

DATA SHEET

1-CTPSIU-6-1U CT

GEN series 1-CTPSIU-6-1U CT Current Transducer Power Supply

SPECIAL FEATURES

- 100 - 240 V AC 50/60 Hz AC input voltage
- 120 - 370 V DC input voltage
- Current transducers' output signals available via 4 mm banana plugs
- Individual or serial access to calibration windings of all transducers (max. 6) via 4 mm banana plugs
- 9-pin D-Sub connector provides access to isolated status signals of each transducer and power
- Front LEDs indication of normal operation for each transducer and power LED for 1-CTPSIU-6-1U CT



1-CTPSIU-6-1U CT Functions and Benefits

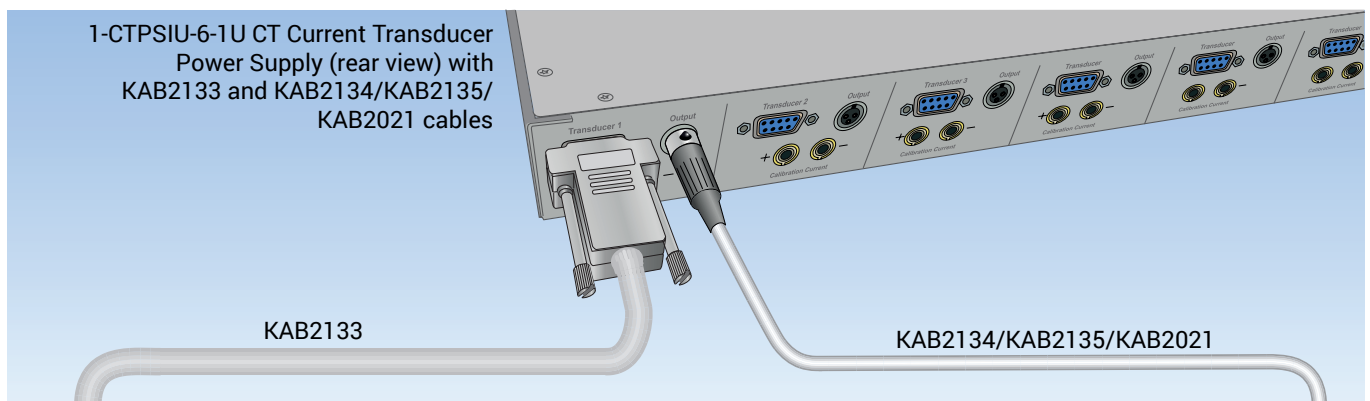
The 1-CTPSIU-6-1U power supply is designed to deliver the required power for optimal performance of the current transducers

A dedicated 6-channel system interface unit for ultra-stable, high precision fluxgate technology current transducers.

The power supply powers up to six CTT/CTS/CTN/CTM series current transducers at the same time.

The 1-CTPSIU-6-1U power supply, when used with HBK Current Transducers, enables full performance for measurements with the following configurations:

- GN310B/GN311B or GN610B/GN611B cards, connected via KAB2133, KAB2134, or KAB2135 cables.
- GN800B card, connected via KAB2021 cable and the Current Remote Probe.



Electrical Specifications			
Parameter	Symbol	Value	Comment
Mains input			
AC input voltage	V_{AC}	90 - 264 V _{RMS}	Autoranging ⁽¹⁾
Power rating		350 W	
AC nominal current	I_{AC}	2.1 A @ 115 V A _{RMS} 1:1 A @ 230 V A _{RMS}	
Frequency	f	50 - 60 Hz	Autoranging ⁽¹⁾
Transducer output port			
Supply voltage	U_{cc}	± 14.75 (min) ± 15.75 (max)	Valid for all channels
Ripple		10 mV _{RMS}	
Status Port (Isolated output)			
Collector-Emitter current		100 mA	
Collector-Emitter voltage off		100 V	
Reverse Collector-Emitter voltage, off		0.3 V	Add Is (if Is is positive)
Collector-Emitter voltage, on		1.2 V	@ 100 mA
Isolation to chassis		300 V	

(1) 100-240V~ ±10% “~” refers to EN61010-1

Specifications	
Modular 19" rack with 1 to maximum 6 channel CT support.	
	
Figure 1: Front side (left) and rear side (right)	
Signal LEDs	CT Power ON, CT Status
Maximum input voltage	AC 100 V to 240 V, 47 Hz to 63 Hz
Output voltage	± 15 V ± 5% (per channel)
Number of channels	6; The 1-CTPSIU-6-1U is intended to be used for powering up to six HBM current transducers.
Power supply	100 to 240 V AC, 47 to 63 Hz 120 - 370 V DC
Connectors	
Input connectors	9 pin D-sub
Output connectors	XLR

Environmental and Safety Specifications	
Ambient operating temperature range	5 °C to 40 °C (41.0 °F to 104.0 °F)
Storage temperature range	0 °C to 60 °C (32.0 °F to 140.0 °F)
Relative humidity	20% to 80%, Non-condensing
Maximum altitude	2000 m (6562 ft)
Usage	Designed for indoor use
Polution Degree	2
External devices	External devices connected to current transducers must comply with the standards IEC 61010-1 and IEC 62368-1 and be energy-limited circuitry.
Cleaning	The transducer should only be cleaned with a damp cloth. No detergent or chemicals should be used.
Electrical Safety	
EN 61010-1	Safety requirements for electrical equipment for measurement, control, and laboratory use - General requirements
EN IEC 61010-2-030	Particular requirements for testing and measuring circuits
Electromagnetic Compatibility	
EN 61326-1	Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
Environmental	
EN 60068-2-64	Environmental testing - Part 2-64: Tests - Test Fh: Vibration, broadband random and guidance
EN 60068-2-27	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock

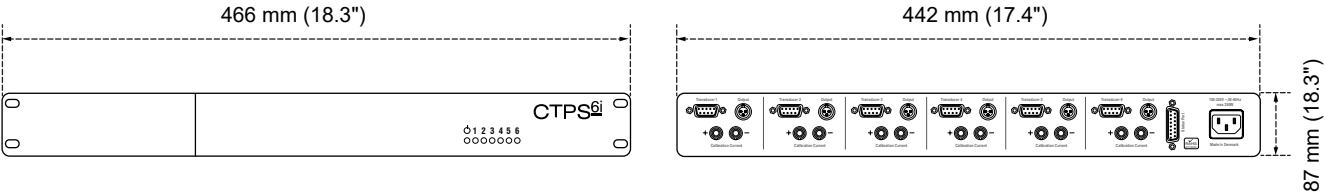
Physical, Weight and Dimensions	
Weight	Typical 6.5 kg (14.33 lb)
Mounting instructions	
Height	87.2 mm (3,43")
Width / Width including mounting ears	442 mm (17,40") / 466 mm (18,34")
Depth	415 mm (16,33")
 The diagram illustrates the physical dimensions of the CTPSIU-6-1U CT. It includes a side view showing a width of 466 mm (18.3 inches) and a height of 87 mm (18.3 inches). The front view shows a width of 442 mm (17.4 inches) and a height of 87 mm (18.3 inches). The front view also shows the location of the CTPSIU-6-1U CT label and the location of the mounting ears.	

Figure 2: Dimensions

1-CTPSIU-6-1U Connections

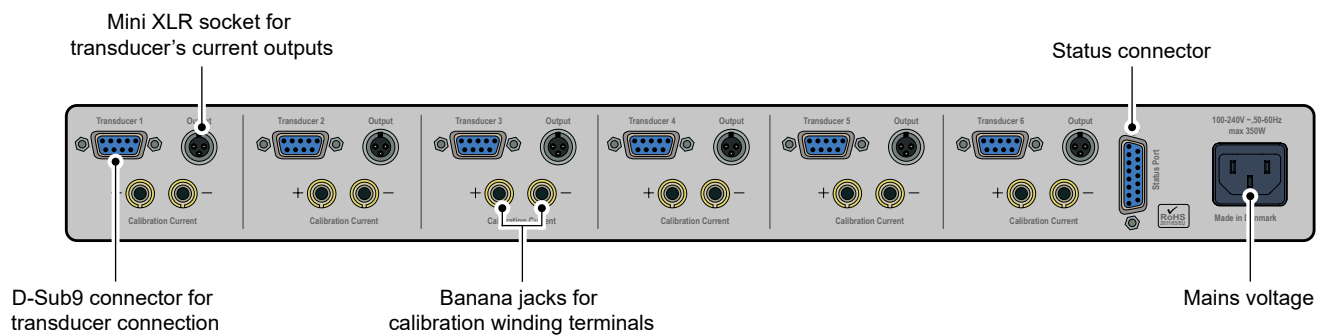


Figure 3: Connection overview 1-CTPSIU-6-1U (rear view)

GN310B/GN311B HBM Current Transducer (CT) Wire Diagram

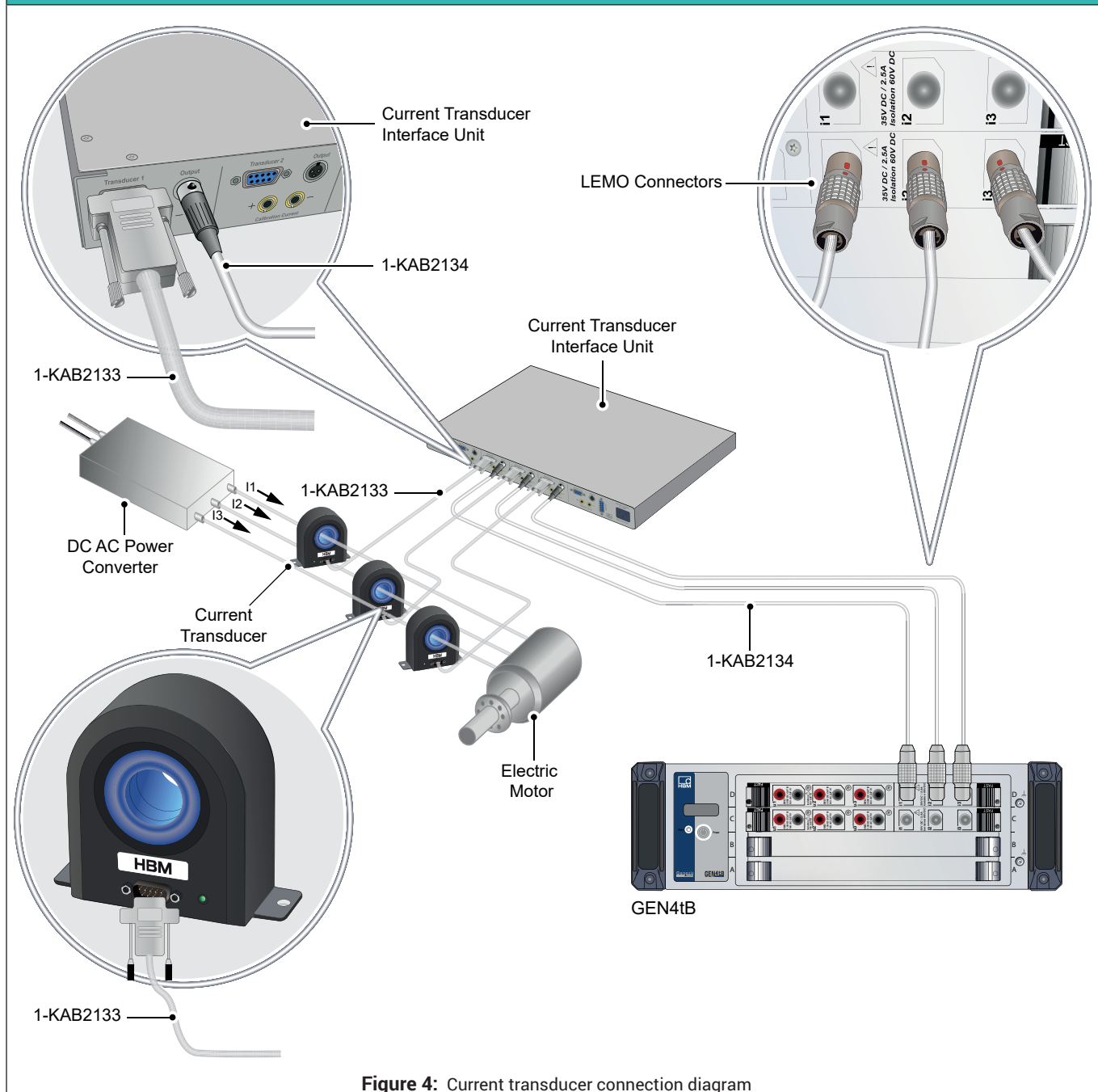


Figure 4: Current transducer connection diagram

Note: Connection diagram refers to CTS series Current Transducers.

GN610B/GN611B Current Transducer (CT) Wire Diagram

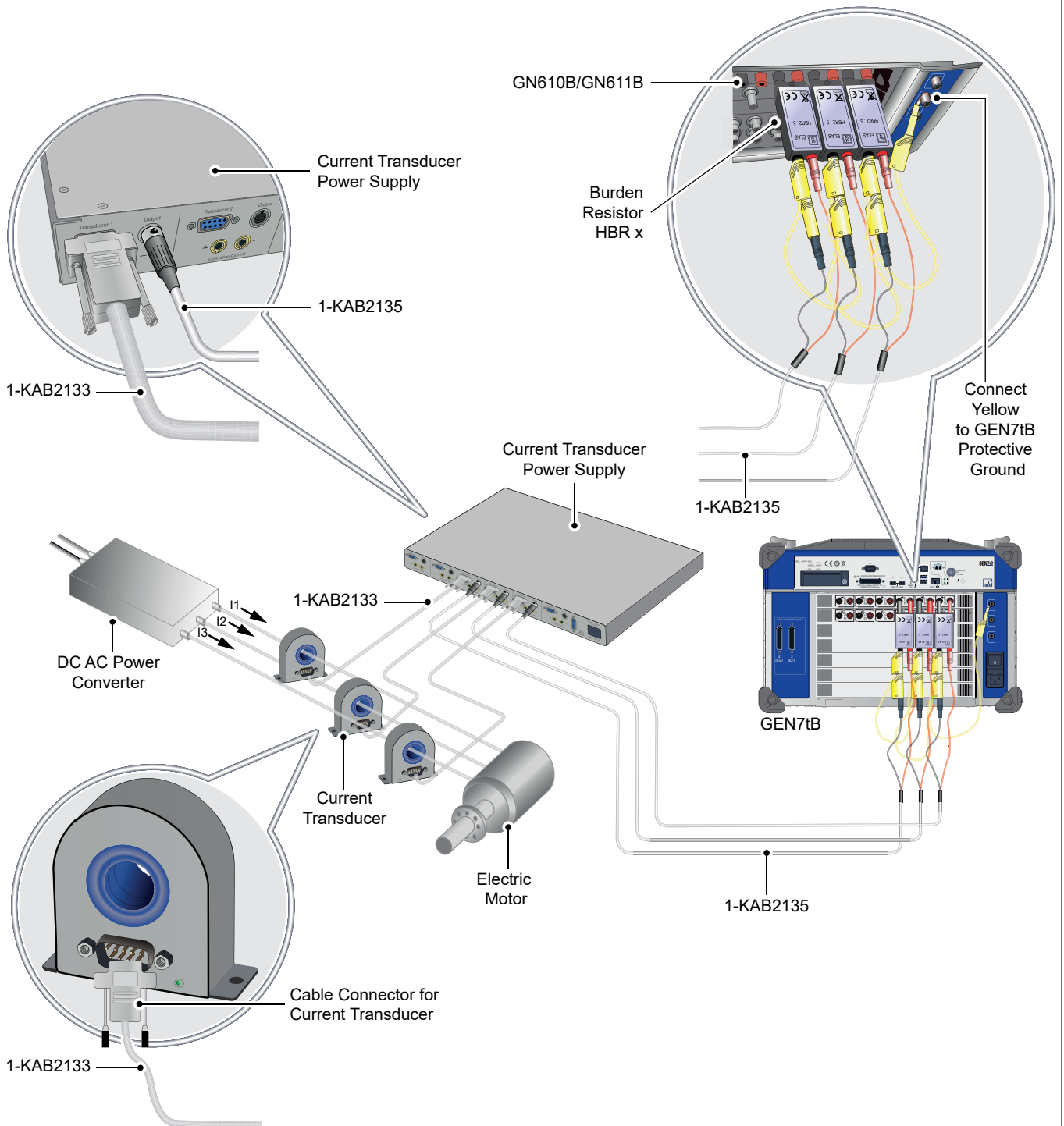


Figure 5: Current transducer connection diagram

P211I-4 (P111I-4) HBK Current Transducer (CT) Wire Diagram

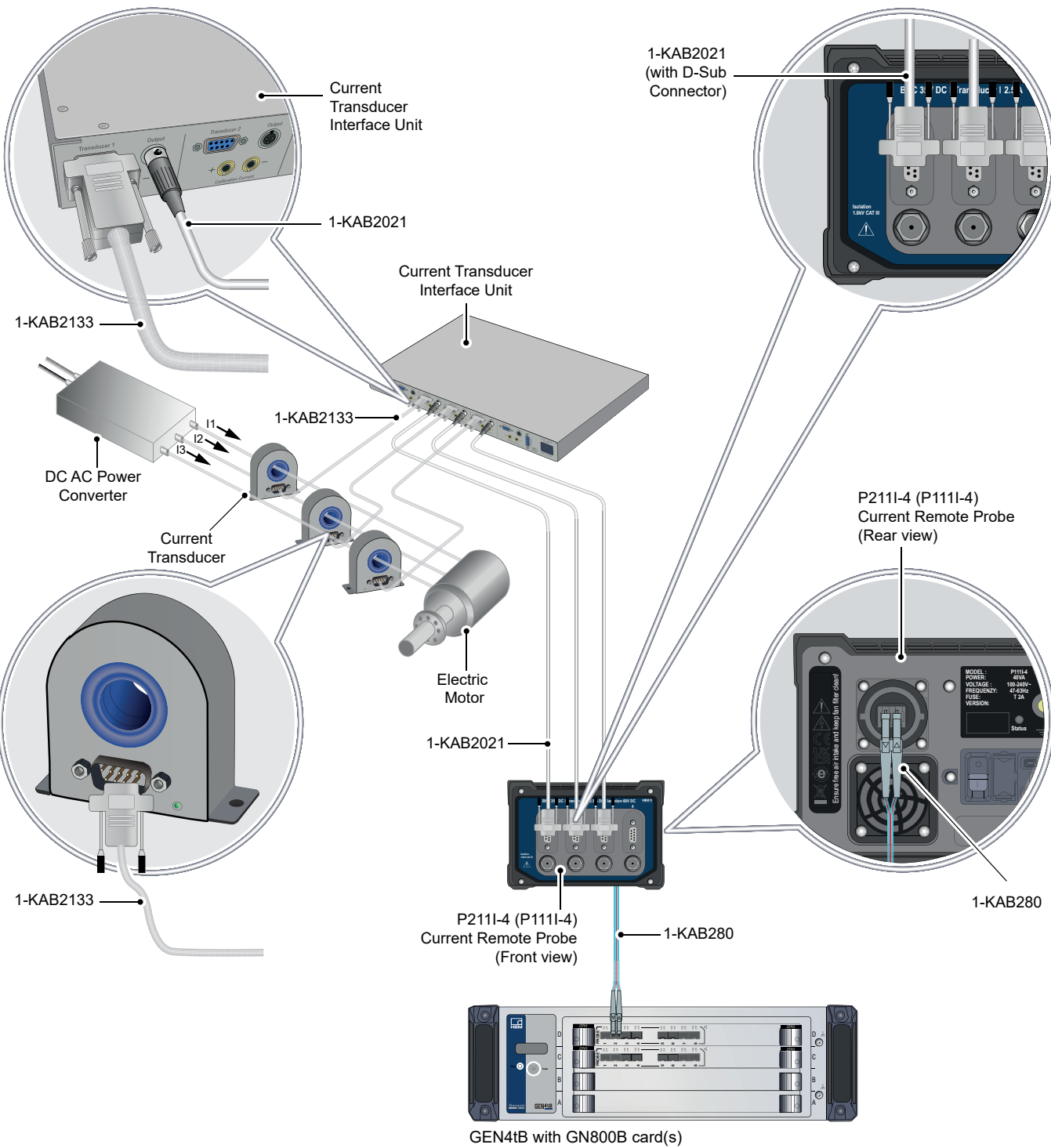


Figure 6: P211I-4 (P111I-4) Current Remote Probe connection diagram

Ordering Information		
Article	Description	Order No.
CT Interface unit	 Interface unit for up to six current transducers. Industry standard D-SUB 9 pin input connectors. Multi-pin XLR output connectors. Supports transducer calibration winding access through 4 mm banana plugs. Front LEDs to indicate normal operation of each transducer. 100 - 240 V AC 50/60 Hz AC input voltage. 120 - 370 V DC input voltage. 1U height 19" rack mountable.	1-CTPSIU-6-1U

Current Transducers Interface and Cables, to be ordered separately		
Article	Description	Order No.
CT cables	 Industry standard current transducer connection cable. Shielded, low ohmic 9 wire cable with D-Sub 9 connectors on both ends. Supports power, status, current output and calibration current input. Lengths: 0.5, 1, 2, 5, 10 and 15 m (1.65, 3.28, 6.56, 16.4, 32.8 and 49.2 ft)	1-KAB2133-0.5 1-KAB2133-1 1-KAB2133-2 1-KAB2133-5 1-KAB2133-10 1-KAB2133-15
XLR to LEMO cable for GN31XB	 CT interface unit to GN31xB DAQ power card connection cable. Uses XLR and LEMO connectors for a direct current output connection to the GEN DAQ card. Length 2 m (6 ft)	1-KAB2134-2
XLR to cable with 4 mm safety plugs for GN61XB	 CT interface unit to GN61xB DAQ 1kV card connection cable. Uses XLR and 4 mm spring-loaded safety plugs for a current output connection to the GEN DAQ card. Requires an additional burden resistor in front of the GN61xB card to convert current to voltage. Length 2 m (6 ft)	1-KAB2135-2
XLR to D-Sub 9 cable for P211I-4 (P111I-4) / P212I-4 (P112I-4)	 CT interface unit to P211I-4 (P111I-4) / P212I-4 (P112I-4) Current Remote Probes connection cable. Uses XLR and D-Sub 9 connectors for a direct current output connection to the Current Remote Probe. Available length 1 m (3.3 ft)	1-KAB2021-1

Current Transducers, to be ordered separately

Ultra-stable, high precision fluxgate technology current transducers for non-intrusive, isolated measurement

**Figure 7:** HBM current transducers, power supply and cables**Current Transducer Family Overview**

Type	Maximum current	Bandwidth (-3 dB)	Aperture size	Supported by 1-CTPSIU-6-1U	Order No.
CTS50ID	75 A DC / 50 A RMS	1000 kHz	27.6 mm	Yes	1-CTS50ID
CTS200ID	300 A DC / 200 A RMS	500 kHz	27.6 mm	Yes	1-CTS200ID
CTS400ID	600 A DC / 400 A RMS	300 kHz	27.6 mm	Yes	1-CTS400ID
CTS600ID	900 A DC / 600 A RMS	500 kHz	27.6 mm	Yes	1-CTS600ID
CTM1200ID	1500 A DC / 1200 A RMS	400 kHz	45.0 mm	Yes	1-CTM1200ID
CTN1000ID	1500 A DC / 1000 A RMS	400 kHz	41.0 mm	Yes	1-CTN1000ID
CTT50ID	75 A DC / 50 A RMS	2000 kHz	20.7 mm	Yes	1-CTT50ID
CTT100ID	150 A DC / 100 A RMS	2000 kHz	20.7 mm	Yes	1-CTT100ID
CTT200ID	285 A DC / 200 A RMS	2000 kHz	20.7 mm	Yes	1-CTT200ID

(1) Approved for use only up to nominal current levels of 1000 A DC / 1000 A RMS. Above these levels additional noise can occur.

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