

FEATURES

- Solenoid valves with explosionproof operator MB type for use in potentially explosive atmospheres according to ATEX Directive 94/9/EC
EC type examination certificate no.: **LCIE 03 ATEX 6059 X**
IECEX Certificate of Conformity no.: **IECEX LCI 09.0001X**
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with the International and European Standards EN-IEC 60079-0, EN-IEC 60079-1 and EN 61241-1
- Solenoid valve requiring manual resetting with coil energised after returning from the tripped state on loss of power
- Easy electrical connection with screw terminals
- Wide range of applications, particularly at low temperatures
- The solenoid valves have TÜV certified IEC 61508 Functional Safety data and can be used up to SIL 4

GENERAL

Differential pressure 0 to 10 bar [1 bar = 100 kPa]
Response time 20 ms (on loss of voltage, with air $\Delta P = 6$ bar)

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas	- 40°C to + 60°C	VMQ (silicone)

MATERIALS IN CONTACT WITH FLUID

(*) Ensure that the compatibility of the fluids in contact with the materials is verified

	Brass body	Stainless steel body
Body	Brass	AISI 316L SS
Internal parts	Stainless steel, brass	Stainless steel
Springs	Stainless steel	Stainless steel
Seals	VMQ	VMQ

OTHER MATERIALS

Electrical enclosure	Aluminium
Cover screws	Steel
Core tube	Stainless steel
Core and plugnut	Stainless steel
Nameplate	Aluminium

ELECTRICAL CHARACTERISTICS

Coil insulation class	H	SAFETY CODE	Ex d IIC T6-T5 Gb
Coil connection	Screw terminals		Ex t IIIC T85°C-T100°C Db IP65
Electrical safety	IEC 335		
Electrical enclosure protection	Moulded IP65 (EN 60529)		
Standard voltages	DC (=) : 24V - 48V		
(Other voltages and 60 Hz on request)	AC (~) : 24V - 48V - 115V - 230V / 50 Hz		

operator type	power ratings		operator ambient temperature range (TS) ⁽²⁾	safety code	replacement coil		type ⁽¹⁾		
	hot/cold (*)	hot/cold =			~	=			
	(W)	(W)			230 V/50 Hz	24 V DC			
MB	-	-	13/18	10,4/12,5	-40 to +60	Ex d IIC Gb Ex t IIIC Db IP65	43004053	43002092	01

(*) AC: Rectified coil construction.

⁽¹⁾ Refer to the dimensional drawings on the following page.

operator AC (~)		
Pn	max. ambient temp. °C ⁽²⁾	
	surface temperature	
	T6	T5
(W)	85°C	100°C
18	50	60 (SIL = 65)

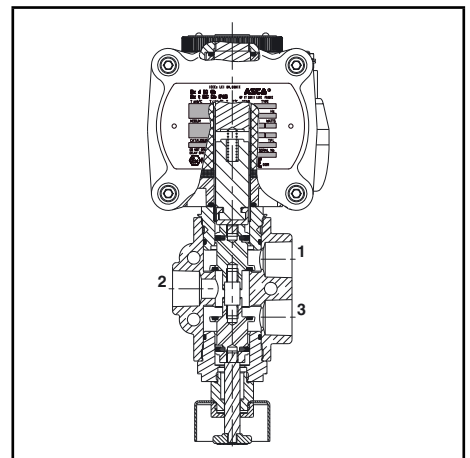
operator DC (=)		
Pn	max. ambient temp. °C ⁽²⁾	
	surface temperature	
	T6	T5
(W)	85°C	100°C
12,5	50	60 (SIL = 65)

SPECIFICATIONS

pipe size	orifice size		flow coefficient Kv				operating pressure differential (bar)			power coil (W)		catalogue number	
	1 → 2	2 → 3	1 → 2		2 → 3		min.	max. (PS)		~	=	brass	stainless steel
	(mm)	(mm)	(m³/h)	(l/min)	(m³/h)	(l/min)		air (*)	~				
NPT													
U - Universal, brass or stainless steel body, VMQ seals													
1/2	10	10	2,1	35	2,1	35	0	10	10	18	-	12600015	12600021
										-	12,5	12600016	12600022
U - Universal, brass or stainless steel body, VMQ seals (Certified IEC 61508 Functional Safety data) ⁽³⁾													
1/2	10	10	2,1	35	2,1	35	0	10	10	18	-	12660034	12660033
										-	12,5	12660035	12660032

⁽²⁾ Contact us for temperatures above +60°C.

⁽³⁾ Including NPT 1/2 stainless steel exhaust protector.

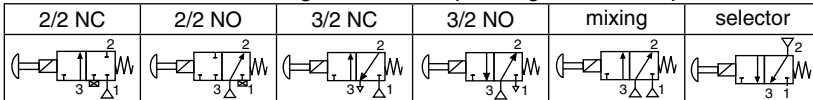


OPTIONS

- IECEx-ATEX cable gland, 3/4 NPT, pre-installed on solenoid valve, supplied with cable clamp (see “explosionproof solenoids” section)
 - for non-armoured cable of 8,5 to 16 mm dia., catalogue number **660510**
 - for armoured cable of ID 8,5 to 16 mm / OD 12 to 21 mm, catalogue number **660514**
- Other cable diameters
- Exhaust protector:
 - stainless steel for bronze and stainless steel bodies, catalogue number **560594** (standard for SIL versions)
- Oxygen service (min. -25°C; contact us for lower temperatures), catalogue number **970530**
- Temperatures down to -50°C, contact us
- Marine paint/anti-corrosive or dust environments (solenoid operator enclosure only)

INSTALLATION

- Always install solenoid valves with body vertical and solenoid upward
- Can be used for the following functions, depending on how the ports are connected:



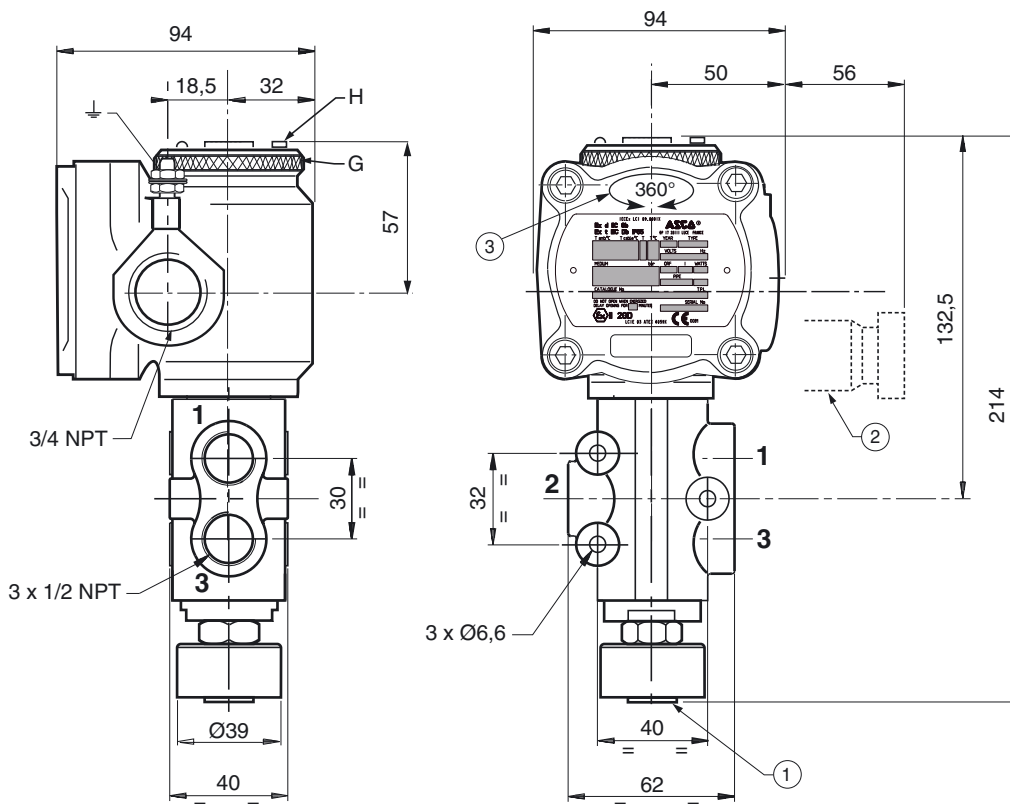
- Solenoid valves have 3 mounting holes in body
- IEC 61508 Functional Safety, allowable temperature range: -40°C to +65°C. Probability of failure on demand, contact us
- Threaded pipe connection is standard NPT (ANSI 1.20.3)
- Installation/maintenance instructions are included with each valve

DIMENSIONS (mm), WEIGHT (kg)



TYPE 01

Operator type “MB”
Aluminium
EN-IEC: 60079-0, 60079-1 and 61241-1
Ex d IIC T6-T5 Gb - Ex t IIIC T85°C-T100°C Db IP65



type	operator type	body	weight ⁽¹⁾
01	MB	brass	2,5
		stainless steel	2,1

⁽¹⁾ including coil.

- ① Manual reset
- ② Explosionproof cable gland to IECEx-ATEX with clamp
- ③ To change the orientation of the solenoid operator relative to the ports, the screw (H) and the nut of the cover (G) must be loosened.