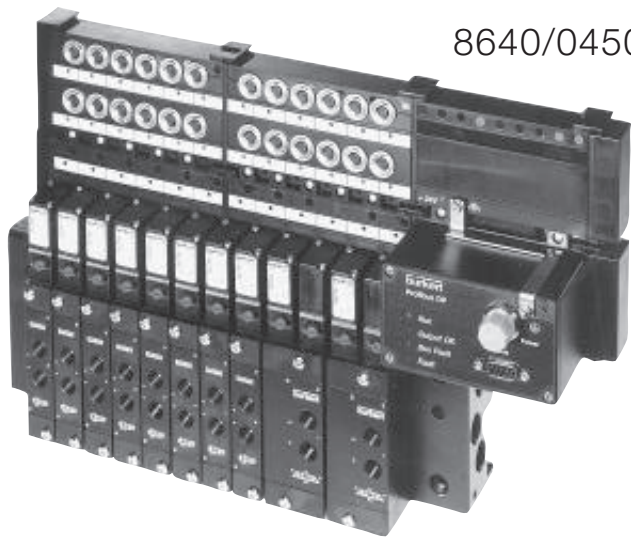



Centralized Process Actuation Solution for the Processing Industries

ON/OFF & Continuous Control



8640/0450

High Flow ALUMINUM Valves

- ✓ Easy NET with wide range of connections 
- ✓ Optimized System Solutions due to high level modularity
- ✓ Circuit functions H, L and N
- ✓ High flow rates
- ✓ Pre-tested and supplied easy to connect

8640
0450

The valve module system is suitable for a wide range of complex control applications with its logical and modular construction in respect of the electrical and fluidic interfaces. The electrical connections can be made either via common connections, multipole or fieldbus interfaces.

Specification

Valve type	0450 (pneumatic directional control)
Materials	
Valve body	Aluminum anodised
Valve internals	Aluminum, st. steel, brass
Seals	POM/NBR
Temperature	
In operation	0 up to +50°C
Storage and transport	-20 up to +60 °C
Fluids	Filtered compressed air, lubricated or unlubricated
Valve port connection	G ^{1/8}
Module connection	Inter-locking
Valve mounting	Push-in /screwed
Valve module mounting	Standard rails & wall mounting configuration according to customer requirement

Electrical Operating Data Solenoids*)

Nominal voltage	24 V/DC
Permissible voltage tolerance	±10 %
Residual ripple	5 V _{ss}

Control Electronics*)

Operating voltage	24 V/DC
Permissible voltage tolerance	±10 %
Residual ripple	1 V _{ss}
Current consumption	Max. 500 mA
Electrical Power	Max. 12 W
Power supply connection	M12 round plug (only AS-i bus also with screw plug terminals)
Rating	IP20 (with feedbacks on terminals) IP65 (with feedbacks on plug connectors)

*) The power supply for the solenoids and the control electronics take place via separately fused circuits.

Overall current requirements:

$I_{Total} = 500 \text{ mA} + n (I_{nominal}) + m (20 \text{ mA})$
 n: No. of valves
 m: No. of indicators (max. 20 mA per indicator)
 I_{nominal}: Rated current of the solenoid

Applications: • Water treatment

- Food and beverage
- Pharmaceutical industry, biotechnology and cosmetics
- Chemical industry
- Pulp / paper processing equipment
- Textile dyeing / drying equipment
- Semiconductor industry

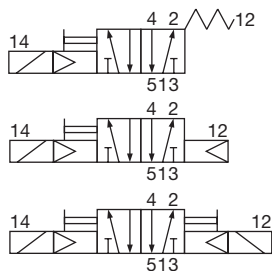


Centralized Process Actuation Solution for the Processing Industries

Technical Data

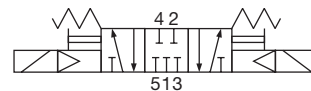
Function H

5/2 way valve, servo-assisted, in de-energized position port 2 pressurized and port 4 exhausted. Different returns incl. impulse valve



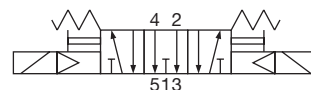
Function L

5/3 way valve, servo-assisted, in middle position all ports locked



Function N

5/3 way valve, servo-assisted, in middle position ports 2 and 4 exhausted

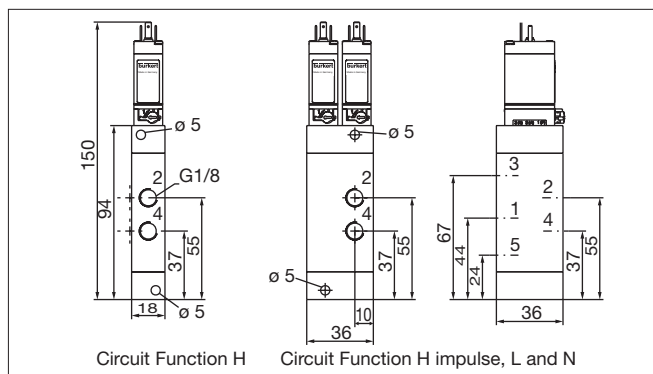


Valve Characteristics

Circuit function	Flow rate [l/min]	Pressure range [bar]	Rated current [W]	Reset	Response times		Item-No.
					opening [ms]	closing [ms]	
H (5/2)	750	2 – 8	1	air spring	19	25	194 274 X
H (5/2)	750	2 – 8	1	spring	17	27	194 275 Y
H (5/2)	750	2 – 8	1	impulse*	16	16	194 276 Z
H (5/2)	750	2 – 10	2	air spring	19	25	194 279 C
H (5/2)	750	2 – 10	2	spring	17	27	194 280 S
H (5/2)	750	2 – 10	2	impulse*	16	16	194 281 P
L (5/3)	650	2 – 8	1	spring*	16	37	194 277 S
L (5/3)	650	2 – 10	2	spring*	16	37	194 282 Q
N (5/3)	650	2 – 8	1	spring*	16	37	194 278 B
N (5/3)	650	2 – 10	2	spring*	16	37	194 283 R

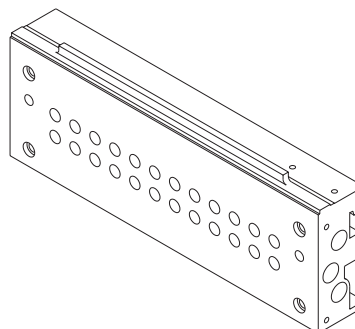
* valves have double mounting dimensions (36 mm wide)

Dimensions [mm] 0450



Pneumatic Modules 0450

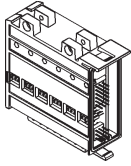
Number of valves	Item-No.
4	194 256 V
6	194 264 V
8	194 265 W
10	194 266 X
12	194 267 Y
14	194 268 H
16	194 269 A
18	194 270 F
20	194 271 U
22	194 272 V
24	194 273 W
Blind cover*	194 379 G



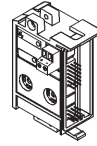
Centralized Process Actuation Solution for the Processing Industries

Modules with Integrated Plugs to Valve Connection

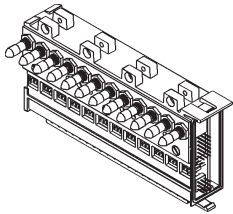
Electrical Basic Module, Standard Version
Max. 2, 5 or 6 valves
Rating IP 65



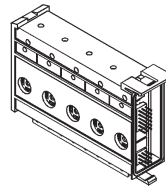
Electrical Basic Module with External Override
Max. 2, 5 or 6 valves
Rating IP 20
Plugable terminals



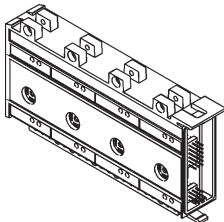
Electrical Basic Module with Manual Override
Max. 2 or 5 valves
Rating IP 20
3-Way lockable switch



Electrical Basic Module, Common Connection
Max. 2 or 5 valves
Rating IP 20
Screw terminals

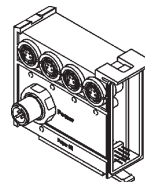


Electrical Basic Module for Impulse Valves
Max. 2, 5 or 6 inputs
Rating IP 20



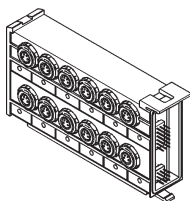
Module with 4 Outputs

24 V/DC
Power consumption
Max. 12 W per output
Electr. connections
M12 round plug (supply)
M8 round plug (outputs)
Rating IP 65

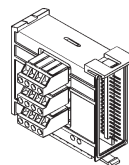


Modules for Position Feedback

Module with Plug Connection for Feedback/Initiators
Max. 4, 10 or 12 inputs
Rating IP 65
M8 round plug version



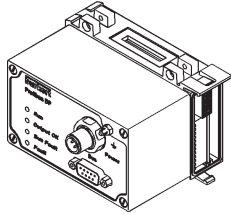
Module with Clamp Connection for Feedback/Initiators
Max. 4, 10 or 12 inputs
Rating IP 20
Plugable terminals



Centralized Process Actuation Solution for the Processing Industries

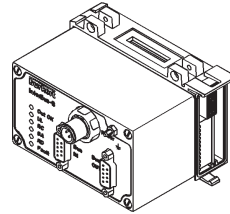
Fieldbus Modules

PROFIBUS DP



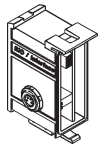
Max. 24 valves
Max. 32 feedbacks
Rating IP 65
Baud rate 9.6; 19.2; 93.75;
187.5; 500 or 1500 kBaud
Electrical conn. M12 (4 pin)
Bus connector D-SUB (9 pin)

InterBus S



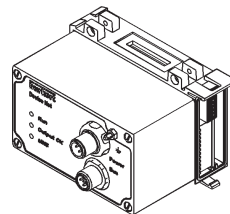
Max. 24 valves
Max. 32 feedbacks
Rating IP 65
Baud rate 500 kBaud
Electrical conn. M12 (4 pin)
Bus connector 2 x D-SUB (9 pin)

Internal Bus Extension RIO-IF Module



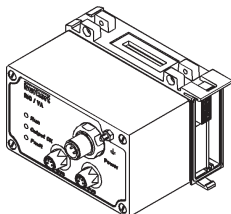
Max. 4 subsequent islands
Rating IP 65
Plug-in coupling
Module for bus extension

Device Net



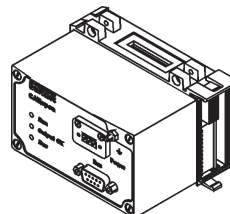
Max. 24 valves
Max. 32 feedbacks
Rating IP 65
Baud rate
125; 250 or 500 kBaud
Electrical conn. M12 (4 pin)
Bus connector MICRO style

RIO VA Module



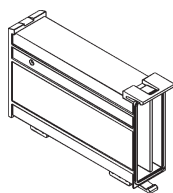
Max. 32 feedbacks
Rating IP 65
Plug connector

Fieldbus CAN Open



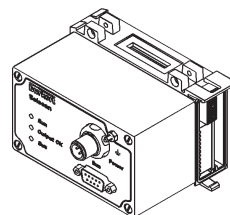
Max. 24 valves
Max. 32 feedbacks
Rating IP 20
Baud rate
20; 125; 250 or 500 kBaud
Electrical conn.
with terminals
Bus connector D-SUB (9 pole)

EME Module



Rating IP 65
Module for connection of
feedback signals in
combination with fieldbus
modules

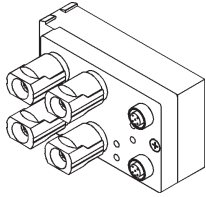
Fieldbus SELECAN



Max. 24 valves
Max. 32 feedbacks
Rating IP 65
Baud rate
20; 100; 500 or 1000 kBaud
Electrical conn. M12 (4 pin)
Bus connector D-SUB (9 pole)

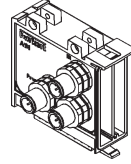
Centralized Process Actuation Solution for the Processing Industries

InterBus Loop



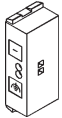
Max. 4 valves
 Max. 2 feedbacks and
 2 valves
 Rating IP 65
 Electr. connection
 Ease ON PG 13.5
 Bus connection
 Ease ON PG 11
 Round plug M12 for
 feedback inputs

Fieldbus AS-Interface



Max. 4 valves
 Rating IP 65
 Electr. conn. M12 (4 pin)
 Bus connector M12 (4 pin)

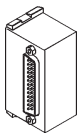
Common Connection for Single Connection of Valves



Max. 24 valves
 Rating IP 20
 Screw terminals

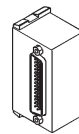
Multipole Modules for Single Connection of Valves and Feedbacks

Multipole Module Valve Outputs



Max. 24 valves
 Rating IP 65
 Electr. connection
 D-SUB (25 pins)

Multipole Module Feedback Inputs

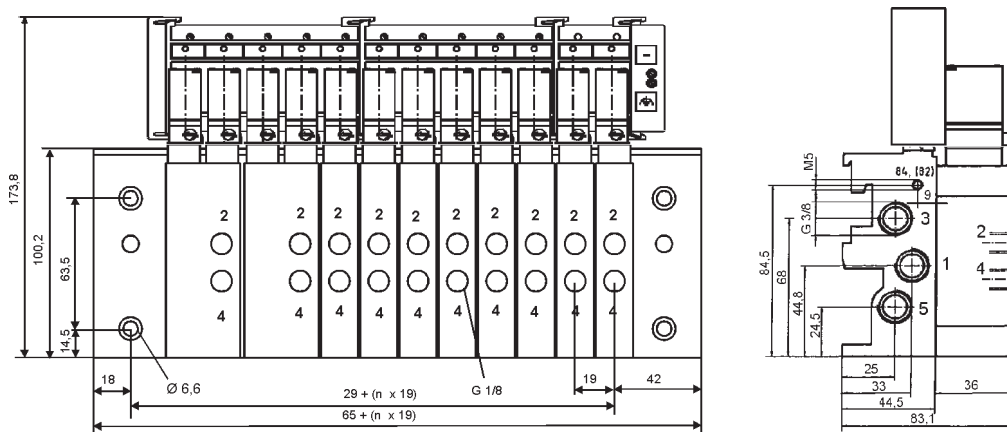


Max. 32 feedbacks
 Rating IP 65
 Electr. connection
 D-SUB (44 pins)

Centralized Process Actuation Solution for the Processing Industries

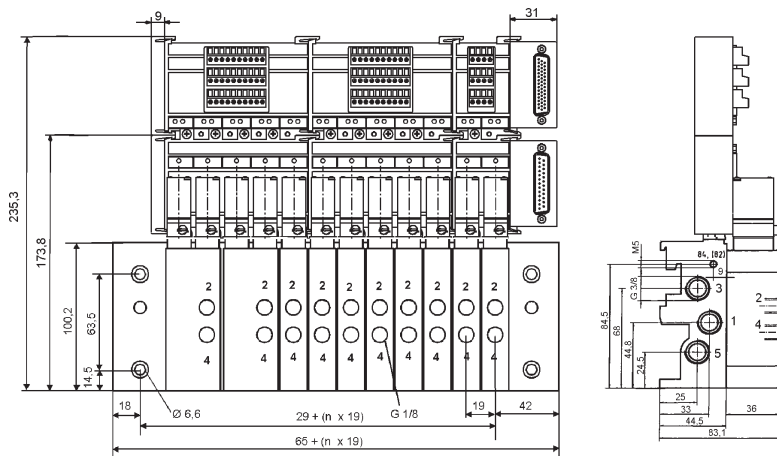
Dimensions [mm]

19 mm Valve Module, Common Connection, 0450



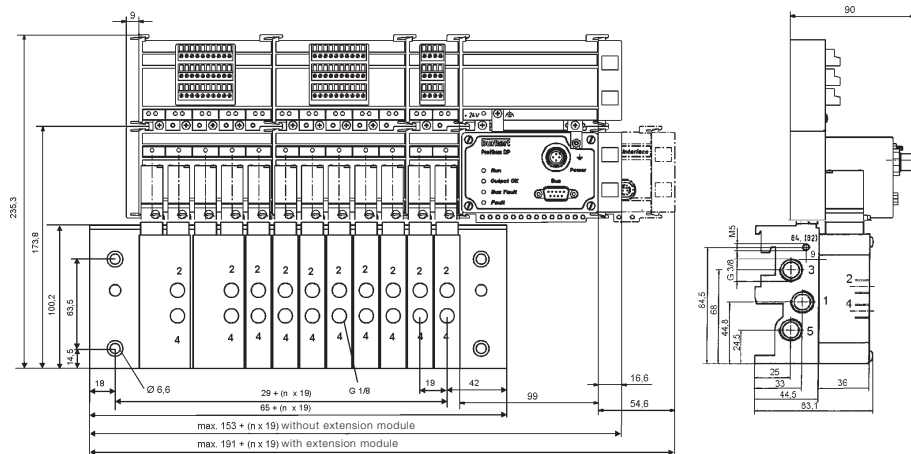
n = number of modules

19 mm Valve Module, Multipole, 0450



n = number of modules

19 mm Valve Module, Fieldbus, 0450



n = number of modules