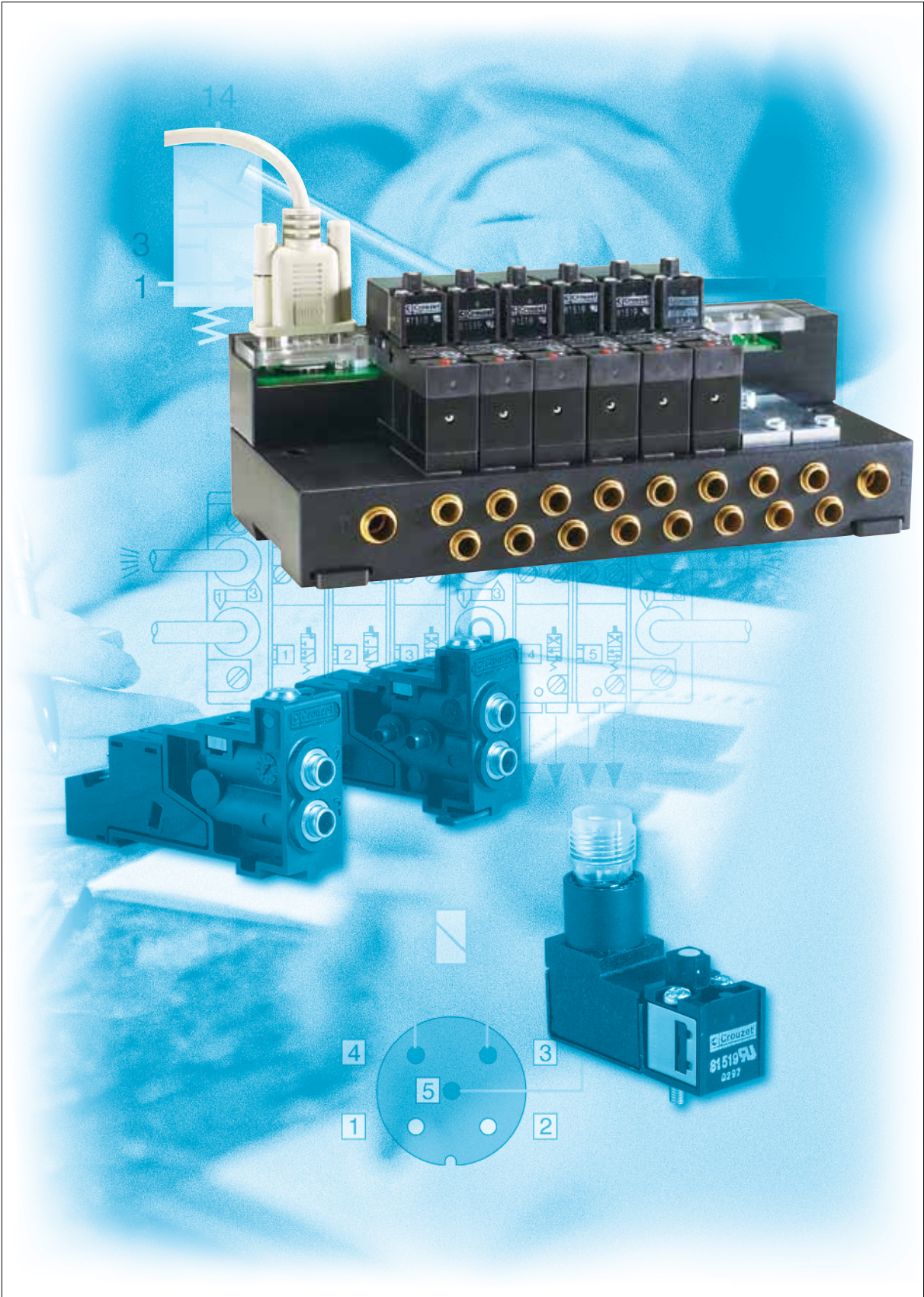


# Electro-pneumatic control valves



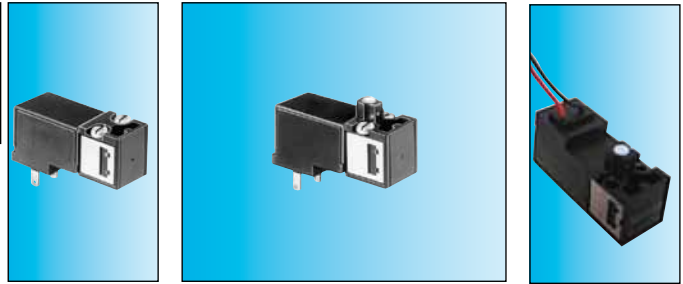


# Miniature solenoid valves for direct current

- 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)

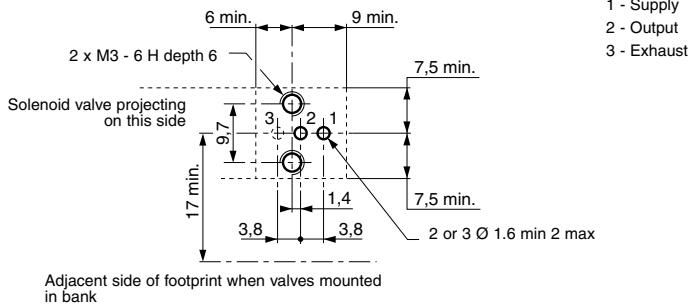
	Consumption	Voltage	81 519 032	81 519 332	81 519 632	81 519 340
Function	1 W	24 V $\overline{\text{DC}}$	3/2 NC	3/2 NC	3/2 NC	3/2 NF
Version			Without manual override	With manual override by impulse	With maintained manual override	With maintained manual override

## Characteristics

Operating pressure	bar	1 → 8	1 → 8	1 → 8	1 → 8
Orifice diameter	mm	0.8	0.8	0.8	0.8
Flow at 6 bars	NI/min	25	25	25	25
kV		0.3	0.3	0.3	0.3
Switching time	ms	5 → 15	5 → 15	5 → 15	5 → 15
Mechanical life (operations)		5 10 <sup>7</sup>	5 10 <sup>7</sup>	5 10 <sup>7</sup>	5 10 <sup>7</sup>
Operating temperature	°C	-10 → +50	-10 → +50	-10 → +50	-10 → +50
Compressed air or inert gas - oil-free air filtered to 50 μ		●	●	●	●
Duty factor		100 % ED	100 % ED	100 % ED	100 % ED
Insulation class	IEC 85	F	F	F	F
Weight		35	35	35	35
Rotatable connector 4 positions in 90° steps		●	●	●	●
Degree of protection with M12 5-pin connector	IEC 529	—	—	—	—
Degree of protection with connector 81 516 082	IEC 529	IP 65	IP 65	IP 65	IP 65
UL and cUL approval		MH 15085	MH 15085	MH 15085	MH 15085

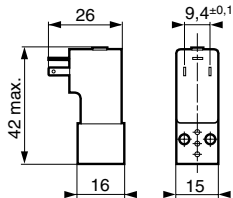
## 15x15 mm footprint

according to CNOMO E 06-36-120N

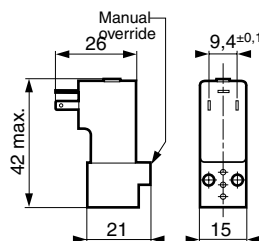


## Encombrement

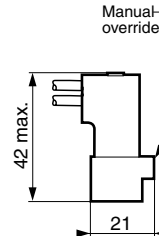
81 519 0



81 519 3  
81 519 6



81 519 3

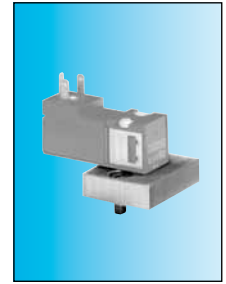
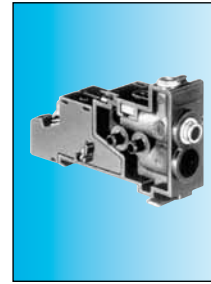
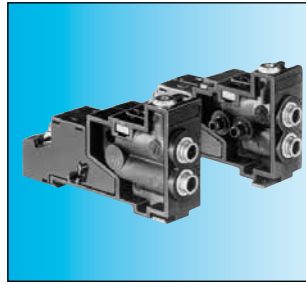


ATEX version products are available in the following catalogues: **Pneumatic products for explosive atmospheres** or on our website [www.crouzet.com](http://www.crouzet.com)

# Sub-bases for miniature solenoid valves



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



## Part numbers

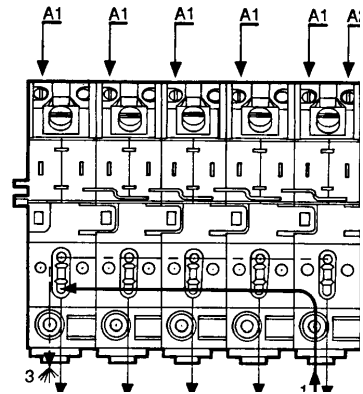
Pair of end bases	<b>81 514 101</b>	—	—
Intermediate sub-base	—	<b>81 514 161</b>	—
Adaptor sub-base for CNOMO 06-05-80 / NFE 49066 footprint	—	—	<b>79 453 569</b>

## Characteristics

Pneumatic indicator on output		•	•	
Common supply		•	•	
Common exhaust		•	•	
Torque capacity	mm <sup>2</sup>	3	3	
Push-in connection for semi-rigid tubing Ø 4 mm (NFE 49100)	mm	•	•	
Mounting		DIN rail 35 mm	DIN rail 35 mm	2 screws M4 x 10
UL and cUL approval	g	MH 15085	MH 15085	—
Weight		65	30	50

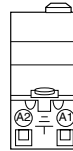
## Connection

Pneumatic



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

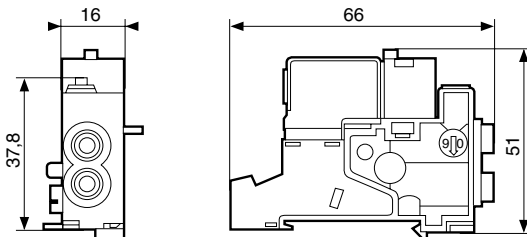
Electrical



- A1 - Pilot signal
- A2 - Common
- ⊥ - Earth

Dimensions with miniature solenoid valve (page 58)

81 514 101 - 81 514 161



79 453 569

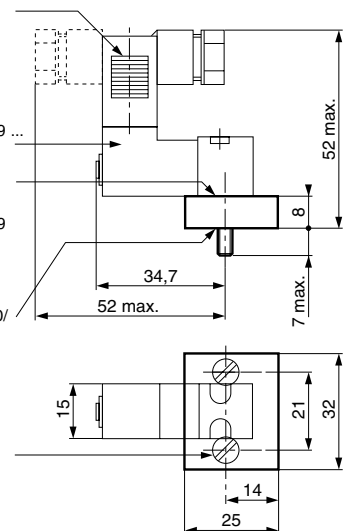
Connector ref 81 516 082  
(rotatable in 90° steps)  
see page 65

Miniature solenoid valve 81 519 ...  
see page 58

CNOMO footprint  
E 06-36-120N for mounting  
miniature solenoid valve 81 519

Mounting on CNOMO 06-05-80/  
NFE 49066 footprint

Fixing on CNOMO 06-05-80/  
NFE 49-066 footprint by  
2 cap screws M4x10  
(NFE 25-127)



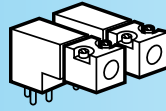
ATEX version products are available in the following catalogues: **Pneumatic products for explosive atmospheres** or on our website [www.crouzet.com](http://www.crouzet.com)



# Electro-pneumatic miniature control valves

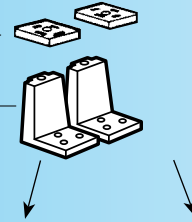
## Mounting

### Miniature solenoid valves



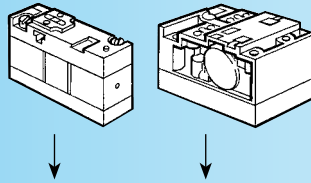
### Indicators

- LED seals
- LED



### Valve modules

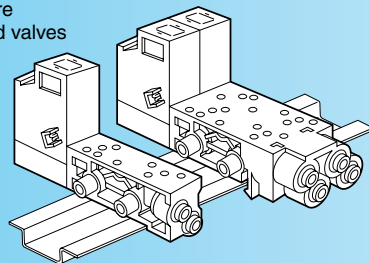
- Poppet
  - 3/2 monostable (17.5 mm)
  - 4/2 monostable (17.5 mm)
- Slide valve
  - 4/2 bistable (35 mm)
  - 4/2 monostable spring-return (35 mm)



### Sub-bases

For miniature solenoid valves

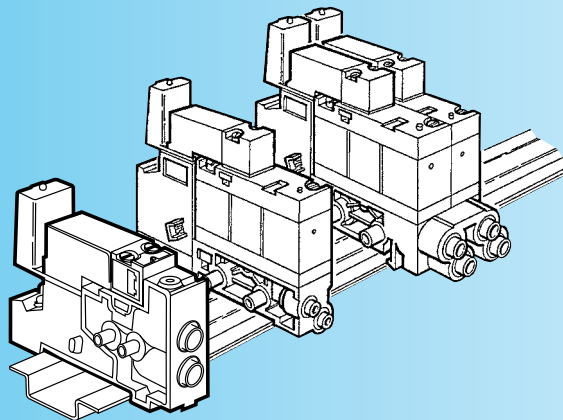
For valve modules



Single

Double

### Complete product



# Valve modules

- Monostable, bistable
- 3/2, 4/2



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



81 513 100



81 513 600



81 513 200



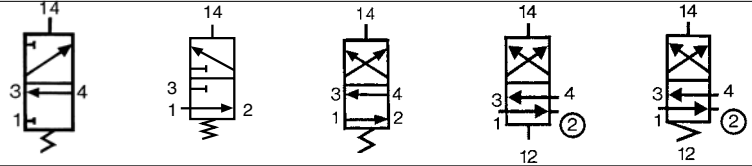
81 516 200



81 516 100

Function	3/2 NC monostable	3/2 NO monostable	4/2 monostable	4/2 bistable	4/2 monostable
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### Symbol

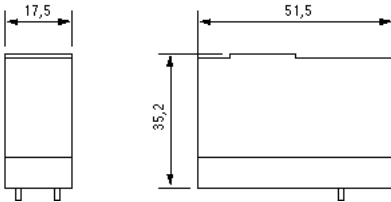


### Characteristics

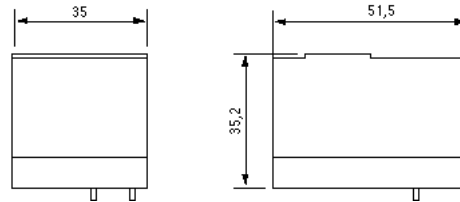
Width	mm	17.5	17.5	17.5	35	35	
Working pressure	bars	3→8	3→8	3→8	2→8	3.5→8	
Orifice diameter	mm	3	3	3	4	4	
Flow at 6 bars	with Ø 4 mm sub-base (page 63)	200	200	200	300	300	
	with Ø 6 mm sub-base (page 63)	Nl/min	300	300	400	400	
Flow Rate	with Ø 4 mm sub-base (page 63)	kV	2.2	2.2	2.2	4	4
	with Ø 6 mm sub-base (page 63)		2.5	2.5	4	5	5
Operating temperature	°C	-10 → +50	-10 → +50	-10 → +50	-10 → +50	-10 → +50	
Switching time for the valve only	ms	15	15	15	50	50	
Mechanical life	operations	1.5 x 10 <sup>7</sup>	1.5 x 10 <sup>7</sup>	1.5 x 10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	
Weight	g	38	38	38	106	106	

### Dimensions

#### 81 513



#### 81 516

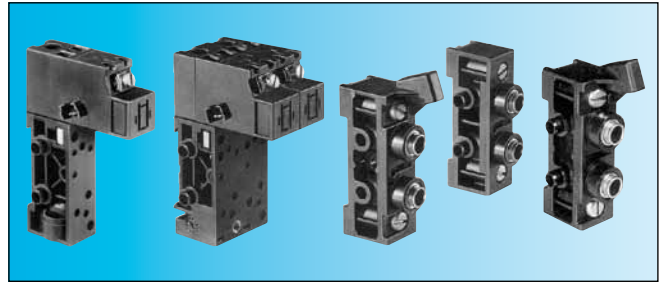


ATEX version products are available in the following catalogues: **Pneumatic products for explosive atmospheres** or on our website [www.crouzet.com](http://www.crouzet.com)

# Sub-bases and end bases for miniature control valves



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



## Part numbers

Mounting			Cabinet	Cabinet	Cabinet	Cabinet
Version			17.5 mm	35 mm	—	—
Push-in connection for semi-rigid tubing (NFE 49100)	Sub-bases	Ø 4 mm	<b>81 513 060</b>	<b>81 517 101</b>	—	—
		Ø 6 mm	<b>81 513 065</b>	<b>81 517 201</b>	—	—
	End bases (pair)	Ø 6 mm	—	—	<b>81 513 011</b>	—
	Intermediate supply module	Ø 6 mm	—	—	—	<b>81 513 001</b>

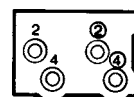
## Characteristics

Torque capacity	mm²	3	3	—	—
UL and cUL approval		MM15085	MM15085	—	—
Mounting		DIN rail 35 mm	DIN rail 35 mm	DIN rail 35 mm	DIN rail 35 mm
Weight	g	55	110	86	44

## Connections Pneumatic

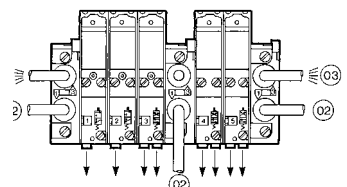


- 2 - Pneumatic output 4/2 (NO)
- 4 - Pneumatic output 3/2 or 4/2 (NC)



- ② Output at rest (NO)
- ② Output at rest \*
- ④ Output at rest \*
- 4 Output operating (NC)

81 513 011 - 81 513 001



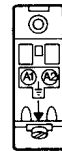
### Note :

- Each sub-base can accept
- sub-base 81 513 060-065 : 1 relay 3/2 or 4/2, width 17.5 mm
- sub-base 81 517 101-201 : 1 bistable relay 4/2 (width 35 mm) or 2 relays 3/2 or 4/2 (width 17.5 mm)

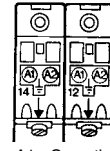
- ② 2 Supply ports
- ③ 2 Exhaust ports

Integral push-in connections Ø 6 mm

## Electrical



- A1 - Pilot signal
- A2 - Common

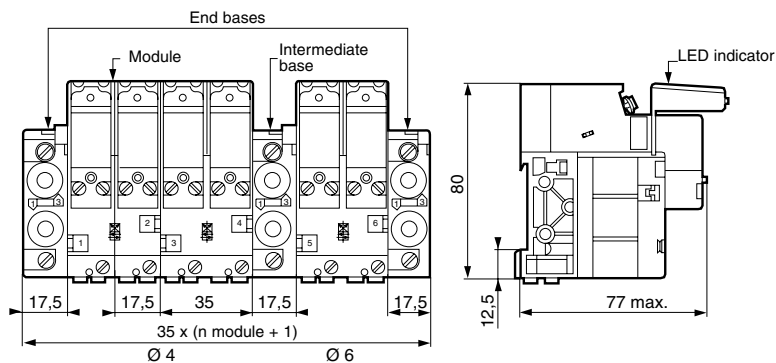


- A1 - Operating control signal (14)
- A2 - Common
- A1 - Rest control signal (12)
- A2 - Common



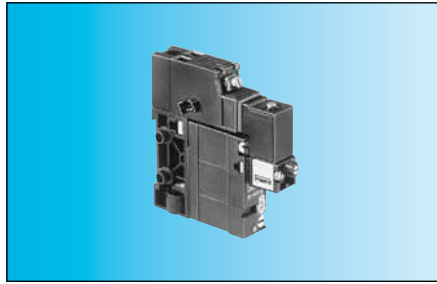
Degree of protection : IP20 when assembled.

**Dimensions** with miniature control valves (page 62) + miniature solenoid valves (page 58) + indicators (page 65)



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# Valves and solenoids valves assembled



**Contact us for  
Other versions**

## Part numbers

Function	3/2 NC	4/2 monostable
Sub-base with push-in connection for semi-rigid tubing (NFE 49100)	Ø 4 ext.	Ø 4 ext.
Version	Solenoid valve with manual override by impulse	Solenoid valve with manual override by impulse
Voltage	24 VDC (+10% -15%)	81 513 103
		81 513 203

## Symbol

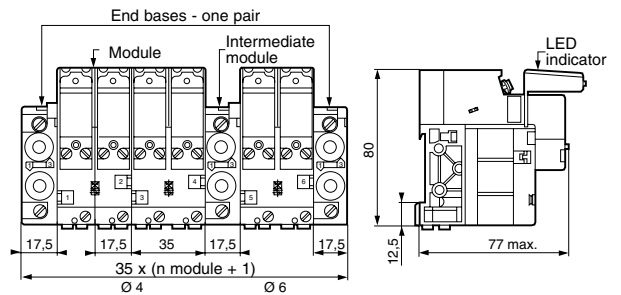
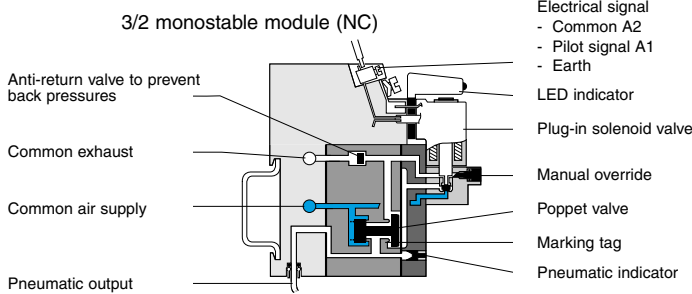


## Characteristics

Operating pressure	bar	3→8	3→8
Orifice diameter	mm	3	3
Flow at 6 bars	NL/min	200	200
KV		2.2	2.2
Operating temperature	°C	-10 → +50	-10 → +50
Switching time of the assembly	ms	20	20
Mechanical life (operations) at 4 bars		1.5 x 10 <sup>7</sup>	1.5 x 10 <sup>7</sup>
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	g	130	130
UL and cUL approval		MH15085	MH15085

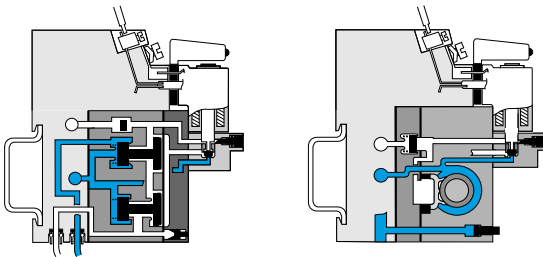
## Principle of operation

## Dimensions



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)

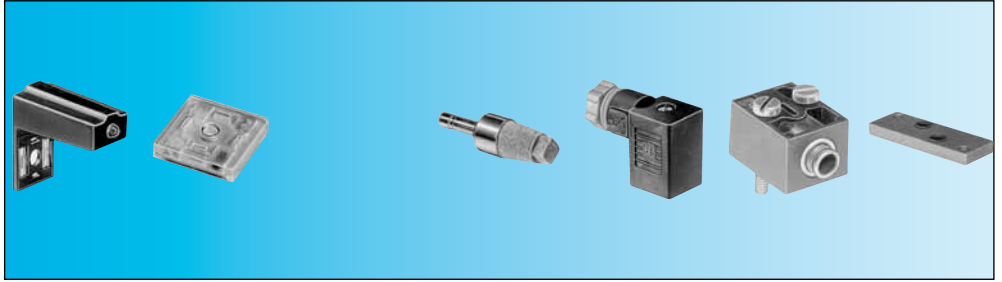
5



## Accessories



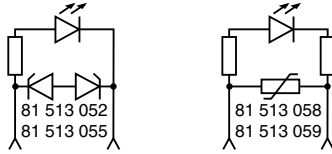
Also available in **ATEX** version for use in potentially explosive atmospheres in accordance with 94/9/EC Directive



### Part numbers

Visual indicators with anti-surge	24 V - 50-60 Hz $\overline{\overline{\overline{\overline{AC}}}}$	<b>81 513 052</b>	—	—	—	—	—	—
	48 V - 50-60 Hz $\overline{\overline{\overline{\overline{AC}}}}$	<b>81 513 055</b>	—	—	—	—	—	—
	110 V - 50-60 Hz $\overline{\overline{\overline{\overline{AC}}}}$	<b>81 513 058</b>	—	—	—	—	—	—
	230 V - 50-60 Hz (-10% +6 %)	<b>81 513 059</b>	—	—	—	—	—	—
LED seal Packaging	12 to 24 V - DC - AC (by 5)	—	<b>81 513 064</b> (by 10)	—	—	—	—	—
Exhaust silencer Connector for solenoid valve	Plug-in $\varnothing$ 6	—	—	—	<b>81 537 001</b>	—	—	—
	Plug-in $\varnothing$ 8	—	—	—	<b>81 537 201</b>	—	—	—
Pneumatic pilots	Without manual override	—	—	—	—	<b>81 516 082</b>	<b>81 516 081</b>	—
	With manual override by impulse	—	—	—	—	—	<b>81 516 091</b>	—
Push-in connection for semi-rigid tubing $\varnothing$ 4 mm (NFE 49100)		—	—	—	—	—	•	—
Blanking plate		—	—	—	—	—	—	<b>81 516 085</b>

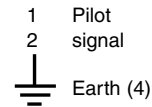
### Symbol



### Characteristics

Consumption	W	—	0.24	—	—	—	—	—
Temperature	°C	—	- 10 $\rightarrow$ +50	—	—	—	—	—
Connection	mm	—	—	—	—	—	Instantané $\varnothing$ 4 ext.	—
Mounted between the pilot solenoid valve and the body of the module		•	•	—	—	—	—	—
Supplied in multiples of 5		•	—	—	—	—	—	—
Supplied in multiples of 10		—	•	—	—	•	•	•
Packet of 10 pieces		—	—	—	—	—	—	•
Weight	g	6	2	30	10	5	3	

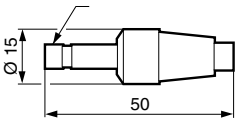
### Connection



### Dimensions

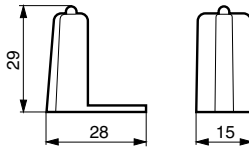
#### 81 537 001 - 81 537 201

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

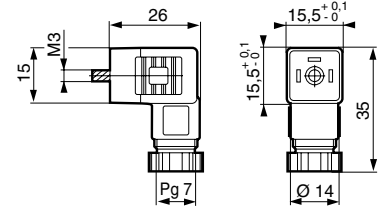


#### 81 513 052 - 81 513 055

#### 81 513 058 - 81 513 059



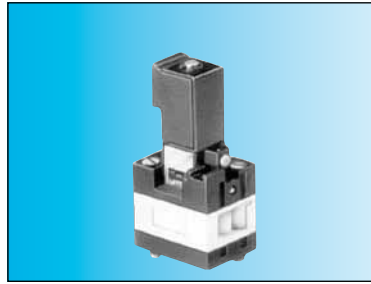
#### 81 516 082



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# Solenoid valves

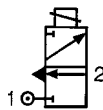
- Reduced "dimensions"
- Mounted on sub-base



## Part numbers and voltages

Function		3/2 NC	
Mounting		On sub-base (54)	
Solenoid valves	24 V (+10% -15%)	81 519 732	
with	24 V - 50/60 Hz (+10% -15%)	81 519 774	
manual	48V - 50/60 Hz (+10% -15%)	81 519 775	
override	110 V - 50/60 Hz (+10% -15%)	81 519 776	
by impulse	220 - 230 V - 50/60 Hz (+10% -15%)	81 519 777	

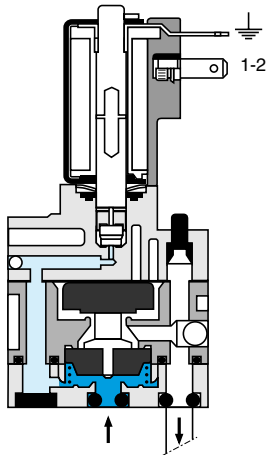
## Symbol



## Characteristics

Operating pressure	bar	2 → 8	
Orifice diameter	mm	2.7	
Flow at 6 bars	NI/min	170	
Rotatable coil 4 positions in 90° steps		●	
Degree of protection (with connector 81 516 082 not supplied) (see page 65)	IEC 529	IP 65	
Mechanical life	operations	1.5 x 10 <sup>7</sup>	
Consumption	W	1	
	VA	2.5	
Operating temperature	°C	-5 → +50	
Weight	g	70	
UL and cUL approval		MH15085	

## Principle of operation



## Connections

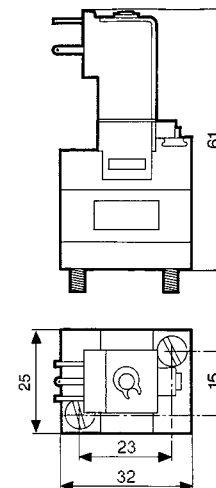
- Pneumatic { 1 - Supply  
2 - Output
- Electrical { 1 - 2 - Pilot signal  
⊥ Earth

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

## Dimensions

81 519

On separate sub-base



5

## ► 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.

