

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 (LCIE 03 ATEX 6059 X) and IECEx certificate (IECEx LCI 09.0001X) are in compliance with the International and European Standards EN 13463-1, EN-IEC 60079-0, EN-IEC 60079-1 and EN-IEC 60079-31
- Easy electrical connection with screw terminals
- Solenoid valve requiring manual resetting with coil energised after returning from the tripped state on loss of power
- Wide range of applications, particularly at low temperatures
- Solenoid valves in conformity with IEC 61508: 2010 route 2nd certified by TÜV with integrity levels:
 - SIL2 with HFT = 0
 - SIL3 with HFT = 1

GENERAL

Differential pressure
Response time

0 to 10 bar [1 bar =100 kPa]
20 ms

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

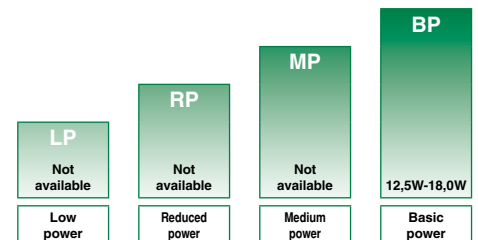
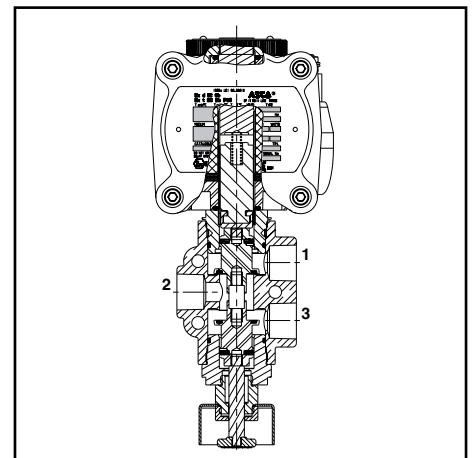
MATERIALS IN CONTACT WITH FLUID

(*) 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



POWER LEVELS - cold electrical holding values (watt)

SPECIFICATIONS

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

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

ELECTRICAL CHARACTERISTICS

Coil insulation class	H
Coil connection	Screw terminals
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

SAFETY CODE

Ex d IIC T6-T5 Gb
Ex t IIIC T85°C-T100°C Db IP65

operator type	power ratings		operator ambient temperature range (TS) (C°)	safety code	replacement coil /kit		type ⁽¹⁾
	hot/cold ⁽²⁾	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

⁽¹⁾ Refer to the dimensional drawings on the following page. ⁽²⁾ AC: Rectified coil construction

TEMPERATURE CLASSIFICATION

operator AC (~)

Pn	max. ambient temp. °C ⁽³⁾	
	surface temperature	
	T6	T5
(W)	85°C	100°C
18	50	60 (SIL = 65)

operator DC (=)

Pn	max. ambient temp. °C ⁽³⁾	
	surface temperature	
	T6	T5
(W)	85°C	100°C
12,5	50	60 (SIL = 65)

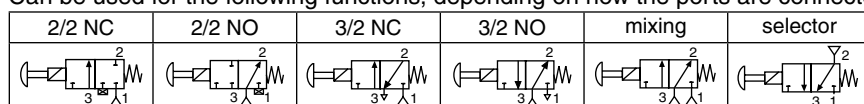
⁽³⁾ Contact us for temperatures above +60°C.

OPTIONS

- IECEx-ATEX cable gland certified to ATEX, 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:
 - bronze for brass body, catalogue number **560595**
 - stainless steel for stainless steel body, catalogue number **560594**
- Oxygen service (min. -25°C; contact us for lower temperatures), catalogue number **970530**
- Temperatures down to -50°C, catalogue number **610536**
- 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)

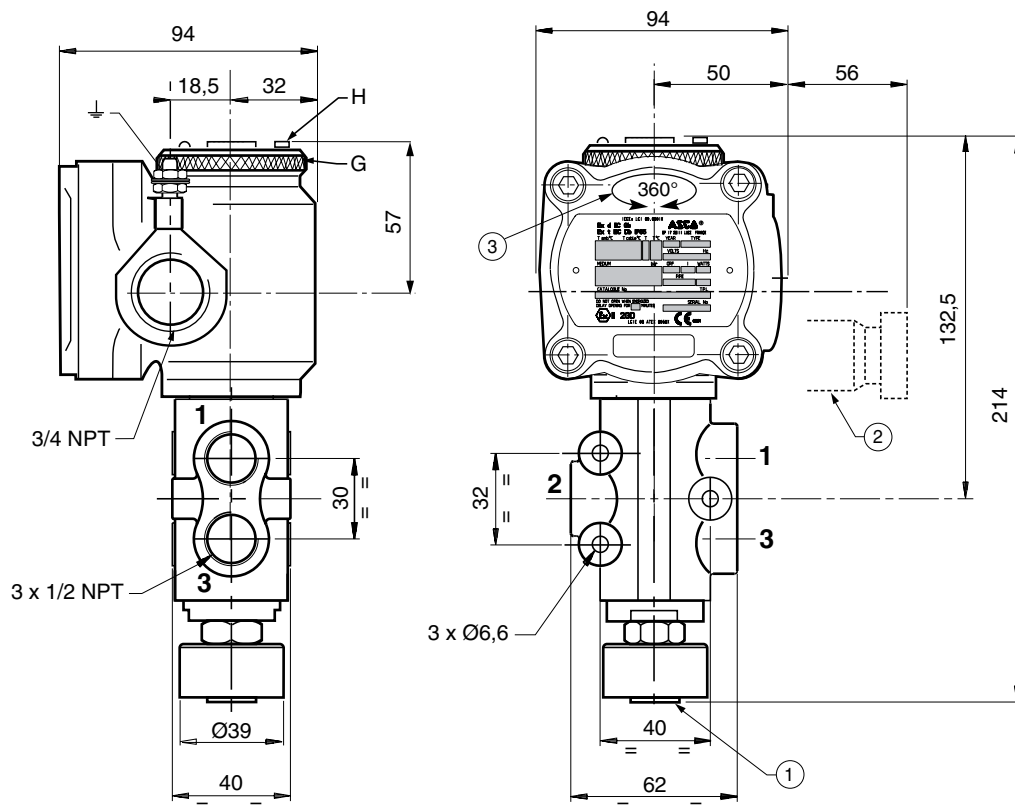


TYPE 01:

MB Solenoid

Aluminium

EN-IEC: 13463-1, 60079-0, 60079-1 and 6079-31



type	power level	body	weight ⁽¹⁾
01	basic power	brass	2,5
		stainless steel	2,1

⁽¹⁾ including enclosure and coil.

① Manual reset operator location.

② Explosionproof cable gland with clamp according to IECEx-ATEX.

③ To change the orientation of the solenoid operator relative to the ports, the screw (H) and the nut on the cover (G) must be loosened.

ACCESSORIES

