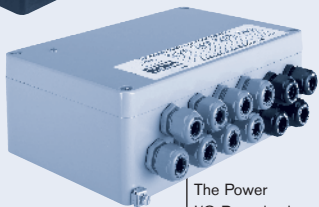
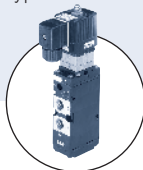
The Power I/O Box,  
polyester versionThe Power  
I/O Box, aluminum  
coating version

Type 8643 can be combined with...

**Type 6519 EEx i**

Pilot valve

**Type 1062**Electrical position  
feedback**Type 2012/8631**Process valve with  
TopControl**Further NAMUR  
proximity switches**

Technical data	
<b>Housing material</b>	Polyester (black) or powder-coated aluminum (grey)
<b>Ambient temperature</b>	
2-wire device	-4°F to 131°F (-20°C to +55°C)
4-wire device	-4°F to 140°F (-20°C to +60°C)
<b>Cable entry</b>	Polyamide cable gland
<b>Protection class</b>	IP 65
<b>Insulation class</b>	3
<b>Dimensions (W x D x H)</b>	260 x 160 x 90 mm, see drawing p. 3
<b>Supply voltage</b>	
Auxiliary supply 24 V	<b>4-wire device</b> 17-32 V DC 200 mA (17 V) 140 mA (24 V) 110 mA (32 V)
Max. current usage	<b>2-wire device</b> not necessary 320 mA (17 V) <sup>1)</sup> 220 mA (24 V) <sup>1)</sup> 160 mA (32 V) <sup>1)</sup>
Voltage range bus	9-32 V DC
Bus power consumption	12 mA/17 mA FDE
<b>Inputs</b>	8 intrinsically safe NAMUR inputs (acc. EN 50227)
<b>Outputs</b>	4 intrinsically safe outputs for pilot valves
Min. switching current	30 mA <sup>2)</sup>
Min. holding current	15 mA
Internal resistance	<340 Ω
Open-circuit voltage	24 V
<b>Electr. conn. for inputs and outputs</b>	Terminal strip up to 2.5 mm <sup>2</sup>
<b>Interfaces</b>	
FF H1 and PA acc. IEC 61158-2	
2-wire device	Ex e
4-wire device	FISCO Ex i or Ex-e ITC 5.0; FF-certified
<b>Electrical connection</b>	4 terminal strip, Bus up to 2.5 mm <sup>2</sup> 3 terminal strip, shield; (1 direct grounding + 2x capacitive grounding)
<b>Auxiliary supply</b>	(only with 4-wire device)
Type of protection	Increased security EEx e
Electr. connection	4 terminal strip up to 2.5 mm <sup>2</sup>
<b>Approvals</b>	II 2 (1) G Ex mb e [ia] IIC T4 PTB 06 ATEX 2051

1) based on bus voltage

2) reduction to 50% after 50 ms.

- Efficient connection of binary signals to a central automation system
- Connection of up to 4 pilot valves and 8 NAMUR proximity switches
- Integrated diagnostic and monitoring functions

With the Power I/O Box Type 8643, Bürkert offers a system that allows extremely cost effective connection of distributed binary signals to a process control system.

Communication takes place via field bus in accordance with the EC 61158-2 standard. The hardware offers 4 intrinsically safe digital outputs making it possible to control a wide range of intrinsically safe actuators such as solenoid valves, relays or indicator lights. 8 intrinsically safe digital inputs operate in accordance with Namur specifications. This enables a broad spectrum of binary sensors ensuring that users are not limited to a specific manufacturer when selecting actuator or sensor technology.

The device with the FF H1 interface offers DO and DI function blocks in a number of different versions in order to meet all of the demands programmers place on such systems.

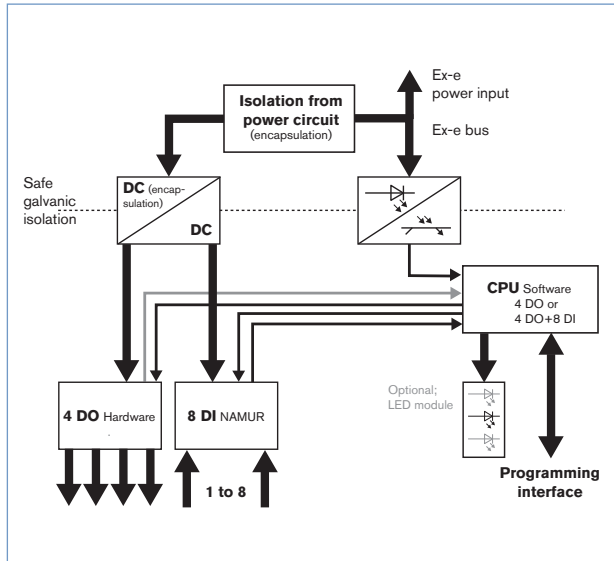
A variety of housing materials including polyester and aluminium offers additional enhancements for the field of application.

### Applications

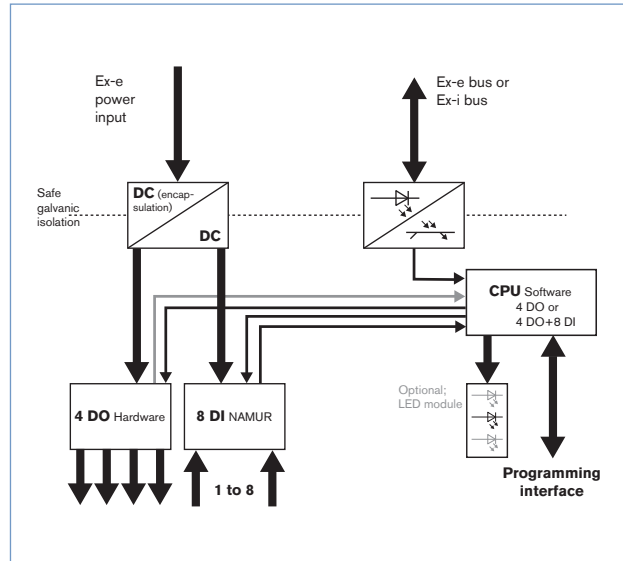
- Chemical industry
- Pharmaceutical Solvent Areas
- Oil and gas industry and pipeline installations
- Industrial waste water treatment

## Configurations

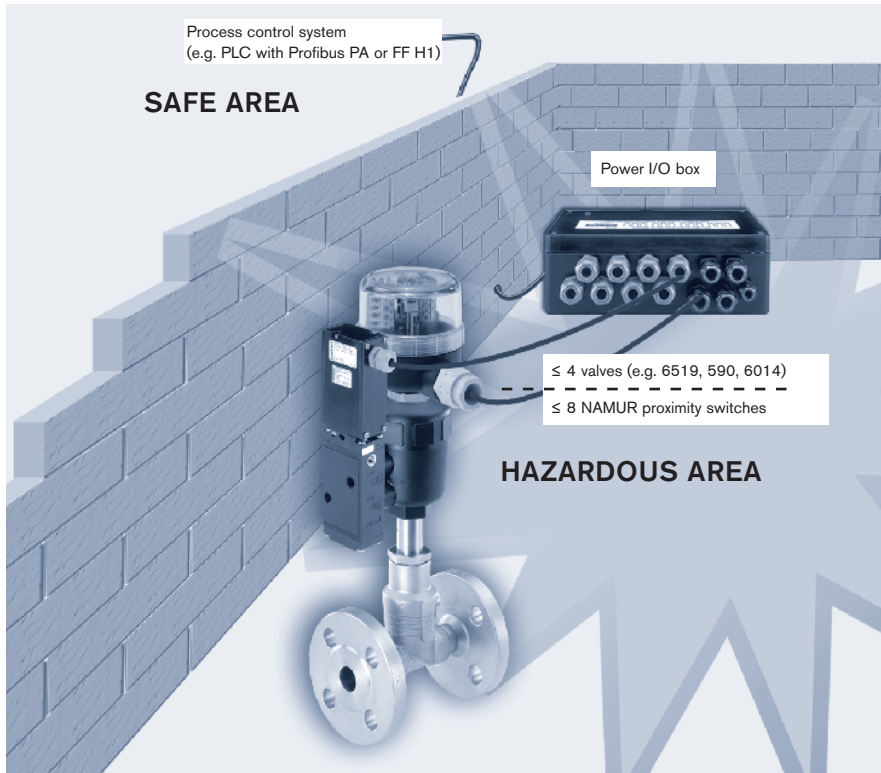
### 2-wire configuration



### 4-wire configuration



## Applications



All of the DO and DI ports on the Power I/O Box are intrinsically safe and are mainly used in process control installations for the control of process valves and other pneumatically operated actuators.

### Ordering chart Power I/O Box

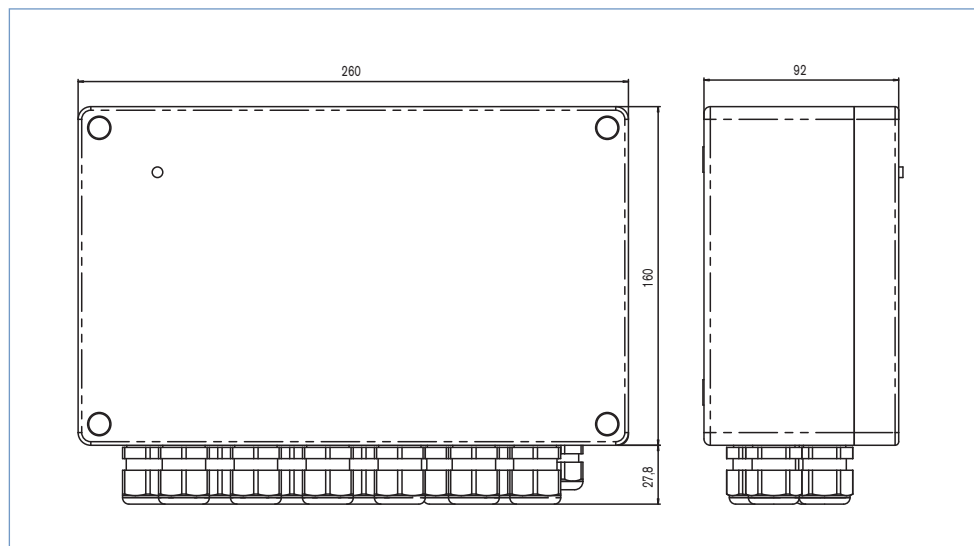
Type	Item no.
<b>FF box, 12 PVC cable glands M20</b>	
Polyester housing, 2-wire version	177 311
Aluminium housing, 2-wire version	162 007
Polyester housing, 4-wire version	177 312
Aluminium housing, 4-wire version	161 979
<b>PA box, 12 PVC cable glands M20</b>	
Polyester housing, 2-wire version	in planning
Aluminium housing, 2-wire version	in planning
Polyester housing, 4-wire version	in planning
Aluminium housing, 4-wire version	in planning

### Ordering chart accessories

Description	Item no.
LED module to show the status of IO's	666 230

Stainless steel on request

### Dimensions [mm]



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