Level | Pressure | Flow | Temperature | Liquid Analysis | Registration | Systems Components | Services | Solutions

Technical Information

Fieldgate FXA320, FXA520

Gateway for remote monitoring of 4...20 mA and HART measuring devices





Application

Fieldgates enable remote monitoring of 4...20 mA and HART measuring devices via telephone lines (analogue), Ethernet TCP/IP or mobile communications (GSM). Measured data are web compatible (HTTP, HTML, WML) and can thus be analysed in a web browser without the need for additional software.

In the case of HART devices, remote diagnosis and remote configuration is also possible.

Thanks to integrated time control, Fieldgates are suitable for all applications in which remote measuring points have to be sporadically analysed. Configurable monitoring of limit values with alarm signalling via e-mail or SMS make it possible to react directly to changes on-site.

Data transfer in XML format allows for simple further analysis and processing of the measured data, through to integration into complex planning systems.

Your benefits

- Communication via modem, Ethernet or GSM/GPRS
- Uses standard Internet protocols (TCP/IP, http)
- Simple configuration with web browsers without additional software
- Visualisation via Internet/Intranet in the web browser and/or WAP mobile phone
- Limit value monitoring with alarm signalling via e-mail or SMS
- Synchronised time stamping of all measured values
- XML data transfer allows for simple further processing of the measured data

FXA320

- Two 4...20 mA current inputs with integrated loop power supply
- Selectable active/passive current input (for 2-wire and 4-wire devices)
- Optionally, four binary inputs with event counter function and frequency measurement

FXA520

- Remote monitoring of up to 30 measured values
- Up to 4 measured values can be displayed per device (HART)
- Intrinsically safe version [EEx ia] IIC for applications in hazardous areas
- Remote diagnosis and remote configuration of connected HART devices
- Applicable in 4...20 mA SIL 2 Loops (IEC 61508)

TI00025S/00/EN/16.15

Endress+Hauser

People for Process Automation

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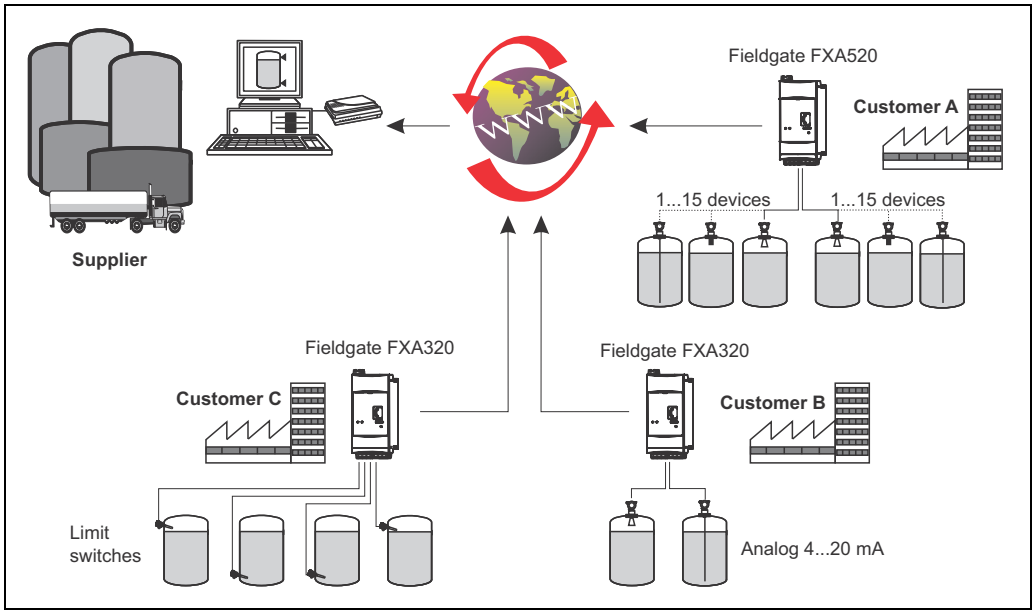
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Applications

Vendor Managed Inventory

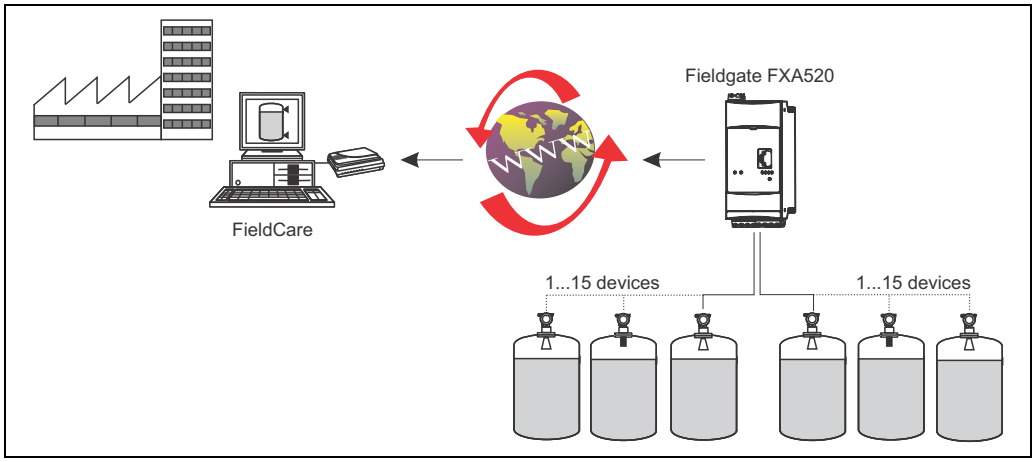
By using Fieldgates to remotely acquire tank or silo levels, suppliers of raw materials can provide their regular customers with information about the current supplies at any time and, for example, consider them in their own production planning. For their part, Fieldgates monitor the configured level limits and, if required, automatically initiate the next delivery. The spectrum of options ranges from a simple purchasing requisition via e-mail to fully automatic order administration by coupling XML data into the planning systems of both customer and supplier.



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Remote maintenance of measuring equipment (FXA520 only)

Fieldgates transfer not only current measured values, but when necessary also provide alerts to standby personnel via e-mail or SMS. In the event of an alarm or also when performing routine checks, service technicians can diagnose and configure connected HART devices remotely. All that is required is the corresponding HART operating software, e.g. FieldCare, for the connected device and the CommDTM for the FXA520. Fieldgate passes on the information transparently, so that all options for the operating software are available remotely. Some on-site service operations can be avoided by using remote diagnosis and remote configuration and all others can at least be better planned and prepared.



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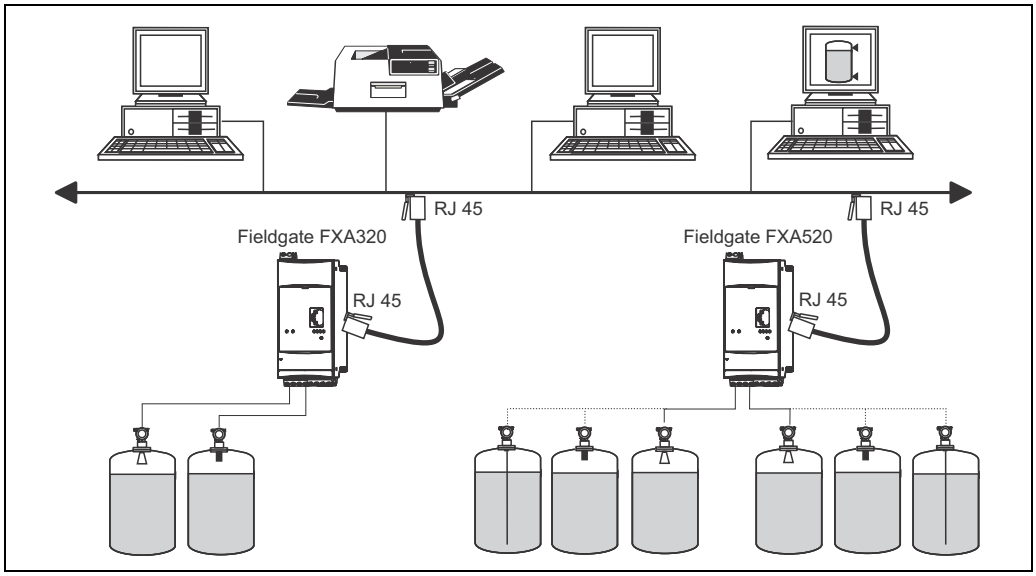
Communication interface

Internet connection

If Fieldgate dials into the Internet permanently via an Internet Service Provider, it is also possible for several users to access the Fieldgate simultaneously when using an analogue/GSM version. The other advantage is that the user does not require a modem as a receiver at the work place.

Ethernet

The 10 Base T Ethernet interface with RJ45 plug-in connection can be connected to the local network using a hub or switch. A standard network cable is used for this. In Ethernet operation, you always have access to the Fieldgate with a standard web browser, since the device is constantly available in the network. Several PCs can access the Fieldgate simultaneously.

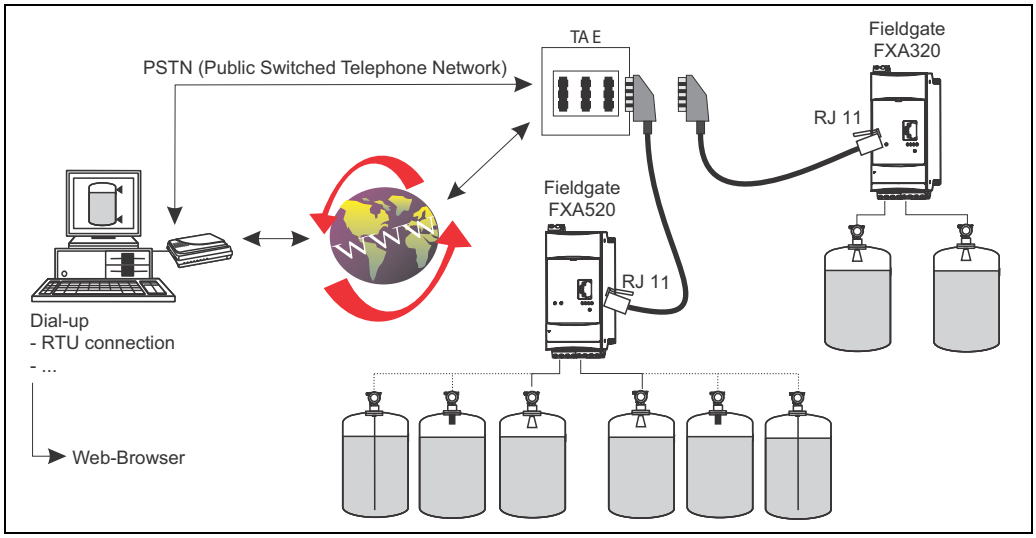


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Telephone network (analogue)

Fieldgate is connected to the available telephone network via an RJ11 (PSTN) plug connector. This form of communication is always a point-to-point connection and only one PC can communicate with the device at any one time. In this configuration, the Fieldgate has to be selected before each access, so that it is ready for online operation. For example, the Windows internal telecommunications network can be used for dialling. After this, the Fieldgate can be accessed with a standard web browser (e.g. Internet Provider).

Fieldgate is also capable of dialling itself into a central server, e.g. in order to deliver periodic measured values. Here, it is also possible to transfer the measured values via the Internet using an Internet Service Provider.

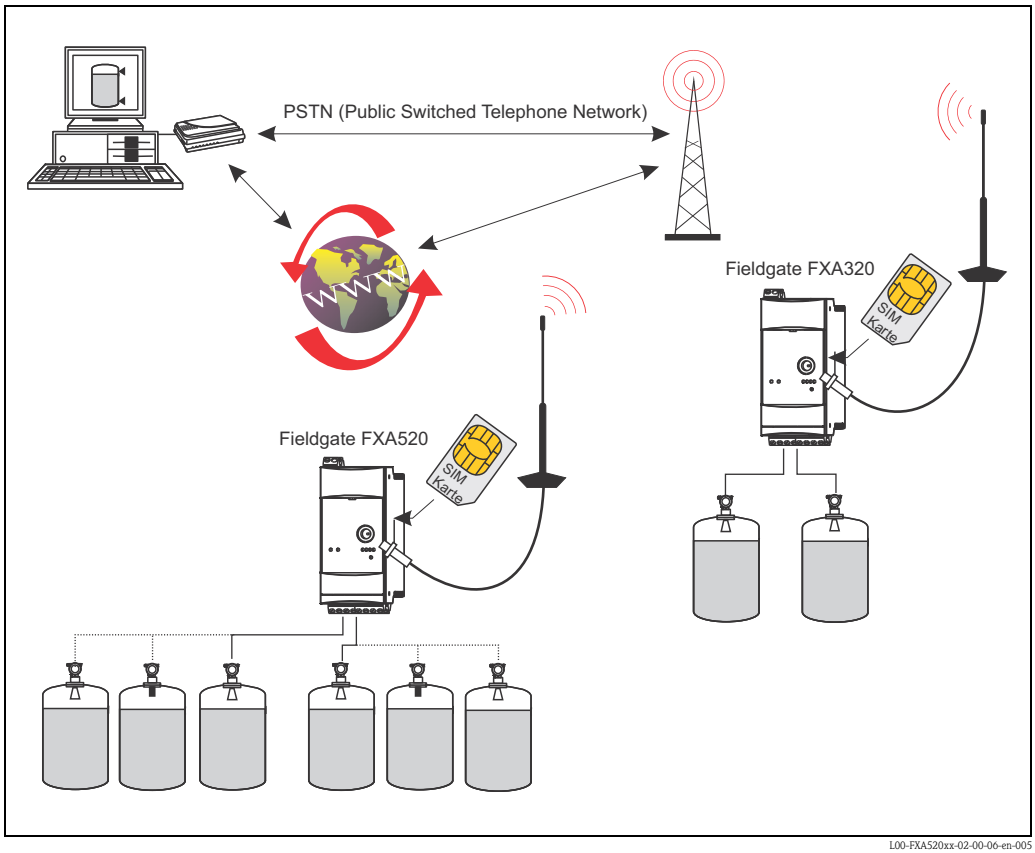


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Mobile communications network (GSM)

If there is no Ethernet or telephone network available in Fieldgate's operating location, the data can also be transferred via GSM using a mobile communications network.

GSM versions can be configured as point-to-point connections or to be freely accessible via the Internet/ Intranet. A SIM card from a mobile communications network operator is required for GSM operation. Communication takes place via the data channel of the SIM card, which may require additional activation, depending on the GSM provider.



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GPRS support

GPRS (General Packet Radio Services) is a mobile communications technique, which exploits the advantages of packet-oriented data transmission and channel bundling. In contrast to normal GSM connections, no complete channel is reserved for the duration of the connection between the mobile device and the basis station, rather the data are compiled into packets, which can be sent depending on requirement and capacity. Data transmission in packets enables not only greater transmission rates but also "always-on-operation". The Fieldgate is thus permanently in a position to connect to the Internet, an Intranet or a mailbox, whereby data are only transferred as required, e.g. if a new e-mail is sent or a new Internet page is called up. In this case, you are only charged for the amount of data actually transmitted and not for connection time.

The GPRS mode of the Fieldgate GSM thus offers the easiest and most cost-effective option for connecting a measuring point permanently to the Internet or an Intranet. Thanks to always-on-operation, the WAP functions of the Fieldgate can also be used easily and cost-effectively.

To use the available GPRS functions, the GSM/GPRS provider will need to allocate a public IP address. It will be necessary to determine in each individual case, whether this additional service is offered by the respective operator.

Function and system design

IT-Security

We only provide a warranty if the device is installed and used as described in theOperating Instructions. The device is equipped with security mechanisms to protect itagainst any inadvertent changes to the device settings.

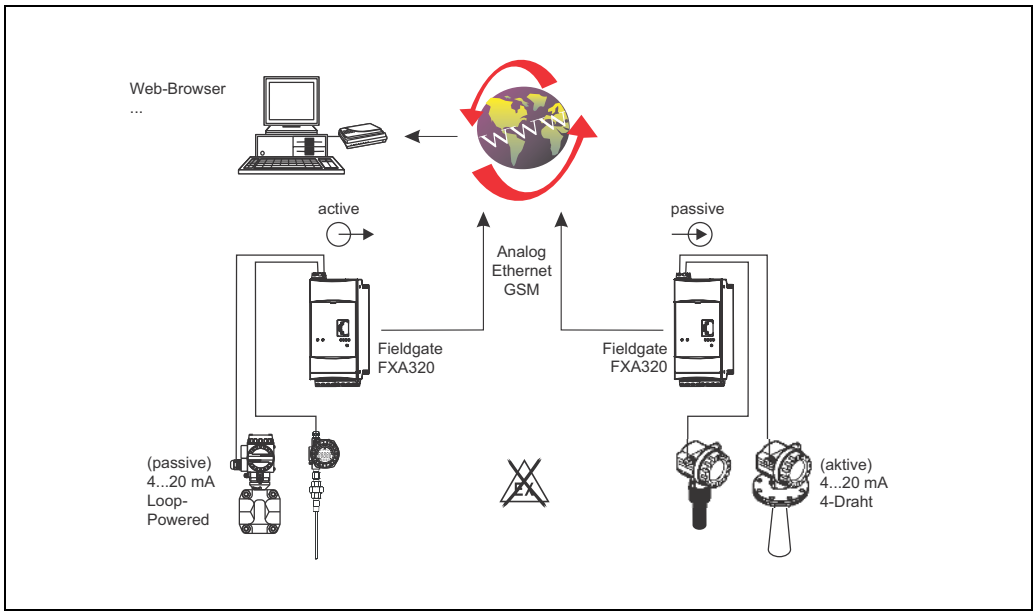
IT security measures in line with operators' security standards and designed to provideadditional protection for the device and device data transfer must be implemented by theoperators themselves.

Endress+Hauser can be contacted to provide support in performing this task.

Measuring system

Configuration with analogue input 4...20 mA (FXA320 only)

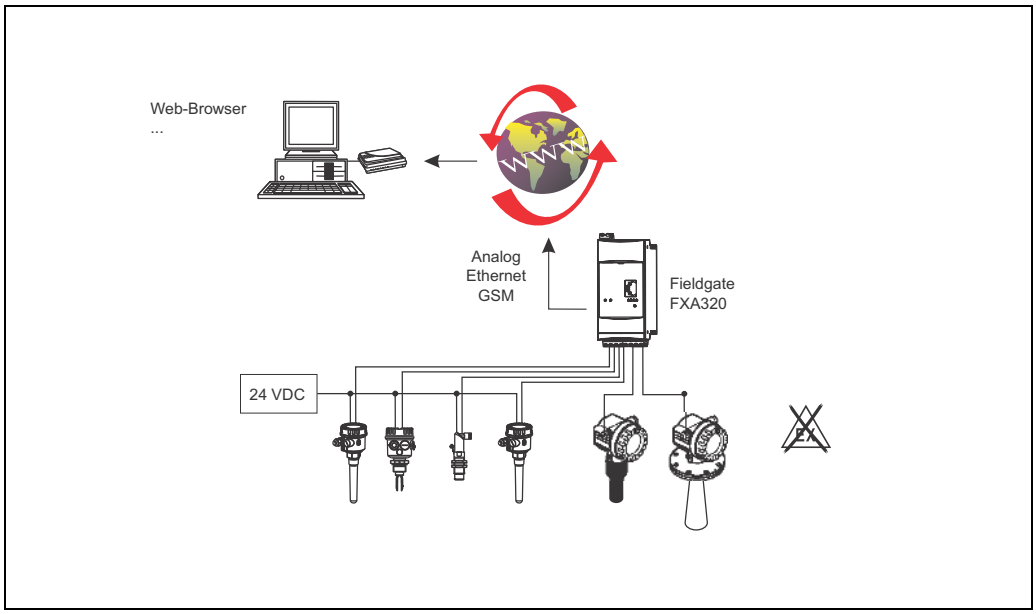
- Two devices can be connected directly.
- Selectable active/passive current input.



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Configuration with binary input (FXA320 only)

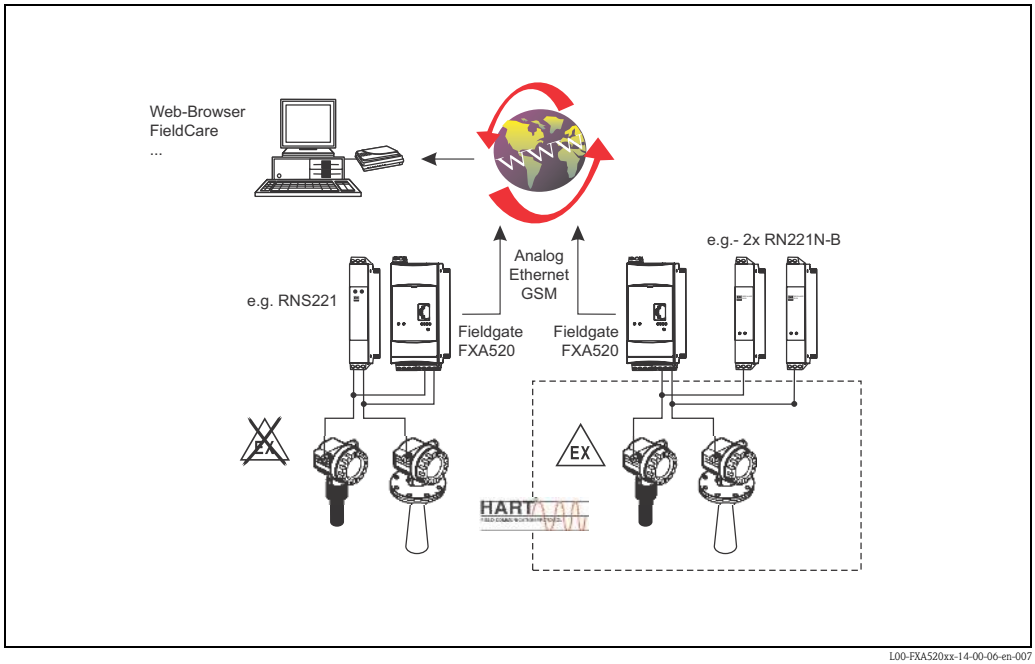
- Four binary inputs with event counter function and frequency measurement.
- Two 4...20 mA current inputs.



L00-FXA320xx-14-00-06-en-002

HART - Point-to-Point configuration (FXA520 only)

- Two devices can be connected directly
- Can also be used in hazardous areas
- Qualified for 4...20 mA SIL 2 Loops (IEC 61508)
- Subsequent connection to available installation possible
- A HART communication resistor is already integrated into the device

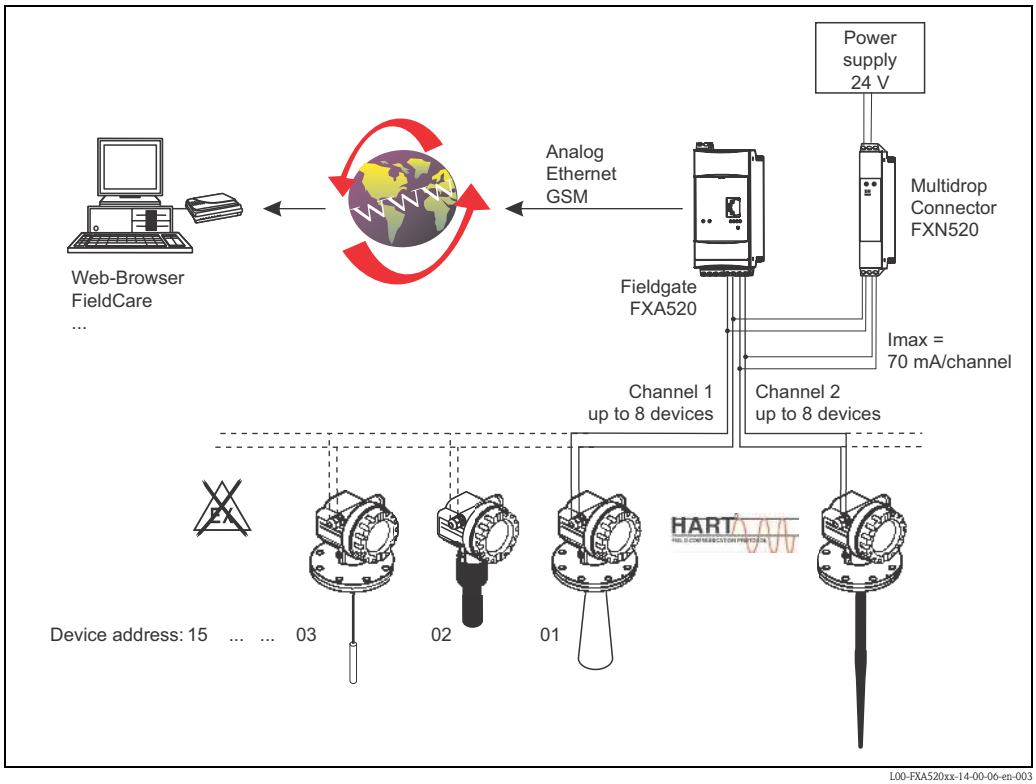


L00-FXA520xx-14-00-06-en-007

HART Multidrop configuration (FXA520 only)

- Only HART communication possible, current signal is fixed to e.g. 4 mA
- Up to 16 devices (2 x 8) can be connected
- When the maximum number of devices are connected, observe the following:
  - Minimum operating voltage of the connected devices,
  - Voltage drop at the communication resistor,
  - HART conformity multi-drop of the connected devices,
  - Current consumption of the connected devices
  - Output characteristics of the power supply unit
  - All connected devices must first be allocated their own HART polling address
- In order to control the start-up current, it is recommended that the FXN520 Multidrop Connector is used.

Note!
Detailed information on the Multidrop Connector can be found in TI400F/00/en.

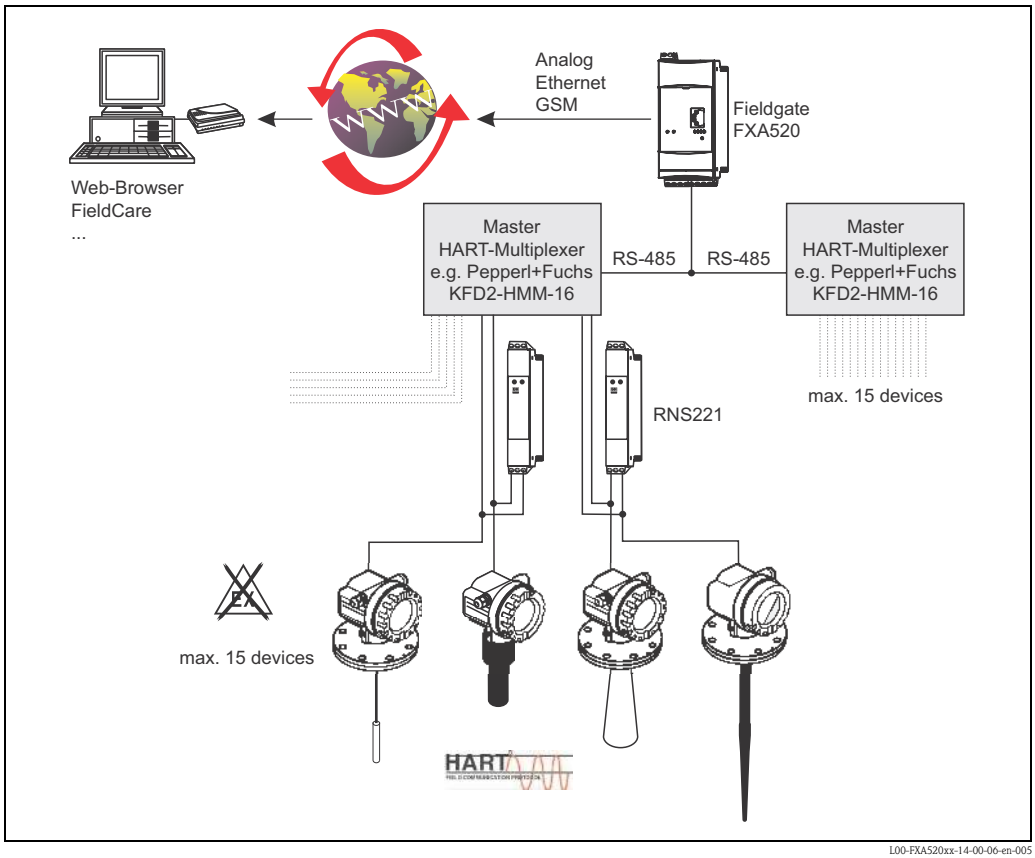


L00-FXA520xx-14-00-06-en-003

HART Multiplexer configuration (FXA520 only)

- Multiplexer, e.g. KFD2-HMM-16 from Pepperl+Fuchs
- Up to 30 devices (2 x 15) can be connected
- Subsequent connection to available installation possible

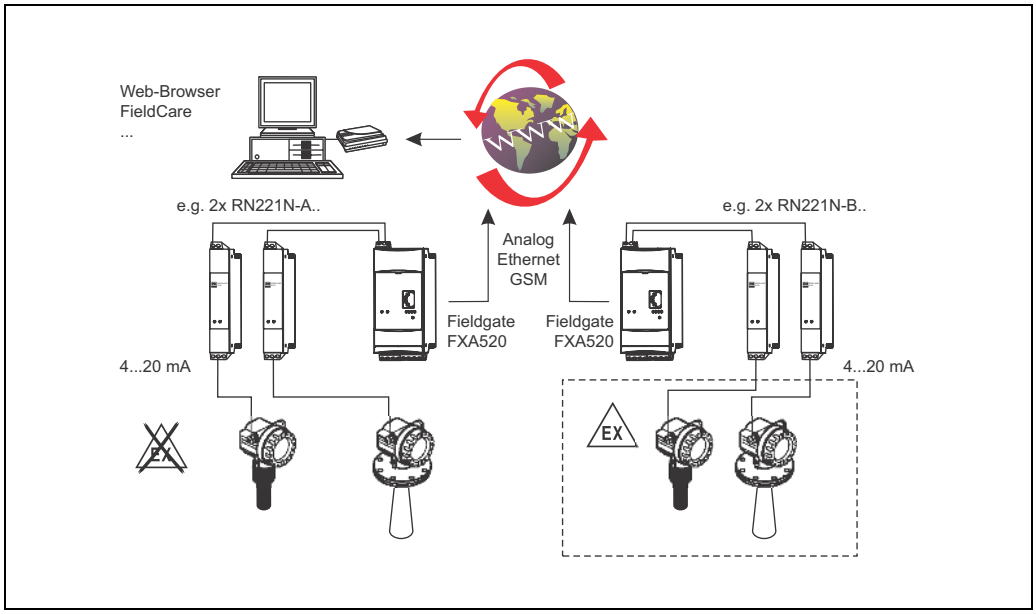
Note!
Detailed information on the multiplexer can be found in the operating instructions BA268F/00.



L00-FXA520xx-14-00-06-en-005

Configuration with analogue input 4...20 mA (FXA520 only)

- Two devices can be connected directly
- Can also be used in hazardous areas (e.g. RN221N)
- Subsequent connection to available installation possible

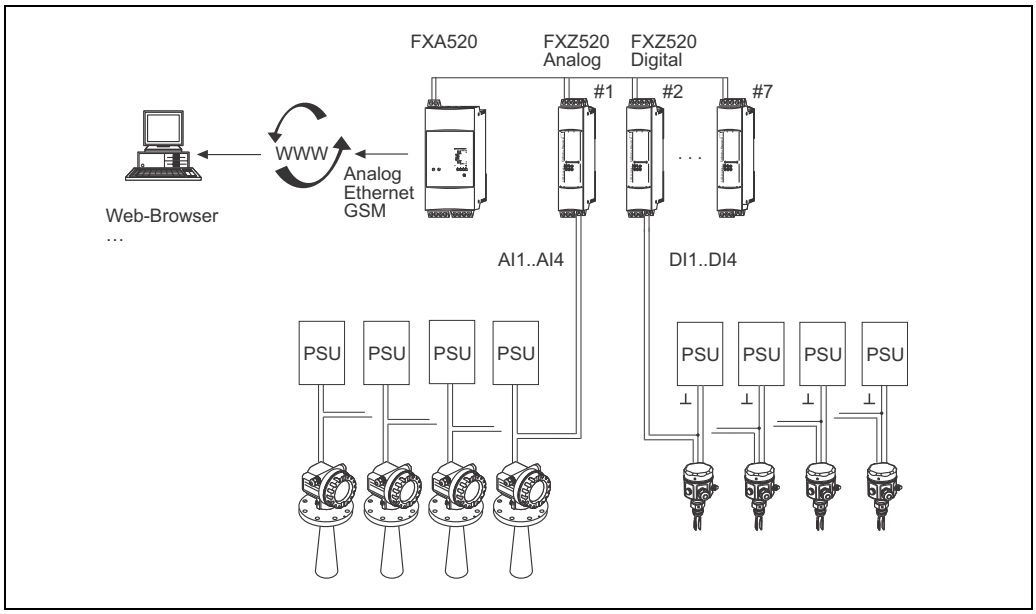


L00-FXA520xx-14-00-06-en-006

Configuration with Fieldgate Inputs FXZ520

- 4-channel extension modules for 4...20 mA and binary signals
- Up to 7 extension modules per FXA520
- Combinable with multiplexer or multidrop

Note
Detailed information on Fieldgate Input is to be found in TI023S/04/en.



BA051E312

Input

Analogue 4...20 mA inputs

FXA520

2 channels: joint ground of both channels, no galvanic isolation.

Channel 1&2 - passive	
Max. input voltage per channel	35 V
Max. input current per channel	45 mA
Input impedance	approx. 100 Ω
Accuracy	≤ 1 %
Voltage drop (incl. diode against reverse polarity)	≤ 3 V
Connection cable	Instrument cable, unscreened
Cable resistance	max. 25 Ω per core

FXA320

2 channels with galvanic isolation. Can be used independently as active or passive input.

Channel 1&2 - active	
Output voltage	15 V ±5% / (22 mA)
No-load voltage	23.5 V ±5%
Output current	max. 23 mA
Short-circuit current	max. 64 mA
Short-circuit duration	Unlimited
Accuracy	≤ 0.5 %
Connection cable	Instrument cable, unscreened
Cable resistance	max. 25 Ω per core

Channel 1&2 - passive	
Max. input voltage per channel	35 V
Max. input current per channel	45 mA
Input impedance	254 Ω
Accuracy	≤ 0.5 %
Voltage drop (incl. diode against reverse polarity)	≤ 6.4 V
Connection cable	Instrument cable, unscreened
Cable resistance	max. 25 Ω per core

RS-485 interface (FXA520 only)

Galvanic isolation	500 V RMS
Termination resistor A-B	120 Ω fully integrated

HART channel 1&2 (FXA520 only)

The HART signal is capacitive coupled or decoupled via a communication resistor

Communication resistor in the 4...20 mA signal line	Integrated 270 Ω communication resistor, for optional use, max. 45 mA!
Short-circuit duration (without interrior communication resistor)	Unlimited

Galvanic isolation between HART channel 1 and channel 2
Ex-isolation between field devices and internal circuits.

Output voltage U0 in the event of a fault (Ex)	Max. 6.5 V
Max. current for EEx ia (Ex)	5.97 mA
Max. power output (Ex)	39 mW
Maximum input voltage (Ex)	30 V
Maximum input voltage (non-Ex)	45 V

Binary inputs (FXA320 only)

Galvanic isolation of all channels from the rest of the current circuits. Each 2 channels have the same reference potential.

Number of digital inputs	4
Input signal voltage	L-signal: -3 ... +5 V H-signal: +15 ... +30 V
Input current with H-signal	5 mA
Max. quiescent current with L-signal	1 mA
Measuring range of event counter function	0 ...12.5 kHz
Measuring range of frequency measurement	4.7 Hz (±1%) ... 12.5 kHz (±4%)

Output

Output signal

- A total of voltages of relay output and power supply lower than 300 V must be granted at installation.
- A relay for alarm in the event of a fault
- Switching-off the sensor's power supply (in the event of a fault, power-save mode)
- Switching capacity of relay contacts:
  U~ maximum 253 V
  I~ maximum 2 A
  P~ maximum 500 VA at cos φ 0.7
  U- maximum 40 V
  I- maximum 2 A
  P- maximum 80 W

Overvoltage category as per EN 61010

II

Protection class

II (double or reinforced insulation)

Power supply

Electrical connection

Remove power from installation during device installationor any other maintenance purposes.

Terminal blocks

The terminal blocks are removable. The (intrinsically safe) 4...20 mA or HART devices are connected to the blocks at the top of the Fieldgate, all other non-intrinsically safe connections are made to those at the bottom. The terminal blocks are colour coded to ensure safe cable routing: blue for the intrinsically safe area and grey for the non-intrinsically safe area.

Connecting HART devices (FXA520 only)

Standard two-core instrument cable or two cores in a multi-core measuring cable can be used to connect HART devices to the Fieldgate FXA520. If strong electromagnetic interference is to be expected, e.g. from machines or radios, a STP cable is recommended. Connect the screening to the ground connection in the device only. As the Fieldgate HART inputs are passive, the connected devices must be powered externally.

Operating the device in hazardous areas (FXA520 only)

National explosion protection directives for designing and routing the intrinsically safe signal cable must be observed. Maximum permitted values for capacity and inductivity can be found in the Safety Instructions XA00188F.

Connecting the supply voltage

Fieldgate has reverse polarity protection. The supply voltage is connected to Terminals 1 and 2, for allowable voltages see below. For mains supplied device, the user must install an external 1 A slow-blow fuse in the power line. The fuse must be designed for min. 250 V an be approved for the application in question.

Supply voltage

Alternating current version (AC):

Voltage range: 85...253 V, 50/60 Hz
Safe galvanic isolation between mains power supply and internal circuits

Direct current version (DC):

Voltage range: 20...60 VDCor 20 ... 30 V_{AC}
Reverse polarity protection guaranteed by bridge rectifier
Safe galvanic isolation between mains power supply and internal circuits

Power consumption

FXA520		**AC (at 253 V_{AC})**	**DC (at 20 V_{DC})**
Analog		6 VA	2 W
Ethernet		4.9 VA	1.5 W
GSM	Send mode	8 VA	4 W
	Standby	4.5 VA	1 W

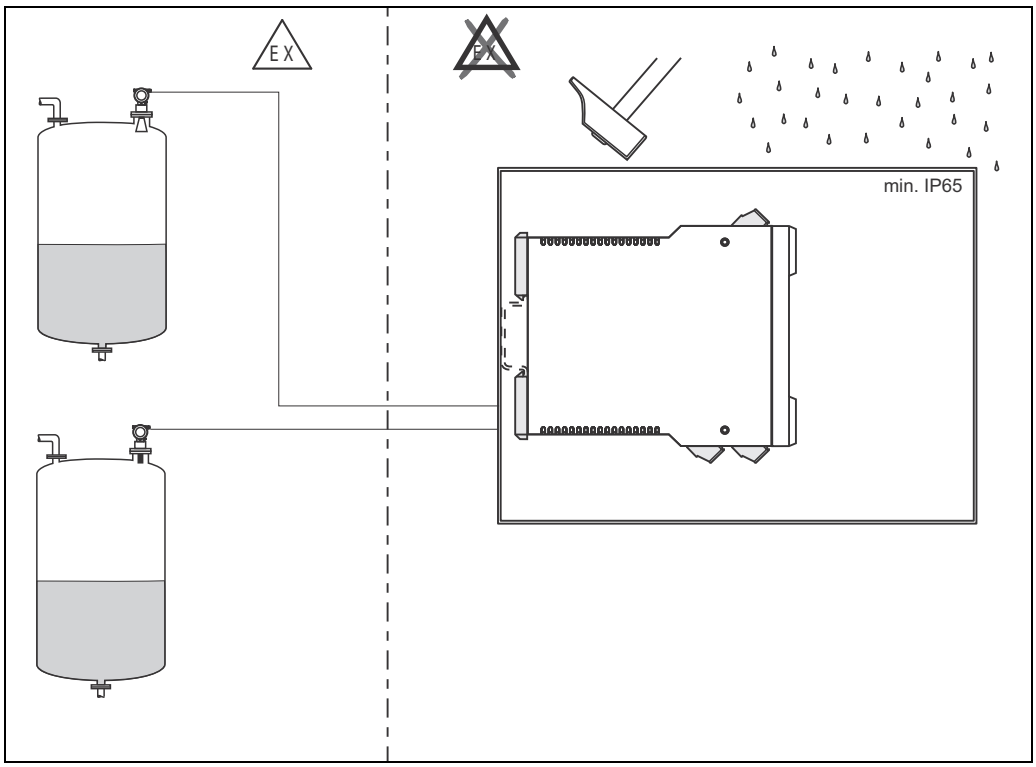
FXA320		**AC (at 253 V_{AC})**	**DC (at 20 V_{DC})**	**Solar (at 10 V_{DC})**
Analog		8 VA	3.5 W	—
Ethernet		8 VA	3.5 W	—
GSM	Send mode	8 VA	4.8 W	4.6 W
	Standby	6 VA	2.9 W	2.8 W

Operating conditions: Installation

Installation instructions

Mounting location

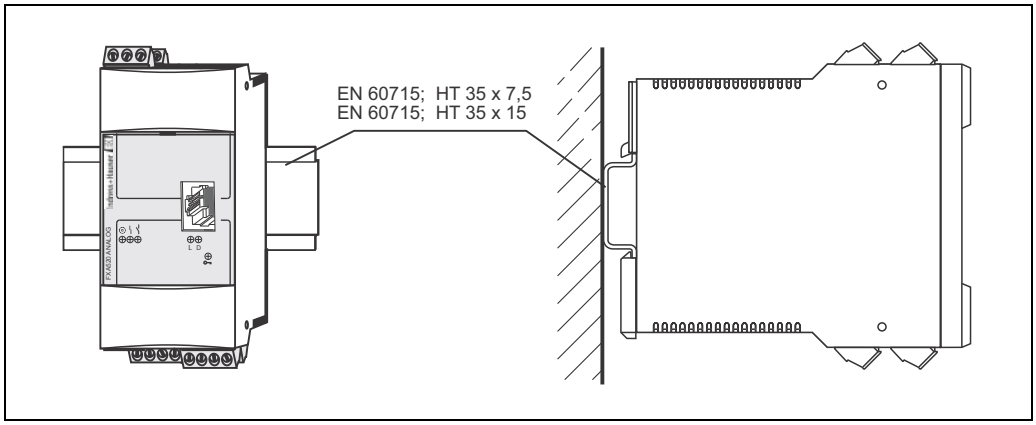
The Fieldgate must be mounted in a cabinet outside of any explosion hazardous area. For outdoor installation, a protective housing (IP65) must be used .



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Orientation

Mount Fieldgate vertically on DIN top-hat rail (HT 35 as per EN 60715).



L00-FXA520xx-17-00-06-de-001

Operating conditions: Environment

Mounting location

Cabinet or protective housing

Permitted ambient temperatures

For individual mounting

-20 C... +60 C

For series mounting without lateral spacing

-20 C... +50 C

Storage temperature

-25 C... +85 C (preferably at +20 C)

Installation in protective housing

-20 C... +40 C
Maximum two Fieldgates can be installed into a protective housing.

Caution!
The devices must be mounted such that they are protected from the weather and from impacts, and where possible in places that are not exposed to direct sunlight. This must be especially observed in regions with warm climates.

Climatic and mechanic application class

3K3

In accordance with DIN EN 60721-3-3

3M2

In accordance with DIN EN 60721-3-3

Ingress protection

IP 20, in accordance with EN 60529

Electromagnetic compatibility (EMC)

to EN 61326 series:
Interference emission: Electrical Equipment Class B
Interference immunity: as per EN 61326-1, Table 1

Application in protection functions

The FXA 520 can be attached back effect freely to protection functions that are classified in SIL 2 to IEC 61508.

SFF[1]	60%

1) SFF = Safe Failure Fraction

TI[1]	**PFD_{avg}**[2]
1 year	$1{,}23 \times 10^{-6}$
5 years	$6{,}13 \times 10^{-6}$
10 years	$1{,}23 \times 10^{-5}$

1) TI = Test Interval between life testing of the protection function (in years)

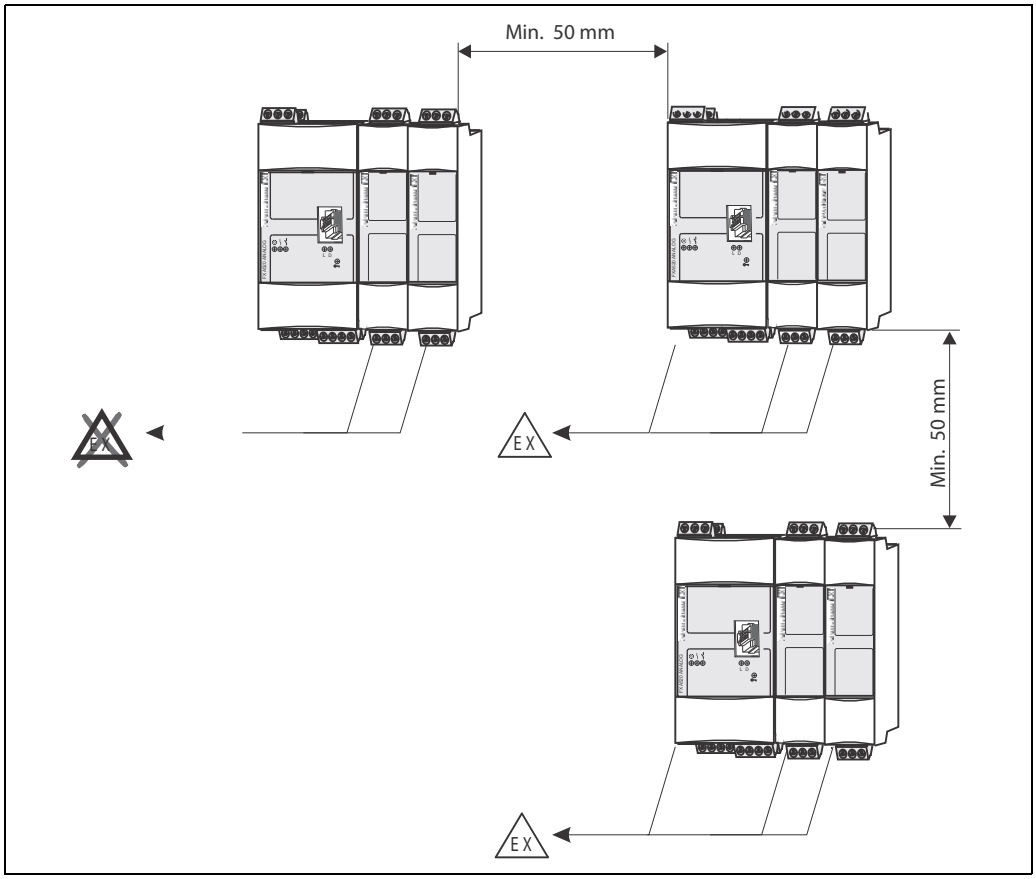
2) PFD_{avg} = Probability (average) of a dangerous Failure on Demand

Mechanical construction

Design, dimensions

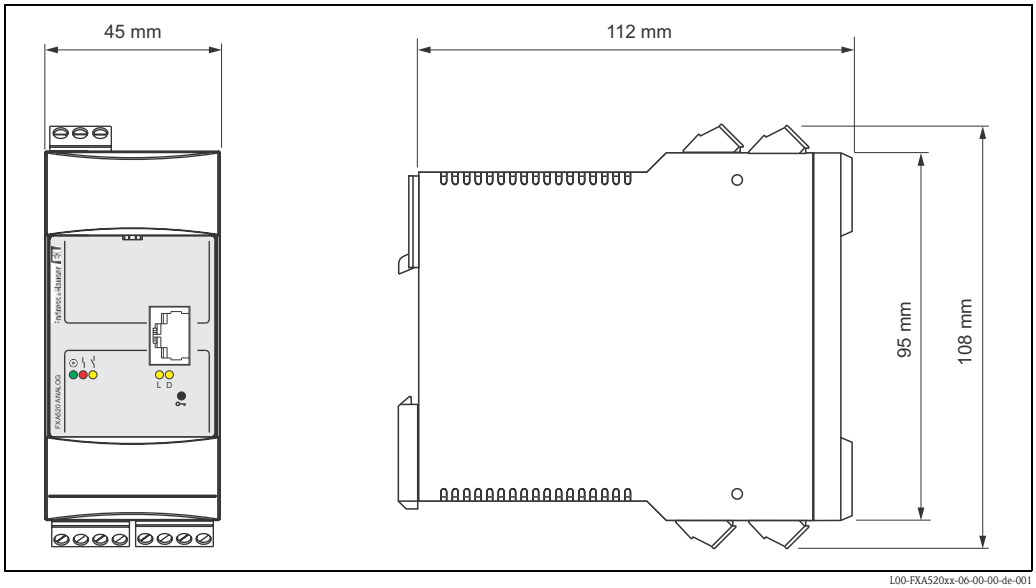
Note!
100 mm = 3.94 in

- Housing: aligned housing (top-hat rail design) made of plastic
- Installation: on top-hat rail as per EN 60715; HT 35x7.5 or EN 60715; HT 35x15
- Degree of protection IP20 as per EN 60529 / IK06 according to IEC 62262



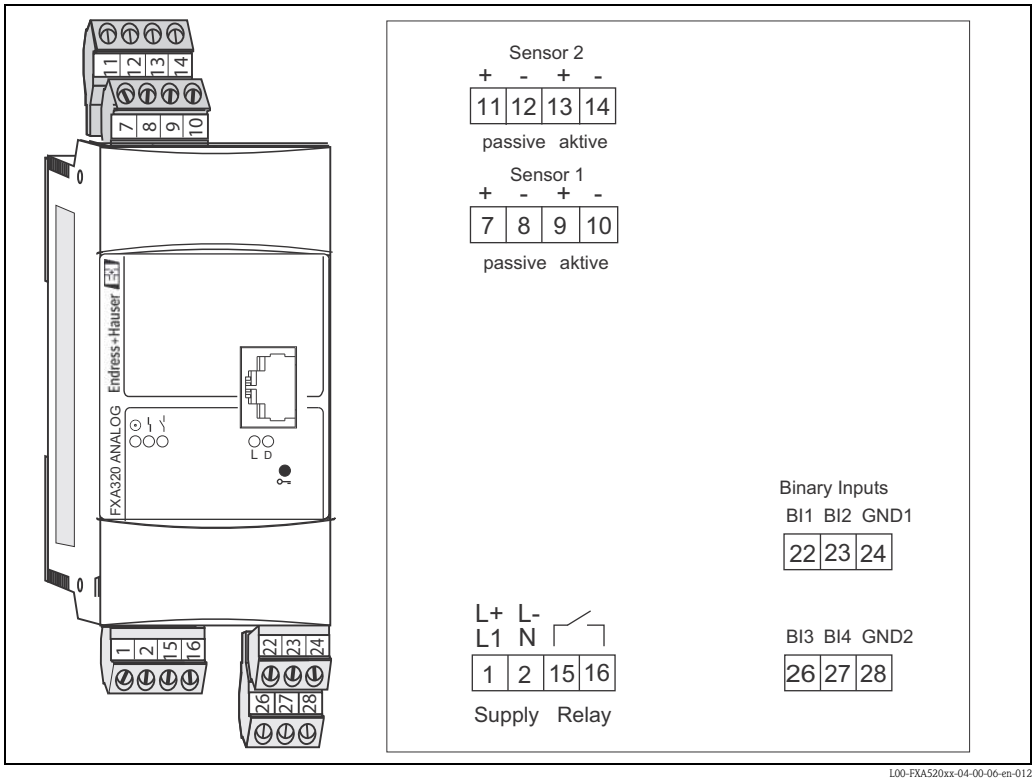
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Dimensions



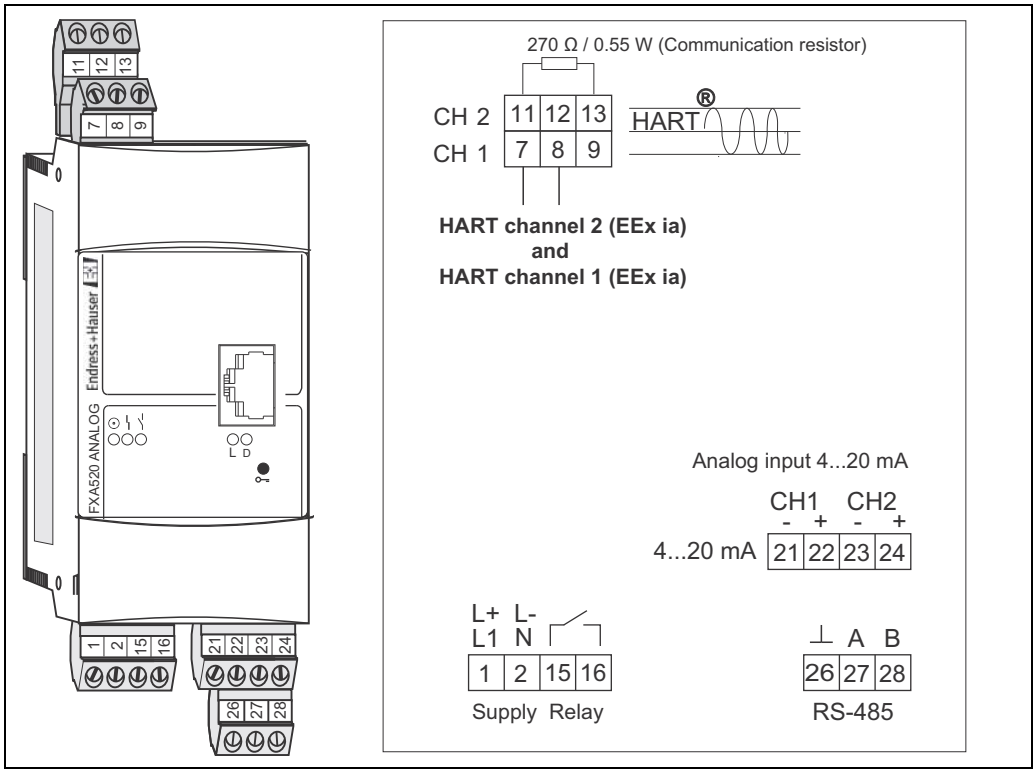
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Weight	approx. 250 g
Materials	**Housing** Polycarbonate Colour: light grey, RAL 7035 **Front cover** Polyamide PA6 Colour: blue **Fixing slide (for fastening on the top-hat rail)** Polyamide PA6 Colour: black, RAL 9005
Terminals	**Connection cross-section** maximum 1 x 2.5 mm or 2 x 1.5 mm **Terminal assignment Fieldgate FXA320**



L00-FXA520xx-04-00-06-en-012

Terminal assignment Fieldgate FXA520



Plug-in connections

Connection socket for Ethernet Fieldgate versions:

RJ45 socket

Connection socket for GSM antenna:

FME socket (male)

Connection plug for DAT module:

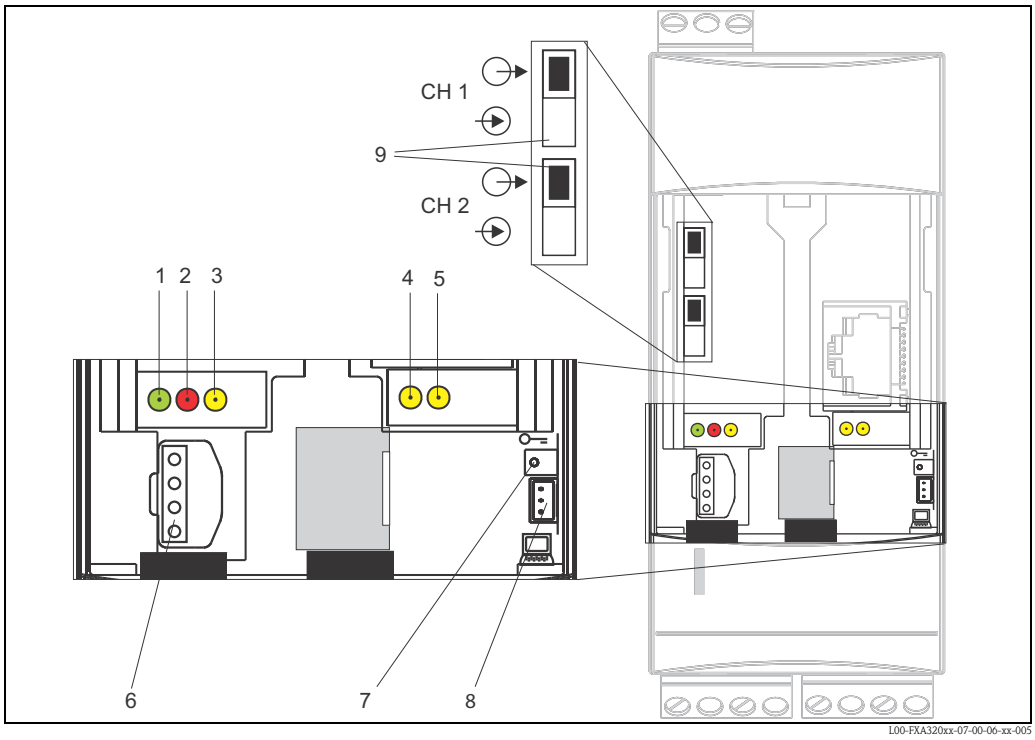
8-pin plug connector in 2.54 mm raster, 2 rows

Connection plug for PC cable:

3-pin plug connector in 2.54 mm raster, 1 row

Human interface

Display elements



Position	Light emitting diode (LED)	Meaning
1	Green LED constant	Displays the correct power supply
2	Red LED constant	Displays a fault
	Red LED flashes	Displays a warning / On site communication via PC / Hardware is unlocked / system start
3	Yellow LED	Switching status of the built-in relay / LED on = relay tightens – LED off = relay de-energised – LED on = relay energised
4	Yellow LED continuously	Displays a successful connection
5	Yellow LED blinks	Displays a transfer activity / GSM version: field strength display if no connection

Operating elements

For the arrangement of the elements, see the diagram above.

Position	Element	Meaning
6	Socket	Connection socket for DAT module
7	Button	Button for hardware security locking and configuration reset
8	Socket	Connection socket for PC cable (service connector)

FXA320 only

Position	Element		Current input channel 1 (CH1)		Current input channel 2 (CH2)	
9	Switch position (up)			aktive		aktive
	Switch position (down)			passive		passive

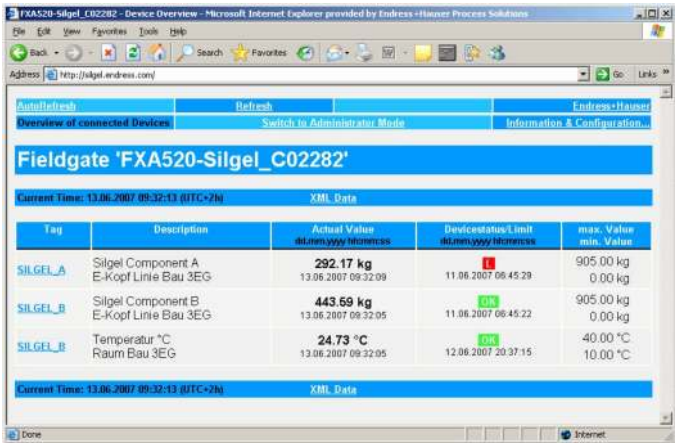
Integrierted web server

Fieldgate is configured via the integrated web server, which also allows the current measured values in a standard Web browser. The following are examples of web pages.

Detailed information on the web server is to be found in Operating Instructions BA00053SEN_1514_PV107xx for Fieldgate BA00051SEN_1514_PV107xx for Fieldgate FXA520.

Device overview

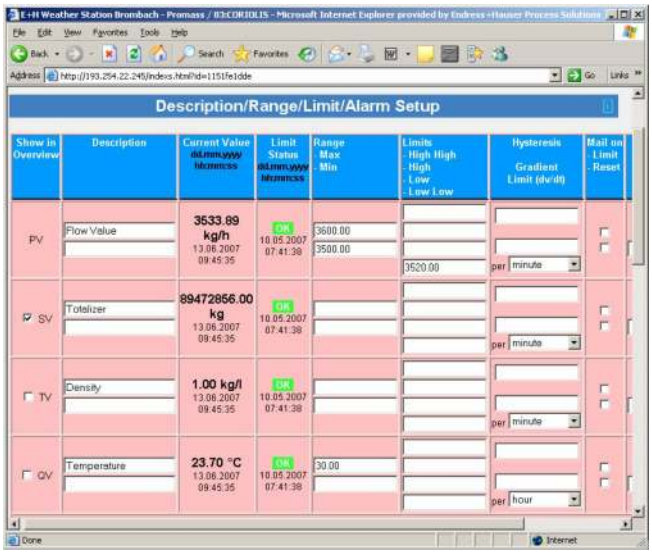
Up to 30 measured values can be viewed in the device overview page.



TI025D01

Limits and alarms

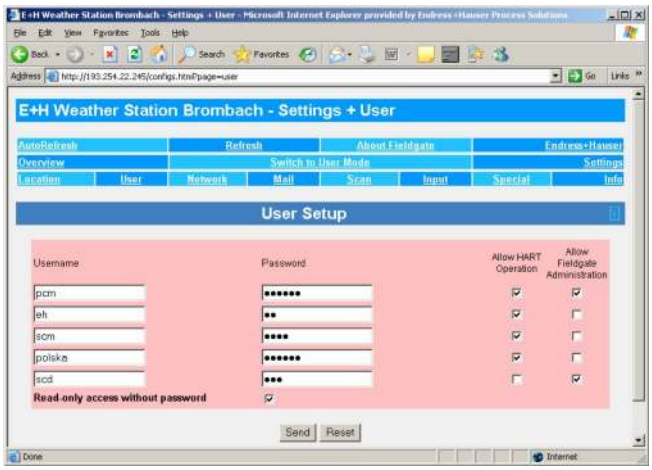
Depending upon the device type, up to four measured values can be read from a HART device. Fieldgate allows a description, measuring range, limit values and alarms to be set for each one.



TI025D02

User management

Up to five user accounts can be set up for each Fieldgate. In addition, Fieldgate offers many more configuration possibilities that allow it to be adapted to its network and system environment.



TI025D03

Certificates and approvals

CE mark

The Fieldgate meets the legal requirements of the EC directives.
Endress+Hauser confirms that the device has been successfully tested by applying the CE label.

Ex-approval

FXA520

see Ordering information

Explosion protection

FXA520

[EEx ia] IIC
Intrinsically safe circuits

Values for each circuit:
Voltage U_o = 6.5 V_{DC}
Current I_o = 6 mA
Power P_o = 9.8 mW

Max. external values in accordance with the following table:

Group	Capacitance C_o [µF]	Inductance L_o [mH]
IIC	25	1000
IIB	570	1000

If inductances and capacitances are concentrated the following values apply:

Group	Capacitance C_o [µF]	Inductance L_o [mH]
IIC	2 2 1.5	0.5 1 5
IIB	10 10 7	1 2 5

Other standards and guidelines

Other standards and guidelines that have been observed when designing and developing the Fieldgate.

EN 60529

Ingress protections for housing (IP code)

EN 61010

Safety requirements for electrical equipment for measurement, control and laboratory use

EN 61326

Interference emission (class B operating equipment), interference immunity (appendix A – industrial sector)

EN 60950 (IEC 950)

Safety of information technology equipment

Telecommunications Regulatory Compliance

Fieldgate analogue version

North America

FCC CFR 47, part 15 and part 68

Europe

Telecommunications Terminal Equipment Directive (99/5/EG)
European approval TBR 21

Fieldgate GSM version

North America
FCC CFR 47 Part 15 and Part 24

Federal Communications Commission Notice

This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
– Reorient or relocate the receiving antenna.
– Increase the separation between the equipment and receiver.
– Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

To ensure that the unit complies with current FCC regulations and safety requirements limiting both maximum RF output power and human exposure to radio frequency radiation, use an antennna with a maximum gain of 2dBi and a separation distance of at least 20 cm must be maintained between the unit's antenna and the body of the user and any nearby persons at all times and in all applications and uses.

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Endress+Hauser may void the user's authority to operate the equipment.

Federal Communications Commission Statement

FCC-ID: LCG-FG-FXA52X-32X
This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

Wireless Notices

In some situations or environments, the use of wireless devices may be restricted. Such restrictions may apply aboard airplanes, in vehicles, in hospitals, near explosives, in hazardous locations, etc. If you are uncertain of the policy that applies to the use of this device, please ask for authorization to use it prior to turning it on.

Ordering information

Fieldgate FXA320

10	Certificates
A	Version for non-hazardous areas
F	CSA, general purpose
Y	Special version

20	Power supply
A	Power supply 85...253 V_{AC}, 50/60 Hz
E	Power supply 20...60 V_{DC}, 20...30 V_{AC}
G	Solar panel connection 10...20 V_{DC}
Y	Special version

30	Modem interface
1	Ethernet
2	Analogue modem
4	GSM modem without antenna
9	Special version

40	DAT module
A	without DAT module
B	with DAT module
Y	Special version

50	Input
A	2-channel analogue (4...20 mA)
B	2-channel analogue (4...20 mA) + 4 binary

FXA320-						Complete product designation

Fieldgate FXA520

10	Certificates	
A	Version for non-hazardous areas	
G	ATEX II (1) GD	EEx ia IIC T6
P	FM	IS - Class I, II, III, Division 1, Group A-G
S	CSA	IS - Class I, II, III, Division 1, Group A-G
Y	Special version	

20	Power supply
A	Power supply 85...253 V_{AC}, 50/60 Hz
E	Power supply 20...60 V_{DC}, 20...30 V_{AC}
Y	Special version

30	Modem interface
1	Ethernet
2	Analogue modem
4	GSM modem without antenna
9	Special version

40	DAT module
A	without DAT module
B	with DAT module
Y	Special version

FXA520-					Complete product designation

Note!
A PC cable is included in the scope of supply of Fieldgate FXA320/520.

Accessories

Note!
The following table gives an overview of possible application for the individual accessory parts with the Fieldgate FXA320 or FXA520.

Accessory	Fieldgate FXA320	Fieldgate FXA520
DAT module	X	X
PC cable	X	X
Fieldgate OPC server	X	X
Java applets	X	X
Antenna (GSM version only)	is required	is required
HART Client (FXA520 only)	—	X
Multiplexer (FXA520 only)	—	X
E+H power supply units (FXA520 only)	—	X

DAT module

An external EEPROM, in which the configuration data is saved identically to the internal EEPROM, can be attached optionally via plug. For example, this allows for the FXA320/520 to be changed in the event of a defect, without losing the customer-specific configuration data.
Order number: 52013311.

PC cable

A PC can be connected to the FXA320/520 for configuration purposes via a serial RS 232 connection. The corresponding cable is included in the scope of delivery.
Order number: 52013984 (if necessary).

Antenna

Antenna for communication via mobile communications (GSM):
- Triband flat antenna (900/1800/1900 MHz).
  Order number: 52018396.
- Quadband rod antenna (800/900/1800/1900 MHz).
  Order number: 71059393.

HART Multiplexer (FXA520 only)

Accessories for HART Multiplexer system (from Pepperl+Fuchs):
- HART Multiplexer Master KFD2-HMM-16.
  Order number: 52017691.
- Master-interface connecting cable.
  Order number: 52017687.
- HART Multiplexer slave KFD0-HMS-16.
  Order number: 52020232.
- Master-slave connecting cable.
  Order number: 52020233.
- Interface module without communication resistor.
  Order number: 52017689.
- Interface module with communication resistor.
  Order number: 52017690.
- Switched-mode power supply.
  Order number: 52017688.

E+H Multidrop Connector FXN520 (FXA520 only)

Operated several devices in multi-drop operation for FXA520. Order number: 52023652.

Fieldgate Input module FXZ520 (FXA520 only)

Fieldgate Input Modules FXZ520 are used together with Fieldgate FXA520 for remote scanning of conventional 4...20 mA measuring instruments, binary switches and pulse transmitters. Each Fieldgate Input Module FXZ520 has four galvanically isolated channels of the same type. Up to seven FXZ520s can be operated with a Fieldgate FXA520. Together with the two integrated analog inputs of the Fieldgate itself, up to 30 conventional measuring points can be connected.

Product structure:

FXZ520 Fieldgate Input Module					
	Certificate				
	A	without			
	F	CSA General Purpose, CSA C US			
		Power Supply			
		A	85 to 253 VAC, 50/60 Hz		
		E	20 to 30 VAC, 20 to 60 VDC		
			Input Signal		
			A	4x 4...20 mA	
			D	4x digital	
FXZ520-					

E+H power supply units (FXA520 only)

RMA422

Multifunctional 1-2-channel top-hat rail device with intrinsically safe current inputs and transmitter power supply, limit value monitoring, mathematics functions and 1-2 analogue outputs.

RNS221

Power supply unit for supplying power to two two-wire sensors or transmitters in non-hazardous areas.

RN221N

Isolator with power supply for safely isolating 4...20 mA standard signal circuits.

RMA421

Multifunctional 1-channel top-hat rail device with universal input, transmitter power supply, limit value monitoring and analogue output.

Documentation

All documents are available as PDFs in the download area of www.endress.com.

Operating Instructions

- KA193FA6: Mounting and installation instructions for Fieldgate FXA520
- KA215FA6: Mounting and installation instructions for Fieldgate FXA320
- BA00051SEN_1514_PV107xx: Operating Instructions for Fieldgate FXA520
- BA00053SEN_1514_PV107xx : Operating Instructions for Fieldgate FXA320

Certificates

- XA00188FA3: Safety Instructions for electrical operating equipment for hazardous areas
- ZD86FEN: Control Drawings (FM)
- ZD87FEN: Control Drawings (CSA)

Accessories

- BA265FDE: Cable for the HART Multiplexer-System
- BA266FDE: Interface Module without Communication resistor
- BA267FDE: Interface Modul with Communication resistor
- BA268FEN: HART-Multiplexer Master KFD2-HMM-16
- BA283FEN: HART Multiplexer slave KFD0-HMS-16
- BA269FEN: Switched power supply
- KA243FA6: Multidrop Connector
- TI00025SEN: Technical Information, Fieldgate Input module

Instruments International

Endress+Hauser
Instruments International AG
Kaegenstrasse 2
4153 Reinach
Switzerland

Tel. +41 61 715 81 00
Fax +41 61 715 25 00
www.endress.com
info@ii.endress.com

Endress+Hauser

People for Process Automation

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