

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		classification (zones)											
operator diameter	DN	V410, V412, V414, V420, V703	V431	category 2						category 3					
				dusts	gas			safety code	dusts	gas			safety code		
					IIA	IIB	IIC			IIA	IIB	IIC			
Ø 32 mm	10 → 20			21	1	1	-	⊕ II 2 GD c IIB T4 T135°C	22	2	2	2	⊕ II 3 GD c T4 T135°C		
Ø 50 mm	15 → 25			21	1	1	-	⊕ II 2 GD c IIB T4 T135°C	22	2	2	2	⊕ II 3 GD c T4 T135°C		
Ø 63 mm	15 → 50			21	1	1	-	⊕ II 2 GD c IIB T4 T135°C	22	2	2	2	⊕ II 3 GD c T4 T135°C		
Ø 90 mm	25 → 65			21	-	-	-	⊕ II 2 D c T135°C	22	2	2	2	⊕ 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 ⁽¹⁾	
	category 2	category 3
	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**

CHOICE OF OPTIONS AND ACCESSORIES

construction type	see page	catalogue page						NC	NO	NC	operator dia. compatibility (mm)					body			
		V410	V412	V414	V420	V431	V703				fluid entry under the disc	fluid entry under the disc	fluid entry above the disc	32	50	63	90	125	bronze
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 ⁻³ mbar	2							•	•	•	•	•	•	•	•	•	•	•	•
NET-INOX treatment	2							•	•	•	•	•	•	•	•	•	•	•	•
Conformity with Regulation (EC) 1935-2004	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

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CONSTRUCTION 07

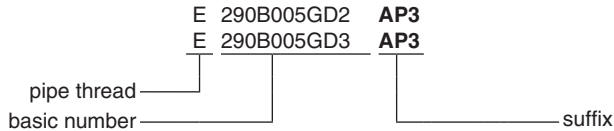
Adapter plate for NAMUR pad-mount pilot

- 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** (V860, sect. G)
 - St. steel body, AISI316L, catalogue number **SCG551A409** ⁽¹⁾

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:



⁽¹⁾ Consult our catalogue «Pilot Valves and Systems for the Process Industry» at: www.asco.com



CONSTRUCTION 08

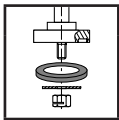
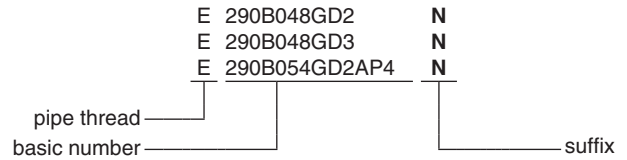
Oxygen service

- 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

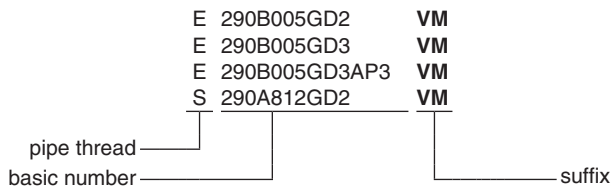
Vacuum applications up to 1,33 10⁻³ mbar

- FPM disc for use with medium vacuum

TO ORDER (for compatibility see page 1):

- Add suffix **VM**

ORDERING EXAMPLES:



CONSTRUCTION 10

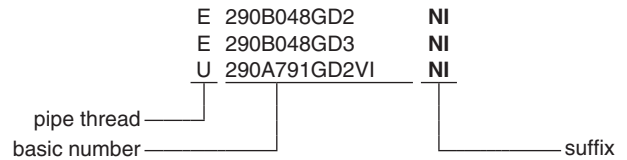
NET-INOX treatment

- 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:



CONSTRUCTION 11

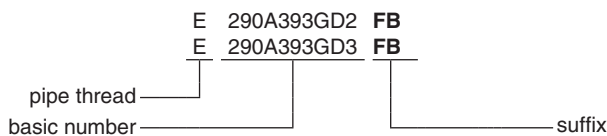
Conformity with Regulation (EC) 1935-2004

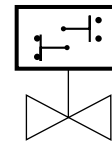
- The material of the wetted parts are listed in the chart of the Annex I of Regulation (EC) 1935/2004

TO ORDER (for compatibility see page 1):

- 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 IIC 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 _i	I _i	P _i	L _i	C _i
15 V	50 mA	120 mW	110 μH	80 nF

Electrical connection

intrinsically safe inductive NAMUR contacts

Max. grip
Cable entry

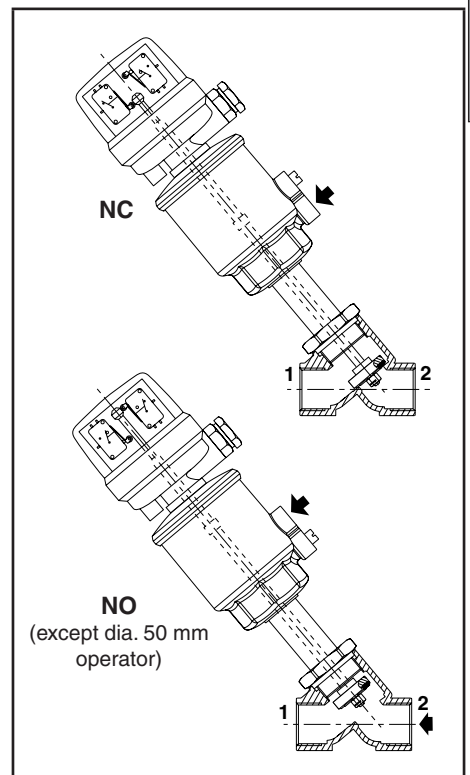
2 terminal strips with 5 screw terminals
2,5 mm²
1 cable gland (cable Ø 5-10 mm)

SPECIFICATIONS

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

⁽¹⁾ 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**



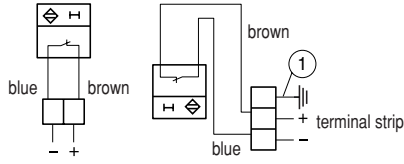
D

OPTIONS

- Other types of contacts: contact us

INSTALLATION

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



① Electrical continuity terminal

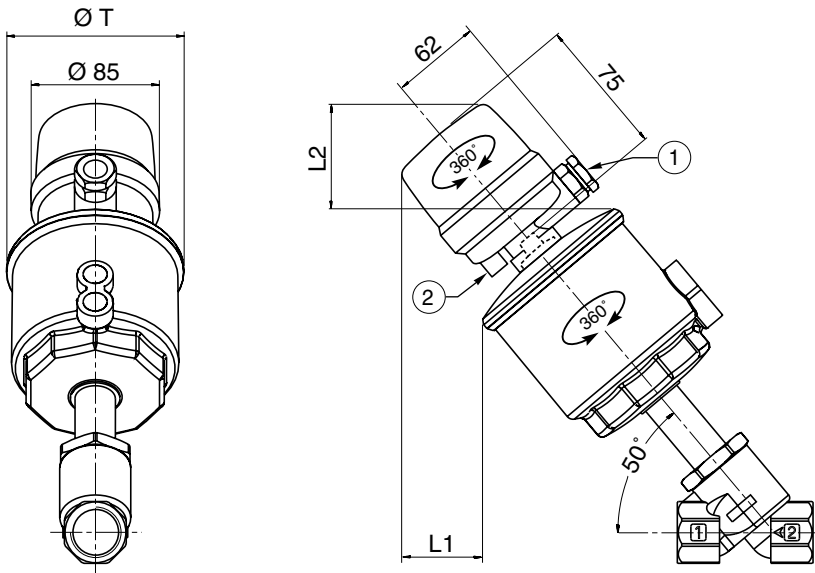
- Installation/maintenance instructions are included with each signaling box

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°)