



Digital Optoconverters RS485, RS422 and contact BREAK-xDW-S-4C

xDW-S-4C



- Digital modulation
- 1x SC/PC optical port with WDM
- 2x RS485 or 1x RS422 port according to standards up to 1Mbps
- 1x digital INPUT
- 1x relay NO
- 1x relay LOCK NO/NC

- Overvoltage protection
- Current limiter in supply
- Working temperature from -40°C to $+70^{\circ}\text{C}$

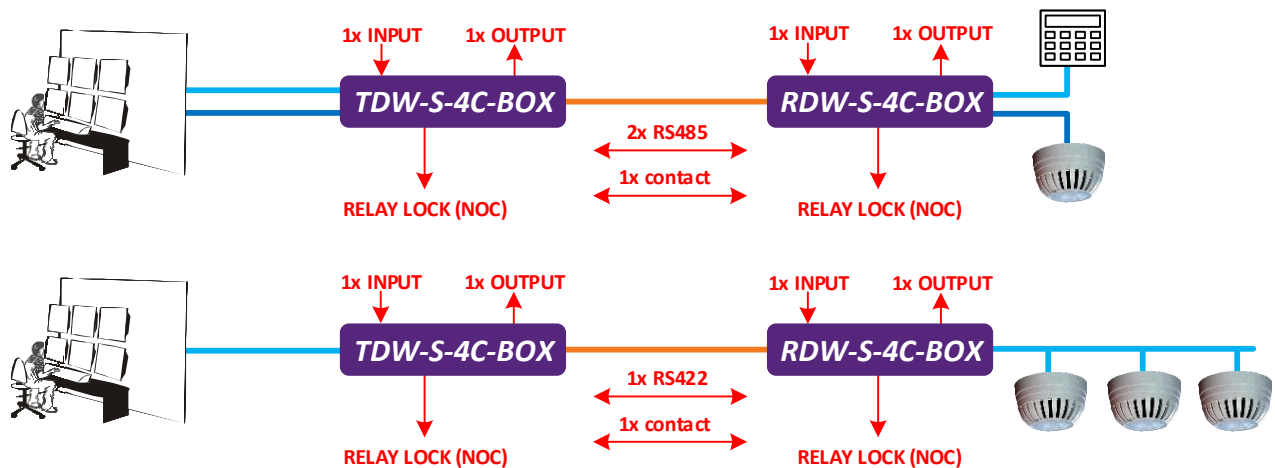
PRODUCT NAME	CODE	SUPPLY
TDW-S-4C-BOX*	1-505-220	10-30VAC/10-60VDC
RDW-S-4C-BOX*	1-605-220	10-30VAC/10-60VDC

* Holders for mounting to DIN35 and flat surface are included.

Description

Optoconverters are designed for transmission of two channels of either half-duplex RS485 bus or one four-wire bus RS422. Together with data buses they also enable transmission of one digital input state to relay output in both directions – all that over one singlemode or multimode optical fiber terminated by SC connector (grinding PC). Relay LOCK detects failure of a remote device, optic fiber interruption and supply failure.

Example of connections



LEGEND

1x fiber MM or SM

UTP cable

**Technical parameters**

	Parameter	Value	Unit	Note
BUS	Overvoltage protection	600	W	pulse 10/1000 µs
	Transmission speed	0 - 1	Mbps	
Optics	Output optical power	-14 to -8 / -10 to 0	dBm	SM / MM
	Sensitivity	-31	dBm	SM / MM
Optical fibers	Optical fibers	1x SM 9/125 - SC connectors	µm	grinding PC
		1x MM 50(62.5)/125 - SC conn.	µm	grinding PC
Optical range	Multimode	6	km	50/125um
	Multimode	4	km	62.5/125um
	Singlemode	20	km	9/125um
ATTENTION: class 1 LASER PRODUCT COMPLIES WITH 21 CFR 1040.10 and 1040.11 (EN 60825-1-1)				
LOCK relay	NOC contact	max. 125VAC/0.5A or 60VDC/0.3A		
		NO contact closed = communication OK, NC contact closed = fault communication		
OUTPUT relay	2x NO contact	max. 125VAC/0.5A or 60VDC/0.3A		
		NO contact in de-energized state open		
Power Supply	Voltage	10-30 / 10-60	VAC / VDC	
	Current at 12VDC	Max. 100	mA	
	Protections	overvoltage / current	600W-pulse 10/1000 µs/reversible	
Environment	Operational range	-40..+70	°C	temperature of environment
	Humidity	max. 95 (non-condensing)	%	
Mechanical	Dimensions - w / h / l	Page 3	mm	
Parameters	Weight	typ.: 0.2	kg	
The producer retains the right to change any technical parameters without previous written or published notification.				

Compatibility with older device BREAK-xDW-4C-BOX/12-24

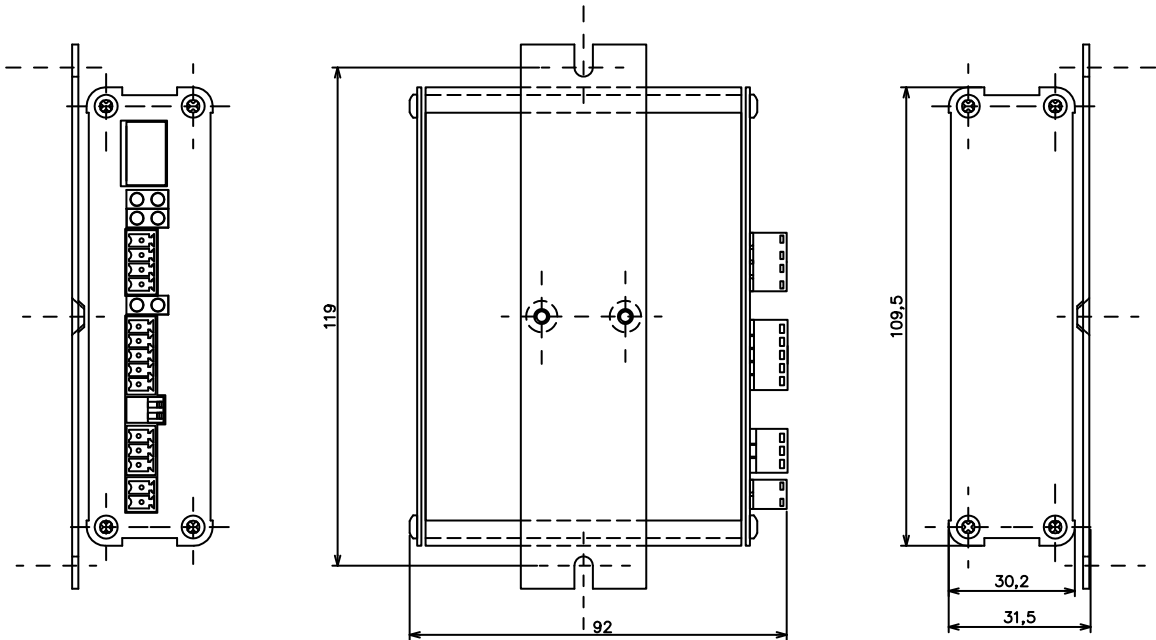
New converters **xDW-S-4C-BOX** are backwards compatible but only with one duplex contact.



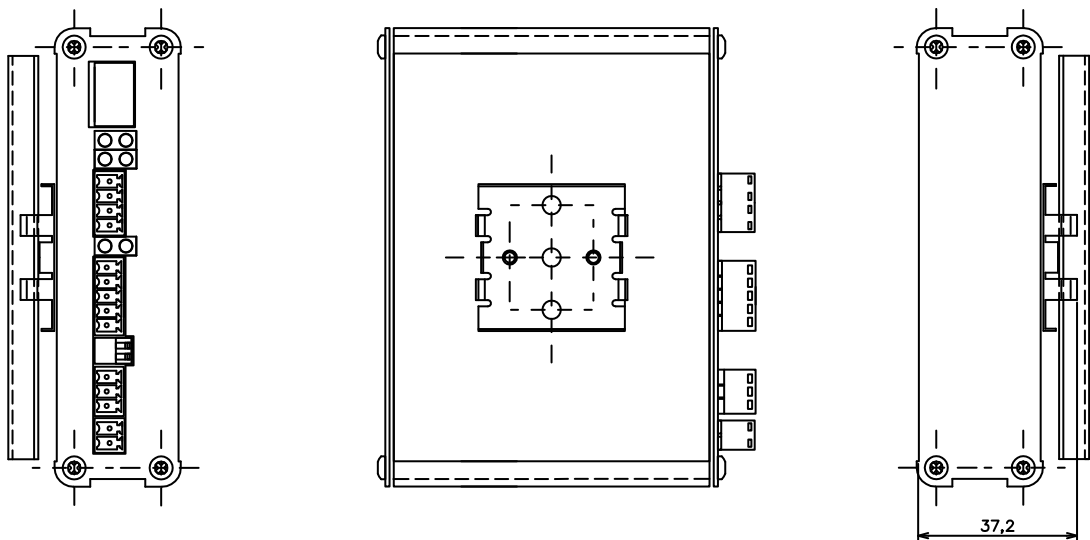
Dimensions

universality

xDW-S-4C



xDW-S-4C + DIN35-LOCK

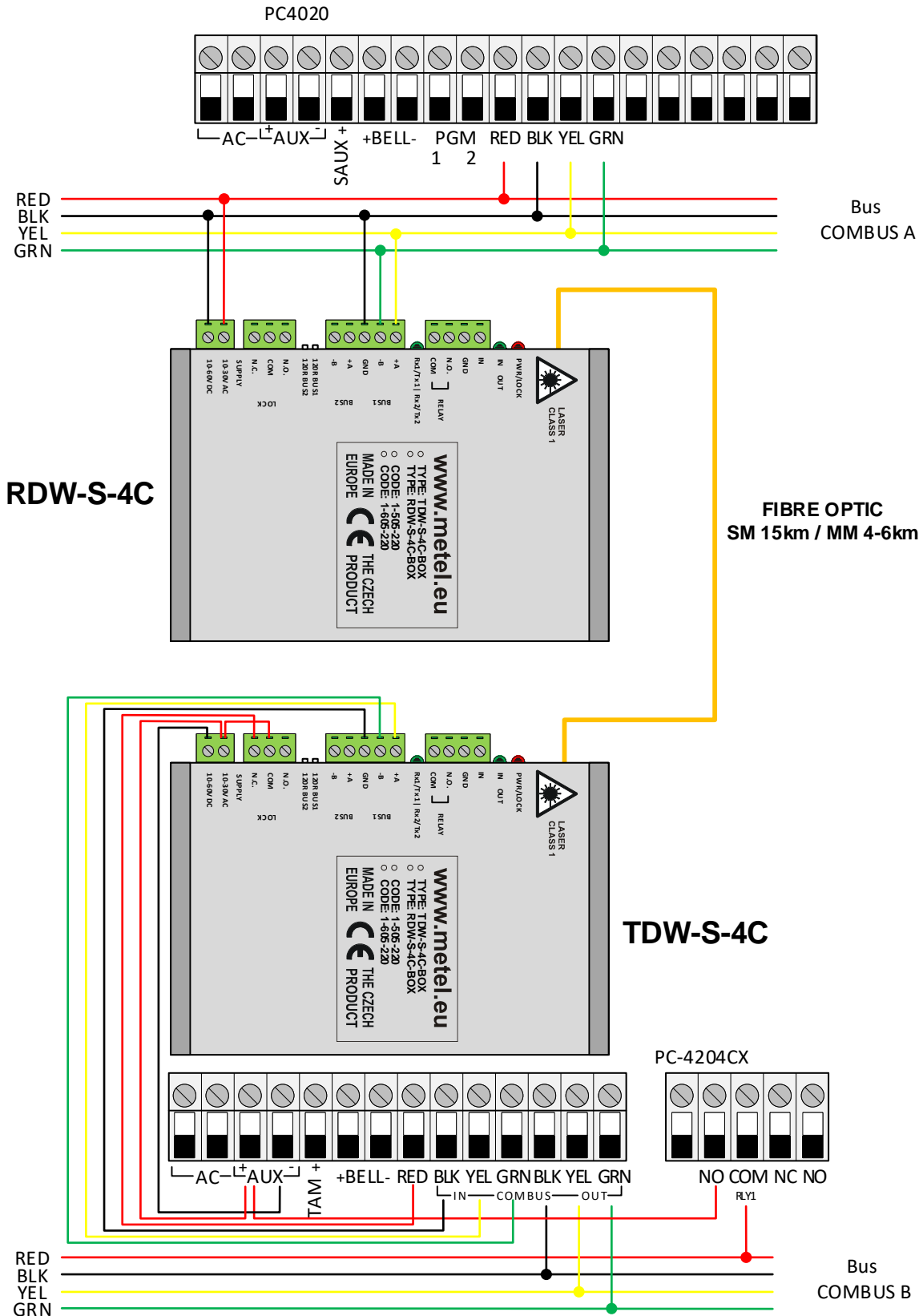


REV.: 201701 – xDW-S-4C
201706 – add wire connection with DSC Power NEO
201810 – change blinking LED

BREAK-xDW-S-4C

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Example of connections with DSC MAXSYS panel



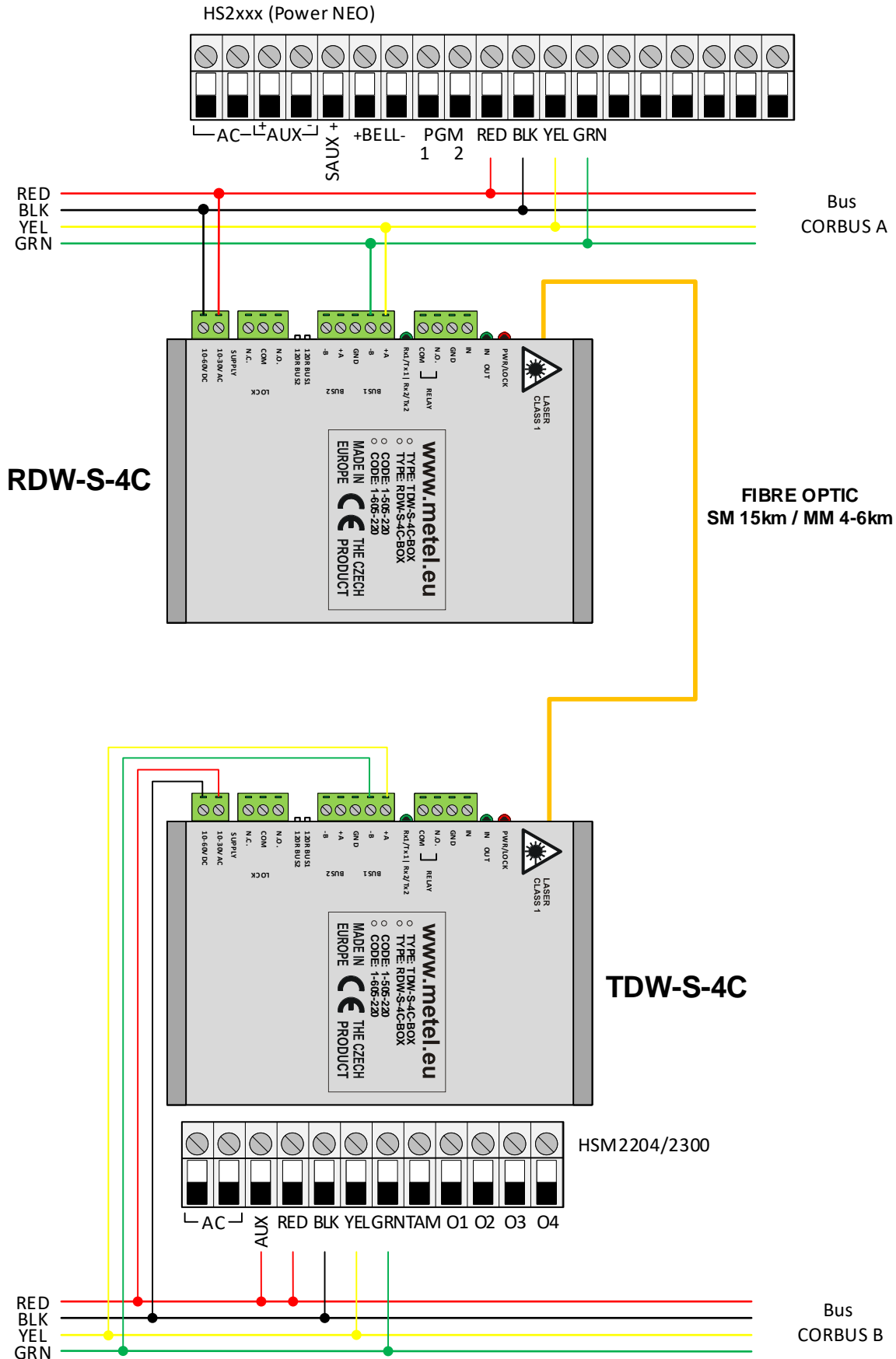
BUS reset function

For proper bus COMBUS reset function it is necessary to connect „LOCK“ relay with according to the diagram and the set relay nr. 1 on the PC4204CX module to the bus reset function.

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Example of connections with DSC POWER NEO



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Installation and Settings

1. Mounting

Mount the converter to flat surface or DIN35 rail.

2. Connect supply

10-30VAC or 10-60VDC acc. to the picture below. The supply is indicated by yellow power LED PWR.

3. Connect optical fibers

terminated by SC connector (grinding PC). After interconnection of TDW-S-4C and RDW-S-4C LED LOCK switches off.

4. Connect signal wires

according to the pictures below.
 Connect RS485 buses to A+ and B- terminals.
 For RS422 transmission use e.g. BUS1 for reception and BUS2 for transmission on one side; the other side will then use BUS1 for transmission and BUS2 for reception.
 Terminate the data buses with 120Ω resistance by switching the DIP switch to ON position.
 Connect shielding to only one side to the GND terminal.

5. Connect inputs and relay outputs

IN - digital inputs can be activated by connection with GND or by low level of TTL.
 OUT - relay outputs max. load 125VAC/0.5A or 60VDC/0.3A
 Contacts are closed after input activation.
 RELAY LOCK - relay reacting to error conditions. Used for alarm systems, starting of back-up, etc. The function is described in the picture below.

6. Indications

LED PWR - by switching on detects supply
 LED LOCK - by switching on detects relay closure
 - by switching on detects optics interruption
 - by switching on detects failure of a remote device
 BUS1,2 Rx/Tx
 - green LED Tx blinking – data transmission
 - red LED Rx blinking – data reception

