

### FEATURES

- Mini-low consumption valves (0,25 W/0,5 W) for use in potentially explosive atmospheres according to ATEX-Directive 94/9/EC  
EC type examination certificate no.: **INERIS 03 ATEX 0249X**  
IECEx Certificate of Conformity no.: **IECEx INE 10.0002X**
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with the International and European Standards IEC and EN: 60079-0, 60079-11, 60079-26, 61241-0 and 61241-11
- The valve's Ex ia protection allows it to be installed in explosive atmospheres up to zone 0 or 20. It can be used in the chemical, oil and pharmaceutical industries, or in processing and packaging plants for flammable products (paints, solvents)
- Compact, monobloc pilot valve with spade plug. Connection according to DIN 43650, form C, 9,4 mm pin spacing
- Version with integrated display and electrical protection. LED visible from 3 sides

### GENERAL

<b>Differential pressure</b>	0 - 8 bar [1 bar = 100 kPa]
<b>Pneumatic base</b>	ISO 15218 (CNOMO E06.36.120N, size 15)
<b>Connection</b>	Subbase
<b>Response time</b>	20 ms

fluids (*)	temperature range (TS)	seal materials (*)
air or inert gas filtered (50 µm), without condensate, dew point: -20°C	0°C to + 40°C (0,25 W)	NBR (nitrile) FPM (fluoroelastomer)
	- 10°C to + 40°C (0,5 W)	

### MATERIALS IN CONTACT WITH FLUID

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

<b>Body</b>	PAA
<b>Internal parts</b>	POM, PET, stainless steel and brass
<b>Seals</b>	NBR, FPM
<b>Pneumatic interface seal</b>	TPE

### OTHER MATERIALS

<b>Coil</b>	Thermoplastic PET
-------------	-------------------

### ELECTRICAL CHARACTERISTICS

<b>Coil insulation class</b>	F  II 1G Ex ia IIC T6 to T4 II 1D Ex iaD 20 IP6X T 85°C to T135°C
------------------------------	--

<b>Connector</b>	Spade plug (cable Ø 4-6 mm)
<b>Connector specification</b>	DIN 43650, 9,4 mm, form C
<b>Electrical safety</b>	IEC 335
<b>Electrical enclosure protection</b>	Moulded IP65 (EN 60529)
<b>Standard voltages</b>	DC (=) : 12V - 24V <sup>(2)</sup> (0,25 W = 24 V only)

voltage (U <sub>n</sub> ) (max. ripple 10%)	power ratings (Pn) <sup>(*)</sup> hot/cold =	typical functional ratings					ambient temperature range (TS)	type <sup>(3)</sup>
		I <sub>(ON)</sub> min. with LED	U <sub>(ON)</sub> min.	U <sub>(MAX)</sub> recom- mended	U <sub>(OFF)</sub> turn off	I <sub>(OFF)</sub> turn off		
(V)	(W)	(mA)	(V)	(V)	(V)	(mA)	(°C) <sup>(1)</sup>	01
LP1 "24V"	0,25	20	12,2	28	3,3	7	0 to +40/50/60	
LP1 "12V"	0,5	33	11,9	23	3,3	10	-10 to +40/50/60	
LP1 "24V"		25	16,4	28	5,7	7		

<sup>(\*)</sup> Nominal power ratings of standard versions (with LED indicator and electrical protection)

Pn	safety parameters				
	U <sub>i</sub> = (DC)	I <sub>i</sub>	P <sub>i</sub>	L <sub>i</sub>	C <sub>i</sub>
(W)	(V)	(mA)	(W)	(mH)	(µF)
0,25/0,5	28	300	1,6	0	0

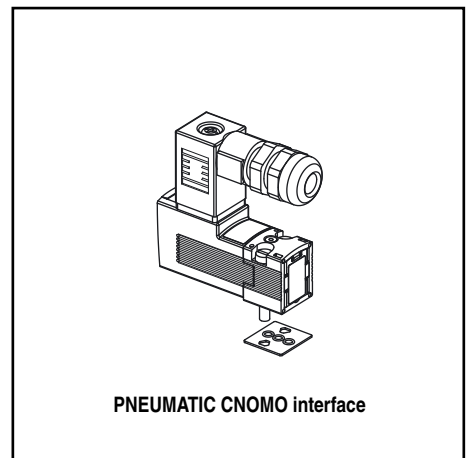
Example of use with a Zener barrier installed in a non-hazardous zone:  
safe area (RS interface)      cable      explosive area



### TEMPERATURE CLASSIFICATION TABLES DC (=)

Pi (watt)	maximum ambient °C <sup>(1)</sup>						Insulation class F (155°C) 100% E.D. <sup>(2)</sup>	single solenoid valve solenoid valve mounted in series
	surface temperature							
	T6 85°C		T5 100°C		T4 135°C			
	12V	24V	12V	24V	12V	24V		
1,6	40	40	50	60	60	60		
	-	-	-	-	50	50		

- <sup>(1)</sup> Minimum ambient temperature: 0°C (0,25 W) / -10°C (0,5W)
- <sup>(2)</sup> Coil designed for permanent duty within maximum ambient temperature limits. The solenoid valve must be connected to a special certified electrical supply unit installed in a non-dangerous zone. List of safety barrier manufacturers on the following page.
- <sup>(3)</sup> Refer to the dimensional drawings on the page 4.



### SPECIFICATIONS

orifice size	flow				operating pressure differential (bar)		power coil (W)	basic catalogue number
	at 6,3 bar l/min (ANR)		coefficient Kv		min.	max. (PS)		with impulse /maintained manual operator
(mm)	1 → 2	2 → 3	1 → 2	2 → 3		(=)	(=)	=
<b>3/2 NC - normally closed (With LED and protection)</b>								
0,6	4	11	0,04	0,16	0	8	0,25	30215311AD
	11	20	0,21	0,44	0	8	0,5	30215106AD

When ordering, please specify in addition to the basic catalogue number:

- voltage:  
0,25 W: 24 V DC  
0,5 W: 12 V DC or 24 V DC

Examples: with connector DIN 43650, 9,4 mm: **30215311AD** 24V DC  
with connector DIN 43650, 9,4 mm: **30215106AD** 12V DC  
with connector DIN 43650, 9,4 mm: **30215106AD** 24V DC

### OPTIONS

- Solenoid valves without LED and electrical protection (0,5 W only)

### INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- Solenoid valve supplied with mounting screws and mounting pad seal(s)
- Electrical connection between solenoid valve and barrier/interface with cable type A or B according to EN 50039
- Installation on single subbase (3 x M5), brass body, catalogue number **30300001**
- Versions with spade-plug connector type ISO 15217/DIN 43650 form C with 8 mm spacing or M12 connection: contact us
- Installation/maintenance instructions are included with each valve

See the list for compatible interfaces and barriers.

This list is for reference only and the user must take into account the cables and the actual supply voltages for the barriers.

The operating conditions are calculated as follows:

0,25 W: **24 V with LED**

$$I_1 \text{ (mA)} = \frac{[V_s - 1,2 - 0,002 (R_b + R_1)] \times 1000}{(R_c + R_1 + R_b)} + 2$$

0,5 W: **12 V or 24 V with LED**

$$I_1 \text{ (mA)} = \frac{[V_s - 1,2 - 0,003 (R_b + R_1)] \times 1000}{(R_c + R_1 + R_b)} + 3$$

This value and the maximum barrier/interface current (if it is non-linear) must be greater than 33 mA (12 V with LED), 25 mA (24 V with LED, 0,5 W), 20 mA (24 V with LED, 0,25 W).

$I_1$  (mA) Min. supply current of the product

$R_b$  (Ω) Max. barrier resistance

$T_a$  (°C) Max. ambient temperature

$R_1$  (Ω) Max. resistance of connecting cables

$V_s$  (V) Min. no-load voltage of barrier/interface

$R_c$  (Ω) Max. coil resistance:

$$12 \text{ V with LED} = \frac{288 (T_a + 234 + 10)}{254} \quad / \quad 24 \text{ V with LED} = \frac{563 (T_a + 234 + 10)}{254}$$

### COMPATIBLE BARRIERS AND INTERFACES

The 12 V DC and 24 V DC solenoid valves are compatible with the barriers listed in the table below.

**0,5 W:** The index (1) indicated the 12 V DC versions that are compatible with the 24 V DC barriers.

Located in safe areas, these barriers and interfaces allow to feed the intrinsically safe solenoid valves located in explosive areas. This equipment must be ordered from its respective manufacturers, specifying that they are intended to feed intrinsically safe solenoid valves: 3021...IA., II 1G Ex ia IIC T6 to T4, II 1D Ex iaD 20 IP6X T85°C to T135°C.

0,5 W				0,5 W			
INTERFACES				ZENER BARRIERS			
manufacturer	module type	302 Ex ia IIC		manufacturer	module type	302 Ex ia IIC	
		12 V with LED	24 V with LED			12 V with LED	24 V with LED
ABB	DO910S	x	x	CEAG	SB-3722	x	
AP3	NAEV30-DO2C-A230-0	x			SB-0722		
	NAEV30-DO2C-A115-0	x			SB-2420	x	x
	NAEV30-DO2H-C024-0	x			SB-3729	x	x
	NAEV30-DO4H-C024-0	x			SB-3728	x	x
	NAEV30-DI2-DO1C-A230-0	x			SB-0728	x	
	NAEV30-DI2-DO1C-A115-0	x		SB-0728	x		
Bartec	07-7331-2105/1000	x		MTL	MTL 722	x	
	07-7331-2301/1100	x			MTL 728	x	x
CEAG	LB-2101				MTL 728P	x	x
	LB-2103			MTL 779	x	x	
	LB-2105	x		Pepperl + Fuchs	Z728	x	x
	LB-2112	x	x		Z728.H	x	x
	FB-2201				Z728.CL	x	x
	FB-2203	x			Stahl	9001/01-199-150-101	x
FB-2205	x		9001/01-280-075-101				
FB-2212	x	x	9001/01-280-085-101	x		x	
G.M. international	D1040Q-2	x		9001/01-280-100-101		x	x
	D1042Q-2	x	x	9001/01-280-110-101		x	x
	D1043Q-2	x		EMERSON	DELTA V		x
MTL	815-DO-04	x	x	For other compatible barriers and interfaces, please ask our product support.			
	4021S	x		In accordance with the zone classification and the national legislation of each country, apply the certification procedures for the connection of IS-rated products with associated equipment. All information subject to change without notice. All responsibility for the use of products from other suppliers and the possible modifications of their characteristics is disclaimed.			
Pepperl + Fuchs	KFD2-SD-Ex1.17	x					
	KFD2-SD-Ex1.36	x	x				
	KFD2-SD-Ex1.48	x <sup>(1)</sup>					
	KFD2-SD-Ex1.48.90A	x <sup>(1)</sup>					
	KFD2-SL-Ex1.48	x <sup>(1)</sup>					
	KFD2-SL-Ex1.48.90A	x <sup>(1)</sup>					
	KFD2-SL2-Ex1	x <sup>(1)</sup>	x				
	KFD2-SL2-Ex1.B	x <sup>(1)</sup>	x				
	KFD2-SL2-Ex1.LK	x <sup>(1)</sup>	x				
	KFD2-SL2-Ex2	x <sup>(1)</sup>	x				
	KFD2-SL2-Ex2.B	x <sup>(1)</sup>	x				
Stahl	KFD2-VD-Ex1.1560	x					
	KFD2-VD-Ex1.1835	x	x				
	9475/12-04-11	x					
Turck	9475/12-04-21	x	x				
	9475/12-04-31	x					
	MK72-S01-Ex	x					
	MK72-S09-Ex0/24VDC	x					
	MK72-S10-Ex0/24VDC	x					
	MC72-41Ex-T/24VDC	x					
Siemens	MC72-42Ex-T/24VDC		x				
	MC72-44Ex-T	x					
	MC72-43Ex-T		x				
Siemens	ET200IS double	x	x				
	6ES7132-7RD20-OAB0	x					

Not compatible

<sup>(1)</sup> Compatible with 24 V DC

0,25 W				0,25 W			
INTERFACES				INTERFACES			
manufacturer	module type	302 Ex ia IIC		manufacturer	module type	302 Ex ia IIC	
		12 V with LED	24 V with LED			12 V with LED	24 V with LED
ABB	DO910S		x	Turck	DO040Ex		x
EMERSON (EPM)	DELTA V		x		Pepperl + Fuchs	FB 2201	x
MTL	815-DO-04		x	FB 2202		x	
Siemens	6E S7132-5SB00-OAB0		x	FB 2203		x	
	6E S7132-5SB00-OAB0 2 way		x	FB 2204		x	
	6E S7132-7RD00-OAB0		x	FB 2205		x	
	6E S7132-7RD10-OAB0		x	FB 2212		x	
	6E S7132-7RD10-OAB0 2 way		x	FB 6210B		x	
	6ES7132-7RD20-OAB0		x	FB 6211B		x	
6E S7132-7RD20-OAB0 2 way		x	FB 6212B	x			
Stahl	9475/12-04-11		x	FB 6212B		x	
	9475/12-04-21		x	FB 6213B		x	
	9475/12-04-31		x	FB 6214B		x	
	9475/12-08-51		x	FB 6215B		x	
	9475/12-08-61		x	For other compatible barriers and interfaces, please ask our product support.			

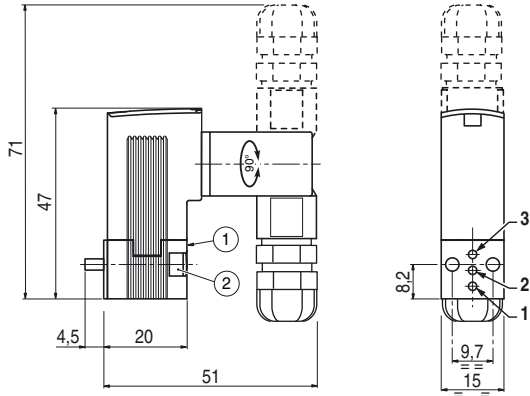
For other compatible barriers and interfaces, please ask our product support.

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

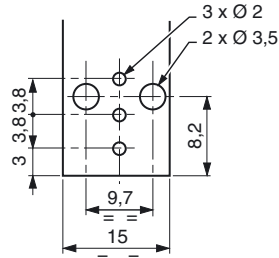


#### TYPE 01

IEC 335 / DIN 43650  
 EN/IEC 60079-11/26 and EN/IEC 61241-11  
 II 1G Ex ia IIC T6 to T4  
 II 1D Ex iaD 20 IP65 T85°C to T135°C



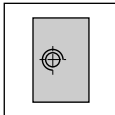
Pneumatic base: ISO 15218  
 (CNOMO E06.36.120N, size 15)



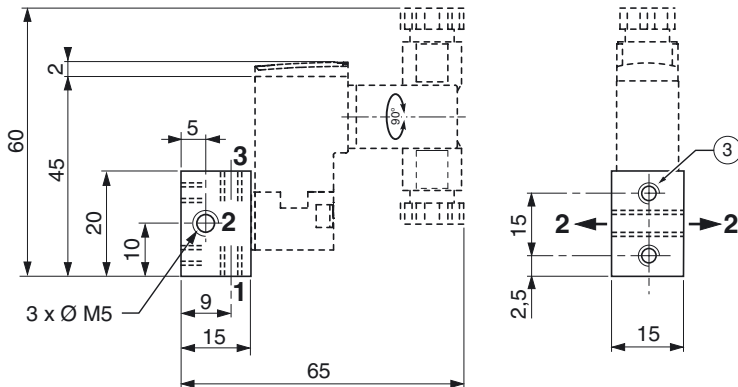
type	weight <sup>(1)</sup>
01	0,052

- ① Manual operator location
- ② Mounting: 2 M3 x 20 screws

<sup>(1)</sup> Including connector.



#### Single subbase Brass



- ③ Mounting: 2 holes M3, depth 4,5

Orifice (2) can be connected on the left or on the right of the subbase.

material	catalogue number	weight <sup>(1)</sup>
brass	30300001	0,034

<sup>(1)</sup> subbase alone