KMT - Kraus Messtechnik GmbH

Gewerbering 9, D-83624 Otterfing, Germany, ☎ 08024-48737, Fax. 08024-5532
Home Page http://www.kmt-telemetry.com, Email: info@kmt-telemetry.com

CTP32-Rotate-IR

32 Channel Telemetry for rotating applications with signal conditioning for STG and ICP signal bandwidth 32x 3000Hz incl. inductive powering and IR-Link

User Manual

INSTRUCTIONS FOR QUALIFIED PERSONNEL ONLY!

CTP32-Rotate - Technical Data:

Front side **Rear side**

Encoder (Rotor Electronic)		Decoder / IND-PWR	
Number of channels:	32	Number of channels:	32
Sensor support	STG ≥ 350Ω or ICP	Analog Output	+/-10V via 37-Sub-D connector
Excitation	STG 4V, ICP 4mA (1mA)	Digital Output	PCM serial (optional PCM interface for PC)
Gain	125-250-500-1000-2000 **(selectable by software)**		
Offset calibration	Automatically (Auto Zero) at STG		
Anti-aliasing filter	30kHz, 2-pole Butterworth analogue 2-stages digital down sampling filter over sampling rate 256		
Band width	3000 Hz per channel	Band width	3000 Hz per channel
Scanning rate	7812.5Hz per channel		
Transmitting rate	**5000kbit/s**		
Resolution	16 bit ADC	DAC (digital to analog converting)	16 bit
Powering	Inductive	Powering	10-30V, 50 Watt (e.g. 24V 2A)
Data transmission	PCM digital infrared link (IR)	Data receiving	PCM digital twisted pair
Operating temperatures	-30 … 80°C	Operating temperatures	-20 … 70°C
RPM	Max. 1500		
Dimensions	250/280 diameter, 135height (mm)	Dimensions	205 x 105 x 120 (mm)
Weight	3950 gram	Weight	1150 gram
Housing protection type	IP65	Housing protection type	IP54
Housing material	Aluminum anodized	Housing material	Aluminum anodized
Humidity	20…100%	Humidity	20 ... 80% (not condensing)
Shock	1000g	Shock	100g
Vibration	10g peak (sine 20Hz-2kHz)	Vibration (sine 20Hz-2kHz)	5g
Static acceleration	300g in all directions	Static acceleration	10g
Power/Data cable	Length up to 25m, **5m is standard** (between Encoder /Decoder)	System accuracy	±0.25% (without sensor)

CTP32-PCM-DEC Receiver unit for up to 32 Channels output via 37 pol. Sub D incl. inductive power generator

Female 37 pole Sub-D for analog signal output, CH 1 to 32

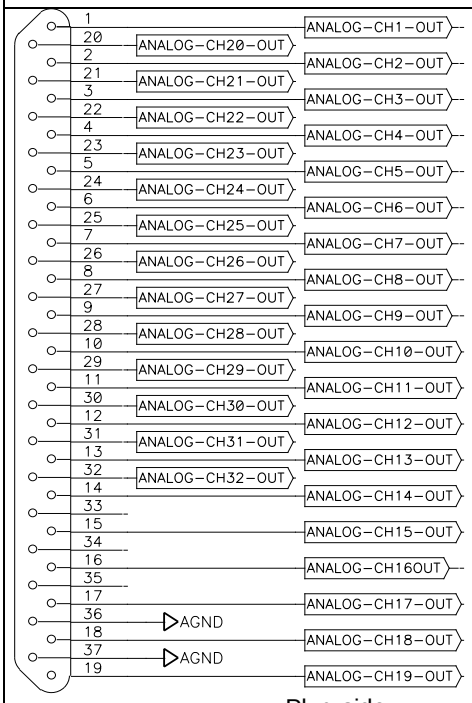
Power ON LED

Power Switch

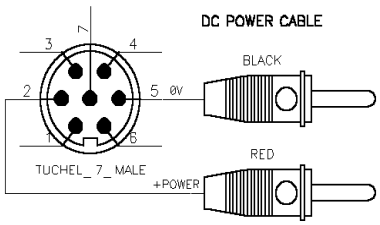
Transmission error LED
Fuse of powering defect LED

7-pole female TUCHEL connector for power supply input 50 Watt (10–30V DC)

To ENCODER (Data IN, IND-PWR OUT)

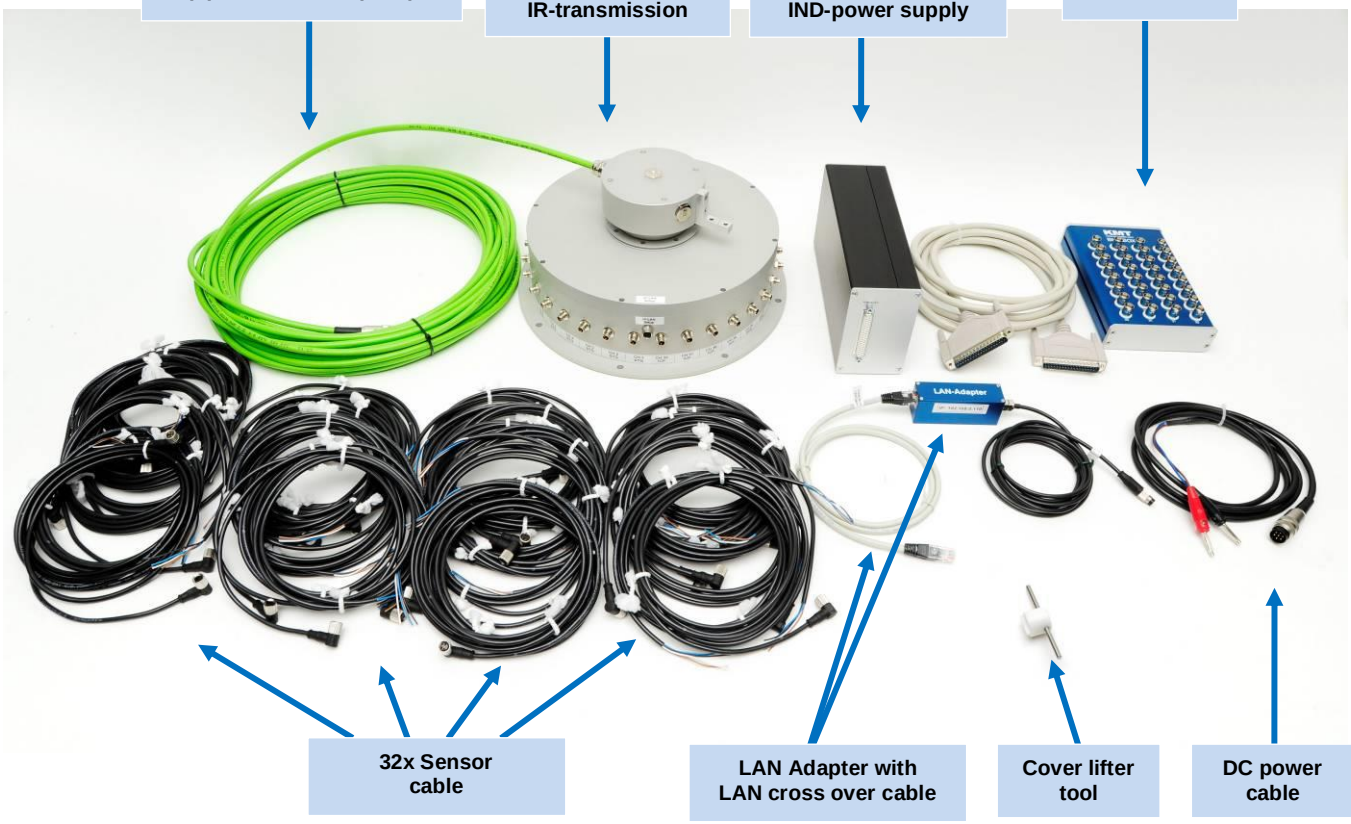


Plug-side

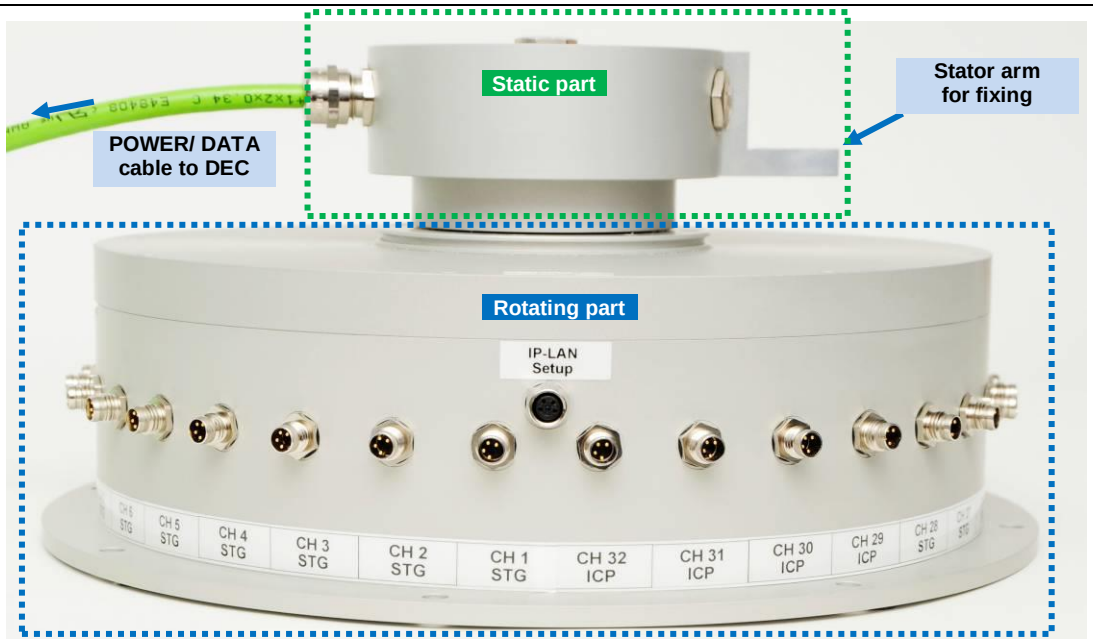


Optional BNC32 Box. Connect on 37pol Sub-D

SET of CTP32-Rotate



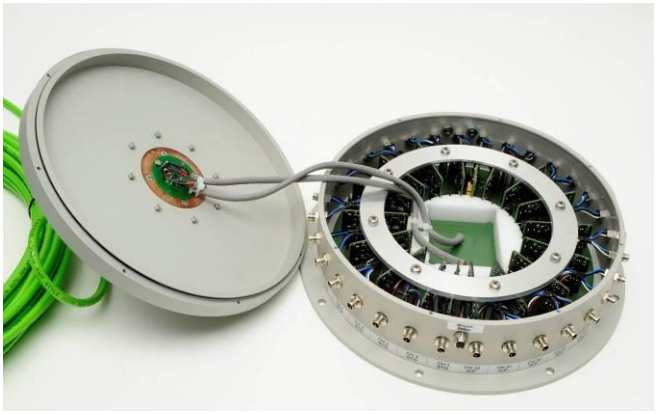
Connections:
32 Channel CTP32-Rotate ENC



Open housing:
32 Channel CTP32-Rotate ENC

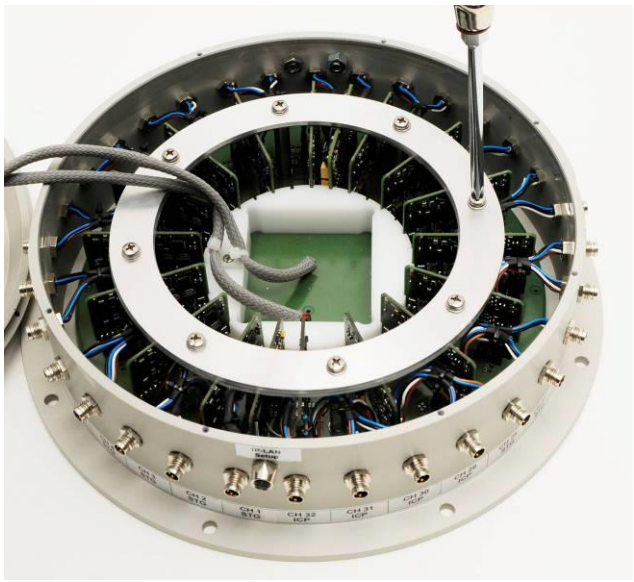
Untwist the M2.5 screw with hexagon screw driver 2mm

Lift the cover on the slot with cover lifter tool!



Take care with power and data cables!!

O-ring seal is lubricated with silicone grease!

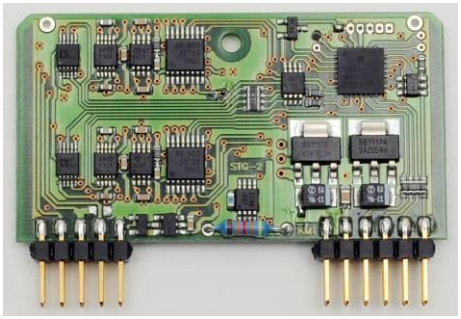


Open the modules ring

Now you can change the acquisition modules e.g. CTP-STG

Caution: If you open the housing, switch off the powering! Don't plug any module under power!

CTP-STG - Acquisition module for 2 channels strain gages



STG connection for 2 channels

Powering and digital bus I/O

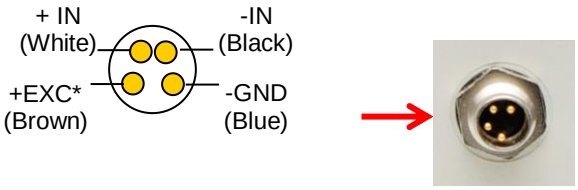
CTP-STG
Acquisition module for 2x strain gages
Full and half bridge (≥350Ω)
Fixed excitation 4V DC
Offset calibration by auto zero
Gain: 250-500-1000-2000
Anti aliasing filter
Signal bandwidth 0Hz to 3000Hz
Resolution 16bit
Accuracy <0.2%
Powering: 6.5-9V DC
Current consumption with full bridge 350 ohm 75mA

Gain and STG-Sensitivity (output +/-10V at decoder)
Gain 125 = +/-20mV/V
Gain 250 = +/-10mV/V
Gain 500 = +/-5mV/V
Gain 1000 = +/-2.50mV/V
Gain 2000 = +/-1,25mV/V

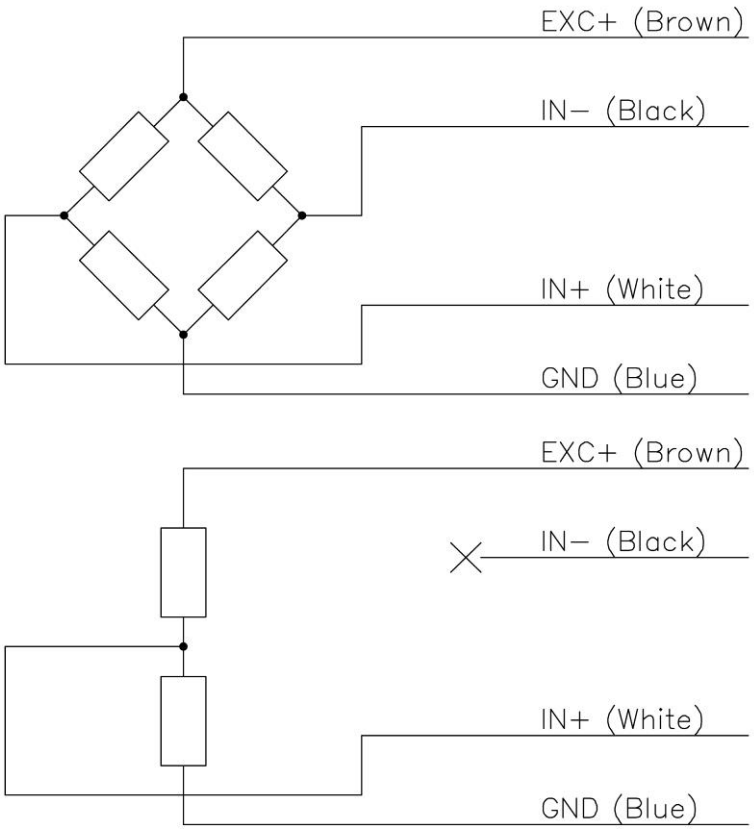
Sensor cable

Pin 1 Brown = EXC +
Pin 2 White = IN +
Pin 3 Blue = GND
Pin 4 Black = IN -

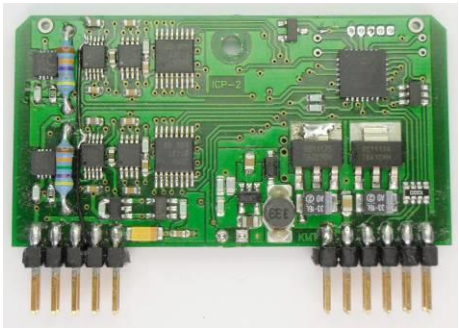
Sensor socket



Plug at CTP-Rotate ENC



CTP-ICP - Acquisition module for 2 channels ICP



IPC connection for 2 channels

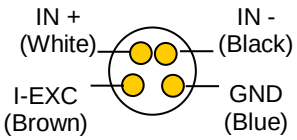
Powering and digital bus I/O

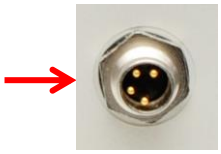
CTP-ICP
Acquisition module for 2x ICP
Fixed excitation 4mA or 1mA
Gain: 1-2-4-8-16
Anti aliasing filter
Resolution 16bit
Accuracy <0.2%
Powering: 6.5-9V DC
Current consumption 80mA

Sensor cable

Pin 1 Brown = I-EXC
Pin 2 White = IN +
Pin 3 Blue = GND
Pin 4 Black = IN -

Sensor socket

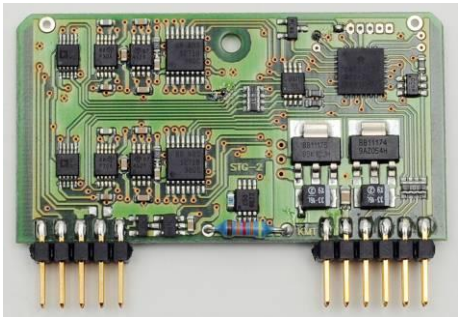




IN + and I-EXC must be shorted together!
IN – and GND must be shorted together!

Plug at CTP-Rotate ENC

CTP-VOLT - Acquisition module for 2 channels VOLT inputs



VOLT connection for 2 channels

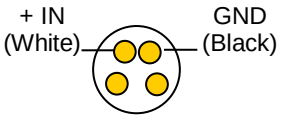
Powering and digital bus I/O

CTP-VOLT
Acquisition module for 2x high level inputs ±5V or ±10V
Signal bandwidth 0Hz to 3000Hz
Resolution 16bit
Accuracy <0.2%
Powering: 6.5-9V DC
Current consumption 60mA

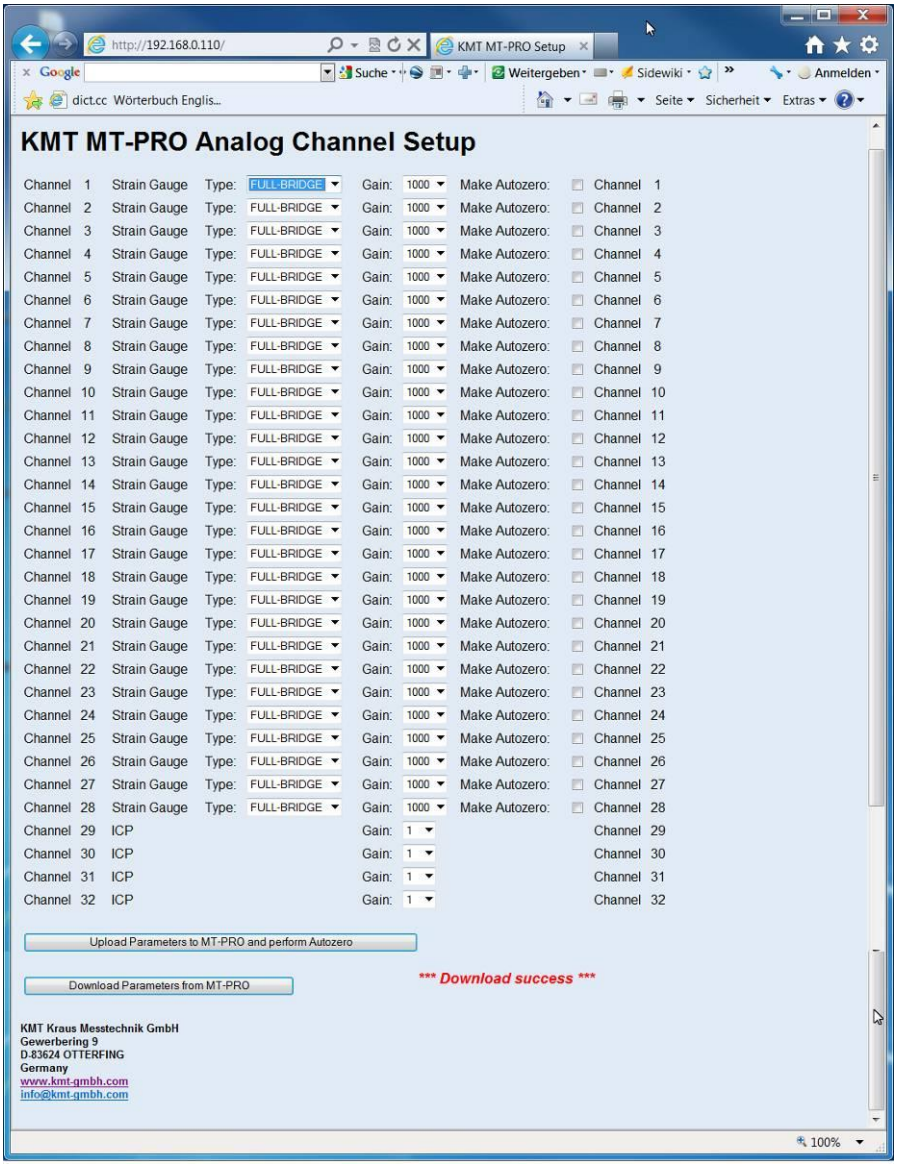
Sensor cable

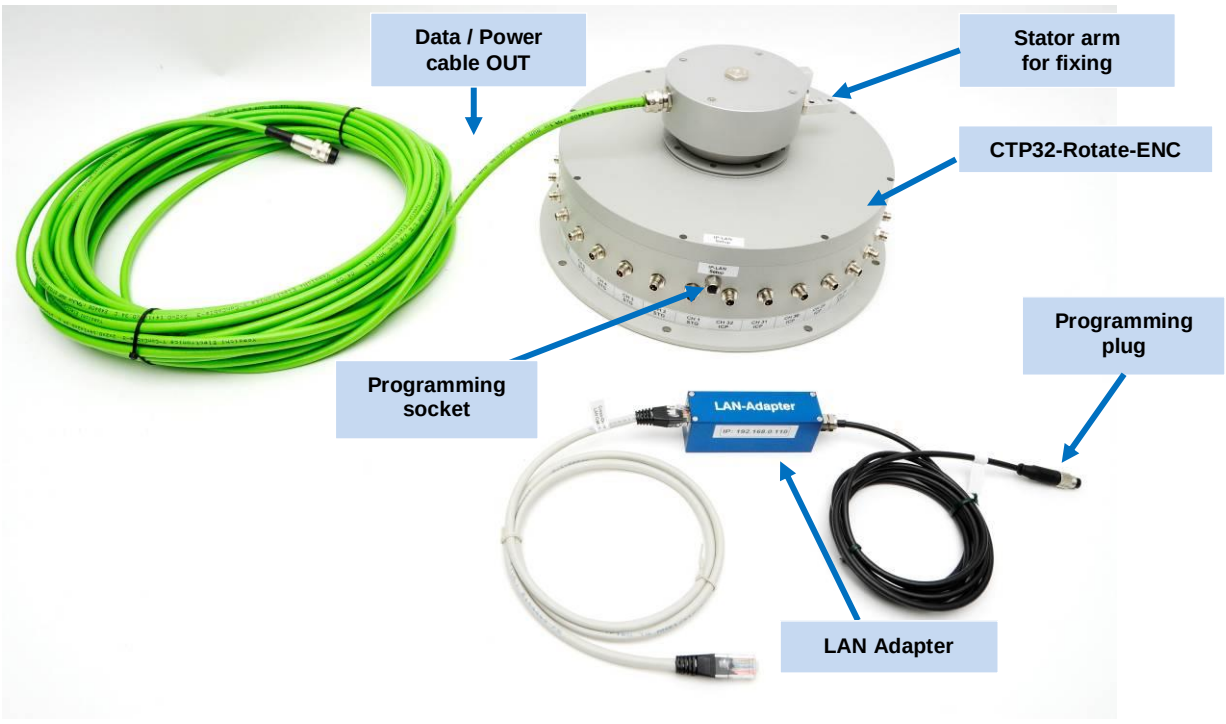
Pin 2 White = IN +
Pin 4 Black = GND

Sensor socket

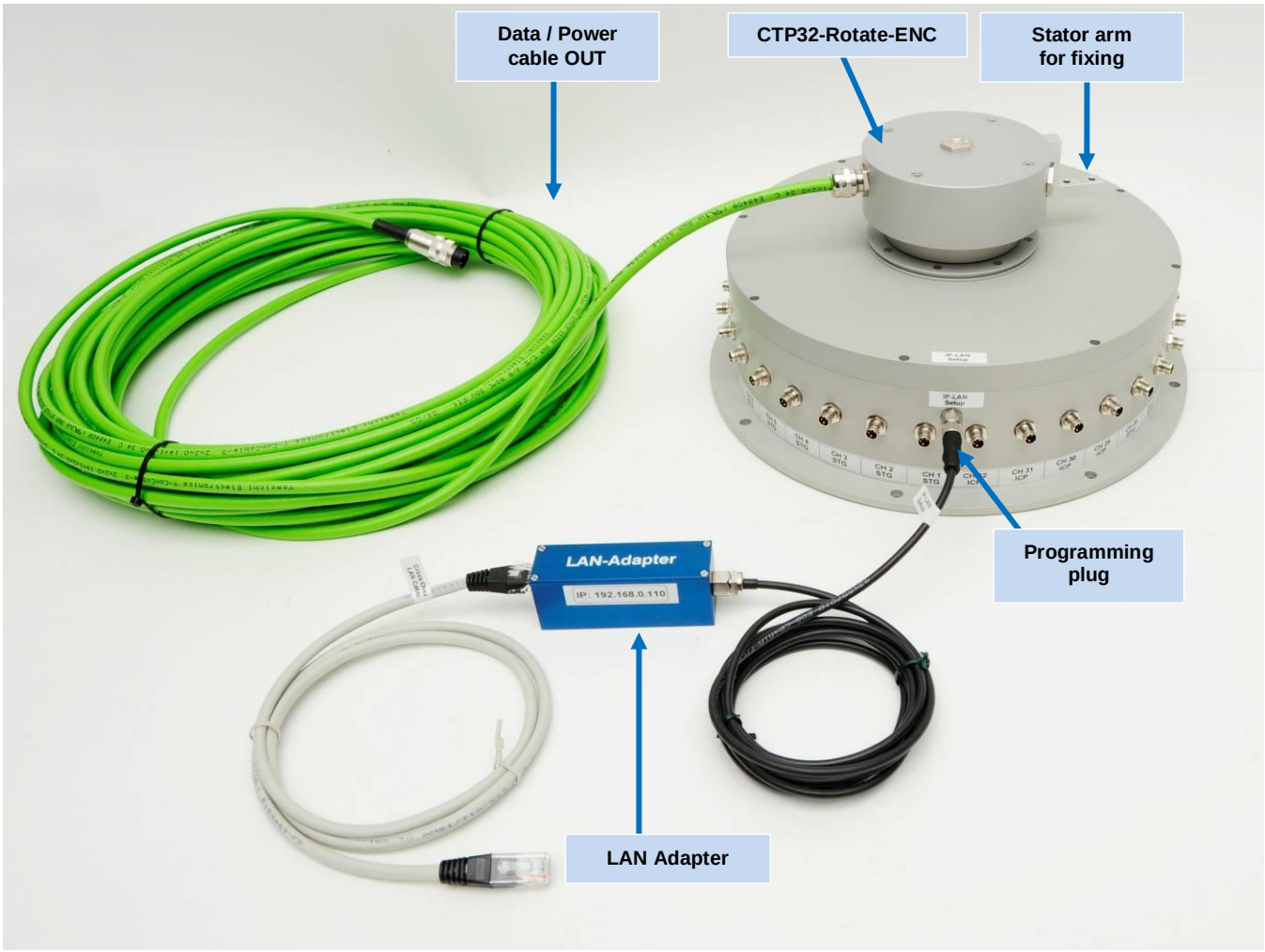


Plug at CTP-Rotate ENC

Settings CTP-Rotate-ENC	Programmable via web interface
Web interface address: **IP 192.168.0.110** Settings: **STG** Gain 125-250-500-1000-2000 Half- and full bridge Make Auto Zero YES/NO **ICP** Gain 1-2-4-8-16 **Selectable for each channel!**	



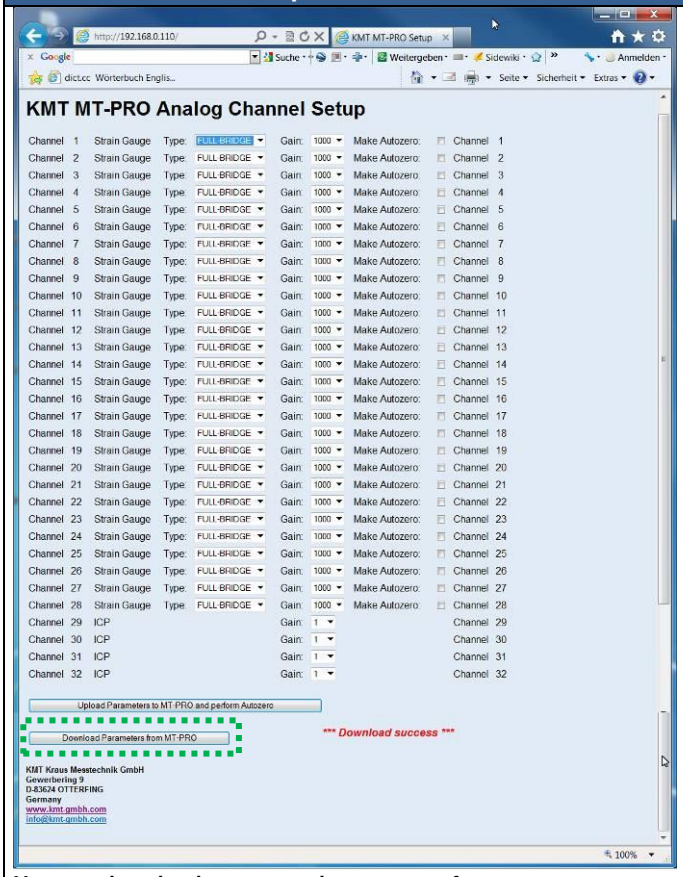
Settings of CTP-Rotate-ENC
Programmable via web interface



1) Power ON the CTP-Rotate ENC via IND-PWR of CTP-Rotate-DEC
2) Connect the LAN-Adapter with the CTP-Rotate-Encoder
3) Adjust your notebook to manual on e.g. IP 192.168.0.100
4) Connect LAN-Adapter with your notebook via ***cross-over*** LAN cable
5) Open Microsoft Internet Browser and enter IP address **192.168.0.110** of LAN-Adapter
6) Now you get access on the web-interface and you can adjust the CTP-Rotate-Encoder

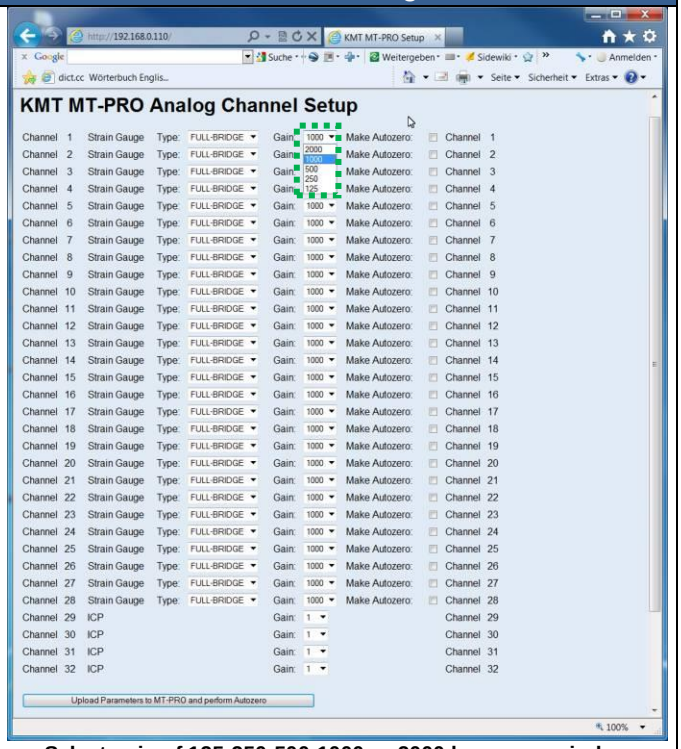
CTP-MTP
Software setup

DOWNLOAD parameters for device



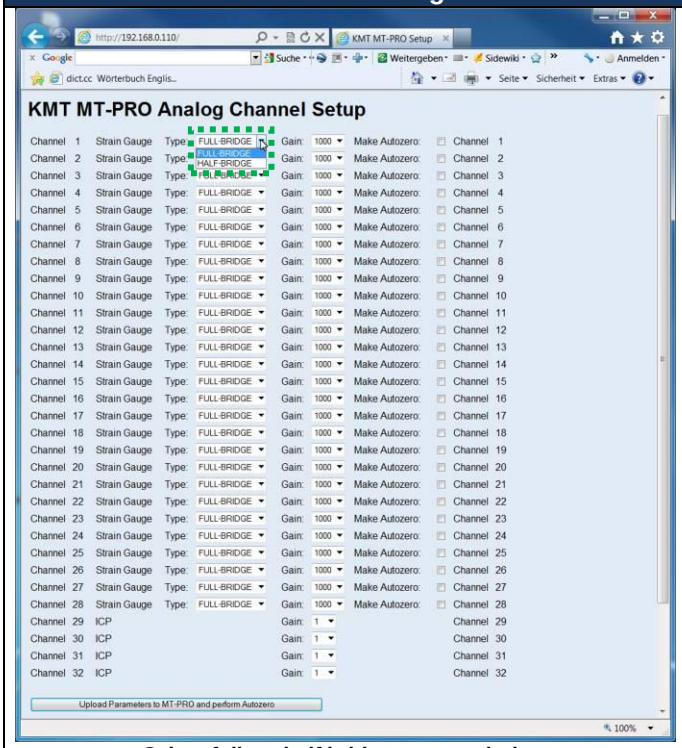
You can download your stored parameters from the CTP-Rotate-ENC

GAIN setting



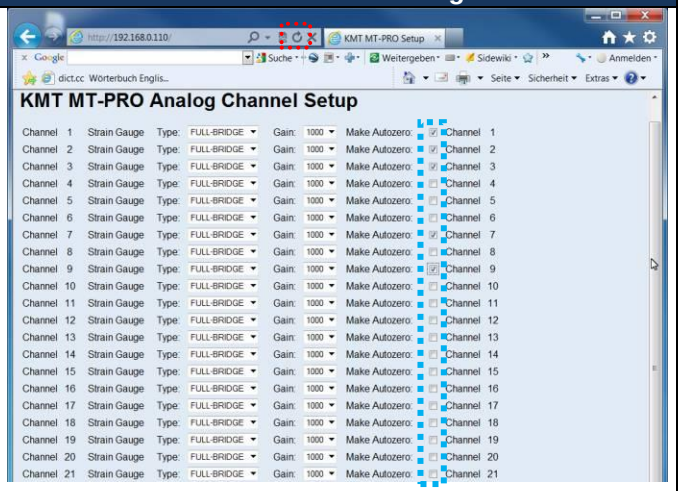
Select gain of 125-250-500-1000 or 2000 by popup window

BRIDGE setting



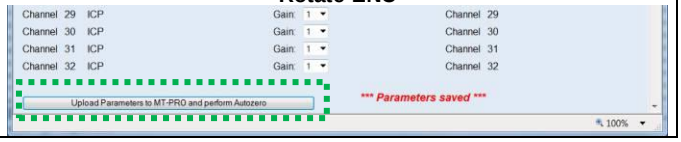
Select full- or half bridge popup window

AUTO-ZERO setting

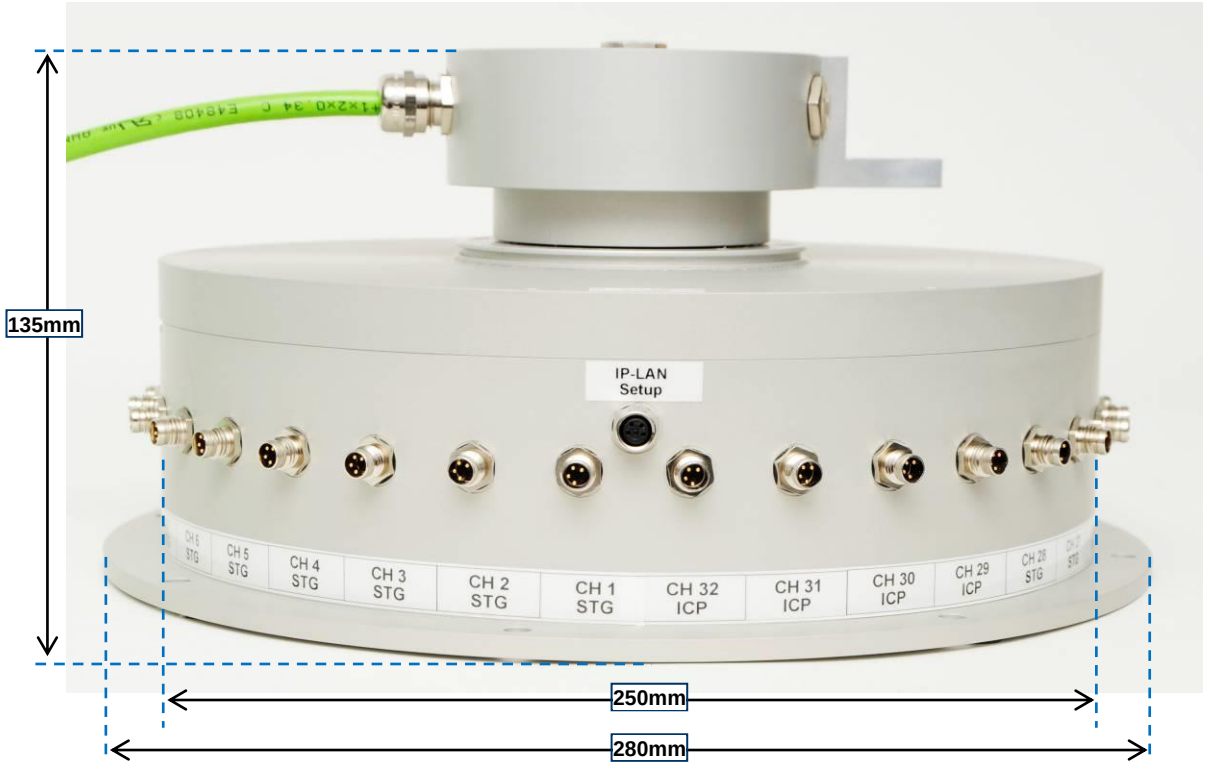


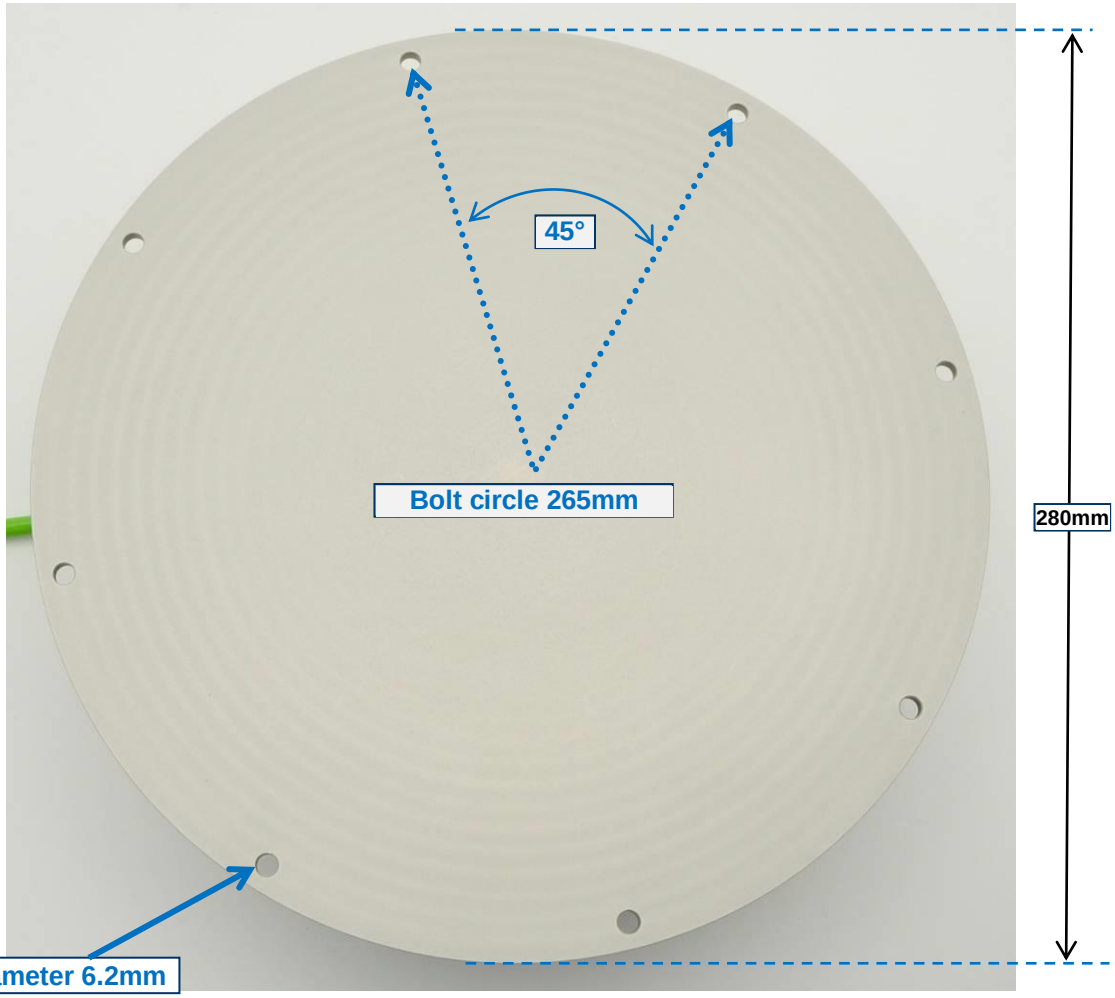
Select Auto-Zero per channel. **The Auto-Zero function will be executed only one time per upload the parameters to CTP-Rotate-ENC! It will be stored also after power off in the CTP-Rotate-ENC until you make a new Auto-Zero on this channel!**

Don't use the refresh button on your Brower; otherwise the parameters of you Brower cash will upload to the CTP-Rotate-ENC



Dimensions of CTP32-Rotate-ENC





Weight 3950g (without cables)