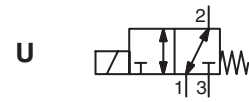




# SOLENOID VALVES

direct operated, balanced poppet  
high flow, flameproof enclosure  
II 2 G/D Ex db IIC T6..T4 Gb / Ex tb IIIC Db IP66/67  
1/4 - 1/2



3/2  
Series  
327

## FEATURES

- Solenoid valves with explosionproof operators NF or WSNF type for use in potentially explosive atmospheres according to ATEX Directive 2014/34/EU EU type examination certificate no.: **LCIE 00 ATEX 6008 X** IECEx Certificate of Conformity no.: **IECEx LCI 07.0015X**
- Compliance with the Essential Health and Safety Requirements has been assured by compliance with the International and European Standards EN-IEC 60079-0, EN-IEC 60079-1 and EN-IEC 60079-31
- The solenoid valves are recommended for pilot applications with high flow, wide pressure ranges and no minimum operating pressure
- Special execution for low ambient and fluid temperatures
- Manual Operators are optional including an under pressure removable type
- The valves are certified according to IEC 61508 Functional Safety data and have SIL-3 capability (TUV & Exida certification)

## GENERAL

Differential pressure 0 - 10 bar [1 bar = 100 kPa]  
Maximum viscosity 65 cSt (mm<sup>2</sup>/s)  
Response time < 100 ms

fluids (*)		temperature range (TS)	seal materials (*)
5,7 mm	air, inert gas, water, oil	- 20°C to + 120°C	FPM (fluoroelastomer)
		- 40°C to + 40°C	VMQ (silicone)
		- 60°C to + 60°C	(F)VMQ ((fluoro)silicone)
12 mm	air, inert gas	- 25°C to + 60°C	NBR (nitrile)
		- 10°C to + 90°C	FPM (fluoroelastomer)
		- 50°C to + 60°C	(F)VMQ ((fluoro)silicone)

## MATERIALS IN CONTACT WITH FLUID

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

**Body** Brass or stainless steel AISI 316L  
**Stem, core tube** Stainless steel  
**Core and plugnut** Stainless steel  
**Springs** Stainless steel  
**Seals & poppets** Ø 5,7 mm: FPM or VMQ or (F)VMQ  
Ø 12 mm: NBR or FPM or (F)VMQ  
**Rider ring** PTFE

## OTHER MATERIALS

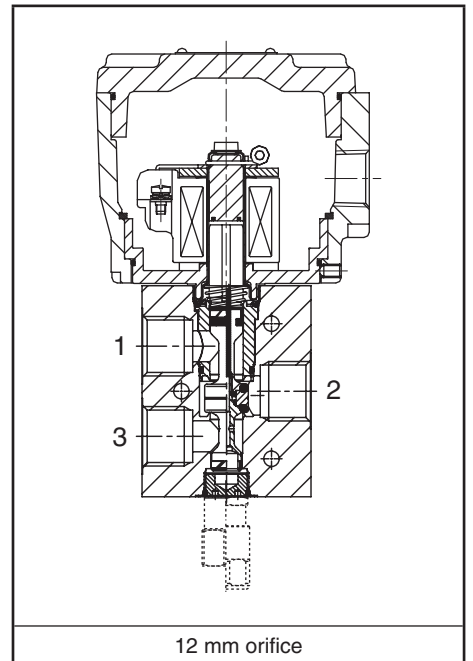
**Solenoid enclosure** NF: Chromated aluminium, epoxy coated  
WSNF: Stainless steel (AISI 316L)  
**Bonnet, cover screws** NF: Steel (zinc plated)  
WSNF: Stainless steel  
**Core tube** Stainless steel  
**Core and plugnut** Stainless steel

## ELECTRICAL CHARACTERISTICS

**Coil insulation class** H (5,7 mm), F (12 mm)  
**Coil connection** Screw terminals  
**Electrical safety** IEC 60335-1  
**Standard voltages** DC (=) : 24V - 48V  
(Other voltages and 60 Hz on request) AC (~) : 24V - 48V - 115V - 230V / 50 Hz

## SAFETY CODE

IECEx / II 2G Ex db IIC T6..T4 Gb  
IECEx / II 2D Ex tb IIIC 85°C to 135°C Db IP66/67



prefix option	power ratings				operator ambient temperature range (TS) (C°) <sup>(3)</sup>	replacement coil		type <sup>(1)</sup>	
	inrush ~	holding ~		hot/cold =		~	=		
		(VA)	(VA)						(W)
NF	5,7	10	10	10	9 / 11,2	-60 to + 40/60	400915-017	400913-142	01-02
		5,8	5,8	5,8	5,2 / 5,7	-60 to + 60/75/90	400921-297	400914-442	
		3,7	3,7	3,7	3,2 / 3,6	-60 to + 60	<sup>(2)</sup>	400914-242	
		1,85	1,85	1,85	1,5 / 1,8	-60 to + 55	<sup>(3)</sup>	400914-542	
WSNF	12	10	10	10	9 / 10	-60 to + 40/60	400921-197	400911-342	01-02
		14,1	14,1	14,1	11 / 14	-60 to + 40/60/90	400921-697	400911-642	

<sup>(1)</sup> Refer to the dimensional drawings on the following page.

<sup>(2)</sup> Temperature range can be limited by sealings.  
<sup>(3)</sup> Only available in 24, 48 and 110V/DC

<sup>(4)</sup> AC limited to 127V/50/60Hz or 125V/DC

Pn (W)	operator AC (~)		
	max. ambient temp. °C surface temperature		
	T6 85°C	T5 100°C	T4 135°C
1,85 <sup>(4)</sup>	55	-	-
3,7 <sup>(4)</sup>	60	-	-
5,8 <sup>(4)</sup>	60	75	90
10 <sup>(4)</sup>	40	60	-
14,1	40	60	90

<sup>(4)</sup> AC rectified coil construction.

Pn (W)	operator DC (=)		
	max. ambient temp. °C surface temperature		
	T6 85°C	T5 100°C	T4 135°C
1,85	55	-	-
3,6	60	-	-
5,7	60	75	90
10	40	60	-
11,2	40	60	-
14	40	60	90

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**SPECIFICATIONS**

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)				power coil (W)		catalogue number		options				
				min.	max. (PS)		maintained man. operator (2)					impulse man. operator (2)	-	-		
					air (*)	water (*)										
NPT	(mm)	(m <sup>3</sup> /h)	(l/min)	~	=	~	=	~	=	~/=	~/=					
<b>U - Universal, FPM seals and poppets</b>																
1/4	5,7	0,45	7,5	0	10	10	10	10	10	11,2	NF8327B001	WSNF8327B002	MS <sup>(1)</sup>	MO	-	-
									5,8	5,7	NF8327B201	WSNF8327B202	MS <sup>(1)</sup>	MO	-	-
									3,7	3,6	NF8327B101	WSNF8327B102	MS <sup>(1)</sup>	MO	-	-
									1,85	1,8	NF8327B301	WSNF8327B302	MS <sup>(1)</sup>	MO	-	-
1/2	12	1,5	25	0	10	10	-	-	14,1	14	NF8327A649	WSNF8327A650	MS <sup>(1)</sup>	MO	-	-
									14,1	14	NF8327A609	WSNF8327A610	MS <sup>(1)</sup>	MO	-	-
<b>U - Universal, NBR seals and poppets</b>																
1/2	12	1,5	25	0	10	10	-	-	10	10	NF8327A607	WSNF8327A608	MS <sup>(1)</sup>	MO	-	-
<b>U - Universal, VMQ seals and poppets</b>																
1/4	5,7	0,45	7,5	0	10	10	10	10	10	11,2	NF8327B011	WSNF8327B012	MS <sup>(1)</sup>	MO	-	-
<b>U - Universal, (F)VMQ seals and poppets</b>																
1/4	5,7	0,45	7,5	0	10	10	10	10	5,8	5,7	NF8327B211	WSNF8327B212	MS <sup>(1)</sup>	MO	-	-
									3,7	3,6	NF8327B111	WSNF8327B112	MS <sup>(1)</sup>	MO	-	-
									1,85	1,8	NF8327B311	WSNF8327B312	MS <sup>(1)</sup>	MO	-	-
1/2	12	1,5	25	0	10	10	-	-	10	10	NF8327A645	WSNF8327A646	MS <sup>(1)</sup>	MO	-	-
									10	10	NF8327A605	WSNF8327A606	MS <sup>(1)</sup>	MO	-	-
<b>U - Universal, (F)VMQ sealings and poppets (minimum fluid temperature -60°C)</b>																
1/4	5,7	0,45	7,5	0	10	10	10	10	5,8	5,7	NF8327B291	WSNF8327B292	MS <sup>(1)</sup>	MO	-	-

<sup>(1)</sup> Functional Safety certification is not applicable with this feature.

<sup>(2)</sup> Under pressure removable execution

**OPTIONS**

- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE-10
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU ([www.asco.com](http://www.asco.com))
- Electrical enclosures according to "NEMA" standards are available
- Compliance with "UL", "CSA" and other local approvals available on request
- 3/8" pipe thread executions are available on request
- Stainless steel exhaust protector for valves certified to IEC 61508 Functional Safety, catalogue number: **131875-015** (NPT 1/4) or **131875-013** (NPT 1/2)
- Other pipe connections are available on request
- Any ATEX approved cable entry device can be fitted in the 1/2" NPT threaded entry hole (M20 x 1.5 in option), refer to the nameplate for identification of the maximum cable temperature
- Material certification like EN 10204 3.1 on the 316L Stainless Steel bodies are available on request

**INSTALLATION**

- The solenoid valves can be mounted in any position without affecting operation
- Solenoid valves have 2 or 3 mounting holes in body
- 1/2" NPT threaded cable entry. Enclosures are supplied without cable gland
- Pipe connection identifier is 8 = NPT (ANSI 1.20.3)
- Installation/maintenance instructions are included with each valve

**SPARE PARTS KIT**

catalogue number	spare parts kit no.
	~/=
(WS)NF8327B001/002	<b>C123670</b>
(WS)NF8327B011/012	<b>C131237</b>
(WS)NF8327B101/102/201/202	<b>C132251</b>
(WS)NF8327B111/112/211/212	<b>C132253</b>
(WS)NF8327B301/302	<b>C133441</b>
(WS)NF8327B311/312	<b>C133442</b>
(WS)NF8327A605/606/645/646	<b>C117638</b>
(WS)NF8327A607/608	<b>C117640</b>
(WS)NF8327A609/610/649/650	<b>C117640V</b>

**ORDERING EXAMPLES:**

NF	8	327	B	001	230V / 50 Hz
WSNF	8	327	B	202	MS 115V / 50 Hz
NF	8	327	A	607	MO 24V / DC
NF	8	327	A	606	230V / 50 Hz

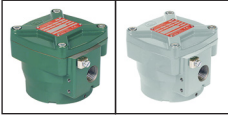
prefix \_\_\_\_\_  
 pipe thread \_\_\_\_\_  
 basic number \_\_\_\_\_  
 voltage \_\_\_\_\_  
 suffix \_\_\_\_\_

**ORDERING EXAMPLES KITS:**

C123670	
C131237	
C117640	V

basic number \_\_\_\_\_  
 suffix \_\_\_\_\_

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



#### TYPE 01-02

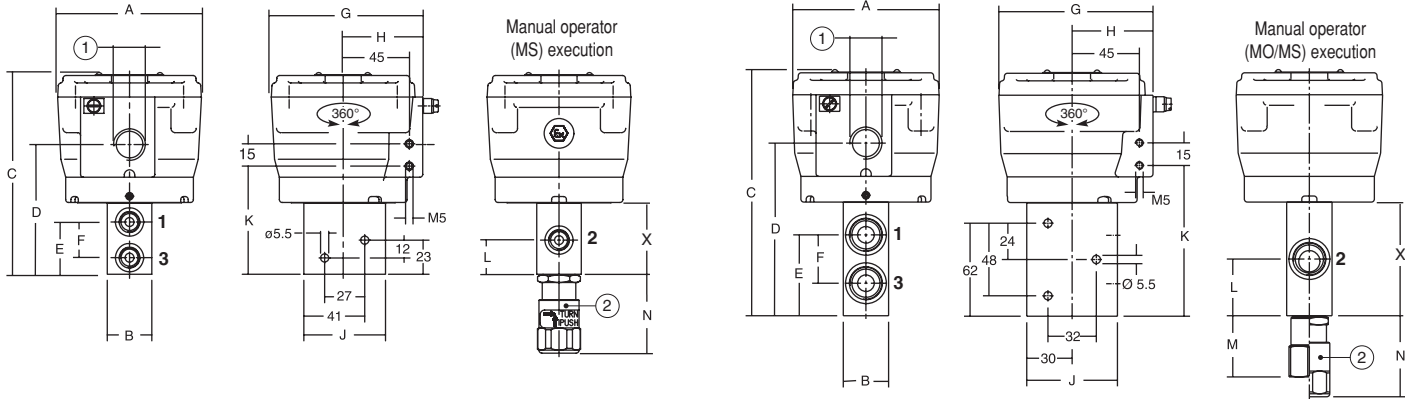
Prefix "NF", "WSNF" Solenoid  
Aluminium, stainless steel  
EN-IEC 60079-1 and EN-IEC 60079-31  
II 2G Ex db IIC Gb, II 2D Ex tb IIIC Db IP66/67

**Type 01:** NF8327B001/011/101/111/201/211/291/301/311

**Type 02:** WSNF8327B002/012/102/112/202/212/292/302/312

**Type 01:** NF8327A605/607/609/645/649

**Type 02:** WSNF8327A606/608/610/646/650



① 1/2 NPT

② Manual operator location

type	prefix option	catalogue number	A	B	C	D	E	F	G	H	J	K	L	M	N	X	weight <sup>(1)</sup>
01	NF	NF8327B001/011/101/111/201/211/291/301/311	97	30	136	87	35	24	102	54	55	73	23	-	54	48	2,6
		NF8327A605/607/609/645/649	97	30	165	115	54	32	102	54	60	100	38	40	54	76	2,4
02	WSNF	WSNF8327B002/012/102/112/202/212/292/302/312	97	30	136	87	35	24	102	54	55	73	23	-	54	48	2,6
		WSNF8327A606/608/610/646/650	97	30	165	115	54	32	102	54	60	100	38	40	54	76	3,8

<sup>(1)</sup> including coil.