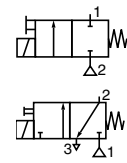




NC



2/2-3/2  
Series  
121

### 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 operator type MB can be fitted to 3/2 and 4/2 series 231 and 232 valves

### GENERAL

Differential pressure 0 to 40 bar [1 bar = 100 kPa]  
Maximum viscosity 40 cSt (mm<sup>2</sup>/s)  
Response time 15 - 25 ms

fluids (*) (2)	temperature range (TS)	seal materials (*)
water, air, inert gas, oil	- 10°C to + 80°C	NBR (nitrile)

### SOLENOID OPERATOR CONSTRUCTION

Solenoid operator housing Aluminium  
Cover screw Steel  
Core tube Stainless steel  
Core and plugnut Stainless steel  
Nameplate Aluminium

### MATERIALS IN CONTACT WITH FLUID

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

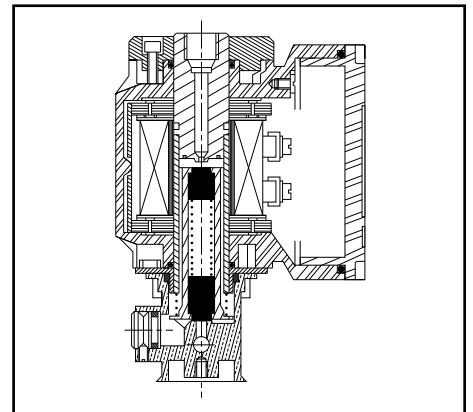
Body Brass  
Internal parts and springs Stainless steel  
Seals NBR  
Shading coil Copper

### ELECTRICAL CHARACTERISTICS

Electrical safety IEC 335  
Coil connection Screw terminals  
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		type(1)
	inrush ~	holding ~	hot/cold =			~	=	
	(VA)	(VA) (W)	(W)			230 V/50 Hz	24 V DC	
MB	75	22	12	8,4 / 10	-10 to +40/+60	Ex d IIC Gb Ex t IIIC Db IP65	43002521 43002059	01..04

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

### TEMPERATURE CLASSIFICATION

#### AC (~) solenoids - operator type MB

Pn (watt)	solenoid size		maximum ambient °C (1)			
	3/2 - 2/2		surface temperature			
			T6	T5	T4	T3
			85°C	100°C	135°C	200°C
Insulation class B (130°C) 100% E.D.						
12	●			40		

#### DC (=) solenoids - operator type MB

Pn (watt)	solenoid size		maximum ambient °C (1)			
	3/2 - 4/2		surface temperature			
			T6	T5	T4	T3
			85°C	100°C	135°C	200°C
Insulation class B (130°C) 100% E.D.						
10	●		40	60		

### SPECIFICATIONS

pipe size	orifice size (mm)	flow coefficient Kv (m <sup>3</sup> /h) (l/min)		operating pressure differential (bar)				power coil (W)		catalogue number				reference	
				max. (PS)						without manual operator		with button manual operator			
				min.		air (*)									water/oil (*)
<b>2/2 NC - Normally closed</b>															
1/4	1,5	0,08	1,3	0	40	40	40	25	12	10	12100003	12101093	12101092	12101094	MB201/O-1,5
	3	0,21	3,5	0	25	10	25	7	12	10	12100012	12100960	12100957	12100962	MB201/O-3
	5	0,36	6	0	10	3,5	8	3	12	10	12100024	12100593	12100952	12100964	MB201/O-5
	6	0,48	8	0	5,5	2	4,5	1,5	12	10	12100333	12100037	12101041	12100965	MB201/O-6
<b>3/2 NC - Normally closed</b>															
1/4	1,5	0,08	1,3	0	25	25	25	25	12	10	12100783	12101087	12101086	12100092	MB301/O-1,5
	3	0,21	3,5	0	10	10	10	10	12	10	12100128	12100134	12100129	12100994	MB301/O-3
	5	0,36	6	0	3,5	3,5	3,5	3,5	12	10	12100148	12100935	12100149	12100995	MB301/O-5

### OPTIONS

- Threaded 2/2 NO; 3/2 NO/U solenoid valves and pad mount 3/2 NC/U solenoid valves
- Coil class H

AC (-)

DC (=)

Pn (watt)	T6 85°C	T5 100°C	T4 135°C	T3 200°C
14	-	-	40°C	-

Pn (watt)	T6 85°C	T5 100°C	T4 135°C	T3 200°C
12	40°C	60°C	-	-

- IECEx-ATEX cable gland certified, 3/4 NPT, installed on solenoid valve, supplied with cable clamp:
  - 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**
- FPM seals (fluoroelastomer)
- Marine paint/anti-corrosive environment
- Oxygen service, catalogue number **970500**
- Impulse-type manual operator

### INSTALLATION

- Solenoid valves must always be installed with solenoid head downwards
- Secured by one threaded hole in bottom (threaded version), or four holes in sub-base (pad mounting version)
- Pipe connections (G\*) have standard combination thread according to ISO 228/1 and ISO 7/1
- Replacement coils available

### DIMENSIONS (mm), WEIGHT (kg)



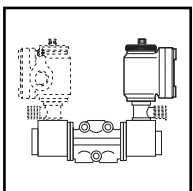
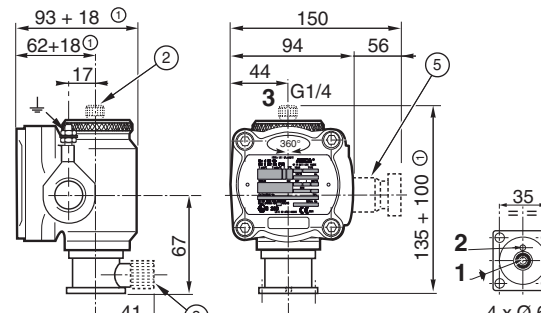
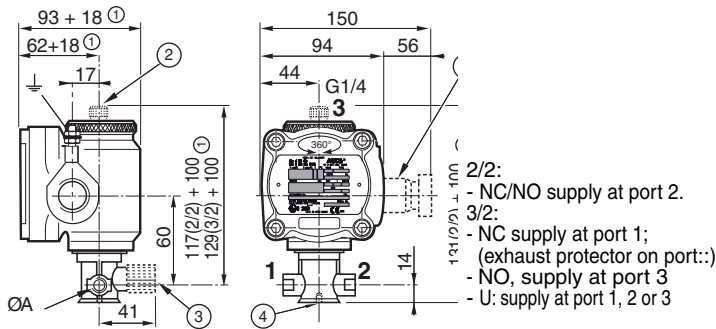
#### TYPE 01

Operator type "MB"  
Aluminium  
2/2-3/2 threaded solenoid valves  
EN-IEC: 60079-0, 60079-1 and 61241-1  
Ex d IIC T6-T5 Gb - Ex t IIIC T85°C-T100°C Db IP65



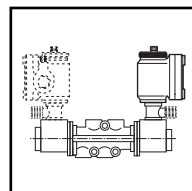
#### TYPE 02

Operator type "MB"  
Aluminium  
3/2 NC/U pad mount solenoid valves  
(Contact us for assembly)  
EN-IEC: 60079-0, 60079-1 and 61241-1  
Ex d IIC T6-T5 Gb - Ex t IIIC T85°C-T100°C Db IP65



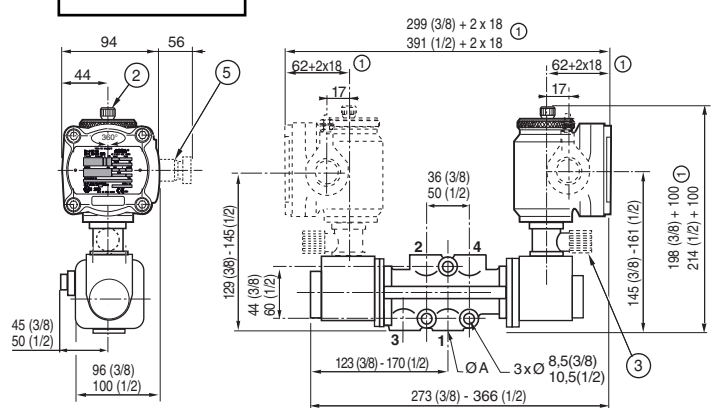
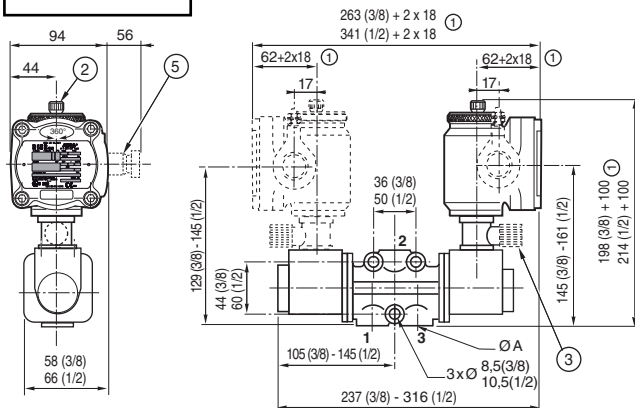
#### TYPE 03

Operator type "MB"  
Aluminium  
Assembly of pad mount version  
on 3/2 valve series 231 (G3/8 - G1/2)  
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 04

Operator type "MB"  
Aluminium  
Assembly of pad mount version  
on 4/2 valve series 232 (G3/8 - G1/2)  
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	ØA	function	orifice size (mm)	weight <sup>(2)</sup>
01	1/4	2/2	1,5..6	1,475
	1/4	3/2	1,5/3/5	1,445
02	pad mount	3/2	1,5/3/5	1,46
03	3/8	3/2	9	3,4
	1/2	3/2	15	4,7
04	3/8	4/2	9	4
	1/2	4/2	15	5,9

- ① Dimension to be added per version to allow for removal
- ② 3/2 NC: exhaust protector
- ③ Manual operator location, button (optional in series 231 and 232)
- ④ Mounting hole M5, depth 7 mm
- ⑤ Explosionproof cable gland to IECEx-ATEX with clamp

<sup>(2)</sup> including coil.