUNICATION MODULES
FEATURES	▪ Isolated power supply for intrinsically safe transmitters ▪ DIN rail mountable ▪ Compatible with all devices using standard HART® communication	▪ DIN rail mountable ▪ Stabilised 12 or 24 VDC output ▪ Overvoltage and short circuit protection	▪ 2- and 10-function types ▪ Wide time range ▪ Small size ▪ Universal power supply voltage ▪ DIN rail mountable ▪ Relay output	▪ Communication interface (modem) between HART®-capable transmitters and PC ▪ DIN rail mountable or test clip connector version ▪ No need for power supply when using USB output ▪ Galvanic isolation ▪ Explosion-proof variants available ▪ 24 V current loop power supply (SAT-504) ▪ Switchable HART® resistor ▪ Bluetooth® compatibility (SAT-504)
APPLICATION	▪ For high precision transmitters ▪ For transmitters operating in hazardous applications ▪ For supplying and isolating certified measurement instruments	▪ Power supply for transmitters and sensors ▪ For inductive, capacitive proximity switches ▪ For infrared sensors ▪ Ultrasonic ▪ Proximity sensors	▪ Process controlling of repeated tasks ▪ Timed cycling of pumps or compressors ▪ Timing of technologic equipments ▪ Sequential control	▪ Transferring measurement data to PC ▪ Connecting field transmitter to the PC via USB, RS485 or Bluetooth®
SPECIFICATION	Power Supply: **20–35 VDC** Output voltage: **24 VDC** Ambient Temperature: **–20°C…+60°C** Input / Output: **4…20 mA + HART®** Accuracy: **1 µA / 8 µA** Response time: **5 ms / 100 ms** Process Connection: **DIN rail mounted (module width: 22.5 mm)** Ingress Protection: **IP20** Certificates: **ATEX, IEC Ex**	Power Supply: **100–250 VAC / 50–60 Hz** Consumption: **max. 70 V A / 37 W** Output voltage: **12.2 VDC ±2%; 2500 mA, 24.2 VDC ±2%; 1250 mA** Ambient Temperature: **–20°C…+40°C** Electrical connection: **Terminal, wire cross section: max. 2.5 mm²** Process Connection: **DIN rail mountable (module width: 52 mm)** Ingress Protection: **IP20**	Power Supply: **12–240 VAC/DC** Time ranges: **0.1 s–100 days** Output: **relay, 250 V, 16A, AC1** Process Connection: **DIN rail mountable (module width: 17.6 mm)** Ingress Protection: **IP20**	Power Supply: **supplied from USB / 24 VDC / Powerbank** Input: **HART®** Output: **USB / RS485 / Bluetooth®** Ingress Protection: **IP20** Certificate: **ATEX**
				
	UNICONT PGK	**NIPOWER**	**NITIME**	**UNICOMM**

SOFTWARES

PROCESS VISUALISATION	HART® CONFIGURATION SOFTWARE
▪ Communication with intelligent transmitters or switches and controllers ▪ Tank configuration ▪ Transmitter configuration ▪ Real-time trend analysis ▪ Data logging ▪ Database handling ▪ Archiving ▪ "Web-Ready" symbols and animations ▪ Remote connection on the Internet	▪ Remote programming and querying measurement data for up to 15 HART®-capable transmitters in one multidrop loop ▪ Handling linearization table entries ▪ Echo Map displaying ▪ Sensor calibration ▪ Measurement data monitoring ▪ Handling multiple HART® modems
▪ Custom-tailored software for industrial process visualization ▪ Online monitoring of measured values ▪ Tank-farm visualization ▪ Alarm systems ▪ Inventory management	▪ For easy setting-up and configuration ▪ Remote programming ▪ Displaying measurement data ▪ Error detection ▪ Limited trend monitoring
Requirements: Operating System: **MS Windows 10, 8, 7, Vista, XP, 2000** Input port: **RS232, RS485 / USB** Free disk space required: **5 GB**	Operation System: **MS Windows 10, 8, 7, Vista, XP, 2000** Free disk space required: **100 MB** Memory: **512 MB RAM** HART® Modem: **UNICOMM SAT-304, SAK-305, SAT-504**
	
NIVISION	**EView2**

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