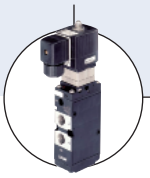
bürkert
FLUID CONTROL SYSTEMS

Power I/O Box, for FOUNDATION Fieldbus H1 or Profibus PA

The Power I/O Box, polyester version

- 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

Type 8643 can be combined with...



Typ 6519 EEx i
Pilot valve

Typ 1062
Electrical position feedback

Typ 2012/8631
Process valve with TopControl

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 IEC 61158. 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 wastewater treatment

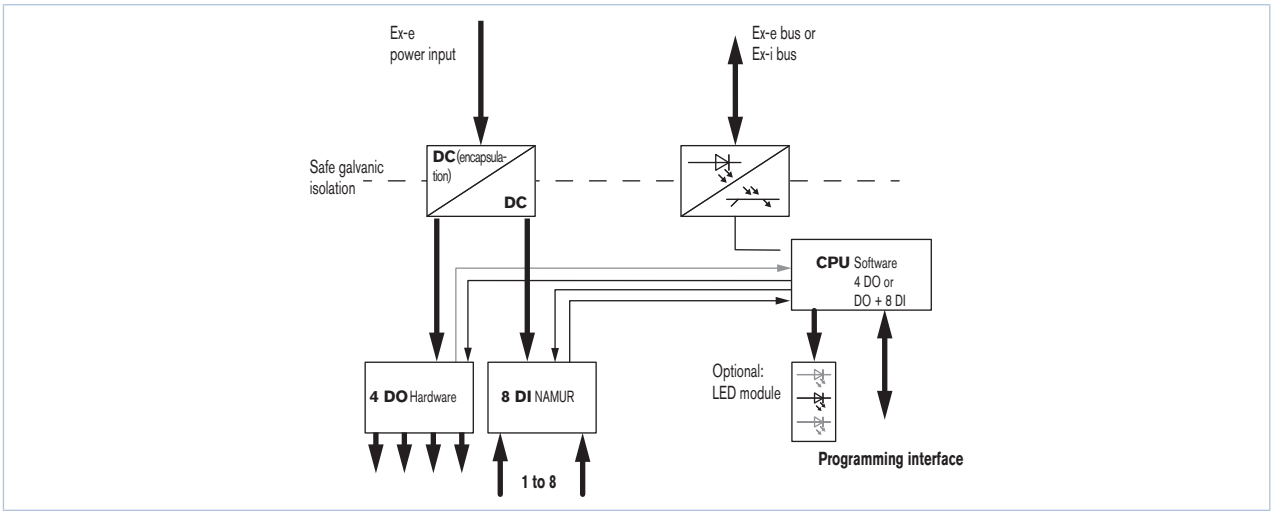
Technical data	
Housing material	Polyester (black) or powder-coated aluminum (grey)
Ambient temperature	-20...+60°C
Cable entry	Polyamide cable gland
Protection class	IP65
Insulation class	3
Dimensions (W x D x H)	260 x 160 x 90 mm, see drawing p. 3
Supply voltage	
Auxiliary supply 24 V	17...32 V DC
Max. current usage	200 mA (17 V) 140 mA (24 V) 110 mA (32 V)
Voltage range bus	9...32 V DC
Bus power consumption	12 mA/17 mA FDE
Inputs	8 intrinsically safe NAMUR inputs (acc. EN 50227)
Outputs	4 intrinsically safe outputs for pilot valves
Min. switching current	30 mA[1)]
Min. holding current	15 mA
Internal resistance	<340 Ω
Open-circuit voltage	24 V
Electrical connection for inputs and outputs	Terminal strip up to 2.5 mm²
Interfaces FF H1 and PA acc. IEC 61158-2	FISCO Ex i or Ex-e ITK 5.0; FF-certified
Electrical connection	4 terminal strip, Bus up to 2.5 mm² 3 terminal strip, shield (1 direct grounding + 2 capacitive grounding)

[1)] reduction to 50% after 50 ms.

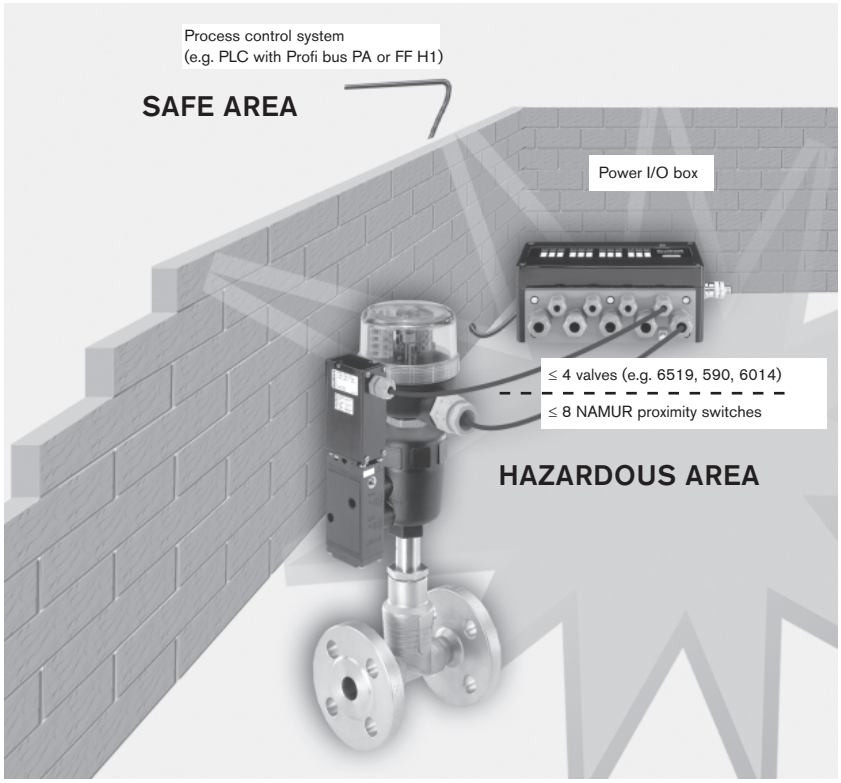
Technical data

Technical data (continued)	
Auxiliary supply	
Type of protection	Increased security EEx e
Electrical connection	4 terminal strip up to 2.5 mm²
Approvals	II 2 (1) G Ex mb e [ia] IIC T4 PTB 06 ATEX 2051

Configurations

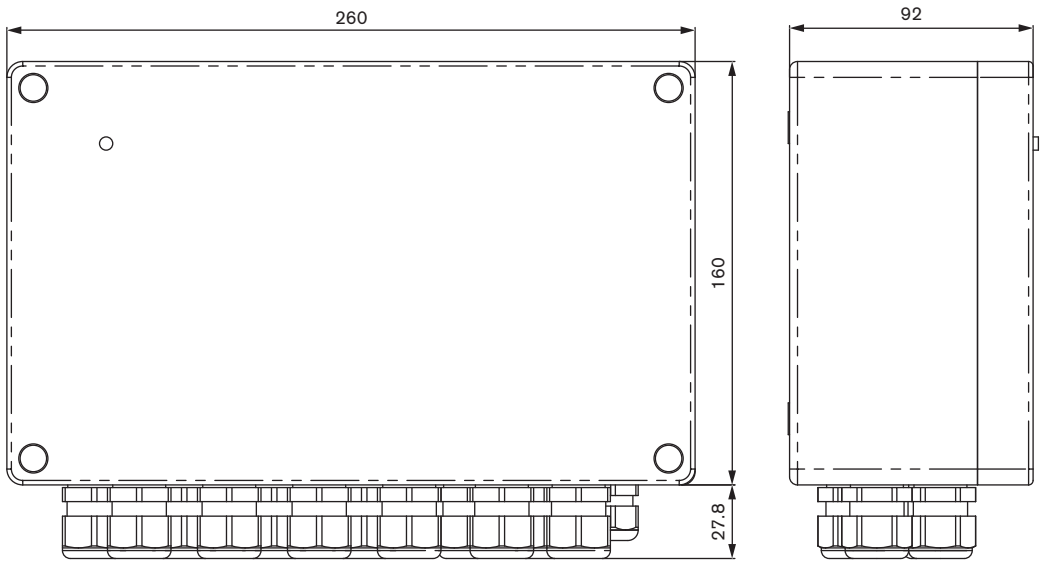


Applications



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.

Dimensions [mm]



Ordering chart Power I/O Box

Type	Item no.
FF box, 12 PVC cable glands M20	
Polyester housing, 4-wire version	177 312
Aluminium housing, 4-wire version	161 979
PA box, 12 PVC cable glands M20, PA profil 3.00	
Polyester housing, 4-wire version	210 163