

ELECTRO-PNEUMATIC CONTROL VALVES

Miniature solenoid valves for alternating current



- Conform to the Low Voltage Directive
- For mounting on sub-base or footprint in accordance with CNOMO recommendation E-06-36-120N

Part numbers (and voltages)

| Consumption | Voltage | 81 519 080 | 81 519 380 | 81 519 680 |
|-------------|------------------------|-------------------------|---------------------------------|---|
| 2,5 VA | 24 V ~ 50-60 Hz | — | 81 519 381 | 81 519 678 |
| 2,5 VA | 48 V ~ 50-60 Hz* | — | 81 519 378 | 81 519 679 |
| 2,5 VA | 10 ~ 50-60 Hz | — | 81 519 379 | — |
| 2,5 VA | 220 V-230 V ~ 50-60 Hz | — | — | — |
| Function | Version | 3/2 NC | 3/2 NC | 3/2 NC |
| | | Without manual override | With manual override by impulse | With manual override by latching (1/4 turn) |

Characteristics

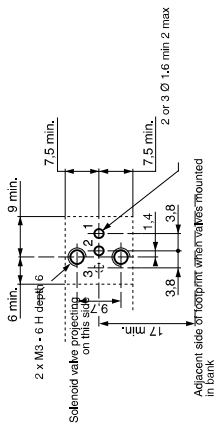
| | | |
|--|----------|-----------|
| Operating pressure | bar | 1 → 8 |
| Orifice diameter | mm | 0,5 |
| Flow at 6 bars | l/min | 12 |
| kV | ms | 0,12 |
| Switching time | ms | 5 → 15 |
| Mechanical life (operations) | °C | 5 10° |
| Operating temperature | °C | -10 → +50 |
| Compressed air or inert gas - oil-free air filtered to 50 µ | | • |
| Duty factor | 100 % ED | 100 % ED |
| Insulation class | F | F |
| Weight | 35 | 35 |
| Rotatable connector 4 positions in 90° steps with sub-base (page 62) | IP 20 | IP 20 |
| Degree of protection with connector 81 516 082 | IP 65 | IP 65 |
| UL and cUL approval | MH 15085 | MH 15085 |

15x15 mm footprint

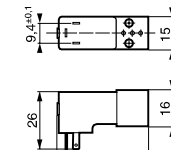
according to CNOMO E 06-36-120N

Dimensions

81 519 0



- 1 - Supply
- 2 - Output
- 3 - Exhaust



81 519 3
81 519 6

Miniature solenoid valves for direct current



- Conform to the Low Voltage Directive
- For mounting on sub-base or footprint in accordance with CNOMO recommendation E-06-36-120N

Also available in ATEX version for use in potentially explosive atmospheres in accordance with 94/9/EC Directive

Part numbers (and voltages)

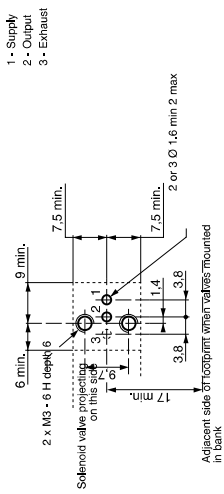
| Consumption | Voltage | 81 519 032 | 81 519 332 | 81 519 632 | 81 519 340 |
|-------------|---------|-------------------------|---------------------------------|----------------------|---------------------------------|
| 1 W | 24 V — | 3/2 NC | 3/2 NC | 3/2 NC | 3/2 NF |
| | | Without manual override | With manual override by impulse | With manual override | With maintained manual override |

Characteristics

| | | |
|---|----------|-----------|
| Operating pressure | bar | 1 → 8 |
| Orifice diameter | mm | 0,8 |
| Flow at 6 bars | l/min | 25 |
| kV | ms | 0,3 |
| Switching time | ms | 5 → 15 |
| Mechanical life (operations) | °C | 5 10° |
| Operating temperature | °C | -10 → +50 |
| Compressed air or inert gas - oil-free air filtered to 50 µ | | • |
| Duty factor | 100 % ED | 100 % ED |
| Insulation class | F | F |
| Weight | 35 | 35 |
| Rotatable connector 4 positions in 90° steps with M12 5-pin connector | IP 65 | IP 65 |
| Degree of protection with connector 81 516 082 | IP 65 | IP 65 |
| UL and cUL approval | MH 15085 | MH 15085 |

15x15 mm footprint

according to CNOMO E 06-36-120N



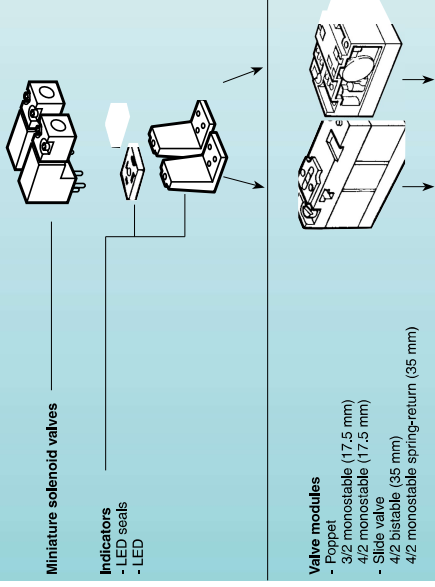
- 1 - Supply
- 2 - Output
- 3 - Exhaust

81 519 3
81 519 6

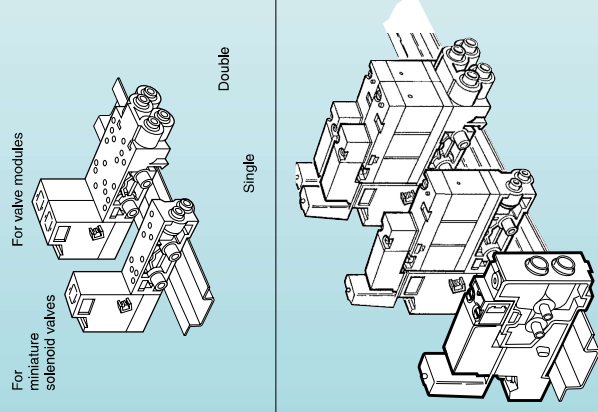
81 519 3
81 519 6

Electro-pneumatic miniature control valves

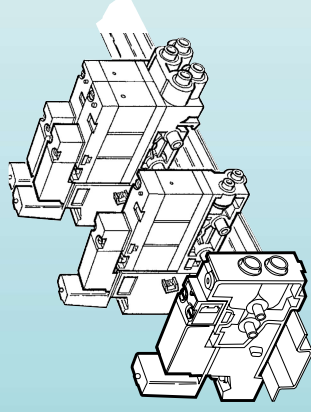
Mounting



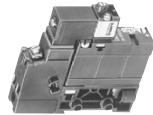
Sub-bases



Complete product



Valves and solenoids valves assembled



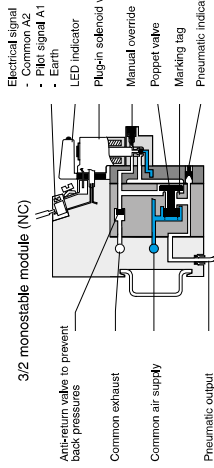
Contact us for
Other versions

| Part numbers | 3/2 NC | 4/2 monostable |
|--------------|--|---|
| Function | Sub-base with push-in connection for semi-rigid tubing (NFE 49100) | Sub-base with push-in connection for semi-rigid tubing (NFE 49100) |
| Version | 3/2 NC, Ø 4 ext. | 4/2 ext., Ø 4 ext. |
| Voltage | 24 VDC (+10% -15%) | 24 V - 50-60 Hz, 48 V - 50-60 Hz, 110 V - 50-60 Hz, 230 V - 50-60 Hz (+10% +6%) |
| Symbol | 81 513 103 | 81 513 203 |

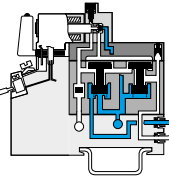


| Characteristics | 3-8 | 3-8 |
|--|-----------------------|-----------------------|
| Operating pressure | 3-8 | 3-8 |
| Orifice diameter | 3 | 3 |
| Flow at sub-base 81 513 060 | 200 | 200 |
| 6 bars | NL/min | NL/min |
| KV with sub-base 81 513 060 | 2.2 | 2.2 |
| with sub-base 81 513 101 | -10 → +50 | -10 → +50 |
| Operating temperature | 20 | 20 |
| Mechanical life (operations) | 1.5 x 10 ⁷ | 1.5 x 10 ⁷ |
| Valve position will be maintained in the event of pressure loss and/or electrical current loss | - | - |
| Mounting | DIN rail 35 mm | DIN rail 35 mm |
| Weight | 130 | 130 |
| UL and cUL approval | MH15085 | MH15085 |

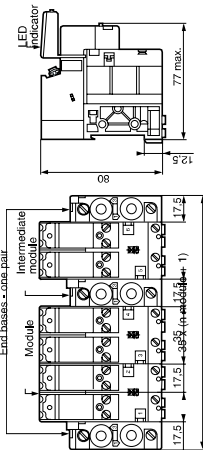
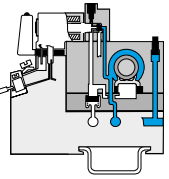
Principle of operation



4/2 monostable module



4/2 bistable module



End bases not supplied (page 63)
Intermediate bases not supplied (page 63)
Indicators not supplied (page 65)

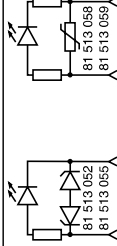
Accessories



Also available in ATEX version for use in potentially explosive atmospheres in accordance with 94/9/EC Directive

| Part numbers | 81 513 052 | 81 513 055 | 81 513 058 | 81 513 059 |
|---|---|-------------------|------------|--------------------------|
| Visual indicators with anti-surge | 24 V - 50-60 Hz, 48 V - 50-60 Hz, 110 V - 50-60 Hz, 230 V - 50-60 Hz (+10% +6%) | - | - | - |
| LED seal | 12 to 24 V - DC - AC | 81 513 064 (by 5) | - | - |
| Packaging | (by 10) | - | - | - |
| Exhaust silencer | Plug-in Ø 6 | 81 537 001 | - | - |
| Connector for solenoid valve | Plug-in Ø 8 | 81 537 201 | 81 516 082 | - |
| Pneumatic pilots | Without manual override With manual override By impulse | - | - | 81 516 081 81 516 091 |
| Push-in connection for semi-rigid tubing Ø 4 mm (NFE 49100) | - | - | - | - |
| Blanking plate | - | - | - | 81 516 085 |

Symbol



Characteristics

| | | | | | | |
|---|----|-----------|---|----|----|---------------------|
| Consumption | W | 0.24 | - | - | - | - |
| Temperature | °C | -10 → +50 | - | - | - | - |
| Connection | mm | - | - | - | - | - |
| Mounted between the pilot solenoid valve and the body of the module | - | - | - | - | - | Instantans 0.4 ext. |
| Supplied in multiples of 5 | - | - | - | - | - | - |
| Packet of 10 pieces | - | - | - | - | - | - |
| Weight | g | 6 | 2 | 30 | 10 | 5 |

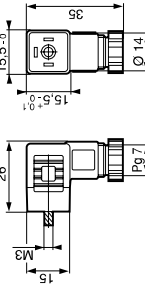
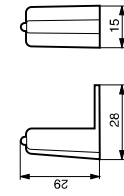
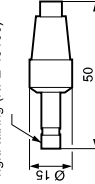
Connection



Dimensions

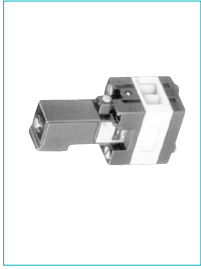
81 537 001 - 81 537 201
Mounted by plugging into push-in connector for semi-rigid tubing (NFE 49100)

81 513 052 - 81 513 055
81 513 058 - 81 513 059



Solenoid valves

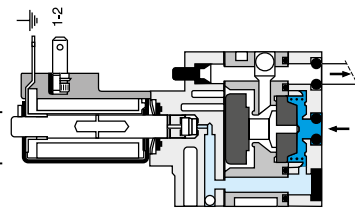
- Reduced "dimensions"
- Mounted on sub-base



| Part numbers and voltages | | | | | | | | | | | |
|---|---|------------------|------------|-----------------------------|------------|----------------------------|------------|------------------------------|------------|------------------------------------|------------|
| Function | 3/2 NC | | | | | | | | | | |
| Mounting | On sub-base (54) | | | | | | | | | | |
| Solenoid valves with manual override by impulse | <table border="1"> <tr> <td>24 V (+10% -15%)</td> <td>81 519 752</td> </tr> <tr> <td>24 V - 50/60 Hz (+10% -15%)</td> <td>81 519 774</td> </tr> <tr> <td>48V - 50/60 Hz (+10% -15%)</td> <td>81 519 775</td> </tr> <tr> <td>110 V - 50/60 Hz (+10% -15%)</td> <td>81 519 776</td> </tr> <tr> <td>220 - 230 V - 50/60 Hz (+10% -15%)</td> <td>81 519 777</td> </tr> </table> | 24 V (+10% -15%) | 81 519 752 | 24 V - 50/60 Hz (+10% -15%) | 81 519 774 | 48V - 50/60 Hz (+10% -15%) | 81 519 775 | 110 V - 50/60 Hz (+10% -15%) | 81 519 776 | 220 - 230 V - 50/60 Hz (+10% -15%) | 81 519 777 |
| 24 V (+10% -15%) | 81 519 752 | | | | | | | | | | |
| 24 V - 50/60 Hz (+10% -15%) | 81 519 774 | | | | | | | | | | |
| 48V - 50/60 Hz (+10% -15%) | 81 519 775 | | | | | | | | | | |
| 110 V - 50/60 Hz (+10% -15%) | 81 519 776 | | | | | | | | | | |
| 220 - 230 V - 50/60 Hz (+10% -15%) | 81 519 777 | | | | | | | | | | |
| Symbol | | | | | | | | | | | |

| Characteristics | |
|---|----------------------------------|
| Operating pressure | bar 2 → 8 |
| Orifice diameter | mm 2,7 |
| Flow at 6 bars | NI/min 170 |
| Reliable coil 4 positions in 90° steps | |
| Degree of protection (with connector 81 516 062 not supplied) (see page 65) | IP 65 |
| Mechanical life | operations 1,5 x 10 ⁷ |
| Consumption | W 1 |
| Operating temperature | °C 2,5 |
| Weight | g 70 |
| UL and cUL approval | MH15085 |

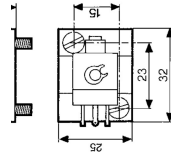
Principle of operation



- Connections**
- Pneumatic
 - 1 - Supply
 - 2 - Output
 - Electrical
 - 1 - 2 - Pilot signal
 - ↓ Earth

Dimensions

81 519
On separate sub-base



Electrical connection by connector 81 516 062 (see page 65)

Miniature control valves, 17.5 mm

➔ Electro-pneumatic interface block

- Complete block, ready to install, consisting of:
 - Preconfigured 8-position sub-base holes
 - 6 4/2 monostable valve modules with 24 V \pm pilot
 - 2 blanking plates (for extension if necessary)
 - 1 connection cable



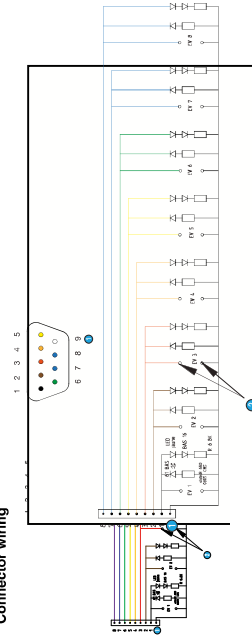
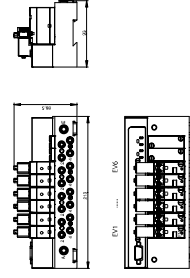
Part numbers

| Part numbers | 16 outputs | 16 outputs |
|---|--|--|
| | 81513241 | 81513238 |
| Electrical characteristics | | |
| Supply voltage | 24 V \pm ± 10% | 24 V \pm ± 10% |
| Supply max. absorbed sur le 24 V de SUBD (mA) | 500 | 500 |
| Courant absorbé par chaque électrovanne | 60 | 60 |
| Response time (ms) | 15 | 15 |
| LED display | Yes (integrated in the sub-base) | Yes (integrated in the sub-base) |
| Protection against voltage surges | Yes | Yes |
| Electrical connections | | |
| Type of cable | Sub D9 AWG 24 wires | Sub D9 AWG 24 wires |
| Cable length | 2 m | 2 m |
| Pneumatic characteristics | | |
| Function | 6 4/2 monostable valve modules (81513200) + 2 free positions | Whitout |
| Operating pressure bars | 3 → 8 b | 3 → 8 b |
| Flow at 6 bars NI/min | 300 | 300 |
| Mechanical life (operations) | 1,5 x 10 ⁷ | 1,5 x 10 ⁷ |
| Working medium | Compressed air or inert gas, 50 µm filtered non-lubricated air | Compressed air or inert gas, 50 µm filtered non-lubricated air |
| Pneumatic connections | | |
| Power supply connection | Push-in connection Ø 8 mm | Push-in connection Ø 8 mm |
| Output connections | Push-in connection Ø 6 mm | Push-in connection Ø 6 mm |
| Connection of common exhaust | Push-in connection Ø 8 mm | Push-in connection Ø 8 mm |
| General characteristics | | |
| Operating temperature range IEC 68214 (°C) | -5 → +50 | -5 → +50 |
| Storage temperature IEC 68-2-14 (°C) | -15 → +50 | -15 → +50 |
| Protection (IEC/EN 60529) | IP 20 | IP 20 |
| Mounting | On DIN rail or via two M5 screws (according to mounting plan) | On DIN rail or via two M5 screws (according to mounting plan) |
| Weight (g) | 1350 | 960 |
| Comments | | |
| Other configurations on request | | |

Dimensions (mm)

81513241

Connector wiring



- Commun 0 V
- Clips femelle CI

► Specific islands "for integrators" (supplied in packs of 20)

► Versions with interfaces 300 NL / mm



Configuration

- 1 - Specify the number and type of interfaces (3 / 2 mono - 4 / 2 mono - 4 / 2 bistable) see page 62.
- 2 - Specify the voltage, the type and method of the control valve connections, see page: 58-59 (Example: 24 V DC with manual switch maintained, exit leads).
- 3 - Please send us your application specifying your requirements and quantities per year, and we will respond as soon as possible.

► Versions with interfaces 30 NL / mm



Configuration

- 1 - Specify the voltage, the type and method of the control valve connections, see page: 58-59 (Example: 24 V DC with manual switch maintained, exit leads).
- 2 - Please send us your application specifying your requirements and quantities per year, and we will respond as soon as possible.

► Develop customised versions to specifications



Crouzet analyses your needs and offers a customised solution.