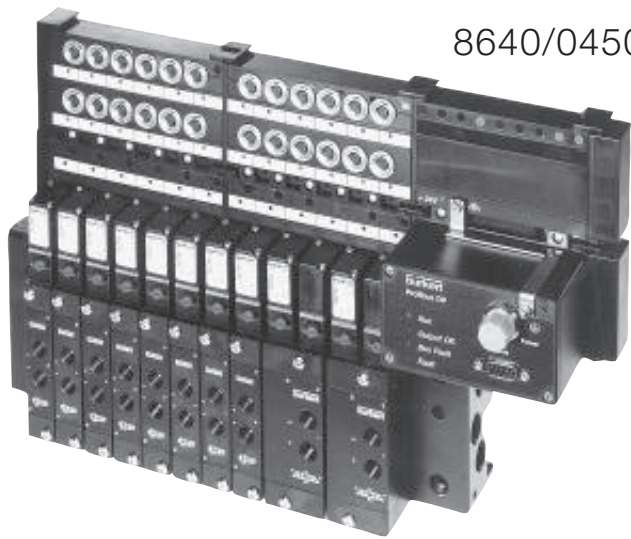


# Centralized Process Actuation Solution for the Processing Industries

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 <sup>1/8</sup>
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 <sub>ss</sub>

### Control Electronics\*)

Operating voltage	24 V/DC
Permissible voltage tolerance	±10 %
Residual ripple	1 V <sub>ss</sub>
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<sub>nominal</sub>: 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

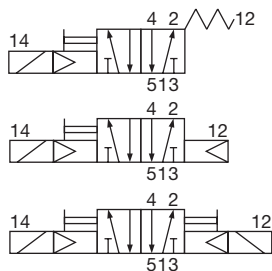


# Centralized Process Actuation Solution for the Processing Industries

## Technical Data

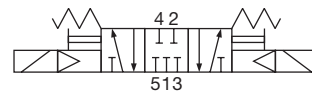
### Function H

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



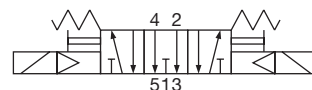
### Function L

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

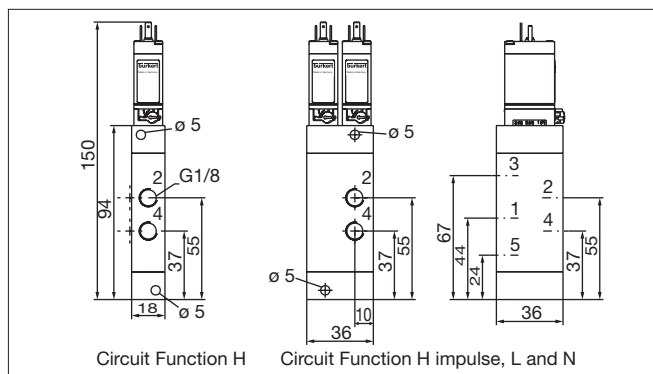


## Valve Characteristics

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

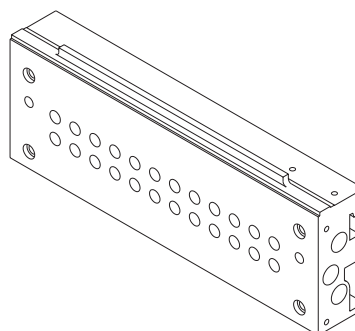
\* valves have double mounting dimensions (36 mm wide)

## Dimensions [mm] 0450



## Pneumatic Modules 0450

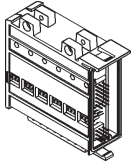
Number of valves	Item-No.
4	194 256 V
6	194 264 V
8	194 265 W
10	194 266 X
12	194 267 Y
14	194 268 H
16	194 269 A
18	194 270 F
20	194 271 U
22	194 272 V
24	194 273 W
Blind cover*	194 379 G



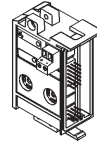
# Centralized Process Actuation Solution for the Processing Industries

## Modules with Integrated Plugs to Valve Connection

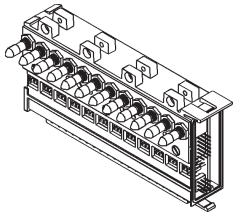
Electrical Basic Module, Standard Version  
Max. 2, 5 or 6 valves  
Rating IP 65



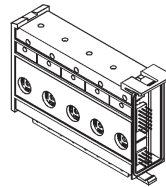
Electrical Basic Module with External Override  
Max. 2, 5 or 6 valves  
Rating IP 20  
Plugable terminals



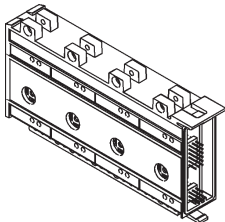
Electrical Basic Module with Manual Override  
Max. 2 or 5 valves  
Rating IP 20  
3-Way lockable switch



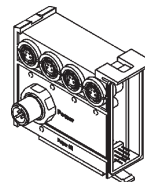
Electrical Basic Module, Common Connection  
Max. 2 or 5 valves  
Rating IP 20  
Screw terminals



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

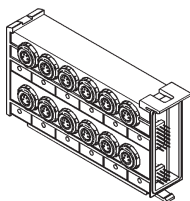


Module with 4 Outputs  
24 V/DC  
Power consumption  
Max. 12 W per output  
Electr. connections  
M12 round plug (supply)  
M8 round plug (outputs)  
Rating IP 65

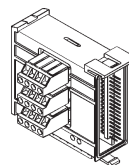


## Modules for Position Feedback

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



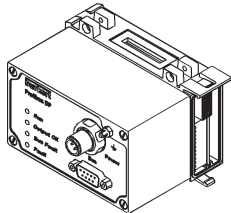
Module with Clamp Connection for Feedback/Initiators  
Max. 4, 10 or 12 inputs  
Rating IP 20  
Plugable terminals



# Centralized Process Actuation Solution for the Processing Industries

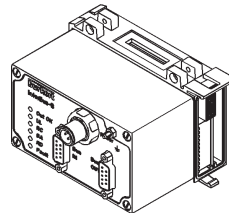
## Fieldbus Modules

### PROFIBUS DP



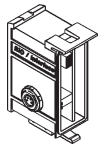
Max. 24 valves  
Max. 32 feedbacks  
Rating IP 65  
Baud rate 9.6; 19.2; 93.75;  
187.5; 500 or 1500 kBaud  
Electrical conn. M12 (4 pin)  
Bus connector D-SUB (9 pin)

### InterBus S



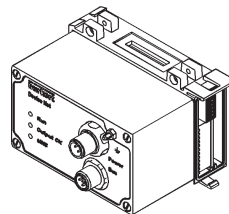
Max. 24 valves  
Max. 32 feedbacks  
Rating IP 65  
Baud rate 500 kBaud  
Electrical conn. M12 (4 pin)  
Bus connector 2 x D-SUB (9 pin)

### Internal Bus Extension RIO-IF Module



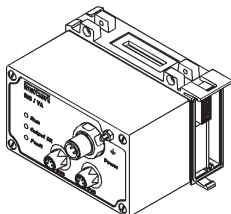
Max. 4 subsequent islands  
Rating IP 65  
Plug-in coupling  
Module for bus extension

### Device Net



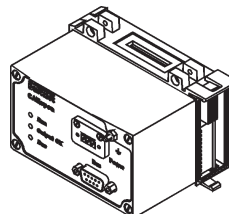
Max. 24 valves  
Max. 32 feedbacks  
Rating IP 65  
Baud rate  
125; 250 or 500 kBaud  
Electrical conn. M12 (4 pin)  
Bus connector MICRO style

### RIO VA Module



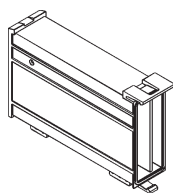
Max. 32 feedbacks  
Rating IP 65  
Plug connector

### Fieldbus CAN Open



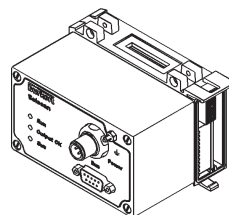
Max. 24 valves  
Max. 32 feedbacks  
Rating IP 20  
Baud rate  
20; 125; 250 or 500 kBaud  
Electrical conn.  
with terminals  
Bus connector D-SUB (9 pole)

### EME Module



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

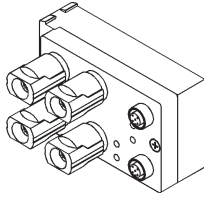
### Fieldbus SELECAN



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)

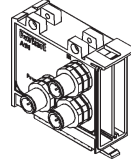
# Centralized Process Actuation Solution for the Processing Industries

## InterBus Loop



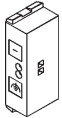
Max. 4 valves  
Max. 2 feedbacks and  
2 valves  
Rating IP 65  
Electr. connection  
Ease ON PG 13.5  
Bus connection  
Ease ON PG 11  
Round plug M12 for  
feedback inputs

## Fieldbus AS-Interface



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

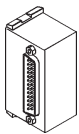
## Common Connection for Single Connection of Valves



Max. 24 valves  
Rating IP 20  
Screw terminals

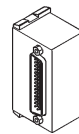
## Multipole Modules for Single Connection of Valves and Feedbacks

### Multipole Module Valve Outputs



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

### Multipole Module Feedback Inputs

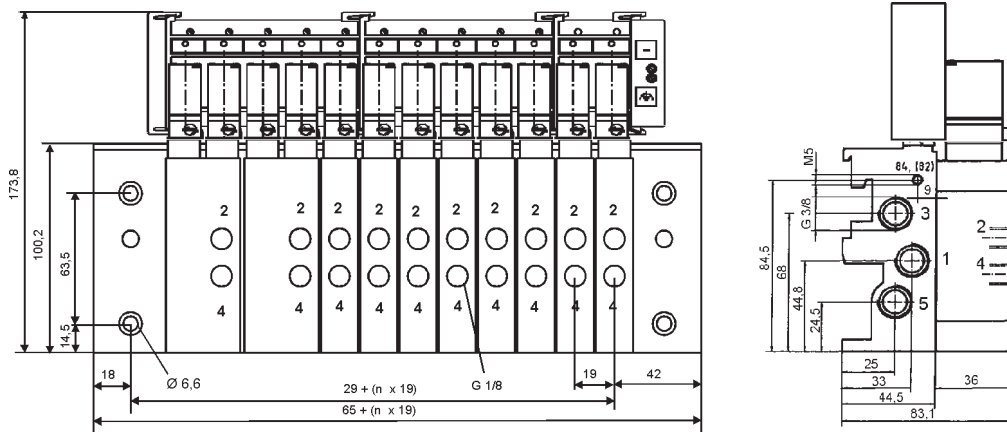


Max. 32 feedbacks  
Rating IP 65  
Electr. connection  
D-SUB (44 pins)

# Centralized Process Actuation Solution for the Processing Industries

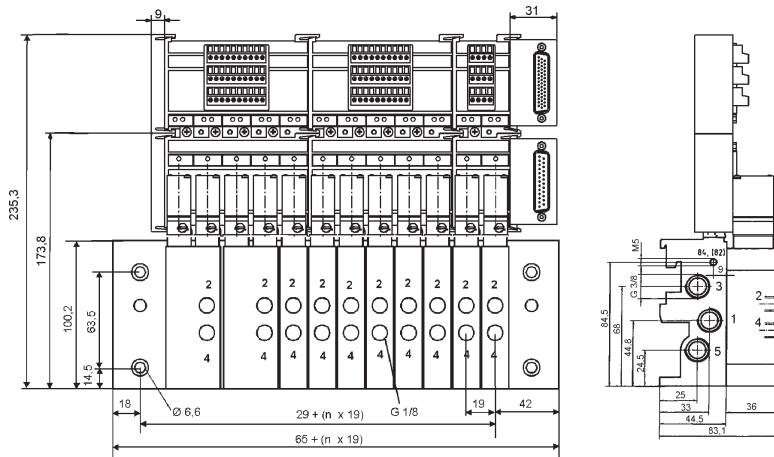
## Dimensions [mm]

### 19 mm Valve Module, Common Connection, 0450



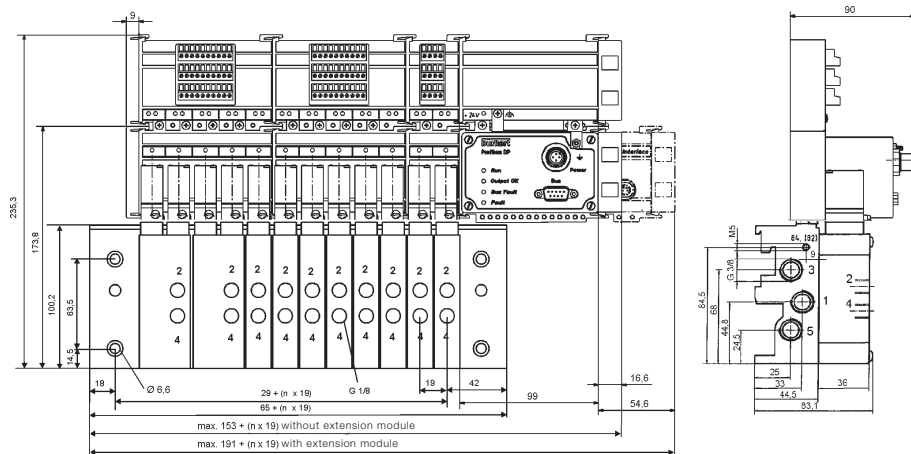
n = number of modules

### 19 mm Valve Module, Multipole, 0450



n = number of modules

### 19 mm Valve Module, Fieldbus, 0450



n = number of modules