

## Product Description

### CANopen Amplifier Busbox-C

#### Special Features

- ❑ Amplifier with CANopen interface
- ❑ Designed for one or two strain gauge sensors
- ❑ User friendly commissioning via EDS file

## Scope of Supply

- **Electronic unit**  
designed into an aluminium enclosure
- **Disk with EDS-file**
- **2 Sensor plugs (X3A, X3B)**
- **1 Protection cover (X3C)**

## Available for Delivery

- **Cable socket** for external power supply (X1)
- **Bus-T-connector**
- **Terminal resistance**
- **Bus plug**  
(Micro Connector X2)

**CANopen**



## Application

The Busbox-C is used whenever strain gauge sensors are to be connected to the CANopen Bus. The primary use is for web tension measurement.

It is possible to connect either each sensor separately to one Busbox and transmit the measurement value of each sensor onto the Bus or connect two sensors to one Busbox. The first alternative can be used to determine the web tension difference, the second results in the average values being transmitted to the Bus.

The electronic device consists of an analog and a digital part.

The system can power one or two sensors and process the measuring signals. The measurement values are converted into digital signals. In the interface module they are converted to the appropriate data format for transmission to the Bus.

## Technical Data

Power supply  $V_5$ : 20,5 ...30 V, max 150 mA  
 Supply:  
 (sensor A + B): 4,5 V/ 18 mA  
 Signal:  $\pm 10,8 \text{ mV} \pm 0 \dots 7\text{FF8 hex.}$   
 Standard protection: IP 67  
 Nominal temperature range:  $+10 \dots +60 \text{ }^\circ\text{C}$   
 Operational temperature range:  $0 \dots +60 \text{ }^\circ\text{C}$

### CANopen:

Protocoll spezifikation: CAN 2.0B passiv \*  
 Transmission rate: 20, 250, 500, 1000kbit/s

Data width: 2 Byte dates  
 Resolution: 12 Bit at range  $\pm 160\%$  of nominal sensor force  
 Converting time: 2ms  
 Bus participant: max. 64  
 Factory adjustment  
 CANopen ID: 64

\* CAN 2.0B passive: The sensor BZAC can receive correct telegrams according to the spezifikation CAN2.0A with 11 bit identifier and CAN 2.0B with 29 bit identifier. Only telegrams accorded to CAN 2.0A will be processed.

Connection CANopen X2 (pin)		
color	pin-no.	function
field	1	field
red	2	+24 V ( $V_5+$ )
black	3	GND ( $V_5-$ )
white	4	CAN_H
blue	5	CAN_L

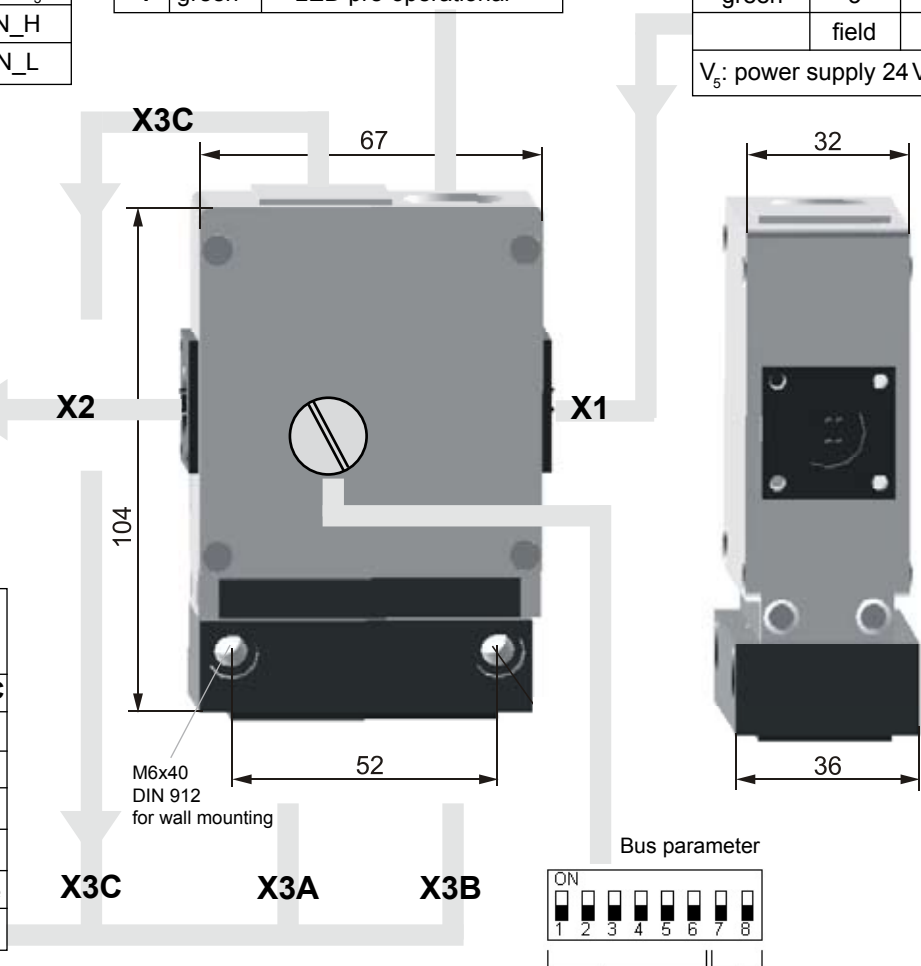
LED Configuration (LED display):		
1	green	LED power
2	red	LED error
3	green	LED operational
4	green	LED pre-operational

Pin Configuration X1 (pIN)		
color	pin-no.	function
white	1	+24 V ( $V_5+$ )
brown	2	GND ( $V_5-$ )
green	3	PE
	field	enclosure

$V_5$ : power supply 24V

Pin Configuration X3 A/B/C (receptacle)		
color	pin-no.	X3 A/B/C
white	1	+ $V_1$
brown	2	- $V_4$
green	3	- $V_1$
yellow	4	+ $V_4$
	field	enclosure

$V_1$ : signal volt.  $V_4$ : supply volt.



**Ordering Example:**  
**Busbox - C**  
 \_\_\_\_\_ CANopen Type

Einstellen des Modul-IDs						
Schalter Nr.						Modul-ID
1	2	3	4	5	6	dez./hex.
OFF	OFF	OFF	OFF	OFF	OFF	1 / 1
ON	OFF	OFF	OFF	OFF	OFF	2 / 2
...	...	...	...	...	...	... / ...
OFF	ON	ON	ON	ON	ON	63 / 3F
ON	ON	ON	ON	ON	ON	64 / 40

Einstellen der Übertragungsrate		
Schalter Nr.		Übertragungsrate
7	8	in KBit/s
OFF	OFF	20
ON	OFF	250
OFF	ON	500
ON	ON	1000