Series 2300 ENOVA®

Technical innovation, rational design, high performance and extremely compact size: these are the main features the ENOVA® series bring to the market.
Each valve comprises all the necessary pneumatic and electrical functions needed to produce a solenoid valve assembly.
There are no limits to the configuration of the solenoid valve island, as full priority has been given to the end user's needs; the addition or removal of modules is a simple operation that can be swiftly and easily achieved.
The management of the electrical signals through the valves is optimized through a patented dedicated connector in each valve.
Electrical connections are made via a twenty-five pin connector, which is capable of controlling up to twenty-two solenoids.
Electrical and pneumatic connections are located on the same module at one end of the assembly.
Serial bus nodes compatible with most common protocols are easily integrated.
Most widely used and known communication protocols, such as PROFIBUS DP, CANopen®, DeviceNet, AS-Interface can be directly integrated with the valve manifold by simply plugging the necessary module onto the electrical connection, maintaining IP65 environmental protection.
The management of inputs has also been foreseen, and can be achieved by adding one or more expansion modules directly to the serial module.

"Shifting time of pneumatic directional control valves or moving parts, logic devices were measured in accordance to ISO 12238:2001"

Main characteristics

- Clean profile prevents accumulation of dirt
- Compact size: modules of 12.5 mm
- Connections available: 4 , 6 , 8 mm
- IP65 protection grade
- Optimized electrical connection system
- Electrical and pneumatic line connections on one side
- Quick coupling connection system with visual indicator: locked/unlocked
- Freedom of configuration

Functions

- 5/2 monostable
- 5/2 bistable
- 5/3 closed centres
- 2x3/2 N.C. - N.C. (5/3 open centres)
- 2x3/2 N.O. - N.O. (5/3 pressured centres)
- 2x3/2 N.C. - N.O.
- 2x2/2 N.C. - N.C.
- 2x2/2 N.O. - N.O.
- 2x2/2 N.C. - N.O.

Construction characteristics

Central body	Reinforced technopolymer
External casing	Reinforced technopolymer
Spool seals	PUR
Springs	Spring steel with protective coating
Operators	Reinforced technopolymer
Spools	Aluminium 2011

Operational characteristics

Supply voltage	24 VDC ± 10% PNP (NPN on request)
Pilot consumption	0,9 Watt
Valve working pressure (1-11)	from vacuum to 10 bar max.
Pilot working pressure (12-14)	from 2,5 to 7 bar max.
Operating temperature	-5°C ... +50°C
Protection degree	IP65
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous

Attention: dry air must be used for applications below 0°C"

Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

Solenoid-Differential (Monostable)

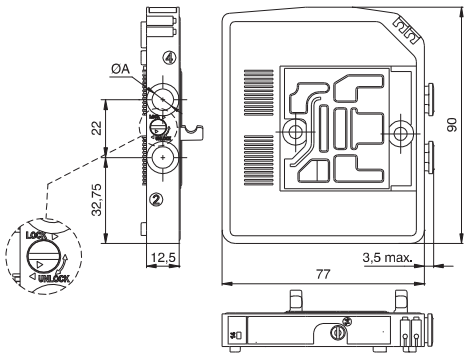
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Working pressure (bar)	From vacuum to 10
Pilot pressure (bar)	2,5 ... 7
Temperature °C	-5 ... +50
Flow rate at 6 bar with Δp=1 (Nl/min)	700
Response time according to ISO 12238, activation time (ms)	12
Response time according to ISO 12238, deactivation time (ms)	15

Coding: 23ⒺⒸ.52.00.36.Ⓥ

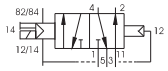
Ⓔ	ELECTRICAL CONTACT
	0 = Standard (only one electric signal)
	1 = CEB (Bistable Electrical contacts)-(two electrical signals)
Ⓒ	CONNECTION ØA
	4 = Quick connection for tube Ø4
	6 = Quick connection for tube Ø6
	8 = Quick connection for tube Ø8
Ⓥ	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN

SHORT CODE B4
SHORT CODE B6
SHORT CODE B8
SHORT CODE R4 (CEB)
SHORT CODE R6 (CEB)
SHORT CODE R8 (CEB)





Weight 115 g



Solenoid-Spring (Monostable)

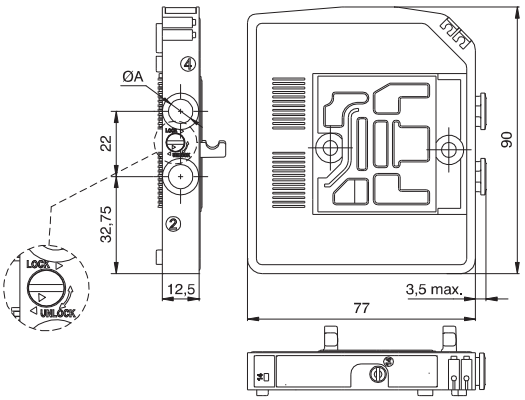
Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Working pressure (bar)	From vacuum to 10
Pilot pressure (bar)	2,5 ... 7
Temperature °C	-5 ... +50
Flow rate at 6 bar with Δp=1 (Nl/min)	700
Response time according to ISO 12238, activation time (ms)	9
Response time according to ISO 12238, deactivation time (ms)	30

Coding: 23ⒺⒸ.52.00.39.Ⓥ

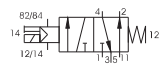
Ⓔ	ELECTRICAL CONTACT
	0 = Standard (only one electric signal)
	1 = CEB (Bistable Electrical contacts)-(two electrical signals)
Ⓒ	CONNECTION ØA
	4 = Quick connection for tube Ø4
	6 = Quick connection for tube Ø6
	8 = Quick connection for tube Ø8
Ⓥ	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN

SHORT CODE A4
SHORT CODE A6
SHORT CODE A8
SHORT CODE P4 (CEB)
SHORT CODE P6 (CEB)
SHORT CODE P8 (CEB)





Weight 115 g



Solenoid-Solenoid (Bistable)

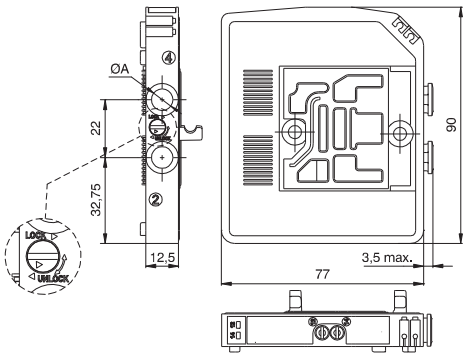
Coding: 230Ⓒ.52.00.35.Ⓥ

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Working pressure (bar)	From vacuum to 10
Pilot pressure (bar)	2,5 ... 7
Temperature °C	-5 ... +50
Flow rate at 6 bar with Δp=1 (Nl/min)	700
Response time according to ISO 12238, activation time (ms)	7
Response time according to ISO 12238, deactivation time (ms)	7

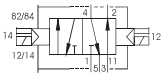
Ⓒ	CONNECTION ØA
	4 = Quick connection for tube Ø4
	6 = Quick connection for tube Ø6
	8 = Quick connection for tube Ø8
Ⓥ	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN

SHORT CODE C4
SHORT CODE C6
SHORT CODE C8





Weight 115 g



Solenoid-Solenoid (Bistable-Closed centres)

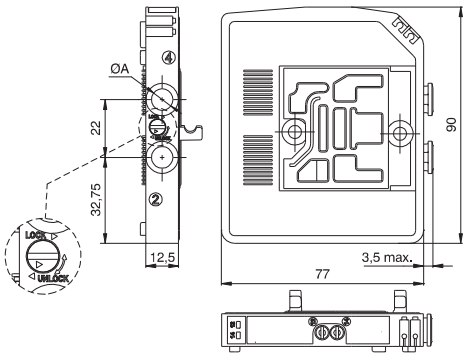
Coding: 230Ⓒ.53.31.35.Ⓥ

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Working pressure (bar)	From vacuum to 10
Pilot pressure (bar)	2,5 ... 7
Temperature °C	-5 ... +50
Flow rate at 6 bar with Δp=1 (Nl/min)	550
Response time according to ISO 12238, activation time (ms)	15
Response time according to ISO 12238, deactivation time (ms)	15

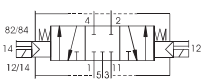
Ⓒ	CONNECTION ØA
	4 = Quick connection for tube Ø4
	6 = Quick connection for tube Ø6
	8 = Quick connection for tube Ø8
Ⓥ	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN

SHORT CODE E4
SHORT CODE E6
SHORT CODE E8





Weight 130 g



Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

Solenoid-Solenoid 2x3/2 Bistable-N.C. - N.C. (=5/3 Open centres)

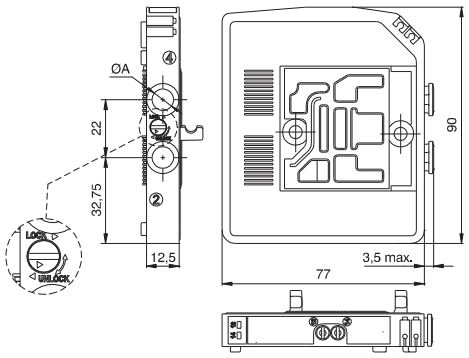
Coding: 230Ⓒ.62.44.35.Ⓥ

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Working pressure (bar)	From vacuum to 10
Pilot pressure (bar)	2,5 ... 7
Temperature °C	-5 ... +50
Flow rate at 6 bar with Δp=1 (Nl/min)	700
Response time according to ISO 12238, activation time (ms)	9
Response time according to ISO 12238, deactivation time (ms)	30

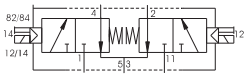
Ⓒ	CONNECTION ØA
	4 = Quick connection for tube Ø4
	6 = Quick connection for tube Ø6
	8 = Quick connection for tube Ø8
Ⓥ	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN

SHORT CODE F4
SHORT CODE F6
SHORT CODE F8





Weight 130 g
5/3 Open Centres: Use the Solenoid valves with 2x3/2 N.C. - N.C. function
5/3 Pressured Centres: Use the Solenoid valves with 2x3/2 N.O. - N.O. function



Solenoid-Solenoid 2x3/2 Bistable-N.C. - N.O.

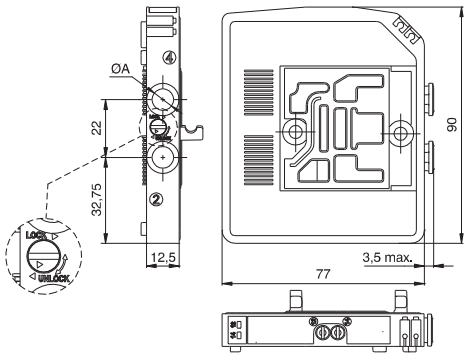
Coding: 230Ⓒ.62.45.35.Ⓥ

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Working pressure (bar)	From vacuum to 10
Pilot pressure (bar)	2,5 ... 7
Temperature °C	-5 ... +50
Flow rate at 6 bar with Δp=1 (Nl/min)	700
Response time according to ISO 12238, activation time (ms)	9
Response time according to ISO 12238, deactivation time (ms)	30

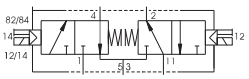
Ⓒ	CONNECTION ØA
	4 = Quick connection for tube Ø4
	6 = Quick connection for tube Ø6
	8 = Quick connection for tube Ø8
Ⓥ	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN

SHORT CODE H4
SHORT CODE H6
SHORT CODE H8





Weight 130 g
5/3 Open Centres: Use the Solenoid valves with 2x3/2 N.C. - N.C. function
5/3 Pressured Centres: Use the Solenoid valves with 2x3/2 N.O. - N.O. function



Solenoid-Solenoid 2x3/2 Bistable-N.O. - N.O. (=5/3 Pressured centres)

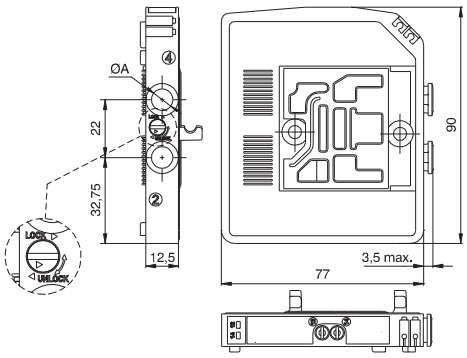
Coding: 230Ⓒ.62.55.35.Ⓥ

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Working pressure (bar)	From vacuum to 10
Pilot pressure (bar)	2,5 ... 7
Temperature °C	-5 ... +50
Flow rate at 6 bar with Δp=1 (Nl/min)	700
Response time according to ISO 12238, activation time (ms)	9
Response time according to ISO 12238, deactivation time (ms)	30

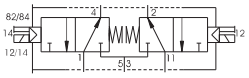
Ⓒ	CONNECTION ØA
	4 = Quick connection for tube Ø4
	6 = Quick connection for tube Ø6
	8 = Quick connection for tube Ø8
Ⓥ	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN

SHORT CODE G4
SHORT CODE G6
SHORT CODE G8





Weight 130 g
5/3 Open Centres: Use the Solenoid valves with 2x3/2 N.C. - N.C. function
5/3 Pressured Centres: Use the Solenoid valves with 2x3/2 N.O. - N.O. function



Solenoid-Solenoid 2x2/2 Bistable-N.C. - N.C.

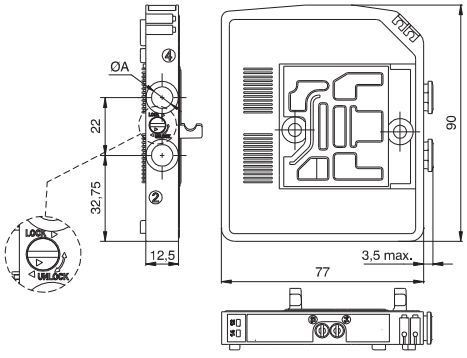
Coding: 230Ⓒ.42.44.35.Ⓥ

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Working pressure (bar)	From vacuum to 10
Pilot pressure (bar)	2,5 ... 7
Temperature °C	-5 ... +50
Flow rate at 6 bar with Δp=1 (Nl/min)	700
Response time according to ISO 12238, activation time (ms)	9
Response time according to ISO 12238, deactivation time (ms)	30

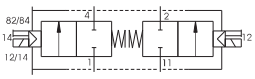
Ⓒ	CONNECTION ØA
	4 = Quick connection for tube Ø4
	6 = Quick connection for tube Ø6
	8 = Quick connection for tube Ø8
Ⓥ	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN

SHORT CODE L4
SHORT CODE L6
SHORT CODE L8





Weight 130 g



Overall dimensions and technical information are provided solely for informative purposes and may be modified without notice

Solenoid-Solenoid 2x2/2 Bistable-N.C. - N.O.

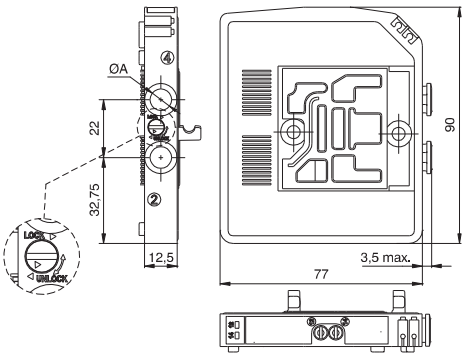
Coding: 230Ⓒ.42.45.35.Ⓥ

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Working pressure (bar)	From vacuum to 10
Pilot pressure (bar)	2,5 ... 7
Temperature °C	-5 ... +50
Flow rate at 6 bar with Δp=1 (Nl/min)	700
Response time according to ISO 12238, activation time (ms)	9
Response time according to ISO 12238, deactivation time (ms)	30

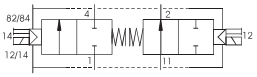
Ⓒ	CONNECTION ØA
	4 = Quick connection for tube Ø4
	6 = Quick connection for tube Ø6
	8 = Quick connection for tube Ø8
Ⓥ	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN

SHORT CODE N4
SHORT CODE N6
SHORT CODE N8





Weight 130 g



Solenoid-Solenoid 2x2/2 Bistable-N.O. - N.O.

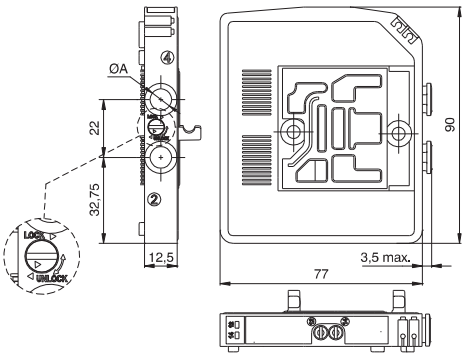
Coding: 230Ⓒ.42.55.35.Ⓥ

Operational characteristics	
Fluid	Filtered air. No lubrication needed, if applied it shall be continuous
Working pressure (bar)	From vacuum to 10
Pilot pressure (bar)	2,5 ... 7
Temperature °C	-5 ... +50
Flow rate at 6 bar with Δp=1 (Nl/min)	700
Response time according to ISO 12238, activation time (ms)	9
Response time according to ISO 12238, deactivation time (ms)	30

Ⓒ	CONNECTION ØA
	4 = Quick connection for tube Ø4
	6 = Quick connection for tube Ø6
	8 = Quick connection for tube Ø8
Ⓥ	VOLTAGE
	02 = 24 VDC PNP
	12 = 24 VDC NPN

SHORT CODE M4
SHORT CODE M6
SHORT CODE M8





Weight 130 g

