

NEW Level transmitters

JUMO Maera (4390 Series)

www.intech.co.nz/4390

Level probe for liquids - Critical Applications.



Features:

- ◆ Two wire 4~20mA submersible transmitter.
- ◆ High accuracy < 0.5%.
- ◆ 3x Overpressure - up to 40 bar.
- ◆ Surge and Reverse polarity protection.
- ◆ Integrated OVP (lightning protection (4392).



4391

4392

Note: A close proximity or direct lightning strike may compromise the OVP protection.

MODEL	DESCRIPTION	PRICE
	<p>Level transmitter (4392 stats). Housing: 225mm x ø25mm, stainless steel. Protection: IP68. EN60529 to 400m. Cable: polyurethane ø 9mm. Accuracy: on full scale, < 0.5% min @ 20°C. Operating temp: 0~50°C. Temp coefficient: ±0.2% / 10°C. Output: 4~20mA, 2 wire, loop powered. U_T = 10~30Vdc. Load resistance: max. R_L < (U_S-10V) / 0.02A. JUMO Datasheet: 40.4392 40.4391 40.4390</p>	
	<p>Standard ranges:</p>	
4391-242-1.0	0~1 metre H ₂ O, with 10 metres of cable.	\$1415.00
4392-242-2.5	0~2.5 metres H ₂ O, with 10 metres of cable.	\$1030.00
4392-242-4.0	0~4 metres H ₂ O, with 10 metres of cable.	\$1030.00
4392-242-6.0	0~6 metres H ₂ O, with 10 metres of cable.	\$1030.00
4392-242-10	0~10 metres H ₂ O, with 15 metres of cable.	\$1125.00
4392-242-25	0~25 metres H ₂ O, with 30 metres of cable.	\$1390.00
4392-242-40	0~40 metres H ₂ O, with 50 metres of cable.	\$1750.00
4392-242-60	0~60 metres H ₂ O, with 65 metres of cable.	\$2155.00
	Other ranges and cable lengths are available on request.	



NAA-209



NAA-101/2



LPN-OVP (Rev 1)

Common Accessories for Level transmitters.

MODEL	DESCRIPTION	PRICE
NAA-101	<p>Terminal Box with filter. Protection: IP65. Size: 93 x 93mm.</p>	\$70.00
NAA-102	<p>Terminal Box with filter and integral OVP. Protection: IP65. Size: 93 x 93mm. Overvoltage protection: Voltage clipping: slow - 90 Vpp, fast - 33 Vpp. Line resistance: 13 ohm. Max rating: 600 W / 1ms.</p>	\$320.00
NAA-209	Hanging Cable Clamp.	\$30.00
LPN-OVP (Rev 1)	<p>DIN Rail mount OVP unit. www.intech.co.nz/lpn-ovp Leakage Current: 10µA @ 24Vdc. Transient cut-off voltage: 33V. Added line resistance: 4 ohms for the loop.</p>	\$115.00

BD Sensors

www.intech.co.nz/lmk306

Level probe for liquids - Small Diameter.



NEW!

MODEL	DESCRIPTION	PRICE
LMK 306	<p>Stainless Steel Submersible Level Transmitter. Housing: 132mm x ø17mm, stainless steel. Protection: IP68. Cable: polyurethane ø7.4mm. Accuracy: on full scale, ≤±0.5%. Operating temp: -10~70°C. Temp drift: ≤±0.2% / 10°C. Output: 4~20mA, 2 wire, loop powered. VS = 12~36Vdc. Load resistance: R_{max} = [(VS - VS min) / 0.02] Ω</p>	
LMK-306-50	0~50 metres H ₂ O, with 60 metres of cable.	\$1750.00
LMK-306-100	0~100 metres H ₂ O, with 110 metres of cable.	\$2155.00
	Other ranges and cable lengths are available on request.	

**IN-LLT-C Cost Effective.
Submersible Level Transmitter for Water applications.**

MODEL	DESCRIPTION	PRICE
IN-LLT-C	Submersible Level transmitter. Housing: 92mm x ø26mm, stainless steel. Protection: IP68. Cable: polyethylene ø9mm. Accuracy: on full scale, 0.5%. Operating temp: -10~80°C. Temp coefficient: ±0.2% / 10°C. Output: 4~20mA, 2 wire, loop powered. U _T = 12~28Vdc. Load resistance: <(U _v -12)/0.02.	
A	Standard ranges: 0~1 metre H ₂ O, with 10 metres of cable.	\$680.00
B	0~5 metres H ₂ O, with 10 metres of cable.	\$680.00
C	0~10 metres H ₂ O, with 15 metres of cable.	\$700.00
D	0~20 metres H ₂ O, with 30 metres of cable.	\$760.00
E	0~50 metres H ₂ O, with 60 metres of cable.	\$880.00
F	0~100 metres H ₂ O, with 110 metres of cable.	\$1080.00
G	0~200 metres H ₂ O, with 210 metres of cable. Other ranges and cable lengths are available on request.	POA



Features:

- ◆ Two wire 4~20mA submersible transmitter.
- ◆ High accuracy 0.5% FS.
- ◆ Overpressure 2x FS.

www.intech.co.nz/in-llt

For Overvoltage (Lightning) protection with the IN-LLT-C please see previous page (62) <<

Applications:

- ◆ Water in reservoirs, tanks and vessels.
- ◆ Bore holes and small pipes.
- ◆ Sewerage pits.

**Nivopress NPK
Level probe for liquids - General Purpose.**

MODEL	DESCRIPTION	PRICE
NPK-4	Level transmitter. Housing: 145mm x ø22mm, stainless steel. Protection: IP68. Cable: polyurethane ø7mm. Accuracy: on full scale, <0.5%. Operating temp: -10~60°C. Temp coefficient: ±0.05% / 10°C. Output: 4~20mA, 2 wire, loop powered. U _T = 9~30Vdc. HART programmable. Load resistance: max. R _L = (U _S -9V) / 0.02A.	
NPK-41-03	Standard ranges: 0~1 metre H ₂ O, with 3 metres of cable. Programmable down to: 0.5m	\$850.00
NPK-42-05	0~2 metres H ₂ O, with 5 metres of cable. 0~1m	\$870.00
NPK-43-10	0~5 metres H ₂ O, with 10 metres of cable. 0~2.5m	\$900.00
NPK-44-15	0~10 metres H ₂ O, with 15 metres of cable. 0~5m Other ranges and cable lengths are available on request.	\$930.00
Options	Extra cable Atex Ex	\$9/m POA



www.intech.co.nz/npk



Features:

- ◆ Two wire 4~20mA submersible transmitter.
- ◆ High accuracy < 0.5%.
- ◆ Reverse polarity protection.

For Overvoltage (Lightning) protection with the NPK-4 please see previous page (62) <<

Unicont PDF
Field mounting indicator. Loop powered.

MODEL	DESCRIPTION	PRICE
PDF-401	Field mounting indicator. Loop powered. Mount: Wall mount. Temperature: -25~60°C. Housing: Paint coated aluminium. Display: 6 digit LCD, engineering units and bar graph. Power: 2 wire, 4~20mA. Option, 4 wire, 4~20mA/HART. Protection: IP67.	\$885.00
PDF-401 Ex marking	Field mounting indicator. Ex version. Specifications as above. Ex 112GEExia11CT6 / Ex 11GEExd11BT6.	POA
PDF-501	Housing Option: reinforced plastic. Not available in Ex version.	\$830.00



LR-Display
Plug in Display. Loop powered.

MODEL	DESCRIPTION	PRICE
LR-Display	Plug in Display. Loop powered. Input: 4~20mA, 2 wire. Display: 4-digit: 7.6mm height. Housing: Plastic. Protection: IP65.	\$290.00



LR-Display shown with
 JUMO P30-504 Pressure
 Transmitter - see page 60.

LPI-LCD-5
Panel Mount Indicator. Loop powered.

www.intech.co.nz/lpi-lcd

MODEL	DESCRIPTION	PRICE
LPI-LCD-5	Panel mount. Loop powered. Input: 4~20mA, 2 wire. Display: 5-digit LCD of 12.5mm height. Volts Drop: 3.9V @ 20mA. Scaling: Programmable between -19999 to 30000. Max Resolution: 50,000 counts. Accuracy: +/-0.02% of reading plus 2 digits. Decimal Point: Programmable to six positions. Temperature: -10°C to +50°C. Protection: IP65. Housing: Plastic. 96 x 48mm.	\$348.00
Cover	Option: Splash proof lockable security cover: IP65	\$72.00



Unicont PKK
Multifunction limit switch.

MODEL	DESCRIPTION	PRICE
PKK-312	Loop current monitoring relay and digital isolator. Mount: DIN rail. Operating modes: (selectable) Limit switch, Differential switch, Window switch. Supply voltage: 230, 110, 24Vac. 24Vdc. Specify one when ordering. Input: 1~22mA & dry contact. Output: Relay, 8 amps, 250Vac. Transmitter Power Supply: 30v, I _{max} = 70mA.	\$275.00



Level switches



Rubber protection sleeve
MKG-210, MKS-210.



Square flange
MKA-210-0



Two inch BSP mount
MKA-21B



Flanged mount
MKA-211



Submersible
MKU-210
10m cable




Top mounted, L arm.
MKA-210-4L



Side mounted, Z arm.
MKA-210-4Z

Nivomag MKA-210 Series. Llyod (GL) certified. Fixed differential level switch.

MODEL	DESCRIPTION	PRICE
MKA-210-0 Side mount.	Magnetic float level switch with fixed differential. Wetted parts: Stainless steel. Mount: Square flange. Protection: IP65. Pressure: 25 bar. Liquid density: Min. 0.7 SG Ambient temp: -20~80°C. Liquid temp: -20~250°C. Switch rating: Microswitch.  10A, 250Vac12. 0.6A, 220Vdc13. Protrusion length: 202mm. (other lengths available, refer below).	\$575.00
Options		Add Price
	With 2" BSP process connection. MKA-21B-0.	N/C
	With rubber protection sleeve. (Medium 0~100°C).	\$110.00
	With silicone protection sleeve. (Medium 0~200°C).	\$145.00
	Flange mount. Screwed. MKA-211.	POA
	With protrusion length. Several lengths available.	POA
	With "L" or "Z" profile. MKA-210-4L/Z.	\$90.00
	Underwater IP68. MKU-210.	\$298.00
	Ex version.	POA

Ex version available
 Cenelec, Germanischer Lloyd.
 Ex approval: EEx dme IIC T4...T6.


MODEL SELECTION:			
	MK-21	MK-22	MK-23
Fixed differential.	√		
Adjustable differential.		√	√
Straight arm.	√	√	√
L or Z arm.	√		
Side mount.	√	√	
Top mount.	√		√
Submersible.	√		
Rubber protection sleeve.	√		
Flanged process connection.	√	√	√
Threaded process connection.	√		
Ex version.	√	√	√
Tester.	√	√	

Specific gravity of liquids:	
Petrol	0.700
Kerosene	0.800
Olive oil	0.920
Water	1.000
Sea water	1.025
Milk	1.030
Sulfuric acid	1.140
Glycerine	1.260
Mercury	13.595

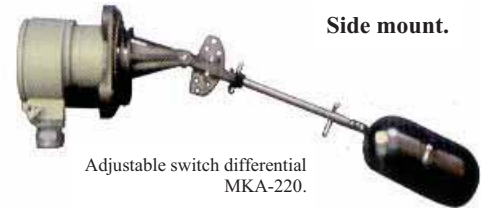
MINIMUM LIQUID DENSITY (kg/dm³) S.G.:				
	Arm length			
Float diameter.	100mm	200mm	300mm	1m ~ 3m
52mm	0.7	0.8	0.85	-
64mm	0.7	0.8	0.8	-
120mm	-	-	-	0.7

Nivomag MKA-220 Series. Llyod (GL) certified.
Adjustable differential level switch.

Level switches

MODEL	DESCRIPTION	PRICE
MKA-220-0 Side mount.	Magnetic float level switch with adjustable differential. Wetted parts: Stainless steel. Mount: Square flange. Protection: IP65. Pressure: 25 bar. Liquid density: Min. 0.7 SG Ambient temp: -20~80°C. Liquid temp: -20~250°C. Switch rating: Microswitch. 10A, 250Vac12. 0.6A, 220Vdc13. Protrusion length: 268mm (other lengths available, refer below). 	\$778.00
Options		Add Price
With rubber protection sleeve. (Medium 0~100°C)		\$110.00
With silicone protection sleeve. (Medium 0~200°C)		\$145.00
Flange mount.		POA
With protrusion length. Several lengths available.		POA
Underwater IP68.		\$298.00
Ex version.		POA


Switch differential between high and low switch set points can be changed by changing the positions of the two pins.



Adjustable switch differential MKA-220.

Ex version available
 Cenelec, Germanischer Lloyd.
 Ex approval: EEx dne IIC T4...T6.

Nivomag MKA-230 Series.
Adjustable differential level switch.

MODEL	DESCRIPTION	PRICE
MKA-230-1 Top mount.	Magnetic float level switch with adjustable differential. Wetted parts: Stainless steel. Mount: Square flange. Protection: IP65. Pressure: 16 bar. Liquid density: Min. 0.7 SG Ambient temp: -20~80°C. Liquid temp: -20~250°C. Switch rating: Microswitch. 10A, 250Vac12. 0.6A, 220Vdc13. Protrusion length: 1265mm (other lengths available, refer below). Differential: 1000mm max. 	\$885.00
Options		Add Price
With longer protrusion length. 2265mm protrusion. 2000mm max. differential. 3265mm protrusion. 3000mm max. differential.		\$60.00 \$115.00
Flange mount.		POA
Ex version.		POA

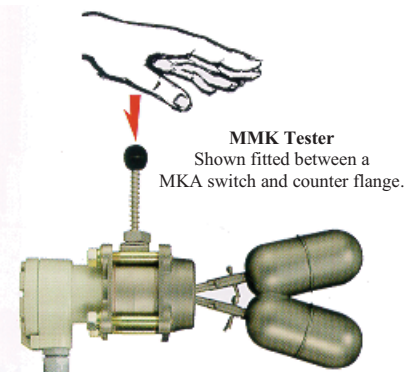
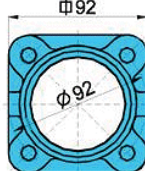
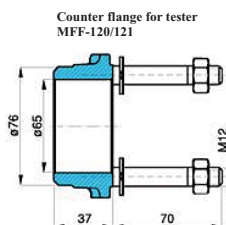
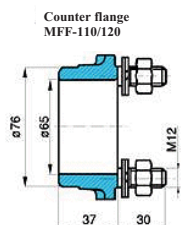


Top mount.

Switch differential can be adjusted by moving the rings on the rod. The weight of different rod lengths is compensated for by adjusting the counter weight.

Nivomag MMK Tester & Nivomag MFF Counter flange.

MODEL	DESCRIPTION	PRICE
MMK-110	Tester for magnetic float level switches. Requires tester flange.	\$238.00
MMK-120	Steel Test Plunger. Stainless Steel Test Plunger.	\$355.00
MFF-110	Counter flange for magnetic float level switches.	\$133.00
MFF-111	Steel Flange.	\$144.00
MFF-120	Steel Tester Flange.	\$168.00
MFF-121	Stainless Steel Flange.	\$179.00
MFF-121	Stainless Steel Tester Flange.	\$179.00



The tester is mounted between the switch body and the counter weight. Pressing the plunger pushes the arm counter weight which activates the switch. Operation of the switch can be checked without any filling or emptying procedures.

Level switches

Nivoswitch RCM/RCR Series.

Vibrating fork level switch.

For liquids & light free flowing granules and powders.



RCM-400-1



RCM-401-1

MODEL	DESCRIPTION	PRICE
	Vibrating fork level switch. <i>Most liquids with a maximum viscosity of 10,000 mm²/s (centistokes).</i> <i>Powders and light granules with a minimum density of 0.05 kg/dm³ (S.G.).</i> Mount: 1" BSP = RCM . Wetted parts: 316 stainless steel. Ambient temp: -40~70°C. Medium temp: -40~130°C @ ambient of -40~55°C. -40~95°C @ ambient of -40~70°C. Pressure: Max, 40 bar @ -40~100°C. 25 bar @ -40~130°C. Output: Type 1: 2 wire ac, 20~255Vac, 50/60 Hz. Type 3: (NPN/PNP selectable). 3 wire dc, 12~55Vdc, 350 mA. with plug in connector. (IP65).	
RCM-400-1	Shorty version. <i>(Liquids only).</i> Probe length: 69mm stainless steel.	\$380.00
RCM-401-1	Standard version. Probe length: 125mm stainless steel.	\$415.00
RCM-402-1	Extended probe: From a min of 0.2m, to a max of 3m. Probe length: 0.2m stainless steel. For each extra 100mm over 0.2m: add....	\$640.00 \$33.00
Options		Add Price
	Cable integral to probe. (IP68). Cable length = 3m.	\$58.00
	Triclamp sanitary probe = RCR . 1.5 or 2 inch.	\$150.00
	Highly polished probe = RCG . <i>For more hygienic applications.</i>	\$195.00
	ECTFE (Halar) coated probe. <i>For aggressive or sticky medium.</i> With ECTFE (Halar) coated st.st. flange. Max: 40 bar @ -40~100°C. 25 bar @ -40~120°C.	\$68.00
	ECTFE (Halar) coated probe. <i>For aggressive or sticky medium.</i> With polypropylene flange. Max: 6 bar @ -20~50°C. 1 bar @ -20~90°C.	\$68.00
	Ex version, Special version of R-400 to be used only with the Nivoswitch JDT remote switching unit. (See below).	POA



RCM-401-2
With integral cable
IP68

Density settings:			
2 wire ac.	Fixed settings.		Liquids: p > 0.7 kg/dm ³ (S.G.). Solids: p > 0.5 kg/dm ³ (S.G.).
2/3 wire dc.	Switch selectable. (Connector). Wire selectable. (Cable).	High density.	Liquids: p > 0.7 kg/dm ³ (S.G.). Solids: p > 0.5 kg/dm ³ (S.G.).
		Low density.	Solids: p < 0.5 kg/dm ³ (S.G.).

Connector Plug	2m Cable	Process connection
-1 = AC	-2 = AC	RCM = 1" BSP
-3 = DC	-4 = DC	RCR = 2" Tri-clamp

Nivoswitch RFM Series.
Vibrating fork level switch.
For liquids & light free flowing granules and powders.

MODEL	DESCRIPTION	PRICE
	Vibrating fork level switch. <i>Most liquids with a maximum viscosity of 10,000 mm²/s (centistokes).</i> <i>Powders and light granules with a minimum density of 0.05 kg/dm³ (S.G.).</i> Housing: Cast aluminium. Protection: IP67. Mount: 1" BSP. Wetted parts: 316 stainless steel. Ambient temp: -30~70°C. Medium temp: -40~130°C @ ambient of -30~55°C. -40~95°C @ ambient of -30~70°C. Pressure: Max, 40 bar @ -40~100°C. 25 bar @ -40~130°C. Power supply: Universal, 20~255Vac / 20~60Vdc. Output: SPDT relay. 250Vac, 8 amps, ac1.	
RFM-400-0	Shorty version. <i>(Liquids only)</i> Probe length: 69mm stainless steel.	\$740.00
RFM-401-0	Standard version. Probe length: 125mm stainless steel.	\$758.00
RFM-402-0	Extended probe: From a min of 0.2m, to a max of 3m. Probe length: 0.2m stainless steel.	\$1055.00
	For each extra 100mm over 0.2m: add....	\$35.00
Options		Add Price
	Plastic housing, in lieu of aluminium.	N/C
	Stainless steel flange, DN50.	\$490.00
	Second relay output.	\$58.00



RFM-401-0



RFM-400-0

Density settings. Switch selectable. Low / high density.
Low density. Solids: $p < 0.5 \text{ kg/dm}^3$ (S.G.).
High density. Liquids: $p > 0.7 \text{ kg/dm}^3$ (S.G.). Solids: $p > 0.5 \text{ kg/dm}^3$ (S.G.).

ECTFE coated probe for aggressive or sticky medium also available - contact Intech.

Nivofloat NLP/NLN Series.
Float level switch.
For liquids.

MODEL	DESCRIPTION	PRICE
	Float level switch with adjustable differential. <i>Minimum density of 0.8 g/cm³ (S.G.).</i> Temperature: -20~80°C. Pressure: 5 bar. Liquid density: Min 0.8 SG Protection: IP68. Wetted parts: non toxic polypropylene. Switch angle: ±45° Output: SPDT micro-switch, 8 amp 230Vac.	
	PVC cable:	
NLP-105	5 metres	\$85.00
NLP-110	10 metres	\$115.00
NLP-120	20 metres	\$175.00
	Neoprene cable:	
NLN-105	5 metres	\$115.00
NLN-110	10 metres	\$175.00
NLN-120	20 metres	\$295.00

Applications:

- ◆ Drinking water reservoirs.
- ◆ Sewage tanks.
- ◆ Pump protection.
- ◆ Holding tanks.



www.intech.co.nz/nivofloat

Features:

- ◆ Mercury free switch.
- ◆ Low specific weight of floating body.
- ◆ Hermetically moulded, double chamber.
- ◆ Switching differential can be set by adjusting the counter weight along the cable.

Level switches

Nivocont RKH Series. Vibrating rod level switch. For free flowing granules and powders.



Power Supply	
-1	85~265Vac 120~375Vdc
-2	16~40Vac 19~55Vdc



MODEL	DESCRIPTION	PRICE
	Vibrating rod level switch with adjustable sensitivity. <i>Minimum density of 0.05 kg/dm³ (S.G.).</i> <i>Max granular size: 10mm.</i> Housing: Cast aluminium. Protection: IP67. Mount: 1.5" BSP. Wetted parts: 316 stainless steel. Ambient temp: -30~60°C. Medium temp: -30~110°C @ ambient of -30~50°C. -30~75°C @ ambient of -30~60°C. Pressure: max. 25 bar (absolute). Power supply: 85~265Vac (50/60Hz), / 120~375Vdc. Output: SPDT relay, 8 amp 250Vac1.	
RKH-302	Standard version. Probe length: 235mm.	\$913.00
RKR-305	Pipe extended probe. From a min of 0.5m, to a max of 3m. Probe length: 0.5m. For each extra 100mm over 0.5m: add.....	\$1210.00 \$35.00
RKK-301	Cable extended probe. From a min of 1m, to a max of 20m. Probe length: 1m. For each extra metre over 1m: add..... Medium temp: -25~90°C @ ambient of -30~35°C. -25~75°C @ ambient of -30~60°C. Pressure: max. 6 bar. (Absolute).	\$1335.00 \$24.00
RKH-402	Plastic housing, in lieu of aluminium.	\$913.00
Options		Add Price
	High temperature. (not RKK) Medium temp: -30~160°C @ ambient of -30~35°C.	\$110.00
	Power supply of: 16~40Vac (50/60Hz), / 19~55Vdc.	N/C
	Solid state output: SPST, ac/dc 350mA / 50V.	N/C
	ABS reinforced plastic housing, in lieu of alu-cast.	N/C
	Fast response.	POA
	Remote mounting electronics.	POA
	Ex version. Ex II D I T6 IP67 (Zone 20). Not plastic housing.	\$435.00

Typical applications.

- Plastic processing.*
 - powders, pellets, granulates.
- Chemical industries.*
 - pills, powders, crystals.
- Agriculture/food industries.*
 - grains, rice, cereals, feed, flour.
- Pulp and paper industries.*
 - crushed cellulose, shavings.
- Recycling.*
 - paper cuts, ground plastic.
- Energy generation.*
 - fly ash, lime, carbon black.
- Mining and quarry.*
 - coal, stone powder.
- Construction.*
 - cement, sand, clay.

Density					
Material	lb/cu.ft	S.G.	Material	lb/cu.ft	S.G.
Alumina, fine	35	0.56	Grape pomace	18	0.29
Alumina, briquette	65	1.04	Grass seed	21	0.34
Ashes, dry	40	0.64	Lactose	32	0.51
Barley	42	0.67	Lime, ground	45	0.72
Blood, dried	40	0.64	Malt, dry, ground	22	0.35
Caustic soda	88	1.41	Meat meal	37	0.59
Cement	95	1.52	Milk, powdered	20	0.32
Clay, fine dry	110	1.76	Oats, rolled	22	0.35
Clay, fire, powdered	52	0.83	Oyster shells, ground	53	0.85
Coal, ground	40	0.64	Peas, dry	48	0.77
Coal, pulverized	34	0.54	Sand, foundry	95	1.52
Feed pellets	38	0.61	Sulphur, powdered	55	0.88
Fish meal	35	0.56	Wheat	48	0.77
Flour	38	0.61	Yeast, dried	41	0.66

Figures are indicative only.

**Nivocont KRK Series.
Conductive level switches.**

MODEL	DESCRIPTION	PRICE
KRK-512-5	Conductivity liquid level single control relay. Differential or limit switch with adjustable sensitivity and delay. DIN rail mount. Relay output: 1x SPDT. 16 amp 250Vac. Power supply: Universal 24~240Vac/dc. Minimum conductivity: 20 µS/cm (microSeimen). <i>1 microSeimen = 1 micromho.</i>	\$138.00
KRK-522	Conductivity liquid level dual control relay. Differential or limit switch with adjustable sensitivity and delay. DIN rail mount. Relay outputs: 2x SPDT. 16 amp 250Vac. Power supply: 230Vac, optional 24Vac/dc. Minimum conductivity: 20 µS/cm (microSeimen). <i>1 microSeimen = 1 micromho.</i>	\$185.00
Probe holders and accessories.		
KSP-201	Single probe holders for level electrode. Process connection: 3/8" BSP.	
KSS-201	Single probe holder: P/P.	\$38.00
KSN-201	Single probe holder: Steel/PFA.	\$58.00
KSN-201	Single probe holder: Stainless Steel/PFA.	\$70.00
KSH-202	Probe holders for level electrodes. Process connection: 1.5" BSP. Two probes plus reference electrode.	\$290.00
KSH-203	Three probes plus reference electrode.	\$360.00
KSH-204	Four probes plus reference electrode.	\$378.00
KSK-201	Submersible single probe. (Probe hangs on the cable). Stainless steel electrode in an ABS enclosure.	\$28.00
KLN-210	Stainless steel electrode with M6 thread for KS holders. 1m length. Other lengths by request.	\$25.00
KLP-204	Probe separator for level electrodes. Four way separator.	\$5.00



KRK-512-5



KRK-522



KSH-203



KSK-201



KSP-201



KLP-204

**Nivocont KKH Series.
Compact conductive level switch (replaces KKH-102).**

MODEL	DESCRIPTION	PRICE
	Compact conductive liquid level switch. Suitable for using with 1 or 2 KRK-512 level control switches. Mount: 1½" BSP. Housing: Plastic. Relay outputs: 1x or 2x SPDT 16 amp 250Vac1. Power: 230Vac, optional 24Vac/dc. Minimum conductivity: 10 µS/cm (microSeimen). <i>1 microSeimen = 1 micromho.</i>	
KKH-212	3 probes.	\$340.00
KKH-222	4 probes.	\$492.00
	Stainless electrodes added price.	POA



- * Two independent pump controls.
- or
- * Two independent alarm levels.
- or
- * Pump control with alarm.

- * No wiring of a separate electronic unit.
- * Selectable high or low fail safe.
- * Adjustable sensitivity.
- * Pressure 1 bar.
- * Protection IP67.

Level transmitters



Features

- ◆ Two-wire: HART feature.
- ◆ Microcontroller based.
- ◆ Rigid and flexible probes.
- ◆ Plug-in field display module.
- ◆ Simple programming.
- ◆ Ex version available.
- ◆ High temperature model.
- ◆ HART communication.

Nivocap CT-300 Series. 2 wire capacitance level transmitter. For liquids, powders, granules.

MODEL	DESCRIPTION	PRICE
	Capacitance solid rod probe level transmitter. <i>Minimum relative dielectric constant of 2.</i> <i>Maximum relative dielectric constant of 60.</i> Housing: Plastic (PBT glass fibre reinforced, flame retardant). Protection: IP67. Mount: 1" BSP. Wetted parts: 316 stainless steel. Probe: Partly or fully coated steel cable. Probe length: Rod, min 0.2m. max 3.0m. Cable, min 1m. max 20m. Ambient temp: -25~70°C. Medium temp: -25~200°C. Pressure: Max. 16 bar at 200.°C. (Absolute). Capacitance: ~600pF/m Power Supply: 12~36Vdc max. 22 mA. Output: 4~20mA, two wire. HART Communication. Load resistance: max. $R_L = (U_S - 12V) / 0.02A$	
CTR-300	Insulated rod, level transmitter.	\$1330.00
CTP-300	Partially rod, level transmitter. <i>The above prices are for probe lengths up to 2.0m.</i>	\$1510.00
CTK-300	Insulated light cable, level transmitter.	\$1345.00
CTL-300	Partially light cable, level transmitter. <i>The above prices are for cable lengths up to 1.0m.</i>	\$1345.00
CTN-300	Insulated heavy cable, level transmitter. <i>The above price is for a cable length of 2.0m.</i>	\$1835.00
Options for Rod probe.		Add Price
	Probe length to a max of 3m.	
	PFA insulated: For each extra 100mm over 2m.	\$15.00
	Partially insulated: For each extra 100mm over 2m.	\$7.00
	High temperature: -25~200°C.	\$195.00
	Ex version: EEx ia/ib IIB T4. (Not high temperature).	\$255.00
Options for Light Cable probe.		Add Price
	Cable length to a max of 20m.	
	FEP insulated: For each extra 1m over 1m.	\$43.00
	Partially insulated: For each extra 1m over 1m.	\$15.00
	Counter weight for light cable probe.	\$148.00
	Ex version: EEx ia/ib IIB T4. (Not high temperature).	\$255.00
Options for Heavy Duty Cable probe.		Add Price
	Medium temp: -25~80°C.	
	Mount: 1.5" NPT or BSP.	
	Cable length to a max of 20m.	
	PE insulated: For each extra 1m over 2m.	\$58.00
	Counter weight for heavy duty cable probe.	\$255.00
Accessories.		
	Display.	\$168.00
	HART Modem.	\$570.00



PROBE SELECTION	
Conductive materials: ◆ Water based solutions. ◆ Acids. ◆ Bases.	Only insulated probe can be used.
Non-conductive materials: ◆ Most petrochemicals. ◆ Solvents.	Insulated or non-insulated probe can be used.

Level transmitters

Features

- ◆ 4~20mA output.
- ◆ Stainless steel flush diaphragm.
- ◆ Wide variety of process connections.
- ◆ Great choice of ranges.
- ◆ High accuracy <0.25%.
- ◆ IP 67 protection.
- ◆ ATEX certified versions.

Applications

- ◆ Most liquids and masses in tanks and vessels.
- ◆ Chemicals with dense vapour or gas layer above the surface.
- ◆ Viscose or corrosive materials.
- ◆ Foaming liquids.

Nivopress DTF Level and Pressure transmitter. (Hydrostatic Liquid Level)

MODEL	DESCRIPTION	PRICE
DTF	Level and Pressure transmitter. Mount: 1.5" BSP. Housing: Plastic or Aluminium. Protection: IP67. Wetted parts: Stainless steel. Accuracy: < 0.25%. F.S.O. Turn down: ~1 : 2. Operating temp: -30~70°C. Medium: -25~125°C. Output: 4~20mA, 2 wire, loop powered. $U_T = 12\sim30Vdc.$ Load resistance: max. $R_L = (U_S - 12V) / 0.02A.$	\$1685.00
Options		Add Price
	Triclamp fitting, 2 inch.	\$163.00
	SAP-203 display module.	\$158.00
	HART Communication.	\$248.00



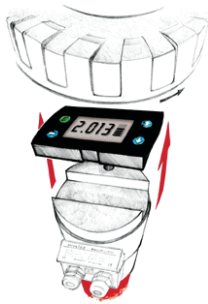
**FOR
FREE FLOWING GRANULES
and BULK SOLIDS**

EchoTREK STD-30J Series—4 Wire. Ultrasonic level transmitter. Stand alone unit.

MODEL	DESCRIPTION	PRICE
4 Wire	EchoTREK compact ultrasonic level transmitter. Housing: Powder coated aluminium. Protection: Housing, IP67. Sensor, IP65. Transducer: Closed cell polyurethane foam sensor face. Polypropylene sensor housing. Beam angle: 5°. Ambient temp: -25~60°C Process temp: -30~75°C. Pressure: 0.7~1.1 bar (absolute). Power supply: 85~255Vac, 50/60Hz. 6.8VA. 120~360Vdc, 5.5W. Outputs: 4~20mA, 600ohm, galv isolated. relay, SPDT, 250Vac / 3amp, ac1.	
STD-34J	Range 0.6m to 8m. Flange, DN150 (min size) 30 kHz. 3x.*	\$2508.00
STD-33J	Range 0.6m to 25m. Flange, DN150 (min size) 30 kHz. 3x.*	\$2898.00
STD-31J	Range 1m to 50m. Flange, DN300 (min size) 15 kHz. 4x.*	\$3300.00
* Dust penetration. 1x = weak...4x = excellent.		
Options		Add price
	SAP-100 programming module/indicator, custom made. Integral, plug-in LCD 6 digit display, bargraph and icons. Scalable in engineering units.	\$185.00
	Power supply of: 10.5~40Vdc, 4.1W. 10.5~28Vac, 50/60Hz. 4.6VA.	N/C
	Approval: Dust Ex approval.	POA
	HART Communication.	POA



Ultrasonic level transmitters



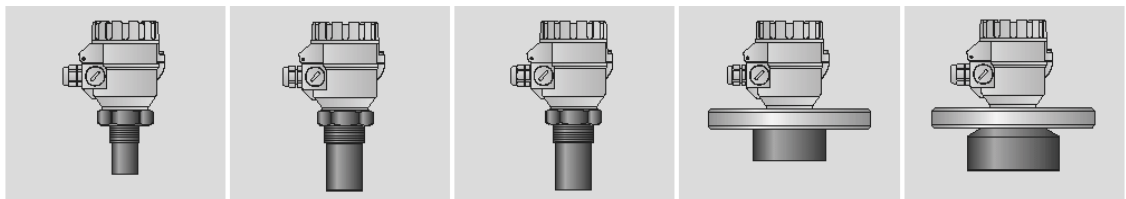
EchoTREK SEP/SEM-300 Series—2 Wire. Ultrasonic level transmitter. With PP or PVDF transducers.

MODEL	DESCRIPTION	PRICE
2 Wire	EchoTREK compact ultrasonic level transmitter. Housing: Plastic. Protection: Housing, IP67. Sensor, IP68. (Submersible). Transducer: Polypropylene, (PP). Flange material: Polypropylene, (PP). Ambient temp: -30~60°C. Process temp: -30~90°C. Pressure: 0.3~3 bar (absolute). Power supply: 11.4~36Vdc / 4.8mw...720mw. Outputs: 4~20mA, (3.9...20.5mA).	
SEP-390	Range 0.2m to 4m. Mount, 1.5" BSP. 6°. 80 kHz. 1x.*	\$1540.00
SEP-380	Range 0.25m to 6m. Mount, 2" BSP. 5°. 80 kHz. 1x.*	\$1540.00
SEP-370	Range 0.35m to 8m. Mount, 2" BSP. 7°. 50 kHz. 2x.*	\$1785.00
SEP-360	Range 0.35m to 10m. Flange, DN80 (min size) 5°. 60 kHz. 2x.*	\$1875.00
SEP-340	Range 0.45m to 15m. Flange, DN125 (min size) 5°. 60 kHz. 2x.*	\$2030.00
SEM-360	Transducer material of Stainless Steel. Process temp: -30~100°C (120 °C for max 2 hrs). Range 0.4m to 7m. Mount, Flush flange. Din 80.	\$2335.00
SEM-360	Range 0.55m to 12m. Mount, Flush flange. Din 125.	\$2720.00
* Penetration through fumes / vapour, foam. 1x = weak...4x = excellent.		
Options		Add price
	SAP-200 programming module/indicator, custom made. Integral, plug-in LCD 6 digit display, bargraph and icons. Scalable in engineering units.	\$168.00
	Housing material of powder coated aluminium.	\$55.00
	Transducer material of Kynar, (PVDF).	\$105.00
	Larger flanges.	POA
	Mounting bracket 200mm.	\$155.00
	DATALOGGER 10,000 sets of data-HART.	\$160.00
	HART Communication.	POA
	R-Relay	\$98.00

- ◆ Practically any liquid.
- ◆ Reliable measurement even under extreme conditions with vapours, fumes, stirrers, foam on chemicals.
- ◆ 32 point curve linearisation.
- ◆ Volume calculation with pre-programmed tank shapes.
- ◆ Open channel flow measurement with pre-programmed flumes and weirs.
- ◆ Capability to suppress interference from two fixed targets.
- ◆ 4~20mA continuous output plus a fully programmable relay output.



EchoTREK SEP-300 Series.



SEP-390

SEP-380

SEP-370

SEP-360

SEP-340

Type	Main application field	Type	Main application field
SEP-390	Small tanks where dead band is critical.	SEP-360	Small process tanks with flanges.
SEP-380	Small process tanks with 2" process connection.	SEP-340	
SEP-370			

EchoTREK STP/STA/STM-300 Series—4 Wire.
Ultrasonic level transmitter.
With PP or PVDF transducers.

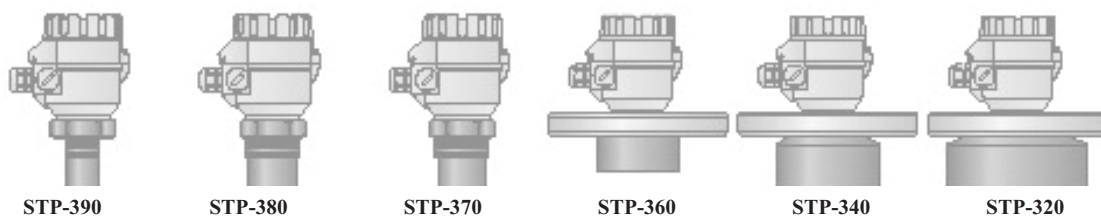
MODEL	DESCRIPTION	PRICE
4 Wire	EchoTREK compact ultrasonic level transmitter. Housing: Plastic. Protection: Housing, IP67. Sensor, IP68. (submersible). Transducer: Polypropylene, (PP). Flange material: Polypropylene, (PP). Ambient temp: -30~60°C Process temp: -30~90°C. Pressure: 0.3~3 bar (absolute). Power supply: 85~255Vac. 50/60Hz. 6VA. Outputs: 4~20mA, 600ohm, galv. isolated. relay, SPDT, 250Vac / 3amp, ac1.	
STP-390	Range 0.2m to 4m. Mount, 1.5" BSP. 6°. 80 kHz. 1x.*	\$1735.00
STP-380	Range 0.25m to 6m. Mount, 2" BSP. 5°. 80 kHz. 1x.*	\$1735.00
STP-370	Range 0.35m to 8m. Mount, 2" BSP. 7°. 50 kHz. 2x.*	\$1999.00
STP-360	Range 0.35m to 10m. Flange, DN80 (min size) 5°. 60 kHz. 2x.*	\$2095.00
STP-340	Range 0.45m to 15m. Flange, DN125 (min size) 5°. 40 kHz. 3x.*	\$2265.00
STP-320	Range 0.60m to 25m. Flange, DN150 (min size) 7°. 20 kHz. 4x.*	\$2860.00
STM-360	Transducer material of Stainless steel. Process temp: -30~100°C. (C.I.P. 120°C for 2 hours max) Pressure: 0.9~1.1 bar (absolute). Range 0.4m to 7m. Flange, DN80 flush 5°. 60 kHz.	\$2555.00
STM-340	Range 0.55m to 12m. Flange, DN125 flush 5°. 40 kHz.	\$2960.00
STM-320	Range 0.65m to 15m. Flange, DN150 flush 7°. 20 kHz.	\$3920.00
* Penetration through fumes / vapour, foam. 1x = weak...4x = excellent.		
Options		Add price
SAP-100 programming module/indicator, custom made. Integral, plug-in LCD 6 digit display, bargraph and icons. Scalable in engineering units.		\$185.00
Power supply of: 10.5~40Vdc, 3.6W. 10.5~28Vac, 50/60Hz. 4VA.		N/C
Housing material of powder coated aluminium (= STA).		\$55.00
Transducer material of Kynar, (PVDF).		\$105.00
Larger flanges.		POA
Mounting bracket 200mm.		\$155.00
HART Communication.		POA



- ◆ Practically any liquid.
- ◆ Reliable measurement even under extreme conditions with vapours, fumes, stirrers, foam on chemicals.
- ◆ 32 point curve linearisation.
- ◆ Volume calculation with pre-programmed tank shapes.
- ◆ Open channel flow measurement with pre-programmed flumes and weirs.
- ◆ Capability to suppress interference from two fixed targets.
- ◆ 4~20mA continuous output plus a fully programmable relay output.



EchoTREK STP-300 Series.



Type	Main application field	Type	Main application field
STP-390	Small tanks where dead band is critical.	STP-360	Small process tanks with flanges.
STP-380	Small process tanks with 2" process connection.	STP-340	Medium size tanks.
STP-370		STP-320	Medium to large size tanks.

Ultrasonic level transmitters



EasyTREK SCA/SPA-300 Series
Ultrasonic level transmitter.
For liquids.



Features

- ◆ 4, 6, 8, 10 and 15m ranges.
- ◆ HART programming (HART Only).
- ◆ Excellent focusing: 5° total beam angle.
- ◆ IP68 protection.
- ◆ Built-in temperature compensation.

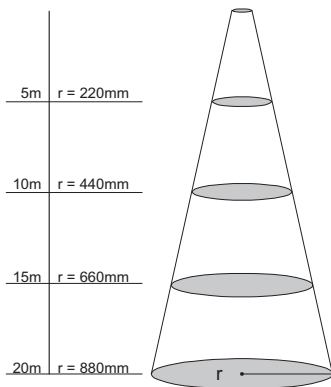


Programmable features via HART communications:

- ◆ Measurement configuration (Units, function, blanking ranges).
- ◆ Measurement optimisation (damping, tracking speed, ignoring stirrers etc).
- ◆ Tank contents profiles: 14 different shapes.
- ◆ Open Channel Flow Metering: 21 different profiles.
- ◆ 32 point linearisation.
- ◆ Information/diagnostics (Echo map and signal/noise).

MODEL	DESCRIPTION	PRICE
2 Wire	Transducer: Polypropylene. Protection: IP68. Ambient temp: -30~60°C. Process temp: -30~60°C. Pressure: 0.3~3 bar (absolute). Beam angle: 5°. Resolution: <2m = 1mm. 2...5m = 2mm. 5...10m = 5mm. Damping: 10 sec, 30 sec, 60 sec, (programmable). Power supply: 10.5~40Vdc, 3.6W. and 10.5~28Vac, 4VA. Outputs: 4~20mA, HART, max 600 ohm. Communication: HART protocol. (HART Only). Accuracy: ±0.2% of measured distance + 0.05% of range.	
SPA-390	Ultrasonic transmitter. 0.25m to 4m. Mount: 1½" BSP.	\$1330.00
SPA-380	Ultrasonic transmitter. 0.25m to 6m. Mount: 1" or 2" BSP.	\$1330.00
SPA-370	Ultrasonic transmitter. 0.35m to 8m. Mount: 2" BSP.	\$1575.00
SPA-360	Ultrasonic transmitter. 0.35m to 10m. Mount: 1" BSP.	\$1575.00
SPA-340	Ultrasonic transmitter. 0.45m to 15m. Mount: 1" BSP.	\$1680.00
Options		Add price
	Fast connecting gland.	\$28.00
SCA-380-2	Outputs: 4~20mA, 600ohm, galv isolated, (max 250V). relay, SPST (n/o), 48Vac / 5amp, ac12. Ultrasonic transmitter. 0.25m to 6m. Mount: 1" and 2" BSP. Process temp: -30~60°C. (1" BSP). -30~80°C. (2" BSP).	\$1410.00
SCA-360-2	Ultrasonic transmitter. 0.35m to 10m. Mount: 1" and 2" BSP. Process temp: -30~60°C.	\$1605.00
SCA-340-2	Ultrasonic transmitter. 0.45m to 15m. Mount: 1" BSP. Process temp: -30~60°C.	\$1738.00
Options		Add price
	HART, RS485 (instead of 4~20mA).	POA
	Mounting bracket 200mm.	\$155.00
	Full Feature programming.	\$445.00

Ultrasonic notes



Radii corresponding to 5° beam angle.

Temperature.
All Nivelco ultrasonic devices have built in temperature compensation over the entire measuring range.

Pressure.
Because of the physical characteristics of ultrasound, ultrasonic measurement is limited in vacuum and high pressure applications.

Sonic Cone.
Most of Nivelco's transducers have a 5°~7° total beam angle at -3dB, ensuring a reliable measurement in narrow silos with uneven side walls as well as in process bins with various protruding objects. Furthermore, as a result of the narrow beam angle, the emitted ultrasonic signal ensures outstanding focusing and good penetration through dust, gases, vapour and foam.

Transducer Material.*
Nivelco offer a wide range of transducer materials:
Polypropylene (PP): Resists most caustics, acids and bases.
Kynar (PVDF): Resists acids and most solvents.
Teflon (PTFE): Resists acids and most solvents. Accepted in hygienic applications.
Stainless steel (316): Ultimate resistance against solvents. Accepted in hygienic applications. Withstands CIP cleaning up to 120°C.

Contact Intech for more Info.