



Moduflex Valve System

Instant control for all pneumatic actuators,
modular valve islands and stand-alone valves

Catalogue no. PDE2536SLUK September 2015

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

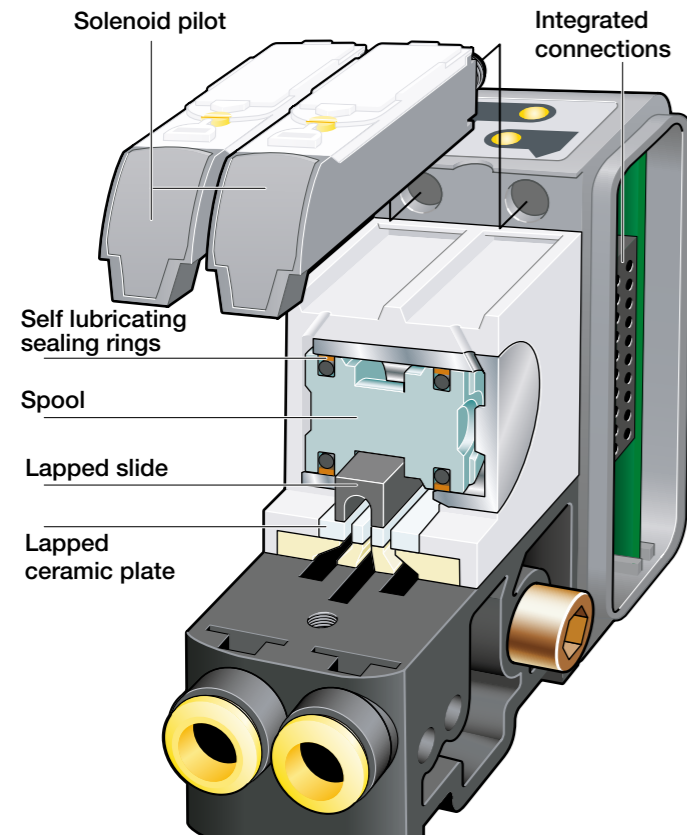


ENGINEERING YOUR SUCCESS.

Moduflex Valve System: The New Pneumatic Generation

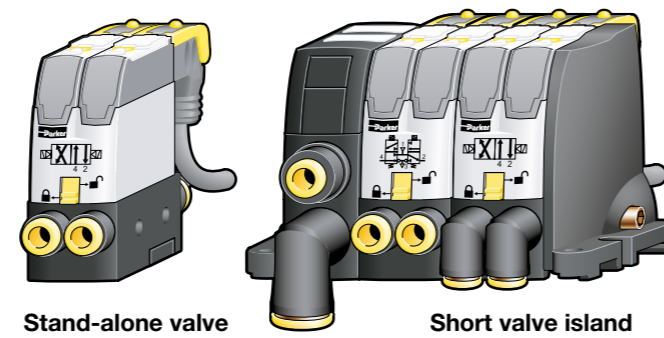
High Performance Technology

Super compact 4/2 slide valve for the best flow to size ratio, reliable long life and short response times.

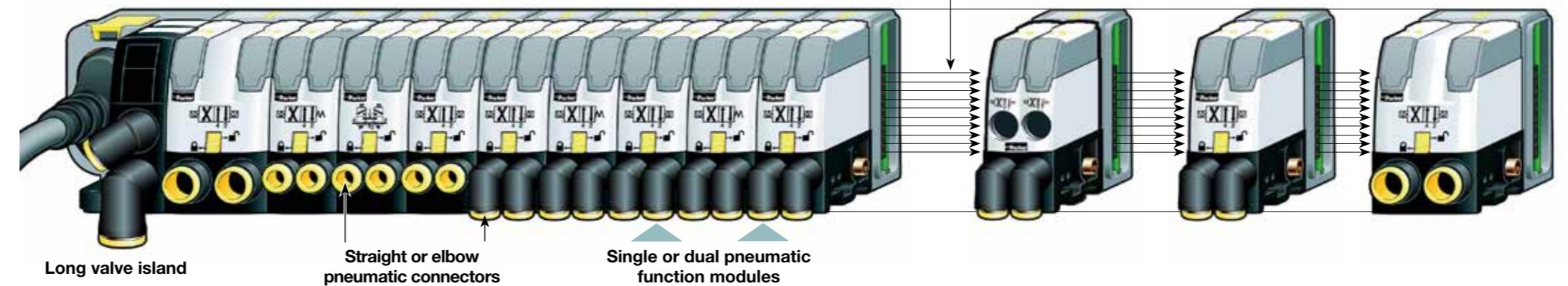


A Complete System

Covering all pneumatic installation requirements with a choice of either stand-alone, short or long valve islands.

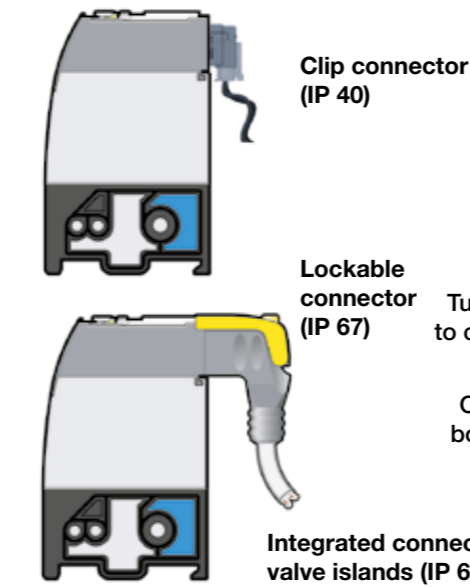


Stand-alone valve Short valve island



Long valve island Straight or elbow pneumatic connectors Single or dual pneumatic function modules

Individual Connector Valve Islands



Clip connector (IP 40)

Lockable connector (IP 67)

Tube size to cylinder

Cylinder bore size

3 Valve Sizes Into the Same Valve Island

Size 01	Size 1		Size 2	
Dual 4/2 Sgl Sol 270 NI/mn Section nominal 4mm ²	All functions 400 NI/mn Section nominal 12mm ²		All functions 1200 NI/mn * Section nominal 40mm ²	
Ø ext. 4mm	Ø ext. 4mm	Ø ext. 6mm	Ø ext. 8mm	Ø ext. 10mm
Ø 6 to Ø 25mm	Ø 6 to Ø 25mm	Ø 25 to Ø 40mm	Ø 40 to Ø 63mm	Ø 63 to Ø 100mm

* 2 x 3/2 = 800 NI/min

Pneumatic Specification

- Working pressure of -0.9 to 8 bar

- Flow	Size 01	Size 1	Size 2
Flow channel	7mm ²	12mm ²	40mm ²
Air flow	275 NI/min	400 NI/min ¹⁾	1200 NI/min ¹⁾

¹⁾ 2 x 3/2 = 800 NI/min

- All exhausts are collectable including solenoid pilot exhaust

- 100 million operations with dry or lubricated air 40 µ filtration

Electrical Specification

- Voltage 24V DC. Voltage surge protection

- Non polarity sensitive* (same product for both PNP and NPN)

* Except Pilot Solenoid Valve Clip Connector version

- Protection

Clip connector
Lockable connector

Individual connector IP40
Integrated connections IP65

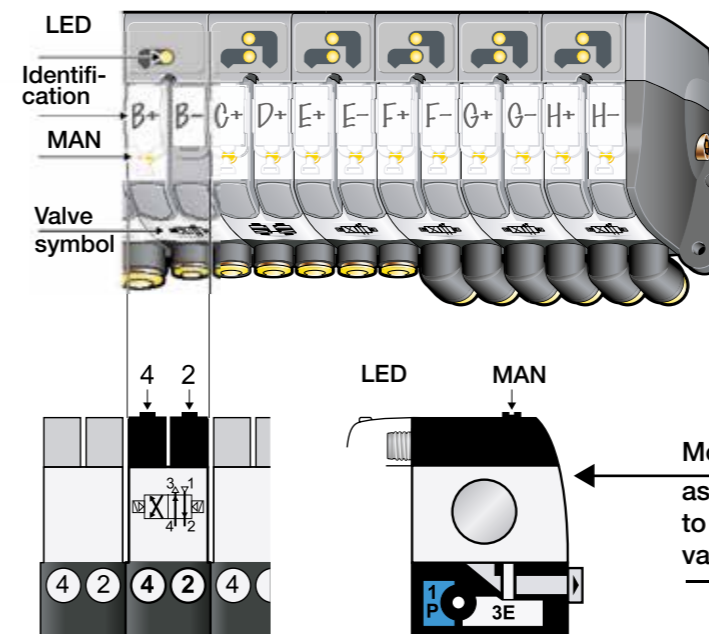
- Consumption 1W

- Shift time < 10 ms**

** shift time for 4/2 bistable size 1 valve

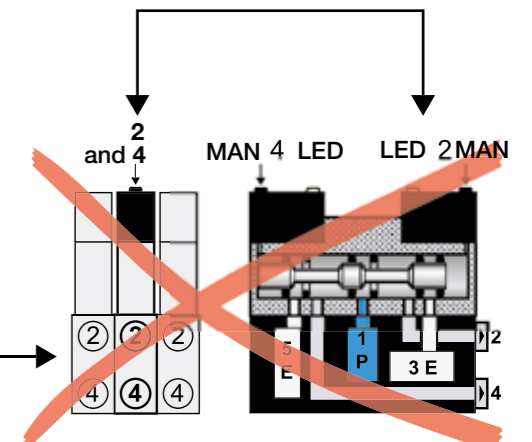
Easy Man-Machine Dialogue

Diagnostic and manual operations are simple: marking, LED and manual override (MAN) all lined-up with corresponding output to cylinder. Much simpler than with traditional valves.



LED MAN

Moduflex as compared to traditional valve island

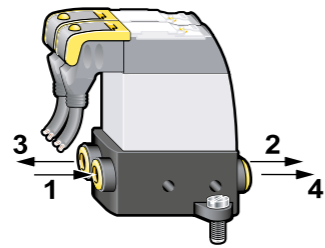


Stand-Alone Modules

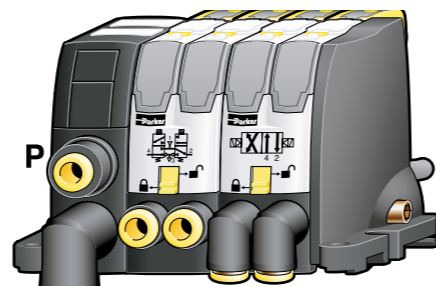


Each module is complete with individual connections:

- Pneumatic: pressure supply, exhaust connection and outputs to cylinder
- Electrical: IP67 protected individual connectors

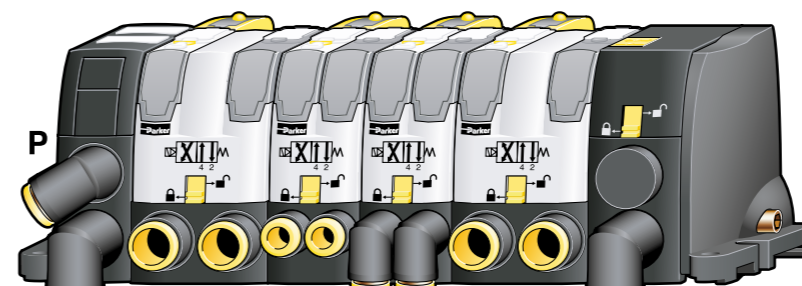


Islands with Individual Connectors



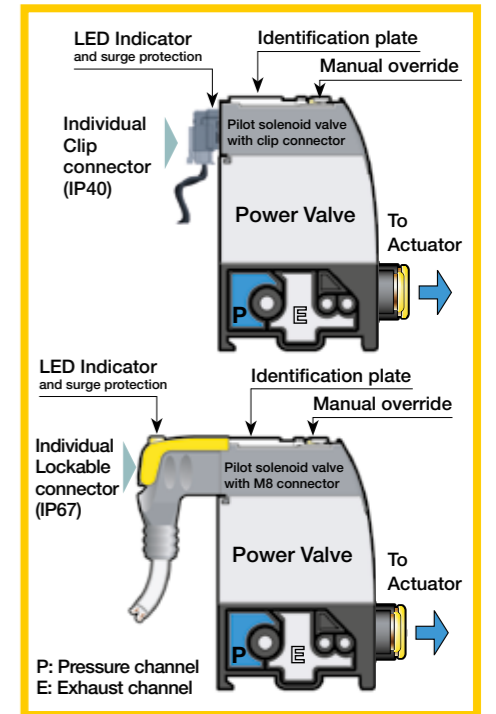
E Short build island

Each module is assembled into an island with a simple modular screw:



E High flow island

- Remote short build islands require only one pressure supply and one exhaust connection
- Longer high flow islands may require two exhaust connections



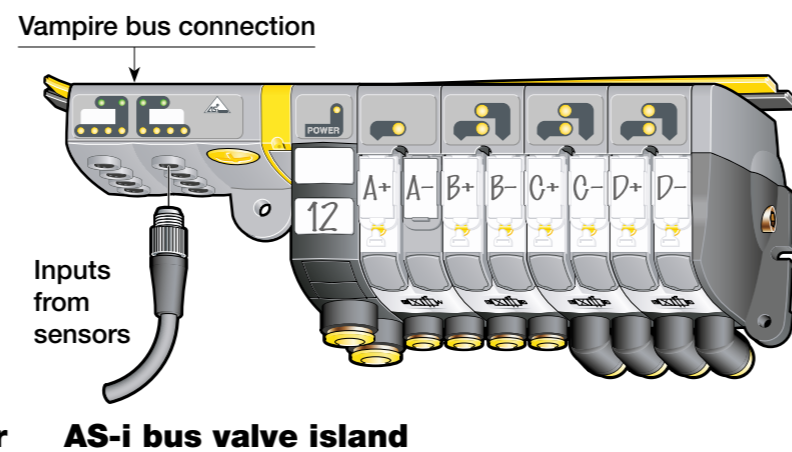
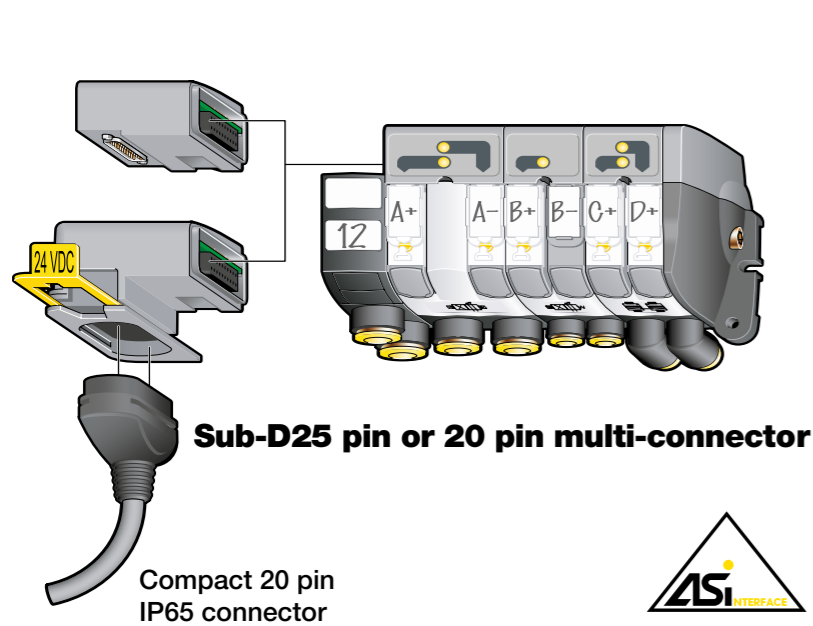
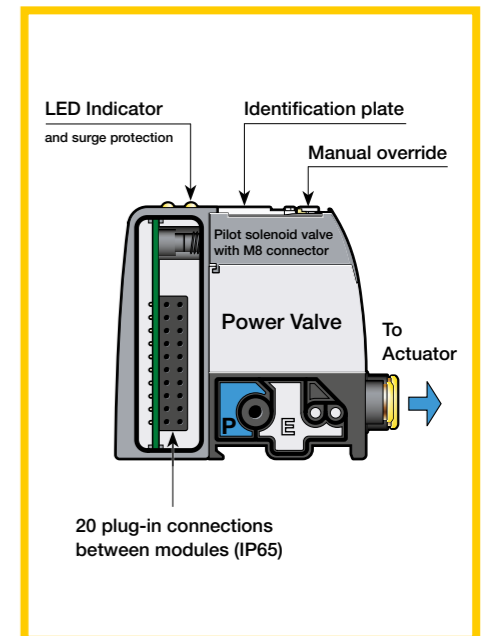
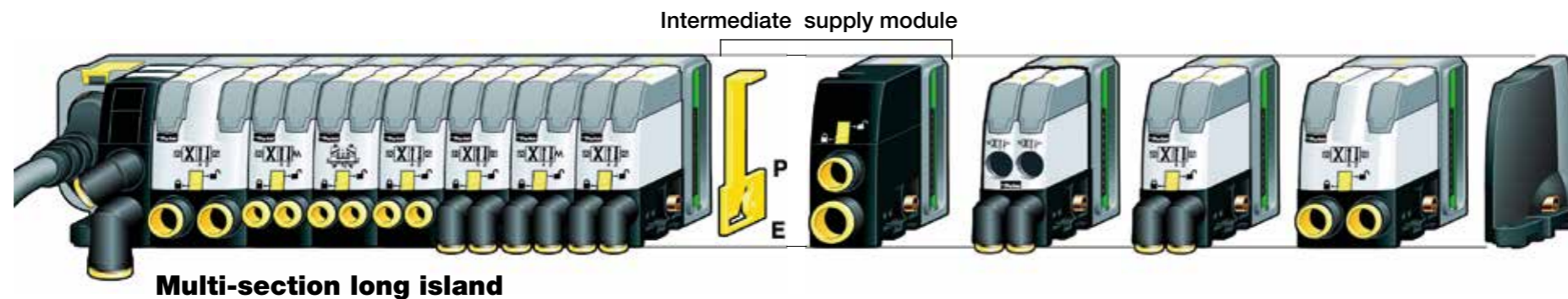
Islands With Integrated Connections

Each module is assembled into an island that includes:

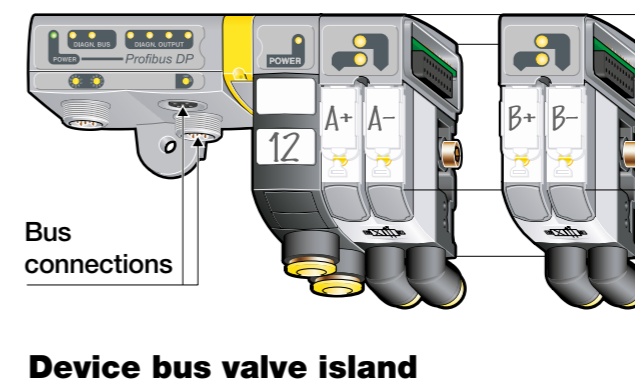
- The pressure and the exhaust channels
- The modular integrated electrical connections

At the head, the island electrical connection is terminated:

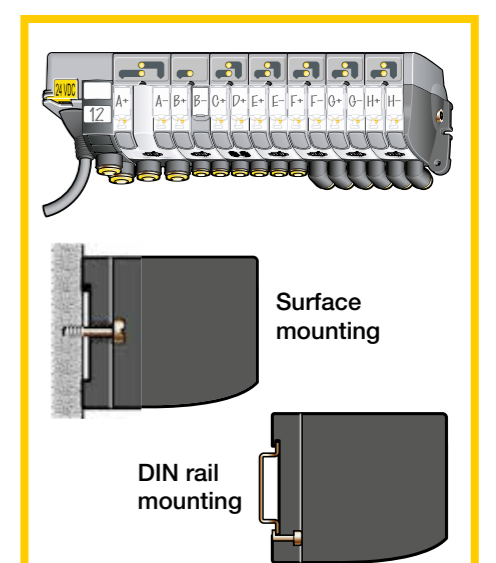
- Either with one multi-pin plug-in connector
- Or with a field-bus connection



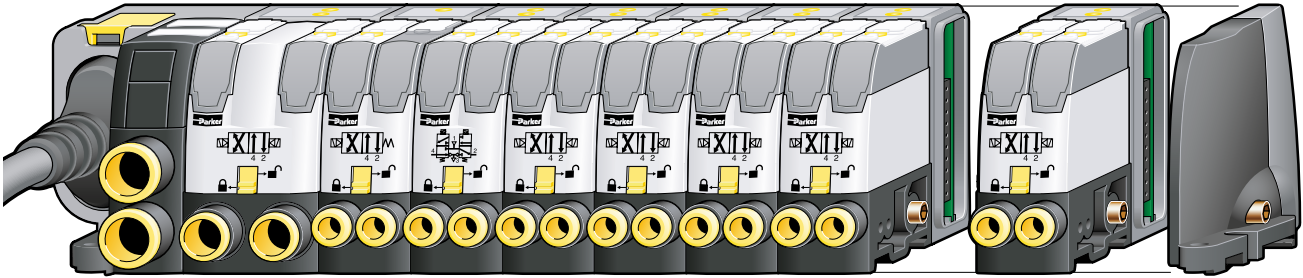
- Standard AS-i protocol (up to 31 nodes)
- AS-i version 2-1 protocol (up to 62 nodes)



DeviceNet™ PROFIBUS INTERBUS-S
CANopen BUS



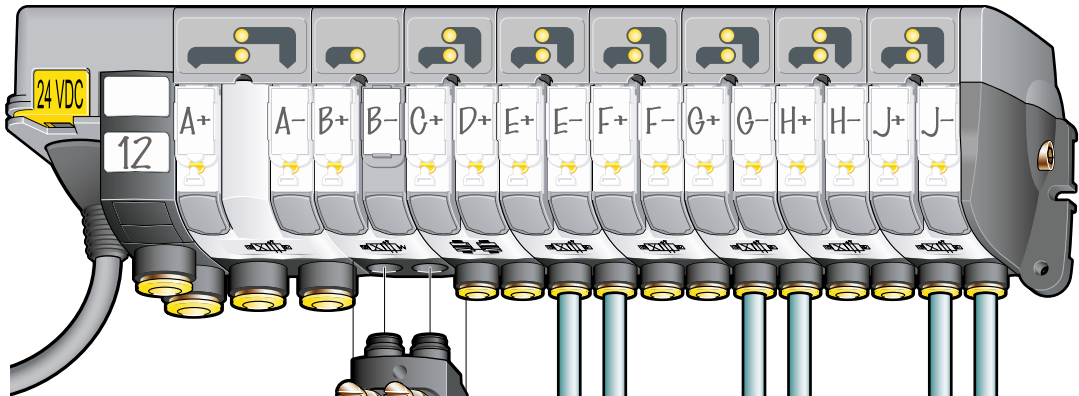
Total Modularity, Total Flexibility...



Valve island
internal flexibility



Valve island
peripheral
flexibility



1 Dual flow control module

2 Pressure regulation module

3 Dual pilot operated check valve module

4 Vacuum generator module

Peripheral control modules add flexibility to the valve island. They may be plugged-in directly to the valve island or installed in-line closer to the cylinder or to the vacuum pad.

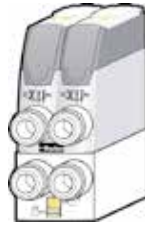
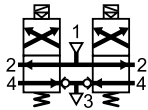


Moduflex: Valve functions and flow channel

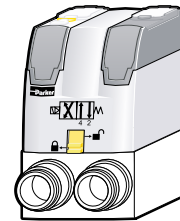
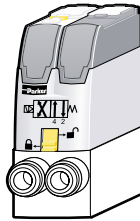
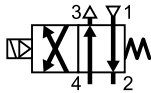
Size 1
12mm² flow channel
400 NI/min ¹⁾

Size 2
40mm² flow channel
1200 NI/min ²⁾

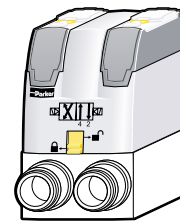
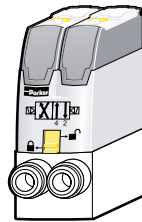
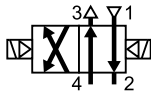
2 x 4/2 - way valve
single solenoid



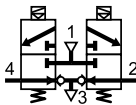
4/2 - way valve
single solenoid



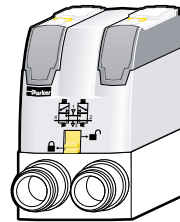
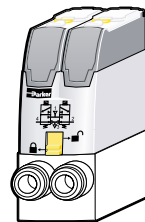
4/2 - way valve
double solenoid



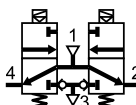
2 x 3/2 - way valve NC
single solenoid



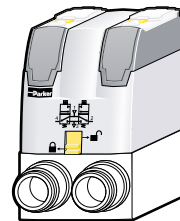
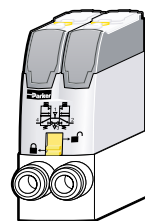
Note: this module can also achieve 3 position functions:
- 3 position vented centre
- 3 position closed centre, with the addition
of a dual pilot operated check valve



2 x 3/2 - way valve NO
single solenoid



Note: this module can also achieve the 3 position
pressure centre function



1) 2 x 4/2 = 150 NI/min
2) 2 x 3/2 = 800 NI/min

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