



The Power I/O Box, polyester version



Type 8643 can be combined with...



Typ 6519 EEx i

Pilot valve



Typ 1062

Electrical position feedback



Typ 2012/8631

Process valve with TopControl

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



- 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 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
- Industrielle Abwasserbehandlung

Technical data		
Housing material	Polyester (black) or powder-coated aluminum (grey)	
Ambient temperature	2-wire device -20°C to +55°C 4-wire device -20°C to +60°C	
Cable entry	Polyamide cable gland	
Protection class	IP 65	
Insulation class	3	
Dimensions (W x D x H)	260 x 160 x 90 mm, see drawing p. 3	
Supply voltage	4-wire device	2-wire device
Auxiliary supply 24 V	17-32 V DC	not necessary
Max. current usage	200 mA (17 V)	320 mA (17 V) ¹⁾
	140 mA (24 V)	220 mA (24 V) ¹⁾
	110 mA (32 V)	160 mA (32 V) ¹⁾
Voltage range bus	9-32 V DC	17-32 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 ²⁾	
Min. holding current	15 mA	
Internal resistance	<340 Ω	
Open-circuit voltage	24 V	
Electr. conn. for inputs and outputs	Terminal strip up to 2.5 mm ²	
Interfaces	FF H1 and PA acc. IEC 61158-2	
2-wire device	Ex e	
4-wire device	FISCO Ex i or Ex-e ITK 5.0; FF-certified	
Electrical connection	4 terminal strip, Bus up to 2.5 mm ² 3 terminal strip, shield; (1 direct grounding + 2x capacitive grounding)	

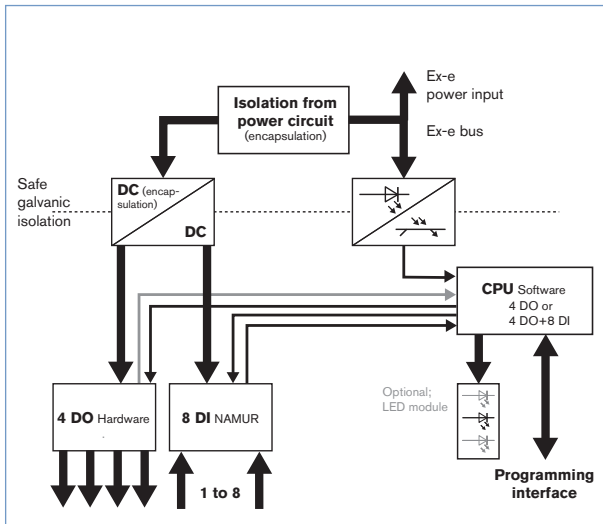
Technical data

Technical data (continued)	
Auxiliary supply	(only with 4-wire device)
Type of protection	Increased security EEx e
Electr. connection	4 terminal strip up to 2.5 mm ²
Approvals	II 2 (1) G Ex mb e [ia] IIC T4 PTB 06 ATEX 2051

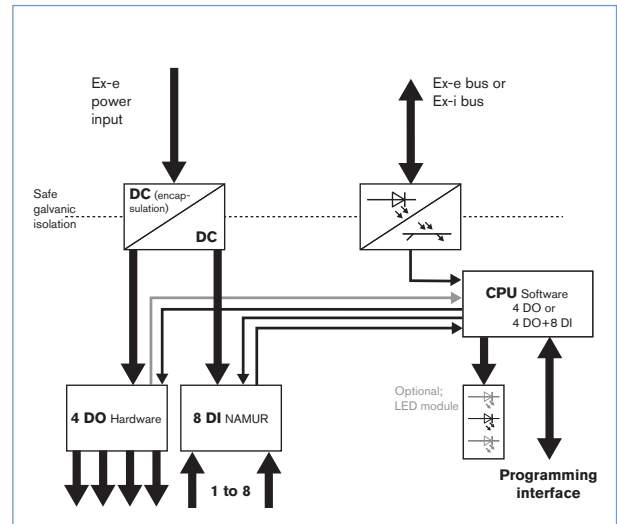
¹⁾ based on bus voltage
²⁾ reduction to 50% after 50 ms.

Configurations

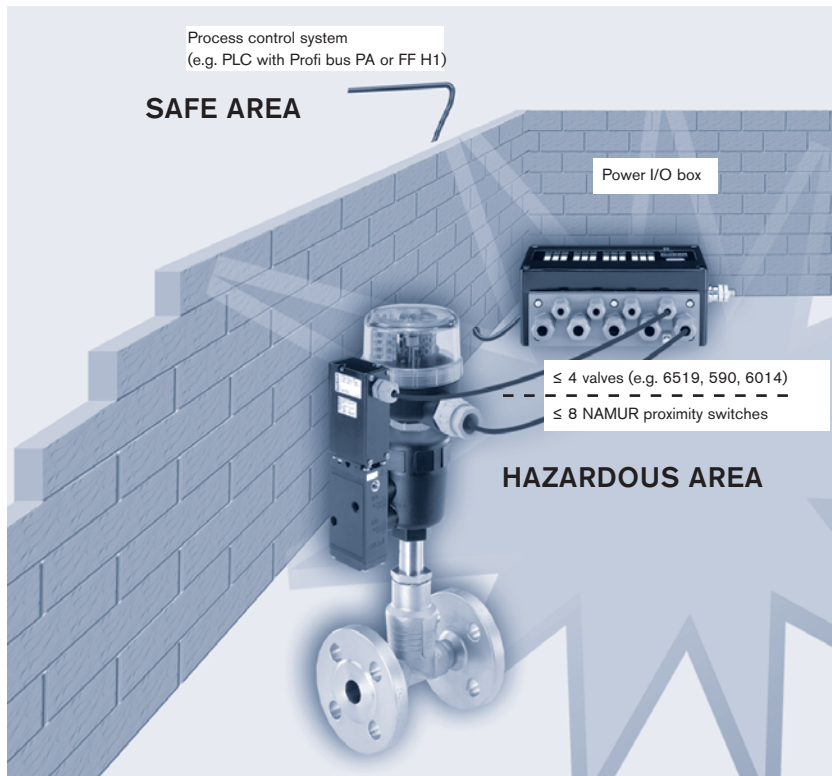
2-wire configuration



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

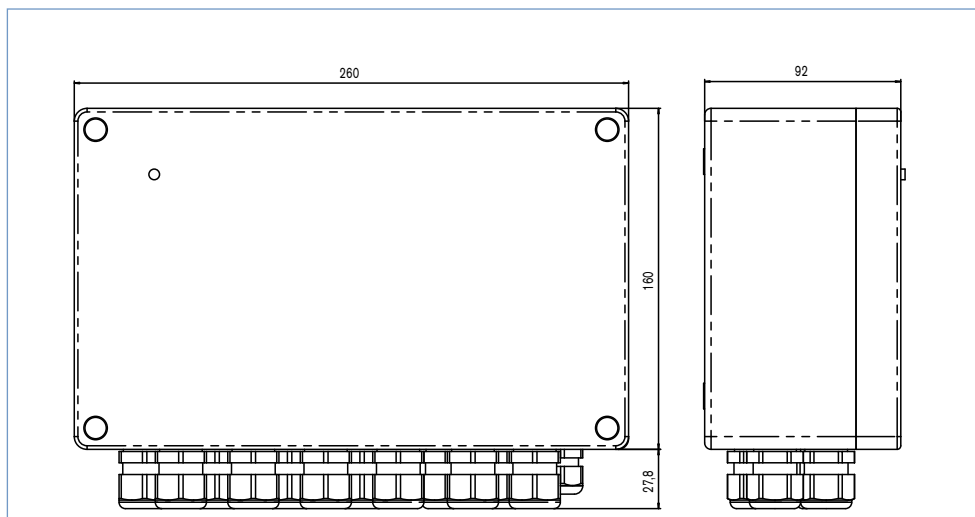
Type	Item no.
FF box, 12 PVC cable glands M20	
Polyester housing, 2-wire version	177 311
Aluminium housing, 2-wire version	162 007
Polyester housing, 4-wire version	177 312
Aluminium housing, 4-wire version	161 979
PA box, 12 PVC cable glands M20, PA profil 3.02	
Polyester housing, 2-wire version	in Vorbereitung
Aluminium housing, 2-wire version	in Vorbereitung
Polyester housing, 4-wire version	in Vorbereitung
Aluminium housing, 4-wire version	in Vorbereitung
PA box, 12 PVC cable glands M20, PA profil 3.00	
Polyester housing, 4-wire version	210 163
Polyester housing, 2-wire version	210 198

Ordering chart accessories

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

Stainless steel, spring-cage terminal blocks or metallische metal cable glands on request.

Dimensions [mm]



To find your nearest Bürkert facility, click on the orange box → www.burkert.com

In case of special application conditions, please consult for advice.

Subject to alteration.
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