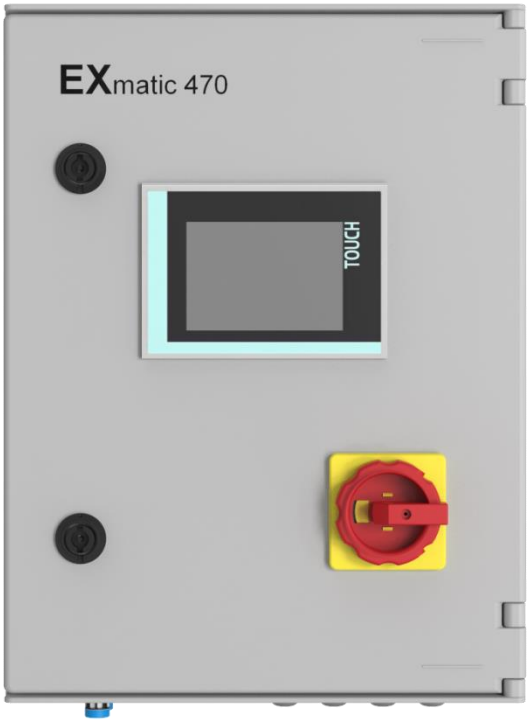
EXmatic 470

TECHNICAL INFORMATION

Control unit
for retractable probe housings



EXNER
Process Equipment

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1 Technical data

1.1 Standards

The following standards were applied when manufacturing the retractable probe housing:

» Interference immunity in compliance with EN 61000-6-2

» Interference suppression in compliance with EN 61000-6-4

1.2 Material properties

Control cabinet materials		
Housing	GRP	
	Stainless steel	Option
Display	Plastic	Option

1.3 Pneumatics

Pneumatic hoses		
	∅ - external	∅ - internal
For compressed air supply	8 mm	6 mm
For control air	6 mm	4 mm
For position feedback	4 mm	2 mm

1.4 Dimensions

Dimensions		
	Plastic	Stainless steel
Width	300 mm	300 mm
Height	400 mm	400 mm
Depth	250 mm	250 mm

1.5 Environmental conditions

Temperature		
Ambient temperature	0…55 °C	
Transport and storage temperature	-10…60 °C	
Environment		
Relative humidity	10… 95 %	Non-condensing

Protection class		
Housing with switches and LEDs	IP 54	With guard door closed
Housing with display	IP 54	With guard door closed

1.6 Connection values

Electrical connection values		
Voltage supply	24 V DC	30 VA
Input for external contacts	24 V DC	Self-supply for floating contact
Maximum current consumption	1.6 A	
Output for external relay, Cleaning pump I, II and III	24 V DC	Max. 250 mA
Output for status and alarm contacts	24 V DC	Max. 100 mA

1.7 Cleaning valves (optional)

Compressed air	
	» According to ISO8573-1:2010 [5:4:4] » Filtered, 40 µm, water and oil-free » 6 bar » No continuous air consumption

1.8 Identification plate

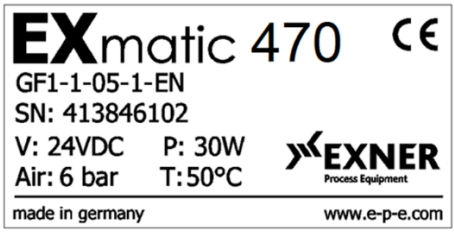


Fig. 1: Identification plate

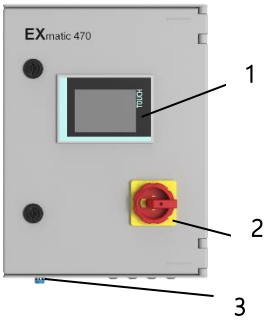
The identification plate is located on the inside of the cabinet door!

In case of queries, please contact your retailer directly!

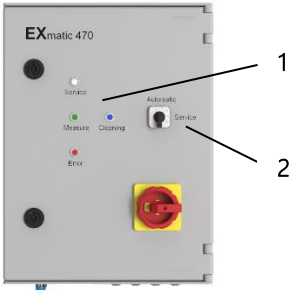
2 Product description

2.1 EXmatic 470 electro-pneumatic control unit

External view

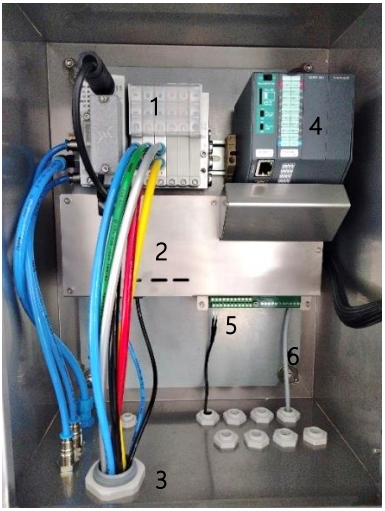


1	Control panel
2	Main switch
3	Compressed air connection

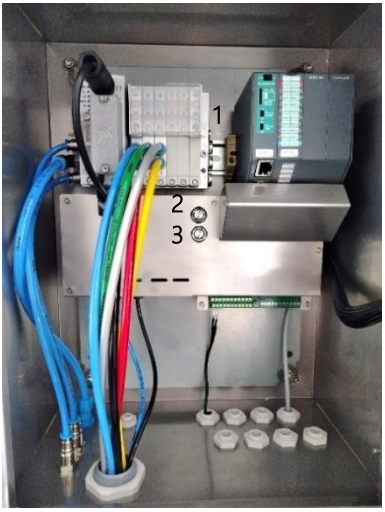


1	Status or position indicator via LED
2	Automatic/service switch

Fig. 2: Probe housing control unit from the outside (with or without a display)



1	Valve manifold
2	Pressure switch
3	Multi-connection hose inlet
4	Control unit (PLC)
5	Connection terminals
6	PE connection



1	Assembly space for WLAN module
2	Push button (engages) for WLAN module activation/deactivation
3	Push button (feels) start/stop for the cleaning programme

Fig. 3: Control unit from the inside (with/without display)

Function

The probe housing control unit EXMATIC 470 enables fully automatic control and monitoring of measuring and cleaning cycles of pneumatic retractable probe housing. Cleaning

times, measuring intervals and start times can be parameterised and adjusted to individual requirements.

Input

The control unit monitors the respective position feedback from the retractable probe housing via integrated inputs.

Automatic cleaning can be started via an additional input.

Output

The respective status of the retractable housing and the control unit can be transmitted to a superordinate process control system via four contact outputs.

Retractable probe housing

The retractable probe housing and cleaning valves for control of the cleaning solution are connected to the probe housing control system via pneumatic hoses. This should be realised via the dedicated EXconnect multi-connection hose.

2.2 Process integration

The EXmatic 470 probe housing control unit is supplied with 24V DC and compressed air with a pressure of 6 bar. Connection to the retractable probe housing and the cleaning and drain valves is realised via pneumatic hoses which are bundled in a multi-connection hose.

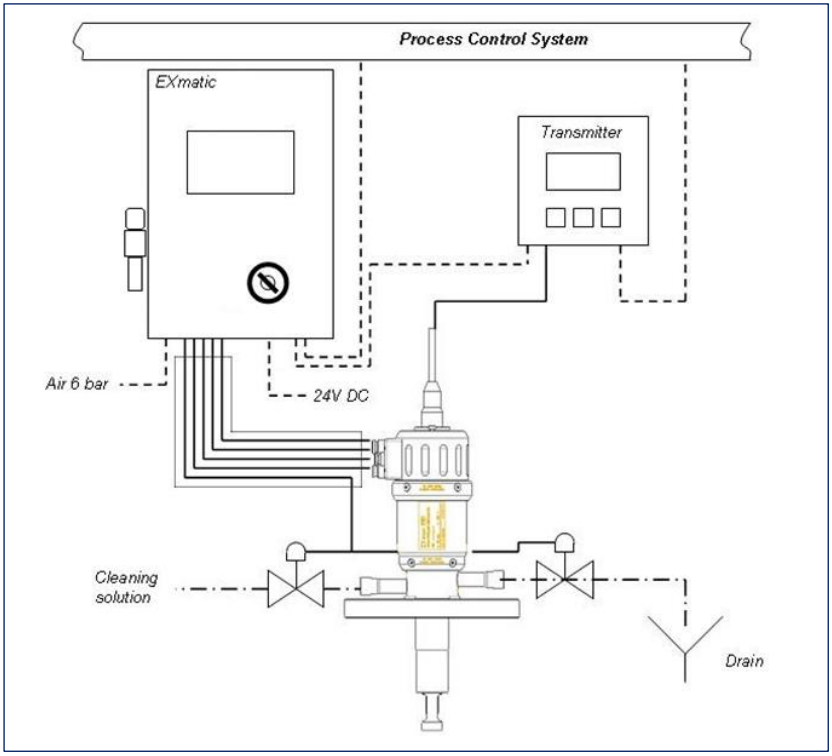


Fig. 4: Process flow

The respective status of the measuring unit (alarm status, measuring status, cleaning status or position service) can be reported via contacts to a superordinate process control system.

Cleaning cycles can be started via an external contact, e.g. from the pH transmitter.

The EXmatic 470 probe housing control unit is fully independent and can be operated from a transmitter or process control system without any connection.

The probe housing control unit features a manual as well as an automatic mode. In manual mode, motion of the retractable probe housing and the individual cleaning valves can be controlled manually. The probe housing control unit without a display provides this function only if the "RemoteStage" software described is used.

In automatic mode, a parameterised cleaning process runs after a cleaning cycle is started. After its completion, the retractable probe housing moves to "Measuring" position.

3 EXmatic 470 order structure

	Code	Housing				
	GF0	Plastic (GRP) without a display				
	GF1	Plastic (GRP) with a display				
	SS0	Stainless steel without a display				
	SS1	Stainless steel with a display				
	XXX	Special version				
		Code	Cleaning			
		1	For one cleaning solution			
		2	For two cleaning solutions			
		3	For three cleaning solutions			
		X	Special version			
			Code	Multi-connection hose length		
			00	Without multi-connection hose		
			03	3 metres		
			05	5 metres		
			10	10 metres		
			XX	Special version		
				Code	Compressed air maintenance unit	
				0	Without	
				1	With an integrated maintenance unit	
				X	Special version	
					Code	Interface
					EN	Without
					XX	Special version
EXmatic 470						Order code

4 Spare parts and accessories

Spare parts		
EXmatic 470	Spare parts	Order number
	Diaphragm valve PTFE/EPDM DN12 PN6 for cleaning solution	2-095-70-001
	Pilot control valve 5/2-way monostable, 24 V DC	2-091-10-003
	Pilot control valve 2x3/2-way NC, 24 V DC	2-091-10-004
	Pressure switch 0-10 bar Ø 4 mm PNP	2-096-00-002

Accessories		
Control cabinet	Accessories	Order number
	Wall mounting, plastic control cabinet	2-083-73-001
	Wall mounting, stainless steel control cabinet	2-083-73-002
	Pole mounting (plastic/stainless steel)	2-083-70-003
Diaphragm valves	Accessories	Order number
PVDF/EPDM G 3/8", DN12, PN6, NC	Cleaning valve set for one cleaning valve and one drain valve	2-095-70-002
	Cleaning valve set for two cleaning valves and one drain valve	2-095-70-003
	Cleaning valve set for three cleaning valves and one drain valve	2-095-70-004
Maintenance unit	Accessories	Order number
	Compressed air maintenance unit	2-078-73-001

NOTE

When ordering spare parts and accessories, please specify the serial number of your unit.

5 Certificates and compliance

EU-Declaration of conformity

for

Control unit EXmatic470

We declare under our sole responsibility that the product, to which this declaration relates, is in conformity with the following standards and the normative documents:

EU- Directive	harmonized standards
EMC-Directive 2014/30/EU	EN 61000-6-2:2005
Module A	EN 61000-6-4:2007

This declaration applies to all identical specimens of the product, which are manufactured according to the development-, design- and manufacturing drawings and descriptions, which are part of this declaration.

This declaration is given by the manufacturer.

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