

### FEATURES

- 2/2 or 3/2 valves NC/NO designed for use in potentially explosive atmospheres in accordance with ATEX-Directive 94/9/EC, category 2 or 3 (for category 1, contact us)
- 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		classification (zones)											
operator diameter	DN	V410, V412, V414, V420, V438, V703	V431	category 2						category 3					
				dusts	gas			safety code <sup>(b)</sup>	dusts	gas			safety code <sup>(b)</sup>		
					IIA	IIB	IIC			IIA	IIB	IIC			
Ø 32 mm	10 → 20			21	1	1	(a)	Ex II 2 GD IIB T6 T85°C	22	2	2	2	Ex II 3 GD T6 T85°C X		
Ø 50 mm	15 → 25			21	1	1	(a)	Ex II 2 GD IIB T6 T85°C	22	2	2	2	Ex II 3 GD T6 T85°C X		
Ø 63 mm	15 → 50			21	1	1	(a)	Ex II 2 GD IIB T6 T85°C	22	2	2	2	Ex II 3 GD T6 T85°C X		
Ø 90 mm	25 → 65			21	(a)	(a)	(a)	Ex II 2 D T85°C	22	2	2	2	Ex II 3 GD T6 T85°C X		
Ø 125 mm	32 → 65														

With optional static dissipative paint finish (TPL 20706):

(a) II 2 GD c T6 T85°C X (category 2)

(b) The maximum allowable surface temperature T6 T85°C corresponds to a valve operated with a fluid at ambient temperature. If the fluid temperature exceeds +80°C, the valve's surface temperature will be equal to the fluid temperature.

### 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 1	category 2	category 3
	contact us	GD2	GD3

Example: Valve E290, DN 35, operator dia. 63 mm (page V410) designed for use in zones 1 and 21 (category 2), catalogue number: **E290B010GD2**

### OPTIONS FOR VALVE BODIES TO ATEX 94/9/EC

- Static dissipative paint finish for protection of static-sensitive categories 2 and 3 valves, TPL 20706, e.g.: XE290B005GD2TPL20706

### CHOICE OF OPTIONS AND ACCESSORIES

construction type	see page	catalogue page							NC	NO	NC	operator dia. compatibility (mm) Ø	body						
		V410	V412	V414	V420	V431	V438	V703					fluid entry under the disc	fluid entry under the disc	fluid entry above the disc	32	50	63	90
Signaling box, intrinsically safe inductive contacts NAMUR	3																		
Adapter plate (stainless steel) for NAMUR pad-mount pilot	2																		
Oxygen service (max. limits: 15 bar, +60°C)	2																		
Vacuum applications up to 1.33 10 <sup>-3</sup> mbar	2																		
NET-INOX treatment	2																		
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



### CONSTRUCTION 07

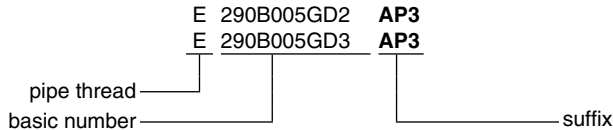
#### Adapter plate for NAMUR pad-mount pilot

- Adaptable on diameter Ø 63, 90 and 125 mm operators
- Stainless steel AISI 316L
- Solenoid pilot valves, series 551, 3/2 NC:  
- St. steel body, AISI316L, catalogue number **SCG551A409** <sup>(1)</sup>

#### TO ORDER (for compatibility see page 1):

- 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

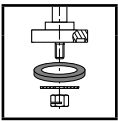
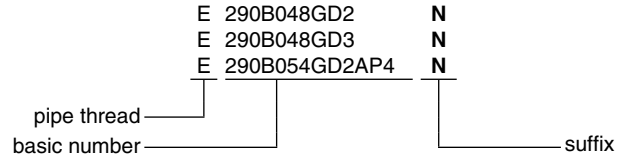
#### Oxygen service

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

#### TO ORDER (for compatibility see page 1):

- Add suffix N

#### ORDERING EXAMPLES:



### CONSTRUCTION 09

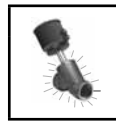
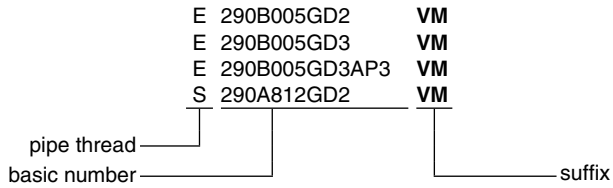
#### Vacuum applications up to 1,33 10<sup>-3</sup> mbar

- FPM disc for use with medium vacuum

#### TO ORDER (for compatibility see page 1):

- Add suffix VM

#### ORDERING EXAMPLES:



### CONSTRUCTION 10

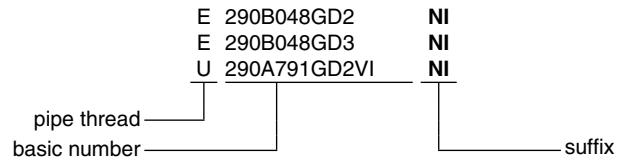
#### NET-INOX treatment

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

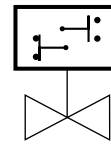
#### TO ORDER (for compatibility see page 1):

- Add suffix NI

#### ORDERING EXAMPLES:



<sup>(1)</sup> Consult our catalogue «Pilot Valves and Systems for the Process Industry» at: [www.asconumatics.eu](http://www.asconumatics.eu)



### 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 94/9/EC
- 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, EN 60076-26, prEN 61241-0 and IEC 61241-11
- The signaling box is supplied pre-installed and pre-adjusted on the valve. It is rotatable through 360°

### 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 V DC nominal
- Switching frequency: 1 kHz

Protection rating of contacts:

- Ex II 1 G Ex ia IIC T6
- II 1 D Ex iaD 20 T108°C

- EC type examination certificate no.:

**PTB 00 ATEX 2032 X**  
**ZELM 03 ATEX 0128 X**

- Recommended interfaces:

*galvanic barrier*  
Pepperl & Fuchs type KFA6-SR2-EX1.W  
MTL instruments type MTL5011B

*ZENER barrier*

MTL instruments type MTL7742

safety parameters						II 1 G Ex ia IIC T			gas
						surface temperature			
type <sup>(1)</sup>	U <sub>i</sub>	I <sub>i</sub>	P <sub>i</sub>	L <sub>i</sub>	C <sub>i</sub>	T6	T5	T4	
type 1	16 V	25 mA	34 mW	50 µH	40 nF	56°C	60°C	-	
type 2	16 V	25 mA	64 mW	50 µH	40 nF	49°C	60°C	-	
type 3	16 V	52 mA	169 mW	50 µH	40 nF	28°C	40°C	60°C	
type 4	16 V	76 mA	242 mW	50 µH	40 nF	13°C	25°C	53°C	

max. ambient temp.

safety parameters						II 1 D Ex iaD 20 T		dusts
						max. ambient temp.		
type <sup>(1)</sup>	U <sub>i</sub>	I <sub>i</sub>	P <sub>i</sub>	L <sub>i</sub>	C <sub>i</sub>	40°C	60°C	
type 1	16 V	25 mA	34 mW	50 µH	40 nF	T44°C	T64°C	
type 2	16 V	25 mA	64 mW	50 µH	40 nF	T48°C	T67°C	
type 3	16 V	52 mA	169 mW	50 µH	40 nF	T60°C	T77°C	

surface temperature

<sup>(1)</sup> Safety circuit type according to EC type examination certificate.

### Electrical connection

intrinsically safe inductive NAMUR contacts

2 terminal strips with 5 screw terminals

**Max. grip**

2,5 mm<sup>2</sup>

**Cable entry**

1 cable gland (cable Ø 5-10 mm)

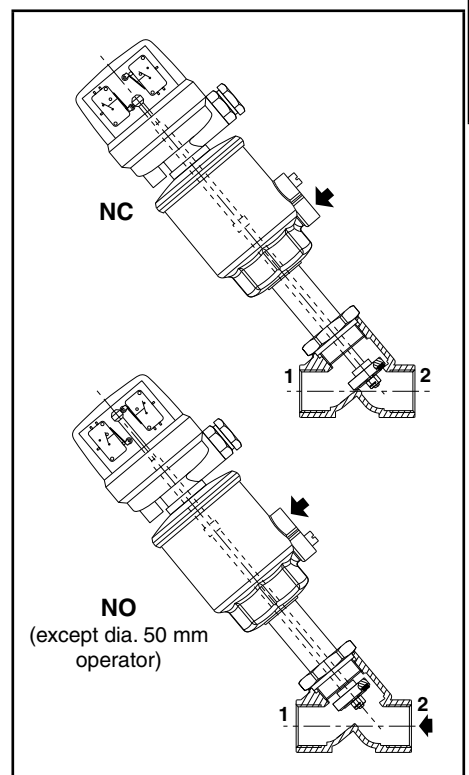
### SPECIFICATIONS

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)	<b>SH2</b>

<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**



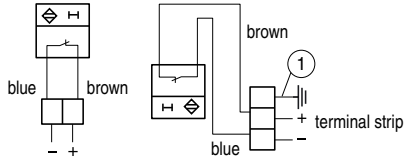
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### OPTIONS

- Other types of contacts: contact us

### INSTALLATION

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



① Electrical continuity terminal

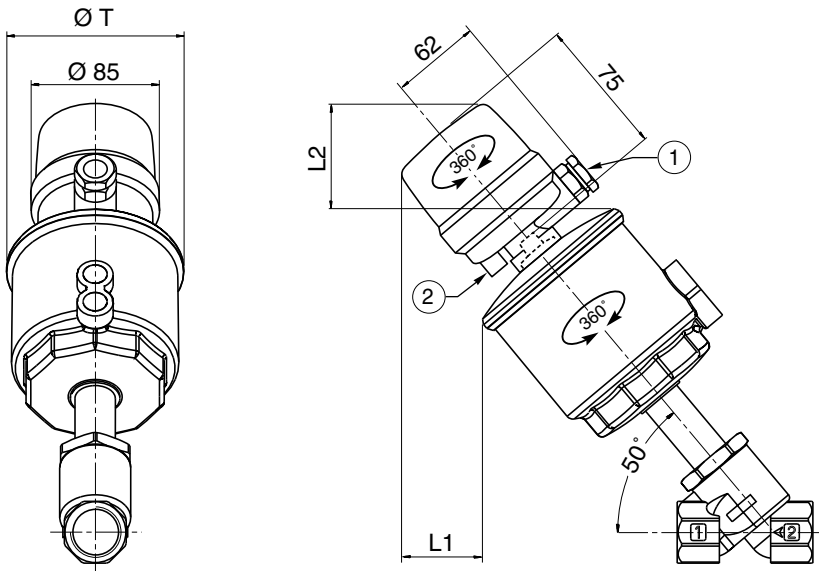
- Installation/maintenance instructions are included with each signaling box

### 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°)