

# Compact fieldbus I/O-modules in IP20

**TURCK**

Industrial  
Automation

Series FDN/FDP with 16 channels



Series FDN with 8 channels



- Extremely compact for restricted space conditions
- High flexibility through freely configurable I/Os
- Different potential groups for the I/O range
- Inputs: PNP, short-circuit protected
- Outputs: 0.5 A and 1.8 A (FDN20-16XSG), short-circuit protected
- Extended temperature range  
DeviceNet™: -40...+70 °C  
PROFIBUS-DP 0...+55 °C

## Small housing style, flexible and inexpensive

The new compact IP20 modules are designed for use where conventional I/O bus terminal systems are unsuitable due to their large dimensions. In applications with a small number of signals, they have the edge on modular systems.

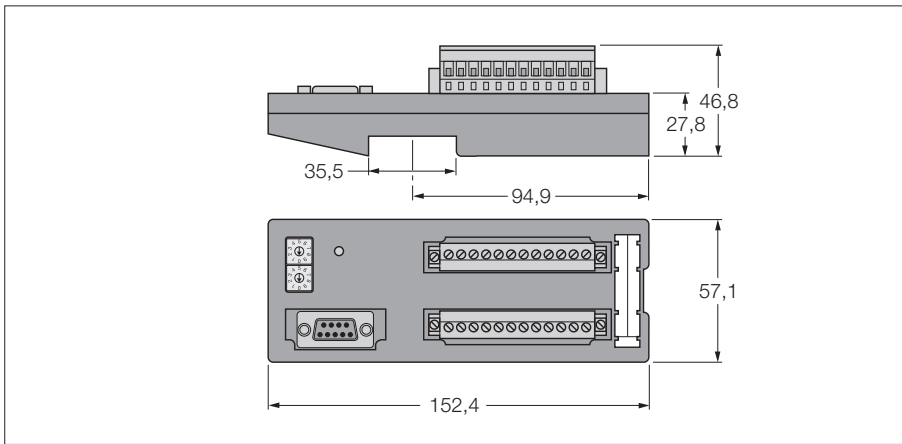
Low space requirements as well as simple handling make work easy for the design engineer and ensures fast setup.

Depending on type, the modules offer 8 or 16 digital channels. If necessary these can be configured as inputs or outputs, with the I/O supply circuits arranged in three galvanically isolated levels. In this way the modules offer optimum flexibility in an extremely compact design.

# Fieldbus I/O module for PROFIBUS-DP

## 16 configurable channels

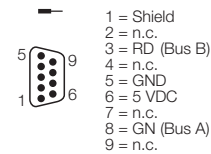
### FDP20-16XSG



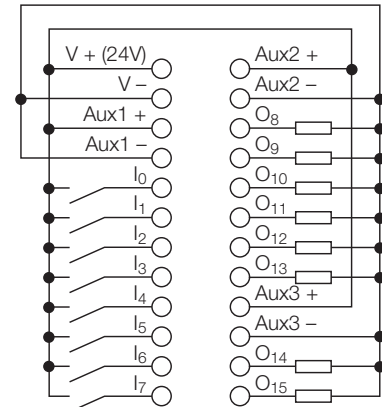
- Rotary coding switch for adjustment of the node address
- Degree of protection IP20
- 3 I/O power supply groups each galvanically isolated
- 16 configurable channels, DI or DO
- 24 VDC, pnp
- Output current: 0.5 A

<b>Type</b>	FDP20-16XSG
Ident-No.	6611466
<b>Number of channels</b>	16
Electrical isolation	I/Os to PROFIBUS
Internal power consumption	< 75 mA plus I/O supply
Admissible range field supply	18...30VDC
Electrical isolation	I/Os to PROFIBUS
<b>Fieldbus transmission rate</b>	9.6 kbps up to 12 Mbps
Fieldbus addressing range	1...99
Fieldbus addressing	2 decimally coded rotary switches
<b>Inputs</b>	
Input voltage	18...30VDC
Low level signal voltage	< 4 V
High level signal voltage	8...24 V
Low level signal current	< 0.5 mA
High level signal current	1...3.4 mA
Input delay	2,5 ms
Max. input current	700 mA
<b>Outputs</b>	
Output voltage	18...30 VDC, short-circuit proof
Output current per channel	0.5A (from Aux)
Switching frequency	≤ 100 Hz
<b>Operating temperature</b>	0°C...55°C

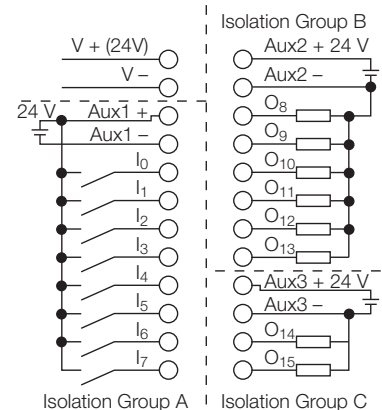
#### Fieldbus



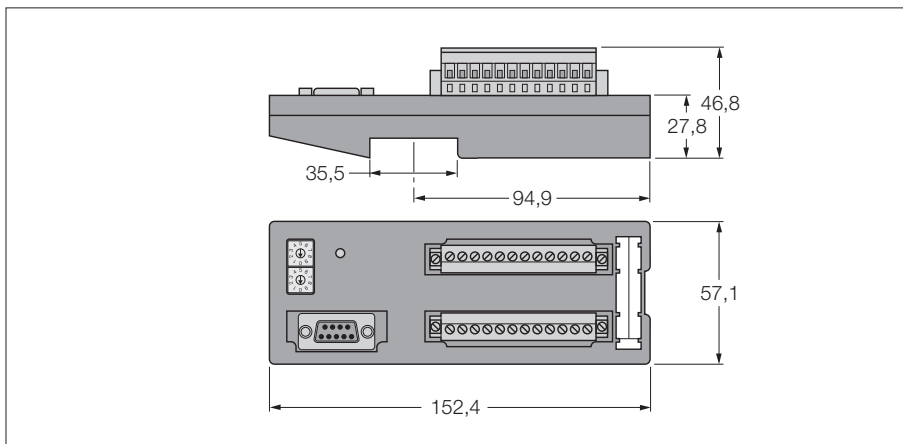
#### Wiring diagram



#### Wiring diagram



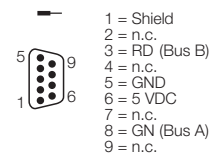
**Fieldbus I/O module for PROFIBUS-DP**  
**16 digital inputs**  
**FDP20-16S**



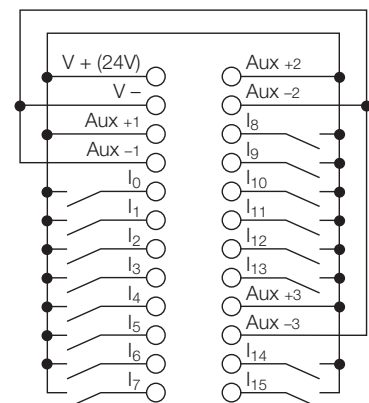
- Rotary coding switch for adjustment of the node address
- Degree of protection IP20
- 3 I/O power supply groups each galvanically isolated
- 16 digital inputs, 24 VDC
- pnp

<b>Type</b>	FDP20-16S
Ident-No.	6611465
<b>Number of channels</b>	16
Electrical isolation	I/Os to PROFIBUS
Internal power consumption	< 75 mA plus I/O supply
Admissible range field supply	18...30VDC
Electrical isolation	I/Os to PROFIBUS
<b>Fieldbus transmission rate</b>	9.6 kbps up to 12 Mbps
Fieldbus addressing range	1...99
Fieldbus addressing	2 decimally coded rotary switches
<b>Inputs</b>	
Input voltage	18...30VDC
Low level signal voltage	< 4 V
High level signal voltage	8...24 V
Low level signal current	< 0.5 mA
High level signal current	1...3.4 mA
Input delay	2,5 ms
Max. input current	700 mA
<b>Operating temperature</b>	0°C...55°C

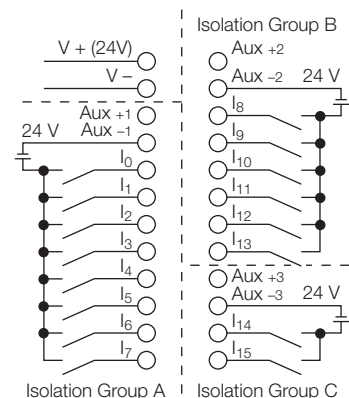
**Fieldbus**



**Wiring diagram**



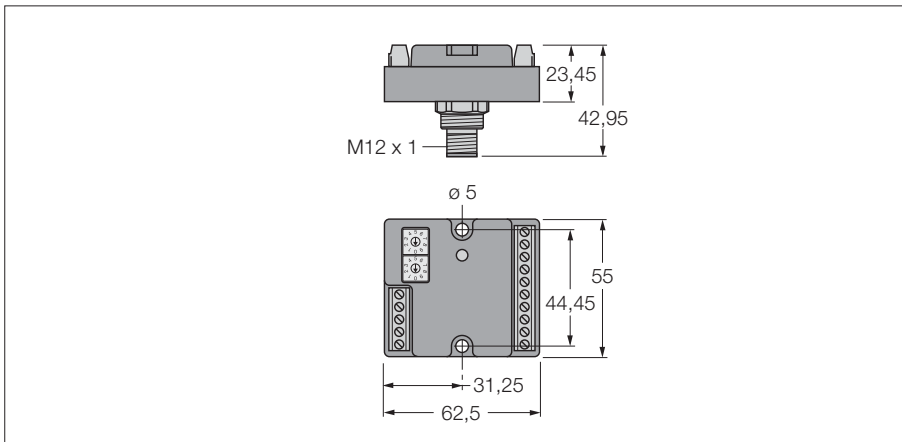
**Wiring diagram**



# Fieldbus I/O module for DeviceNet

## 4 digital inputs, 4 configurable channels

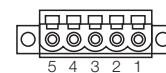
### FDN20-4S-4XSG-E



- Rotary coding switch for adjustment of the node address
- Degree of protection IP20
- M12 flange connector for convenient mounting and connection to DeviceNet
- 4 digital inputs
- 4 configurable channels, DI or DO
- 24 VDC
- pnp
- Output current: 0.5 A

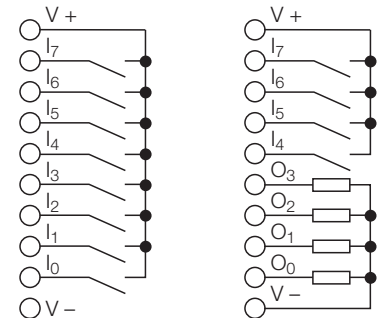
<b>Type</b>	FDN20-4S-4XSG-E
Ident-No.	6611343
<b>Number of channels</b>	8
Internal power consumption	< 50 mA plus I/O supply
Voltage supply via DeviceNet	24 VDC
Admissible range field supply	11...26 VDC
<b>Fieldbus transmission rate</b>	125 kbps to 500 kbps
Fieldbus addressing range	0...63
Fieldbus addressing	2 decimally coded rotary switches
<b>Inputs</b>	
Input voltage	11...26 VDC
Low level signal voltage	< 4 V
High level signal voltage	8...24 V
Low level signal current	< 0.5 mA
High level signal current	1...3.4 mA
Input delay	2.5 ms
Max. input current	total: 700 mA
<b>Outputs</b>	
Output voltage	18...26 VDC, short-circuit proof
Output current per channel	0.5 A (from DeviceNet)
Switching frequency	≤ 100 Hz
<b>Operating temperature</b>	-40°C...70°C

#### Fieldbus

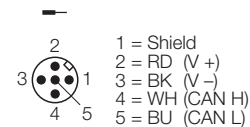


- 1 = BK (V -)
- 2 = BU (CAN L)
- 3 = Shield
- 4 = WH (CAN H)
- 5 = RD (V +)

#### Wiring diagram

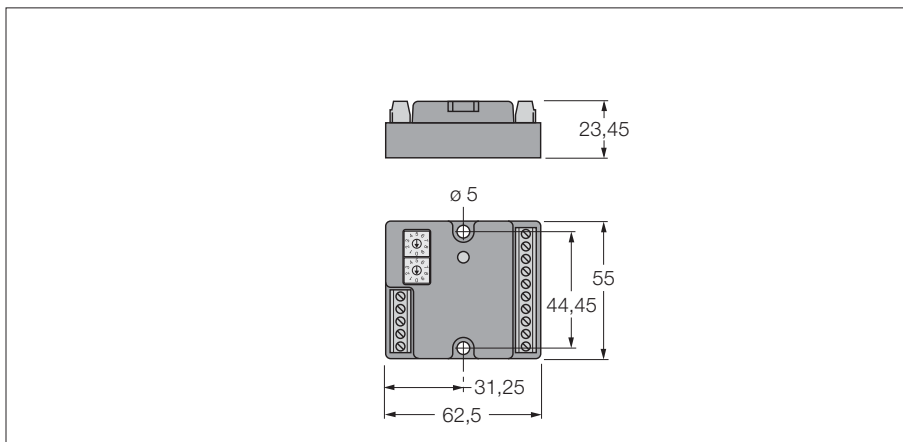


#### Fieldbus



- 1 = Shield
- 2 = RD (V +)
- 3 = BK (V -)
- 4 = WH (CAN H)
- 5 = BU (CAN L)

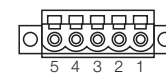
**Fieldbus I/O module for DeviceNet**  
**4 digital inputs, 4 configurable channels**  
**FDN20-4S-4XSG**



- Rotary coding switch for adjustment of the node address
- Degree of protection IP20
- 4 digital inputs
- 4 configurable channels, DI or DO
- 24 VDC
- pnp
- Output current: 0.5 A

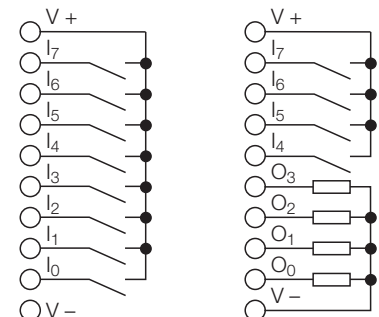
<b>Type</b>	FDN20-4S-4XSG
Ident-No.	6611359
<b>Number of channels</b>	8
Internal power consumption	< 50 mA plus I/O supply
Voltage supply via DeviceNet	24 VDC
Admissible range field supply	11...26 VDC
<b>Fieldbus transmission rate</b>	125 kbps to 500 kbps
Fieldbus addressing range	0...63
Fieldbus addressing	2 decimally coded rotary switches
<b>Inputs</b>	
Input voltage	11...26 VDC
Low level signal voltage	< 4 V
High level signal voltage	8...24 V
Low level signal current	< 0.5 mA
High level signal current	1...3.4 mA
Input delay	2.5 ms
Max. input current	total:: 700 mA
<b>Outputs</b>	
Output voltage	18...26 VDC, short-circuit proof
Output current per channel	0.5 A (from DeviceNet)
Switching frequency	≤ 100 Hz
<b>Operating temperature</b>	-40°C...70°C

**Fieldbus**



- 1 = BK (V -)
- 2 = BU (CAN L)
- 3 = Shield
- 4 = WH (CAN H)
- 5 = RD (V +)

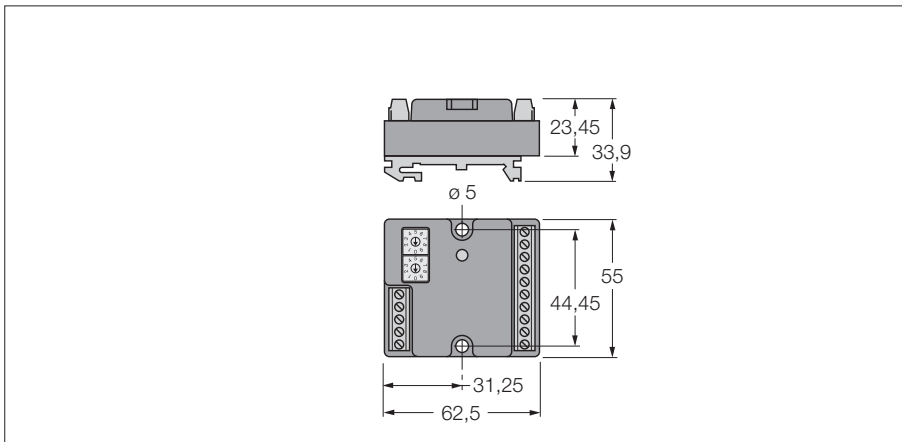
**Wiring diagram**



# Fieldbus I/O module for DeviceNet

## 4 digital inputs, 4 configurable channels

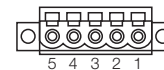
### FDN20-4S-4XSG-DIN



- Rotary coding switch for adjustment of the node address
- Degree of protection IP20
- Can be mounted on DIN rail
- 4 digital inputs
- 4 configurable channels, DI or DO
- 24 VDC
- pnp
- Output current: 0.5 A

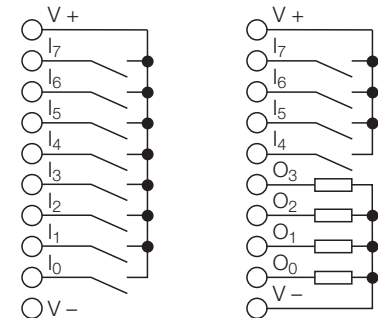
<b>Type</b>	FDN20-4S-4XSG-DIN
Ident-No.	6611377
<b>Number of channels</b>	8
Internal power consumption	< 50 mA plus I/O supply
Voltage supply via DeviceNet	24 VDC
Admissible range field supply	11...26 VDC
<b>Fieldbus transmission rate</b>	125 kbps to 500 kbps
Fieldbus addressing range	0...63
Fieldbus addressing	2 decimally coded rotary switches
<b>Inputs</b>	
Input voltage	11...26 VDC
Low level signal voltage	< 4 V
High level signal voltage	8...24 V
Low level signal current	< 0.5 mA
High level signal current	1...3.4 mA
Input delay	2.5 ms
Max. input current	total: 700 mA
<b>Outputs</b>	
Output voltage	18...26 VDC, short-circuit proof
Output current per channel	0.5 A (from DeviceNet)
Switching frequency	≤ 100 Hz
<b>Operating temperature</b>	-40°C...70°C

#### Fieldbus

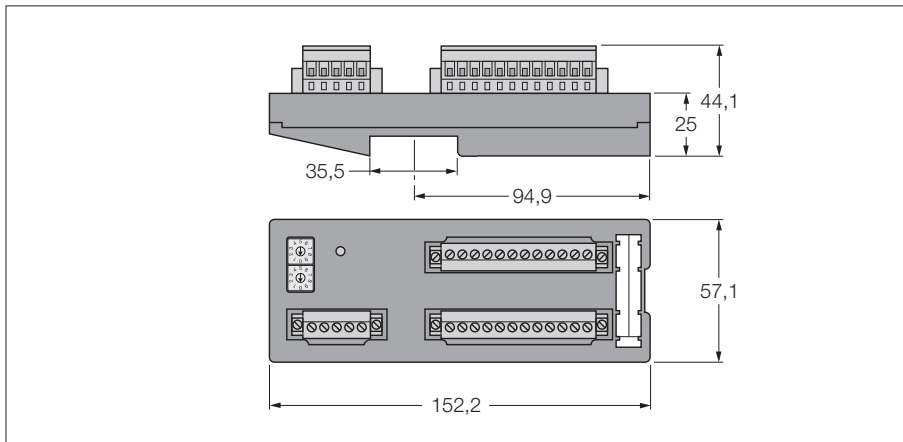


- 1 = BK (V -)
- 2 = BU (CAN L)
- 3 = Shield
- 4 = WH (CAN H)
- 5 = RD (V +)

#### Wiring diagram



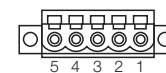
**Fieldbus I/O module for DeviceNet**  
**16 configurable channels**  
**FDN20-16XSG**



- Rotary coding switch for adjustment of the node address
- Degree of protection IP20
- 3 I/O power supply groups each galvanically isolated
- 16 configurable channels, DI or DO
- 24 VDC
- pnp
- Output current: 0.5 A

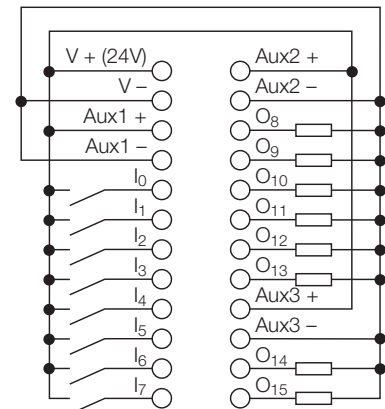
<b>Type</b>	FDN20-16XSG
Ident-No.	6611373
<b>Number of channels</b>	16
Electrical isolation	I/Os to DeviceNet
Internal power consumption	< 75 mA plus I/O supply
Voltage supply via DeviceNet	24 VDC
Admissible range field supply	11...26 VDC
Electrical isolation	I/Os to DeviceNet
<b>Fieldbus transmission rate</b>	125 kbps to 500 kbps
Fieldbus addressing range	0...63
Fieldbus addressing	2 decimally coded rotary switches
<b>Inputs</b>	
Input voltage	11...26 VDC
Low level signal voltage	< 4 V
High level signal voltage	8...24 V
Low level signal current	< 0.5 mA
High level signal current	1...3.4 mA
Input delay	1 ms
Max. input current	total: 700 mA
<b>Outputs</b>	
Output voltage	18...26 VDC, short-circuit proof
Output current per channel	0.5A (from Aux)
Switching frequency	≤ 100 Hz
<b>Operating temperature</b>	-40°C...70°C

**Fieldbus**

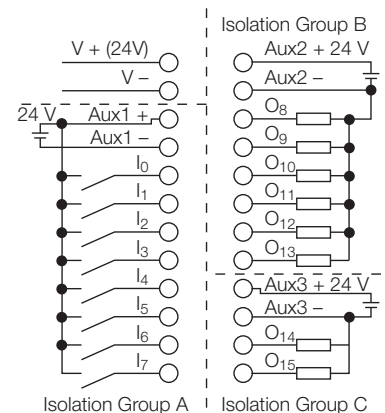


- 1 = BK (V -)
- 2 = BU (CAN L)
- 3 = Shield
- 4 = WH (CAN H)
- 5 = RD (V +)

**Wiring diagram**



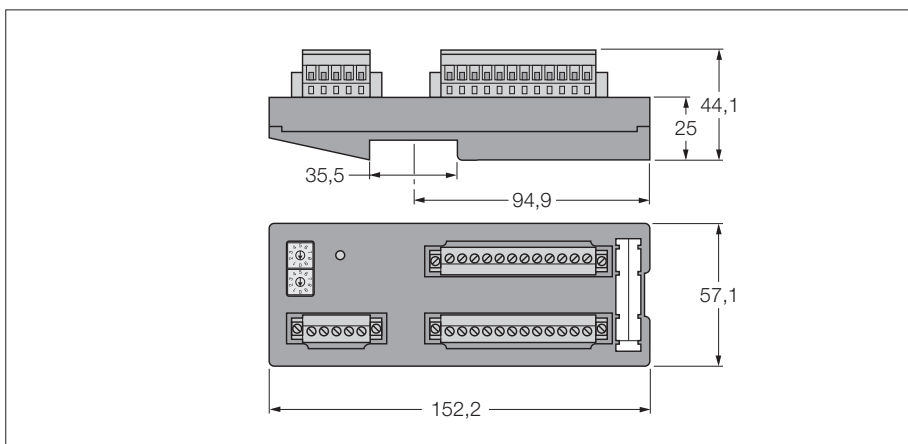
**Wiring diagram**



# Fieldbus I/O module for DeviceNet

## 16 digital inputs

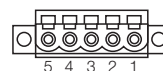
### FDN20-16S



- Rotary coding switch for adjustment of the node address
- Degree of protection IP20
- 3 I/O power supply groups each galvanically isolated
- 16 digital inputs, 24 VDC
- pnp

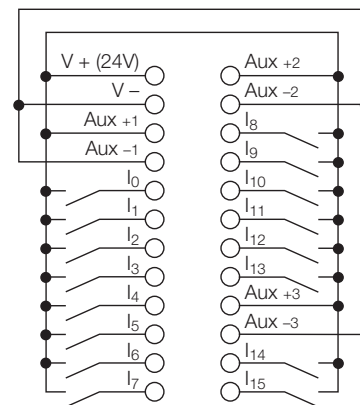
<b>Type</b>	FDN20-16S
Ident-No.	6611312
<b>Number of channels</b>	16
Electrical isolation	I/Os to DeviceNet
Internal power consumption	< 75 mA plus I/O supply
Voltage supply via DeviceNet	24 VDC
Admissible range field supply	11...26 VDC
Electrical isolation	I/Os to DeviceNet
<b>Fieldbus transmission rate</b>	125 kbps to 500 kbps
Fieldbus addressing range	0...63
Fieldbus addressing	2 decimally coded rotary switches
<b>Inputs</b>	
Input voltage	11...26 VDC
Low level signal voltage	< 4 V
High level signal voltage	8...24 V
Low level signal current	< 0.5 mA
High level signal current	1...3.4 mA
Input delay	1 ms
Max. input current	total: 700 mA
<b>Operating temperature</b>	-40°C...70°C

#### Fieldbus



- 1 = BK (V -)
- 2 = BU (CAN L)
- 3 = Shield
- 4 = WH (CAN H)
- 5 = RD (V +)

#### Wiring diagram



#### Wiring diagram

