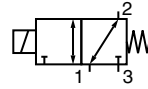




# SOLENOID VALVES

direct operated, balanced poppet  
high flow, flameproof enclosure  
II 2 G Ex d IIC T6..T4, II 2D Ex tD A21 IP67  
1/4 - 1/2

U



3/2  
Series  
327

## FEATURES

- Solenoid valves with explosionproof operators NF or WSNF type for use in potentially explosive atmospheres according to ATEX Directive 94/9/EC  
EC 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, EN-IEC 61241-0 and EN-IEC 61241-1
- 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
- The valves are certified according to IEC 61508 Functional Safety data and have SIL-4 capability (TÜV approval) and SIL-3 capability (EXIDA approval)

## 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)
		- 50°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 335  
**Standard voltages** DC (=): 24V - 48V  
(Other voltages and 60 Hz on request) AC (~): 24V - 48V - 115V - 230V / 50 Hz

## SAFETY CODE

IECEX / II 2 G Ex d IIC T6..T4  
IECEX / II 2 D Ex tD A21 IP67 T85°C..T135°C

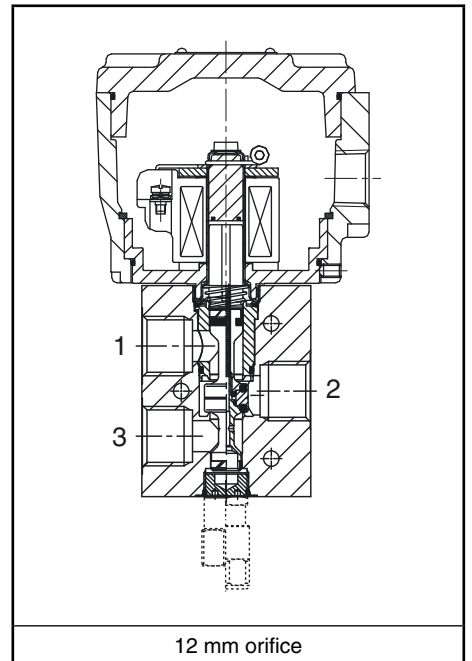
prefix option	power ratings				operator ambient temperature range (TS) (C°) <sup>(3)</sup>	replacement coil		type <sup>(1)</sup>	
	inrush ~	holding ~		hot/cold =		~	=		
		(VA)	(VA)						(W)
NF	5,7	10	10	10	9 / 11,2	-60 to + 40/60	400915-017	400913-142	01-02
		5,8	5,8	5,8	5,2 / 5,7	-60 to + 60/75/90	400921-297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

<sup>(1)</sup> Refer to the dimensional drawings on the following page.  
<sup>(2)</sup> 3,7 W: Limited to max. 115 V / 50 Hz  
<sup>(3)</sup> Temperature range can be limited by sealings.

Pn (W)	operator AC (~)			
	max. ambient temp. °C surface temperature			
	T6 85°C	T5 100°C	T4 135°C	
insulation class F/H (155°C/180°C) 100% E.D.				
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	-	-
insulation class F (155°C) 100% E.D.				
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	
insulation class F/H (155°C/180°C) 100% E.D.				
1,8	55	-	-	-
3,6	60	-	-	-
5,7	60	75	90	-
10	40	60	-	-
11,2	40	60	-	-
insulation class F (155°C) 100% E.D.				
14	40	60	90	-



### SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)				power coil (W)		catalogue number		options				
				min.	max. (PS)		brass			stainless steel	maintained man. operator	impulse man. operator				
					air (*)	water (*)								~	=	~/=
NPT	(mm)	(m³/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	-	-
	12	1,5	25	0	10	10	-	-	14,1	14	NF8327A649	WSNF8327A650	MS <sup>(1)</sup>	MO	-	-
1/2	12	1,5	25	0	10	10	-	-	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	-	-
									10	10	NF8327A645	WSNF8327A646	MS <sup>(1)</sup>	MO	-	-
	12	1,5	25	0	10	10	-	-	10	10	NF8327A605	WSNF8327A606	MS <sup>(1)</sup>	MO	-	-
1/2	12	1,5	25	0	10	10	-	-	10	10	NF8327A605	WSNF8327A606	MS <sup>(1)</sup>	MO	-	-

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

### 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 94/9/EC (see "Explosionproof solenoids" section)
- 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: **34600419** (G1/4) or **34600479** (G1/2)
- 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

### INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- Solenoid valves have 2 or 3 mounting holes in body
- 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	<b>V</b>

basic number — suffix

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



#### TYPE 01-02

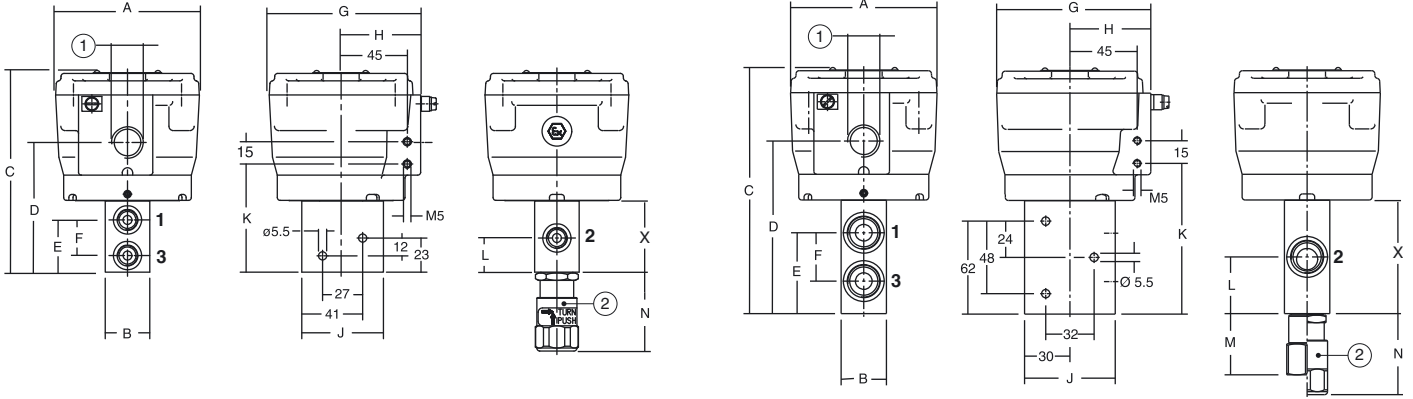
Prefix "NF", "WSNF" Solenoid  
Aluminium, stainless steel  
EN-IEC 60079-1 and EN-IEC 61241-1  
II 2 G Ex d IIC - II 2D Ex tD A21 IP67

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

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

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

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



① 1/2 NPT

② Manual operator location (Type MO/MS)

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

<sup>(6)</sup> including coil.

