

Assembly and operating Instructions
Level indicators
NA
NA-V4A
NA-V4A Ex



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NA / NA-V4A

Level indicator

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1 Foreword

These installation and operating instructions are applicable to devices of series level indicator V4A. Please follow all instructions and information given for installation, operation, inspection and maintenance. The Instructions form a component part of the device and should be kept in an appropriate place accessible to the personnel in the vicinity of the location. Where various plant components are operated together, the operating instructions pertaining to the other devices should also be observed.

2 Safety

2.1 Symbol and meaning



Safety notice

This symbol is placed against all directions/information relating to occupational health and safety in these Installation and Operating Instructions and draws attention to danger to life and limb. Such notices should be strictly observed.

2.2 General safety directions and exemption from liability

This document contains basic instructions for the installation, operation, inspection and maintenance of the NA / NA-V4A level indicator type series. Non-observance of these directions can lead to hazardous situations for man and beast and also to damage to property, for which Kirchner und Tochter disclaims all liability. The operator is required to rule out potentially hazardous situations through voltage and released media energy.



2.3 Intended use

The type series NA / NA-V4A level indicator devices are designed for liquids and for vertical installation. Installation in the fluid container (NA) or pipeline (NA-V4A) should be carried out solely in accordance with these Instructions. The required version of the level indicator should be selected on the basis of the conditions on operating site. The limit values pertaining to the device are given in section 10, 12 and should not be exceeded. Modifications or other alterations to the level indicator may only be carried out by Kirchner und Tochter. The installation of the NA-V4A in horizontal pipe runs is possible using appropriate pipe bends. The inflow resp. the level increase must always be directed from the bottom upwards. Details of the process product and the operating conditions are specified in the order confirmation.

2.4 Special safety instructions concerning glass devices



For safety reasons, we recommend fitting a protective shield in front of the measuring tube when starting up flow meters fitted with glass measuring tubes. The devices should not be operated where there is a risk of pressure surges (water hammer)!

To avoid glass breakage, all fitting work between measuring glass and heads inside the glass should be carried out by twisting and simultaneously pressing after having wetted the gaskets.

2.5 Information for Operator and operating personnel

Authorized installation, operating, inspection and maintenance personnel should be suitably qualified for the jobs assigned to them and should receive appropriate training and instruction. All persons charged with assembly, mounting, operation, inspection and maintenance duties must have read and understood the operating instructions. Gaskets in contact with the fluid product must be replaced after all maintenance and repair work.

2.6 Regulations and guidelines

In addition to the directions given in these Installation and Operating Instructions, observe the regulations, guidelines and standards, such as DIN EN and for specific applications, the codes of practice issued by DVGW (gas and water) and VdS (underwriters) or the equivalent national codes and applicable national accident prevention regulations.



2.7 Notice as required by the hazardous materials directive

In accordance with the law concerning handling of waste (critical waste) and the hazardous materials directive (general duty to protect), we would point out that all flow meters returned to Kirchner und Tochter for repair are required to be free from any and all hazardous substances (alkaline solutions, acids, solvents etc.).



Make sure that devices are thoroughly rinsed out to neutralize hazardous substances.

3 Transport and storage

Always use the original packing for transport, handling and storage. Protect the device against rough handling, coarse impact, jolts etc.



4 Installation

4.1 NA

Since the level indicator NA is manufactured according to customer specifications, the following installation instructions may differ from your custom design.

Work preparatory to installation

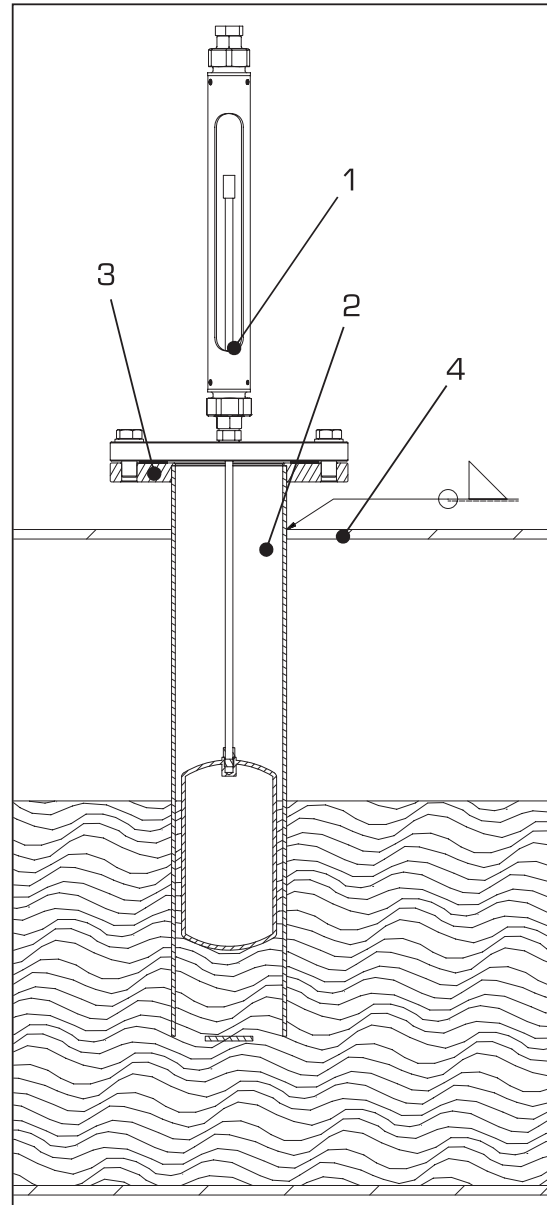
- The float tube is welded to the liquid container, so the installation location must be prepared accordingly (degreasing, cleaning etc).
- The indicating device (1) consisting of a glass tube and a protective steel sleeve, must be secured against mechanical stress (bumps or the like).

Preparing the level indicator

1. Unpack the device carefully.
2. Remove the transport lockings.
3. Check that the float can move freely in the device.

Installation NA

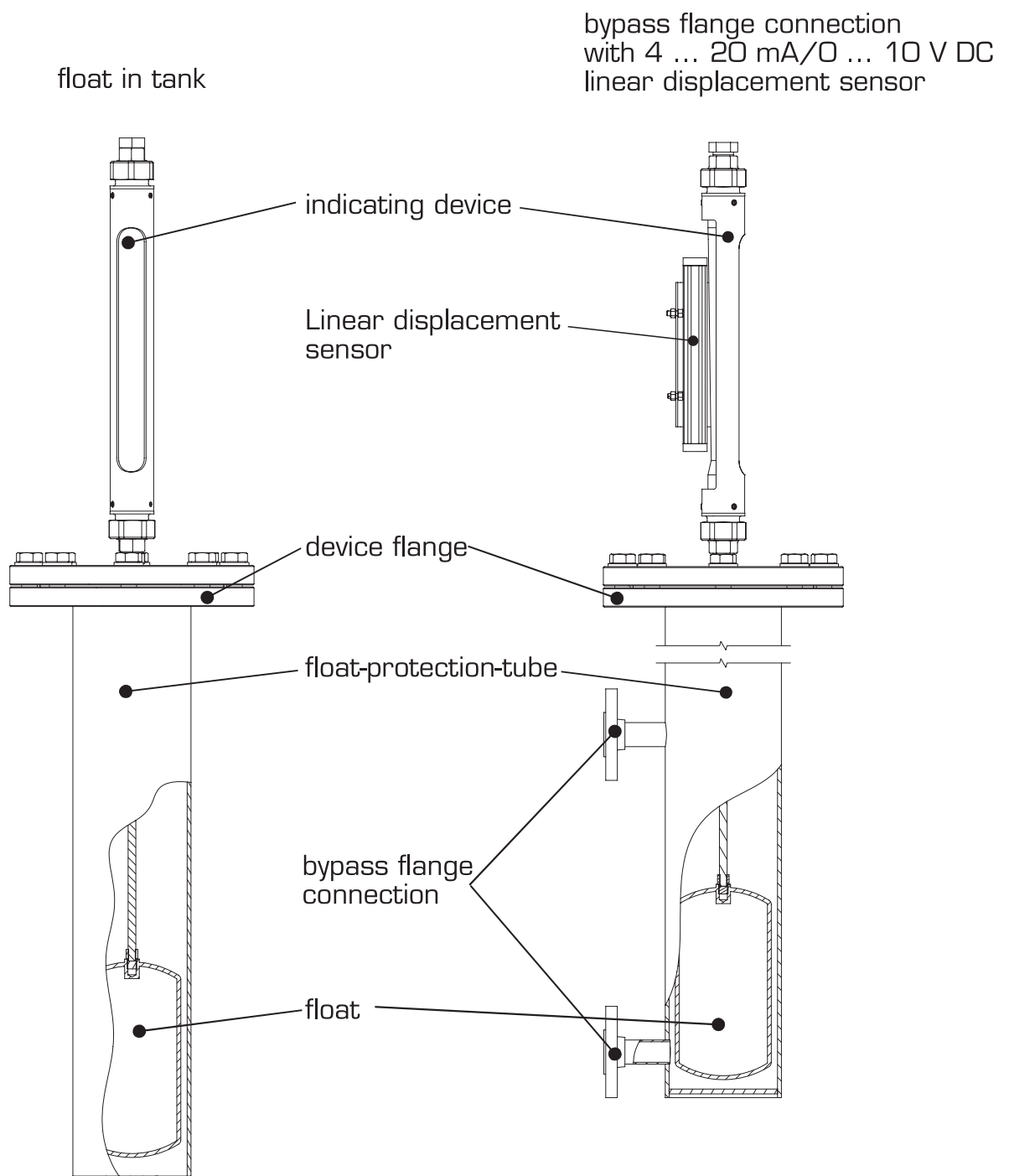
1. Insert the float-protection-tube (2) through the prepared opening in the liquid container, until the space between the device flange (3) and container (4) allows easy welding.
2. Welding the float protection tube to the container with a clean circumferential weld seam.





NA variants

These are some examples of design variants





4.2 NA-V4A

Preparation of the installation point

- Check the pipe run at the point of installation. Level indicators are only suitable for vertical installation and an upward flow direction (from bottom to top). For all other installation situations, appropriate pipe bends need to be fitted in the existing pipeline to ensure upward vertical flow through the device.
- If necessary, support the pipeline on both sides of the level indicator to prevent vibration from being transferred to the device.
- Before connecting, clean the pipelines leading to the device by blowing out or flushing.
- For Type level indicator-V4A Rp with external pipe thread, additionally fit both free ends of the pipe with the pipe unions on the flow meter before installation.
- The measuring device is inserted either by using appropriate gaskets with the union nuts at the ends of the pipe (Rp) or direct on the ends of the pipe or screw-in connection with a suitable open-end spanner at the device head (Gi). The V4A level indicator with flanges (DN) is sealed off from the pipeline by flat gaskets and the level indicator-V4A Gi using appropriate packing material or screw-in connections. After it has been installed, the measuring device should not be turned any more.
- Pay attention to the correct spacing of the sealing faces and to exact alignment.
- Under no circumstances should the level indicator be used to draw the pipe ends together (install free of stresses!). Do not over-tighten the union nuts.

Preparation of the measuring device

1. Remove the device from the transport packing.
2. Remove the transport protection stoppers from the ends of the device.
3. Pull the float securing rod out of the device (PVC red or grey).
4. Check that the float can move freely in the device.
5. Have ready: flat gaskets (flange connection) or packing material such as hemp (Rp/Gi). These are not included with the supply.



Installation NA-V4A Gi

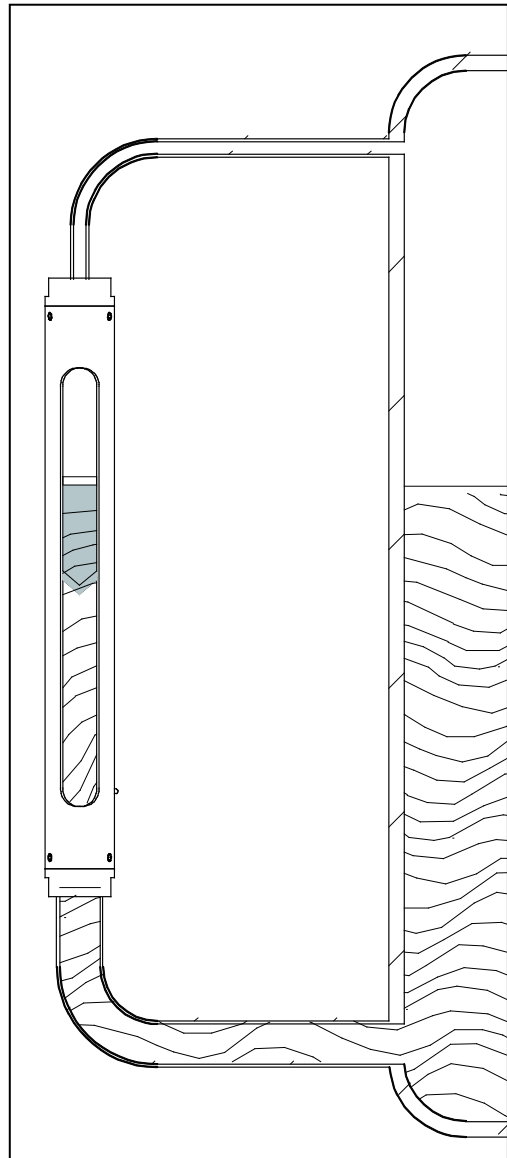
When screwing in adjacent fittings, use the flat sides at the ends of the device for counter-holding with a suitable open-end spanner. Use suitable sealant.

Installation NA-V4A Rp

1. Dismantle the inserts and the union nuts from the device.
2. Slide the union nuts over the ends of the pipeline at the installation point.
3. Screw the inserts using packing material on to the pipe ends.
4. Slide the device with the gaskets at both ends into the installation point.
5. Screw the union nuts back on the device heads and tighten down such that the device is seated in the pipeline without stresses.

Installation NA-V4A DN

1. Slide the device with the flat gaskets (not included with supply) at both ends into the installation point.
2. Check that the gaskets are in alignment and make sure they do not project into the pipeline.
3. Attach bolts and nuts loosely to the flanged connection.
4. Tighten bolts on the flanged connection in diagonally opposite sequence so that the device is fastened in the pipeline without stresses.





NA / NA-V4A

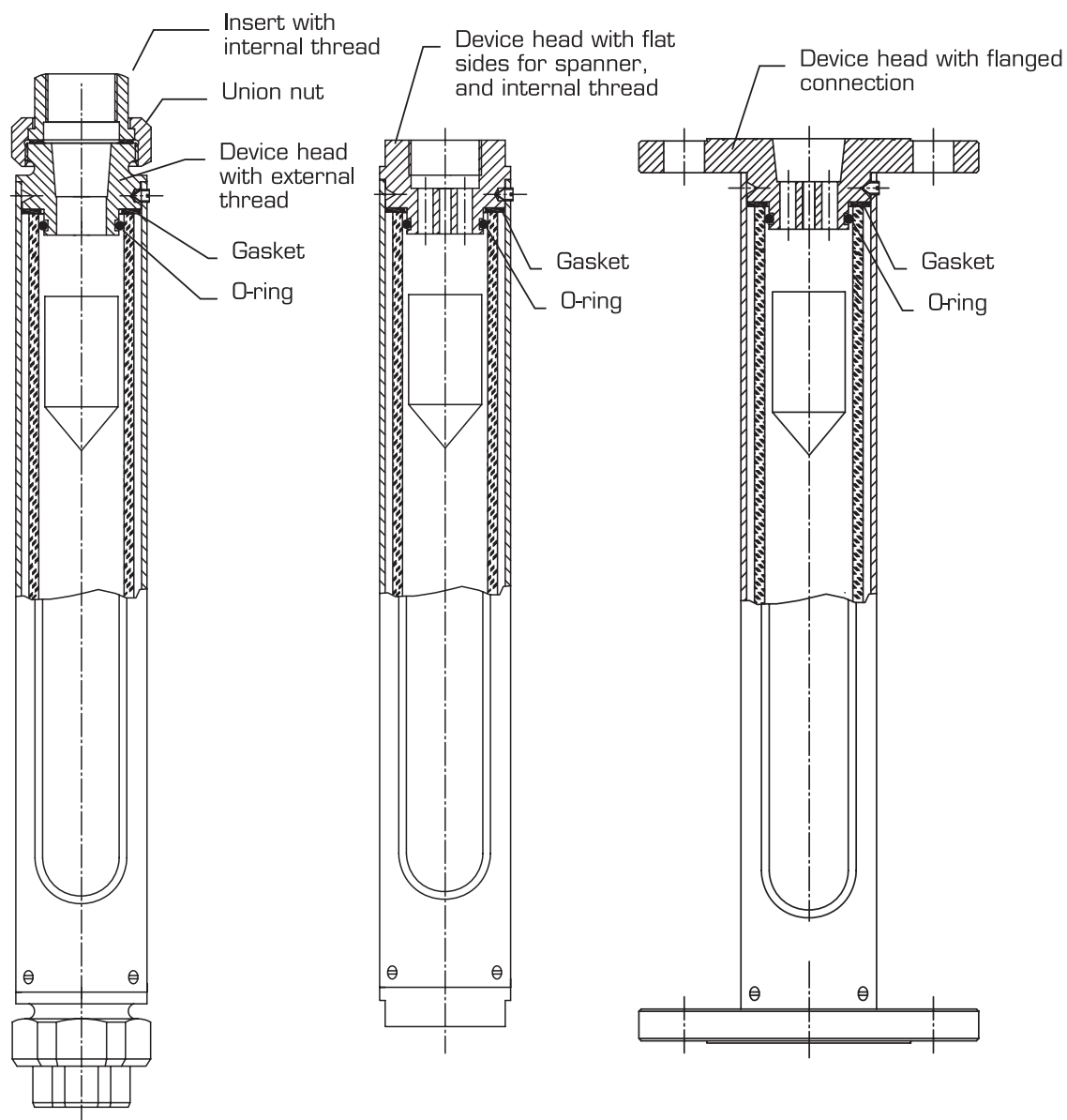
Level indicator

NA-V4A variants

NA-V4A Rp

Rp NA-V4A Gi

NA-V4A DN





5 Start-up

The device must be properly installed before it is started up.

1. Check all device connections.
2. To set the flow: pressurize the pipelines by slowly opening the shut-off valves. On liquid service: carefully vent the pipeline.
3. Check the leak-tightness of all components and if necessary, tighten down threaded joints or screw connections.

6 Reading in operation

The reading of the filling level takes place at the level of liquid in the measuring tube.

The immersion depth of the float in the medium depends on the density of the medium.



7 Limit switches MSK1 / MSK12 / MSKW

The level indicator can be equipped with limit switches to provide local indication with monitoring function.

The limit switches consist of a limit switch (reed switch) that is switched over by the magnet integrated in the float.

The limit switch is guided in a guide slot in the protective case and can be adjusted over the full measuring range. The reed switches have a bistable characteristic.

Uncontrolled current and voltage peaks can occur in the case of inductive or capacitive loads, e.g. from contactors or solenoid valves. Such peaks will also occur, depending on cable geometry, where cables exceed a certain length.

We therefore recommend using an MSR contact protection relay, which is additionally available. This will increase the contact rating and prevent occurrence of inductive and capacitive peaks, thus ensuring long service life of the contacts.

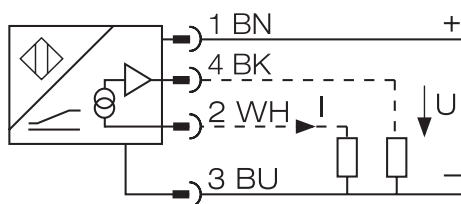
Electrical data and limit values are specified in section 10.

7.1 Connection of limit switches

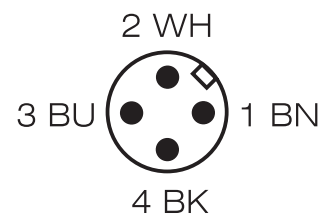


The electrical connection of the device must be performed according to the pertinent VDE regulations, as well as the regulations of the local power company.

1. Disconnect electric power from the system before connecting the sensor.
2. Provide a protective circuit of the sensor corresponding to its output.
3. Connect the protective elements suitable for use upstream.
4. The cable connection is done on the enclosed angle connector. The circuit diagram for the sensor is in the following illustration:



circuit diagram

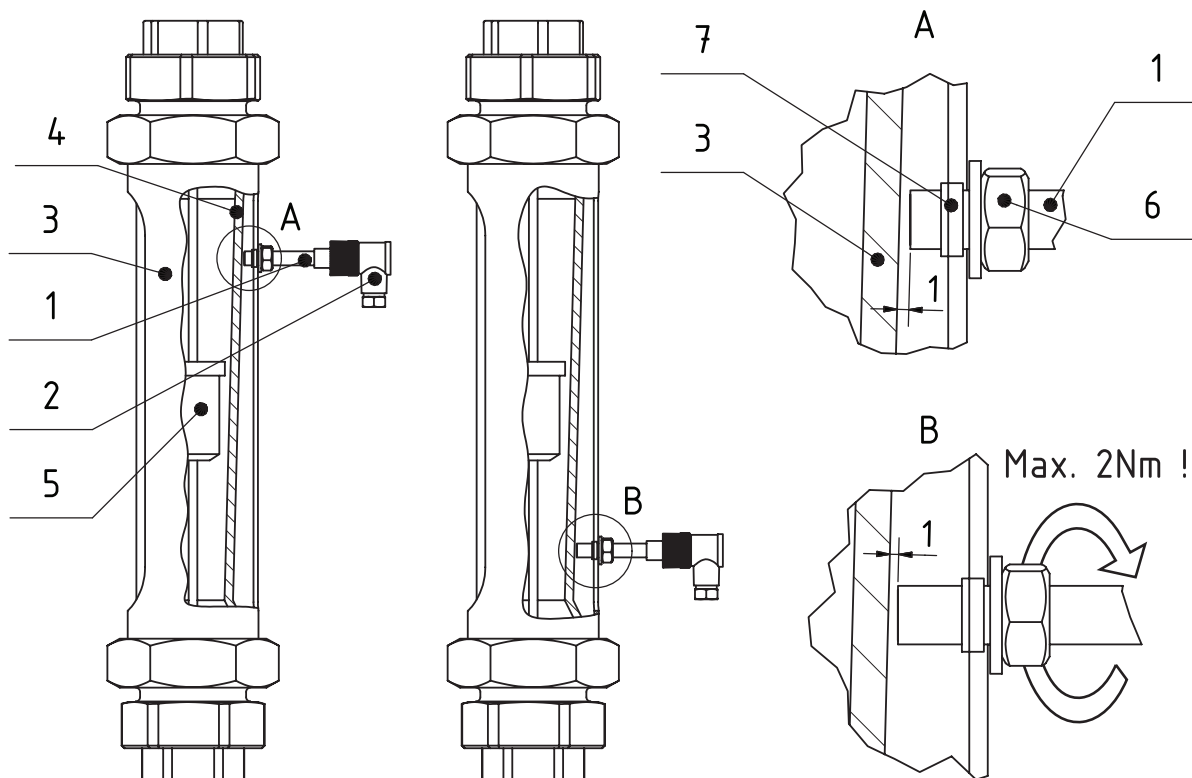


pin assignment



7.2 Setting the limit switches

1. Loosen the lock nut ⑥ SW13 (M8 x 1) on the neck of the switch ①.
2. Slide the switch ① to the flow value required to be monitored.
3. Please make sure the contact ① never touches the measuring glass ④ and the clearance between contact ① and glass ④ is always approx. 1 mm. This clearance can be obtained by turning the contact in the sliding block ⑦.
4. Test the switching characteristic by moving the float ⑤ over and beyond the switching position.
5. Retighten the lock nut ⑥. **Maximum fastening torque is 2 Nm!**

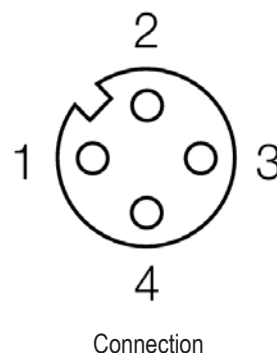
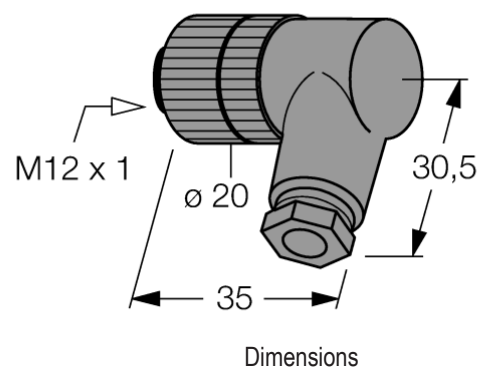


- ① MSK limit value switch
- ② M12 right angle plug
- ③ flow meter
- ④ measuring glass
- ⑤ float
- ⑥ lock nut
- ⑦ sliding block



7.3 Round connector

M12 x 1 Right angle plug	
Connector	field-wireable female connector, M12 x 1, angled
Number of poles	4-pole, A-coding
Contacts	metal, CuZn, optalloy-plated
Contact carriers	plastic, PA, black
Grip	plastic, PBT, black
Seal	plastic, FKM
Degree of protection	IP67 only tightened with screws
External diameter of the cable	4 ... 6 mm
Core cross-section/ Clamping ability	max. 0,75 mm ²
Screw-in thread	PG 7
Connection mode	screw clamp
Mechanical lifespan	min. 50 contact durability
Pollution degree	3
Rated voltage	max. 250 V
Insulation resistance	≥ 108 Ω
Ampacity	4 A
Forward resistance	≤ 8 mΩ
Ambient temperature	-25 ... +85 °C
Connector	



8 Linear displacement sensor 4 ... 20 mA / 0 ... 10 V

The linear displacement sensor, based on the Hall effect, delivers an output signal proportional to the height setting of the flow meter.

The signal can be displayed in 4 ... 20 mA or 0 ... 10 V and is used for remote flow rate observation. The sensor is connected via the enclosed M12 x 1 mm connector.

Please notice, that the sensor has a blind zone in the range of 3.7 mA to around 4 mA and performs stable operation only after approx. 4 mA.

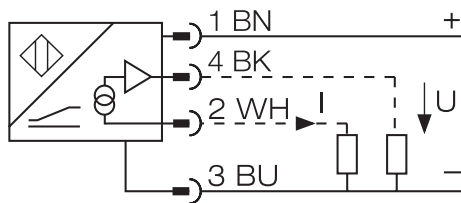


8.1 Connection of the linear displacement sensor

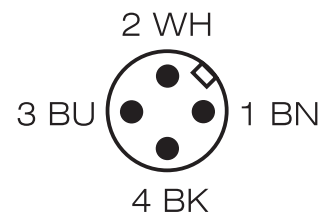


The electrical connection of the device must be performed according to the pertinent VDE regulations, as well as the regulations of the local power company.

1. Disconnect electric power from the system before connecting the sensor.
2. Provide a protective circuit of the sensor corresponding to its output.
3. Connect the protective elements suitable for use upstream.
4. The cable connection is done on the enclosed angle connector. The circuit diagram for the sensor is in the following illustration:



circuit diagram



pin assignment

8.2 Setting the sensor

Normally the linear displacement sensor is delivered set on the lowest measurement range point. This corresponds in this condition to 4 mA.

The other measurement range or mA values can be found in the enclosed protocol.

If you want to set the 4 mA value to another measurement range point, slide the sensor or the 4 mA value to the desired point.

To do this, loosen the two outer nuts with their toothed washers. Next loosen the two set screws by approx. one revolution. Now you can put the sensor in the desired position and retighten the set screws and the nuts.

Next move to each following scale mark to determine the mA value belonging to it.



9 Maintenance and cleaning of the level indicator

The device is maintenance-free. If the float tube (NA) or the measuring glass (NA-V4A) is dirty, the meter can be dismantled after removal from the installation site.

9.1 Dismantling the float unit (NA)

Loosen the screws at the device flange and pull out the display part together with float rod and float from the float tube.



To avoid damages and wrong readings, you have to pay special attention to the correct installation of the appropriate gaskets and the float.

9.2 Replacement of measuring glass (NA-V4A)

1. Remove the device from the installation point.
2. Detach the lateral retaining screws and remove the heads from the glass by simultaneously twisting and pulling them out of the glass.
3. Remove the float from the old glass.
4. Put the float into the new glass.
5. Replace the O-rings and gaskets on the device heads with new ones.
6. Wet the O-ring before assembling glass and head.
7. Carefully slide the lower device head into the bottom opening of the measuring glass, twisting and pushing simultaneously (risk of glass breakage!).
8. Insert the glass with head into the case, making sure not to knock the glass against the case.
9. Fasten the device head with the retaining screws to the case.
10. Align the glass approximately concentric with the axis of the sleeve.
11. Slide the second head with wetted O-ring by simultaneously twisting and pushing it into the upper opening of the measuring glass or steel case. Also fasten this device head with the retaining screws to the case.
12. Reinstall the device in the installation point.



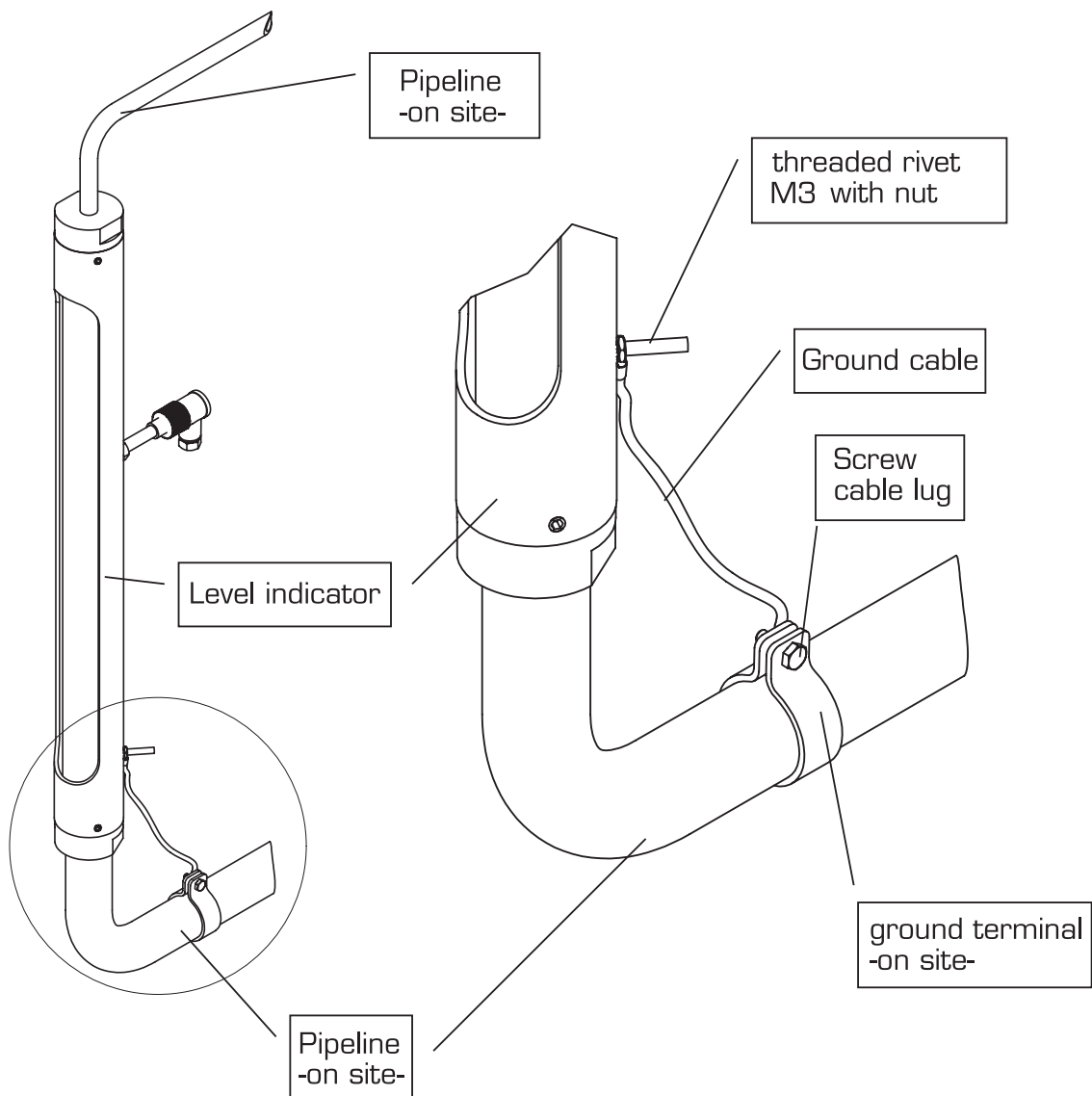
10 Explosion protection

10.1 Installation and Setup

The suitability of the level indicator corresponding to the area of application shall be verified by checking the nameplate.

The level indicator must be grounded.

If the device is not enough electrostatically grounded by the process line, an additional ground connection should be installed using the grounding terminal, marked on the back of the sleeve. The connection only ensures an electrostatic connection of the device and does not meet the requirements for an equipotential connection.





10.2 Electric connection

The simple, intrinsically safe reed contact is mounted on the level indicator.



This reed switch may be operated only by a type-approved, suitable isolating switching amplifier with intrinsically safe circuits. The following maximum levels are to be observed.

Identification Data		
Mounted Reed-switch	U _i [V]	I _i [mA]
MSK1 Ex MSK12 Ex MSKW Ex	20 V	40 mA

These reed switches take no safety-related function within a system.

The connection cables for the intrinsically safe circuits have to be selected in accordance with the valid installation standard (e. g. EN 60079-14). Current summation between different intrinsically safe circuits of the Level indicator has to be avoided.

10.3 Start-up

The following tests have to be carried out before start-up:

1. Suitability of the materials used for the measuring part and the seal materials used for adequate corrosion resistance to the fluid.
2. Connect the built-in fail-safe Reed Contact properly.
3. Ground the indicator electrostatically (refer to the illustration in section 10.1).
4. To avoid pressure surges, the operator must ensure that the unit is started up with a continuous flow (do not use solenoid valves!).



10.4 Category/Zone

Level indicator of the type

- NA-V4A

are designed for use in Category 2 by 2014/34/EU and according to EN 60079/14 suitable for use in zone 1 and zone 2 (see also section 13 Annex).

10.5 Types of protection

The circuits of the limit switches (reed switches) are „Intrinsic Safety“ category „ia“ in the type of protection.

They may be operated only with approved and appropriate switching amplifiers, the terminal values in accordance with Namur - see section 9.2.

Level indicator of the type

- NA-V4A Ex

Not covered by Directive 2014/34/EU - see section 12.



10.6 Temperature classes

Level indicator of the type

NA- V4A Ex

are only allowed in certain temperature classes (see Table 1).

The temperature class includes the ambient temperature T_{amb} , the fluid temperature T_m and the material of the float.

Table 1

Maximum permissible ambient/fluid temperature in °C for temperature class T6-T1

Float material		
PVDF/PTFE	PVC	PP
Temperature class		
T6	T6-T1	T6
$T_{amb}: < 40\text{ °C}$	$T_{amb}: > 0\text{ °C} < 40\text{ °C}$	$T_{amb}: > 0\text{ °C} < 40\text{ °C}$
$T_m: < 70\text{ °C}$	$T_m: < 40\text{ °C}$	$T_m: < 70\text{ °C}$
T5		T5-T1
$T_{amb}: < 40\text{ °C}$		$T_{amb}: > 0\text{ °C} < 40\text{ °C}$
$T_m: < 85\text{ °C}$		$T_m: < 85\text{ °C}$
T4-T1		
$T_{amb}: < 40\text{ °C}$		
$T_m: < 100\text{ °C}$		

Ambient temperature: T_{amb}

Fluid temperature: T_m



11 Service

All devices with defects or deficiencies should be sent directly to our repair department. In the service area of the Kirchner und Tochter homepage (www.kt-flow.de) you will find the declaration of decontamination as download and more information about returns.

To avoid risks to our employees and the environment, we can only process devices, for which we get a declaration of decontamination certifying that they are safe due to legal regulations. For questions, please contact our sales department, Tel. +49 2065-96090.

11.1 Disposal

Please help to protect our environment and dispose workpieces in conformity with current regulations resp. continue using them.



12 Technical data

Nominal pressure rating	PN 10 at 20 °C
Max. operating pressure	8 bar
Temperature resistance	80 °C, optionally 100 °C
Ambient temperature	90 °C
Connection	
NA	welded to liquid container
NA-V4A	Rp, Gi, Ga, DN
Corrosion protection	epoxy paint kiln-dried, traffic blue (RAL 5017), satin-finished
Corrosion class	C2

12.1 Materials

Design	NA
Gaskets	standard: NBR, EPDM optionally: FKM, FFKM
Display	
Protective tube	P235, 1.4301 (with MSKW)
Heads	S355
Pipe union	malleable cast iron, zinc plated
Measuring glass	Borosilicate glass
Substructure	
Float	1.4571
Connecting rod	1.4571
Flanges and Floatpipe	S355

other materials on request

Design	NA-V4A
Protective tube	1.4301
Heads	1.4571
Float	PP, optionally: PVDF, PTFE
for version with limit value switches	PP with magnetic core
Measuring glass	Borosilicate glass
Gaskets	standard: NBR, EPDM optionally: FKM, FFKM

other materials on request



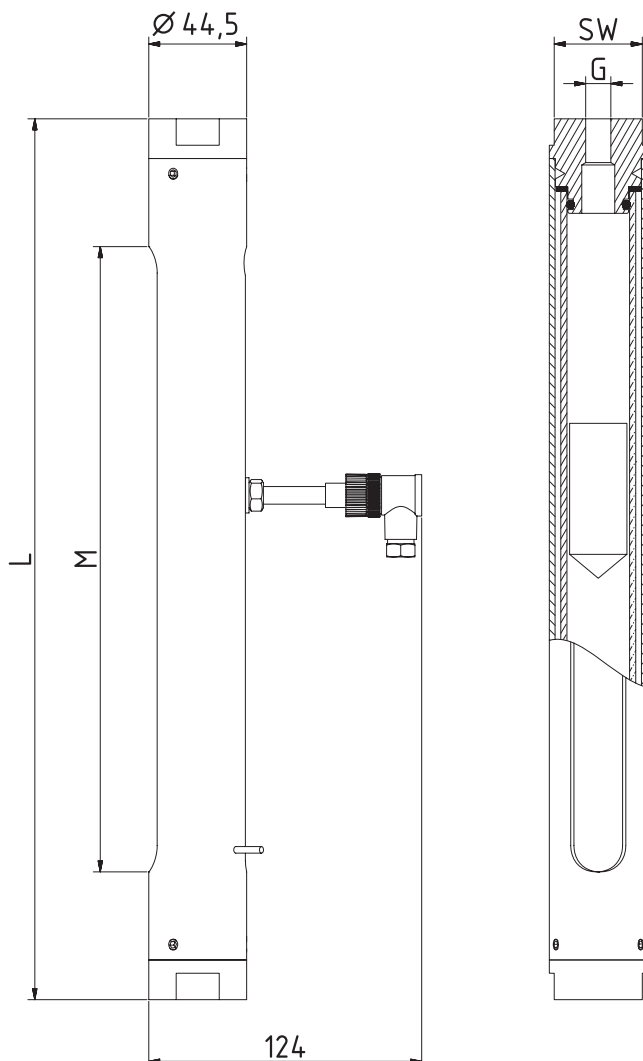
12.2 Dimensions NA

The NA type series Level indicators are manufactured according to customer specifications.

12.3 Dimensions NA-V4A

NA-V4A with female thread			
L [mm]	M [mm]	G	SW [mm]
300	184	G $\frac{1}{4}$,	40
400	284	G $\frac{1}{2}$,	
500	384	G $\frac{3}{4}$,	
600	484	G1	
700	584		
800	684		
900	784		
1000	884		

other lengths or connections on request

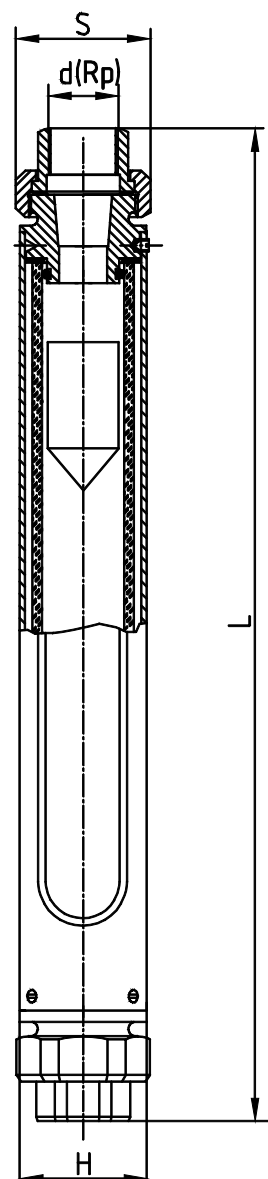




NA / NA-V4A

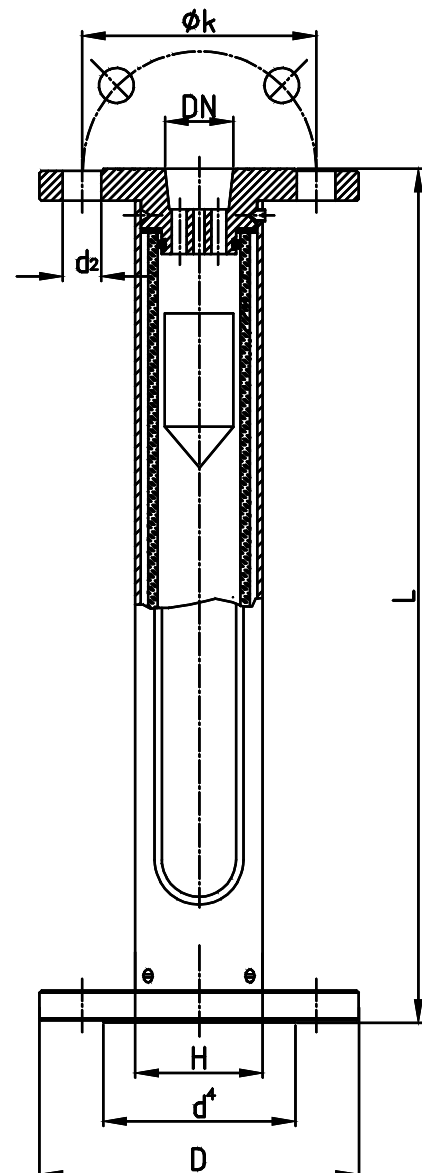
Level indicator

NA-V4A with union nut			
Thread	S [mm]	H [mm]	L [mm]
Rp 1/2	41	44,5	300
			400
			500
Rp 3/4	50		600
			700
			800
Rp1	55		900
			1000



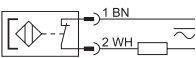
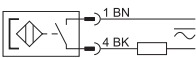
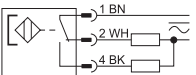


NA V4A with flange connection								
Size	D [mm]	d4 [mm]	K [mm]	Bolts Qty	Thread	d2 [mm]	H [mm]	L [mm]
DN 10	90	40	60	4	M 12	M 12	45,5	300
								400
DN 15	95	45	65	4	M 12	14		500
								600
DN 20	105	58	75	4	M 12	14		700
								800
DN 25	115	68	85	4	M 12	14		900
								1000





12.4 Technical data of limit value switches

Design	MSK1	MSK12
Switching voltage	50 V AC/75 V DC	50 V AC/75 V DC
Switching current	max. 0,5 A	max. 0,5 A
Switching capacity	max. 10 W/VA	max. 10 W/VA
Dielectric strength	230 V AC/400 V DC	230 V AC/400 V DC
Temperature range ¹⁾	-20 ... +90 °C	-20 ... +90 °C
Switching function	normally closed	normally open
Connection		
Design	MSKW	
Switching voltage	50 V AC/75 V DC	
Switching current	0,5 A	
Switching capacity	5 W/VA	
Dielectric strength	110 V AC/200 V DC	
Temperature range ¹⁾	-20 ... +90 °C	
Switching function	change over	
Connection		

¹⁾ The thermal endurance of the flow meter is crucial.

Connection via freely configurable right angle plug M12 x 1

12.5 Low-voltage directive

Above 50 V AC/75 V DC, contacts are subject to the EU Low Voltage Directive. The user is required to verify their use accordingly.



12.6 Technical data linear displacement sensor

Measurement range	160 mm
Repeatability	$\leq 0,1 \%$ from measurement range \leq dependent upon position sensor
Linearity deviation	$\leq 1 \%$ v.E.
Temperature drift	$\leq \pm 0,006 \%/K$
Ambient temperature ¹⁾	-25 ... +70 °C
Operating voltage	15 ... 30 V DC
Residual ripple	< 10 % U _{ss}
Idle current	≤ 15 mA
Rated insulation voltage	< 0.5 kV
Short circuit protection	yes
Fail-safe circuit/reverse polarity protection	yes/complete
Output function	Four-wire, analogue output
Voltage output → Load resistor	0 ... 10 V $\geq 4,7$ k Ω
Current output → Load resistor	4 ... 20 mA $\leq 0,4$ k Ω
Recovery time at output	< 15 ms
Sampling rate	200 Hz
Type	Quader, Q25L
Dimensions	201 x 35 x 25 mm
Housing material	Aluminium
Material of active surface	Plastic, PC-GF20
Connection	Plug Connector, M12 x 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30g (11 ms)
Protection class	IP67
Operating voltage display	LED, green
Measurement range display	LED, yellow, position sensor in detection range
Connection diagram	

¹⁾ The thermal endurance of the level indicator is crucial.



NA / NA-V4A

Level indicator

13 Appendix



Stellungnahme zur Anwendbarkeit der RL 14/34/EU (ATEX)

Für Geräte und Komponenten
zur Verwendung in explosionsgefährdeten Bereichen

Statement for application
of directive 14/34/EU
for Equipment and Components
intended for Use in Potentially Explosive Atmospheres

Gegenstand: Gerät/Komponente Typ
Subject: Equipment/Component type

Niveaumanzeiger NA-V4A

Hergestellt und zur Prüfung vorgelegt
Manufactured and submitted for examination

Kirchner & Tochter GmbH

Anschrift
Address

Dieselstraße 17; D-47228 Duisburg

Prüfgrundlage
Basis for examination

Anhang II der Richtlinie 14/34/EU
Annex II of Directive 14/34/EU

Verwendete Normen
Standard basis

EN 1127-1: 2011; EN 13463-1: 2009

Prüfgrundlage für Sicherheits- und
Gesundheitsanforderungen, die nicht von
den verwendeten Normen abgedeckt werden
Basis for those health and safety requirements
not covered by the standard basis

NA

Schutzartkennzeichen
Code for type of protection

keine

Prüfergebnis:

Das Gerät fällt nicht unter den Anwendungsbereich der
Richtlinie 14/34/EU. Es hat keine potentielle Zündquelle.

Auftrags-Nr:

124389305



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1) Gegenstand und Typ:

NA-V4A, Typ Gi, Rp und DN

2) Beschreibung:

Das Gerät der Baureihe NA-V4A ist ein Füllstandsanzeiger für Flüssigkeiten. Es ist für den senkrechten Einbau vorgesehen. Der Einbau sowie die Grenzwerte des Gerätes sind der Bedienungsanleitung zu entnehmen. Der Einbau in waagrecht führenden Leitungen ist unter Verwendung entsprechend ausgeführter Leitungsbögen möglich. Die Strömungsrichtung muss immer von unten nach oben gerichtet sein.

Der Füllstand wird direkt an einem Borosilikatglas Messrohr und einem darin befindlichen Schwimmer abgelesen. Die Bewegung des Schwimmers ist unter 1m/sec.

Das Messrohr ist in eine Edelstahlhülse eingebaut, die zum Ablesen an einer Seite geöffnet ist.

Die erforderlichen Dichtungen werden je nach Medium festgelegt.

Um eine Vorortanzeige mit Überwachungsfunktion zu realisieren, lässt sich der Füllstandsanzeiger mit Grenzwertkontakten, Typ MSK1, MSK12 und MSKW, ausrüsten.

Der Grenzwertkontakt besteht aus einem Reedkontakt, der durch den in den Schwimmer integrierten Magneten umgeschaltet wird.

Der Reedkontakt wird in einem Führungsschlitz in der Schutzhülse geführt und kann über den vollen Messbereich stufenlos verstellt werden. Die Reedkontakte haben bistabiles Verhalten.

Der Reedkontakt muss über einen Bauart zugelassenen eigensicheren Stromkreis betrieben werden.

Das Gerät kann in der Zone 1, Explosionsgruppe IIC eingesetzt werden.

3) Technische Daten:

Niveauanzeiger V4A	
max. Betriebsdruck	8 bar bei 20°C
Temperaturbeständigkeit	80 °C, optional: 100 °C
Umgebungstemperatur	90 °C
Anschluss	Gi: Zylindrisches Innen-Befestigungsgewinde nach ISO 288 Rp: Zweiteilige Rohrverschraubung: Einlegeteil mit zylindrischen Innengewinde nach ISO 7-1 DN: Flansche PN 10 nach DIN EN 1092-1, andere (ANSI, JIS, ...) auf Anfrage

4) Dokumentation des Herstellers:

Register-Nr./ Register no.	Bezeichnung / Designation	Seiten/ Pages	Revision/ Rev.	Datum/Date
1.	Einbau- und Betriebsanleitung	24	1.1	-
2.	Niveauanzeiger_017_2	1	-	21.03.2014
3.	Niveauanzeiger_018_1	1	-	19.11.2013



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4.	Niveauanzeiger_019_1	1	-	19.11.2013
5.	Niveauanzeiger_020_1	1	-	13.11.2013
6.	Niveauanzeiger_021_1	1	-	31.03.2014
7.	Niveauanzeiger_022_1	1	-	31.03.2014
8.	Niveauanzeiger_023_0	1	-	21.03.2014
9.	Datenblatt MSK1	2	-	-
10.	Datenblatt MSK12	2	-	-
11.	Datenblatt MSKW	2	-	-
12.	Datenblatt 2752	3	-	-
13.	Datenblatt 3425	3	-	-
14.	Datenblatt 3325	3	-	-

5) Prüfergebnis:

Die im Kapitel 1 aufgeführten Geräte fallen nicht in den Zuständigkeitsbereich der Richtlinie.

6) Kennzeichnung:

Keine

7) Bedingungen für die sichere Verwendung bzw Verwendungshinweise

Der Niveauanzeiger ist in den Potentialausgleich einzubinden.

Der Reedkontakt muss über einen Bauart zugelassenen eigensicheren Stromkreis betrieben werden.

TÜV Rheinland Industrie Service GmbH
Prüflaboratorium für Ex-Schutz
Haumannplatz 4
D – 45130 Essen

Essen, den 09.04.2014

Dipl.-Ing.
Manuel Steffen

Dr.-Ing.
Angela Lilienthal





Kirchner und Tochter

Konformitätserklärung Declaration of Conformity

A. Kirchner & Tochter GmbH, Dieselstr. 17, 47228 Duisburg, Deutschland

Wir erklären hiermit unter alleiniger Verantwortung, dass folgende Produkte
We declare herewith under sole responsibility that the products

NA / NA-V4A / NA-V4A Ex **Niveauanzeiger / Level indicator**

konform sind mit den Schutzzielen der Richtlinien des Europäischen Parlaments (soweit zutreffend).
are in conformity with the protection requirements of Council Directives (as far as applicable).

Der geforderte Sicherheits- und Gesundheitsschutz wird erfüllt in Übereinstimmung mit den harmonisierten Standards oder den angeführten technischen Normen (soweit zutreffend):
The stipulated safety and public health safety requirements are fulfilled in accordance with the harmonized standards or mentioned technical specifications (as far as applicable):

Die Geräte der Baureihe Niveauanzeiger sind keine Druckgeräte im Sinne der RL 97/23/EG.
Ausgelegt nach AD-2000 Merkblättern B0 und N4 (PSmax = 8 bar) und geprüft nach DIN EN 12266-1:2012-06 (Druck- und Dichtheitsprüfung) durchlaufen die Geräte der Baureihe Niveauanzeiger dieselben Prüfungen wie Geräte der Firma Kirchner und Tochter die nach RL 97/23/EG als Druckgeräte eingestuft werden.
The devices of the level indicator series are no equipment in the sense of Directive 97/23/EC.
Designed according to AD-2000 instruction sheets B0 and N4 (PSmax = 8 bar) and tested according to DIN EN 12266-1:2012-06 (pressure and leak test) the devices of the level indicator series pass through the same checks as devices from Kirchner und Tochter classified as pressure equipment according to 97/23/EC.

Laut Stellungnahme zur Anwendbarkeit der RL 2014/34/EU des TÜV Rheinland, fallen die Geräte nicht unter den Anwendungsbereich der Richtlinie 2014/34/EU (ATEX). Sie haben keine eigenen Zündquellen.
Die oben genannten Geräte dürfen in Zone 1, Explosionsgruppe IIC eingesetzt werden.
According to the opinion on applicability of the Directive 2014/34/EU by the TÜV Rheinland the devices do not fall under the scope of Directive 2014/34/EU (ATEX). They have no own sources of ignition.
The devices mentioned above may be used in Zone 1, explosion group IIC.

Duisburg, 04.04.2014

ppa. Torsten Krawczyk
Leiter Vertrieb/
Sales Manager

i.V. Stanislaw Wosmiller
Konstruktion/
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Kirchner und Tochter

Durchflussmesstechnik seit 1951



The devices from **Kirchner und Tochter** have been tested in compliance with applicable EC/EU CE-regulations of the European Community.

The respective declaration of conformity is available on request. Subject to change without notice. The current valid version of our documents can be found at www.kt-flow.de.

The **Kirchner und Tochter** QM-System is certified in accordance with DIN EN ISO 9001:2015. The quality is systematically adapted to the continuously increasing demands.