



Level



Pressure



Flow



Temperature



Liquid
Analysis



Registration



Systems
Components



Services



Solutions

Operating Instructions

Level Switch MPC2000 MPC2

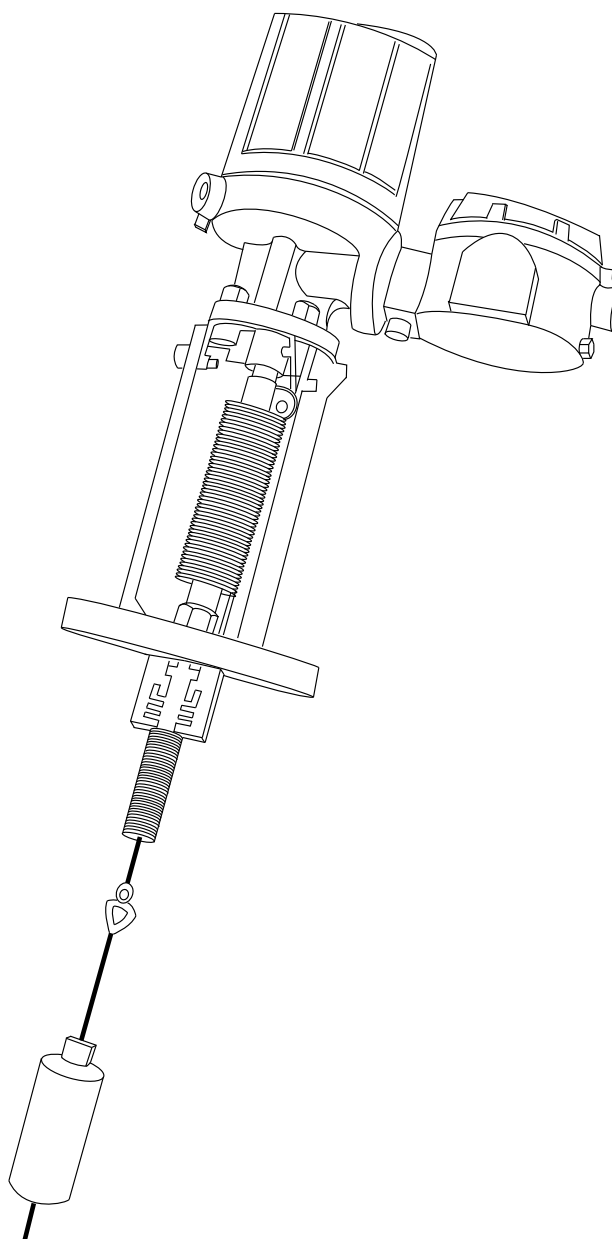


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1 Safety Instructions

1.1 Designated Use

MPC series level switches are displacement type instruments for liquid tanks. MPC displays an alarm for water or oil tank levels and to control pumps and valves by utilizing independent operation of the contacts.

1.2 Installation, Commissioning, and Operation

- Mounting, electrical installation, start-up, and maintenance of the instrument may only be performed by trained personnel authorized by the operator of the facility.
- Personnel must read and understand these installation instructions before performing the procedures.
- The instrument may only be operated by personnel who are authorized and trained by the operator of the facility. All instructions in this manual must be observed.
- The installer must make sure that the measuring system is correctly wired according to the wiring diagrams. The measuring system must be grounded.
- Observe all law and regulations applicable and valid for your country and pertaining to the opening and repairing of electrical devices.

1.3 Product Requirements

External Connection

When an external connection is required, the product should be protectively grounded before it is connected to a measurement object or an external control circuit.



Caution!

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

1.4 Notes on Safety Conventions and Symbols

To highlight safety-relevant or alternative operating procedures in this manual, the following conventions have been used, each indicated by a corresponding symbol on the left.

Safety Conventions	
	Warning! Indicates an action or procedure that, if not performed correctly, will lead to personal injury, a safety hazard, or destruction of the instrument
	Caution! Indicates an action or procedure that, if not performed correctly, may lead to personal injury or malfunction of the instrument
	Note! Indicates an action or procedure that, if not performed correctly, may indirectly affect operation or lead to an unexpected instrument response.
Explosion Protection	
	Device certified for Use in Explosion Hazardous Area If the device has this symbol embossed on its name plate, it can be installed in an explosion hazardous area.
	Explosion Hazardous Areas Symbol used in drawings to indicate explosion hazardous areas. Devices located in and wiring entering areas designated as “explosion hazardous areas” must conform to the stated type of protection.
	Safe Area (non-explosion hazardous area) Symbol used in drawings to indicate, if necessary, non-explosion hazardous areas. Devices located in safe areas still require a certificate if wiring enters into explosion hazardous areas
Electrical Symbols	
	Direct Voltage A terminal to or from which a direct current or voltage may be applied or supplied
	Alternating Voltage A terminal to or from which an alternating (sine-wave) current or voltage may be applied or supplied
	Grounded Terminal A grounded terminal, that is already grounded by means of an earth grounding system for the purpose of the operator
	Protective Grounding (earth) Terminal A terminal that must be connected to an earth ground prior to making any other connection to the equipment
	Equipotential Connection (earth bonding) A connection that must be made to the facility grounding system, such as a star-shaped connection grounding system or equipotential line, according practices of the country or company.

2 Identification

2.1 Device Designation

2.1.1 Nameplate

The following technical data are given on the instrument nameplate:

Endress+Hauser 	
液面警報器 / Level controller	
④	
Order code	①
Serial no.	②
防爆型式 / Ex proof model	③
防爆構造 / Protection class	d2G4
定格 : 接点容量 (1接点容量) / Contact output (1 contact) AC 250 V 1050 VA max., DC 250 V 120 VA max.	
⑤	
周囲温度 / Ambient temp.: -10 °C ~ +40 °C 警告 : 通電状態では蓋を開けないでください。 Warning: Do not open the cover when energized.	
エンドレスハウザー山梨株式会社 IP65 Endress+Hauser Yamanashi Co.,Ltd. Yamanashi 406-0846 Made in Japan NP-1083-8	

①	Order Code
②	Serial No.
③	Explosion model
Order code Printed	
MPC2-abcBxxxxxxxx	MPC-2abcEB
MPC2-abcExxxxxxxx	MPC-2abcE
MPC2-abcBxxxxxxxx	MPC-2ab1EB
MPC2-abcExxxxxxxx	MPC-2ab1E
MPC2-abcBxxxxxxxx	MPC-2ab1EB
MPC2-abcExxxxxxxx	MPC-2ab1E
MPC2-abcBxxxxxxxx	MPC-2a1cEB
MPC2-abcExxxxxxxx	MPC-2a1cE
eg: MPC2-304Bxxxxxxxx → MPC-2304EB	
*Refer to approved type	
④	Tag No.

Explosion model :

Protection class :

Rating :

Contact output (1 contact)
AC 250V 1050VA
DC 250V 120VA

Note: Be sure to cut off the power before opening the cover.

Endress+Hauser Yamanashi Co.,Ltd.
Made in Japan Yamanashi 406-0846 NP-2592

Approved Type				
MPC2-	a	b	c	d
↑	↑	↑	↑	↑
External Design	Radiation Fins	Switching Point	Cable entry	
0 Without guide pipe	0 Without fin	1 1 x Level	E PF(G)3/4	
1 Internal pipe type	1 With fin (single fin, double fin)	1 x FRT overflow detection	EB With cable connector	
2 Outer pipe type (side-side)		1 x CRT overflow detection	(TF16-11/TF22-13/TF22-15/TF28-18)	
3 Outer pipe type (side-bottom)		2 2 x Level		
		3 3 x Level		
		4 4 x Level		

Figure 1: THS Approval Type

Endress+Hauser 	
液面警報器 / Level controller	
⑤	
Order code	①
Serial no.	②
型式 / Type	③
接点定格 (1接点容量) / Contact rating (1 contact)	
④	
エンドレスハウザー山梨株式会社 IP65 Endress+Hauser Yamanashi Co.,Ltd. Yamanashi 406-0846 Made in Japan NP-1756-5	

①	Order Code
②	Serial No.
③	Type
Order Code Printed	
MPC2-abc■xxxxxxx	MPC-2abcW
MPC2-abc■xxxxxxx	MPC-2abcW
MPC2-ab5■xxxxxxx	MPC-2ab1W
MPC2-ab5■xxxxxxx	MPC-2ab1W
MPC2-ab6■xxxxxxx	MPC-2ab1W
MPC2-ab6■xxxxxxx	MPC-2ab1W
MPC2-a2c■xxxxxxx	MPC-2a1cW
MPC2-a2c■xxxxxxx	MPC-2a1cW
■ = W or X	
(Sample)	
MPC2-304Wxxxxxxxx → MPC-2304W	
MPC2-304X xxxxxxxx → MPC-2304W	
④	Tag No.
⑤	Contact Rating

Figure 2: Waterproof Type

2.2 Ordering Information

010	Type:			
	0	Not selected		
	1	Internal pipe		
	2	External pipe (side-side installation 25A/1")		
	3	External pipe (side-bottom installation 25A/1")		
020	Heat Radiation:			
	0	w/o fin, max. 100°C		
	1	Double fin max. 250°C		
	2	Single fin max. 150°C		
030	Switch count:			
	1	1 x Level		
	2	2 x Level		
	3	3 x Level		
	4	4 x Level		
	5	1 x FRT Overflow detection		
	6	1 x CRT Overflow detection		
040	Approval:			
	B	Flame proof d2G4, TIIS + cable gland		
	E	Flame proof d2G4, TIIS		
	W	Weather proof IP65		
	X	Weather proof IP65 + cable connector		
	9	Special version, TSP-no. to be spec		
050	Function:			
	0	Basic version		
	9	Special version, TSP-no. to be spec		
060	Process Connection, Top Mounted Flange:			
	3	10K 65A RF, SUS304, JIS flange B2220		
	4	10K 65A RF, SUS316, JIS flange B2220		
	1	10K 80A RF, SUS304, JIS flange B2220		
	2	10K 80A RF, SUS316, JIS flange B2220		
	S	10K 100A RF, SUS304, JIS flange B2220		
	T	10K 100A RF, SUS316, JIS flange B2220		
	7	20K 65A RF, SUS304, JIS flange B2220		
	8	20K 65A RF, SUS316, JIS flange B2220		
	5	20K 80A RF, SUS304, JIS flange B2220		
	6	20K 80A RF, SUS316, JIS flange B2220		
	C	2-1/2"150lbs RF, SUS304, ANSI flange B16.5		
	D	2-1/2"150lbs RF, SUS316, ANSI flange B16.5		
	G	2-1/2"300lbs RF, SUS304, ANSI flange B16.5		
	H	2-1/2"300lbs RF, SUS316, ANSI flange B16.5		
	A	3" 150lbs RF, SUS304, ANSI flange B16.5		
	B	3" 150lbs RF, SUS316, ANSI flange B16.5		
	E	3" 300lbs RF, SUS304, ANSI flange B16.5		
	F	3" 300lbs RF, SUS316, ANSI flange B16.5		
	U	4" 150lbs RF, SUS304, ANSI flange B16.5		
	V	4" 150lbs RF, SUS316, ANSI flange B16.5		
	L	65A 150lbs RF, SUS304, JPI flange 7S-15		
	M	65A 150lbs RF, SUS316, JPI flange 7S-15		
	Q	65A 300lbs RF, SUS304, JPI flange 7S-15		
	R	65A 300lbs RF, SUS316, JPI flange 7S-15		
	J	80A 150lbs RF, SUS304, JPI flange 7S-15		
	K	80A 150lbs RF, SUS316, JPI flange 7S-15		
	N	80A 300lbs RF, SUS304, JPI flange 7S-15		
	P	80A 300lbs RF, SUS316, JPI flange 7S-15		
	W	100A 150lbs RF, SUS304, JPI flange 7S-15		
	X	100A 150lbs RF, SUS316, JPI flange 7S-15		
	9	Special version, TSP-no. to be spec.		
MPC2-				Product designation (part 1)

[illegible]

Note!

Order Information 070: Switch Position

When there are 3 or 4 alarm points and "1: lower + upper" is selected, if not specified by a customer, the following MPC specification is used.

- 3 points: 2 upper limits, 1 lower limit
- 4 points: 2 upper limits, 2 lower limits

Order Information 090: Set Point

- Without internal pipe/external pipe, overflow alarm
Specify a setting length in a range starting from the bottom of flange connected to top of MPC.
- With internal pipe
The set point should accommodate connection component length (internal pipe plate + attached gasket + mounting gasket (6+2+2mm)) of 10mm. Specify a setting length in a range starting from the bottom of the flange connected to top of MPC + 10mm.
- With external pipe
The set point should accommodate an extra 2mm (dimension of gasket). Specify a setting length in a range starting from the bottom of the flange connected to top of MPC + 2mm.
- Minimum setting length
Specify a setting length of 300mm or more for point 1 (H) and 150mm or more for alarm intervals.

2.3 Scope of Delivery



Caution!

It is extremely important to follow the instructions concerning the unpacking, transportation and storage of measuring instruments provided in the chapter "Incoming Acceptance, Transportation, Storage".

The scope of delivery consists of:

- Assembled Instrument

Accompanying Documentation:

- Operating Manual (this manual)

3 Installation

3.1 Incoming Acceptance, Transport, Storage

3.1.1 Incoming Acceptance

Check the packing and contents for any signs of damage.

Check the shipment, and make sure that nothing is missing and that the items match your order.

3.1.2 Transport



Caution!

- Follow the safety instructions and conditions of transportation for instruments in excess of 18kg (40 lbs.).

3.1.3 Storage

Store MPC2 in three parts as follows.

The allowed storage temperature is -10°C to $+60^{\circ}\text{C}$ (-14°F to $+140^{\circ}\text{F}$)

MPC2 Main Body

- Store MPC2 using a box with cushioned packing material when delivered.

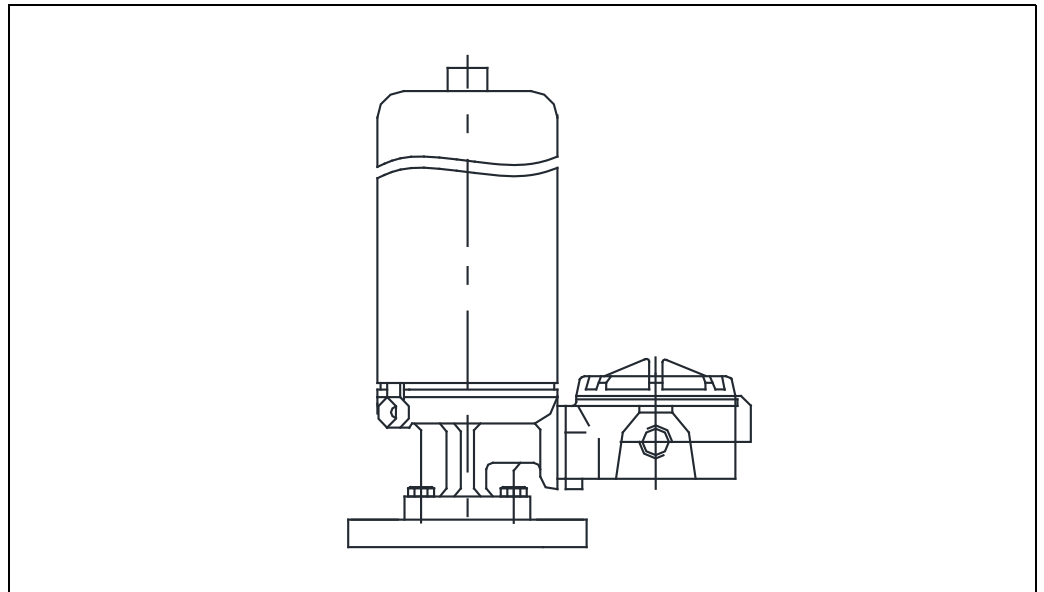


Figure 3: MPC2 Main Body

Displacer

- Without bending or crimping wire, store MPC2 using a box with cushioned packing material when delivered.
- Wind the upper and lower wires around the displacer in 100mm diameter coils if wire is long.

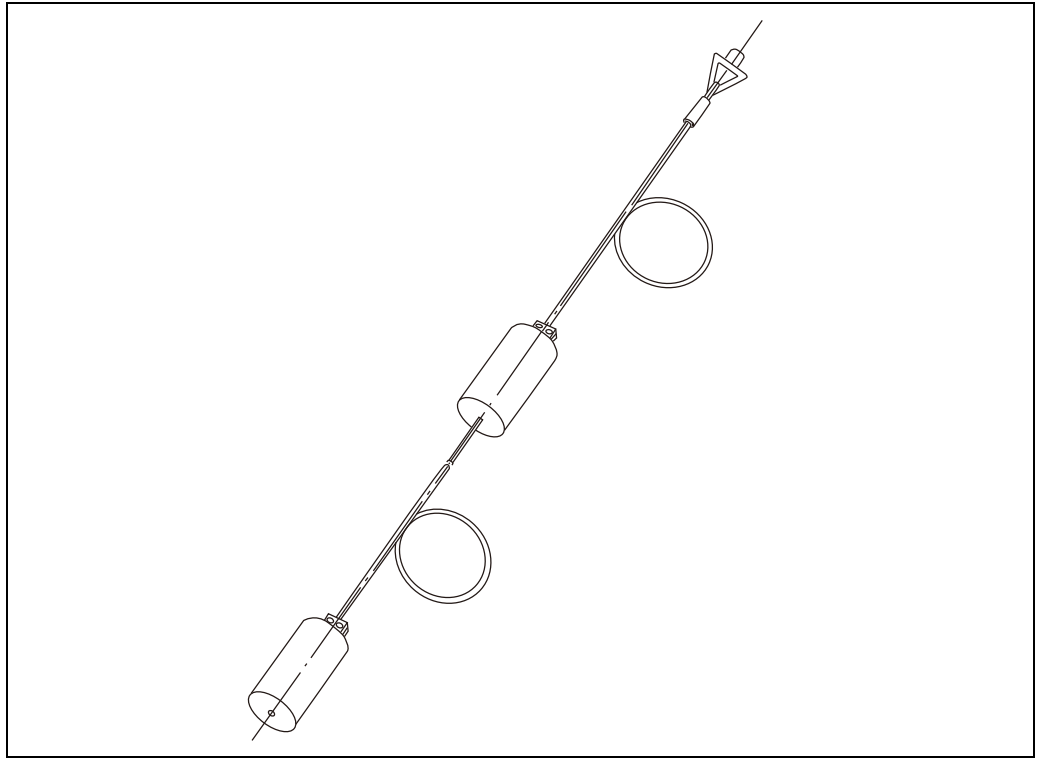


Figure 4: Displacer

Spring with Iron Core

- For 1 to 2 point switches, store spring with iron core in a cylindrical box.
- For 3 to 4 point switches, store spring with iron core in a cylindrical box, then cover the box and seal with tape to protect the spring.

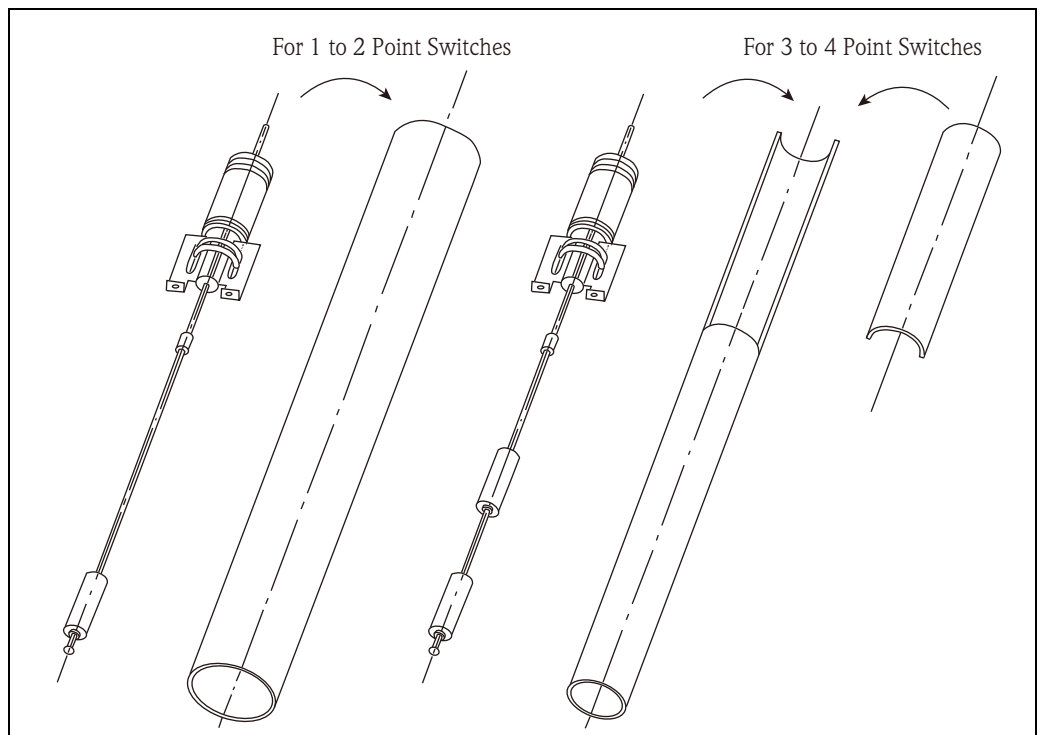


Figure 5: Spring with Iron Core

4 Basic Device Layout

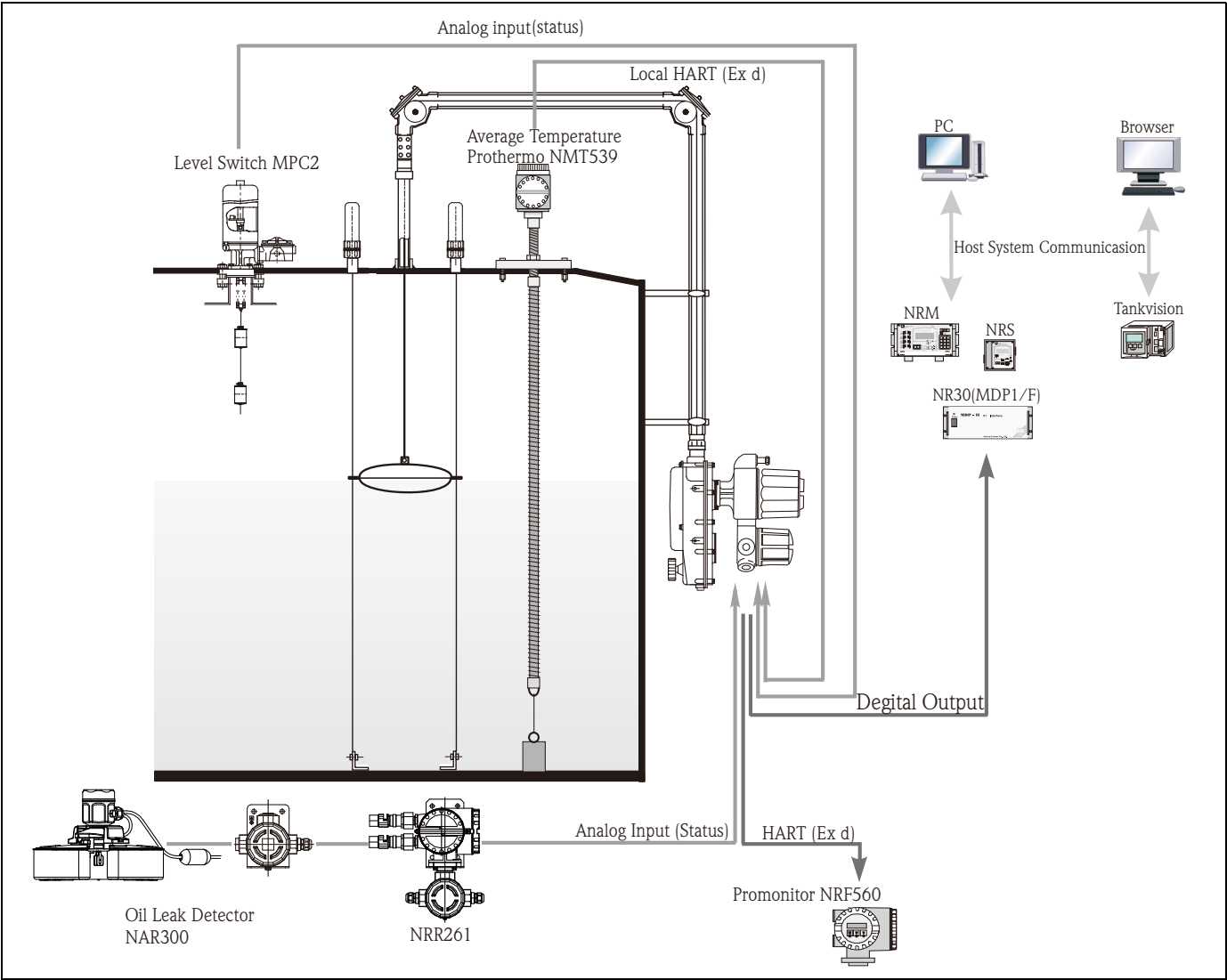


Figure 6: Device Layout

5 Set Up Condition

5.1 Dimensions

Switch Points: 1

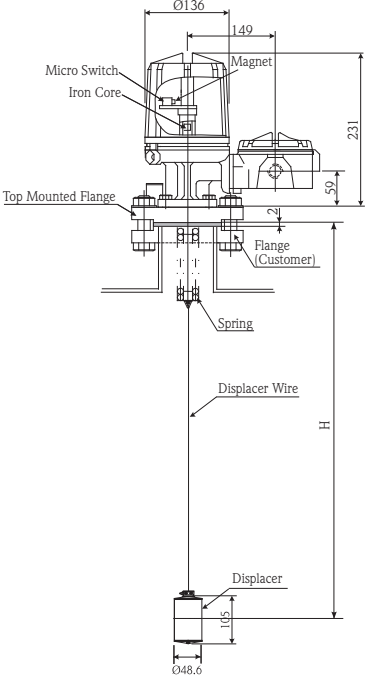
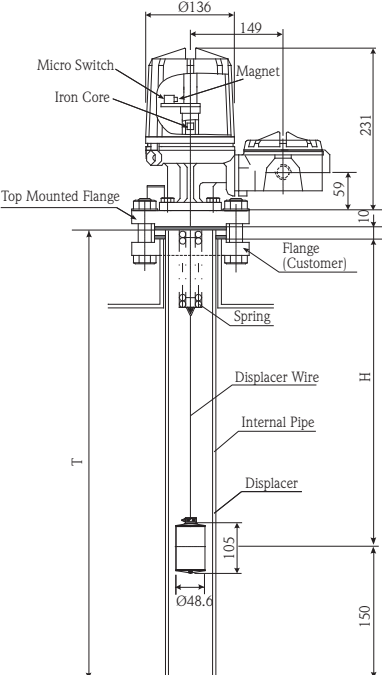
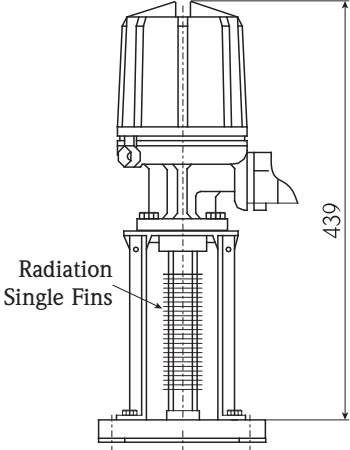
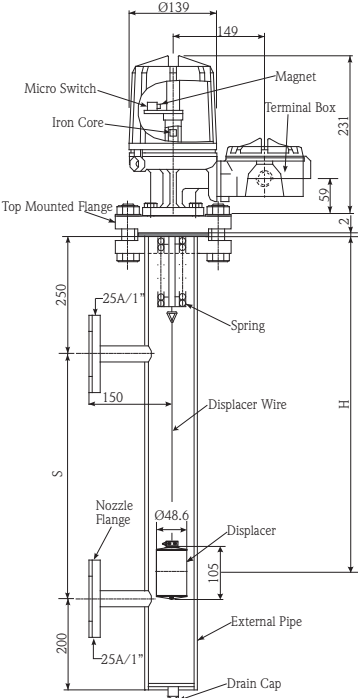
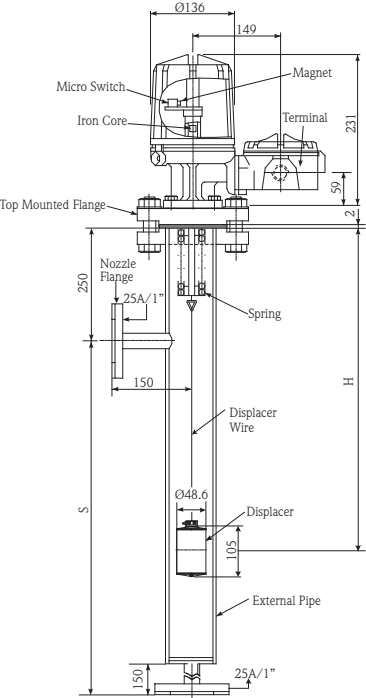
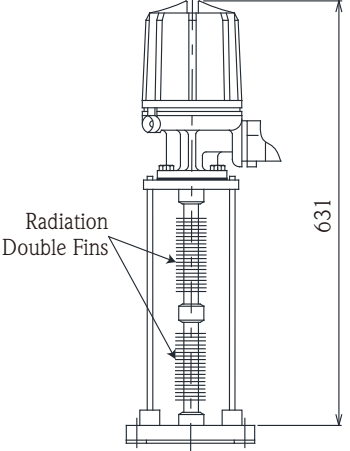
Without Guide Pipe	Internal Pipe Type: Tank top mounting	Radiation Fins
MPC20 □□ E	MPC21 □□ E	Single Fin
		
External Pipe Type: Side-side Mounting	External Pipe Type: Side-bottom Mounting	Radiation Fins
MPC22 □□ E	MPC23 □□ E	Double Fins
		

Figure 7: 1Points Switch

Switch Points: 2

Without Guide Pipe	Internal Pipe Type: Tank top mounting	Radiation Fins
MPC20 □□ E	MPC21 □□ E	Single Fin
External Pipe Type: Side-side Mounting	External Pipe Type: Side-bottom Mounting	Radiation Fins
MPC22 □□ E	MPC23 □□ E	Double Fins

Figure 8: 2 Points Switch

Switch Points: 3

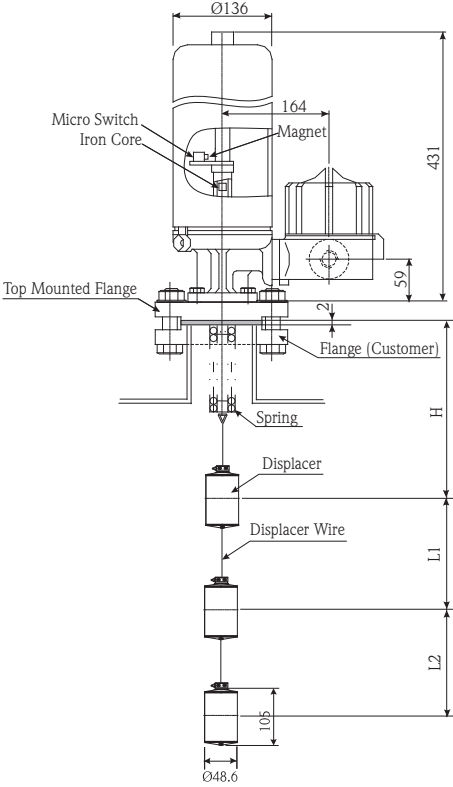
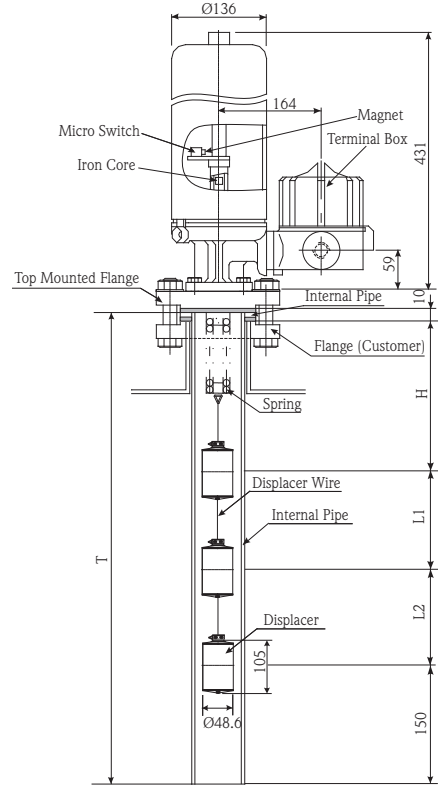
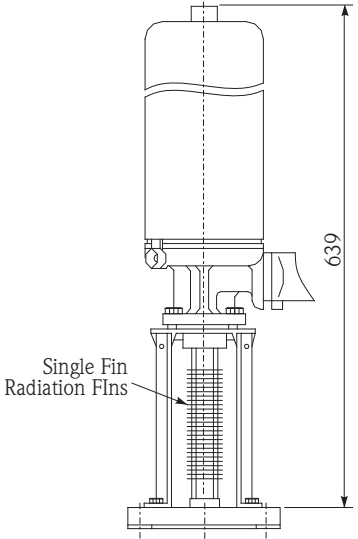
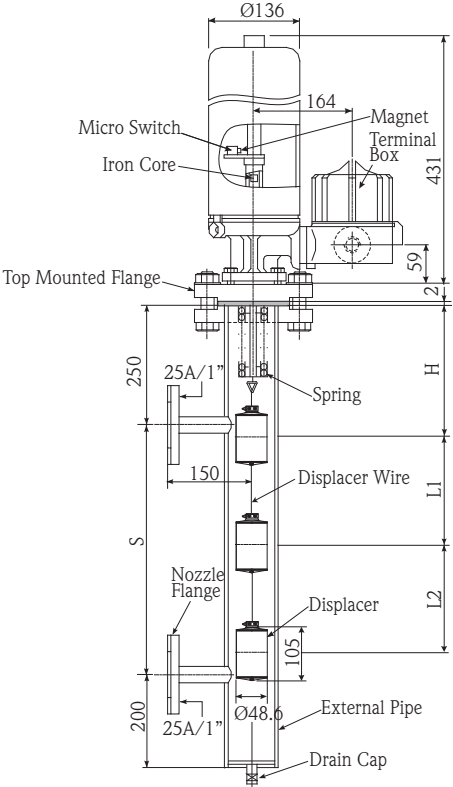
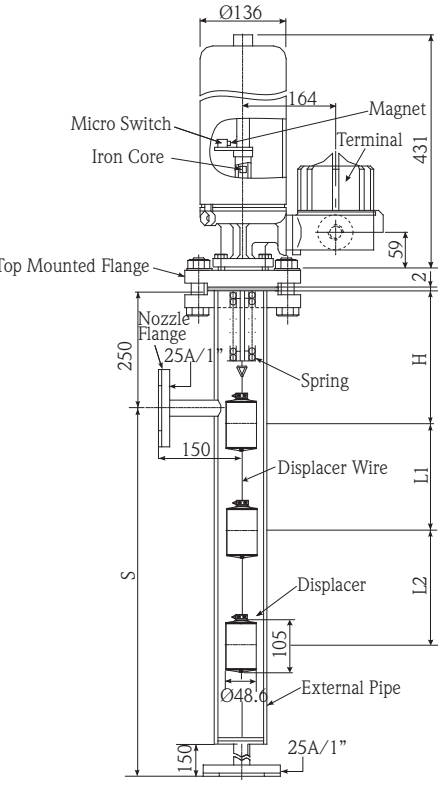
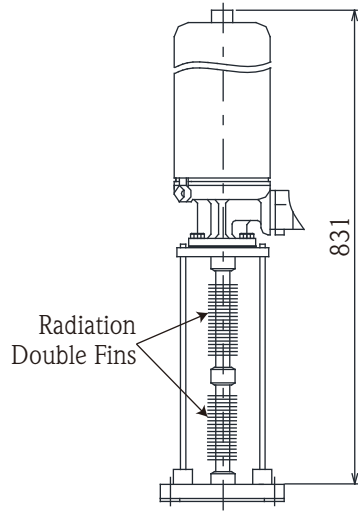
Without Guide Pipe	Internal Pipe Type: Tank top mounting	Radiation Fins
MPC20 □□ E	MPC21 □□ E	Single Fin
		
External Pipe Type: Side-side Mounting	External Pipe Type: Side-bottom Mounting	Radiation fins
MPC22 □□ E	MPC23 □□ E	Double Fins
		

Figure 9: 3 Points Switch

Switch Points: 4

Without Guide Pipe	Internal Pipe Type: Tank top mounting	Radiation Fins
MPC20 □□ E	MPC21 □□ E	Single Fin
External Pipe Type: Side-side Mounting	External Pipe Type: Side-bottom Mounting	Radiation Fins
MPC22 □□ E	MPC23 □□ E	Double Fins

Figure 10:4 Points Switch

Waterproof Type

A cable connector can be attached to the waterproof type for an option.

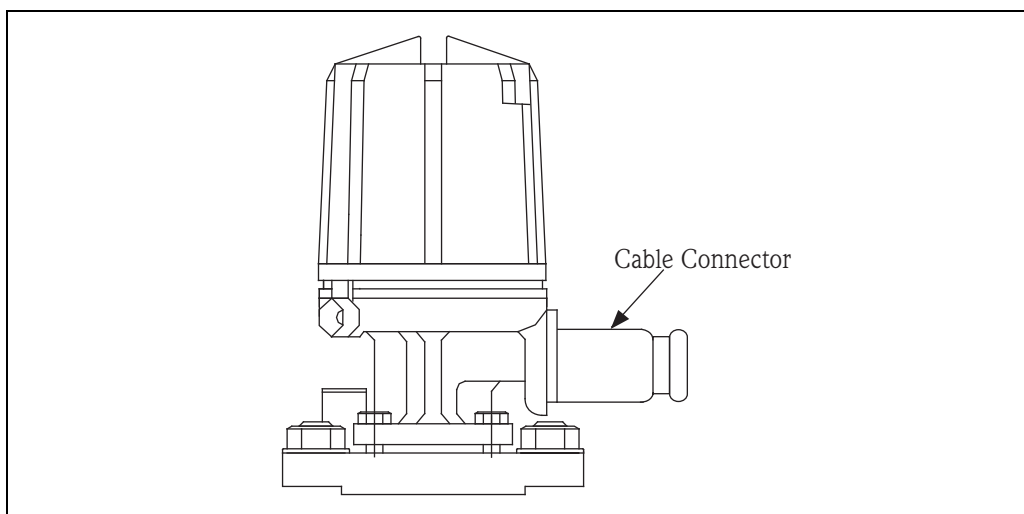


Figure 11: Cable Connector for 1 Point Switch

**Note!**

MPC2 of 2 to 4 type switches also can be attached to the waterproof type for an option.

5.2 Overflow Alarm

Either of two specifications can be used for the overflow alarm: displacer in CRT or weight in FRT. When displacer or weight reaches specified position, an alarm signal is output to warn in advance of an overflow.

The operation and function of weight specification are the same as for the 1 switch point of MPC type. When liquid reaches the upper limit point, a displacer rises and triggers the alarm. MPC2 features an additional confirmation function. By pulling the test wire and hoisting the displacer to the high limit point manually, the alarm can be triggered.

5.2.1 Floating Roof Tank (FRT) with Weight

Weight Type: Order Info.: 030 Switch Count...5; 1xFRT Overflow Detection

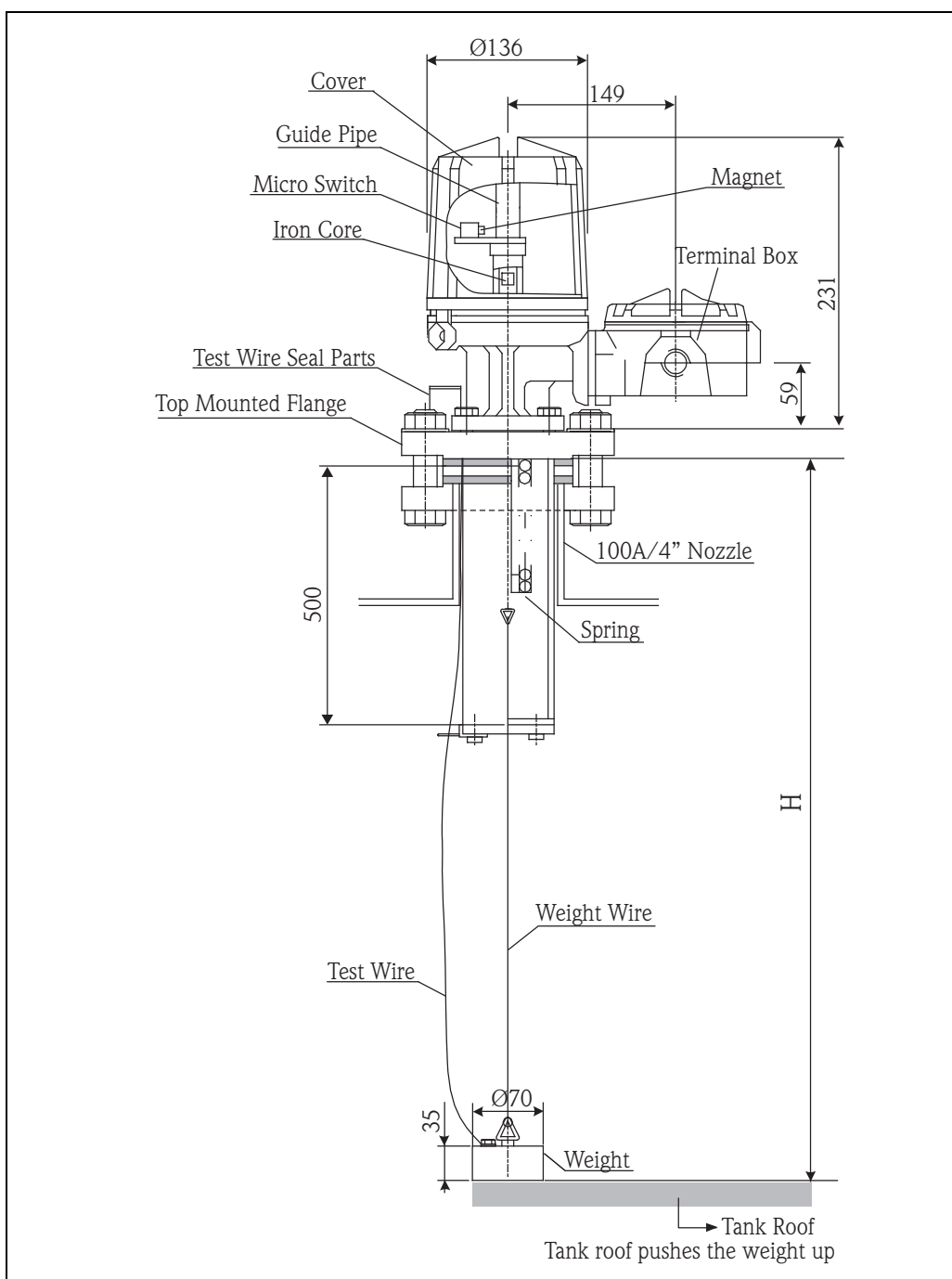


Figure 12: Weight Type of Overflow Alarm

5.2.2 Cone Roof Tank (CRT)

Displacer Type: Order Info.: 030 Switch Count...6; 1xCRT Overflow Detection

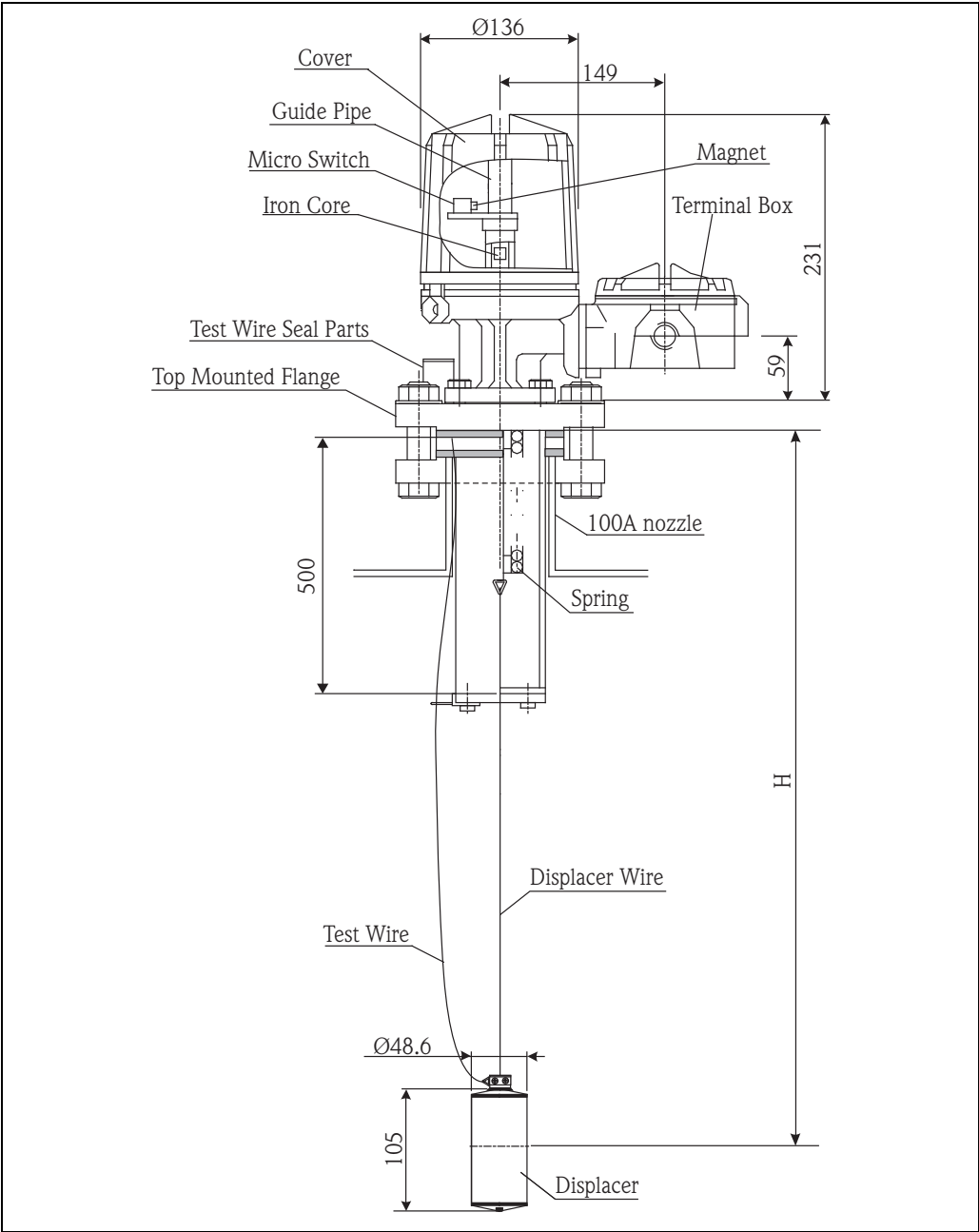


Figure 13: CRT with Displacer

5.3 Assembling and Mounting MPC2

MPC2 is delivered in four separate parts: body, spring (including iron), displacer, and pipe (internal/outer). Follow the instructions for mounting and installation.



Note!

- Do not bend or crimp wire connected to the displacer.
- When connecting displacer and spring, use the fixed triangular joint with threaded displacer locknut. Do not move the displacer out of position. It has been adjusted for this position at the factory.
- Do not bend intermediate shaft while installing spring and body.
- Install and tighten the spring lock screw securely.
- After mounting MPC as follows, connect it to the pipe.

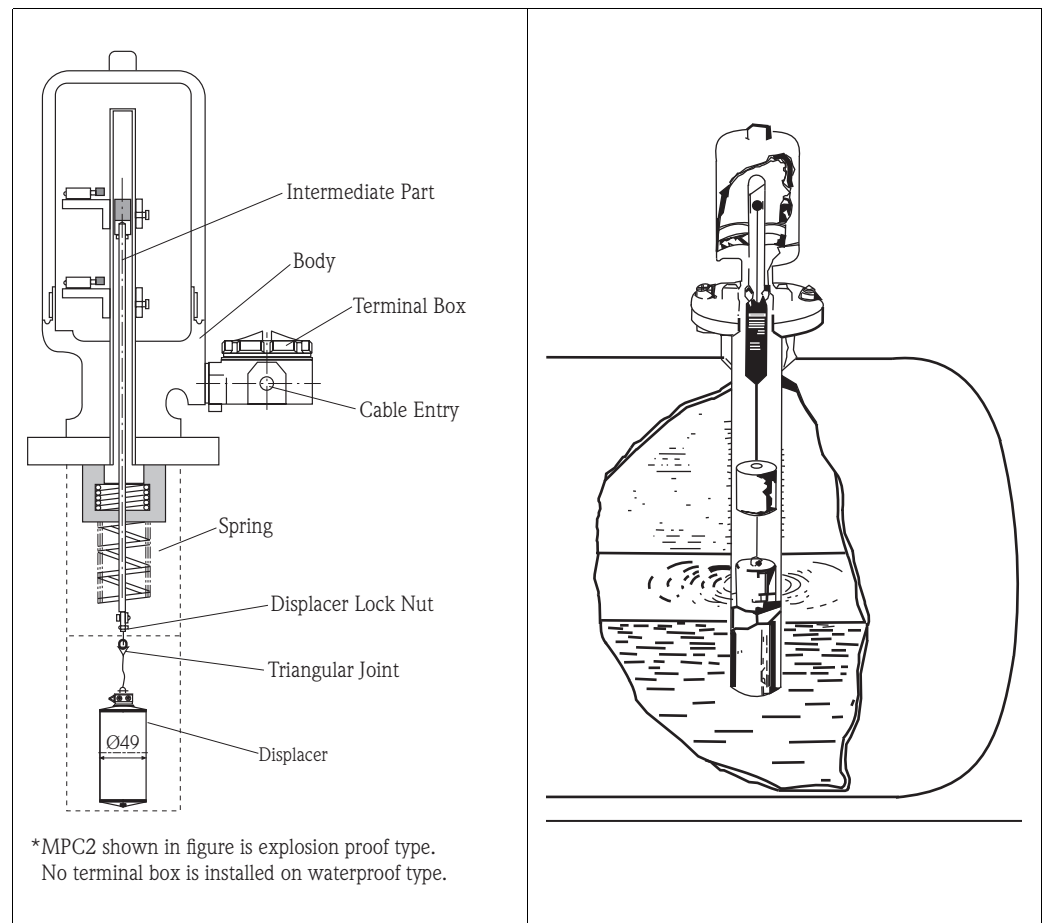


Figure 14: MPC Assembly

6 Wiring

The figure shows the each switch contact condition when level is normal.

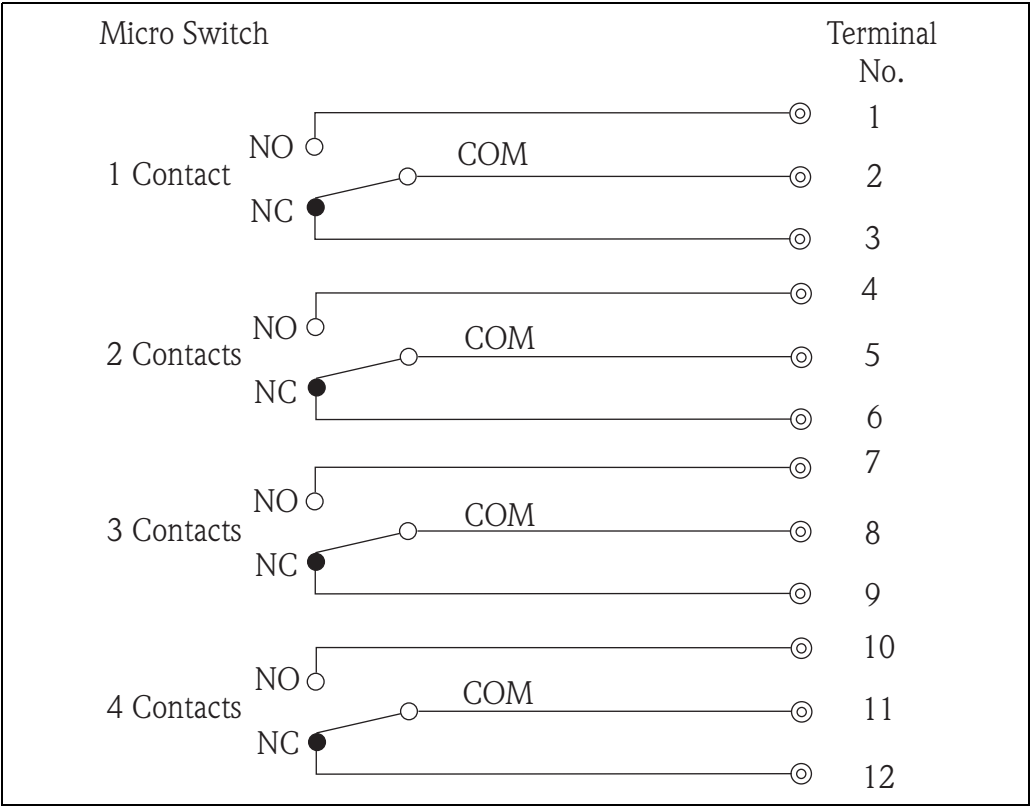


Figure 15: Switch Contact Condition

7 Change of Alarm Contact

The position of the alarm contact can change within the range of wire on which is hanging a displacer.
To change the position, move the displacer to a direction where is required (ex. When the upper alarm contact is required to move 100mm down, the upper displacer should be moved 100mm down.).

8 Maintenance

MPC is not required to special cares of its operation or maintenance. However when the adherent liquid is used in a tank, the parts of MPC: protective pipe, displacer, and internal pipe, should be cleaned periodically.

8.1 Repair

The Endress+Hauser repair policy is based on the fact that the measuring devices have a modular design and that customers are able to undertake repairs themselves. Spare parts are contained in corresponding kits along with their related replacement instructions. Endress+Hauser provides spare parts for repairs of MPC2000 or MPC2, which are located with their order numbers on later pages (refer to "10.1 Spare Parts"). Contact Endress+Hauser service representatives for further assistance regarding service and spare parts.

9 Precaution for High Temperature

Refer to the separate Technical Information, "Instruction for Use in High Temperature".

10 Troubleshooting

10.1 Spare Parts

Spare parts are contained in kits. Spare parts for MPC2000 or MPC2 which can be ordered from Endress+Hauser are shown with their order numbers in the diagram below. Contact Endress+Hauser service representatives for further assistance.

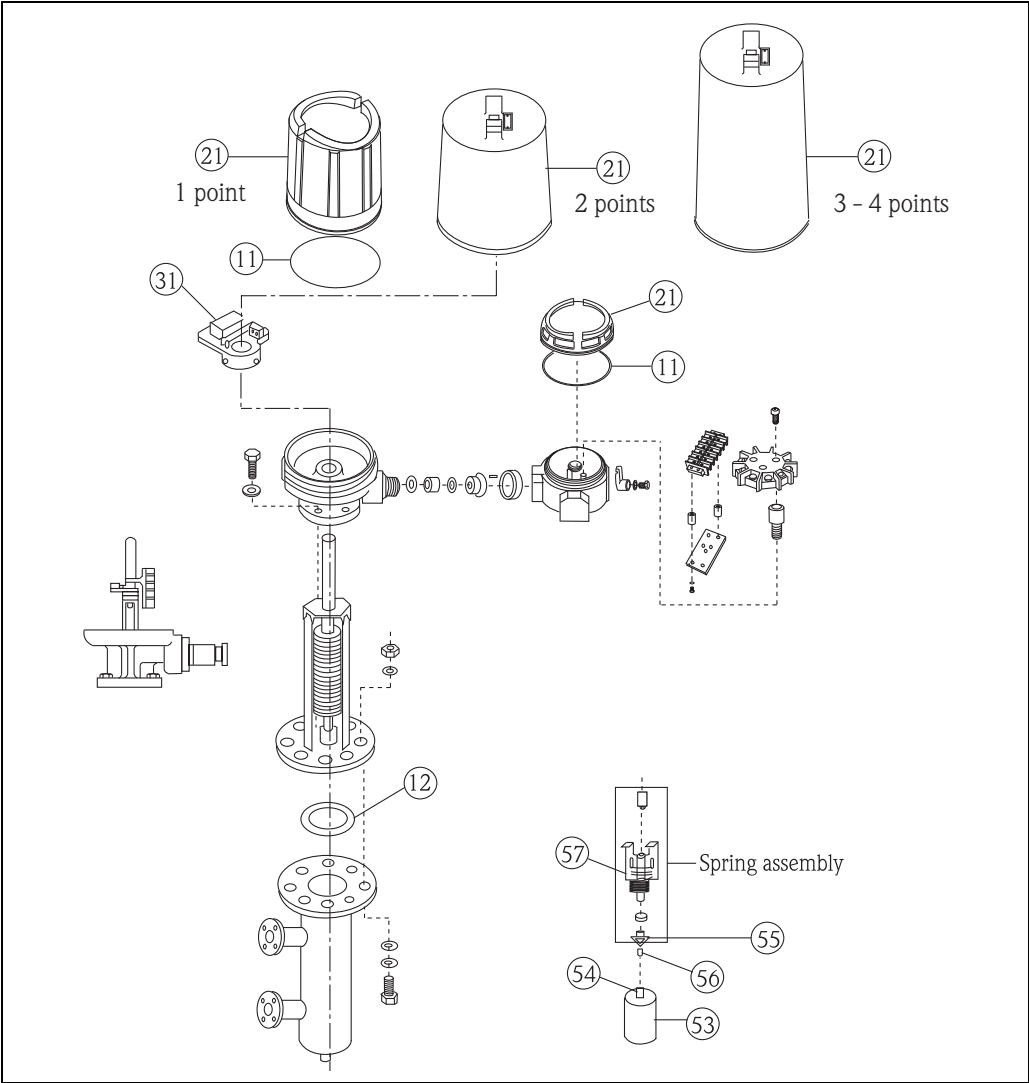


Figure 16: Spare Parts

No.	Part No.	Specification	No.	Parts No.	Specification
11	017880-5025	O-ring, main body, CR	12	56004357	Flange packing D120xD70x2T
	017880-5026	O-ring, terminal box, small, CR		56004358	Flange packing D130xD90x2T
21	017860-6323	Terminal box cover		56004359	Flange packing D160xD115x2T
	017860-6324	Cover for main housing for 1 contact	54	56004364	Displacer holder
	017885-6316	Cover for main housing for 2 contacts	55	56004352	Wire holder
	017885-6317	Cover for main housing for 3+4 contacts	56	017885-1839	Wire sleeve, dia. 1.6 (10pcs/set)
31	56004285	Switch bracket assembly (High Temp.) (to 250°C)	57	017885-1847	Spring for 1 contact (4g)
	017885-1836	Switch bracket assembly (to 100°C)		017885-1848	Spring for 2 contact (5g)
53	017885-1841	Displacer SS316 (100H x 50dia.)		017885-1849	Spring for 3 contact (7g)
	017885-1842	Displacer SS316 (150H x 50dia.)		017885-1850	Spring for 4 contact (8g)

10.2 Troubleshooting

Symptom	Possible Causes	Solutions
No Signal generated.	■ Iron core is not moving due to damage or bent intermediate shaft. ■ Faulty micro switch ■ Foreign substances have collected on spring, impairing movement. ■ Displacer is not moving due to damaged flange. ■ Displacer sinks.	■ Remove device and repair bent intermediate shaft. ■ Replace the micro-switch. ■ Remove device and clean or replace spring. ■ Reinstall displacer ■ Replace displacer
Signal generated is erratic.	■ Faulty wiring connection ■ Faulty lead-in conductor connection ■ Faulty micro switch connection(internal switch terminal connection is faulty, internal switch contact is faulty)	■ Repair/rewire connection ■ Repair faulty contacts ■ Replace micro switch
Upper/Lower setting position misaligned	■ Liquid density has changed. ■ Displacer and iron core are not working smoothly due to mis-aligned or damaged installation component(s). ■ Foreign substances have collected on displacer causing weight to increase.	■ Readjust MPC ■ Reinstall MPC ■ Replace damaged components, move displacer up and remove foreign substances.

10.3 Return

The following procedure must be performed before returning MCP2000/MPC2 to Endress+Hauser e.g. for repair or calibration.

- Remove all residue. Pay special attention to the gasket grooves and crevices where fluid may be present. This is especially important if the fluid is corrosive, poisonous, carcinogenic, radioactive, or otherwise hazardous.
- Always enclose a duly completed "Declaration of Hazardous Material and De-contamination" form (a copy of the "Declaration of Hazardous Material and De-contamination" is included at the end of this operating manual). Only then can Endress+Hauser transport, examine, and repair a returned device.
- Enclose special handling instructions if necessary, for example a safety data sheet as per EN 91/155/EEC.

Additionally specify:

- An exact description of the application
- The chemical and physical characteristics of the instrument
- A short description of the error that occurred (specify the error code where possible)
- Operating time of the device



Caution!

- Hazardous materials may be attached to damaged parts of NMS5 or its plastic material. Unless hazardous materials are completely removed from NMS5, no repair request is accepted.
- Incomplete cleaning of the instrument may result in waste disposal or cause harm to personnel (burns, etc.). Any costs arising from this will be charged to the operator of the instrument.

10.4 Disposal

In case of disposal, separate the various components according to their materials.

10.5 Contact Addresses of Endress+Hauser

The addresses of Endress+Hauser are given on the back cover of this operating manual. If you have any questions, do not hesitate to contact E+H representatives.

11 Technical Data

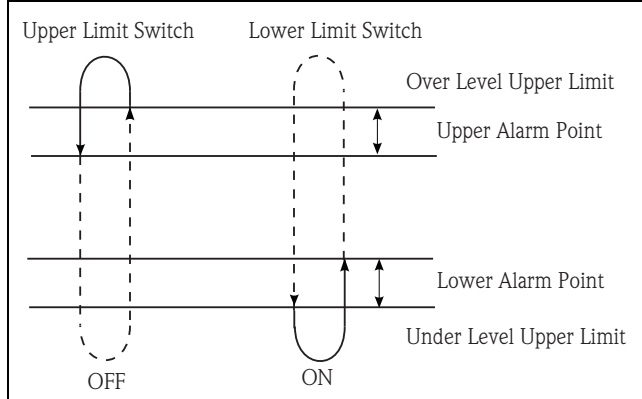
Accuracy	Without fin (MPC2- +0++++++) 1 and 2 points: within $\pm 3\text{mm}$ (MPC2- +0++++++) 3 and 4 points: within $\pm 5\text{mm}$ *at 25°C With fin Single fin (MPC2- +2++++++) 1 and 2 points: $\pm 7\text{mm}$, 3 and 4 points: $\pm 10\text{mm}$ Double fin (MPC2- +1++++++) 1 and 2 points: $\pm 7\text{mm}$, 3 and 4 points: $\pm 10\text{mm}$
Maximum Allowable Working Pressure	2.94 Mpa (30kgf/cm ²) *This value varies depending on specifications.
Ambient Temperature	-20 to +60 °C (-4 to 140°F) (Ex type) -10 to +40 °C (-14 to 104°F) (Non Ex type)
Liquid Temperature	0 to 100°C (Radiation Fine: max. 250°C) *Refer to the separate Technical Information "Instruction for Use in High Temperature".
Density Limits	0.65 to 1.2g/cm ³
Wetted Material	Order Info. : 060: Process Connection, Top Mounted Flange 080: Internal Pipe/External Pipe
Alarm Contacts	1 to 4
Contact Capacity	TIIS Explosion Rating max. 250VAC, 1050VA max. 250VDC, 120VA Allowable Contact Capacity 1 to 2 points 250VAC 4.2A 1050VA, 125VDC 0.4A 50W 3 to 4 points 250VAC 2.8A 700VA, 125VDC 0.4A 50W
Hysteresis	Standard: 1, 2 Points 7 to 25mm (density = 1g/cm ³) 3, 4 Points 7 to 45mm (density = 1g/cm ³) High Temperature: 1, 2 Points 7 to 40mm (density = 1g/cm ³) 3, 4 Points 7 to 40mm (density = 1g/cm ³) 

Figure 17: Hysteresis

Process Connection Top Mounted Flange	Without Internal Pipe/ Internal Pipe External Pipe (side-side installation, side bottom installation) Overflow Detection	10K 80A RF, SUS304, JIS FlangeB2220 10K 80A RF, SUS316, JIS FlangeB2220 20K 80A RF, SUS304, JIS FlangeB2220 20K 80A RF, SUS316, JIS FlangeB2220 3" 150lbs RF,SUS304, ANSI Flange B16.5 3" 150lbs RF,SUS316, ANSI Flange B16.5 3" 300lbs RF,SUS304, ANSI Flange B16.5 3" 300lbs RF,SUS316, ANSI Flange B16.5 80A 150lbs RF,SUS304, JPI Flange 7S-15 80A 150lbs RF,SUS316, JPI Flange 7S-15 80A 300lbs RF,SUS304, JPI Flange 7S-15 80A 300lbs RF,SUS316, JPI Flange 7S-15 10K 65A RF, SUS304, JIS FlangeB2220 10K 65A RF, SUS316, JIS FlangeB2220 20K 65A RF, SUS304, JIS FlangeB2220 20K 65A RF, SUS316, JIS FlangeB2220 2-1/2" 150lbs RF,SUS304, ANSI Flange B16.5 2-1/2" 150lbs RF,SUS316, ANSI Flange B16.5 2-1/2" 300lbs RF,SUS304, ANSI Flange B16.5 2-1/2" 300lbs RF,SUS316, ANSI Flange B16.5 65A 150lbs RF,SUS304, JPI Flange 7S-15 65A 150lbs RF,SUS316, JPI Flange 7S-15 65A 300lbs RF,SUS304, JPI Flange 7S-15 65A 300lbs RF,SUS316, JPI Flange 7S-15 10K 100A RF, SUS304, JIS FlangeB2220 10K 100A RF, SUS316, JIS FlangeB2220 4" 150lbs RF,SUS304, ANSI Flange B16.5 4" 150lbs RF,SUS316, ANSI Flange B16.5 100A 150lbs RF,SUS304, JPI Flange 7S-15 100A 150lbs RF,SUS316, JPI Flange 7S-15
Approval	Flame Proof TIIS d2G4	
Protection Class	IP65	
Cable Connection	Explosion proof PF(G)3/4,PF(G)1,PF(G)1-1/4, NPT3/4 (cable connection) TF16-11,TF22-13,TF22-15,TF28-18 (cable gland) Waterproof PF(G)3/4, NPT3/4, PF(G) 1/2 (cable connection) 20 a.b.c (cable connector)	Caution! When installing MPC2 using cable glands, ensure to use the cable glands attached to MPC2. This specification can be ordered according to the order information 040.
Color	Metallic silver (internal pipe is note painted.)	
Dimension	Internal Pipe Type: Internal pipe length max. 4000mm External Pipe Type: mounting nozzle interval (require to be specified)	Note! The side and bottom flanges are equivalent to 25A/1".

Declaration of Hazardous Material and De-Contamination

Erklärung zur Kontamination und Reinigung

RA No.

Please reference the Return Authorization Number (RA#), obtained from Endress+Hauser, on all paperwork and mark the RA# clearly on the outside of the box. If this procedure is not followed, it may result in the refusal of the package at our facility.
Bitte geben Sie die von E+H mitgeteilte Rücklieferungsnummer (RA#) auf allen Lieferpapieren an und vermerken Sie diese auch außen auf der Verpackung. Nichtbeachtung dieser Anweisung führt zur Ablehnung ihrer Lieferung.

Because of legal regulations and for the safety of our employees and operating equipment, we need the "Declaration of Hazardous Material and De-Contamination", with your signature, before your order can be handled. Please make absolutely sure to attach it to the outside of the packaging.

Aufgrund der gesetzlichen Vorschriften und zum Schutz unserer Mitarbeiter und Betriebseinrichtungen, benötigen wir die unterschriebene "Erklärung zur Kontamination und Reinigung", bevor Ihr Auftrag bearbeitet werden kann. Bringen Sie diese unbedingt außen an der Verpackung an.

Type of instrument / sensor

Geräte-/Sensortyp _____

Serial number

Seriennummer _____

☐ **Used as SIL device in a Safety Instrumented System / Einsatz als SIL Gerät in Schutzeinrichtungen**
Process data/Prozessdaten

Temperature / Temperatur _____ [°F] _____ [°C]

Pressure / Druck _____ [psi] _____ [Pa]

Conductivity / Leitfähigkeit _____ [µS/cm]

Viscosity / Viskosität _____ [cp] _____ [mm²/s]

Medium and warnings

Warnhinweise zum Medium



	Medium /concentration Medium /Konzentration	Identification CAS No.	flammable entzündlich	toxic giftig	corrosive ätzend	harmful/ irritant gesundheits- schädlich/ reizend	other * sonstiges*	harmless unbedenklich
Process medium								
Medium im Prozess								
Medium for process cleaning								
Medium zur Prozessreinigung								
Returned part cleaned with								
Medium zur Endreinigung								

* explosive; oxidising; dangerous for the environment; biological risk; radioactive

* explosive; brandfördernd; umweltgefährlich; biogefährlich; radioaktiv

Please tick should one of the above be applicable, include safety data sheet and, if necessary, special handling instructions.

Zutreffendes ankreuzen; trifft einer der Warnhinweise zu, Sicherheitsdatenblatt und ggf. spezielle Handhabungsvorschriften beilegen.

Description of failure / Fehlerbeschreibung _____

Company data / Angaben zum Absender

Company /Firma _____	Phone number of contact person / Telefon-Nr. Ansprechpartner: _____
Address / Adresse _____	Fax / E-Mail _____
_____	Your order No. / Ihre Auftragsnr. _____

"We hereby certify that this declaration is filled out truthfully and completely to the best of our knowledge. We further certify that the returned parts have been carefully cleaned. To the best of our knowledge they are free of any residues in dangerous quantities."

"Wir bestätigen, die vorliegende Erklärung nach unserem besten Wissen wahrheitsgetreu und vollständig ausgefüllt zu haben. Wir bestätigen weiter, dass die zurückgesandten Teile sorgfältig gereinigt wurden und nach unserem besten Wissen frei von Rückständen in gefahrbringender Menge sind."

(place, date / Ort, Datum)

Name, dept./Abt. (please print /bitte Druckschrift)

Signature / Unterschrift

Endress + Hauser Japan Co., Ltd.
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862-1 Mitsukunugi Sakaigawa-cho
Fuefuki-shi Yamanashi,
406-0846 Japan

Phone: ++81 55 266 4964
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For more Endress+Hauser product please visit: www.ainstru.com

Mail: Sales@ainstru.com

Endress + Hauser 
People for Process Automation