

Digital Telemetry **D^x**

Signal Conditioning and Transmitter Unit **D^x-SCT** (Rotary Device)



Technical Data

Input for Small Level Signals (Strain Gages, Thermo Couple, etc.) :

Input Range :

Resolution :

Accuracy :

Sample Rate :

Anti-aliasing Filter :

Bridge adjustment:

Test Shunt :

Test Signal :

or

two differential voltage inputs to connect up to two full bridges or thermo couples

four half bridge inputs with internal bridge supplement

±2mV to ±2V continuously programmable by remote control (no external resistors or jumpers)

16 bit

0.01% - 0.025%

max. 5 kHz sum sample rate (exclusive additional channels)

6 poles Butterworth characteristics with programmable cut-off frequency

> double measurement span, remote controlled remote controlled by receiver unit

to verify the bridge resistance or to detect broken thermo couples

Input for High Level Signals (Voltage Measurement) :

Input range :

Resolution :

Accuracy :

Sample Rate :

Anti-aliasing Filter :

and

one differential input

one single ended input

±0.2V to ±22V continuously programmable by remote control (no external resistors or jumpers)

16 bit

0.01%

max. 5 kHz sum sample rate (exclusive additional channels)

6 poles Butterworth characteristics with programmable cut-off frequency

Additional Channel to Measure the Temperature of the Transmitter :

Measure Range :

Resolution :

also acts as a reference element for thermo couples

-30°C to 100°C

12 bit

Additional Channel to Measure the Power of the Transmitter :

to control inductive or battery power

Bridge Excitation :

4.096 V (40mA max. short-circuit proof)

High Frequency Transmitter/Receiver :

Transmitting Power :

Data Transportation :

channel programmable in the 868 MHz SRD band (optional 433 MHz, 915 MHz or 2.4GHz ISM bands)

+10dBm max., limited by national regulations

(LBT-method when necessary)

package transfer inclusive error detection

Power Supply :

inductive power supply with inductive head and stator winding

or

DC-supply 7.5V – 39V

Power approx. 250mW ... 450mW

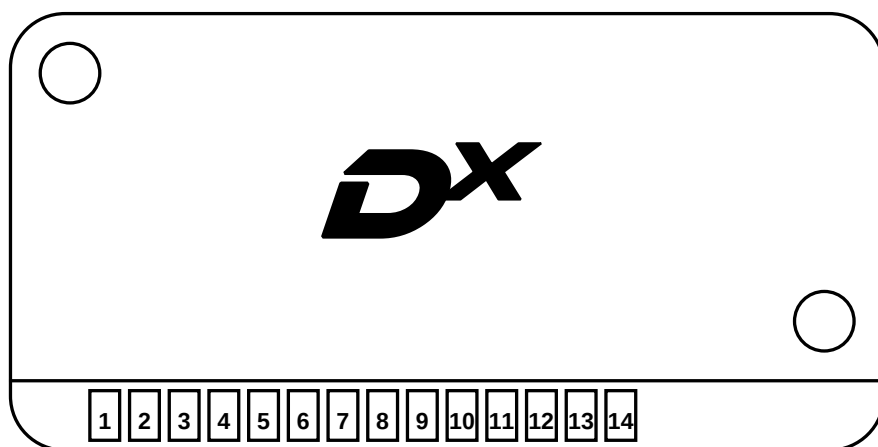
Temperatur range :

-40°C - +85°C

Dimensions :

approx. 44.2mm x 23.9mm

Connection Diagram:



Pad 1	Induktiv-Power 1
Pad 2	DC-Power Plus
Pad 3	Induktiv-Power 2
Pad 4	DC-Power Ground
Pad 5	Excitation -
Pad 6	Excitation +
Pad 7	Ch2 Bridge Input -

Pad 8	Ch2 Bridge Input +
Pad 9	Ch1 Bridge Input -
Pad 10	Ch1 Bridge Input +
Pad 11	Ch 4 High Level SE+
Pad 12	Analog-Ground
Pad 13	Ch3 High Level -
Pad 14	Ch3 High Level +

Receiver-, Control- and Interface Unit **DX**-RCI



Technical Data

Display :

Resolution : 2,83 inch OLED (262144 colors)
 Contrast : 320 x 240
 Angle of View : 10000:1 (compare TFT 400:1 max.)
 $\pm 85^\circ$ no preferred orientation (TFT approx. $\pm 70^\circ$)

Input Interface :

scroll wheel with scroll function and 5 buttons

Analog Outputs :

Output Range : **6 BNC** jacks, can be freely assigned to any signal
 Resolution : ± 10 Volt, low pass filter with fixed cut-off frequency
 Accuracy : 16 bit
 $\pm 0.01\%$

Inductive Power Supply for Transmitter :

digital controlled power, controlling of the frequency and output power to achieve an optimum adaption on the transfer method and the environmental conditions max. 20 W

High Frequency Transmitter/Receiver:

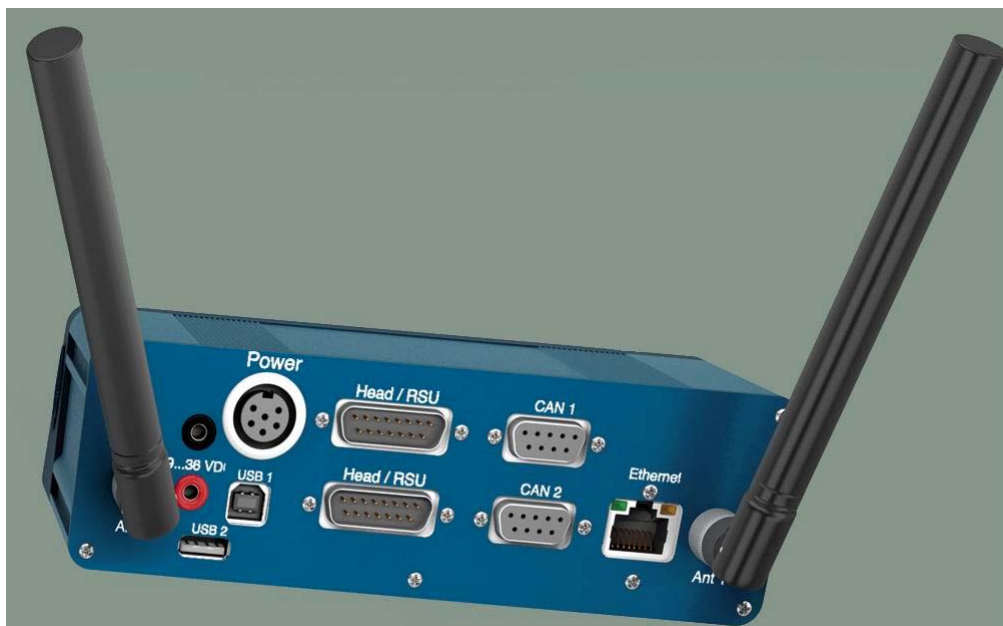
Transceiver :

channel programmable in the 868 MHz SRD band (optional 433 MHz, 915 MHz or 2.4GHz ISM bands)
 2 independant systems, can be used in diversity or parallel mode with different frequencies
 synchronize the exact sampling and control the frequencies of up to eight **DX**-SCT transmitters, results in a synchronized data stream
 can be used instead of the two whip antennas in case of inappropriate radio conditions, caused by reflexions and deadspots. The satellite receivers transfer the data to the **DX**-RCI by wire in a secure way, without loosing the synchronization

Synchronization :

Satellite Receiver :

Digitale Interfaces :



CAN :	CAN 2.0b, standard and extended identifier, fully programmable 1 MBaud max. ISO 11898, galvanic isolated
Ethernet :	10/100 Mbit network connection secure data transmission with TCP protocol web based user setup
USB :	USB 2.0 full speed/12 MBit plug and play interface for parameter transfer
SD-Card :	standard SD slot for datalogging (4 GB Max.)

Power Supply : 9 – 36 Volt DC

Dimensions : approx. 170mm x 130mm x 53 mm

Option: Satellite Receiver / Relay Unit **DX**-RSU

Can be used, if the receiver unit **DX**-RCI cannot receive the data directly from the transmitters (caused by deadspots or reflexions).

Technical Data

Data Connection to DX-RCI :	secure, digital cable connection, length 30m max.
Power Supply :	supplied by receiver unit DX -RCI
Temperature Range :	-40°C - +85°C
Dimensions :	approx. 44mm x 22mm