

Cable Identifier – CI/LCI

- Inexpensive cable selection system
- Easy to operate
- Safe handling
- Very small



Megger[®]

Reliable cable selection on energised and de-energised cables

Functional description

Clear identification of a cable before it is cut or fitted is a task with absolute relevance to safety. Any mistakes here can result in fatal consequences for the cable fitter and may cause outages for the connected customers. The CI cable identification system has been developed for even easier and safer working.

The system consists of the current impulse generator and the receiver CI RX. This receiver is connected by a 230 mm (option 120 mm) flex clamp for decoupling the identification signal. The Pulse generator CI TX generates single sawtooth pulses with a peak current up to 100 A and transmits them into the cable being identified. This current flow of these impulses causes an electromagnetic field with a defined polarity around the cable which is received with the flex coupler of the receiver CI RX, automatically synchronised and displayed by the LED scale. The only possible adjustment is the adjustment of the display sensitivity.

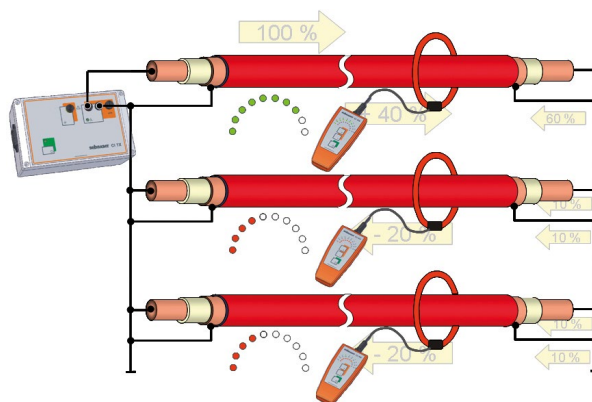
A special software function controls and verifies all parameters of the received pulse.

Evaluated are the following parameters:

- Impuls shape
- Polarity
- Amplitude
- Frequency (2 s Intervall)

The directional clamp in combination with the parameter monitoring by the receiver provides a safe selection regardless of any interference.

The user must only verify the display. This means, that generally, only one conductor or cable has the correct polarity while all other cables have the opposite polarity. Deviations from these requirements must lead to a control of the complete setup.



Cable identification: core-shield

Selection on de-energised cables with CI set

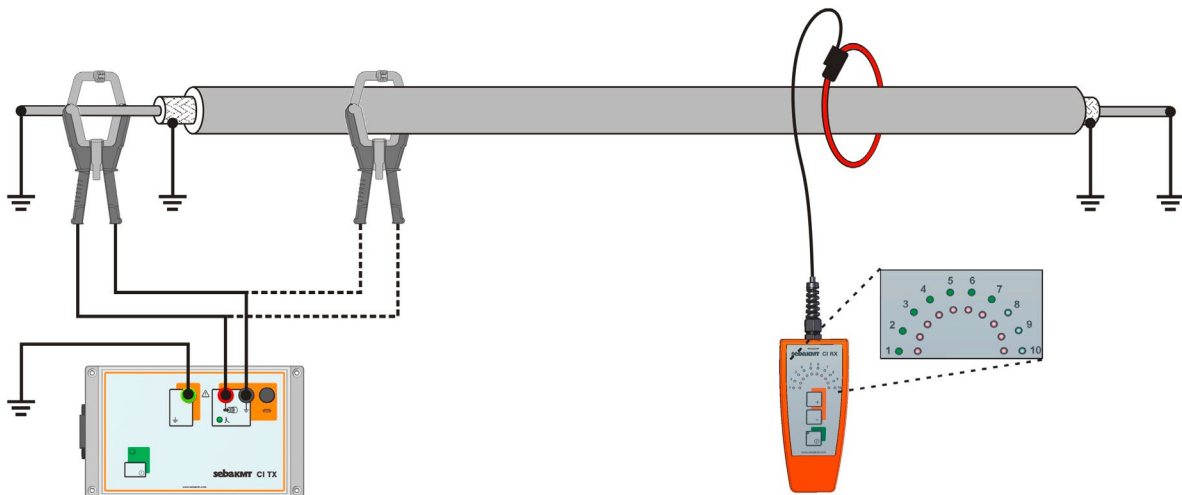
The CI TX in an active, internal powered generator, designed for the selection on de-energised cables. This mains or rechargeable battery powered unit generates active impulses up to 100 A. The feed of the pulse can be done via direct connection or with the optional available transmitter clamp (SZ 80). The operating time of up to 4 hours permits a very flexible use.

Low voltage applications

Work in low-voltage cable networks is increasingly being carried out under live voltage. This demands a reliable identification of the correct cable, which naturally has to be possible without switching off the mains voltage.

Identification on energised cables with the LCI set

The impulse generator LCI TX is connected by a protective conductor lead with the 115 V/230 V AC supply. The feeding transformer is in 2 sec, intervals loaded with current pulses of approx. 80 A. This results in a pulsed current on the section of cable which is received by the flex clamp and is thus used for reliable identification of this section of cable (not suitable for IT networks!). Two LED's indicate the correct connection polarity. This guarantees correct connection to safety sockets.

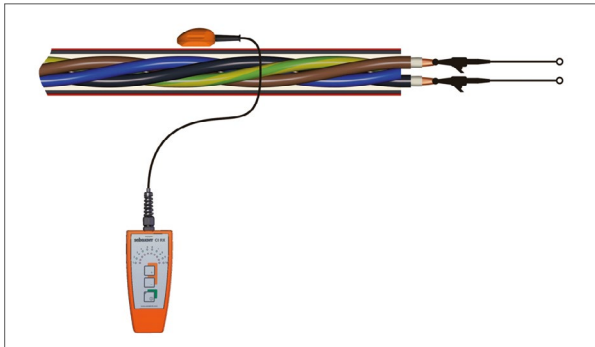


Connection variants SZ 80

Clear identification with the twisted field sensor

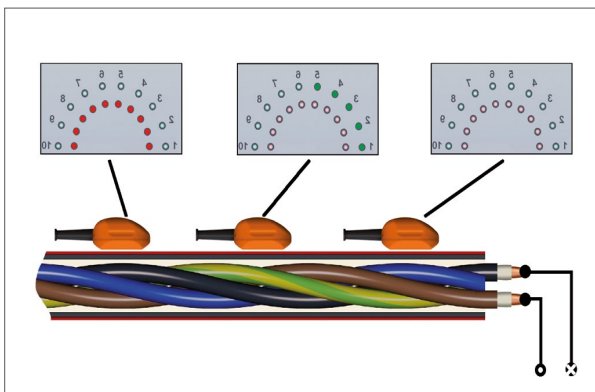
Selection between two phases, and in TT and IT systems

For the selection between phases and with the twisted field method there is the LCI TX 440, which can be connected directly between two phases up to 440 V of a low voltage distribution.



Use of twisted field sensor

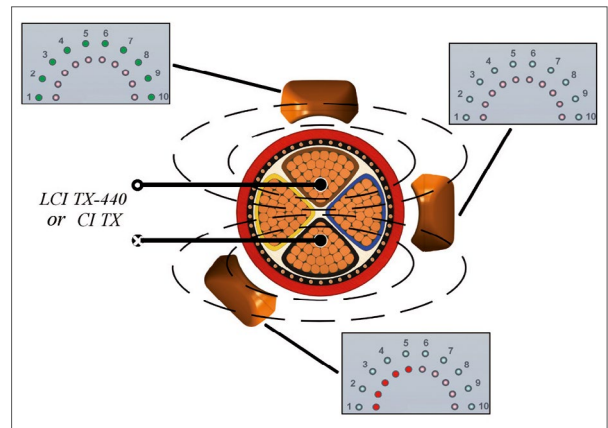
Requirement is a current flow through the feeding transformer. With the twisted field sensor TFS CI, the required phase is then directly detected through the outer sheath. For an even safer selection, this system provides the possibility to use the Flex Coupler to select the correct cable first and then to confirm this additionally by using the twist field sensor to verify the specific phase in this cable. In this case the cable can be opened at the outer sheath, and the phase can be exposed before cutting or working on it. Especially for unmarked phases as they exist in PLC or similar, this procedure is very helpful.



Identification with twisted field sensor

Advantage of the twist field method with current impulse

In opposition to a conventional twist field method with audio frequency, the use of the TFS CI in combination with the polarised selection impulse has a significant higher selectivity. This technology has a very clear, narrow limited maximum on top of the phase to be selected, as well as the same clear negative maximum on the return line. Unused conductors will not produce any signal.



Display of the receiver, with twisted field sensor

This twist field selection works as well with the LCI TX (Connection L-N). For the connection on open LV distributions the system has standard safety clips with integrated fuse acc. to CAT IV / 600 V. For a direct connection a NH fuses there is an optional NH test adapter for the insertion on top of NH fuses. This enables a mechanically solid and high current capable connection. This adapter is fused with 6 A, and can be directly used at the LCI TX 440 connector or by a screw-in adapter for the fused clip base, to be used with the LCI TX. The small dimension of the selection generators permits an easy storing inside road pillars.

Technical Data CI/LCI

Universal-Receiver CI RX

Sensor	230 mm Flex-Coupler
Amplifier setting	10 steps; 3 ... 24 dB
Power supply	2 x 1.5 V AA batteries
Operating time	> 50 h
Weight	0.4 kg
Dimension	150 x 65 x 35 mm
Protection class	IP 54
Op. / storage temperature	-10 °C ... +60 °C
Operating humidity	Max. relative humidity 93% at 30°C

Transmitter for identification on de-energised cables CI TX

Pulse voltage	55 VDC
Pulse current	max. 100 A
Pulse sequence	30 / min
Pulse width	72 ms
Power supply	100 ... 240 VAC 50 / 60 Hz 12 V rechargeable battery
Operating time	4 h on rechargeable battery
Charging time	6 h
Weight	1.6 kg
Dimension	201 x 120 x 80 mm
Protection class	IP 54
Op. / storage temperature	-10 °C ... +60 °C
Operating humidity	Max. relative humidity 93% at 30°C

Transmitter for identification on energised cables LCI TX

Operating voltage	100 ... 240 VAC 50 / 60Hz
Pulse current	80 A
Pulse sequence	15 / min
Pulse width	1.5 ms
Weight	0.5 kg
Dimension	151 x 101 x 60 mm
Protection class	IP 54
Op. / storage temperature	-10 °C ... +60 °C, CAT IV / 300 V
Operating humidity	Max. relative humidity 93% at 30°C

Transmitter for phase to phase identification on energised cables LCI TX 440

Operating voltage	240 ... 440 VAC; 50 / 60Hz
Pulse current	80 A
Pulse sequence	15 / min
Pulse width	1.5 ms
Weight	0.5 kg
Dimension	151 x 101 x 60 mm
Protection class	IP 54
Op. / storage temperature	-10 °C ... +60 °C, CAT IV / 600 V
Operating humidity	Max. relative humidity 93% at 30°C



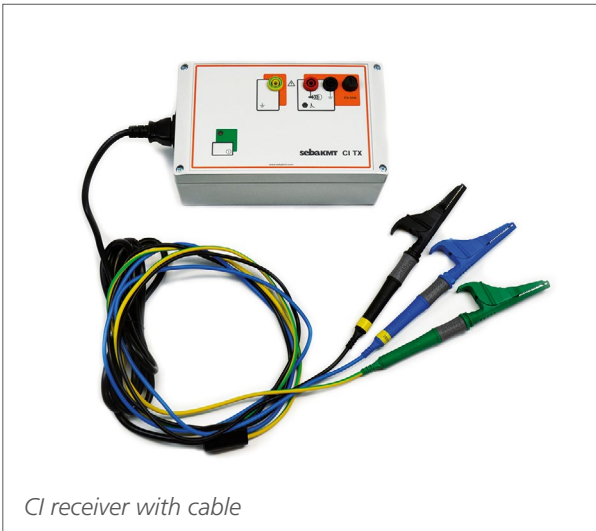
Signal feed-in



Receiver connection



CI & LCI set with transport case



CI receiver with cable



Twisted field sensor TFS CI



Phasenauslesesensor PAS CI



Transport case



Transmitter clamp SZ 80

Ordering information

Product Order no.	Complete set CI & LCI-440 Order no. 108300606	Complete set CI & LCI Order no. 820011449	Live Cable Identifier Phase-Phase (CI-440) Order no. 108300513	Live Cable Identifier Order no. 820011450	Cable Identifier Order no. 820011451
CI Receiver Order no. 820010874	✓	✓	✓	✓	✓
CI Transmitter Order no. 820010916	✓	✓	✗	✗	✓
LCI Transmitter Order no. 820010924	✗	✓	✗	✓	✗
LCI 440 Transmitter (phase-phase) Order no. 820025001	✓	✗	✓	✗	✗
Twisted field sensor Order no. 820024979	✓	✓	optional	optional	optional
Phase identification sensor Order no. 820014535	optional	optional	optional	optional	optional
Lead kit for CI Transmitter Order no. 128314893	✓	✓	✗	✗	✓
Lead kit for LCI Order no. 820021805	✗	✓	✗	✓	✗
Lead kit for LCI Transmitter (phase-phase) Order no. 128314895	✓	✗	✓	✗	✗
Transport-case Order no. 90004532	✓	✓	✓	✓	✓
Mains cable EU (plug) Order no. 810000024	✓	✓	✗	✓	✓
Mains cable UK (plug) Order no. 118307335	✓	✓	✗	✓	✓
Mains cable US (plug) Order no. 502025220	✓	✓	✗	✓	✓
SZ 80 set, including accessories Order no. 2007615	optional	optional	✗	✗	optional
User manual	DE / EN / ES / FR / HU / RU				
Flexible clamp, 250 mm Order no. 820013107	Please select one type of clamp.				
Flexible clamp, 150 mm Order no. 820013106					