



### FEATURES

- 2/2 or 3/2 valves NC/NO designed for use in potentially explosive atmospheres in accordance with ATEX-Directive 2014/34/EU, category 2 or 3
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with European Standards EN 13463-1
- Recommended for applications in the chemical, oil, gas and paint coating industries etc.

### GENERAL / CONSTRUCTION / SPECIFICATIONS

Verify the compatibility of the category/zone with the selected valve.		see page Pressure Operated Valves			classification (zones)									
operator diameter	DN	(2/2)		(3/2)	dusts	gas			safety code	dusts	gas			safety code
		15, 19, 23, 25, 27, 31	35	1		IIA	IIB	IIC			IIA	IIB	IIC	
Ø 32 mm	10 → 20				21	1	1		Ex II 2 GD c IIB T4 T135°C	22	2	2	2	Ex II 3 GD c T4 T135°C
Ø 50 mm	15 → 25				21	1	1		Ex II 2 GD c IIB T4 T135°C	22	2	2	2	Ex II 3 GD c T4 T135°C
Ø 63 mm	15 → 50				21	1	1		Ex II 2 GD c IIB T4 T135°C	22	2	2	2	Ex II 3 GD c T4 T135°C
Ø 90 mm	25 → 65				21				Ex II 2 D c T135°C	22	2	2	2	Ex II 3 GD c T4 T135°C
Ø 125 mm	32 → 65													

### ORDERING

Verify the compatibility of the category/zone with the selected valve.	suffix to be added to the valve's catalogue number <sup>(1)</sup>	
	category 2	category 3
	GD2	GD3

Example (see page 15):

Valve E290, DN 35, operator dia. 63 mm designed for use in zones 1 and 21 (category 2), catalogue number: **E290B010GD2**

### CHOICE OF OPTIONS AND ACCESSORIES

construction type	see page	catalogue page										NC	NO	NC	operator dia. compatibility (mm)					body							
		15	19	23	25	27	31	35	1 (3/2 section)	fluid entry under the disc	fluid entry under the disc				fluid entry above the disc	32	50	63	90	125	bronze	stainless steel	cast iron				
01  Signaling box, intrinsically safe inductive contacts NAMUR	45																										
07  Adapter plate (stainless steel) for NAMUR pad-mount pilot	44																										
08  Oxygen service (max. limits: 15 bar, +60°C)	44																										
09  Vacuum applications up to 1.33 10 <sup>-3</sup> mbar	44																										
10  NET-INOX treatment	44																										
11  Conformity with Regulation (EC) 1935-2004	44																										
12  All stainless steel AISI 316L version (Recommended for aggressive environments) For valve catalogue numbers = contact us																											

- Valves with female threaded ports.
- Valves with male threaded ports
- Valves with butt welding connection
- Valves with flange connection.
- Valves with CLAMP connection
- Valves with male threaded ports DIN 11851

All leaflets are available on: [www.asco.com](http://www.asco.com)



**CONSTRUCTION 07**

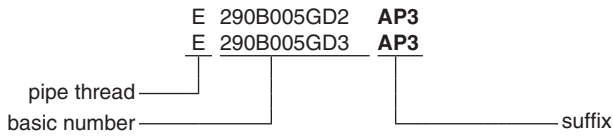
**Adapter plate for NAMUR pad-mount pilot**

- Adaptable on diameter Ø 63, 90 and 125 mm operators
- Stainless steel AISI 316L
- Solenoid pilot valves, series 551, 3/2 NC:
  - aluminium body, catalogue number **SCG551A001** ([www.asco.com](http://www.asco.com))
  - St. steel body, AISI316L, catalogue number **SCG551A409** ([www.asco.com](http://www.asco.com))

**TO ORDER:** (for compatibility: see page 43)

- Add suffix
  - stainless steel AISI 316L **AP3** (dia. 63 mm operator)
  - stainless steel AISI 316L **AP4** (dia. 90 and 125 mm operators)

**ORDERING EXAMPLES:**



**CONSTRUCTION 08**

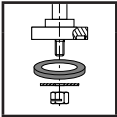
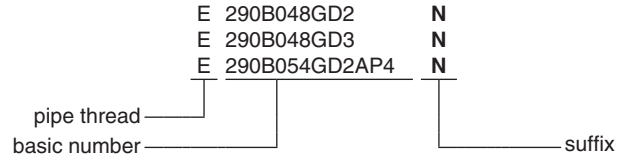
**Oxygen service**

- Special grease and cleaning
- **Pressure limited to 15 bar/temperature limited to +60°C**

**TO ORDER:** (for compatibility: see page 43)

- Add suffix **N**

**ORDERING EXAMPLES:**



**CONSTRUCTION 09**

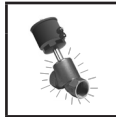
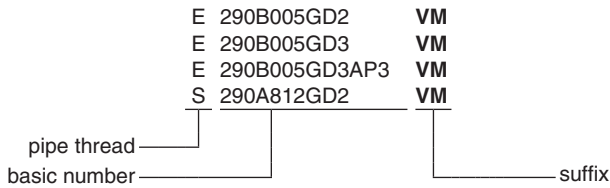
**Vacuum applications up to 1,33 10<sup>-3</sup> mbar**

- FPM disc for use with medium vacuum

**TO ORDER:** (for compatibility: see page 43)

- Add suffix **VM**

**ORDERING EXAMPLES:**



**CONSTRUCTION 10**

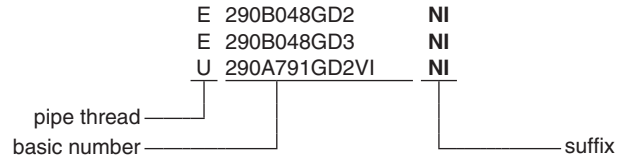
**NET-INOX treatment**

- Stainless steel valve body pickled in nitric hydrofluoric acid bath
- Treatment recommended for aggressive environments
- Standard on valves with CLAMP-type connections

**TO ORDER:** (for compatibility: see page 43)

- Add suffix **NI**

**ORDERING EXAMPLES:**



**CONSTRUCTION 11**

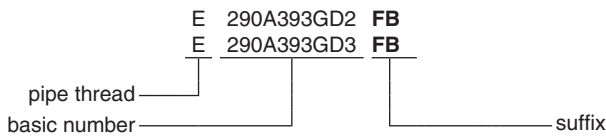
**Conformity with Regulation (EC) 1935-2004**

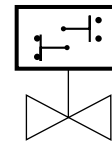
- The material of the wetted parts are listed in the chart of the Annex I of Regulation (EC) 1935/2004

**TO ORDER:** (for compatibility: see page 43)

- Add suffix **FB**

**ORDERING EXAMPLES:**





## FEATURES

- The signaling box fits all series 290 (2/2) and 390 (3/2) valves with 50 mm (NC) and 63 to 125 mm (NC/NO) operators to indicate whether the valve is open or closed
- The version with 2 intrinsically safe inductive NAMUR contacts is designed for use in potentially explosive atmospheres to ATEX-Directive 2014/34/EU
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with the International and European Standards EN 60079-0, EN 60079-11 and EN 60076-26
- The signaling box is supplied pre-installed and pre-adjusted on the valve. It is rotatable through 360°
- The signaling box complies with the EMC Directive 2014/30/EU

## OPERATION

At both end-of-travel positions (open and closed) of the valve stem, cams on the signaling box plunger operate contacts which provide an electrical signal indicating that the end position is reached.

## GENERAL

Ambient temperature range -10°C to +60°C

## CONSTRUCTION

Body, cover PA  
Degree of protection IP66  
Unit can be rotated through 360° around the centreline of the valve operator (set screw)

## ELECTRICAL CHARACTERISTICS

### intrinsically safe inductive NAMUR contacts

The protection rating of the installed signaling box depends on the type of selected valve (see page 1).

Contact characteristics:

- Power supply: 8,2 V DC
- Switching frequency: 800 Hz

Protection rating of contacts:

- Ⓜ II 1 G Ex ia IIB T6 Ga
- Ⓜ II 2 G Ex ia IIB T6 Gb
- Ⓜ II 1 D Ex ia IIIC T90°C Da

- EC type examination certificate no.:  
**BVS 04 ATEX E153**  
**PTB 01 ATEX 2191**

- Recommended interfaces:  
*galvanic barrier*  
Pepperl & Fuchs type KFA6-SR2-EX1.W  
MTL instruments type MTL5011B  
*ZENER barrier*  
MTL instruments type MTL7742

### safety parameters

U <sub>i</sub>	I <sub>i</sub>	P <sub>i</sub>	L <sub>i</sub>	C <sub>i</sub>
15 V	50 mA	120 mW	110 μH	80 nF

## Electrical connection

intrinsically safe inductive NAMUR contacts

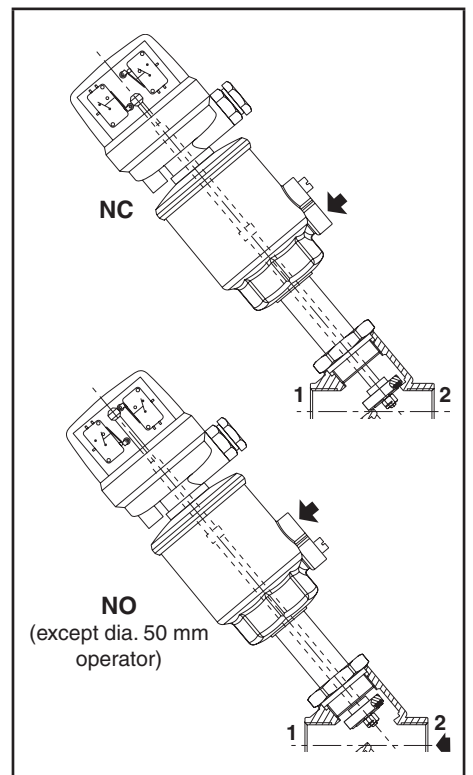
Max. grip  
Cable entry

2 terminal strips with 5 screw terminals  
2,5 mm<sup>2</sup>  
1 cable gland (cable Ø 5-10 mm)

## SPECIFICATIONS

operator	suffix <sup>(1)</sup> signaling box supplied installed on valve 2 intrinsically safe inductive contacts
dia. 50 mm (NC), dia. 63, 90, 125 mm (NC-NO)	SH2

- <sup>(1)</sup> Add the appropriate suffix after the catalogue number of the selected valve, example:
- catalogue number of valve alone **E290B010**
  - catalogue number of valve + pre-installed intrinsically safe inductive contacts box = **E290B010 SH2**

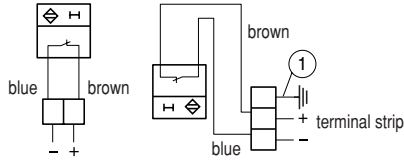


### OPTIONS

- Other types of contacts: contact us

### INSTALLATION

- The signaling box can be installed in any position
- Electrical connection:



① Electrical continuity terminal

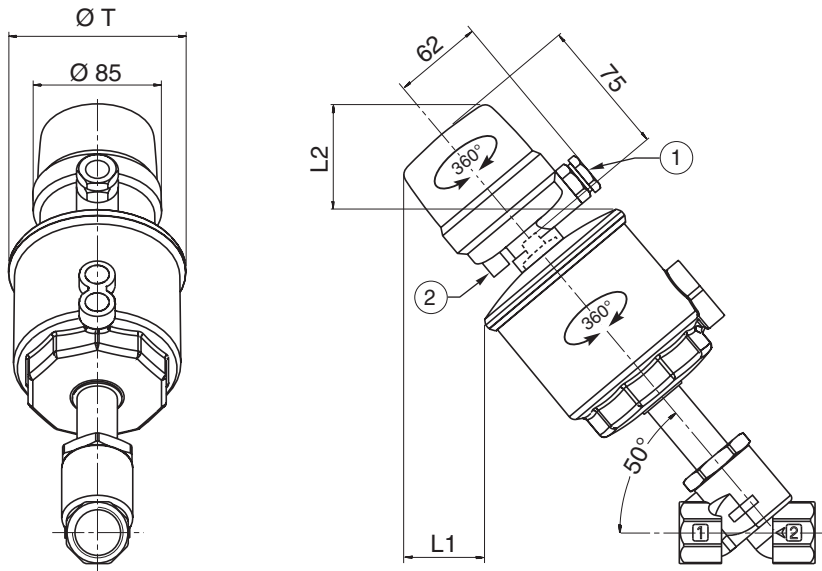
- Installation/maintenance instructions are included with each signaling box

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

Weight of unit alone: 0,310

### INSTALLATION ON SERIES 290 & 390

with dia 50 (NC), 63, 90 or 125 mm operator



operator dia.	50 mm	63 mm	90 mm	125 mm
L1	53	46	35	32
L2	75	70	56	50
Ø T	65	85	118	156

- ① 1 cable gland (cable Ø 5-10 mm)
- ② Unit rotation lock set screw (orientable through 360°)