

ASCO™ Operators

intrinsically safe, II 1G Ex ia IIC T6 Ga, II 2D Ex tb IIIC T85°C Db IP66/IP67
Aluminium or stainless steel enclosure

Series
LI / WSLI

Features and Benefits

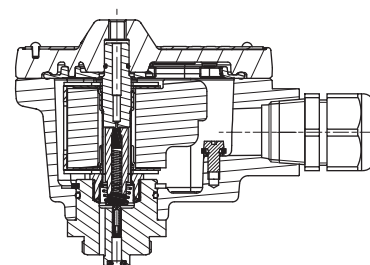
- Explosionproof operator for use in potentially explosive atmospheres according to ATEX-Directive 2014/34/EU
EC type examination certificate no.: **LCIE 09 ATEX 3054 X**
IECEx Certificate of Conformity no.: **IECEx LCI 09.0022X**
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with the International and European Standards IEC and EN: 60079-0, 60079-11 and 60079-31
- Easy electrical installation by means of a screw terminal coil
- Enclosure provided with a cable gland for unarmoured cable with an o.d. of 6 to 12 mm
- Ingress protection degree IP67
- A wide range of valves can be supplied with the operator



Construction

Solenoid enclosure	LI	Aluminium, cataphoresis black painting
	WSLI	Stainless steel (AISI 316L)
Bonnet	LI	Stainless steel
	WSLI	Stainless steel (AISI 316L)
Cover screws		Stainless steel
Core, core tube and plugnut		Stainless steel
Seals		VMQ
Upper disc		FPM
Lower disc		NBR
Nameplate		Stainless steel
Coil connection		Embedded screw terminals
Cable gland		Polyamide (PA), 1/2 NPT (cable Ø 7-12 mm)
Safety code	LI ⁽¹⁾ / WSLI ⁽¹⁾	Ex II 1G Ex ia IIC T6 Ga Ex II 2D Ex tb IIIC T85°C Db IP66/IP67

⚠️ ⁽¹⁾ For use in zone 0 locations, see the installation conditions given in the I&M instructions.

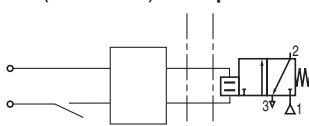


Electrical characteristics

Coil insulation class F
Standard voltages DC (=) : 24V

voltage (U _n) (max. ripple 10%)	power ratings (P _n) hot/cold =	typical functional ratings		R		operator ambient temperature range (TS)	type ⁽²⁾
		I _{(ON) min.}	U _{(ON) min.}	20°C	max. T6		
(V)	(W)	(mA)	(V)	(Ω)	(Ω)	(°C) ⁽³⁾	
24	0.5	32	12.5	288	354	-40 to +60	01

P _n	safety parameters					safe area (RS interface)	explosive area
	U _i = (DC)	I _i	P _i	L _i	C _i		
(W)	(V)	(mA)	(W)	(H)	(μF)		
0.5	32	500	1.5	0	0		



Example of use with a Zener barrier installed in a non-hazardous zone

Temperature classification table

DC (=) solenoids

P _n (watt)	solenoid size	maximum ambient °C ⁽³⁾	
		surface temperature	
	M6	T6	85°C
insulation class F (155°C) 100% E.D.			
0.5	•		60

Check the wattage compatibility with the product selected.

⁽²⁾ Refer to the dimensional drawings on the following page.

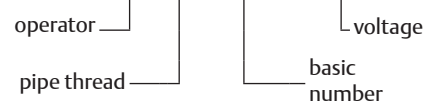
⁽³⁾ The minimum allowable ambient temperature is -40°C for the operator. Actual temperature range can be limited depending on valve operation limits. -35°C max. with polyamide cable gland.

This intrinsically safe valve must be connected to a specific, approved power supply (safety barrier or interface) located in a safe area.

Ordering information

A valve supplied with the intrinsically safe operator will be identified with prefix LI or WSLI before the catalogue number.

Example: LI G 551A307 24V/DC



Connections

- Internal and external earthing connection
- The operator can be rotated through 360° to select the most favourable position for cable entry
- Electrical connection between solenoid valve and barrier/interface with cable type A or B according to EN 50039


Options

- Cable glands (Nickel-plated brass): unarmoured cable, catalogue number **88200011** / armoured cable, catalogue number **88200014**

Compatibles barriers

Located in safe areas, these barriers allow to feed the intrinsically safe solenoid valves located in explosive areas.

ASCO operators LI / WSLI		
II 1G Ex ia IIC T6 Ga, II 2D Ex tb IIIC T85°C Db IP66/IP67		
Suppliers	Barrier reference	LI/WSLI
ABB	DO910S/B/N	x
	NAEV30-DO2C-A230-0	X
AP3	NAEV30-DO2C-A115-0	X
	NAEV30-DO2H-C024-0	X
	NAEV30-DO4H-C024-0	X
	NAEV30-DO4L-C024-0	X
	NAEV30-DI2N-DO1C-A230-0	X
	NAEV30-DI2N-DO1C-A115-0	X
	NAEV30-DI2N-DO1H-C024-0	X
	D5048S	X
G.M. international	D5049S	X
	D1045Y	X
	D1048S	X
	D1049S	X
	D1040Q 2	X
	D1040Q 3	X
	D1041Q 3	X
	D1041Q 4	X
	D1042Q 2	X
	D1043Q 2	X
	D1043Q 3	X
	D1043Q 4	X
	MTL	MTL4521
MTL5521		X
MTL4521L		X
MTL5522		X
MTL4523		X
MTL5523		X
MTL4523L		X
MTL4523R		X
MTL4523V		X
MTL5523V		X
MTL4524		X
MTL5524		X
MTL4524S		X
MTL4525		X
MTL5525		X
MTL5521T		X
MTL4523VL		X
MTL5523VL		X
MTL5523		X

 Not compatible

For other compatible barriers and interfaces, please ask our product support.

In accordance with the zone classification and the national legislation of each country, apply the certification procedures for the connection of IS-rated products with associated equipment.

All information subject to change without notice. All responsibility for the use of products from other suppliers and the possible modifications of their characteristics is disclaimed.

Compatibles barriers

ASCO operators LI / WSLI		
II 1G Ex ia IIC T6 Ga, II 2D Ex tb IIIC T85°C Db IP66/IP67		
Suppliers	Barrier reference	LI/WSLI
Pepperl + Fuchs	KCD0-SD3-Ex1.1045	X
	KCD0-SD3-Ex1.1245	X
	KCD0-SD-EX1.1245	X
	KCD2-SLD-EX1.1045	X
	KCD2-SLD-EX1.1065	X
	KCD2-SLD-EX1.1245	X
	KFD0-SD2-EX1.10100	X
	KFD0-SD2-EX1.1045	X
	KFD0-SD2-EX1.1065	X
	KFD0-SD2-EX1.1180	X
	KFD0-SD2-EX2.1045	X
	KFD0-SD2-EX2.1245	X
	KFD2-SL2-EX1	X
	KFD2-SL2-EX1.B	X
	KFD2-SL2-EX1.LK	X
	KFD2-SL2-EX1.LK.1045	X
	KFD2-SL2-EX2	X
	KFD2-SL2-EX2.B	X
	KCD0-SD3-Ex1.1245.SP	X
	KCD0-SD-Ex1.1245.SP	X
	KFD2-SL2-Ex1.LK-Y1	X
	HiC2871	X
	HIC2871A	X
	HIC2873	X
	HIC2877	X
	HIC2883	X
	HID2872	X
	HID2876	X
	LB-2112 AR/ER	X
	FB-2212	X
FB-2216	X	
FB6216	X	
Stahl	9475/32-04-72	X
	9176/ 10- 16- 00s	X
	9176/ 20- 16- 00s 1 canal	X
	9176/ 20- 15- 00s 2 canaux	X
	9176/ 20- 16- 00s 2 canaux	X
	9176/ 20- 17- 00s 2 canaux	X
	9175/ 10- 14- 11s	X
	9175/ 10- 16- 11s	X
	9175/ 20- 14- 11s 1 canal	X
	9175/ 20- 16- 11s 1 canal	X
	9175/ 20- 14- 11s 2 canaux	X
	9276/ 10- 21- 40- 00k	X
	9276/ 10- 21- 40- 00s	X
	9276/ 10- 21- 60- 00k	X
	9276/ 10- 21- 60- 00s	X
	9276/ 10- 24- 48- 00k	X
	9276/ 10- 24- 48- 00s	X
	9275/ 10- 24- 48- 11s	X
Turck	IMX12-DO01-1U-1U-PR/ 24VDC/CC	X
	MX12-DO01-1U-1U-0/24VDC/CC	X
	IMX12-DO01-2U-2U-0/ 24VDC	X
	IMX12-DO01-2U-2U-0/ 24VDC/CC	X
	IMX12-DO01-2U-2U-PR/ 24VDC	X
	IMX12-DO01-1U-1U-0/ 24VDC	X
	IMC-DO-11EX/L	X
	IMX12-DO01-2U-2U-PR/ 24VDC/CC	X
Siemens	6ES7132-7GD10-0AB0 2 ways	X
	6ES7132-7-GD21-0AB0 2 ways	X
	6ES7132-7RD22-0AB0 2 ways	X

Not compatible For other compatible barriers and interfaces, please ask our product support.

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
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Compatibles barriers

ASCO operators LI / WSLI		
II 1G Ex ia IIC T6 Ga, II 2D Ex tb IIIC T85°C Db IP66/IP67		
Suppliers	Barrier reference	LI/WSLI
Phéonix contact	MACX MCR-EX-SL-SD-21-60-LP-SP - 2924100	X
	MACX MCR-EX-SL-SD-21-60-LP - 2865515	X
	MACX MCR-EX-SL-SD-24-48-LP - 2865609	X
	MACX MCR-EX-SL-SD-21-40-LP-SP - 2924139	X
	MACX MCR-EX-SL-SD-21-40-LP - 2865764	X
	MACX MCR-EX-SL-SD-24-48-LP-SP - 2924126	X
	MACX MCR-EX-SL-SD-24-48-LFD-SP - 2906156	X
	MACX MCR-EX-SL-SD-24-48-LFD - 2906155	X
	MACX MCR-EX-SL-SD-23-48-LFD-SP - 2924870	X
	MACX MCR-EX-SL-SD-23-48-LFD - 2924867	X
	PI-EX-SD-24-48 - 2865298	X
	PI-EX-SD-21-60 - 2865188	X
WAGO	750-535	X
	750-535/040-000	X
	750-539	X

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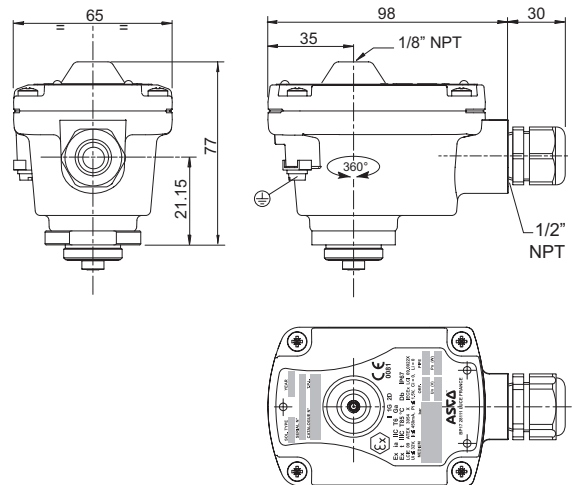
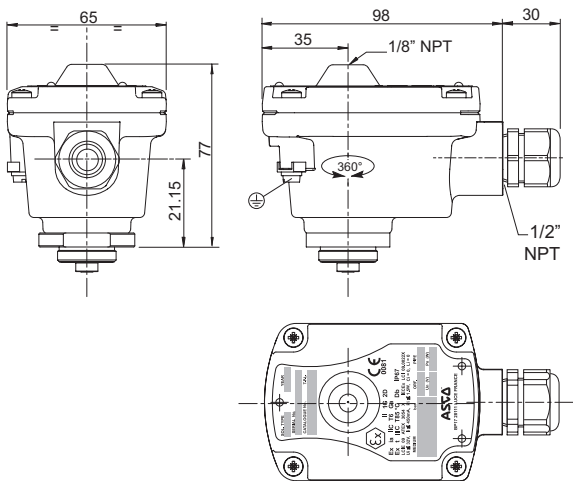
Dimensions (mm), Weight (kg) 



TYPE LI
Prefix "LI" Solenoid
Aluminium, cataphoresis black painting
IEC and EN: 60079-11, 60079-31
II 1G Ex ia IIC T6 Ga, II 2D Ex tb IIIC T85°C Db IP66/IP67



TYPE WSLI
Prefix "WSLI" Solenoid
Stainless steel
IEC and EN: 60079-11, 60079-31
II 1G Ex ia IIC T6 Ga, II 2D Ex tb IIIC T85°C Db IP66/IP67



prefix	weight
LI	0.56
WSLI	1.17