

# Technical Reference Manual

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# Technical Reference Manual

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Notes

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## Warranty Information

A copy of the specific warranty terms applicable to your DEWETRON product and replacement parts can be obtained from your local sales and service office.

## Support

For any support please contact your local distributor first or DEWETRON directly.

For Asia and Europe, please contact:

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Web: <http://www.dewetron.com>

The telephone hotline is available  
Monday to Friday between  
08:00 and 17:00 CET (GMT +1:00)

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The telephone hotline is available  
Monday to Friday between  
08:00 and 17:00 GST (GMT -5:00)

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## Printing History

Please refer to the page bottom for printing version.

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# Safety instructions

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## Safety symbols in the manual

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*Indicates hazardous voltages.*

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**WARNING** *Calls attention to a procedure, practice, or condition that could cause bodily injury or death.*

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**CAUTION** *Calls attention to a procedure, practice, or condition that could possibly cause damage to equipment or permanent loss of data.*

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### **WARNINGS**

*The following general safety precautions must be observed during all phases of operation, service, and repair of this product. Failure to comply with these precautions or with specific warnings elsewhere in this manual violates safety standards of design, manufacture, and intended use of the product. DEWETRON Elektronische Messgeraete Ges.m.b.H. assumes no liability for the customer's failure to comply with these requirements.*

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**All accessories shown in this document are available as option and will not be shipped as standard parts.**

## Safety instructions for all DEWETRON systems

- The DEWETRON data acquisition systems may only be installed by experts.
- Read your manual before operating the system.
- Observe local laws when using the instrument.
- DO NOT operate the product in an explosive atmosphere or in the presence of flammable gases or fumes.
- DO NOT operate damaged equipment: Whenever it is possible that the safety protection features built into this product have been impaired, either through physical damage, excessive moisture, or any other reason, REMOVE POWER and do not use the product until safe operation can be verified by service-trained personnel. If necessary, return the product to a DEWETRON sales and service office for service and repair to ensure that safety features are maintained.
- No modifications are allowed at the instrument. The fuse in the power module has to be replaced by the same type. For continued protection against fire, replace the line fuse(s) only with fuse(s) of the same voltage and current rating and type. DO NOT use repaired fuses or short-circuited fuse holder labels and print on the power module may not be removed.
- DO NOT substitute parts or modify equipment: Because of the danger of introducing additional hazards, do not install substitute parts or perform any unauthorized modification to the product. Return the product to a DEWETRON sales and service office for service and repair to ensure that safety features are maintained.
- Before opening the instrument (experts only) or exchanging the fuse in the power module disconnect power!
- Don't use higher supply voltage than specified!
- Use only original plugs and cables for harnessing.
- Safety of the operator and the unit depend on following these rules.

# Safety instructions

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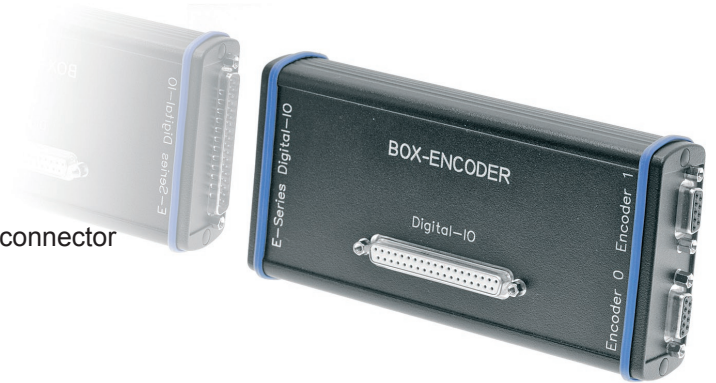
Notes

# BOX-ENCODER

## BOX-ENCODER

External connection box for any standard unit with AD16-xx or AD64-xx boards

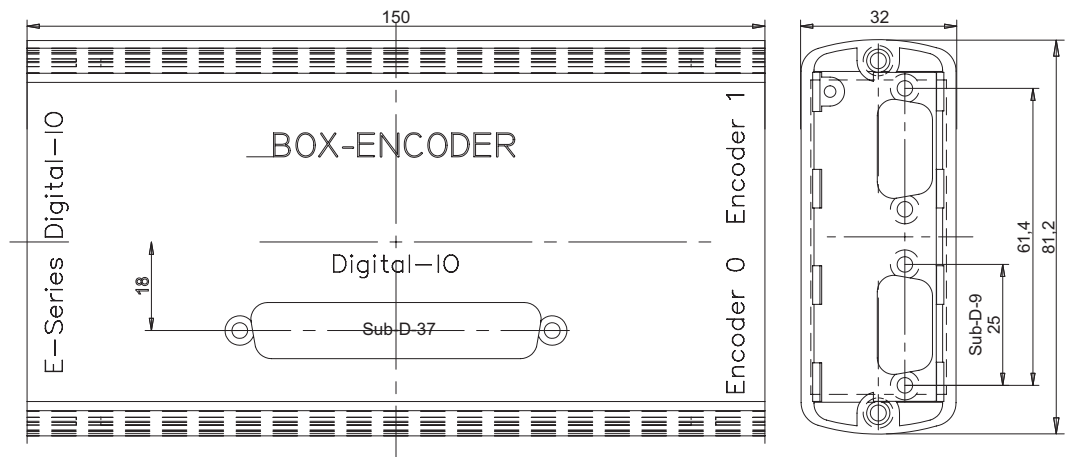
- 2 isolated encoder inputs
- Optional 5 V<sub>DC</sub> or 12 V<sub>DC</sub> sensor supply
- Includes 1m connection cable to digital I/O connector



## Specifications

	BOX-ENCODER
Number of channels	2 isolated encoder channels
Input level	
low	+1.0 V max.
high	+4.0 to +24 V
Isolation voltage	350 V <sub>DC</sub>
Input impedance	10 kOhm
Max input frequency	300 kHz
Power consumption	Typical 0.6 W
Dimensions (W x H x D)	approx. 150 x 32 x 81 mm (5,9 x 1,3 x 3,2 in.)
Weight	typ. 350 g ( 0,77 lbs)

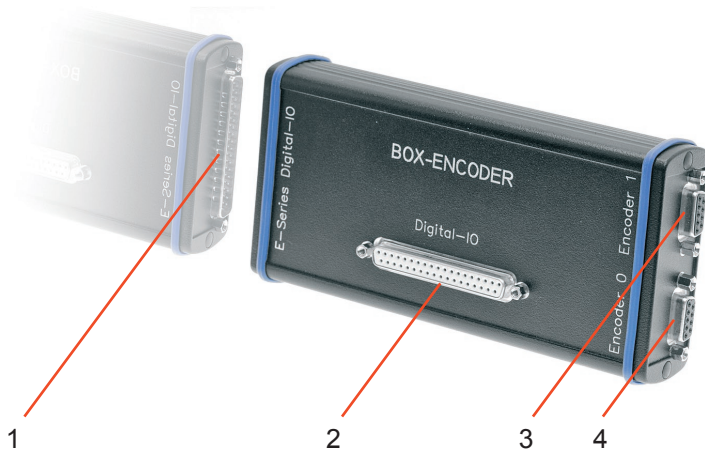
## Dimensions\*



\* Dimensions in mm  
(1 inch = 25.4 mm)

# BOX-ENCODER

## Connectors

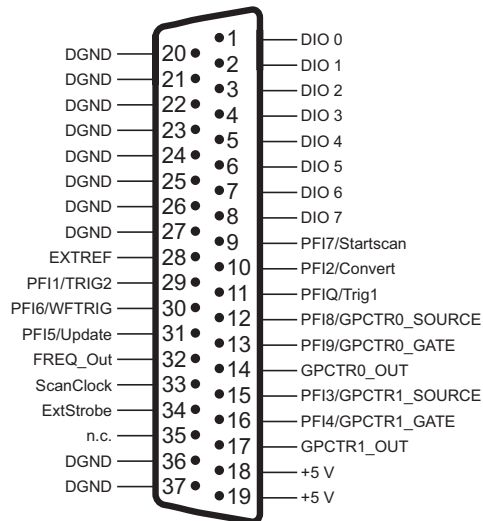


### Connector overview

- 1 Digital I/O connector (to DEWETRON system)
- 2 Digital I/O connector (to use the remaining channels)
- 3 Encoder input 1
- 4 Encoder input 2

### Digital I/O connector (to DEWETRON system)

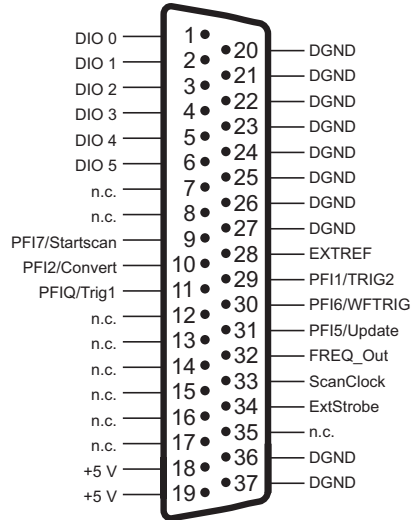
Connect this connector with your DEWETRON system using the cable in your shipment.



37-pin SUB-D connector male

## Digital I/O connector (to use the remaining channels)

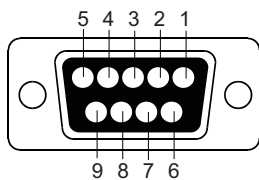
This connector, placed on the front side of the BOX-ENCODER is wired to the remaining channels of the I/O card.



37-pin SUB-D connector male

## Encoder inputs

Optionally the encoder inputs are prepared to supply the sensors with whether 5 V<sub>DC</sub> or 12 V<sub>DC</sub>.



9-pin SUB-D connector female

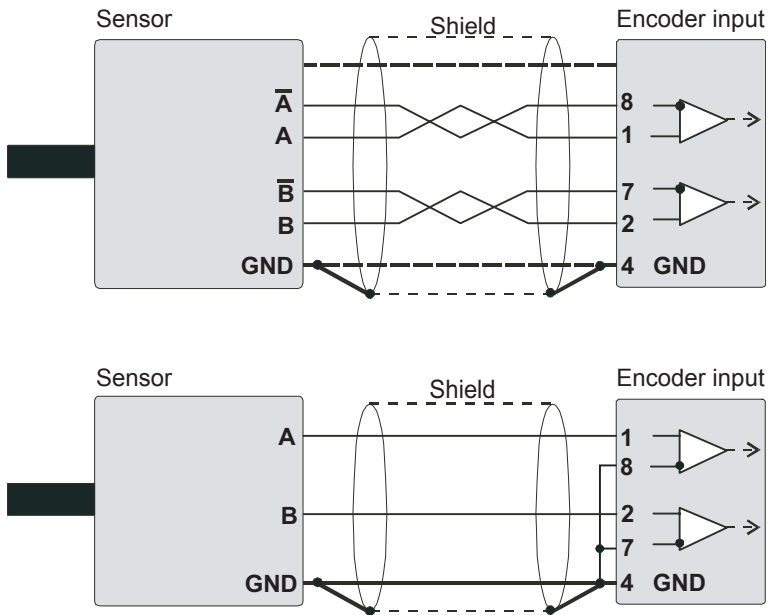
### Pin assignment

- 1 A+ (galvanic isolation)
- 2 B+ (galvanic isolation)
- 3 n.c.
- 4 GND (not galvanic isolation!)
- 5 Encoder supply + (optional)
- 6 n.c.
- 7 B- (galvanic isolation)
- 8 A- (galvanic isolation)
- 9 Encoder supply - (optional)

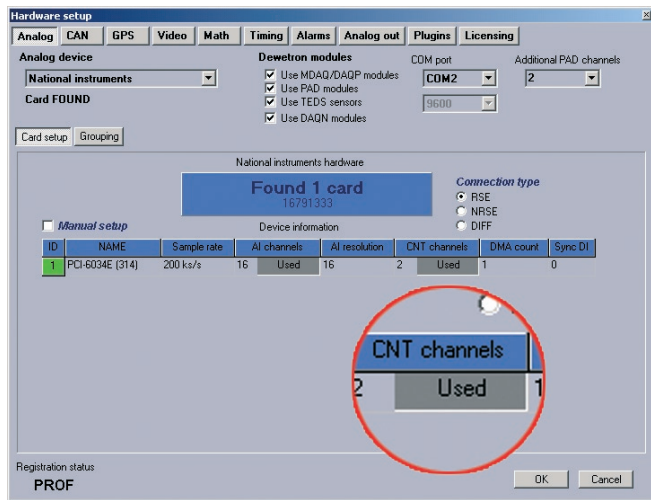
# BOX-ENCODER

## Sensor connection

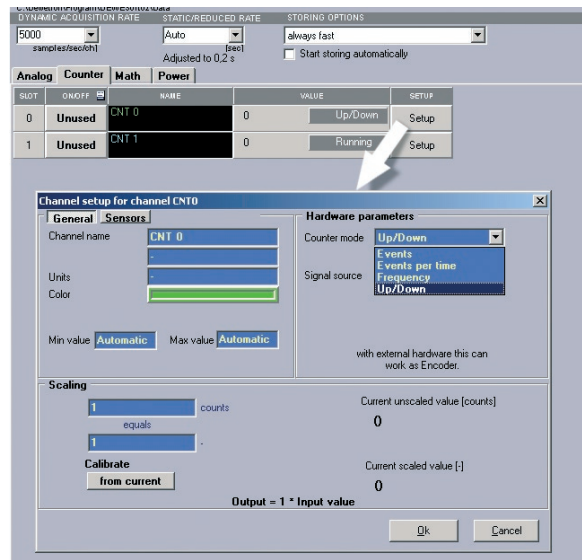
The following schematics should give an idea how to connect the sensors.



## Hardware setup in DEWESoft



DEWESoft hardware setup screen (select "Used")



Counter channel setup (select „Up/Down“)

# Declaration of conformity

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Following products are in conformity with EN50081 (Electromagnetic compatibility, generic emission standard for light and heavy industry) and EN50082 (Electromagnetic compatibility, generic immunity standard for light and heavy industry):

**DEWE-2000 / DEWE-2010 series**

**DEWE-3000 / DEWE-3010 / DEWE-3020 series**

**DEWE-4000 / DEWE-4010 series**

**DEWE-5000 series**

**DEWE-600 series**

**DEWE-BOOK series**

**DEWE-RACK series**

**DAQ / MDAQ modules series**

**PAD / EPAD modules series**

Note: Enhanced EMC specifications are achieved when using DC power supply input.

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Graz, Nov. 15th, 2004



Ing. Herbert Wernigg  
Managing director

# Notes

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