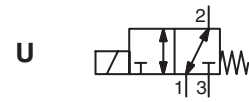




SOLENOID VALVES

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 (mm²/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

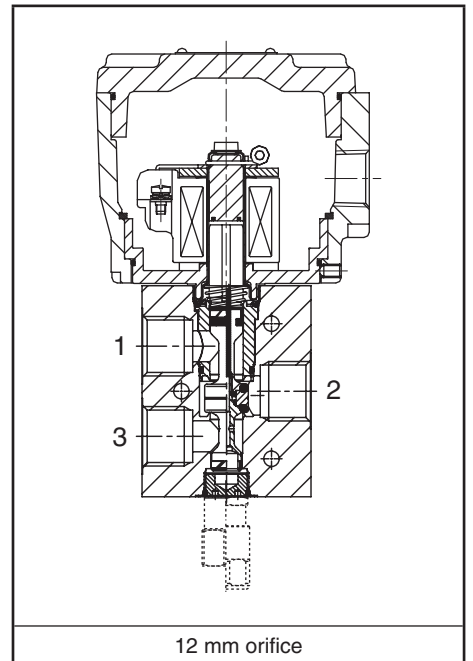
Solenoid enclosure NF: Chromated aluminium, epoxy coated
WSNF: Stainless steel (AISI 316L)
Bonnet, cover screws NF: Steel (zinc plated)
WSNF: Stainless steel
Core tube Stainless steel
Core and plugnut Stainless steel

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°) ⁽³⁾ | replacement coil | | type ⁽¹⁾ | |
|---------------|---------------|-----------|------|------------|---|-------------------|----------------|---------------------|-------|
| | 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 | ⁽²⁾ | 400914-242 | |
| | | 1,85 | 1,85 | 1,85 | 1,5 / 1,8 | -60 to + 55 | ⁽³⁾ | 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 | |

⁽¹⁾ Refer to the dimensional drawings on the following page.

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

⁽⁴⁾ 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 |
| insulation class F/H (155°C/180°C) 100% E.D. | | | |
| 1,85 ⁽⁴⁾ | 55 | - | - |
| 3,7 ⁽⁴⁾ | 60 | - | - |
| 5,8 ⁽⁴⁾ | 60 | 75 | 90 |
| 10 ⁽⁴⁾ | 40 | 60 | - |
| 14,1 | 40 | 60 | 90 |

⁽⁴⁾ 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 | - |
| 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) | (m³/h) | (l/min) | ~ | = | ~ | = | ~ | = | ~/= | ~/= | | | | | |
| U - Universal, FPM seals and poppets | | | | | | | | | | | | | | | | |
| 1/4 | 5,7 | 0,45 | 7,5 | 0 | 10 | 10 | 10 | 10 | 10 | 11,2 | NF8327B001 | WSNF8327B002 | MS ⁽¹⁾ | MO | - | - |
| | | | | | | | | | 5,8 | 5,7 | NF8327B201 | WSNF8327B202 | MS ⁽¹⁾ | MO | - | - |
| | | | | | | | | | 3,7 | 3,6 | NF8327B101 | WSNF8327B102 | MS ⁽¹⁾ | MO | - | - |
| | | | | | | | | | 1,85 | 1,8 | NF8327B301 | WSNF8327B302 | MS ⁽¹⁾ | MO | - | - |
| 1/2 | 12 | 1,5 | 25 | 0 | 10 | 10 | - | - | 14,1 | 14 | NF8327A649 | WSNF8327A650 | MS ⁽¹⁾ | MO | - | - |
| | | | | | | | | | 14,1 | 14 | NF8327A609 | WSNF8327A610 | MS ⁽¹⁾ | MO | - | - |
| U - Universal, NBR seals and poppets | | | | | | | | | | | | | | | | |
| 1/2 | 12 | 1,5 | 25 | 0 | 10 | 10 | - | - | 10 | 10 | NF8327A607 | WSNF8327A608 | MS ⁽¹⁾ | MO | - | - |
| U - Universal, VMQ seals and poppets | | | | | | | | | | | | | | | | |
| 1/4 | 5,7 | 0,45 | 7,5 | 0 | 10 | 10 | 10 | 10 | 10 | 11,2 | NF8327B011 | WSNF8327B012 | MS ⁽¹⁾ | MO | - | - |
| U - Universal, (F)VMQ seals and poppets | | | | | | | | | | | | | | | | |
| 1/4 | 5,7 | 0,45 | 7,5 | 0 | 10 | 10 | 10 | 10 | 5,8 | 5,7 | NF8327B211 | WSNF8327B212 | MS ⁽¹⁾ | MO | - | - |
| | | | | | | | | | 3,7 | 3,6 | NF8327B111 | WSNF8327B112 | MS ⁽¹⁾ | MO | - | - |
| | | | | | | | | | 1,85 | 1,8 | NF8327B311 | WSNF8327B312 | MS ⁽¹⁾ | MO | - | - |
| 1/2 | 12 | 1,5 | 25 | 0 | 10 | 10 | - | - | 10 | 10 | NF8327A645 | WSNF8327A646 | MS ⁽¹⁾ | MO | - | - |
| | | | | | | | | | 10 | 10 | NF8327A605 | WSNF8327A606 | MS ⁽¹⁾ | MO | - | - |
| U - Universal, (F)VMQ sealings and poppets (minimum fluid temperature -60°C) | | | | | | | | | | | | | | | | |
| 1/4 | 5,7 | 0,45 | 7,5 | 0 | 10 | 10 | 10 | 10 | 5,8 | 5,7 | NF8327B291 | WSNF8327B292 | MS ⁽¹⁾ | MO | - | - |

⁽¹⁾ Functional Safety certification is not applicable with this feature.
⁽²⁾ 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)
- 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

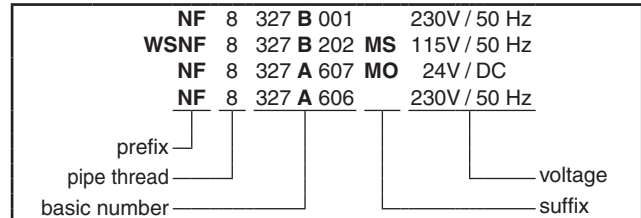
INSTALLATION

- 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

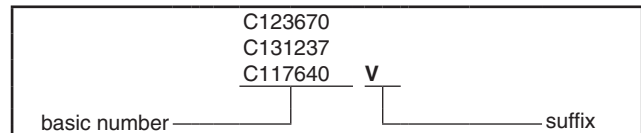
SPARE PARTS KIT

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

ORDERING EXAMPLES:



ORDERING EXAMPLES KITS:



DIMENSIONS (mm), WEIGHT (kg)



TYPE 01-02

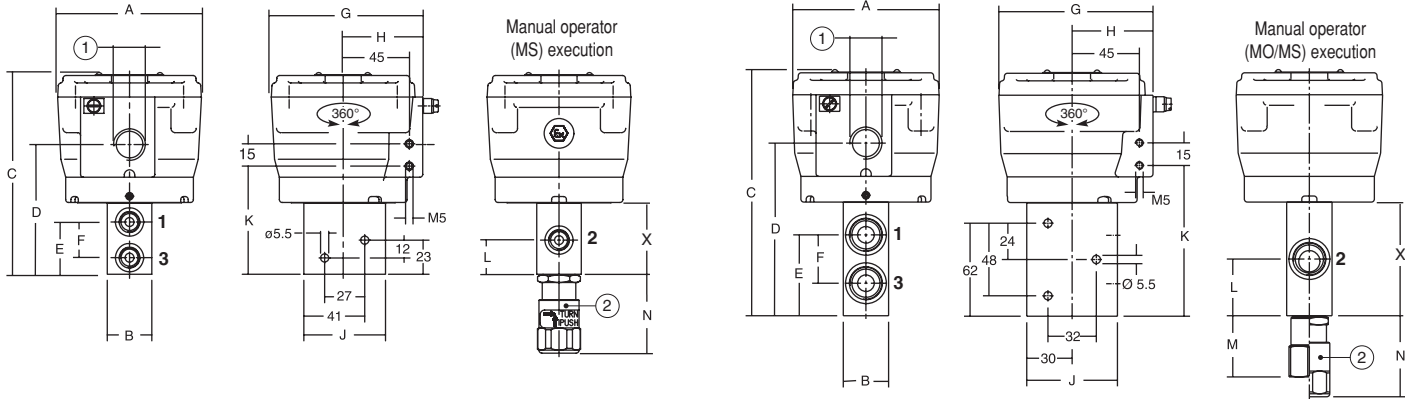
Prefix "NF", "WSNF" Solenoid
Aluminium, stainless steel
EN-IEC 60079-1 and EN-IEC 60079-31
II 2G Ex db IIC Gb, II 2D Ex tb IIIC Db IP66/67

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 ⁽¹⁾ |
|------|---------------|--|----|----|-----|-----|----|----|-----|----|----|-----|----|----|----|----|-----------------------|
| 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 |

⁽¹⁾ including coil.