

FEATURES

- Solenoid valves with explosionproof operator MB type, intended 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-IEC 60079-0, EN-IEC 60079-1 and EN-IEC 61241-1
- Easy electrical connection with screw terminals
- Versions with or without auxiliary manual operator
- 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 30 - 50 ms

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas	- 40°C to + 60°C ⁽¹⁾	VMQ (silicone)

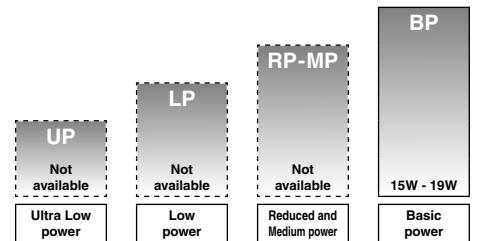
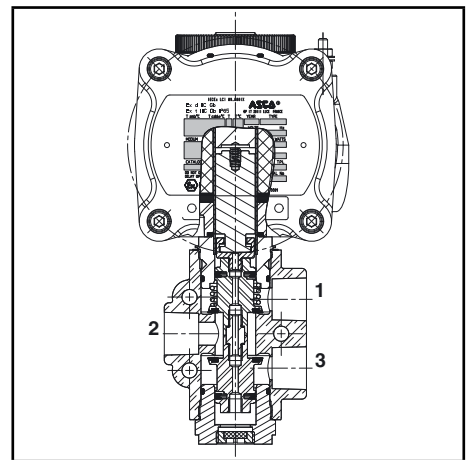
MATERIALS IN CONTACT WITH FLUID

(*) 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

Solenoid 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 coil (W)	catalogue number						
											without manual operator		with maintained manual operator		with impulse manual operator		
	1 → 2	2 → 3	1 → 2	2 → 3	min.	max. (PS)	air (*)	brass	stainless steel		brass	stainless steel	brass	stainless steel			
NPT	(mm)	(mm)	(m³/h)	(l/min)	(m³/h)	(l/min)	~	=	~	=							
U - Universal, brass or stainless steel body, VMQ seals																	
1/2	10	10	1,6	27	1,5	25	0	10	10	19	-	12600013	12600019	12600017	12600023	12600057	12600059
										-	15	12600014	12600020	12600018	12600024	12600058	12600060
U - Universal, brass or stainless steel body, VMQ seals (Certified IEC 61508 Functional Safety data) ⁽²⁾																	
1/2	10	10	1,6	27	1,5	25	0	10	10	19	-	12660024	12660026	-	-	12660036	12660038
										-	15	12660025	12660027	-	-	12660037	12660039

⁽¹⁾ Contact us for temperatures above +60°C.

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

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		
	AC (~) : 24V - 48V - 115V - 230V / 50 Hz; Other voltages and 60 Hz on request		

operator type	power ratings				operator ambient temperature range (TS) ⁽²⁾ (C°)	safety code	replacement coil /kit		type ⁽¹⁾
	inrush ~ (VA)	holding		hot/cold = (W)			~	= 24 V DC	
		(VA)	(W)						
MB	35	15	19	12 / 15	-40 to +60	Ex d IIC Gb Ex t IIIC Db IP65	43004053	43002091	01

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

TEMPERATURE CLASSIFICATION

AC (~) operator

Pn (W)	max. ambient temp. °C ⁽²⁾	
	surface temperature	
	T6 85°C	T5 100°C
19	50	60 (SIL = 65)

DC (=) operator

Pn (W)	max. ambient temp. °C ⁽²⁾	
	surface temperature	
	T6 85°C	T5 100°C
15	50	60 (SIL = 65)

⁽²⁾ 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:
 - stainless steel for stainless steel body, 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

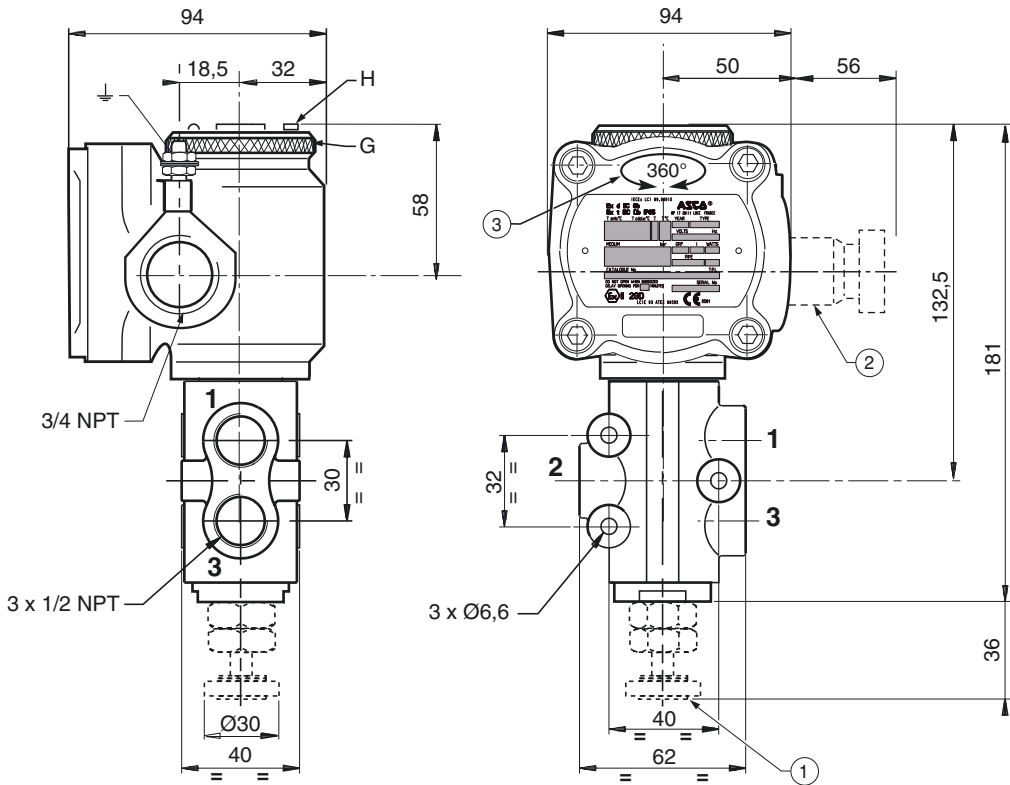
- Always install solenoid valves with body vertical and solenoid upward
- Can be used for the following functions, depending on how the ports are connected:

2/2 NC	2/2 NO	3/2 NC	3/2 NO	mixing	selector
- 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: 60079-0, 60079-1 and 61241-1

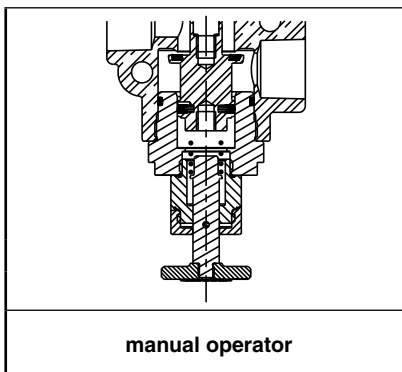


type	operator type	body	weight ⁽¹⁾
MB	01	brass	2,1
		stainless steel	1,7

⁽¹⁾ Without manual operator, including enclosure and coil.
 Manual operator version, add 0,1 kg

- ① Manual 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.

SECTIONAL DRAWING



ACCESSORIES

