

FEATURES

- Mini-low consumption valves (0,25 W/0,5 W) for use in potentially explosive atmospheres according to ATEX-Directive 2014/34/EU
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 and 60079-26
- 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

Differential pressure	0 - 8 bar [1 bar = 100 kPa]
Pneumatic base	ISO 15218 (CNOMO E06.36.120N, size 15)
Connection	Subbase
Response time	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) - 10°C to + 40°C (0,5 W)	NBR (nitrile) FPM (fluoroelastomer)

MATERIALS IN CONTACT WITH FLUID

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

Body	PARA
Internal parts	POM, PET, stainless steel and brass
Seals	NBR, FPM
Pneumatic interface seal	TPE

OTHER MATERIALS

Coil	Thermoplastic PET
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ELECTRICAL CHARACTERISTICS

Coil insulation class	F Ex II 1 G Ex ia IIC T6 to T4 Ga II 1 D Ex ia IIIC T 85°C to T135°C IP65 Da
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Connector	Spade plug (cable Ø 4-6 mm)
Connector specification	DIN 43650, 9,4 mm, form C
Electrical safety	IEC 335
Electrical enclosure protection	Moulded IP65 (EN 60529)
Standard voltages	DC (=) : 12V - 24V ⁽²⁾ (0,25 W = 24 V only)

voltage (U _n) (max. ripple 10%)	power ratings (P _n) ^(*)	typical functional ratings					ambient temperature range (T _S)	type ⁽³⁾
		I _(ON) min.	U _(ON) min.	U _(MAX) recom- mended	U _(OFF) turn off	I _(OFF) turn off		
	with LED							
(V)	(W)	(mA)	(V)	(V)	(V)	(mA)	(°C) ⁽¹⁾	
LP1 "24V"	0,25	20	12,2	28	3,3	7	0 to +40/50/60	01
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		

^(*) Nominal power ratings of standard versions (with LED indicator and electrical protection)

P _n	safety parameters				
	U _i = (DC)	I _i	P _i	L _i	C _i
(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 ⁽¹⁾					
	surface temperature					
	T6 85°C	T5 100°C	T4 135°C			
	12V	24V	12V	24V	12V	24V
Insulation class F (155°C) 100% E.D. ⁽²⁾						
1,6	40	40	50	60	60	60
	-	-	-	-	50	50
single solenoid valve						
solenoid valve mounted in series						

⁽¹⁾ Minimum ambient temperature: 0°C (0,25 W) / -10°C (0,5W)

⁽²⁾ 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.

⁽³⁾ 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					with impulse /maintained manual operator
	(mm)	1 → 2	2 → 3	1 → 2	2 → 3	min.		max. (PS)
3/2 NC - normally closed (With LED and protection)								
0,6	4	11	0,04	0,16	0	8	0,25	30215311IAD
	11	20	0,21	0,44	0	8	0,5	30215106IAD

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

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

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

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

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_l (mA) Min. supply current of the product

R_b (Ω) Max. barrier resistance

T_a (°C) Max. ambient temperature

R_l (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: 302 1. ...IA., II 1 G Ex ia IIC T6 to T4 Ga, II 1D Ex ia IIC T85°C to T135°C IP6X Da.

0,5 W							
INTERFACES				ZENER BARRIERS			
manufacturer	module type	302 Ex ia		manufacturer	module type	302 Ex ia	
		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		MTL	MTL 722	x	
	NAEV30-DI2-DO1H-C024-0	x			MTL 728	x	x
Bartec	07-7331-2105/1000	x			MTL 728P	x	x
	07-7331-2301/1100	x			MTL 779	x	x
CEAG	LB-2101			Pepperl + Fuchs	Z728	x	x
	LB-2103				Z728.H	x	x
	LB-2105	x			Z728.CL	x	x
	LB-2112	x	x	Stahl	9001/01-199-150-101	x	
	FB-2201				9001/01-280-075-101		
	FB-2203	x			9001/01-280-085-101	x	x
	FB-2205	x			9001/01-280-100-101	x	x
	FB-2212	x	x		9001/01-280-110-101	x	x
G.M. international	D1040Q-2	x		EMERSON	DELTA V		x
	D1042Q-2	x	x	For other compatible barriers and interfaces, please ask our product support.			
	D1043Q-2	x					
MTL	815-DO-04	x	x				
	4021S	x					
Pepperl + Fuchs	KFD2-SD-Ex1.17	x					
	KFD2-SD-Ex1.36	x	x				
	KFD2-SD-Ex1.48	x ⁽¹⁾					
	KFD2-SD-Ex1.48.90A	x ⁽¹⁾					
	KFD2-SL-Ex1.48	x ⁽¹⁾					
	KFD2-SL-Ex1.48.90A	x ⁽¹⁾					
	KFD2-SL2-Ex1	x ⁽¹⁾	x				
	KFD2-SL2-Ex1.B	x ⁽¹⁾	x				
	KFD2-SL2-Ex1.LK	x ⁽¹⁾	x				
	KFD2-SL2-Ex2	x ⁽¹⁾	x				
	KFD2-SL2-Ex2.B	x ⁽¹⁾	x				
	KFD2-VD-Ex1.1560	x					
	KFD2-VD-Ex1.1835	x	x				
Stahl	9475/12-04-11	x					
	9475/12-04-21	x	x				
	9475/12-04-31	x					
Turck	MK72-S01-Ex	x					
	MK72-S09-Ex0/24VDC	x					
	MK72-S10-Ex0/24VDC	x					
	MC72-41Ex-T/24VDC	x					
	MC72-42Ex-T/24VDC		x				
	MC72-44Ex-T	x					
	MC72-43Ex-T		x				
Siemens	ET200IS double	x	x				
	6ES7132-7RD20-OAB0	x					

Not compatible

⁽¹⁾ Compatible with 24 V DC

0,25 W							
INTERFACES				INTERFACES			
manufacturer	module type	302 Ex ia		manufacturer	module type	302 Ex ia	
		24 V with LED				24 V with LED	
ABB	DO910S	x		Turck	DO040Ex	x	
EMERSON (EPM)	DELTA V	x			FB 2201	x	
MTL	815-DO-04	x		Pepperl + Fuchs	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 6213B	x	
	9475/12-04-21	x			FB 6214B	x	
	9475/12-04-31	x			FB 6215B	x	
	9475/12-08-51	x					
	9475/12-08-61	x					

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

DIMENSIONS (mm), WEIGHT (kg)



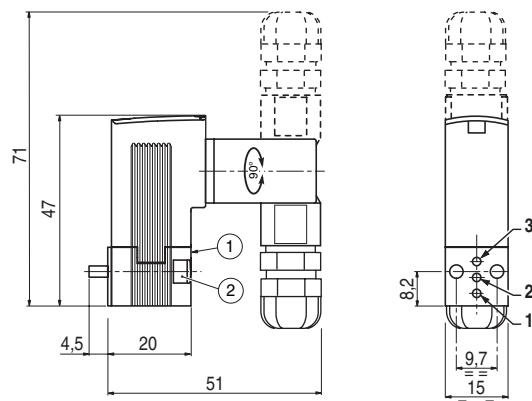
TYPE 01

IEC 335 / DIN 43650

EN/IEC 60079-11/26

II 1 G Ex ia IIC T6 to T4 Ga

II 1 D Ex ia IIIC T85°C to T135°C IP65 Da

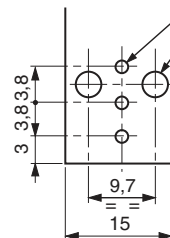


type	weight ⁽¹⁾
01	0,052

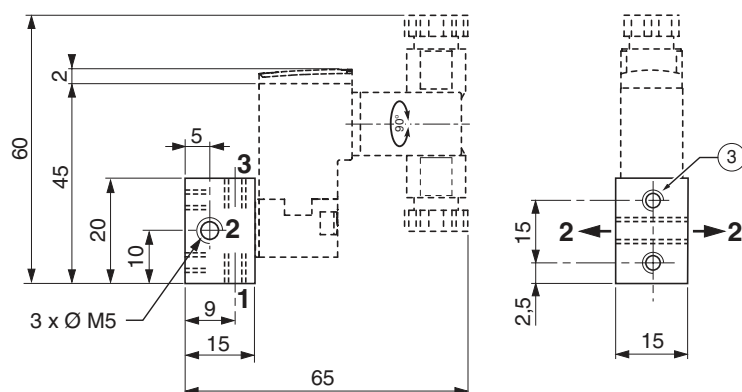
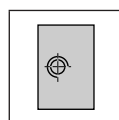
⁽¹⁾ Including connector.

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

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



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 ⁽¹⁾
brass	30300001	0,034

⁽¹⁾ subbase alone



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