

Level switch

NS 64/NS 100 ..-AM



Fluidcontrol

 **IO-Link**

Forging and press technology require large fluid volumes to be moved very rapidly under high overpressure. For this purpose, hydraulic accumulators are charged with the fluid up to the required operating pressure and pressurised to release the desired volume at the correct pressure at the defined time.

The NS 64 and NS 100 series are suitable for monitoring the variable fill volumes for these systems. Available with up to 64 or 100 bar (928 or 1450 psi) pressure ratings, they indicate the desired liquid level via clearly visible sight glass float, as well as via variable switching contacts and/or continuous output position encoder. A magnetic field generated by the interior unsinkable main float moves the sight glass float. The same magnetic field also triggers the electric contacts and the position encoder.

Level switch NS for external installation

Visual and electric liquid level monitoring

Operating pressure up to 100 bar (1450 psi)

Adjustable level contacts

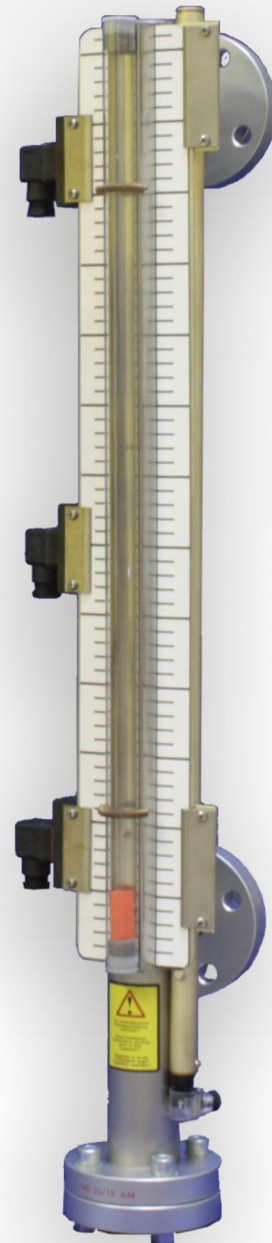
Optional analog output 4-20 mA or IO-Link

Display with scale

Compact design

Particularly buoyant floats

Special versions available upon request



Technical Data NS 64 ..-AM

Basic unit

Max. operating pressure	64 bar (928 psi)
Max. operating temperature	50 °C (122 °F)
spec. min. fluid weight	0.85 kg/dm ³ (0.031 lb/in ³)

Material

Float SK596	Plastic
Riser	1.4571
Flange	1.4541
Sight glass	PC

Connection

DIN 2637 flange	DN 25
ØD	140 (5.5")
Øk	100 (3.9")
Ød	18 (0.7")
b	22 (0.9")
ØA	68 (2.7")
h	2 (0.1")
Weight at L1=500 mm (19.7")	approx. 22 kg (48.5 lb)
Weight L1+100 mm (3.9")	approx. 0.5 kg (1.1 lb)

Other versions available upon request

Options

Continuous liquid level measurement BLT-AM or switching contacts, see below

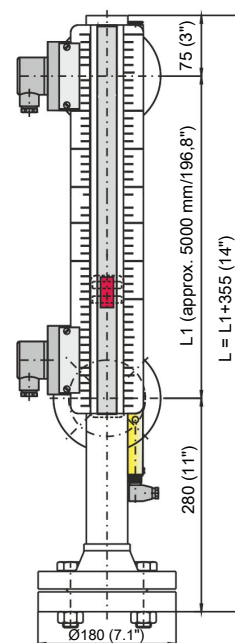
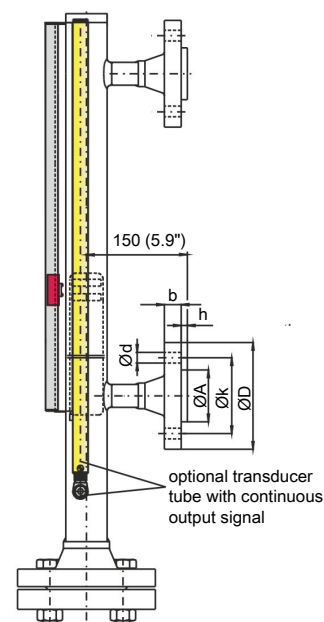
Accessories

Item no.:	Description:
2254000	Flange seal 65/25x2 mm (DN25)
2273999	Mounting bolts 8 x M16x70
9008073	Ball valve, steel DN25 PN64
9008078	Ball valve, stainless steel DN25 PN64

Pressure Equipment Directive information:

The level switches are designed, manufactured and tested to Pressure Equipment Directive 2014/68/EU according to AD-2000 code.

The actual category of the level switch achieved is printed on the type plate. Comprehensive quality assurance is performed according to module H.



Model key NS 64

Model key

Type designation/tank top installation		NS 64/25AM-XX-SK596/-XX	
No optional continuous liquid level measurement BLT-AM (max. 4650 mm/183.1") LD5 IO-Link 5 mm (0.2") resolution LD10 IO-Link 10 mm (0.4") resolution LA5 Analog 4...20 mA 5 mm (0.2") resolution LA10 Analog 4...20 mA 10 mm (0.4") resolution if not required			Length L1 = mm
			Float

Ordering example:

You need: Level switch for outdoor installation, max. operating pressure 64 bar (928 psi), with DN25 flange connection, adapter spacing L1 = 1400 mm (55.1"), with 2 changeover contacts and M3 plug connection

Order NS 64/25-AM-SK596 / 1400
2 x Item no.: 2889999 contact MKS - 1/W-M3

Ordering example with continuous liquid level measurement:

You need: Level switch for outdoor installation, operating pressure max. 64 bar (928 psi), with DN25 flange connection, transducer tube IO-Link 5 mm (0.2"), adapter spacing L1 = 1400 mm (55.1"), with 2 changeover contacts and M3 plug connection

Order NS 64/25-AM-LD5-SK596 / 1400
2 x Item no.: 2889999 contact MKS - 1/W-M3

Technical Data NS 100 ..-AM

Basic unit

Max. operating pressure	100 bar (1450 psi)
Max. operating temperature	50 °C (122 °F)
spec. min. fluid weight	0.85 kg/dm ³ (0.031 lb/in ³)

Material

Float SK596	Plastic
Riser	1.4571
Flange	1.4541
Sight glass	PC

Connection

DIN 2637 flange	DN 25
ØD	140 (5.5")
Øk	100 (3.9")
Ød	18 (0.7")
b	22 (0.9")
ØA	68 (2.7")
h	2 (0.1")
Weight at L1=500 mm (19.7")	approx. 25 kg (55.1 lb)
Weight L1+100 mm (3.9")	approx. 0.5 kg (1.1 lb)

Other versions available upon request

Options

Continuous liquid level measurement BLT-AM or switching contacts, see below

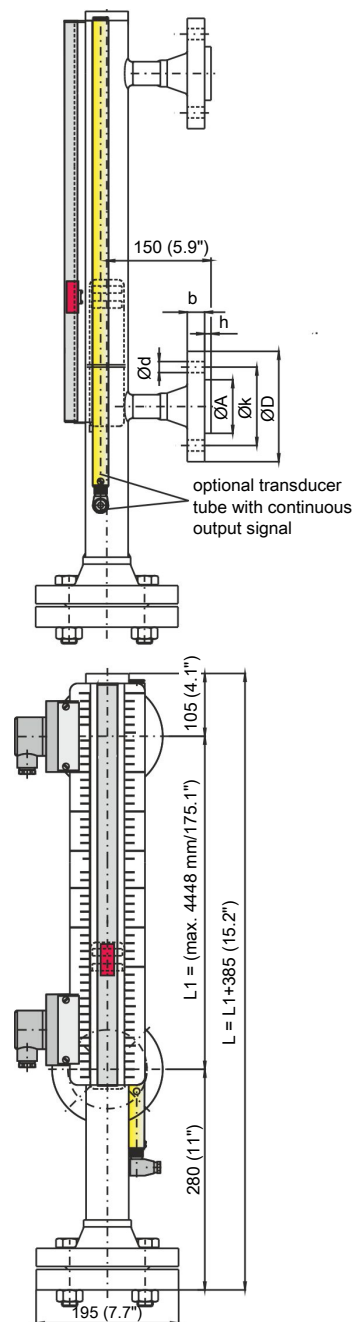
Accessories

Item no.:	Description:
2254000	Flange seal 65/25x2 mm (DN25)
2273999	Mounting bolts 8 x M16x70
9008077	Ball valve, steel DN25 PN100
9008079	Ball valve, stainless steel DN25 PN100

Pressure Equipment Directive information:

The level switches are designed, manufactured and tested to Pressure Equipment Directive 2014/68/EU according to AD-2000 code.

The actual category of the level switch achieved is printed on the type plate. Comprehensive quality assurance is performed according to module H.



Model key NS 100

Model key

Type designation/tank top installation		NS100/25AM-XX-SK596/-XX	
No optional continuous liquid level measurement BLT-AM (max. 4650 mm/183.1") LD5 IO-Link 5 mm (0.2") resolution LD10 IO-Link 10 mm (0.4") resolution LA5 Analog 4...20 mA 5 mm (0.2") resolution LA10 Analog 4...20 mA 10 mm (0.4") resolution if not required			Length L1 = mm
			Float

Ordering example:

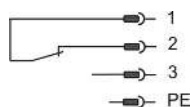
You need:	Level switch for outdoor installation, max. operating pressure 100 bar (1450 psi), with DN25 flange connection, adapter spacing L1 = 1500 mm (59.1"), continuous level output, 5 mm (0.2") resolution and with 2 changeover contacts and M3 plug connection
Order	NS 100/25-AM-K5-SK596 / 1500 2 x Item no.: 2889999 contact MKS 1/W-M3

Contacts for NS ..-AM

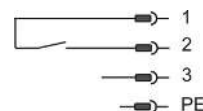
Pin assignment (Contact position empty tank)

Type	MKS-1/K-M3 (-60)
Function	NC contact/NO contact
Max. voltage	230 VAC/DC
Max. switching current	1 A
Max. contact load	50 VA
Connector	M3 (DIN EN 175301-803)
	3-pin + PE
IP class	IP 65
Item no.	2888999

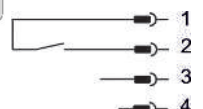
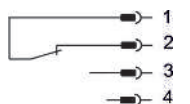
Mounted left



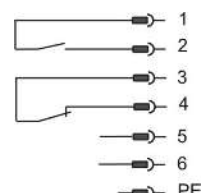
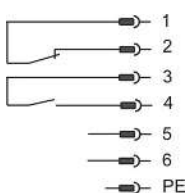
Mounted right



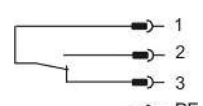
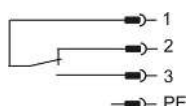
Type	MKS-1/K-M12
Function	NCC/NOC
Max. voltage	24 V DC
Max. switching current	1 A
Max. contact load	50 VA
Connector	M12 (DIN EN 61076-2-101)
	4 pol.
IP class	IP65*
Item no.	2893999



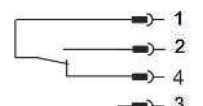
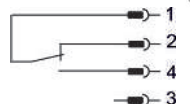
Type	MKS-2/K-S6
Function	2 x NC contact/NO contact
Max. voltage	230 VAC/DC
Max. switching current	1 A
Max. contact load	50 VA
Connector	S6
	6-pin + PE
IP class	IP 65
Item no.	2891999



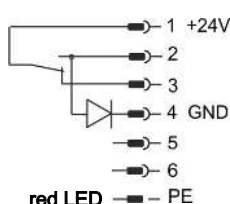
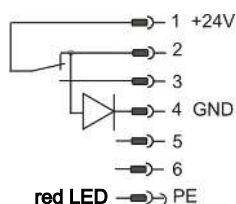
Type	MKS-1/W-M3 (-60)
Function	Changeover switch
Max. voltage	230 V AC/DC
Max. switching current	1 A
Max. contact load	50 VA
Connector	M3 (DIN EN 175301-803)
	3 pol. + PE
IP class	IP65
Item no.	2889999



Type	MKS-1/W-M12
Function	Changeover switch
Max. voltage	24 V DC
Max. switching current	1 A
Max. contact load	50 VA
Connector	M12 (DIN EN 61076-2-101)
	4 pol.
IP class	IP65*
Item no.	2889899



Type	MKS-1/W-L 24V-S6 (-60)
Function	Changeover switch with LED
Max. voltage	24 V DC
Max. switching current	1 A
Max. contact load	25 VA
Connector	S6
	6 pol. + PE
IP class	IP65
Item no.	2890999



*IP65 with cable box attached.

When installing a BLT transducer tube with continuous output signal, the contacts can only be mounted on the left.

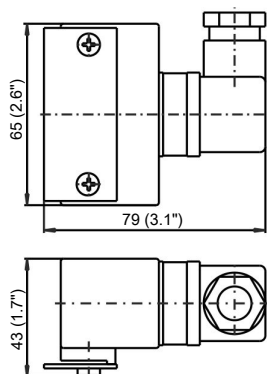
Other contacts available upon request

For applications in high shock and vibration environments we recommend using the contacts MKS-1/K-M3, MKS-1/K-M12 or MKS-2/K-S6.

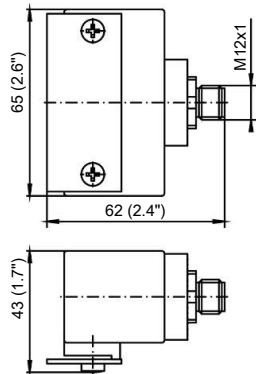
Versions ending in -60 are for switch type NS 3/20 AM and have a pipe clamp for mounting to the level switch tube.

Dimensions for contacts for NS ..-AM

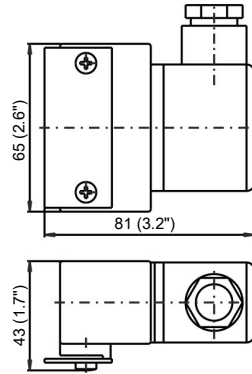
MKS-1/K-M3, MKS-1/W-M3



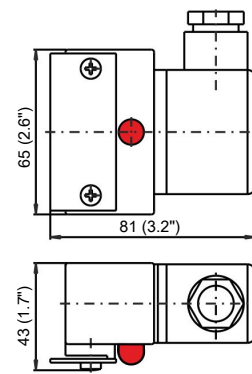
MKS-1/K-M12, MKS-1/W-M12



MKS-2/K-S6



MKS-1/W-L24V-S6



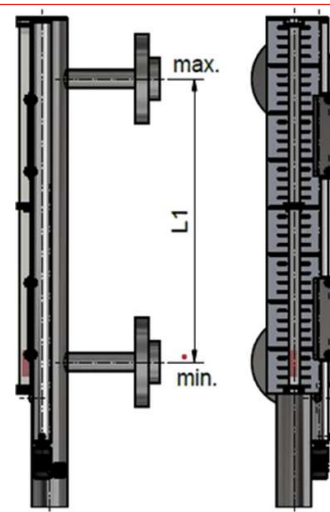
Technical Data BLT-AM

BLT-AM1(2)-LD-5(10)-1D1S-/VAR with IO-Link interface

BLT-AM1(2)-LA-5(10)-1A-/VAR with 4-20 mA output

	1D1S	1A
Transducer tube material:	Nickel-plated brass	
Ambient temperature:	-20 °C to +70 °C (-4 °F to 158 °F)	
Lengths:	L1 variable to max. 4650 mm (183.1 in)	
Input value		
Sensor element:	Reed chain 5 or 10 mm (0.2" or 0.4") resolution	
Tolerance:	±1% FS	
Operating voltage (UB):	18 - 30 VDC	10 - 30 VDC
Measuring range:	0 to 100 %	4-20 mA > 0-100 %
Output:	IO-Link	4-20 mA
IO-Link	Rev. 1.1	-
Baudrate:	COM3 (230.4k)	-
SIO Mode:	Yes	-
Min. Time Period	10 ms	-
Max. Load:	-	(UB-8V)/0.02 A

Dimensions



Standard Pin Assignment BLT-AM

Connector	M12 (base)	M12 (base)
Number of pins	4-pin	4-pin
DIN EN 61076-2-101	30 VDC	30 VDC
IP rating with IP67 cable box attached	IP67	IP67
Version	1D1S	1A
Connection schematic		
	1D1S (IO-Link)	1A (4-20 mA)
1	+24 VDC	+24 VDC
2	S2 (PNP max. 200 mA)	OUT 4-20 mA
3	GND	GND
4	C/Q (IO-Link)	NC