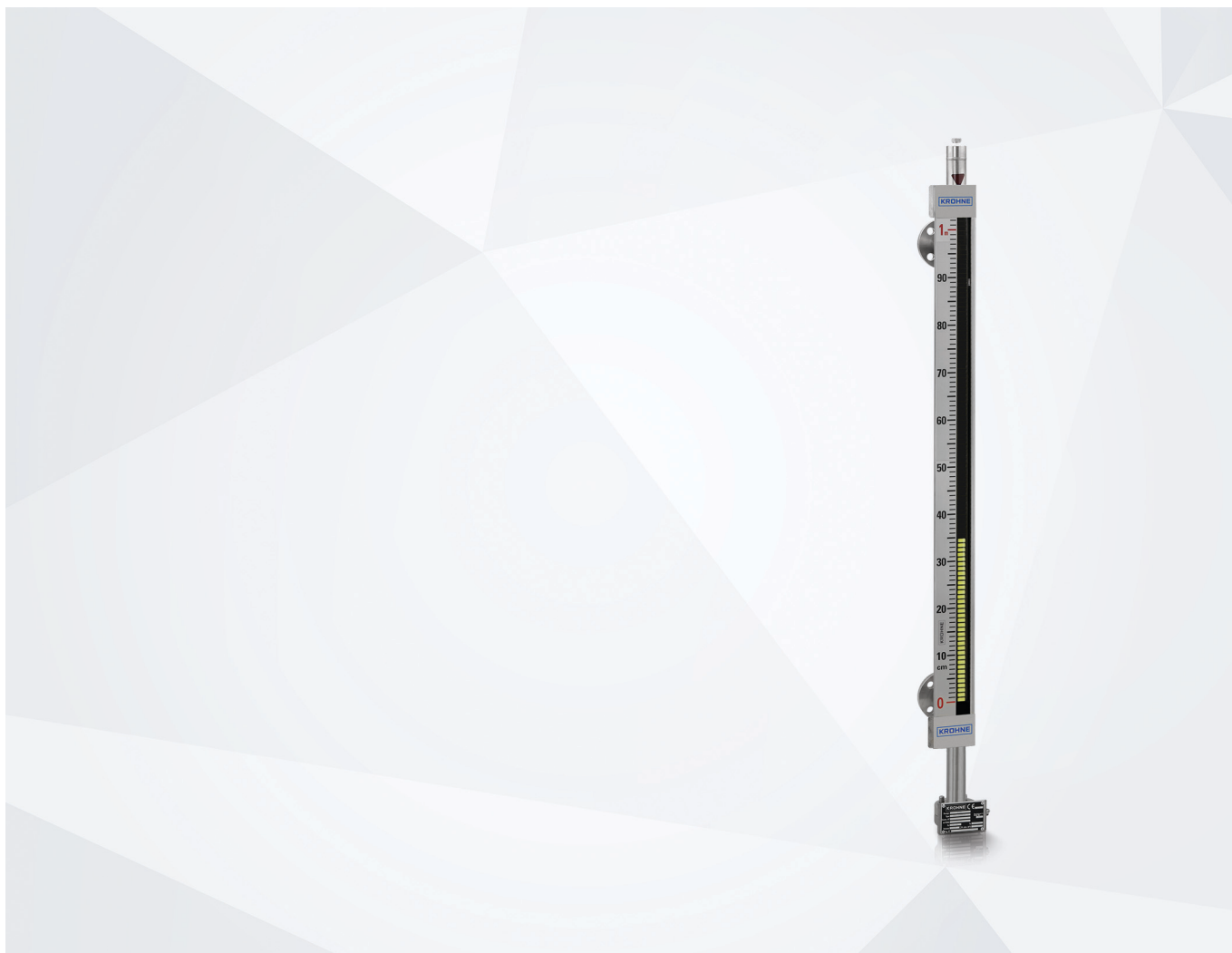




BM26A-1000 Technical Datasheet

Magnetic Level Indicator for basic liquid applications

- Most competitive price
- Process conditions up to +200°C (+392°F) / 40 barg (580 psig)
- Level indication up to 5.5 m / 18 ft (other dimensions on request)



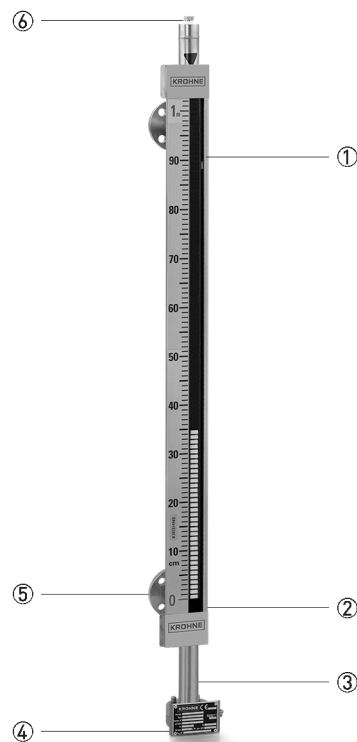
1	Product features	3
1.1	Magnetic level indicator for basic liquid applications	3
1.2	Measuring principle	5
2	Technical data	6
2.1	Technical data	6
2.1.1	BM26A-1000 magnetic level indicator	6
2.1.2	LT40 reed-chain level transmitter	9
2.1.3	MS15-series and MS40-series limit switches	14
2.2	Dimensions	16
2.2.1	Magnetic level indicator (measuring chamber) - overall dimensions	16
2.2.2	Options	24
2.2.3	Accessories	28
2.3	Maximum process pressure: measuring chamber	29
2.4	Temperature limits: LT40 C/F reed-chain level transmitter	30
2.4.1	LT40 without an LCD indicator module	30
2.4.2	LT40 with an LCD indicator module	31
2.5	Temperature limits: MS15-series limit switch	32
2.5.1	Aluminium housing	32
2.5.2	Stainless-steel housing	33
2.6	Temperature limits: MS40-series limit switch	34
3	Installation	35
3.1	Intended use	35
3.2	Pre-installation requirements	35
3.2.1	General notes	35
3.2.2	Isolation valves	35
3.3	EU Pressure Equipment Directive	36
3.4	Reed-chain level transmitter (LT40)	37
3.4.1	General notes	37
3.4.2	Thermal insulation	37
3.5	Limit switches (MS15 series and MS40 series)	38
3.5.1	General notes	38
3.5.2	Thermal insulation	39
4	Electrical connections	40
4.1	Reed-chain level transmitter	40
4.1.1	General notes	40
4.1.2	Electrical schematics and procedure	40
4.2	Limit switches	41
4.2.1	General notes	41
4.2.2	Electrical schematics and procedure	41
5	Notes	42

1.1 Magnetic level indicator for basic liquid applications

The BM26A-1000 is a simple, rugged device designed to indicate or transmit the level of a liquid. The measuring chamber is made of stainless steel.

A magnetic level indicator (MLI) indicates level with a float magnetically coupled to a column of rotating flaps. An optional reed-chain transmitter (LT40) can also transmit level as an analog or digital signal. Optional bistable switches (MS15 series and MS40 series) can be attached to the measuring chamber to detect level.

This device is suitable for measuring liquids that have a density of 700...1200 kg/m³ / 43.70...74.91 lb/ft³, for a temperature range of -70...+200°C / -94...+392°F at a pressure of -1...40 barg / -14.5...580 psig.



- ① Level indicator - column of rotating flaps in a hermetically sealed tube made of borosilicate glass with options that include a scale, scale units and flap colours
- ② Red flaps for float failure indication
- ③ Stainless-steel measuring chamber
- ④ Option: drain
- ⑤ Side or axial process connections
- ⑥ Option: vent

Highlights

- Proven technology
- Easy to install, safe to use and no commissioning required
- Rugged design - metal construction
- High-visibility level indicator column operates without electrical power
- Flaps in the level indicator column are housed in a hermetically sealed, durable glass tube (IP68)

- PED / EN 13445
- Optional LT40 reed-chain level transmitter
 - Output options: 4...20 mA (HART 7), FOUNDATION™ fieldbus or PROFIBUS PA
 - Accuracy options: ± 10 mm ($\pm 0.4''$) or ± 5 mm ($\pm 0.2''$)
- A wide selection of options and accessories: special materials, isolation valves, high-temperature and low-temperature insulation, approvals for hazardous locations, limit switches, reed-chain transmitter etc.

Industries

- Basic applications
- Water and wastewater
- Pulp and paper

Applications

- Water storage and water washtanks
- Lubrication oils and hydraulic fluids
- Fuel tanks
- Condensate receiver tanks
- Mill water storage
- Turpentine recovery
- Surge tanks
- Additives
- Skid manufacturers
- Inks
- Condenser hot wells

1.2 Measuring principle

The device operates on the principle of communicating tubes. The measuring chamber is connected adjacent to the tank. The process conditions in the measuring chamber are the same as those of the tank.

A float is in the measuring chamber. The float contains magnets that rotate the flaps in the indicator column and operate the optional limit switches and analog transmitter on the side of the measuring chamber. The position of the magnets does not correspond to the level of liquid, so the scale is offset at the factory to take into account this difference. The offset of the magnets depends on the liquid density. Refer to the illustration that follows:

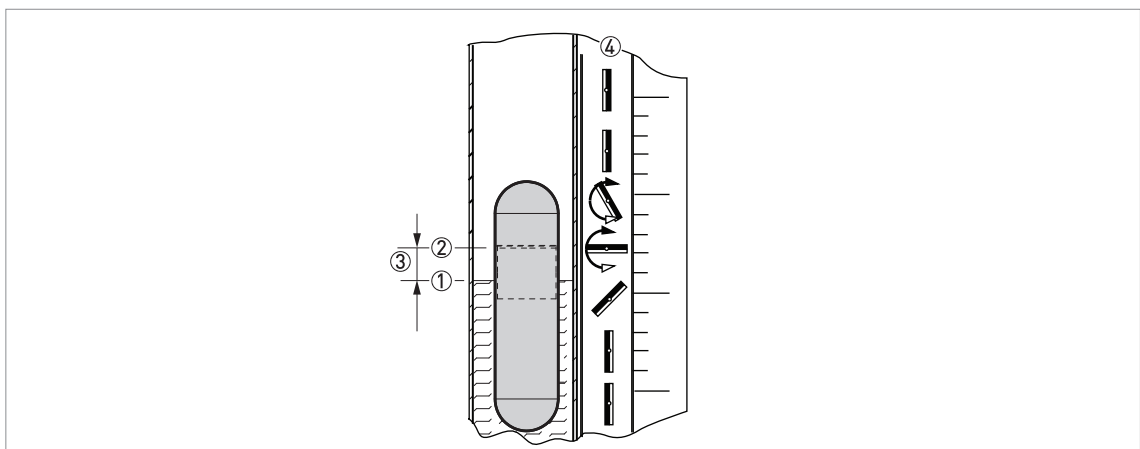


Figure 1-1: Offset between liquid level and the float magnet (liquid level offset)

- ① Level of the liquid
- ② Top of the float magnet. The magnet field around the top of the magnet turns the flaps in the indicator column that shows the level in the tank.
- ③ Liquid level offset. This offset is the difference between the level of the liquid and the top of the float magnet. The value is related to the type of float in the measuring chamber and the density of the liquid.
- ④ Indicator column of yellow/black or red/white rotating flaps with the optional scale in m/cm, ft/inch, % (simplified) or customized volume units

2.1 Technical data

- The following data is provided for general applications. If you require data that is more relevant to your specific application, please contact us or your local sales office.
- Additional information (certificates, special tools, software,...) and complete product documentation can be downloaded free of charge from the website (Downloadcenter).

2.1.1 BM26A-1000 magnetic level indicator

Measuring system

Measuring principle	Magnetic level indicator - bypass chamber (principle of communicating tubes). A float in the measuring chamber (Ø42 mm × 2 mm / NPS 1 1/4 pipe) is magnetically coupled to a mechanical level indicator.
Application range	Level indication of liquids in applications from vacuum up to 40 barg / 580 psig
Measured value	
Primary measured value	Level of the float magnets in the measuring chamber
Secondary measured value	Level or volume of the liquid in the tank

Design

Measuring chamber variants	Side / side process connections
	Axial / axial process connections
	Bottom axial / top side process connections
	Bottom side / top axial process connections
Options	LT40 reed-chain level transmitter without LCD indicator module with a compact or a remote housing ①
	LT40 reed-chain level transmitter with LCD indicator module with a compact or a remote housing ①
	Anti-icing cover for glass indicator tube
	Bistable limit switches ②
Measuring range (ML)	0.3...5.5 m / 1...18 ft (longer on request)
Display and user interface	
Display	Indicator column with magnetically coupled rotating flaps that have two colors: yellow/black; red/white
Float failure indication (at the bottom of the indicator column)	Orange flaps
Scale marking options	No scale; m + cm; ft + inches; customized volume units; % (simplified) ③

Measuring accuracy

Accuracy	±10 mm / 0.4"
Repeatability	±10 mm / 0.4" (when density is constant)
Maximum rate of change	20 mm/s / 0.787"/s

Operating conditions

Temperature	
Process temperature	-70...+200°C / -94...+392°F (Ex: see supplementary instructions or approval certificates)
Ambient temperature	-70...+80°C / -94...+176°F (Ex: see supplementary instructions or approval certificates)
Storage temperature	-70...+80°C / -94...+176°F
Pressure	
Process pressure	-1...40 barg / -14.5...580 psig ④
Chemical properties	
Density	700...1200 kg/m³ / 43.7...74.91 lb/ft³. Higher density on request.
Viscosity	≤ 500 mPa·s / ≤ 500 cP
Other conditions	
Ingress protection (IEC 60529)	Indicator column: IP66 / IP68 (0.15 barg)

Materials

Measuring chamber	Stainless steel (1.4404 / 316L)
Float	Stainless steel (1.4404 / 316L); titanium
Indicator column rail	Stainless steel (1.4401 / 316)
Indicator column tube	Borosilicate glass 3.3 (agrees with ISO 3585) - hermetically sealed tube
Scale (option)	Stainless steel (1.4401 / 316)
Process connection	Stainless steel (1.4404 / 316L)
Gasket options	Aramid; graphite; PTFE
Braid insulation	Ceramic fibre (thermal insulation between the indicator column and the measuring chamber when the process temperature is +100...+200°C / +210...+392°F)
Anti-icing cover	PLEXIGLAS® (option for glass indicator column tube) - when the liquid temperature is -50...+40°C / -58...+104°F

Process connections

Threaded pipes	1/2...3/4 NPT (male); G 1/2...3/4 (male)
Welded pipes, ASME	NPS 1/2...1 in Sch 10S ⑤
Flange options	
EN	DN15...50 (Type B1) in PN40
ASME	NPS 1/2...2 (RF) in Class 150 / 300 ⑤

Drain and vent connections

Drain options	
Thread	Without; G 3/8...3/4 (female) with plug; 3/8...3/4 NPT (female) with plug
Flange	All process connection options
Vent options	
Thread	Without; G 3/8...1/2 (female) with plug; 3/8...1/2 NPT (female) with plug
Flange	All process connection options

Power supply

Limit switches	Refer to the technical data for the MS15 series and MS40 series
Reed-chain level transmitter	Refer to the technical data for the LT40

Input and output

Parameter	Level detection or indication
Output signal	Refer to the technical data for the LT40 reed-chain level transmitter and the MS15-series and MS40-series limit switches

Approvals and certification

CE	The device meets the essential requirements of the EU Directives. The manufacturer certifies successful testing of the product by applying the CE marking. For more data about the EU Directives and European Standards related to this device, refer to the EU Declaration of Conformity. You can download this document free of charge from the website (Download Center).
Explosion protection	
ATEX	II 1/2 G Ex h IIC T6...T3 Ga/Gb or II 2 G Ex h IIC T6...T3 Gb
IECEX	Ex h IIC T6...T3 Ga/Gb or Ex h IIC T6...T3 Gb
Other standards and approvals	
Pressure	Pressure Equipment Directive
Vibration resistance	EN 60721-3-4 - vibration class 4M4 (1...200 Hz:1g, 15g shock ½ sinus: 6 ms)
Construction code	Standard: EN 13445
	Option: NACE MR0175 / MR0103 / ISO 15156

Table 2-1: BM26A-1000: technical data

- ① For more data, refer to technical data for the LT40 reed-chain level transmitter in this section
- ② For more data, refer to technical data for the MS15-series and MS40-series limit switches in this section
- ③ If the scale adjacent to the indicator column has % (simplified) units, then it has a range of 0...100% with an increment of 10% between each marking
- ④ The maximum pressure is related to the type of process connection, pressure rating and the process temperature. For more data about 316-316L stainless-steel measuring chambers, refer to the "Maximum process pressure: measuring chamber" section in this chapter.
- ⑤ NPS = National Pipe Size. For more data about the dimensions of flanges, refer to the ASME B16.5 standard. For more data about the dimensions of welded pipes, refer to the ASME B36.19M standard.

2.1.2 LT40 reed-chain level transmitter

4...20 mA and 4...20 mA + HART® communication modules

Measuring system

Measuring principle	A reed resistor chain that is magnetically operated by a magnetic float in an adjacent measuring chamber
Primary measured value	Resistance
Secondary measured value	Level or volume of the liquid in the tank

Design

Description of device	Resistance reed chain with 2-wire loop-powered transmitter module attached adjacent to the measuring chamber of the magnetic level indicator. A transmitter module converts changes in resistance to an output signal. If the LT40 is used in multidrop mode, a maximum of 63 transmitters can be connected to a network that agrees with the HART® communication protocol.
Options	Transmitter module position: LT40 C - compact housing at the top of the reed resistor chain
	Transmitter module position: LT40 C - compact housing at the bottom of the reed resistor chain
	Transmitter module position: LT40 F - remote housing connected to the bottom of the reed resistor chain. Max. cable length: 25 m / 82 ft.
	LCD indicator module (non-Ex and Ex d-approved devices only)
Accessories	C 95 Basic universal power supply (Panel mount, 2 relays, 4-digit local indicator and non-Ex)
	C 95 Basic universal power supply (Panel mount, 2 relays, 4...20 mA output, 4-digit local indicator and non-Ex)
Display and user interface	
Display	Optional 2-wire loop-powered LCD indicator module (backlit)
	4-digit LCD with minus sign, 2-button keypad. Selectable number of decimals, 0 to 3.
Available units	mm; inches; %
Range	-1999...9999

Measuring accuracy

Resolution	Standard: $\pm 10 \text{ mm} / 0.4''$ (when density is constant)
	Option: $\pm 5 \text{ mm} / 0.2''$ (when density is constant)

Operating conditions

Temperature	
Ambient temperature, transmitter	-40...+80°C / -40...+176°F ①
Ambient temperature, LCD indicator	-20...+70°C / -4...+158°F ①
Process temperature	The ambient temperature limit is related to the process temperature. Do not put thermal insulation around the transmitter housing. Refer to the "Temperature limits: LT40 C/F reed-chain level transmitter" section in this chapter.
Storage temperature	-40...+80°C / -40...+176°F

Pressure	
Operating pressure	Atmospheric pressure
Other conditions	
Warm-up time	30 s
Response time	1...60 s ②
Ingress protection (IEC 60529)	IP66/IP68 (at a depth of 1.5 m for 2 weeks)
Relative air humidity (RH)	0...99%

Installation conditions

Notes	The LT40 is calibrated at the factory and attached to the measuring chamber before delivery
Dimensions	Refer to the "Dimensions" section

Materials

Housing	Polyester-coated aluminium
Reed-chain tube	Stainless steel (1.4401 / 316)
Clamp	Stainless steel (1.4401 / 316)
Cable gland	Plastic (for M20 × 1.5 only), nickel-plated brass or stainless steel

Power supply

Voltage, without LCD indicator	non-Ex or Ex db: 10...35 V DC
	Ex ia: 10...30 V DC
Voltage, with LCD indicator	non-Ex or Ex db: 17...35 V DC
EN 60947-1 electrical data	Overvoltage category I
Cable entry	M20 × 1.5; 1/2 NPT
Cable gland	None; M20 × 1.5; 1/2 NPT
Intrinsically safe circuit data for Ex ia-approved devices	Refer to supplementary instructions or approval certificates

Input and output

Current output	
Output range	4...20 mA
Error signal	High: 21 mA; Low: 3.6 mA - agrees with NAMUR NE 43
HART®	
Description	Digital signal transmitted with the current output signal (HART® protocol)
Version	7
Multidrop operation	Yes, current output = 4 mA. Polling address 1...15.

Approvals and certifications

CE	The device meets the essential requirements of the EU Directives. The manufacturer certifies successful testing of the product by applying the CE marking.
	For more data about the EU Directives and European Standards related to this device, refer to the EU Declaration of Conformity. You can download this document free of charge from the website (Download Center).

Explosion protection	
ATEX (EU Type Approval)	II 1 G Ex ia IIC T6...T1 Ga or II 2 G Ex ia IIC T6...T1 Gb ③
	II 2 G Ex db IIC T6...T1 Gb
IECEX	Ex ia IIC T6...T1 Ga or Ex ia IIC T6...T1 Gb ③
	Ex db IIC T6...T1 Gb
Other standards and approvals	
EMC	Electromagnetic Compatibility Directive ④
	NAMUR NE 21 (pending) ⑤
Vibration resistance	EN 60721-3-4 - vibration class 4M4 (1...200 Hz:1g, 10g shock ½ sinus: 11 ms)
NAMUR	NAMUR NE 43 ⑥

Table 2-2: LT40 (4...20 mA and 4...20 mA + HART® communication modules): technical data

- ① The ambient temperature limit is related to the process temperature. Do not put thermal insulation around the transmitter housing. Refer to the "Temperature limits: LT40 C/F reed-chain level transmitter" section in this chapter.
- ② This value is programmable
- ③ This Ex approval does not include the optional LCD indicator module
- ④ LT40 F: Strong interference from EMC-conducted emissions (EN 61000-4-6) can cause a maximum deviation of 1.8% along the measurement span
- ⑤ Electromagnetic Compatibility of Industrial and Laboratory Control Equipment
- ⑥ Standardization of the Signal Level for the Failure Information of Digital Transmitters

Fieldbus communication module

	FOUNDATION™ fieldbus	PROFIBUS PA
--	----------------------	-------------

Measuring system

Measuring principle	A reed resistor chain that is magnetically operated by a magnetic float in an adjacent measuring chamber
Primary measured value	Resistance
Secondary measured value	Level and volume of the liquid in the measuring chamber

Design

Description of device	Resistance reed chain with 2-wire loop-powered transmitter module attached adjacent to the measuring chamber of the magnetic level indicator. A transmitter module converts changes in resistance to an output signal.	
Description of transmitter module	Changes in resistance are converted to signals that agree with the FOUNDATION™ fieldbus communication protocol.	Changes in resistance are converted to signals that agree with the PROFIBUS PA communication protocol.
Options	Transmitter module position: LT40 C - compact housing at the top of the reed resistor chain	
	Transmitter module position: LT40 C - compact housing at the bottom of the reed resistor chain	
	Transmitter module position: LT40 F - remote housing connected to the bottom of the reed resistor chain. Max. cable length: 25 m / 82 ft.	
Display and user interface		
Display	None	

Measuring accuracy

Resolution	Standard: ±10 mm / 0.4" (when density is constant)
	Option: ±5 mm / 0.2" (when density is constant)

	FOUNDATION™ fieldbus	PROFIBUS PA
--	----------------------	-------------

Operating conditions

Temperature	
Ambient temperature	-40...+80°C / -40...+176°F ①
Process temperature	The ambient temperature limit is related to the process temperature. Do not put thermal insulation around the transmitter housing. Refer to the "Temperature limits: LT40 C/F reed-chain level transmitter" section in this chapter.
Storage temperature	-40...+80°C / -40...+176°F
Pressure	
Operating pressure	Atmospheric pressure
Other conditions	
Ingress protection (IEC 60529)	IP66/IP68 (at a depth of 1.5 m for 2 weeks)
Relative air humidity (RH)	0...99%

Installation conditions

Notes	The LT40 is calibrated at the factory and attached to the measuring chamber before delivery
Dimensions	Refer to the "Dimensions" section

Materials

Housing	Polyester-coated aluminium
Reed-chain tube	Stainless steel (1.4401 / 316)
Clamp	Stainless steel (1.4401 / 316)
Cable gland	Plastic (for M20 × 1.5 only), nickel-plated brass or stainless steel

Power supply

Voltage	non-Ex or Ex db: 9...32 V DC	
	Ex ia: 9...30 V DC	
EN 60947-1 electrical data	Overvoltage category I	
Cable entry	M20 × 1.5; 1/2 NPT	
Cable gland	None; M20 × 1.5; 1/2 NPT	
Intrinsically safe circuit data for Ex ia-approved devices	Refer to supplementary instructions or approval certificates	
FOUNDATION™ fieldbus		
Description	FOUNDATION™ fieldbus protocol	N/A
PROFIBUS PA		
Description	N/A	PROFIBUS PA protocol Profile A&B, ver.3.0 (EN 50170 vol.2)

Approvals and certification

CE	The device meets the essential requirements of the EU Directives. The manufacturer certifies successful testing of the product by applying the CE marking.	
	For more data about the EU Directives and European Standards related to this device, refer to the EU Declaration of Conformity. You can download this document free of charge from the website (Download Center).	

	FOUNDATION™ fieldbus	PROFIBUS PA
Explosion protection		
ATEX (EU Type Approval)	II 1 G Ex ia IIC T6...T1 Ga or II 2 G Ex ia IIC T6...T1 Gb	
	II 2 G Ex db IIC T6...T1 Gb	
IECEX	Ex ia IIC T6...T1 Ga or Ex ia IIC T6...T1 Gb	
	Ex db IIC T6...T1 Gb	
Other standards and approvals		
EMC	Electromagnetic Compatibility Directive	
Vibration resistance	EN 60721-3-4 - vibration class 4M4 (1...200 Hz:1g, 10g shock ½ sinus: 11 ms)	

Table 2-3: LT40 (fieldbus communication module): technical data

- ① The ambient temperature limit is related to the process temperature. Do not put thermal insulation around the transmitter housing. Refer to the "Temperature limits: LT40 C/F reed-chain level transmitter" section in this chapter.

2.1.3 MS15-series and MS40-series limit switches

	MS15 series	MS40 series
--	-------------	-------------

Measuring system

Measuring principle	Bistable reed switch (SPDT) that is magnetically operated by a magnetic float in an adjacent measuring chamber
Application range	Level detection

Design

Description of device	Limit switch attached adjacent to the measuring chamber of the magnetic level indicator
-----------------------	---

Measuring accuracy

Hysteresis	The hysteresis value agrees with the model of the magnetic level indicator. For more data, refer to the handbook.
------------	---

Operating conditions

Temperature		
Ambient temperature	-40...+80°C / -40...+176°F ①	
Process temperature	The ambient temperature limit is related to the process temperature. Do not put thermal insulation around the transmitter housing. Refer to the "Temperature limits: MS15-series limit switch" and "Temperature limits: MS40-series limit switch" sections in this chapter.	
Operating temperature	-40...+115°C / -40...+239°F ②	-40...+120°C / -40...+248°F ②
Storage temperature	-40...+80°C / -40...+176°F	
Pressure		
Operating pressure	Atmospheric pressure Max. height above mean sea level: 2000 m / 6560 ft	
Other conditions		
Ingress protection (IEC 60529)	MS15 series: IP66 / IP68 (at a depth of 1.5 m for 2 weeks)	
	MS40 series: IP66	
Relative air humidity (RH)	0...99%	

Installation conditions

Notes	Adjust the switch position in relation to the hysteresis data (switching point offset) and the density of the liquid
Dimensions	Refer to the "Dimensions" section

Materials

Housing	Aluminium with epoxy powder paint	
Clamp	Stainless steel (1.4401 / 316)	
Cable gland	Plastic (for M20 × 1.5 only), nickel-plated brass or stainless steel	Plastic

	MS15 series	MS40 series
--	-------------	-------------

Electrical connections

Switching capacity	MS15 / MS40: Absolute ratings: 250 V AC/DC; 1 A; 60 VA/W	
	MS15 NAMUR / MS40 NAMUR: Agrees with DIN 19234 (NAMUR); U _{max} = 13 V DC	
EN 60947-5-1 electrical data (MS15 and MS40 only)	Overvoltage category II	
	Rated insulation voltage, U _i : 250 V AC or 250 V DC	
	Rated impulse withstand voltage, U _{imp} : 2.5 kV	
	Rated conventional thermal current, I _{th} : 1 A	
	Pollution degree: 4	
Utilization category (EN 60947-5-1) with current and voltage ratings	AC13: I _e = 0.5 A; U _{max} = 60 V AC	
	AC13: I _e = 0.25 A; U _{max} = 250 V AC	
	DC12: I _e = 1 A; U _{max} = 60 V DC	
	DC13: I _e = 0.5 A; U _{max} = 60 V DC	
Short-circuit protection device	0.25 A fuse, type 1500 A interrupting rating (IEC 60127-2/1)	
	1 A fuse, application category gG (IEC 60269) or type 1500 A interrupting rating (IEC 60127-2/1)	
Intrinsically safe circuit data	Refer to supplementary instructions or approval certificates	
Cable entry	M20 × 1.5; 1/2 NPT	M16 × 1.5
Cable gland	None; M20 × 1.5; 1/2 NPT	M16 × 1.5

Approvals and certification

CE	The device meets the essential requirements of the EU Directives. The manufacturer certifies successful testing of the product by applying the CE marking.	
	For more data about the EU Directives and European Standards related to this device, refer to the EU Declaration of Conformity. You can download this document free of charge from the website (Download Center).	
Explosion protection		
ATEX (EU Type Approval)	II 1 G Ex ia IIC T6...T1 or II 2 G Ex ia IIC T6...T1 Gb	
	II 2 G Ex db IIC T6...T1 Gb	N/A
IECEX	Ex ia IIC T6...T1 Ga or Ex ia IIC T6...T1 Gb	
	Ex db IIC T6...T1 Gb	N/A
Other standards and approvals		
LVD	MS15 / MS40: Low-Voltage Directive (LVD)	
	MS15 NAMUR / MS40 NAMUR: N/A	
Vibration resistance	EN 60721-3-4 - vibration class 4M4 (1...200 Hz:1g, 10g shock ½ sinus: 11 ms)	

Table 2-4: MS15-series and MS40-series limit switches: technical data

- ① The ambient temperature limit is related to the process temperature. Do not put thermal insulation around the transmitter housing. Refer to the "Temperature limits: MS15-series limit switch" and "Temperature limits: MS40-series limit switch" sections in this chapter.
- ② The operating temperature is the temperature of the electronic parts

2.2 Dimensions

2.2.1 Magnetic level indicator (measuring chamber) - overall dimensions

Side - side process connections

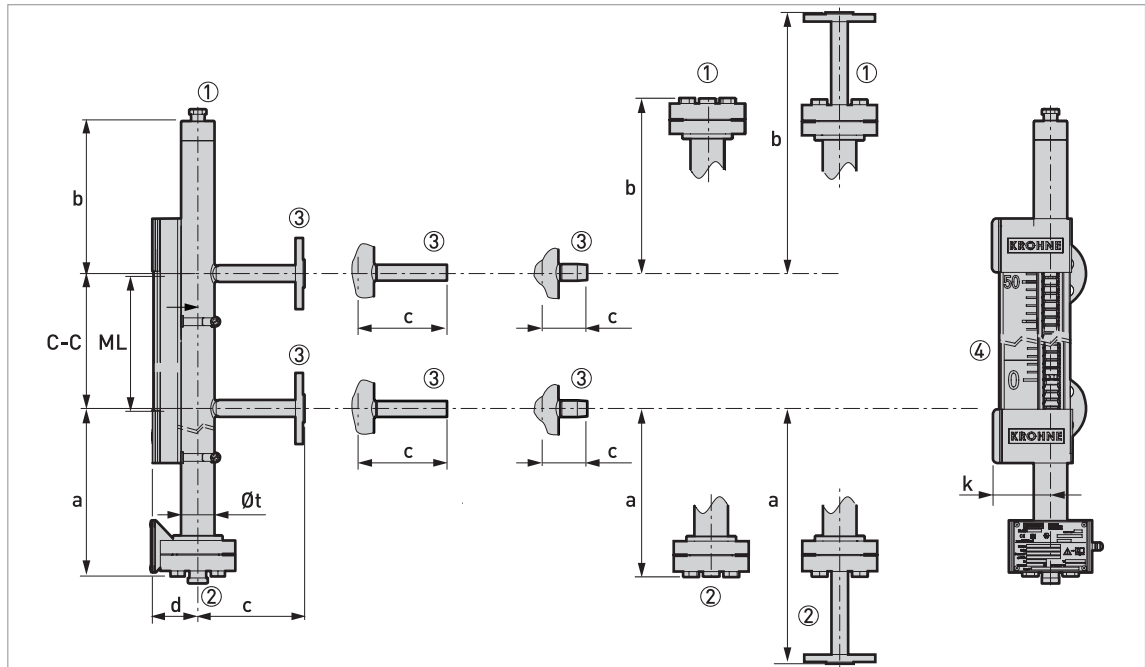


Figure 2-1: Side - side process connections

- ① Optional vent with 3/8...1/2 NPT threaded connection (with plug), G 3/8...1/2 threaded connection on a plate flange (with plug), or DN15...50 / NPS 1/2...2 flange
- ② Optional drain with 3/8...3/4 NPT threaded connection (with plug), G 3/8...3/4 threaded connection on a plate flange (with plug), or DN15...50 / NPS 1/2...2 flange
- ③ Process connection (flange, welded pipe, or pipe with male threaded connection)
- ④ Level indicator column with optional scale (mm, inch, simplified % or volume)

- a = distance from the center axis of the bottom connection to the bottom of the device
- b = distance from the center axis of the top connection to the top of the device
- $C-C$ = distance between the center axes of the top and bottom process connections
- ML = measuring length

If the magnetic level indicator has the flanged vent and drain options, these flanges have the same pressure rating as the flanges for the process connections.

Other dimensions are available on request.

Liquid density [kg/m ³]	Dimensions [mm]							
	a	b	C-C	ML	c	d	k	Øt
700...950	①	228 ②	300...5500 ③	③	④	55.5 ⑤	74	42.4
950...1200	⑥							

Table 2-5: Side - side process connections: general dimensions in mm

- ① Drain options are available. NPT connection (female) + plug: 299 mm. G connection (female) + plug: 291 mm. Flange: 399 mm.
 ② Vent options are available. NPT connection (female) + plug: 228 mm. NPT or G connection (female) + plug: 220 mm. Flange: 328 mm.
 ③ This value agrees with the "C-C" dimension given in the customer order
 ④ NPT or G connection (male): 58 mm. Welded pipe: 130 mm. Flange: 135 mm.
 ⑤ If the indicator column has the PLEXIGLAS® anti-icing cover option, then d = 85.5 mm
 ⑥ Drain options are available. NPT connection (female) + plug: 255 mm. G connection (female) + plug: 247 mm. Flange: 355 mm.

Liquid density [lb/ft ³]	Dimensions [inches]							
	a	b	C-C	ML	c	d	k	Øt
43.70...59.31	①	8.98 ②	11.8...216.5 ③	③	④	2.2 ⑤	2.9	1.67
59.31...74.91	⑥							

Table 2-6: Side - side process connections: general dimensions in inches

- ① Drain options are available. NPT connection (female) + plug: 11.77". G connection (female) + plug: 11.46". Flange: 15.71".
 ② Vent options are available. NPT connection (female) + plug: 8.98". NPT or G connection (female) + plug: 8.66". Flange: 12.91".
 ③ This value agrees with the "C-C" dimension given in the customer order
 ④ NPT or G connection (male): 2.28". Welded pipe: 5.12". Flange: 5.31".
 ⑤ If the indicator column has the PLEXIGLAS® anti-icing cover option, then d = 3.4"
 ⑥ Drain options are available. NPT connection (female) + plug: 10.04". G connection (female) + plug: 9.72". Flange: 13.98".

Axial - axial process connections

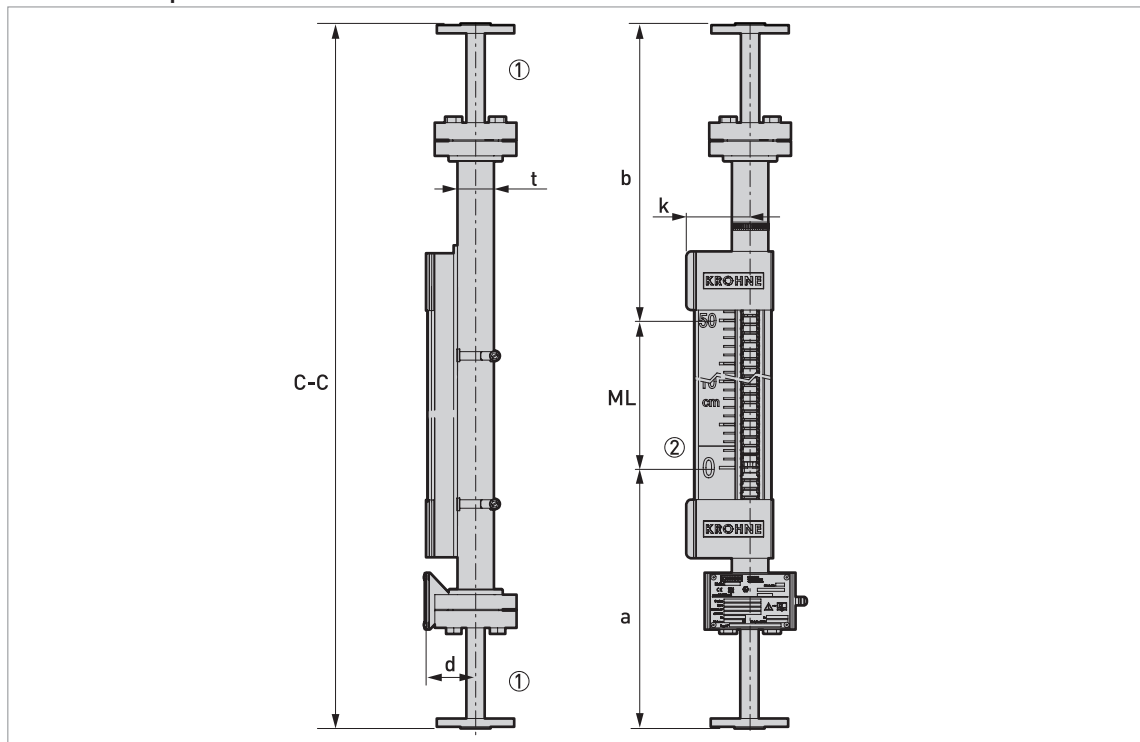


Figure 2-2: Axial - axial process connections

- ① Process connection (flange)
- ② Level indicator column with optional scale (mm, inch, simplified % or volume)

- *a* = bottom dead zone
- *b* = top dead zone
- *C-C* = distance between the flange facings of the top and bottom process connections
- *ML* = measuring length

Other dimensions are available on request.

Liquid density [kg/m ³]	Dimensions [mm]						
	a	b	C-C	ML	d	k	Øt
700...950	390	250	300...5500 ①	C-C - 640	55.5 ②	74	42.4
950...1200	340	250		C-C - 590			

Table 2-7: Axial - axial process connections: general dimensions in mm

① This value agrees with the "C-C" dimension given in the customer order

② If the indicator column has the PLEXIGLAS® anti-icing cover option, then d = 85.5 mm

Liquid density [lb/ft ³]	Dimensions [inches]						
	a	b	C-C	ML	d	k	Øt
43.70...59.31	15.35	9.84	11.8...216.5 ①	C-C - 25.20	2.2 ②	2.9	1.67
59.31...74.91	13.39			C-C - 23.23			

Table 2-8: Axial - axial process connections: general dimensions in inches

① This value agrees with the "C-C" dimension given in the customer order

② If ambient temperature is -76...-4°F: 3.4" (level indicator column with a PLEXIGLAS® anti-icing cover)

Top side - bottom axial process connections

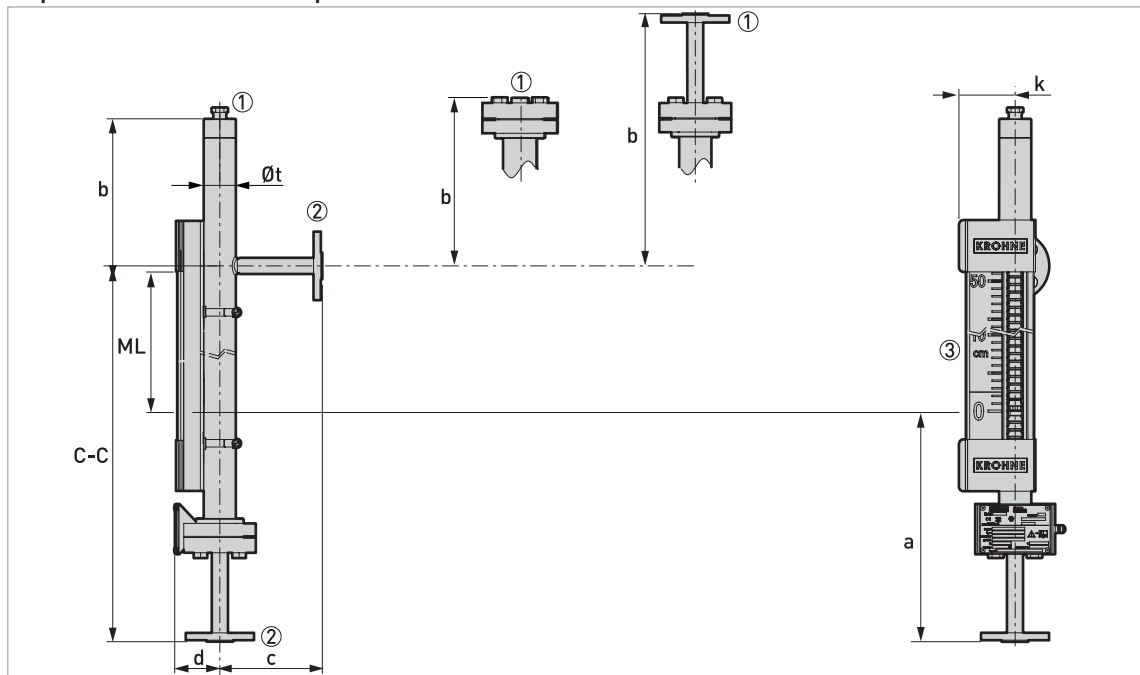


Figure 2-3: Top side - bottom axial process connections

- ① Optional vent with 3/8...1/2 NPT threaded connection (with plug), G 3/8...1/2 threaded connection on a plate flange (with plug), or DN15...50 / NPS 1/2...2 flange
- ② Process connection (flange)
- ③ Level indicator column with optional scale (mm, inch, simplified % or volume)

- a = bottom dead zone
- b = distance from the center axis of the top process connection to the top of the device
- $C-C$ = distance between the center axis of the top process connection and the flange facing of the bottom process connection
- ML = measuring length

If the magnetic level indicator has the flanged vent option, this flange has the same pressure rating as the flanges for the process connections.

Other dimensions are available on request.

Liquid density [kg/m ³]	Dimensions [mm]							
	a	b	C-C	ML	c	d	k	Øt
700...950	400	228 ①	300...5500 ②	C-C - 400	③	55.5 ④	74	42.4
950...1200	360			C-C - 360				

Table 2-9: Top side - bottom axial process connections: general dimensions in mm

① Vent options are available. NPT connection (female) + plug: 228 mm. G connection (female) + plug: 220 mm. Flange: 328 mm.

② This value agrees with the "C-C" dimension given in the customer order

③ EN flange, type B: 135.2 mm. EN flange, type C: 134.7 mm. EN flange, type E: 135.2 mm.

④ If the indicator column has the PLEXIGLAS® anti-icing cover option, then d = 85.5 mm

Liquid density [lb/ft ³]	Dimensions [inches]							
	a	b	C-C	ML	c	d	k	Øt
43.70...59.31	15.75	8.98 ①	11.8...216.5 ②	C-C - 15.75	③	2.2 ④	2.9	1.67
59.31...74.91	14.17			C-C - 14.17				

Table 2-10: Top side - bottom axial process connections: general dimensions in inches

① Vent options are available. NPT connection (female) + plug: 8.98". G connection (female) + plug: 8.66". Flange: 12.91".

② This value agrees with the "C-C" dimension given in the customer order

③ EN flange, type B: 5.32". EN flange, type C: 5.30". EN flange, type E: 5.32".

④ If the indicator column has the PLEXIGLAS® anti-icing cover option, then d = 3.4"

Top axial - bottom side process connections

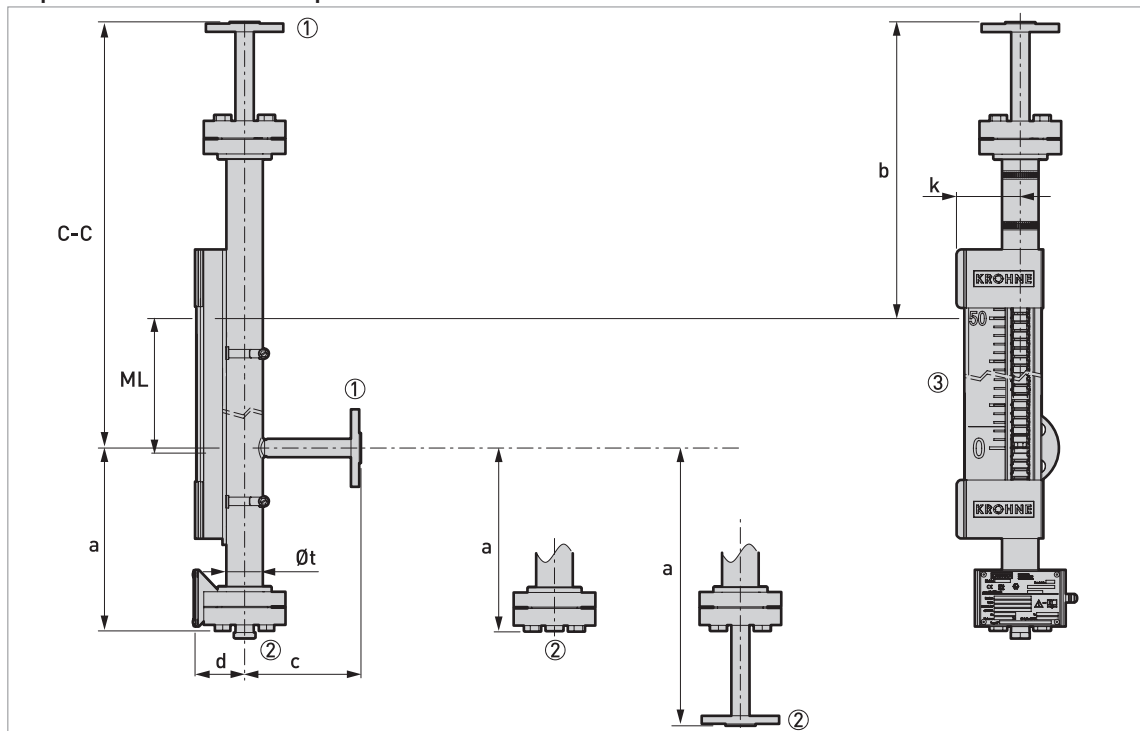


Figure 2-4: Top axial - bottom side process connections

- ① Process connection (flange)
- ② Optional drain with 3/8...3/4 NPT threaded connection (with plug), G 3/8...3/4 threaded connection on a plate flange (with plug), or DN15...50 / NPS 1/2...2 flange
- ③ Level indicator column with optional scale (mm, inch, simplified % or volume)

- *a* = distance from the center axis of the bottom process connection to the bottom of the device
- *b* = top dead zone
- *C-C* = distance between the flange facing of the top process connection and the center axis of the bottom process connection
- *ML* = measuring length

If the magnetic level indicator has the flanged drain option, this flange has the same pressure rating as the flanges for the process connections.

Other dimensions are available on request.

Liquid density [kg/m ³]	Dimensions [mm]							
	a	b	C-C	ML	c	d	k	Øt
700...950	①	330	300...5500 ②	C-C - 330	135	55.5 ③	74	42.4
950...1200	④							

Table 2-11: Top axial - bottom side process connections: general dimensions in mm

① Drain options are available. NPT connection (female) + plug: 299 mm. G connection (female) + plug: 291 mm. Flange: 399 mm.

② This value agrees with the "C-C" dimension given in the customer order

③ If the indicator column has the PLEXIGLAS® anti-icing cover option, then d = 85.5 mm

④ Drain options are available. NPT connection (female) + plug: 255 mm. G connection (female) + plug: 247 mm. Flange: 355 mm.

Liquid density [lb/ft ³]	Dimensions [inches]							
	a	b	C-C	ML	c	d	k	Øt
43.70...59.31	①	12.99	11.8...216.5 ②	C-C - 12.99	5.31	2.2 ③	2.9	1.67
59.31...74.91	④							

Table 2-12: Top axial - bottom side process connections: general dimensions in inches

① Drain options are available. NPT connection (female) + plug: 11.77". G connection (female) + plug: 11.46". Flange: 15.71".

② This value agrees with the "C-C" dimension given in the customer order

③ If the indicator column has the PLEXIGLAS® anti-icing cover option, then d = 3.4"

④ Drain options are available. NPT connection (female) + plug: 10.04". G connection (female) + plug: 9.72". Flange: 13.98".

2.2.2 Options

LT40 C reed-chain level transmitter (compact version)

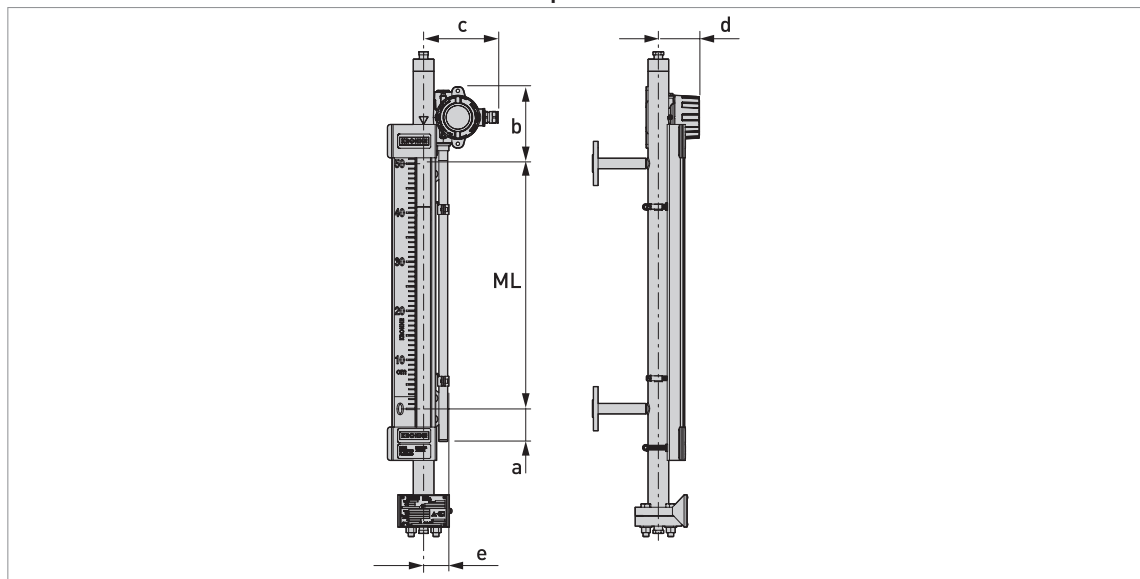


Figure 2-5: LT40 C reed-chain level transmitter (compact version)

Dimensions [mm]					
a	b	c	ML	d	e
66.5	157	153	300...5500	84	50

Table 2-13: LT40 C reed-chain level transmitter: dimensions in mm

Dimensions [inches]					
a	b	c	ML	d	e
2.6	6.2	6.0	11.8...216.5	3.3	2.0

Table 2-14: LT40 C reed-chain level transmitter: dimensions in inches

LT40 F reed-chain level transmitter (remote version)

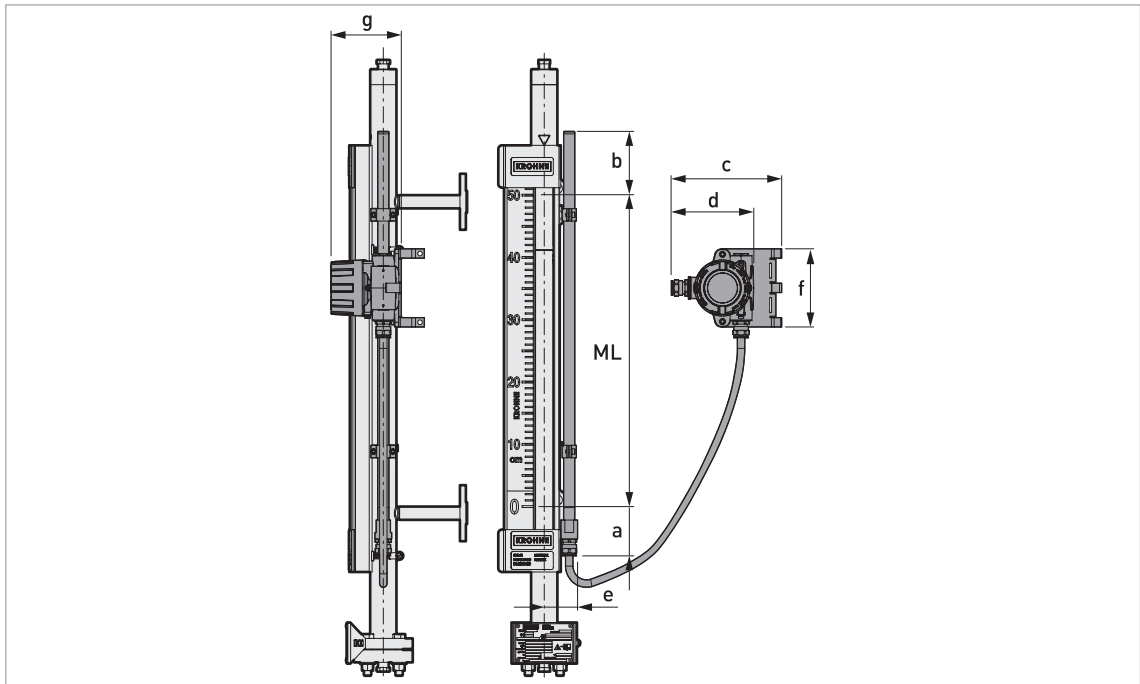


Figure 2-6: LT40 F reed-chain level transmitter (remote version)

Dimensions [mm]							
a	b	c	d	ML	e	f	g
66.5	157	176	133	300...5500	50	125.5	62

Table 2-15: LT40 F reed-chain level transmitter: dimensions in mm

Dimensions [inches]							
a	b	c	d	ML	e	f	g
2.62	6.18	6.93	5.24	11.8...216.5	1.97	4.94	2.44

Table 2-16: LT40 F reed-chain level transmitter: dimensions in inches

Support for the LT40 F reed-chain level transmitter

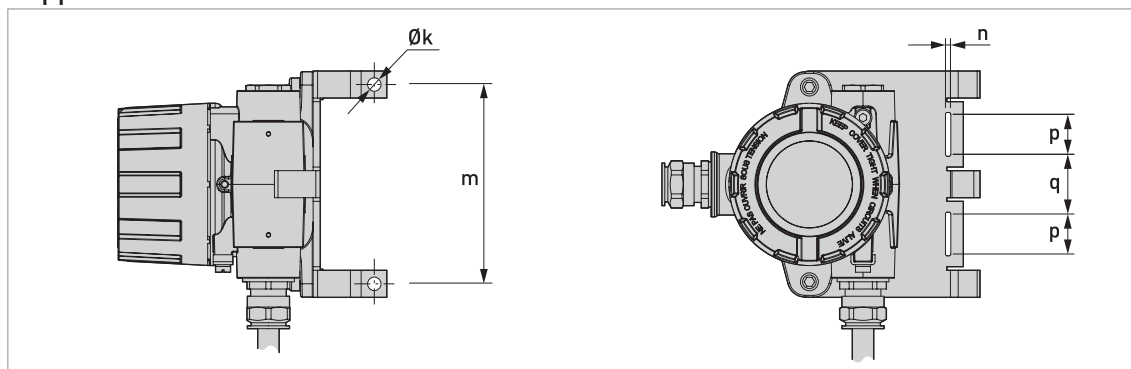


Figure 2-7: Support for the LT40 F reed-chain level transmitter

Dimensions [mm]				
Øk	m	n	p	q
7.5	107.75	3	24.25	31

Table 2-17: Support for the LT40 F reed-chain level transmitter: dimensions in mm

Dimensions [inches]				
Øk	m	n	p	q
0.30	4.24	0.12	0.95	1.22

Table 2-18: Support for the LT40 F reed-chain level transmitter: dimensions in inches

MS15 -series and MS40-series limit switches

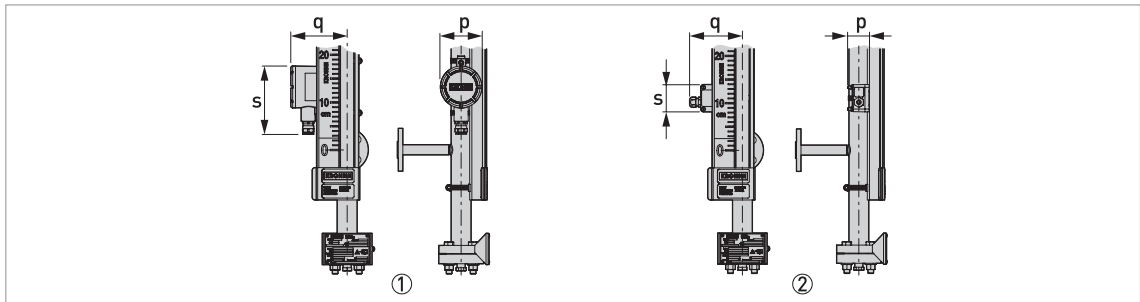


Figure 2-8: MS15-series and MS40-series limit switches

- ① Magnetic level indicator with an MS15-series limit switch
 ② Magnetic level indicator with an MS40-series limit switch

Limit switch version	Dimensions [mm]		
	p	q	s
MS15 series	88	122.7	143.5
MS40 series	46	108.7	56

Table 2-19: MS15-series and MS40-series limit switches: dimensions in mm

Limit switch version	Dimensions [inches]		
	p	q	s
MS15 series	3.46	4.83	5.65
MS40 series	1.81	4.28	2.20

Table 2-20: MS15-series and MS40-series limit switches: dimensions in inches

2.2.3 Accessories

Support bracket

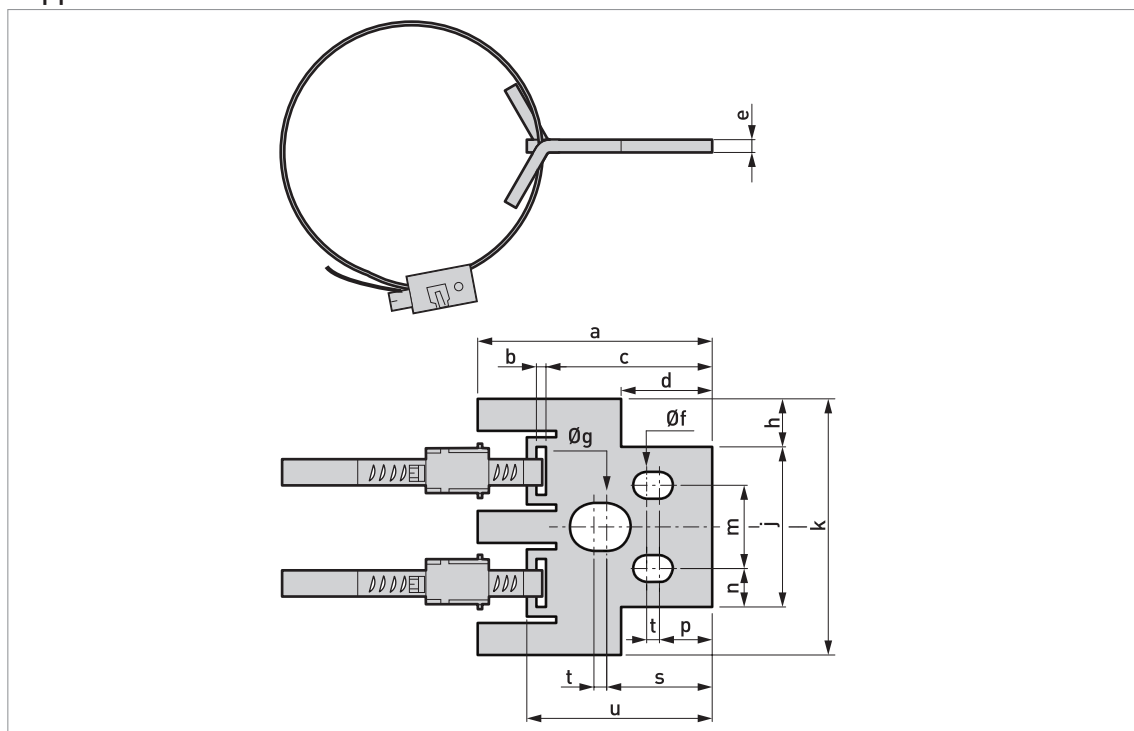


Figure 2-9: Support bracket

The support bracket is an accessory. If necessary, send an order to your supplier.

	Dimensions [mm]															
	a	b	c	d	e	Øf	Øg	h	j	k	m	n	p	s	t	u
Support bracket	73	3	52	28.5	4	8.4	15	15	50	80	26	12	16.5	33	4	58

Table 2-21: Support bracket: dimensions in mm

	Dimensions [inches]															
	a	b	c	d	e	Øf	Øg	h	j	k	m	n	p	s	t	u
Support bracket	2.87	0.12	2.05	1.12	0.16	0.33	0.59	0.59	1.97	3.15	1.02	0.47	0.65	1.30	0.16	2.28

Table 2-22: Support bracket: dimensions in inches

2.3 Maximum process pressure: measuring chamber

Do not use the device at a process pressure more than the maximum limit for a given process temperature.

Maximum process pressure [bar] for a given maximum process temperature [°C]

Standard	Pressure rating	Maximum process temperature [°C]							
		-70	-20	+20	+38	+50	+100	+150	+200
		Maximum process pressure [bar]							
EN 1092-1	PN40	40	40	40	40	40	40	36.3	33.7
ASME B16.5	Class 150	19	19	19	19	18.4	16	14.8	13.6
	Class 300	40	40	40	40	40	40	36.3	33.7
ISO 228-1	G	40	40	40	40	40	40	36.3	33.7
ASME B1.20.1	NPT	40	40	40	40	40	40	36.3	33.7
ASME B36.19M	10S	40	40	40	40	40	40	36.3	33.7

Table 2-23: Maximum process pressure [barg] for a given maximum process temperature [°C]

Maximum process pressure [psig] for a given maximum process temperature [°F]

Standard	Pressure rating	Maximum process temperature [°F]							
		-94	-4	+68	+100.4	+122	+212	+302	+392
		Maximum process pressure [psig]							
EN 1092-1	PN40	580.2	580.2	580.2	580.2	580.2	580.2	526.5	488.8
ASME B16.5	Class 150	275.6	275.6	275.6	275.6	266.9	232.1	214.7	197.3
	Class 300	580.2	580.2	580.2	580.2	580.2	580.2	526.5	488.8
ISO 228-1	G	580.2	580.2	580.2	580.2	580.2	580.2	526.5	488.8
ASME B1.20.1	NPT	580.2	580.2	580.2	580.2	580.2	580.2	526.5	488.8
ASME B36.19M	10S	580.2	580.2	580.2	580.2	580.2	580.2	526.5	488.8

Table 2-24: Maximum process pressure [psig] for a given maximum process temperature [°F]

2.4 Temperature limits: LT40 C/F reed-chain level transmitter

Do not use the device at an ambient temperature more than the maximum limit for a given process temperature. Do not use the device at an ambient temperature less than the minimum limit for a given process temperature.

The temperature limit calculations for these graphs do not include thermal insulation.

2.4.1 LT40 without an LCD indicator module

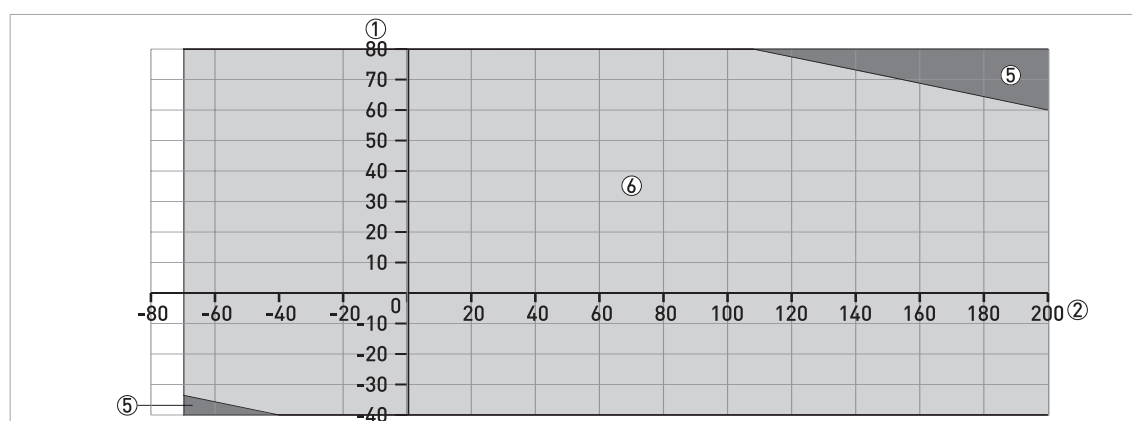


Figure 2-10: Ambient temperature / process temperature - LT40 without an LCD indicator module, in °C

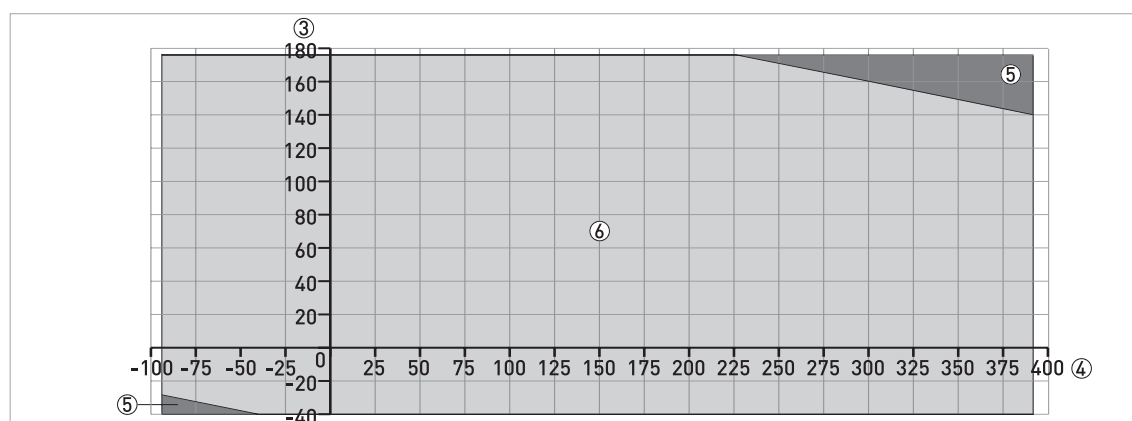


Figure 2-11: Ambient temperature / process temperature - LT40 without an LCD indicator module, in °F

- ① Ambient temperature, °C
- ② Process temperature, °C
- ③ Ambient temperature, °F
- ④ Process temperature, °F
- ⑤ LT40 F - without thermal insulation
- ⑥ LT40 C and LT40 F - without thermal insulation

2.4.2 LT40 with an LCD indicator module

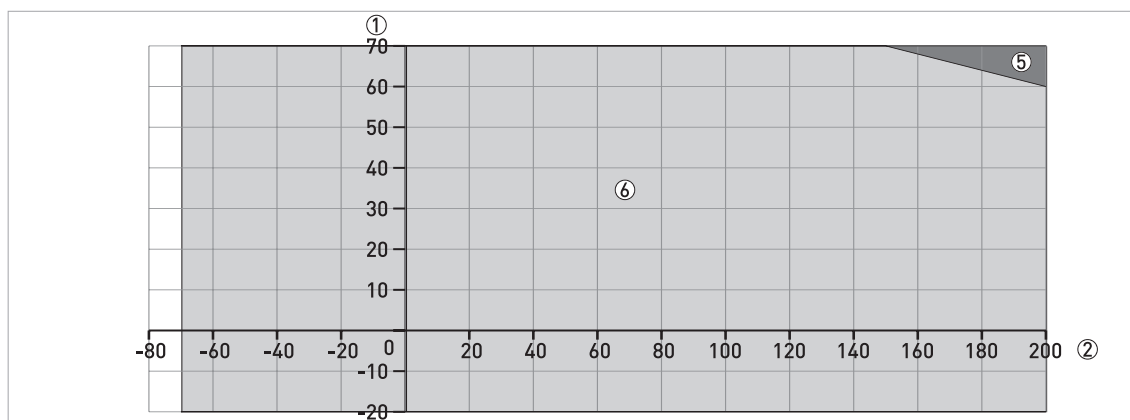


Figure 2-12: Ambient temperature / process temperature - LT40 with an LCD indicator module, in °C

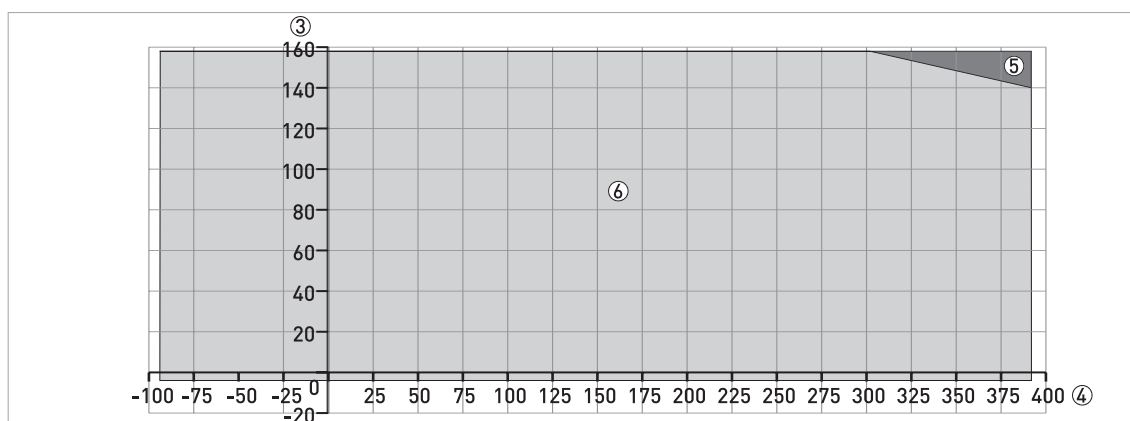


Figure 2-13: Ambient temperature / process temperature - LT40 with an LCD indicator module, in °F

- ① Ambient temperature, °C
- ② Process temperature, °C
- ③ Ambient temperature, °F
- ④ Process temperature, °F
- ⑤ LT40 F - without thermal insulation
- ⑥ LT40 C and LT40 F - without thermal insulation

2.5 Temperature limits: MS15-series limit switch

Do not use the device at an ambient temperature more than the maximum limit for a given process temperature. Do not use the device at an ambient temperature less than the minimum limit for a given process temperature.

The temperature limit calculations for these graphs do not include thermal insulation.

2.5.1 Aluminium housing

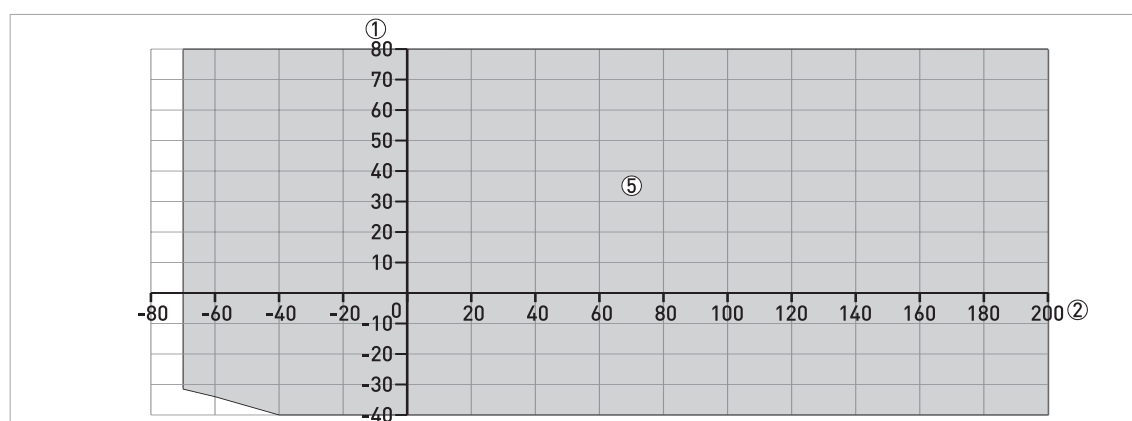


Figure 2-14: MS15 series - aluminium housing: ambient temperature / process temperature, in °C

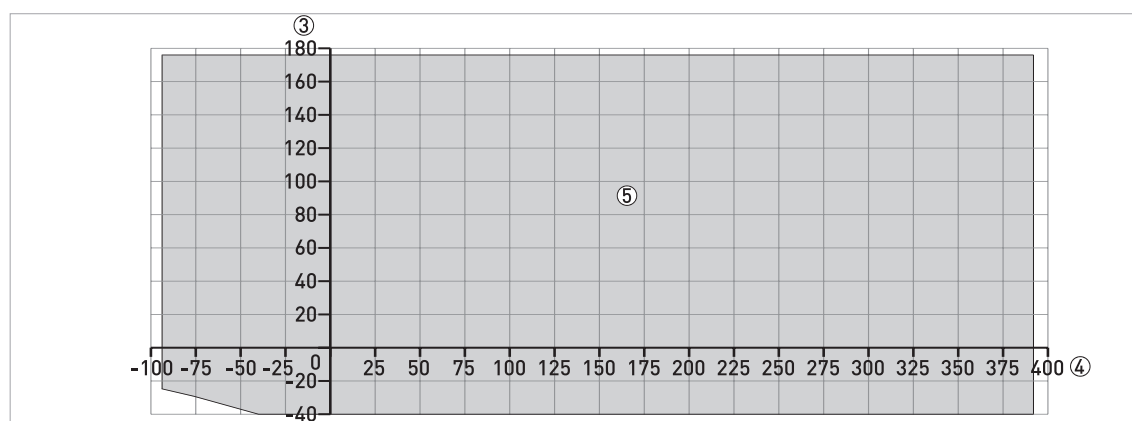


Figure 2-15: MS15 series - aluminium housing: ambient temperature / process temperature, in °F

- ① Ambient temperature, °C
- ② Process temperature, °C
- ③ Ambient temperature, °F
- ④ Process temperature, °F
- ⑤ MS15-series limit switch - without thermal insulation

2.5.2 Stainless-steel housing

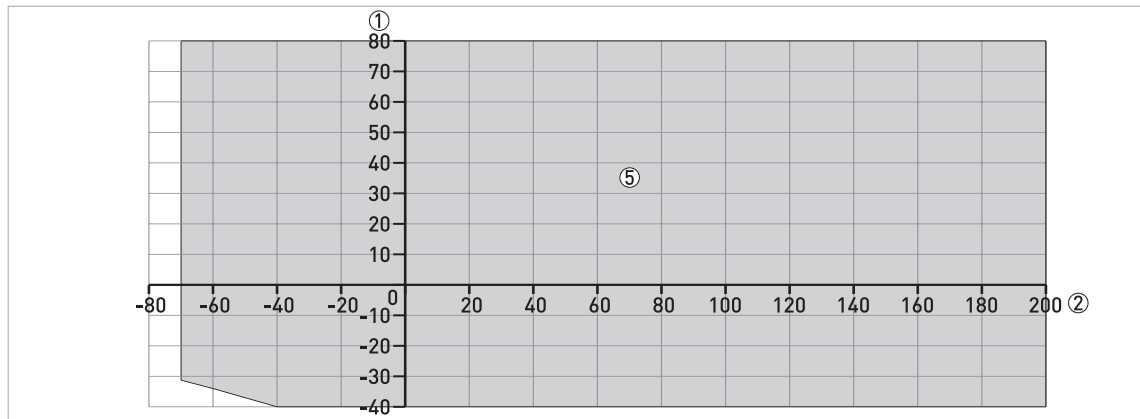


Figure 2-16: MS15 series - stainless-steel housing: ambient temperature / process temperature, in °C

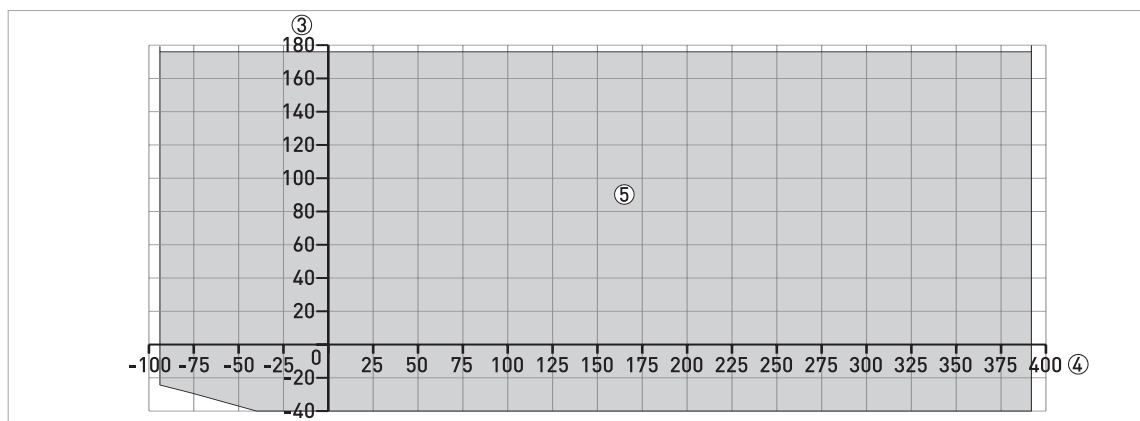


Figure 2-17: MS15 series - stainless-steel housing: ambient temperature / process temperature, in °F

- ① Ambient temperature, °C
- ② Process temperature, °C
- ③ Ambient temperature, °F
- ④ Process temperature, °F
- ⑤ MS15-series limit switch - without thermal insulation

2.6 Temperature limits: MS40-series limit switch

Do not use the device at an ambient temperature more than the maximum limit for a given process temperature. Do not use the device at an ambient temperature less than the minimum limit for a given process temperature.

The temperature limit calculations for these graphs do not include thermal insulation.

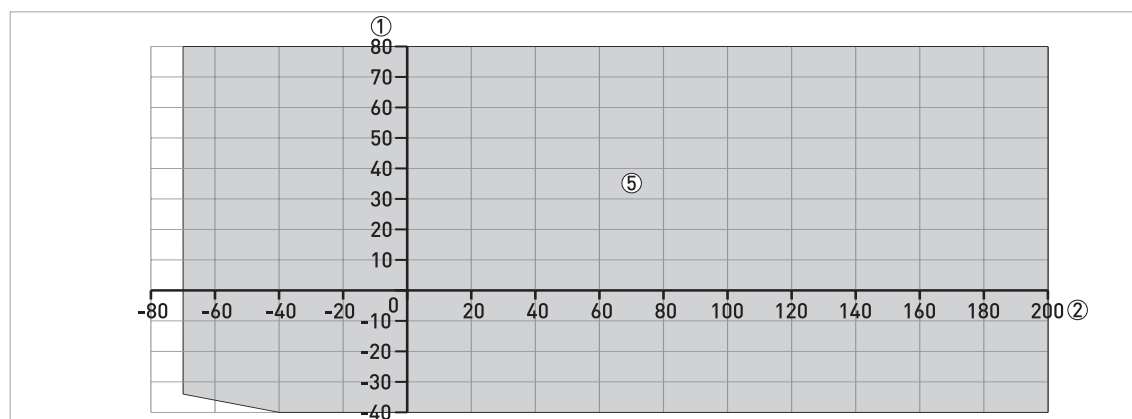


Figure 2-18: MS40 series: ambient temperature / process temperature, in °C

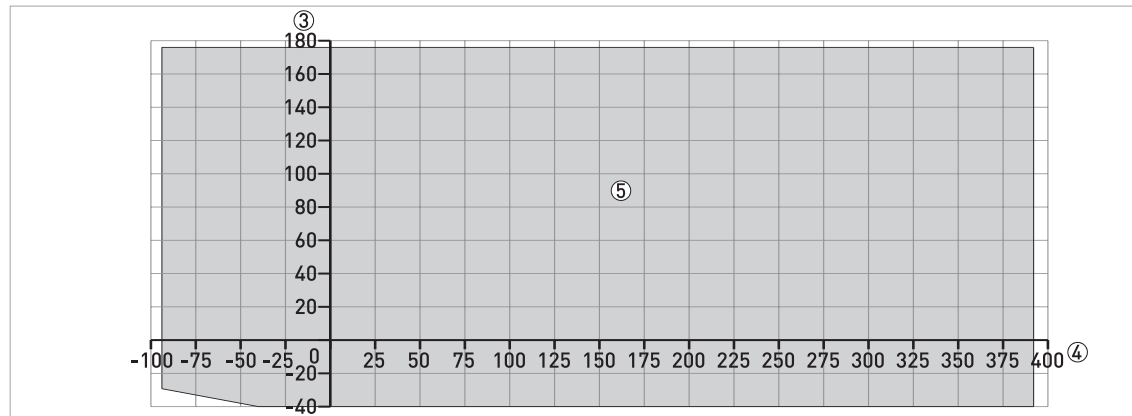


Figure 2-19: MS40 series: ambient temperature / process temperature, in °F

- ① Ambient temperature, °C
- ② Process temperature, °C
- ③ Ambient temperature, °F
- ④ Process temperature, °F
- ⑤ MS40-series limit switch - without thermal insulation

3.1 Intended use

The BM26A-1000 and BM26A- are magnetic level indicators that measure the level or volume of liquids.

The BM26A-1000 is a low-cost solution for basic applications.

These devices are installed next to open or pressurized tanks. With the applicable options, they are resistant to difficult service conditions and liquids that are poisonous or flammable.

Responsibility for the use of the measuring devices with regard to suitability, intended use and corrosion resistance of the used materials against the measured fluid lies solely with the operator.

The manufacturer is not liable for any damage resulting from improper use or use for other than the intended purpose.

3.2 Pre-installation requirements

3.2.1 General notes

Obey the installation conditions that follow. For technical data about the device, refer to *Technical data* on page 6.

Make sure that the installation conditions obey the design constraints related to PED. For more data, refer to *EU Pressure Equipment Directive* on page 36.

Other installation conditions

- Install the magnetic level indicator vertically on the tank.
- Select bolts and gaskets (not supplied) that agree with the pressure rating of the process connection and the process pressure.
- Make sure that mechanical loadings do not cause damage to the process connections. If necessary, put support brackets on the device.

Make sure that the outer surface temperature of the device is less than +60°C / +140°F. If the surface temperature is more than +60°C / +140°F, use the device with precautions that agree with health and safety rules and regulations.

Customer order data is used to adjust the device. If liquid density changes, the device will not measure correctly. For example, if liquid density decreases, then the float does not follow the surface of the liquid and goes down to the bottom of the measuring chamber.

3.2.2 Isolation valves

We recommend that you install isolation valves between the device and the tank. The device can then be easily removed from the tank for the cleaning procedure. Drain the device only when it is isolated from the tank.

3.3 EU Pressure Equipment Directive

These devices are designed, assembled and tested to agree with the EU Pressure Equipment Directive (PED). The PED conformity assessment is approved by a Notified Body.

If the device has an Ex approval, then you must obey other temperature limits. For more data, refer to the Ex supplementary instructions.

The manufacturer did a risk analysis on the device that agrees with the Pressure Equipment Directive. All personnel must know the design and operating conditions that follow to prevent the risk of damage and injury:

- This device is designed to function at almost constant pressure and temperature conditions. A maximum of 500 cycles is permitted along the full pressure range. A maximum of 2000 cycles is permitted along the full temperature range.
- This device is not designed for operating conditions where vibration or fatigue stress is present.
- Events that are not taken into account in the calculations include exceptional risks such as: earthquakes, bad weather, fire etc..
- The standard design calculation does not take into account the theoretical coefficient of corrosion. The product circulating in the device must not have properties that cause surface erosion.
- Our conformity declaration is limited to the parts of the device that are pressurized. It does not include parts that can be dismantled (valves etc.).
- The process connections must be attached correctly to prevent mechanical stress. The axis of the process connection must be parallel to and centred with the axis of the tank's process connections. Tighten the process connections in agreement with the design code.
- The user must take necessary steps to protect the installed device from shock waves (water hammer). A pressure-limiting valve must protect the installation.
- The effective pressure of the installation (the maximum pressure permitted by the pressure-limiting valve) must never be more than the maximum permitted pressure, PS. PS is marked on the device nameplate.
- Make sure that the parts in contact with the fluid are compatible with the fluid and conform to the ageing characteristics of the measurement environment and the fluid used. These have either been recommended in the instructions or form the subject of a particular specification in the contract.
- The device is designed to measure a liquid with a gas phase. It is not designed to measure liquids that change to a solid phase because of changes in pressure (solidification) and temperature (freezing), e.g. water and ice.
- Make sure that there are no magnetic particles in the liquid. These particles can have an effect on the performance of the device.
- Make sure that the size of the particles in the liquid are less than 0.05 mm / 0.002" in diameter.
- Make sure that the device is correctly sealed. Do a leakage check between the device and the tank.
- The external pressure, P_{ext} , must be equal to atmospheric pressure, P_{atmos} ($P_{ext} = P_{atmos}$).

3.4 Reed-chain level transmitter (LT40)

3.4.1 General notes

Customer order data is used to adjust the device. If liquid density changes, the device will not measure correctly. For example, if liquid density decreases, then the float does not follow the surface of the liquid and goes down to the bottom of the measuring chamber.

LT40 C

The electronics module of the compact version of the LT40 is attached to the reed-chain tube.

LT40 F

The electronics module of the remote version of the LT40 is connected the reed-chain tube by an electrical cable this a maximum of 25 m / 82 ft long. The electronics module of the remote version can be attached to a pipe with two hose clamps or attached to a wall with two bolts. Refer to the illustration that follows:

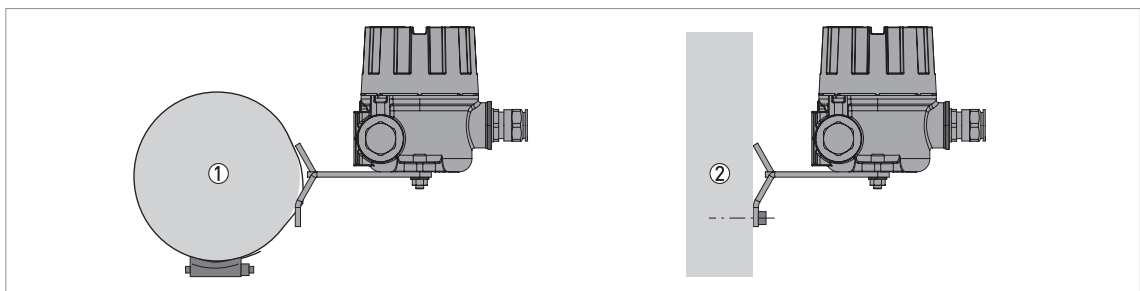


Figure 3-1: LT40 F: Installation of the housing (remote version) for the electronics module: top view

- ① The housing is attached to a tube with two hose clamps
- ② The housing is attached to a wall with two bolts

3.4.2 Thermal insulation

If you put thermal insulation around the magnetic level indicator, do not cover the housing of the reed-chain level transmitter. Make sure that there is approximately 15 mm / 0.6" of empty space between the housing and the thermal insulation.

3.5 Limit switches (MS15 series and MS40 series)

3.5.1 General notes

Limit switch condition - LOW limit:

The limit switch is open when the float moves **below** the switching point.

Limit switch condition - HIGH limit:

The limit switch is open when the float moves **above** the switching point.

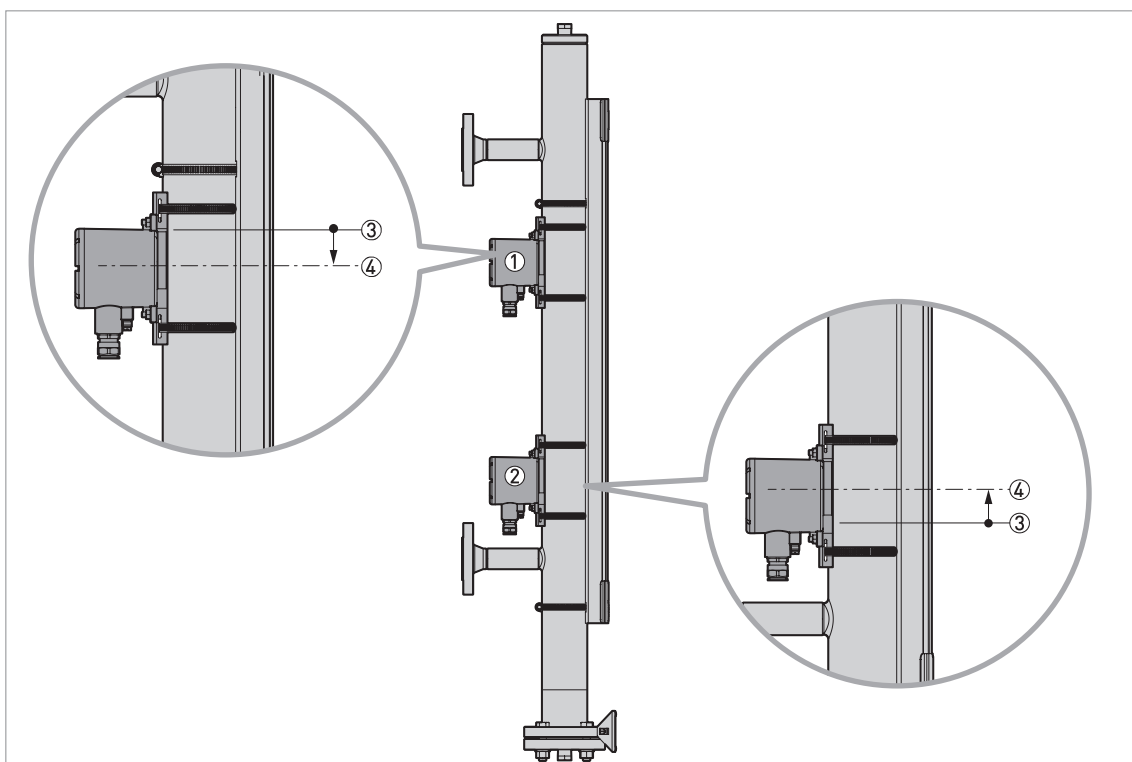


Figure 3-2: Definitions

- ① Limit switch in "HIGH limit" position
- ② Limit switch in "LOW limit" position
- ③ Switching point (the level at which the limit switch changes its condition from "closed" to "open")
- ④ Correct position of the limit switch in relation to the switching point. If it is a "HIGH limit" switch, put it below the switching point (at a distance equal to the switching point offset value). If it is a "LOW limit" switch, put it above the switching point (at a distance equal to the switching point offset value).

3.5.2 Thermal insulation

If you put thermal insulation around the magnetic level indicator, do not cover the housing of the limit switch. Make sure that there is approximately 15 mm / 0.6" of empty space between the housing and the thermal insulation.

Too much heat can cause damage to the limit switch.

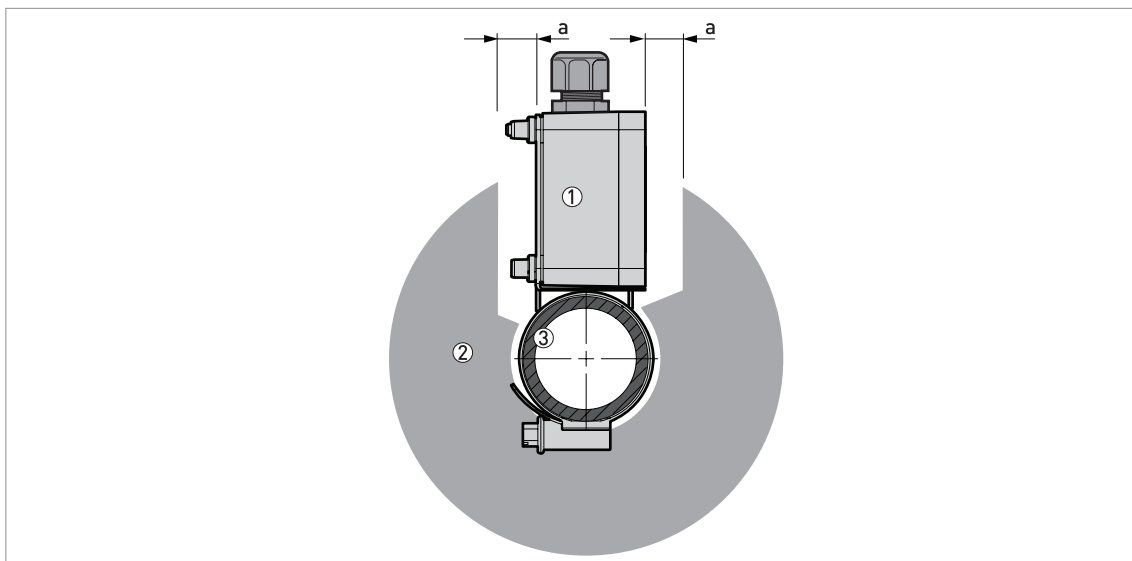


Figure 3-3: Limit switches and thermal insulation for the measuring chamber

① Limit switch housing

② Thermal insulation around the measuring chamber (cross-section)

③ Measuring chamber (cross-section)

Empty space between the limit switch and the thermal insulation for the measuring chamber, $a \geq 15 \text{ mm} / 0.6''$.

4.1 Reed-chain level transmitter

4.1.1 General notes

The reed-chain level transmitter has 4 output options:

- 4...20 mA
- 4...20 mA + HART®
- PROFIBUS PA
- FOUNDATION™ fieldbus

Obey the wiring instructions that follow.

For more data about the reed-chain level transmitter, refer to *LT40 reed-chain level transmitter* on page 9.

4.1.2 Electrical schematics and procedure

4...20 mA and 4...20 mA + HART output modules

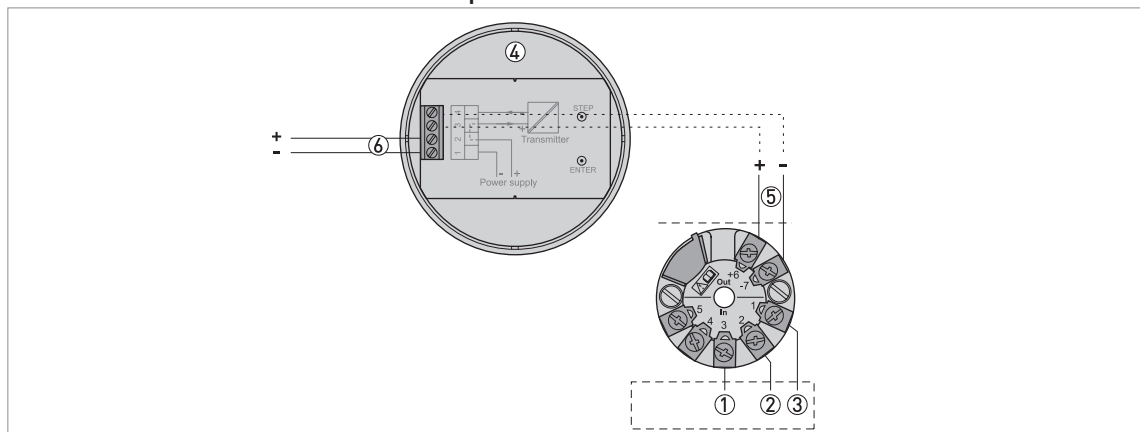


Figure 4-1: Electrical schematic for the 4...20 mA and 4...20 mA + HART output module

- ① Internal wiring - brown wire
- ② Internal wiring - red wire
- ③ Internal wiring - orange wire
- ④ Optional LCD indicator
- ⑤ Power supply terminals +/-, without LCD indicator (DC voltage range: 10...35 V (non-Ex or Ex db) or 10...30 V (Ex ia))
- ⑥ LCD indicator power supply terminals +/- (DC voltage range: 17...35 V)

If the reed-chain level transmitter has the LCD indicator option, then there is a red wire between the positive (+) terminals and a black wire between the negative (-) terminals of the output module and the LCD indicator. Use the +/- terminals on the back the LCD indicator to connect the reed-chain level transmitter to the power supply.

FOUNDATION™ fieldbus / PROFIBUS PA module

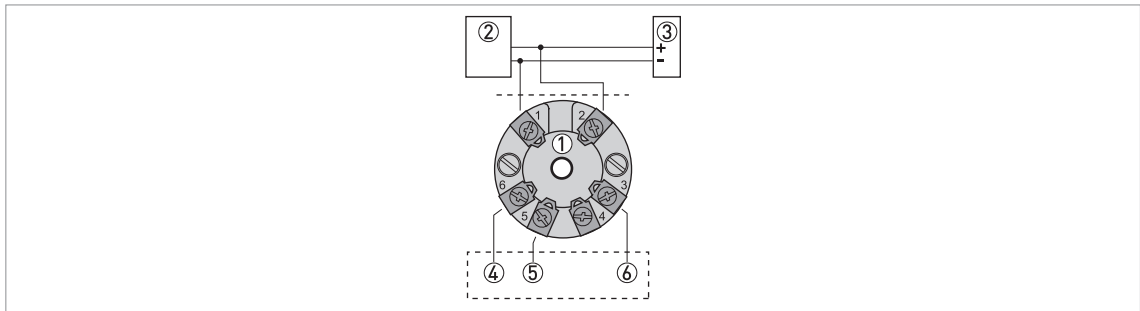


Figure 4-2: Electrical schematic for the FOUNDATION™ fieldbus / PROFIBUS PA module

- ① Bus connection terminals
- ② Segment coupler
- ③ Bus termination
- ④ Internal wiring - orange wire
- ⑤ Internal wiring - red wire
- ⑥ Internal wiring - brown wire

4.2 Limit switches

4.2.1 General notes

There are four limit switch models:

- MS15
- MS15 NAMUR
- MS40
- MS40 NAMUR

Obey the wiring instructions that follow.

For more data, refer to *MS15-series and MS40-series limit switches* on page 14.

4.2.2 Electrical schematics and procedure

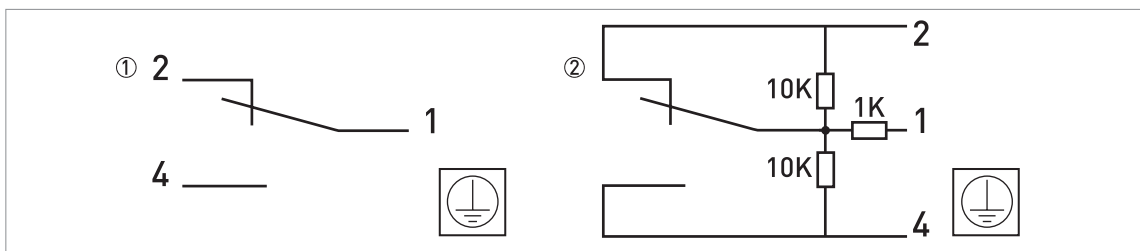


Figure 4-3: Electrical schematics for the MS15-series and MS40-series limit switches

- ① MS15 or MS40 limit switch
- ② MS15 or MS40 limit switch with a NAMUR output

If the limit switch is set to "LOW limit", make sure that it is open when the float is below the switch position. If the limit switch is set to the "HIGH limit", make sure that it is open when the float is above the switching point.





KROHNE – Products, Solutions and Services

- Process instrumentation for flow, level, temperature, pressure measurement and process analytics
- Flow metering, monitoring, wireless and remote metering solutions
- Engineering, commissioning, calibration, maintenance and training services

Head Office KROHNE Messtechnik GmbH
Ludwig-Krohne-Str. 5
47058 Duisburg (Germany)
Tel.: +49 203 301 0
Fax: +49 203 301 10389
info@krohne.com

The current list of all KROHNE contacts and addresses can be found at:
www.krohne.com

KROHNE