771 XS VALVE WITH SF SWITCH BOX

FEATURES

The 2-way 771 XS (stainless steel) ball valve + SF is intended for the manual shut-off of networks for industrial fluids to 16 bar, providing position display and feedback information control. The narrow "flange-to-flange" design of the valve makes it possible to lighten installations compared to traditional "flange" models.Le passage est intégral et le robinet est homologué CE et ATEX. The SF switch box is equipped, as standard, with 2 dry contacts. Due to its IP67 leak-tightness, it can be installed both indoors and outdoors. Different contacts and detectors are available as options.

IR 3 | 3.1 Cert. | CE 0035

AVAILABLE MODELS

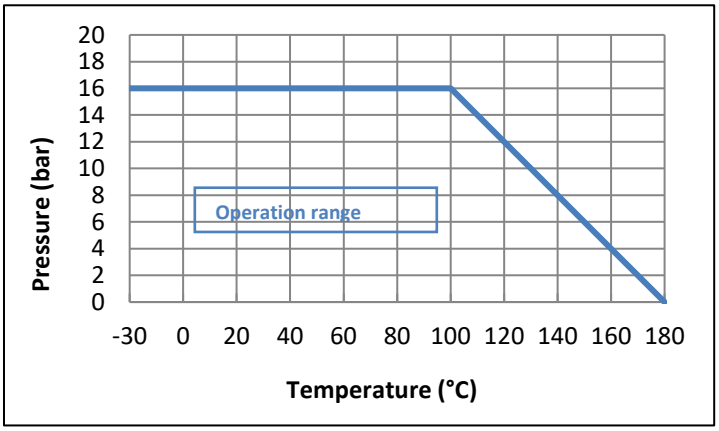
1.4408 SS body.

DN15 to DN100 diameters.

Mounting between flanges PN16 RF.

LIMITS OF USE

Fluid pressure : WP	16 bar (20°C)
Fluid temperature : WT°	-30°C / +180°C
Ambiant temperature	-20°C / +80°C
IP Code	IP 67



DIRECTIVES AND MANUFACTURING STANDARDS

OBJET	Norme	ON	OBJET	Norme
Pressure Equipment Directive 2014/68/EC	DN15 to 20: not subject		Final test	EN 12266
	DN25 to 100: category III	TÜV 0035	Material certificate	EN 10204
Dimensionnement	EN 12516-1		Connection Motorisation	ISO 5211
Directive ATEX	II 2G/D Tx zones 1,2,21 et 22	SIRA 0518	Steel grades	EN 1503-1
	EN 13463-1 et 5			

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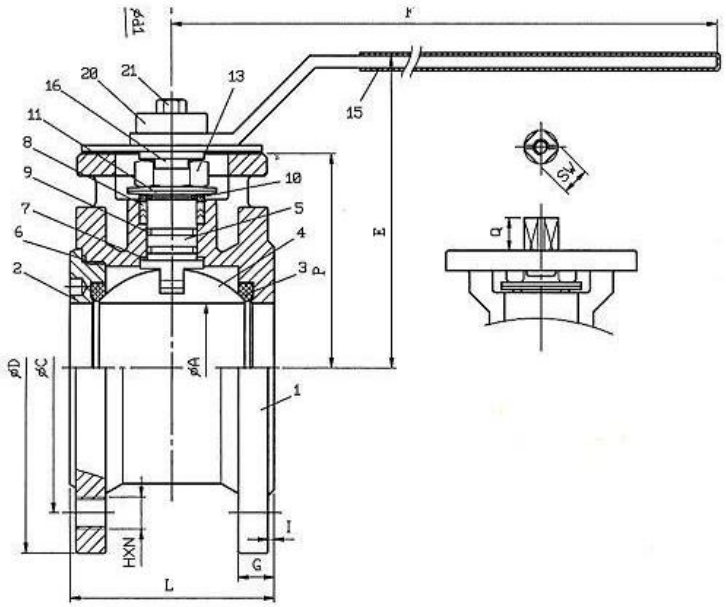
CONSTRUCTION

n°	Name	Material	n°	Name	Material
1	Body	1.4408 SS	12	Lever	304 SS
2	Flanges	1.44058 SS	13	Lever nut	304 SS
3	Seat	PTFE+15% GF	14	Stop	304 SS
4	Sphere	ASTM A276 316 SS	15	Plastic sleeve	PVC
5	Stem	ASTM A276 316 SS	16	Locking device	304 SS
6	Body gasket	PTFE	17	Spring	316 SS
7	Stem gasket	PTFE+15% GF	18	Antistatic device	316 SS
8	Cable gland gasket	PTFE	19	Stop support	304 SS
9	O-ring	FKM	20	Spacer	304 SS
10	Spacer	304 SS	21	Screw	304 SS
11	Belleville washers	301 SS			



DIMENSIONS (mm)

DN	15	20	25	32	40	50	65	80	100
A	16	20	25	32	40	50	65	80	96
C	65	75	85	100	110	125	145	160	180
D	95	105	115	140	150	165	185	200	220
E	89	89	101	112	116	125	154	165	180
F	114	114	187	187	222	222	350	350	350
G	14	16	16	16	16	18	18	20	20
H x N	M12x4	M12x4	M12x4	M16x4	M16x4	M16x4	M16x4	M16x8	M16x8
L	42	44	50	54	68	82	103	122	152
I	2	2	2	2	3	3	3	3	3
P	54	56	62.5	72	78	87.2	107	117,3	132.3
Weight (kg)	1.45	1.92	2.60	3.70	4.65	6.45	10.25	13.55	19.85

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ASSEMBLY AND MAINTAINANCE INSTRUCTIONS

1 - Installation

1.1 - Checks

- Check that the material of the valve body is chemically compatible with the fluid.
- Check that the pressure and service conditions are compatible with the (P, T) diagram of the valve. See § “Service limits”
- Check that the fluid is clean and free of particles. The latter could scratch the ball and damage the seats, hence causing the valve to leak. If need be, install an upstream filter.
- Check that there is no risk of thermal expansion of the fluid, which could damage the seats. In the open position, a hole at the top of the ball balances the pressures between the body cavity and the flow of the fluid. As an option, we recommend a relief hole upstream of the valve for equalising the pressures for fluids such as ammonia, LPG, chlorine, etc.
- Check that the valve is not used for flow or pressure control since it is not intended for this use and there is a risk of premature wear of the seats, in particular in the event of high pressure and/or temperature. For this special application, preferably use our ‘”V-port” 746XS version with a V-shaped hole in the ball. Please contact us.
- Check that the valve is not used on a gas which might condense at certain times during the process. In such a case, the pressure within the body cavity could become negative, which could lead to a significant deformation of the seats. Please contact us.
- Static electricity: the valve will be supplied with a ball-stem-body internal electrical continuity tester. If the service conditions require the electrical continuity of the installation, check its earthing.
- Check the perfect alignment of the upstream and downstream pipe installation. Wafer-type valves such as 771XS are sensitive to this parameter. An alignment fault would lead to a ball blockage.
- Also check the pipe installation support. In the event of a fault of the latter, the valve would undergo too high mechanical stress which could lead to a ball blockage or to leaks.
- On pipe installation for hot fluids, check for the presence of an expansion compensator. Their absence would lead to a high mechanical stress which could lead to blocking the ball.
- If the valve is installed in an explosive zone, you must follow the additional “IMEVMATEX” instructions.

1.2 - Storage before installation

- Follow our general “IMESTOCK” instructions for storage.

1.3 - Installation

- Before any installation, isolate the piping upstream and downstream, depressurize the piping and bring the installation to ambient temperature. Carefully clean the piping of any particle (foreign body, dust, rust, etc.) or shavings by water rinsing or air blowing.
- For valves with a size above DN50, plan to use a hoist.
- Remove the protective masks from the valve flanges.
- Check the cleanliness of the internal surfaces of the valve and if need be, clean them.
- Direction of mounting: the valves do not have a preferred direction of mounting, unless a relief hole was drilled into the ball.
- Check that the standards for the valve flanges (PN16 as per1092-1) and the pipe installation, are the same.
- Select flange gaskets suitable for the fluid and the flange standard for the valve (PN16).

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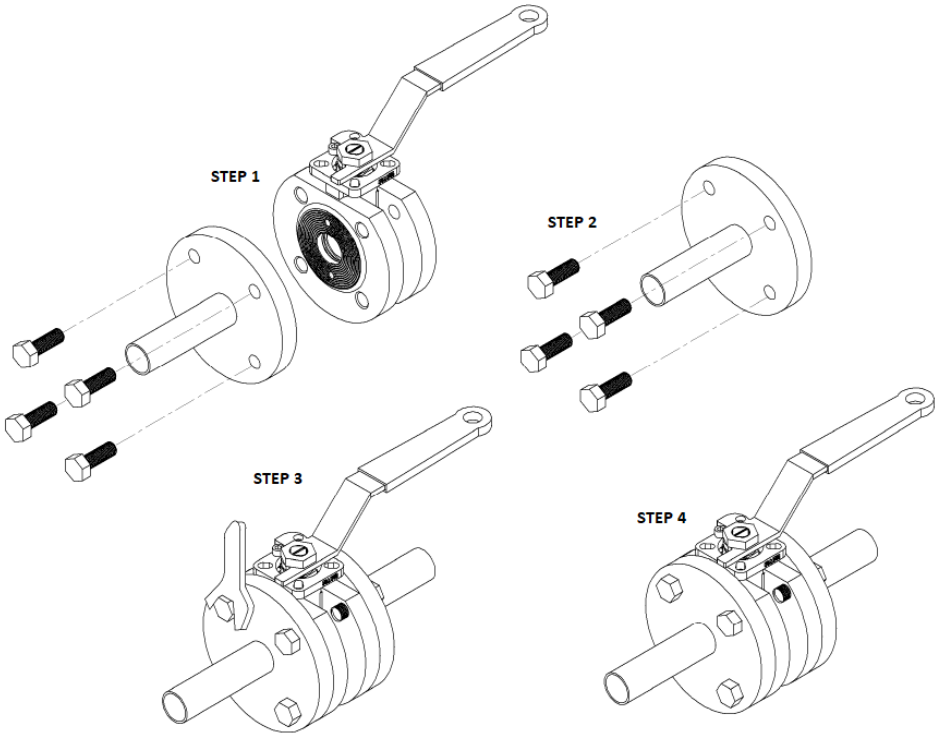
- Stock up on hex-head nuts and bolts as shown in the table below:

DN	Screw	Number	Tightening torque (Nm)	DN	Screw	Number	Tightening torque (Nm)
15	M12 x 30	4	35	50	M16 x 40	4	86
20	M12 x 35	4	35	65	M16 x 40	4	86
25	M12 x 35	4	35	80	M16 x 45	8	86
32	M16 x 35	4	86	100	M16 x 45	8	86
40	M16 x 35	4	86				

- Screw-in the screws through the flanges as shown in the diagram below and apply the torques shown in the table below. Follow a symmetrical tightening cross pattern in order to apply a uniform tightening torque on the gasket seats.



- Check the sealing of the connection using a suitable test (hydrostatic test or leak detection spray).
- Hydraulic test of the installation
  - Valves were tested at the factory at 1.5 x WP.
  - If a hydrostatic test is carried out on the installation, do not exceed the authorised pressure.

2 - Service

- If a hot fluid flows across the valve, do not touch the valve surface.
- Always operate the valve slowly and smoothly.
- Opening clockwise, closing anti-clockwise.

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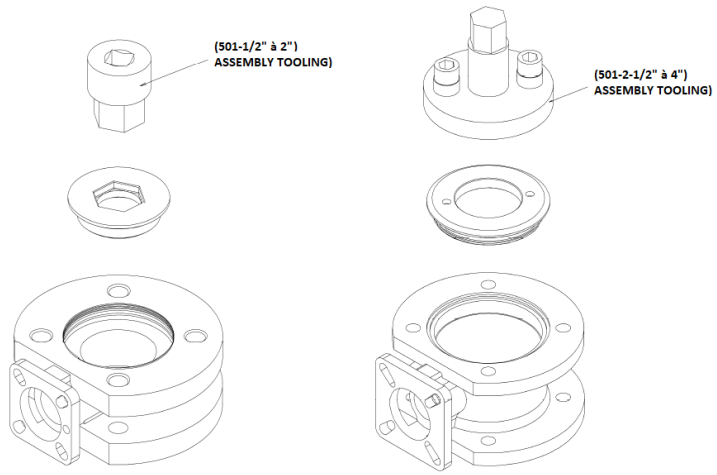
3 - Servicing

3.1 - Frequency of servicing

- The servicing frequency depends upon the use of the valve, of the type of fluid, of its velocity, of its frequency of operation, of the cycles of rise and fall in pressure and temperature.
- Before any intervention, isolate the upstream and downstream pipe installation using the valves provided for this purpose. Depressurize the pipe installation and bring it to ambient temperature.
- If the lever has to be removed, do that before disassembling the body.
- To remove the body, unscrew the lateral tip with special tools as shown in the diagram below. If you do not have such tools, contact our after-sales department.
- To remove the ball from the body, turn the stem by a quarter turn.



3.2 - Inspecting the state of the valve and possible repair

- Check the state of the ball (Item 4): it has to be clean and unscratched. If the cleaning or polishing is not possible, replace it (see the § on spare parts).
- Check the state of the seats (3.1 and 3.2): they must not be deformed, nor scratched, nor worn, or dirty. Otherwise, replace them with parts from the gasket kit.
- Check the state of the packing gland (7 and 8): no leak should be found at the stem and the rings should not be excessively worn. If need be, replace the gaskets.
- Check the state of the body gasket. Replace it, if need be.
- Reassemble the different parts of the valve, following the tightening torques shown in the table below.
- Check that the stem manoeuvring is smooth. Perform about ten manoeuvres.

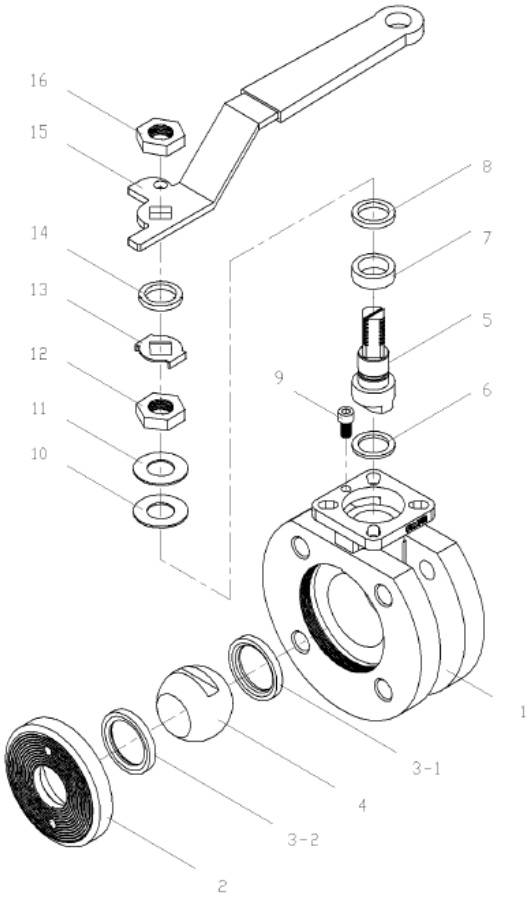


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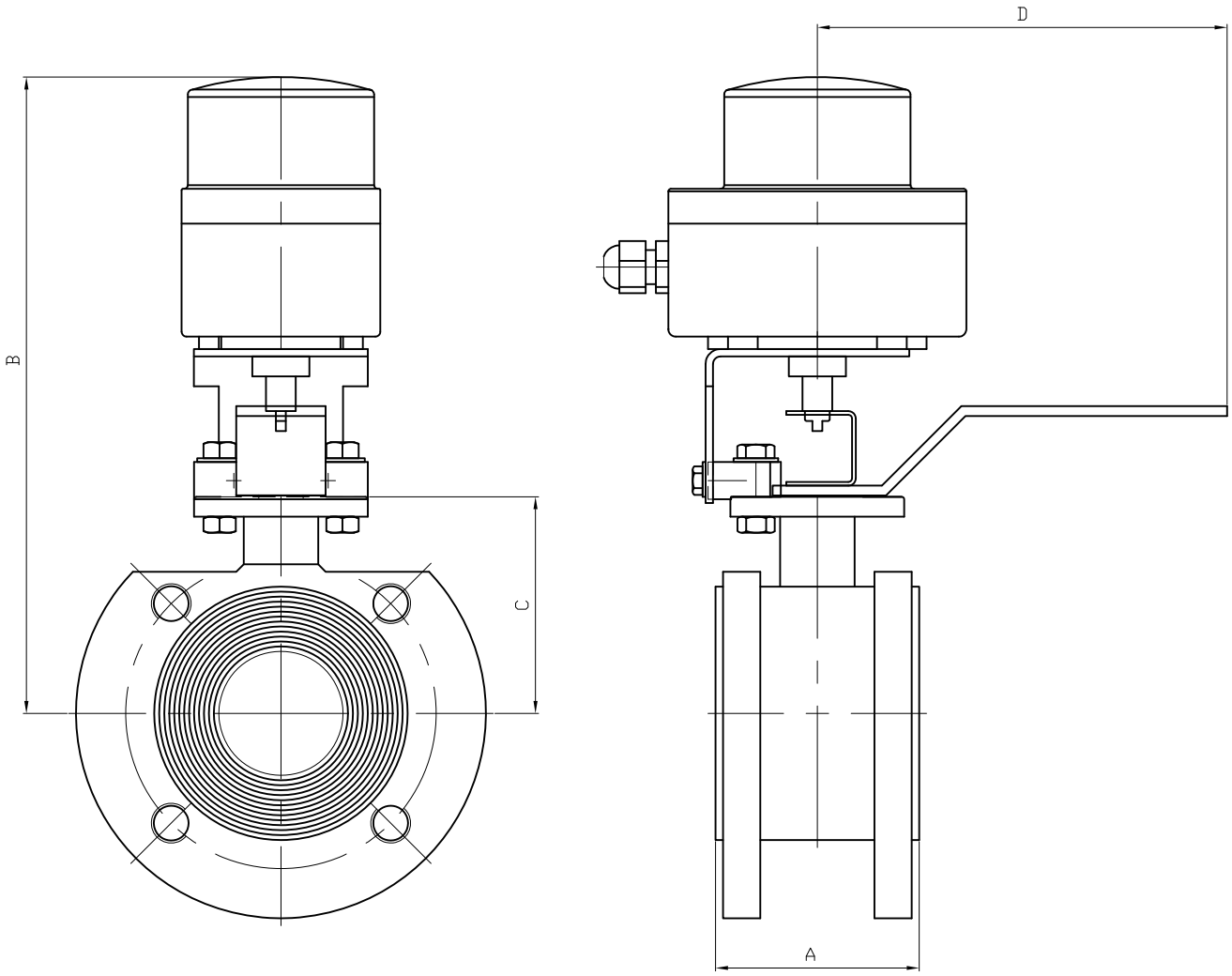
TABLE OF THE TIGHTENING TORQUES OF THE TIE-BOLTS AND OF THE LEVER NUT

DN	Tightening torque for the insert (Nm, item 2)	Lever nut (Nm)
15	29.4	3.4
20	58.8	3.4
25	88.2	4
32	196.1	4
40	294.1	5
50	490.2	5
65	588.2	6
80	686.3	6
100	686.3	6

SPARE PARTS

DN	Gasket kit	Ball	Handle
Reference mark	**3-6-7-8**	**4**	**11**
15	982702	Please contact us.	982802
20	982703	Please contact us.	982802
25	982704	980034	982804
32	982705	980035	982804
40	982706	Please contact us.	982806
50	982707	980037	982806
65	982708	980038	982808
80	982709	980039	982808
100	982710	Please contact us.	982808



DN	15	20	25	32	40	50	65	80	100
A	42	44	50	54	68	82	103	122	152
B	114	116	122.5	132	138	147.2	167	177.3	192.3
C	54	56	62.5	72	78	87.2	107	117.3	132.3
D	110	110	140	140	170	170	300	300	300
POIDS KG	2.85	3.25	4.02	5.12	6.38	8.13	11.7	15.2	21.3

Informations données à titre indicatif et sous réserve de modifications éventuelles
Data subjet to alteration

Ech: /	Date :08/06/2017	Dessiné par : E.D.	Tolérances générales : +/- 0.2	Modifications	Date	REV.
ROBINET A TOURNANT SPHERIQUE 771XS + BFC SF/BALL VALVE 771XS + LIMIT SWITCH BOX SF				Matière :		
				Poids (Kg) :		
SECTORIEL 45, Rue du Ruisseau 38297 SAINT QUENTIN FALLAVIER				Traitement : SANS		
				Plan n° Ens 1296		

SF-TYPE SOLDO SWITCH BOXES

FEATURES

The SF-type switch box is intended for equipping quarter-turn pneumatic actuators and manual valves. It makes it possible to have an easy, direct view of the valve position and of the feedback information to control. Of robust construction, it can be installed outdoors. The position indicator provides a very good visual reading of the valve position. The SF switch box can be equipped with many switches and detectors (see below). The notched cams can be manually adjusted with great accuracy, and are insensitive to vibrations.

AVAILABLE MODELS

SF: IP67 model

LIMITS OF USE

Ambiant temperature	-20°C / +80°C
IP Code	IP 67
SF	Outiside ATEX zone

MECHANICAL CONNECTION

Axis dimension	According to VDI/VDE 3845
Attachment	ISO 5211 F05
Stainless steel arches for attachment on to the actuator	NAMUR 0 : 50x25x20 mm NAMUR 1 : 80x30x20 mm NAMUR 2 : 80x30x30 mm NAMUR 3 : 130x30x30 mm NAMUR 4 : 130x30x50 mm

ELECTRICAL CONNECTION

Standard cable inputs	2 x M20x1.5

CONSTRUCTION

Casing and lid	Aluminium
Coating	Polyester paint
Stem	Stainless steel
Dome	Polycarbonate

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SF-TYPE SOLDO SWITCH BOXES

SWITCH DETAILS SF model

Ref.	Switch	Features
01	SPDT el.mech. switch silver plated contacts	Max 5A-250Vac / min 50mA-250Vac Max 5A-125Vac / min 50mA-125Vac Max 3A-24Vdc / min 50mA-24Vdc
03	SPDT el.mech. switch gold plated contacts (for Exia cert)	Max 1,8A/3A-250Vac / min 5mA-250Vac Max 2A/3A-125ac / min 5mA-125Vac Max 1,2A/1,5A-24Vdc / min 1mA-24Vdc
1F	DPDT el.mech. switch silver plated contacts	
C4	SPDT magnetic hermetically sealed reed switch.	Max 0,1A-120Vac / 1A-24Vdc
C8	DPDT magnetic hermetically sealed reed switch.	Max 0,1A-120Vac / 1A-24Vdc
N1	SPDT magnetic hermetically sealed silver plated snap acting contacts	Max 5A-250Vac / 5A-28Vdc
N3	SPDT magnetic hermetically sealed gold plated snap acting contacts	Max 1A-250Vac / 1A-30Vdc
N4	DPDT magnetic hermetically sealed silver plated snap acting contacts	Max 5A-250Vac / 5A-28Vdc
60	Inductive proximity NAMUR sensor SJ3,5-N	2 wire NC logic (for Exia cert)
62	Inductive proximity NAMUR sensor SJ3,5-SN	2 wire NC logic (for Exia cert, safety funct. low temp)
63	Inductive proximity NAMUR sensor - SJ3,5-S1N	2 wire NO logic (for Exia cert, safety funct)
70	Inductive proximity NAMUR - NJ2-V3-N	2 wire (for Exia cert)
73	Inductive proximity sensor (+70°C max.) - NBB2-V3-E2	P+F - 3 wire PNP NO amplified 10-30 Vdc, 100 mA
75	Inductive proximity sensor - IS 5026	IFM - 2 wire NO/NC amplified 5-36 Vdc, 200 mA
83	Inductive proximity sensor - NBB3-V3-Z4	P+F - 2 wire NO amplified 5-60 Vdc, 100 mA
TO	4-20 mA position transmitter	12-30 Vdc
HO	4-20 mA HART position transmitter	Atex Ex ia IIC T6 / T4 – certified 8-30Vdc

OPTIONS

There are many options for which you are invited to contact our sales service:

	SS : stainless steel box
	3-Channel L or T indicators
L	**LT** : version -40°C (according to the type of switch)
P	**LT 1** : version -55°C (according to the type of switch)
1	Cable inputs 1/2" NPT
	Pilot-solenoid valve wiring
G	EAC Certificate
U	UL Certificate

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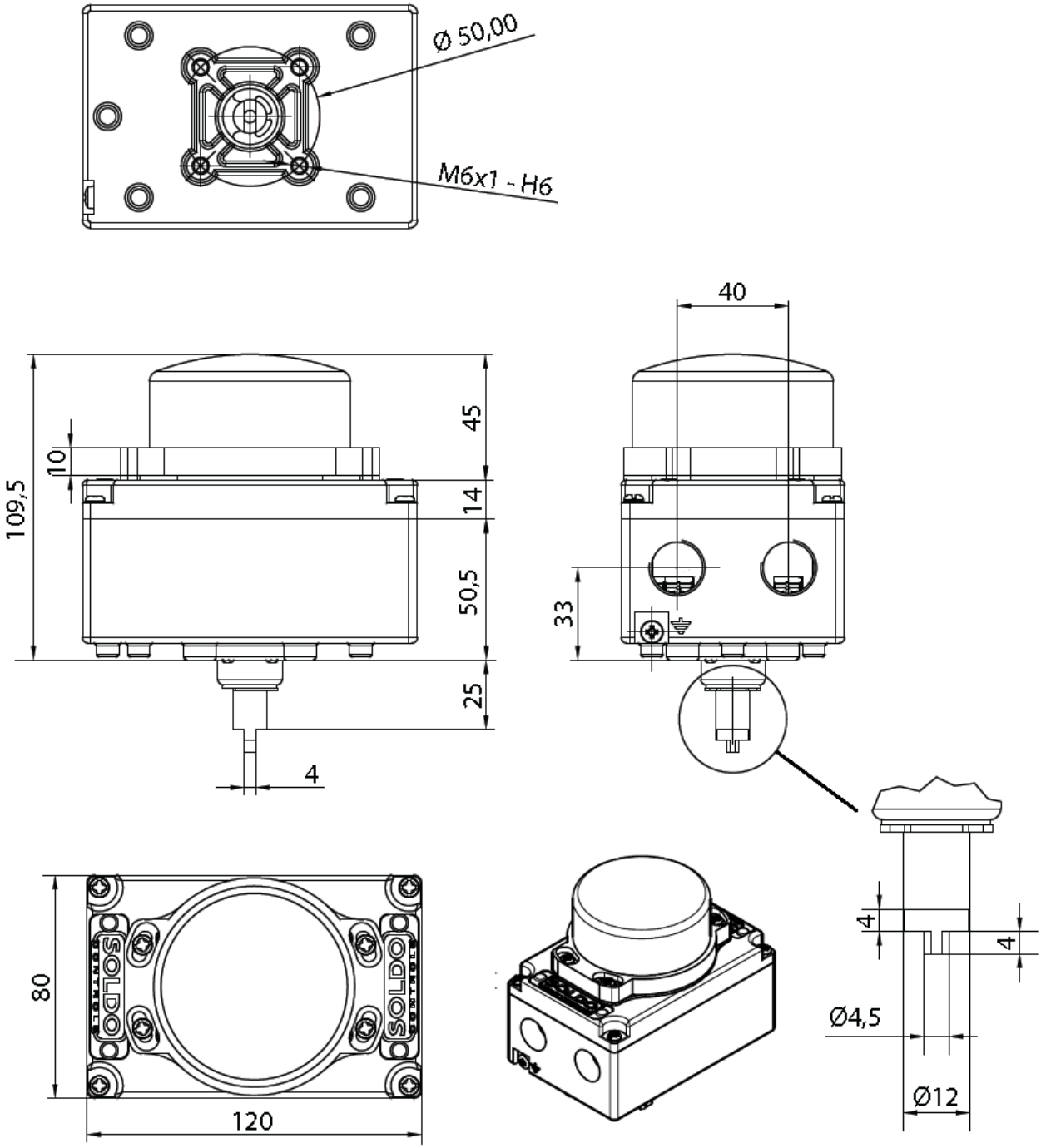
DIMENSIONS (mm)



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