

NN

NOLTA

Water Technology



Catalog North America

NIVA is the water technology brand of NOLTA. NIVA level controllers are the ideal solution for your applications:

- 1. High material resistance**
 - Due to special materials, even the standard versions meet the requirements of 90% of all applications.
- 2. Internal weight**
 - Cost efficient since no additional cable weight is necessary. The level controller remains in place on its own weight.
- 3. Special application variants**
 - Solutions for special applications such as EX zones, high temperatures, solvents, and potable water.
- 4. Easy installation**
 - The same type of controller can be wired to work in filling or emptying applications.
- 5. Form follows function**
 - High reliability even in small diameters. The drop shaped design keeps solid matter from getting stuck on the edges, ensuring proper function of the controller.
- 6. Reliable functionality**
 - Very long lasting almost maintenance-free functionality due to robust materials and a special cast resin encapsulation technique.

Recommended usage by category	MS1	MS1 EX UL	MS1 EX C	MS1 C	MS1 H	MS1 S	MS1 UL	MS1 ACS	N1	N1 pro	KR1 EX	M2	M3
Waste water disposal	•	•				•	•			•	•	•	•
Water supply	•	•		•			•	•	•		•	•	•
Water recycling / Reservoirs	•						•					•	•
General Industry	•	•		•	•	•	•			•	•	•	•
Chemical Industry	•	•	•	•	•	•	•			•	•	•	•
Regenerative Energy	•	•	•	•	•	•	•			•	•	•	•
Mining / Oil industry	•	•	•	•	•	•	•			•	•	•	•
Medical / Pharmaceutical	•				•		•			•		•	•
Construction	•								•	•		•	•

Resistance List	MS1	MS1 EX UL	MS1 EX Teflon	MS1 C	MS1 H	MS1 S	MS1 UL	MS1 ACS	N1	N1 pro	KR1 EX	M2	M3
Rainwater	•	•	•	•	•	•	•		•	•	•	•	•
Ground water	•	•	•	•	•	•	•		•	•	•	•	•
Potable Water								•					
Waste water with suds	•	•	•	•	•	•	•		•	•	•	•	•
Sea and River water	•	•	•	•	•	•	•		•	•	•	•	•
Mineral water	•	•	•	•	•	•	•	•	•	•	•	•	•
Chloride water	•	•	•	•	•	•	•			•	•	•	•
Salt water	•	•	•	•	•	•	•		•	•	•	•	•
Vegetable oils			•	• ²	• ²	•				• ²			
Fruit acid			•	•	•	•				•			
Emulsions with oils and fats	•	•	•	•	•	•				•	•	•	•
Ethyl alcohol			•	•									
Gasoline			•										
Diesel			•	•	•	•							
Crude oil / fuel oil			•	•	•	•							
Brake fluid			•	•	•	•							
Fatty acid			•	•	•	•							
Lye			•	•	•	•							
Sulfuric acid solutions				MS1 CL									
Solvent containing fluids			•	•									
Hydroxypropionic acid, diluted		•	•										
Max. ambient Temperature	80°C	80°C	100°C	100°C	90°C	100°C	60°C	70°C	60°C	80°C	80°C	80°C	80°C

This list was composed to the best of ones knowledge. It is based on empiric data and supplier data sheets. Since no plastic is resistant to all media and resistance heavily depends on external factors such as temperature, mix ratio etc. we strongly recommend to test the products in a controlled environment.



The NIVA level controller MS1 UL for use in North America, e.g. in:

- Treatment plants
- Pump stations
- Lift stations



The NIVA level controller MS1 UL is engineered especially for use in sewage works and pumping stations in liquids heavily charged with solid matter such as raw sewage etc.

Thanks to the good chemical and thermal properties our level controllers are resistant to lees, uric acid, fecal sewage water, oils, petrol, diesel oil, emulsions, alcohol, fruit acids, and even many chemicals. For use at temperatures up to 60 °C (140 °F).

Available versions:

Type	Cable	Cable length*	Order Number
SPDT	SJOW 3/18 AWG	15 ft (ca 5m)	42 000115
SPDT	SJOW 3/18 AWG	30 ft (ca. 9m)	42 000130
SPDT	SJOW 3/18 AWG	65 ft (ca. 20m)	42 000165
SPDT	SJOW 3/18 AWG	98 ft (ca. 30m)	42 000198

*ATTENTION: Cable length in ft for MS1UL

Other cable types and lengths available upon request

Application:

For use in North America
Suggested accessories: SwayBar (40 07)

Electronic connection:


Connection of level controller	Wire		
	white	red	black
For emptying a tank	insulate	X	X
For filling a tank	X	X	insulate
Alarm high level	insulate	X	X
Alarm low level	X	X	insulate

Technical data subject to change

Technical data:

Specific weight: 0.95 - 1.05 or according to specification
 Max. temperature: 60°C (140°F)
 Breaking capacity: 5A / 125V*
 Switch point: 10°
 Protective system: IP 68 / 2 bar
 Equipment group: II G
 Cable cross section: 3/18 AWG
 Height / diameter: 180 / 100 mm
 Housing quality: PP UL94 V0
 Housing color: Black
 Cable quality: SJOW
 Cable color: Black
 Certificates: Intertek cETLus 4004472

* Micro-switch with gold-plated contacts made especially for low currents in electronic circuits

■ With  -certificate 4004472



The NIVA Level Controller MS1 EX is the ideal solution to control liquids with limited switching space in potentially explosive atmospheres classified **Cl.1 Div.1**, (ATEX Zone 0, 1 or 2) e.g. in:

- Refineries
- Gas stations
- Sewage works



The Level Controller MS1 EX UL meets the latest requirements of the international directive IECEx, which must be respected by applications in potentially explosive areas. In accordance with license ASEV 99.110036.02 and cMETus, the Controller MS1 EX UL may be used in Class 1 Division 1 hazardous zones in an intrinsically safe installation.

Available versions:

Type	Cable	Cable length (approx.)	Order number
SPDT	TPR/PVC 4G0,75 mm ²	15ft	42 000215
SPDT	TPR/PVC 4G0,75 mm ²	30ft	42 000230
SPDT	TPR/PVC 4G0,75 mm ²	65ft	42 000265
SPDT	TPR/PVC 4G0,75 mm ²	98ft	42 000298
Other cable types and lengths are available upon request			
Intrinsic safety barrier relay			06 3232

Application:

For use in intrinsically safe electrical circuits in Cl.1 Div.1. cETLus certified. IECEx certificate is recognized in many countries including the U.S., Canada, India, China, Australia. For a complete list check the IEC countries website.

Electronic connection

Connection of level controller	Wire			
	gray	black	brown	⊕
For emptying a tank	insulate	X	X	X
For filling a tank	X	insulate	X	X
High level alarm	insulate	X	X	X
Low level alarm	X	insulate	X	X

Technical data subject to change

⊕ Ground wire to prevent electrostatic discharge

Technical Data

Specific weight: 0.95 –1.05 or according to specification
 Max. temperature: 80°C (176°F)
 Breaking capacity: 1 - 100 mA / 4 V - 40 V*
 Switch point: 10°
 Inductance L_i: 0
 Capacitance C_i: 0
 Protective system: II 1G Ex ia IIC T6
 Cable cross section: 4G0.75 mm²
 Height / diameter: 180 / 100 mm
 Housing quality: PRE-ELEC PP**
 Housing Color: Black
 Cable quality: TPR / PVC
 Cable color: Blue

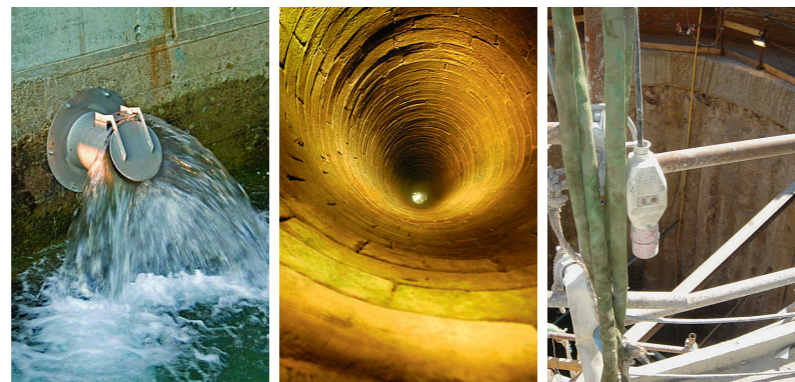
* Micro-switch with gold-plated contacts made especially for low currents in electronic circuits
 ** Specially deflective plastic to prevent electrostatic charging when used in Ex-area (in accordance with ATEX 95).

- cETLus certified
- Class 1 Division 1



The NIVA Level Controller MS1 is the ideal solution to control liquid levels with limited switching space, e.g. in:

- Pump stations
- Wells
- Pump chambers



The NIVA Level Controller MS1 is engineered especially for use in sewage works and pumping stations with liquids heavily charged with solid matter such as raw sewage etc. Thanks to the good chemical and thermal properties our level controllers are resistant to lees, uric acid, fecal sewage water, oils, petrol, diesel oil, emulsions, alcohol, fruit acids, and even many chemicals. For use at temperatures of up to 80 °C (176 °F).

Available versions:

(recommended cable length: 65ft)

Type	Cable	Cable length (approx.)	Order Number
SPDT	TPR/PVC 3 x 0,75 mm ²	5m (16ft)	40 000105
SPDT	TPR/PVC 3 x 0,75 mm ²	10m (30ft)	40 000110
SPDT	TPR/PVC 3 x 0,75 mm²	20m (65ft)	40 000120
SPDT	TPR/PVC 3 x 0,75 mm ²	30m (98ft)	40 000130

Other cable types and lengths are available upon request

Application:

For use in municipal, industrial, commercial and domestic applications where UL certification is not required.

Electronic connection:

Connection of level controller	Wire		
	gray	black	brown
For emptying a tank normally open	insulate	X	X
For filling a tank normally closed	X	insulate	X
Alarm high level	insulate	X	X
Alarm low level	X	insulate	X

Technical data subject to change

Technical data:

Specific weight: 0.95 - 1.05 or according to specification
 Max. temperature: 80°C
 Breaking capacity: 1mA / 4V - 5A / 250V*
 Switch point: 10°
 Protective system: IP 68 / 7 bar
 Equipment group: II
 Cable cross section: 3x0.75 mm²
 Height / diameter: 180 / 100 mm
 Housing quality: Polypropylene (PP)
 Housing Color: Orange
 Cable quality: TPR/PVC
 Cable color: Orange

* Micro-switch with gold-plated contacts made especially for low currents in electronic circuits



The NIVA Level Controller MS1 C is the ideal solution to control liquids with limited switching space. For example in:

- Chemical plants
- Electro plating
- Purifying plants



The NIVA Level Controller MS1 C was designed for an extremely high resistance to chemical liquids and for use at high temperatures of up to +100°C (212°F). For use in solvents we recommend Type MS1 CL.

Available versions:

MS1 C (recommended cable length: 65ft)

Type	Cable	Cable length (approx.)	Order number
SPDT	Teflon/FEP 4G0,5 mm ²	5m (16ft)	40 000705
SPDT	Teflon/FEP 4G0,5 mm ²	10m (30ft)	40 000710
SPDT	Teflon/FEP 4G0,5 mm²	20m (65ft)	40 000720
SPDT	Teflon/FEP 4G0,5 mm ²	30m (98ft)	40 000730

Other cable types and lengths are available upon request

MS1 CL with resistance to solvents:

Type	Cable	Cable length (approx.)	Order number
SPDT	Teflon/FEP 4G0,5 mm ²	5m (16ft)	40 001205
SPDT	Teflon/FEP 4G0,5 mm ²	10m (30ft)	40 001210
SPDT	Teflon/FEP 4G0,5 mm ²	20m (65ft)	40 001220
SPDT	Teflon/FEP 4G0,5 mm ²	30m (98ft)	40 001230

Other cable types and lengths are available upon request

Application:

For use in chemically loaded liquids at temperatures up to 100 ° C (212 ° F). Resistant to: Ethyl alcohol, Gasoline/Diesel, fatty acids and others. Due to its special cable quality the MS1 CL is also resistant to solvents.

For a more complete list please see page 3.

Electronic connection

Connection of level controller	Wire			
	gray	black	brown	⊕
For emptying a tank	insulate	X	X	X
For filling a tank	X	insulate	X	X
High level alarm	insulate	X	X	X
Low level alarm	X	insulate	X	X

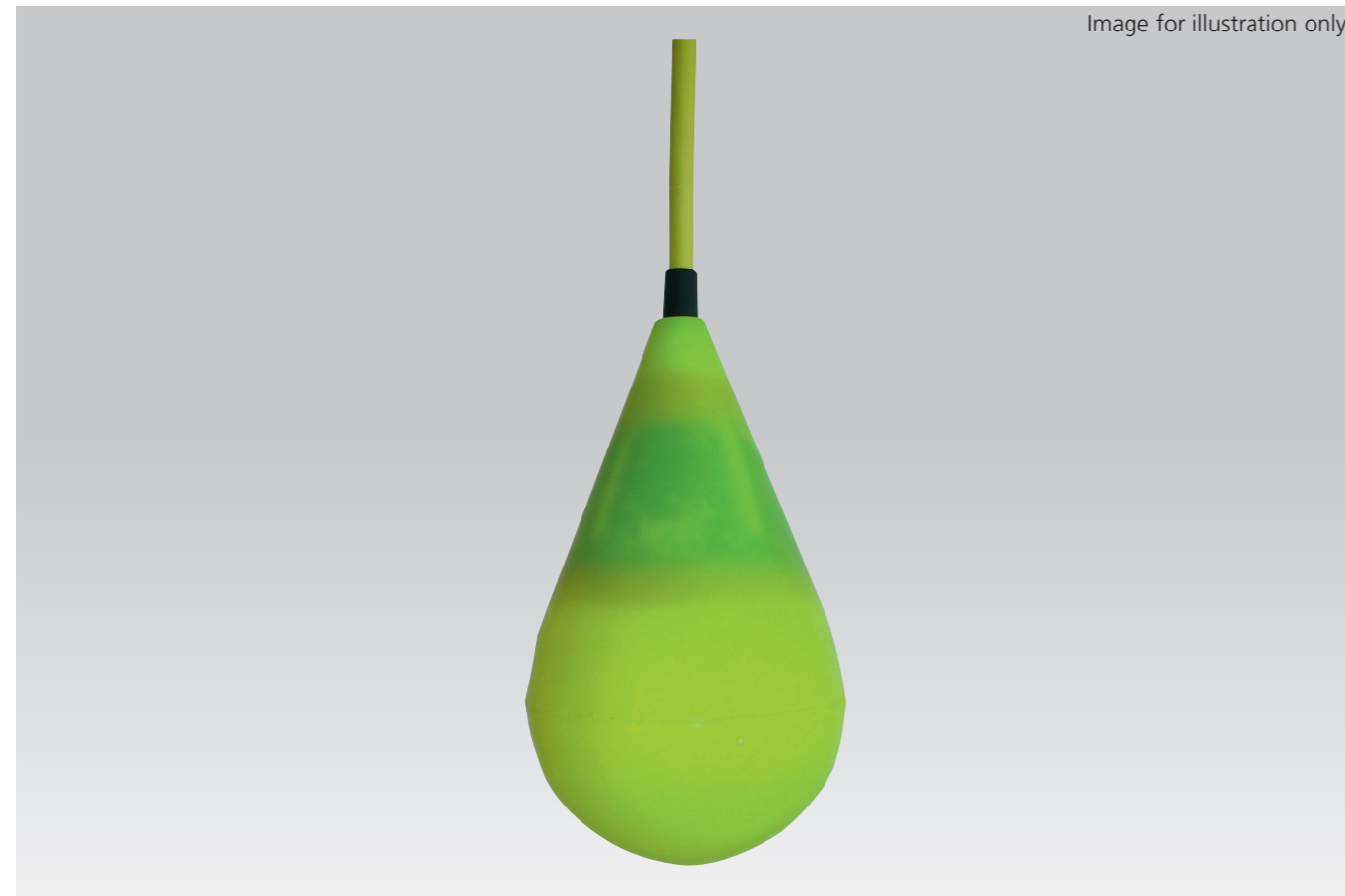
Technical data subject to change

⊕ Ground wire

Technical data:

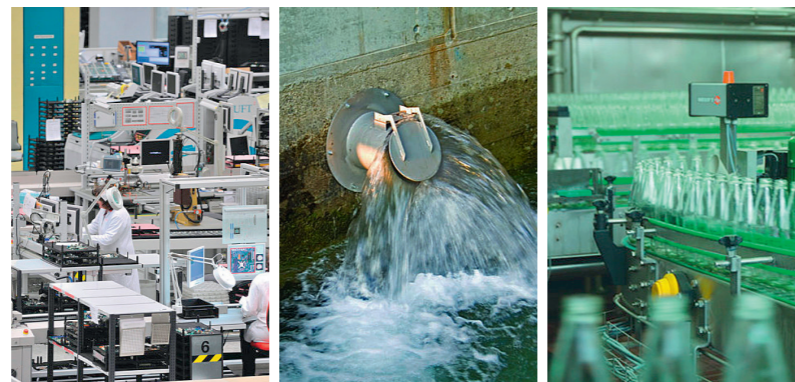
Specific weight: 0.95 - 1.05 or according to specification
 Max. temperature: 100°C (212°F)
 Breaking capacity: 1mA / 4V - 5A / 250V*
 Switch point: 10°
 Protective system: IP 68 / 7 bar
 Equipment group: II
 Cable cross section: 4G0.5 mm²
 Height / diameter: 180 / 100 mm
 Housing quality: Polypropylene
 Housing Color: Gray
 Cable quality: Teflon (FEP)
 Cable color: Black

* Micro-switch with gold-plated contacts made especially for low currents in electronic circuits



The NIVA Level Controller MS1 H is the ideal solution for halogen-free installations, e.g. in:

- Hospitals
- Public institutions
- Chemical plants



The NIVA Level Controller MS1 H is engineered especially for use in halogen-free installations. The adhesion free connection cable provides protection against water and dirt as well as a high resistance against oils.

The MS1 H is halogen-free and develops in case of a fire only small corrosive emissions. It is resistant to hydrolysis, flexible in low temperatures, cut and abrasion resistant and therefore ideally suited for use in extreme environments.

Available versions:

Type	Cable	Cable length (approx.)	Order number
SPDT	PUR/TPE 4G1,0 mm ²	5m (16ft)	40 002205
SPDT	PUR/TPE 4G1,0 mm ²	10m (30ft)	40 002210
SPDT	PUR/TPE 4G1,0 mm ²	20m (65ft)	40 002220
SPDT	PUR/TPE 4G1,0 mm ²	30m (98ft)	40 002230

Other cable types and lengths available upon request

Application:

Halogen-free installations for indoor and outdoor applications. For use in temperatures up to +90°C (194°F).

Electronic connection

Connection of level controller	Wire			
	gray	black	brown	⊕
For emptying a tank	insulate	X	X	X
For filling a tank	X	insulate	X	X
High level alarm	insulate	X	X	X
Low level alarm	X	insulate	X	X

Technical data subject to change

⊕ Ground wire

Technical data:

Specific weight: 0.95 - 1.05 or according to specification
 Max. temperature: 90°C
 Breaking capacity: 1mA / 4V - 5A / 250V
 Switch point: 10°
 Protective system: IP 68 / 7 bar
 Equipment group: II
 Cable cross section: 4G1.0 mm²
 Height / diameter: 180 / 100 mm
 Housing quality: Polypropylene
 Housing Color: Luminous yellow
 Cable quality: PUR/ TPE
 Cable color: Luminous yellow

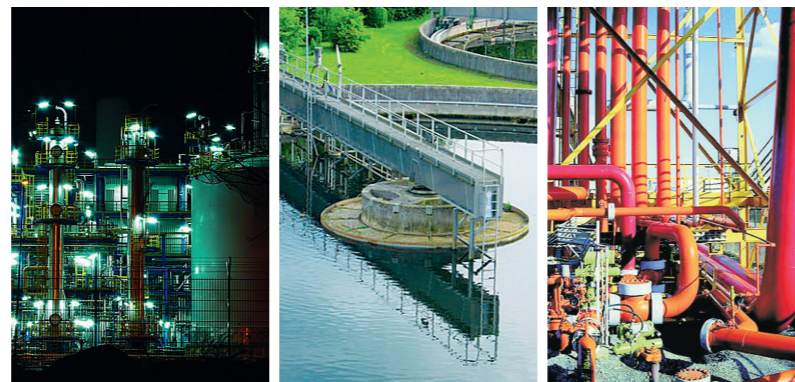
* Micro-switch with gold-plated contacts made especially for low currents in electronic circuits

- Flame resistant cable (IEC 60332-1-2)



The NIVA Level Controller MS1 S for use in high temperature environments e.g. in

- Galvanization
- Cement plants
- Chemical applications



The NIVA MS1 S may be used in high temperature environments where common isolating and sheathing materials would melt or become brittle.

Its resistance to numerous oils, alcohols, animal and vegetable fats as well as other chemical substances make it especially useful in applications for the chemical industry.

Available versions:

Type	Cable	Cable length (approx.)	Order number
SPDT	SiHF 4G0,75 mm ²	5m (16ft)	40 001805
SPDT	SiHF 4G0,75 mm ²	10m (30ft)	40 001810
SPDT	SiHF 4G0,75 mm ²	20m (65ft)	40 001820
SPDT	SiHF 4G0,75 mm ²	30m (98ft)	40 001830

Other cable types and lengths available upon request

Application:

In areas with high ambient temperatures where common isolating and sheathing materials would melt or become brittle.

For continued use in aggressive fluids with temperatures up to +100°C (212°F).

Electronic connection

Connection of level controller	Wire			
	gray	black	brown	⊕
For emptying a tank	insulate	X	X	X
For filling a tank	X	insulate	X	X
High level alarm	insulate	X	X	X
Low level alarm	X	insulate	X	X

Technical data subject to change

⊕ Ground wire

Technical data:

- Specific weight: 0.95 - 1.05 or according to specification
- Max. temperature: 100°C
- Breaking capacity: 1mA / 4V - 5A / 250V
- Switch point: 10°
- Protective system: IP 68 / 7 bar
- Equipment group: II
- Cable cross section: 4G0.75 mm²
- Height / diameter: 180 / 100 mm
- Housing quality: Polypropylene
- Housing color: Red
- Cable quality: SiHF
- Cable color: Dark Red

* Micro-switch with gold-plated contacts made especially for low currents in electronic circuits



The NIVA Level Controller M2 is the ideal solution to control liquids with very limited switching space. For example in:

- Constricted diameters
- Narrow hoppers
- Small tanks



Due to its smaller volume and its lesser buoyancy force, the “small” Level Controller M2 is only suitable for use in media without large amounts of solid matter and especially suitable for use in small tanks with limited space.

Available versions:

Type	Cable	Cable length (approx.)	Order Number
SPDT	TPR/PVC 3 x 0,5 mm ²	5m (16ft)	40 000505
SPDT	TPR/PVC 3 x 0,5 mm ²	10m (30ft)	40 000510
SPDT	TPR/PVC 3 x 0,5 mm ²	20m (65ft)	40 000520
SPDT	TPR/PVC 3 x 0,5 mm ²	30m (98ft)	40 000530

Other cable lengths and types are available upon request

With pre-mounted cable weight (300 g)

Type	Cable	Cable length (approx.)	Order Number
SPDT	TPR/PVC 3 x 0,5 mm ²	5m (16ft)	40 000605
SPDT	TPR/PVC 3 x 0,5 mm ²	10m (30ft)	40 000610
SPDT	TPR/PVC 3 x 0,5 mm ²	20m (65ft)	40 000620
SPDT	TPR/PVC 3 x 0,5 mm ²	30m (98ft)	40 000630

Other cable types and lengths are available upon request

Application:

Liquids without solids. Small diameters. For cable weights to stabilize and adjust the switching point. Additional weights and other accessories on page 28.

Electronic Connection

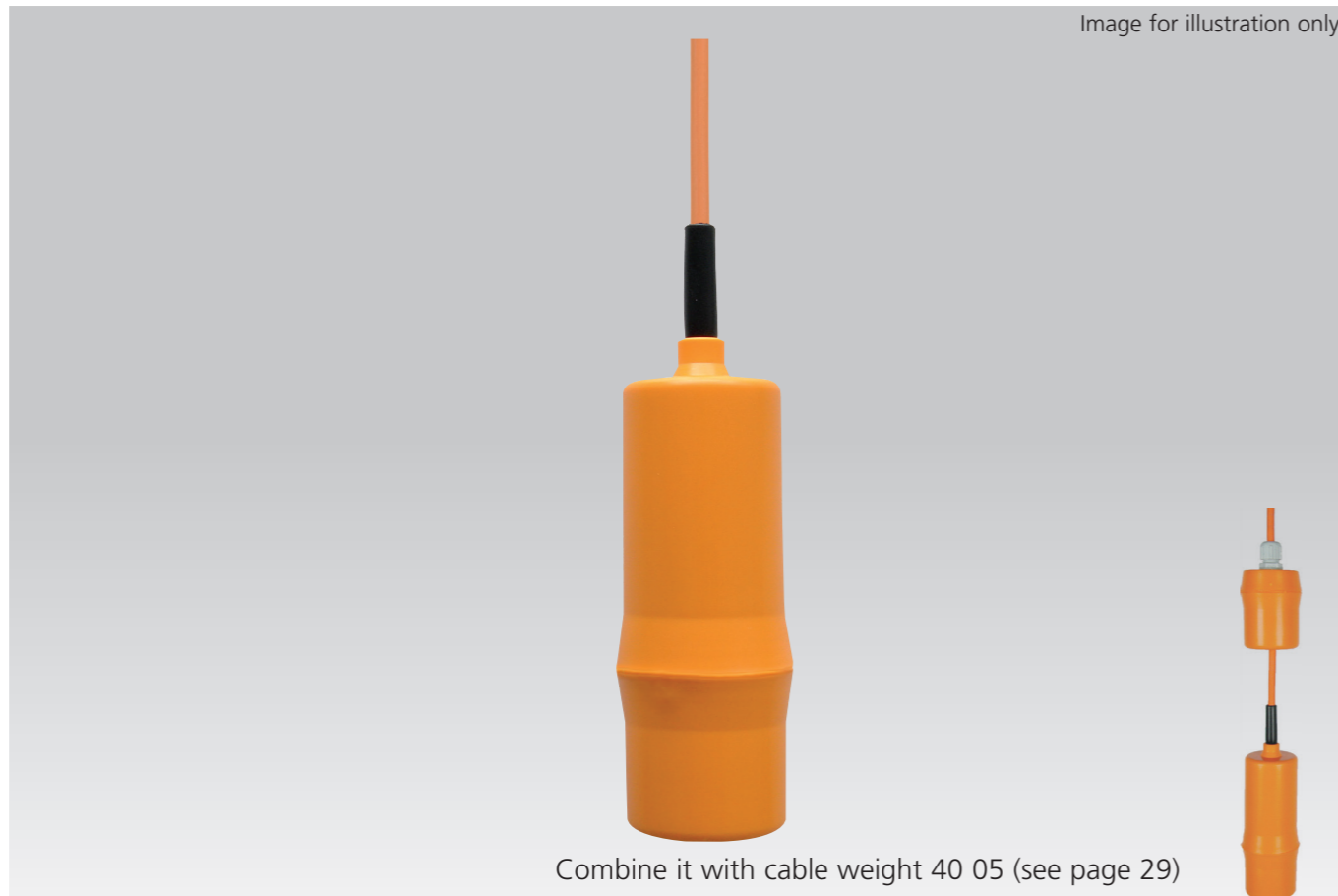
Connection of level controller	Wire		
	gray	black	brown
For emptying a tank	insulate	X	X
For filling a tank	X	insulate	X
High level alarm	insulate	X	X
Low level alarm	X	insulate	X

Technical data subject to change

Technical Data

Max. temperature: 80°C
 Breaking capacity: 1 mA / 4 V - 3 A / 250 V *
 Switch point: 10°
 Protective system: IP 68 / 2 bar
 Protective class: II
 Cable cross section: 3 x 0.5 mm²
 Height / diameter: 90 / 60 mm
 Housing quality: Polypropylene (PP)
 Housing color: Orange
 Cable quality: TPR / PVC
 Cable color: Orange

* Micro-switch with gold-plated contacts made especially for low currents in electronic circuits



The NIVA level controller M3 is the ideal solution to control liquid levels with limited switching space, e.g. in:

- Barrels
- Silos
- Tanks



The Niva M3 Level controller was developed especially for use with barrel pumps. With a max. diameter of only 44mm it can operate in barrels with 2" inlets.

This way simple solutions such as barrel and drum emptying may be realized. The TPR/PVC Cable is resistant to a multitude of liquids and ensures a maintenance free operation.

Available versions:

Type	Cable	Cable length (approx.)	Order number
SPDT	TPR/PVC 3 x 0.5	5m (16ft)	40 001305
SPDT	TPR/PVC 3 x 0.5	10m (30ft)	40 001310
SPDT	TPR/PVC 3 x 0.5	20m (65ft)	40 001320
SPDT	TPR/PVC 3 x 0.5	30m (98ft)	40 001330

Other cable types and lengths available upon request

With pre-assembled cable weight (160g):

Type	Cable	Cable length (approx.)	Order number
SPDT	TPR/PVC 3 x 0.5	5m (16ft)	40 001405
SPDT	TPR/PVC 3 x 0.5	10m (30ft)	40 001410
SPDT	TPR/PVC 3 x 0.5	20m (65ft)	40 001420
SPDT	TPR/PVC 3 x 0.5	30m (98ft)	40 001430

Other cable types and lengths available upon request

Application

Emptying or filling barrels, tanks and drums. May be used with the additional cable weight 40 00 (ø 60mm) for stabilizing the switching point. For weights and other accessories please refer to page 28.

Electronic Connection

Connection of level controller	Wire		
	gray	black	brown
For emptying a tank	insulate	X	X
For filling a tank	X	insulate	X
High level alarm	insulate	X	X
Low level alarm	X	insulate	X

Technical data subject to change

Technical Data

Max. temperature: 80°C
 Breaking capacity: 1 - 100 mA / 4V - 2A / 250V*
 Switch point: 10°
 Protective system: IP 68 / 2 bar
 Equipment group: II Ⓜ
 Cable cross section: 3 x 0,5 mm²
 Height / diameter: 120 / 44 mm
 Housing quality: Polypropylene
 Housing color: Orange
 Cable quality: TPR / PVC
 Cable color: Orange

* Micro-switch with gold-plated contacts made especially for low currents in electronic circuits



Image for illustration only

Also available as piggy-back plug

The NOLTA Level Controller N1 pro is the ideal solution to control liquid levels in industrial applications such as:

- Industrial waste water
- Emulsion of oils
- Dewatering



The NOLTA Level Controller N1 pro can be used everywhere where liquid levels must be supervised. It is ideal for industrial applications. It is simple to install and maintenance-free. The N1 pro is equipped with Nolta's proResist cable which guarantees extreme durability and resistance. Different to the MS-type control switches, the N1 pro is a pump switch which can be used for direct control of pumps. The level controller N1 pro can also be supplied in combination with other NOLTA motor protection plugs.

Available versions:

Type	Cable	Length (m)	Order Number
Normally open	proResist 3G1mm ²	5	41 001205
Normally closed	proResist 3G1mm ²	5	41 001305
SPDT	proResist 3G1mm ²	5	41 001505
Normally open	proResist 3G1mm ²	10	41 001210
Normally closed	proResist 3G1mm ²	10	41 001310
SPDT	proResist 3G1mm ²	10	41 001510
Normally open	proResist 3G1mm ²	20	41 001220
Normally closed	proResist 3G1mm ²	20	41 001320
SPDT	proResist 3G1mm ²	20	41 001520

Available versions: with in-line plug:

Type	Cable	Length (m)	Order Number
Normally open	proResist 3G1mm ²	5	41Z001205
Normally closed	proResist 3G1mm ²	5	41Z001305
Normally open	proResist 3G1mm ²	10	41Z001210
Normally closed	proResist 3G1mm ²	10	41Z001310
Normally open	proResist 3G1mm ²	20	41Z001220
Normally closed	proResist 3G1mm ²	20	41Z001320

Other cable lengths are available upon request

Application:

For direct pump control for example in industrial waste water, emulsions of oils and fats, diluted acids and brines and aggressive medium applications.

Comparison N1 and N1 pro

	N1 pro
Application	<ul style="list-style-type: none"> ■ Industrial waste water ■ Emulsions of oils and fats ■ Diluted acids and brines
Max. temperature	85°C
Cable quality	proResist (TPE)
Cable cross-section	3G1,0 mm ² 4G0,75 mm ² (SPDT)
Versions	N/O, N/C, SPDT
Cable color	Orange
Certificates	CE

Technical Data

- Max. temperature: 85 °C
- Breaking capacity: 10 (8) A / 250V
10 (4) A / 400V
- Switch point: 45°
- Protective system: IP 68 / 2 bar
- Protection class: II
- Cable cross-section: 3G1mm²
- Length /Width / Height: 132 / 81 / 43 mm
- Housing quality: Polypropylene (PP)
- Housing color: Orange
- Cable quality: proResist (TPE/PVC)
- Cable color: Orange
- Certificates: CE



The NIVA Level Controller KR1 EX is the ideal solution to control liquids in potentially explosive atmospheres classified Cl.1 Div.1, (ATEX Zone 0, 1 or 2) for example in:

- Gas stations
- Sewage works
- Fermentation plants



The Level Controller KR1 EX UL was designed especially for use in intrinsically safe electrical circuits in potentially explosive atmospheres. In accordance with license IECEx SEV 13.0002 the Level Controller KR1 EX UL may be used in intrinsically safe installations in hazardous areas Cl. 1 Div. 1.

The controller is equipped with a change-over contact (SPDT), meaning that depending on the electrical connection, the level controller can be used both to empty and fill a tank. Unlike level controller MS1 EX, type KR1 EX is a wide angle controller, which means that only one controller is required for switching on and off.

Available versions:

Type	Cable	Cable length (approx.)	Order Number
SPDT	TPR/PVC 4G0.75	16ft	42 000415
SPDT	TPR/PVC 4G0.75	30ft	42 000430
SPDT	TPR/PVC 4G0.75	65ft	42 000465
SPDT	TPR/PVC 4G0.75	98ft	42 000498

Other cable types and lengths are available upon request

Application KR1 EX:

For use in intrinsically safe electrical circuits in zones 0, 1 and 2 (Cl.1 Div.1). IECEx certificate is recognized in many countries including the U.S., Canada, India, China, Australia. For a complete list check the IEC countries website.

Electronic Connection:

Function	Wire				⊕
	blue	black	brown	⊕	
Normally Open	insulate	X	X	X	X
Normally Closed	X	insulate	X	X	X
Alarm High Level	insulate	X	X	X	X
Alarm Low Level	X	insulate	X	X	X

Technical data subject to change

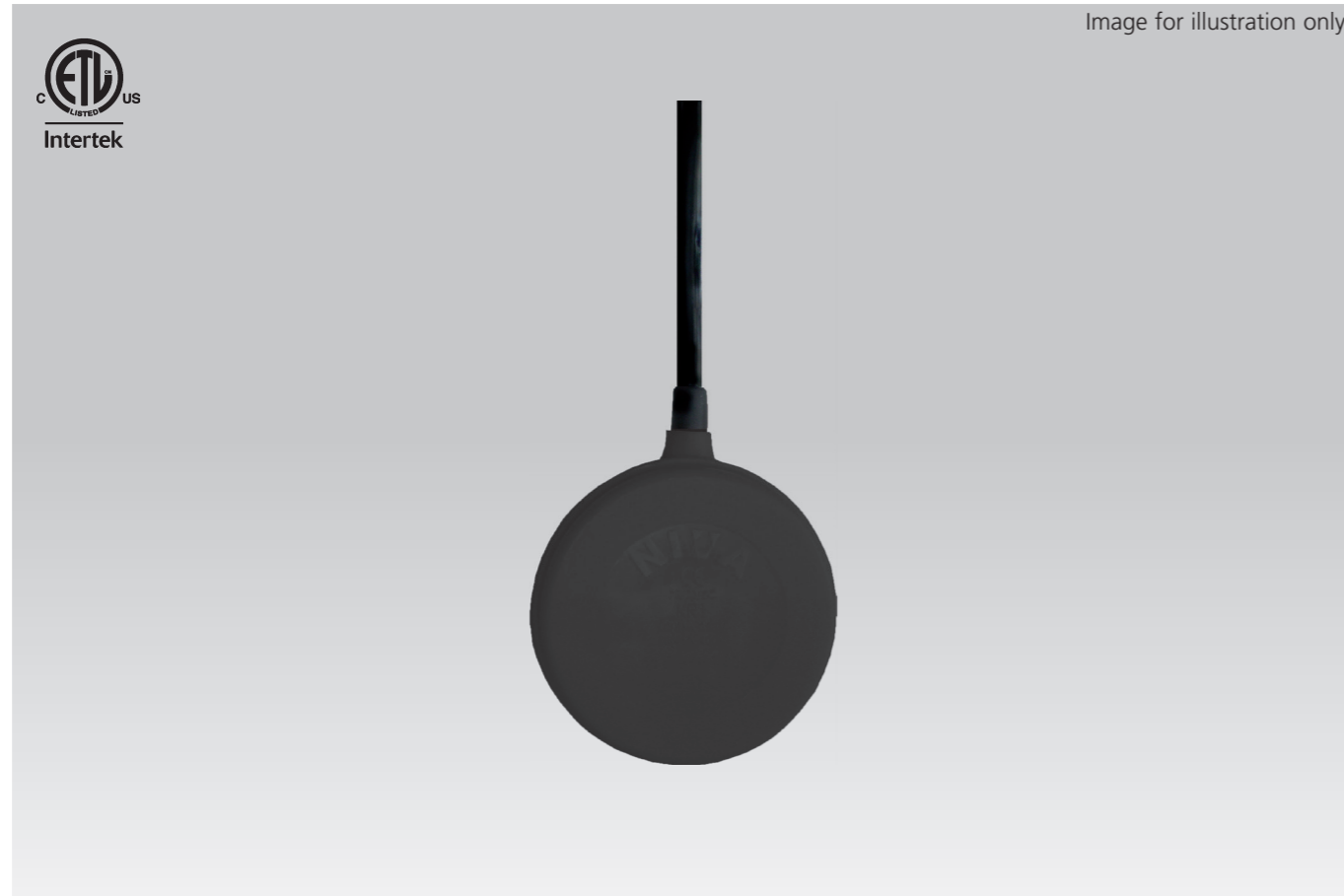
Technical data:

Max. temperature: 80°C (176°F)
 Breaking capacity: 1 - 100 mA / 4 V - 40 V*
 Switch point: 45°
 Capacitance C_i: 0
 Inductance L_i: 0
 Protective system: IP 68 / 2 bar
 EX Type: II 1G Ex ia IIC T6
 Cable cross section: 4G0.75 mm²
 Height / diameter: 40 / 100 mm
 Housing quality: PRE-ELEC PP**
 Housing Color: Black
 Cable quality: TPR / PVC
 Cable color: Blue

* Micro-switch with gold-plated contacts made especially for low currents in electronic circuits
 ** Specially deflective plastic to prevent electrostatic charging when used in Ex-area (in accordance with ATEX 95).

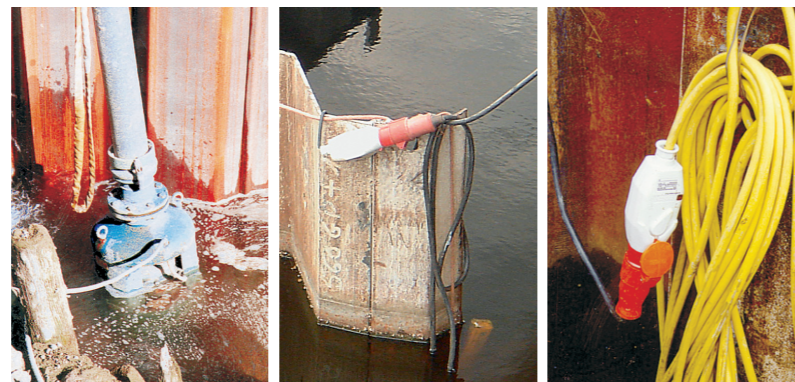
⊕ Ground wire to prevent electrostatic charging

- cETLus certified
- Class 1 Division 1



The NOLTA Level Regulator KR1 is the ideal solution to control liquid levels in industrial applications such as:

- Waste water
- Emulsion of oils
- Chlorine water



The NIVA level controller KR1 can be used everywhere where liquid levels must be supervised. The NIVA KR1 is ideal for industrial applications. It is simple to install and maintenance-free. Thus fast economical and reliable solutions can be realized. The KR1 is equipped with a TPR/PVC cable which guarantees extreme durability and resistance. The level controller KR1 can also be supplied in combination with the NOLTA contactor combination, the NOLTA motorstarter or the NOLTA capacitor plug.

Available versions:

Type	Cable	Cable length (approx.)	Order Number
SPDT	TPR/PVC 4G1.0	5	40 000305
SPDT	TPR/PVC 4G1.0	10	40 000310
SPDT	TPR/PVC 4G1.0	20	40 000320
SPDT	TPR/PVC 4G1.0	30	40 000330

Other cable types and lengths are available upon request

Electronic Connection:

Function	Wire		
	blue	black	brown
Normally Open	insulate	X	X
Normally Closed	X	insulate	X
Alarm High Level	insulate	X	X
Alarm Low Level	X	insulate	X

Technical data subject to change

Technical data:

Max. temperature:	80°C
Breaking capacity:	10(8)A / 250V
Switch point:	45°
Capacitance C _i :	-
Inductance L _i :	-
Protective system:	IP 68 / 2 bar
EX Type:	II
Cable cross section:	4G1,0 mm ²
Height / diameter:	40 / 100 mm
Housing quality:	Polypropylene PP
Housing Color:	Orange
Cable quality:	TPR / PVC
Cable color:	Black



Available accessory
NOLTA Sensor Guard 40 06

The Level Transducer S-26 is designed for seamless level control e.g. in:

- Wastewater treatment and biogas production
- Oil and fuel storage tanks
- Brackish water and fuel tanks in shipbuilding



The level transducer S-26 continuously and hydrostatically measures the level of liquids. It can be used in ventilated tanks at filling heights from 0 to 9 psi. The level probe is used in pumping stations or storage tanks, among other places. The optional SensorGuard (Art.No. 40 06) adds a weight and protective cache that can be screwd on without the use of tools.

Available versions:

Type	Cable length in m	Cable	Measuring range	Art. No.
S-26	20	PUR	0-5 psi	25 03520
S-26	20	PUR	0-9 psi	25 0620

Other cable length and types upon request

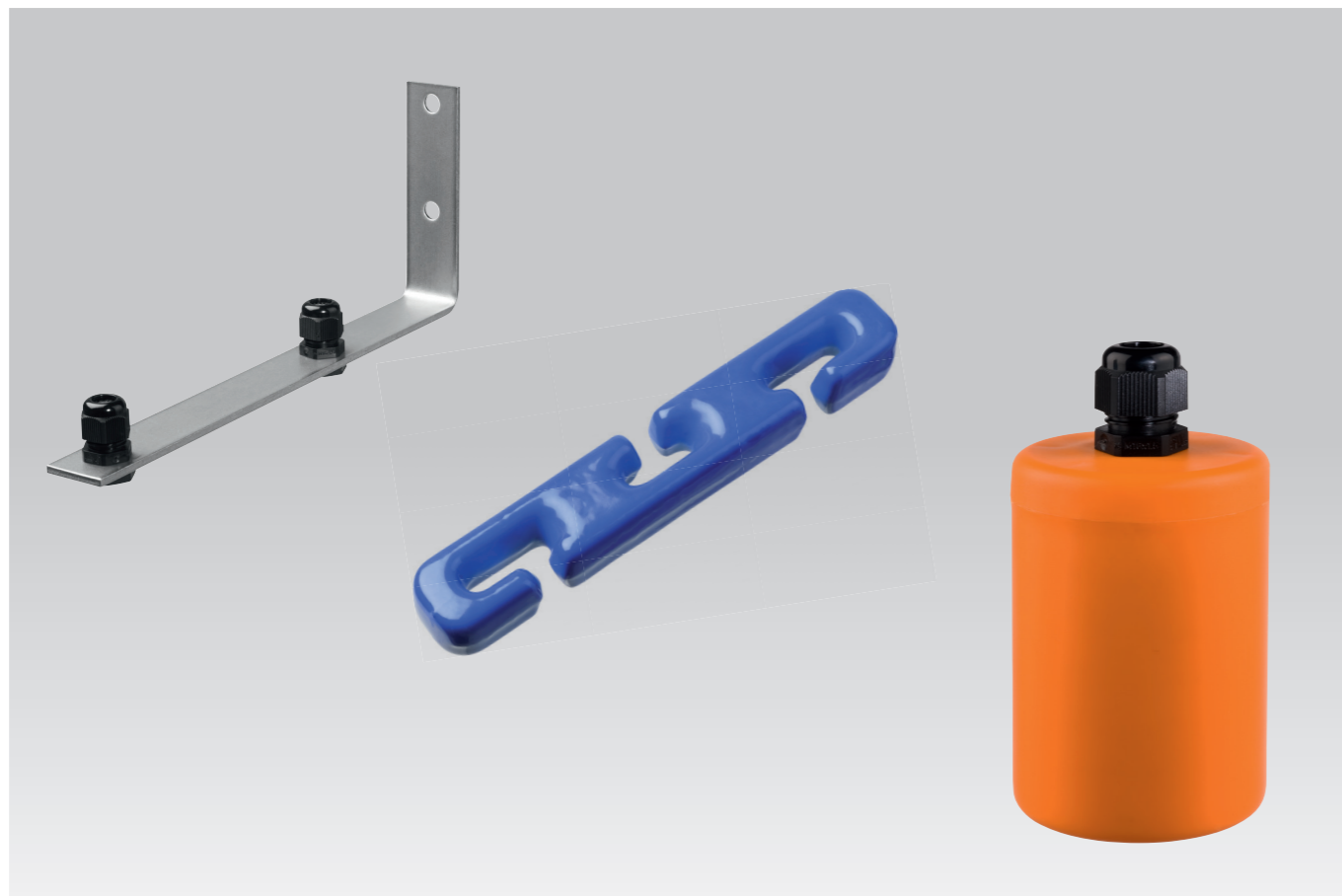
Application:

For continuous level measurements. The electrical output signal is fed to the pump control for reliable refilling and dry run protection.

Technical data:

Input, fluid level:	0-5 or 0-9 psi
Output:	4...20mA, 2-wire
Medium:	Wastewater
Medium temperature:	0 ... + 50 °C
Protective class:	IP 68, immersion depths of 300m
Housing:	Stainless Steel 316L
Protective tube:	PUR
Accuracy:	+/- 0,3%
Certificates:	Drinking water approval (ACS, PZH); CSA; metrological certificate; EAC

Technical data subject to change



**Cable support bracket
Art.-No. 40 02**

The stainless steel support bracket is mounted on the wall. With the 2 included M16 cable glands, one or two level controllers can be suspended freely at exactly the required height. Comes with screws and anchors (M 6).

Technical data:

Material: Stainless steel A2
 Size: 280 x 110 x 30 x 4 mm
 Cable gland: M16 Polyamide
 Clamping range: 4.5 - 10 mm (0.18 - 0.4 in)
 Anchor: M6 x 67 A4

**Cable weight
Art.-No. 41 03**

The cable weight 41 03 weighs approximately 700g (1.5 lb) and can be used on all level controllers.

The weight can be retrofitted on already installed controllers.

Technical data:

Weight: 700 g
 Material: Cast iron, plastic laminated
 Cable gland: 3 cut-outs
 Size L/H/W: 190 x 31 x 27 mm (7.5 x 1.2 x 1 in)

**Cable weight
Art.-No. 40 00 and 40 01**

The cable weight 40 00 weighs approximately 300g (0.7 lb) and can be used with NIVA level controller M 2. Cable weight 40 01 weighs approximately 700 g (1.5 lb) and can be used with level controllers MS 1, N1 and KR1. Both weights must be fixed to the cable before installing the level controllers.

Technical data:

Weight: 40 00 = 300 g (0.7 lb)
 40 01 = 700 g (1.5 lb)
 Material: Polypropylene (PP)
 Cable gland: M16 Polyamide
 Clamping range: 4.5 - 10 mm
 Size: Ø 60 mm x 110 mm (Ø 2.36 in x 4.33 in)

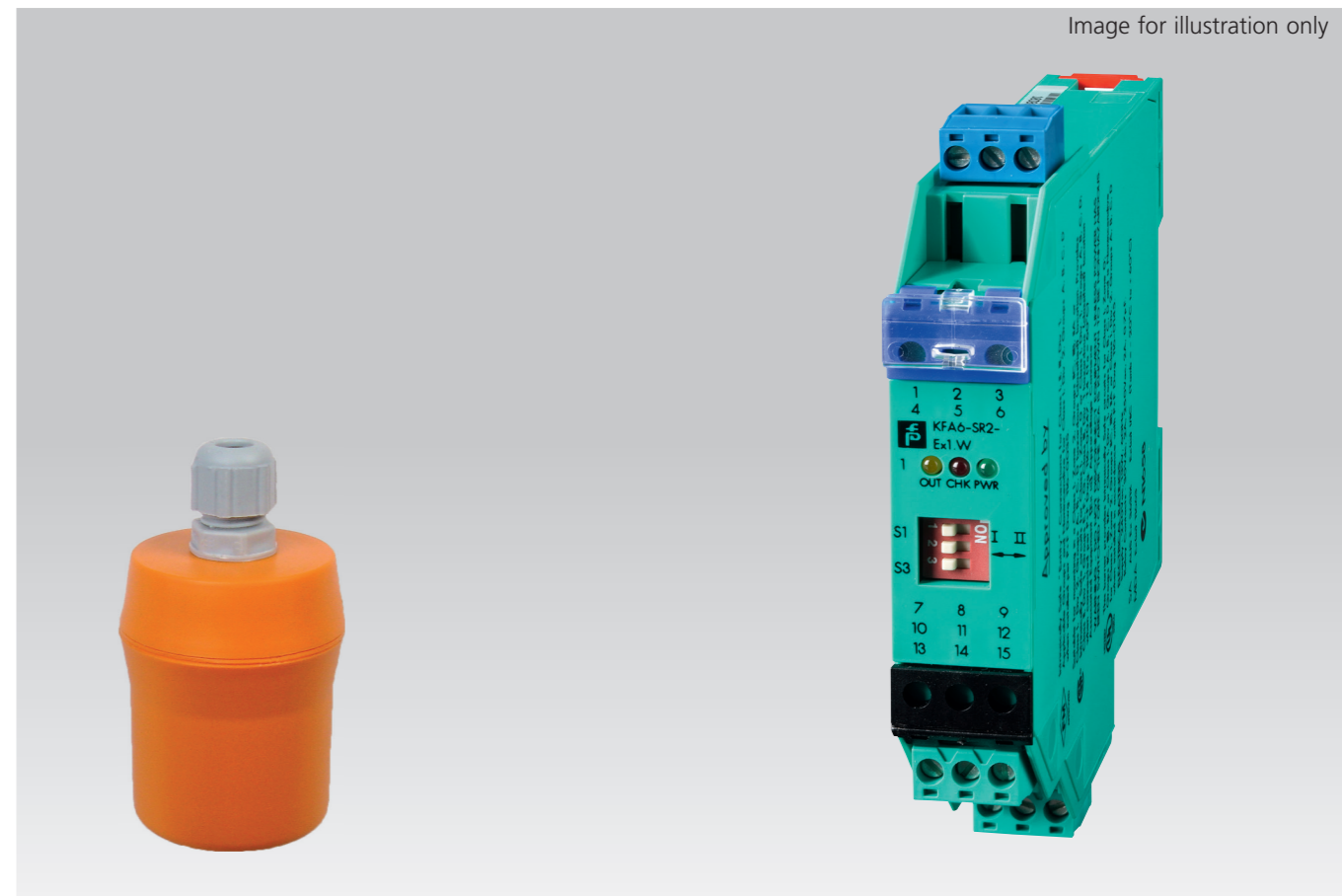


Image for illustration only

**Cable weight
Art.-No. 40 05**

The cable weight 40 05 weighs approx. 160g (0.35 lbs) and fits all Level Controllers M2 and M3. It can not be used with IECEx devices.

The cable weight has to be fitted on the cable before installation of the controller.

If required the M3 can also be supplied with a pre-mounted weight. (See page 18)

Technical Data

Weight: 160 g
 Material: Polypropylene (PP)
 Cable gland: M12 PE/PP
 Clamping range: 3 - 6 mm
 Size: Ø 44 mm x 55 mm

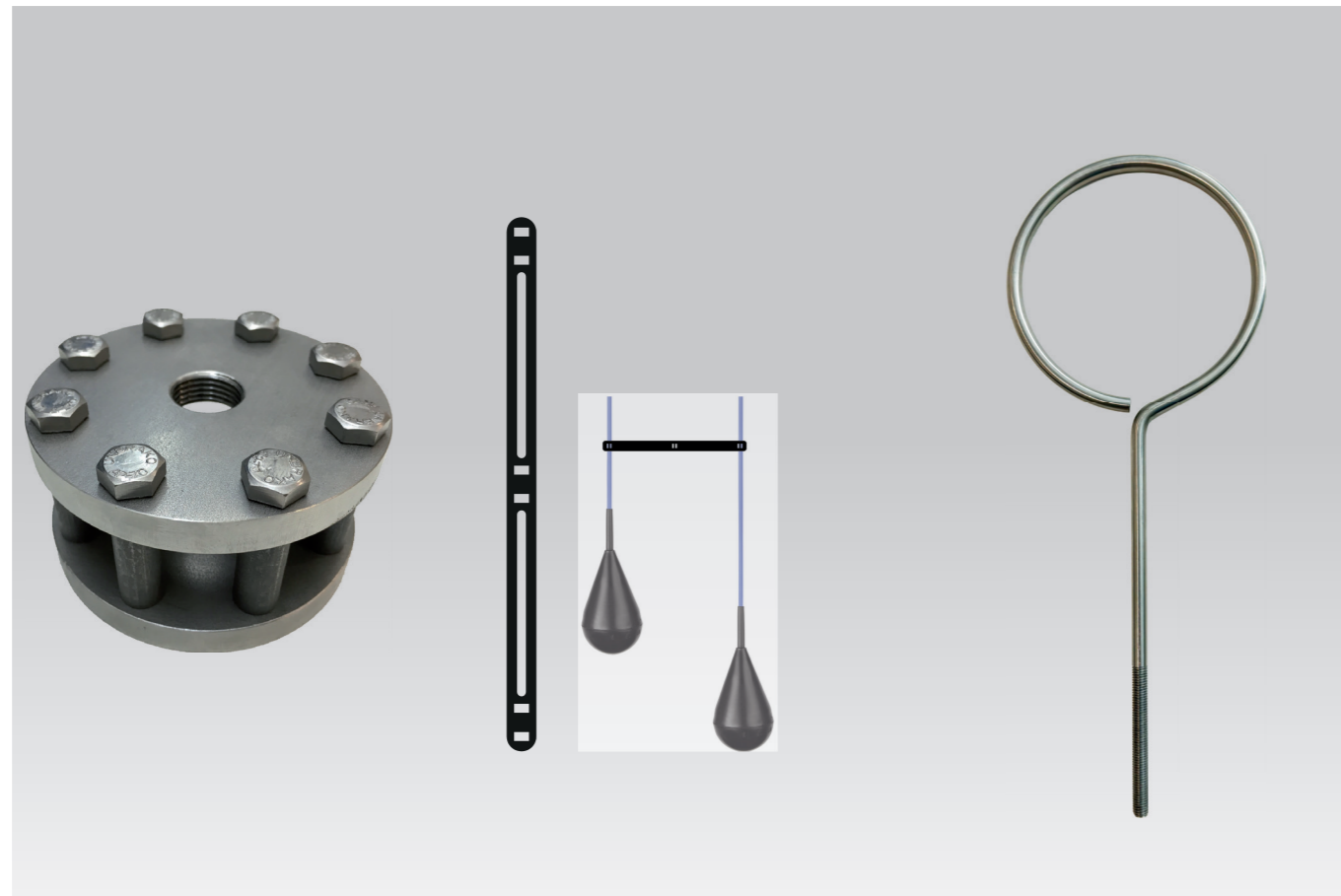
Intrinsically safe barrier Art.-No. 06 3232

This 1-channel intrinsic safety barrier relay is an important safety measure for intrinsically safe electrical circuits.

To ensure the safe disconnection of all intrinsically safe circuits in EX zones 0 and 1 (Cl.1 Div.1), a safety barrier relay is strictly required when installing EX-certified level controllers (EN 60079-11,14, 25 and EN 61241-11).

One relay is required for each switching point (number of controllers in EX zone).

Dual-channel barrier relays are available upon request.



Sensor Guard
Art.-No. 40 06

The stainless steel sensor guard protects the level transducer S-26 from clogging while providing a steady position on the bottom of the tank.

Screws on transducer, no tools required.

Technical data:

Material: Stainless steel A2
Size: 97mm x 50mm
3.81in x 1.97in
Weight: 3lbs

Sway Bar
Art.-No. 40 07

A clever, cost effective way to keep your floats from tangling. Includes 2 cable ties.

Made from 33% Glass Fiber Reinforced Nylon

Technical data:

Distance: 160mm (matches 40 02)
Material: CiLONTM PA 66
Cable gland: 3 cut-outs
Size L/H/W: 180 x 10 x 5 mm

Sway Guard
Art.-No. 40 09

Stainless Steel ring to keep the floats from tangling. Includes 2 nuts and washers.

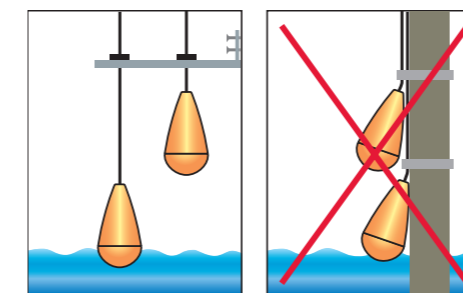
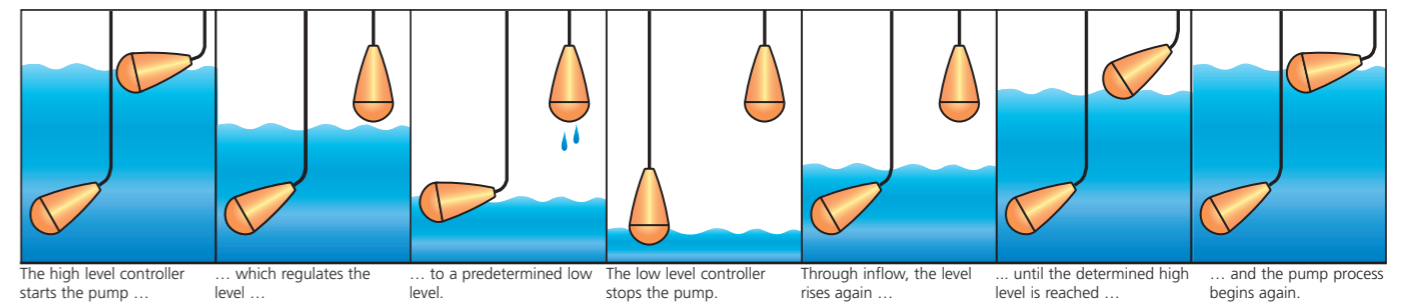
Technical data:

Diameter Ring: 120mm
Material: Stainless steel
Thread: M8x75mm

Technical explanations to water technology

Function

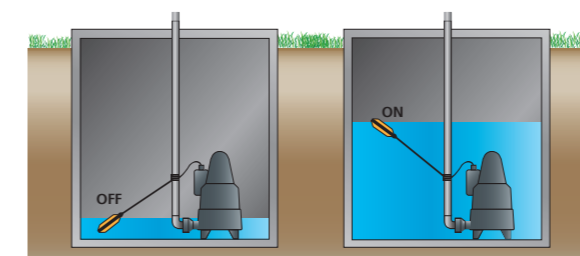
"MS" Series



When installing the level controllers make sure that they are suspended freely and vertically, that they do not rest on the base, that they can float without interference from the shaft walls, pipes, fittings etc. and that they are not exposed directly to currents.

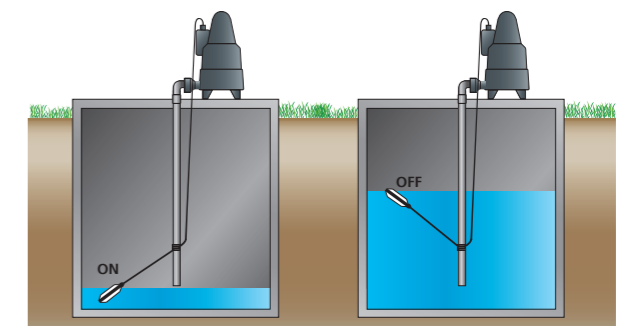
For simple mounting we can supply cable support brackets. The stainless steel support bracket is mounted on the wall. With the included M16 cable glands, one or two level controllers can be suspended freely at exactly the required height.

"N" and "KR" Series



Type "empty" (Normally open)

This type is used when a fluid level is not to exceed a given mark. (spill over protection)
Common applications include waste water collection tanks and storage cisterns.

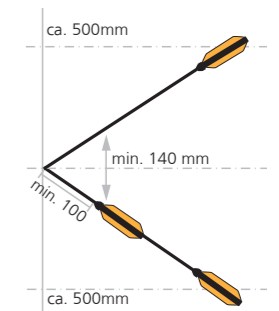


Type "Fill" (Normally closed)

This type is used when a fluid level is not to fall below a given mark.
Common applications include wells and fish ponds or tanks.

The illustration to the right is valid for all level controllers type "N" and "KR". By changing the tether length of the cable the switching point can be adjusted to fit your needs.

It is important to respect the min. lengths of 100mm. If this distance is not kept the cable may be damaged due to the bending radius.





The quality policy of Nolta GmbH

Customer satisfaction is our company's priority. We achieve this through the quality of our products and services, with the benchmark set by our customers.

The quality of our products and services is dependent on the individual effort of each employee along with continuous programs of supervision and quality control.

Under these prime conditions the requirements and specifications set forth by our customers are fulfilled.

Our commitment to improve our products and services is done on a daily basis. Management plays an integral part in ensuring the high standards demanded by our customers

are met at all levels within Nolta GmbH.

All management levels ensure that the quality policy is understood and implemented by all employees.

We strengthen our market position through continued and constantly improved product quality and short lead times. The results are measured by customer satisfaction reviews.

To reduce the need for price adjustments we periodically review our manufacturing locations and outsourcing partners. Where applicable, and under close monitoring, external production is an option.

Nolta and the environment

At Nolta, we see the natural wealth of our environment as the foundation of our economic actions. Our actions are guided by our concern for the environment and our efforts to protect it from harmful influences.

For this reason, we manufacture our products using energy saving and environmentally friendly techniques. And when our products come to the end of their useful lives, we dis-

pose of them in environmentally friendly ways.

At every level of management, we integrate the concern for the environment in our decision making process. Protecting the environment requires responsible actions by all employees. Furthermore, managers have the extra responsibility to ensure our environmental policies are followed and to lead by example.

The integrated management system of Nolta GmbH

The main components in the quality of our product are the protection of our environment and the safety of our employees.

The basis for fulfilling these components is an integrated management system for quality management, environmental protection and occupational safety. We feel that it is our obligation to reach the best quality in our products while acting ecologically responsible.

At Nolta we undertake regular checks as to whether the actions of our company are in line with this policy, fulfill all legal requirements and strive for constant ecological improvement.

We want to ensure the technological and organizational implementation as well as the success of our environmental policy through our management system.

The service philosophy of Nolta GmbH

We understand quality not only in regards to our product but also in our service to our customers. Product quality is a matter of course and our highest priority. What distinguishes us from others, is our exemplary service which has made Nolta GmbH a reliable and trusted partner in motor protection and water technology for over 50 years.

We see ourselves not only as manufacturer and supplier of

high quality products but also as a service provider for our customers. This includes uncomplicated communication channels and qualified consultation as well as target oriented training opportunities through the Nolta Academy.

We provide our customers with top end products and 50 years of experience in motor protection and water technology.

History



1959



1974



2011

Contact:

North America
Nolta Inc.
265 Franklin St., Suite 1702
Boston, MA 02110
USA



Felix Bonn
Ph.: +1 (617) 963 3591
[Email: fbonn@noltainc.com](mailto:fbonn@noltainc.com)

Scan to save to contacts



NOLTA worldwide



