

Instructions for Installation, Use and Maintenance



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Instructions for Installation, Use and Maintenance for the KECA 300 CLB83 Low-power Current Transformers

These instructions for installation, use and maintenance are valid for KECA 300 CLB83 low-power current transformers according to IEC 61869- 10 standard operating in indoor conditions.

01 Example of a label
(IEC 61869-10)

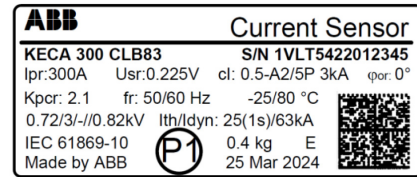
02 Example of data
stored in 2D Bar Code
according to label
parameters in picture

1. Operating Conditions

The LPCT (low-power current transformer) should be mounted in dry, indoor conditions without excess ingress of dust and corrosive gases. The product must be protected against unusually heavy deposits of dust or similar pollution, as well as against direct sunshine. It is designed for standard ambient temperature between -25°C and +80°C (storage and transportation temperature between -40°C and +80°C). The altitude for mounting should be lower than 1000 m above sea level. The sensor may also be used at higher altitudes when agreed upon with the manufacturer. The LPCT type KECA 300 CLB83 is intended for use in current measurement in medium voltage switchgear. The LPCT shall be installed over a screened bushing insulator, screened insulated cable or any other type of screened insulated conductor. The case of LPCT is made from insulating plastic material. The primary conductor shall be insulated in medium and low voltage applications and screened from the application voltage in medium voltage applications – conductive screening shall be at ground potential. The insulation of primary conductor determines the highest permissible system voltage.

2. Technical Details

For the LPCT dimensions see dimension drawings at the end of these instructions. Rated values for each individual LPCT are mentioned on the rating plate glued to the body. Values mentioned on the rating plate must not be exceeded.



01

KECA 300 CLB83	Type code
S/N	Serial number
Ipr	Rated primary current
Usr	Rated secondary output
cl.	Accuracy class
Kpcr	Rated extended primary current factor
fr	Rated frequency in Hz
Ith/Idyn	Rated short-time thermal current in kA / Rated dynamic current in kA
-25/80 °C	Ambient temperature
0,4 kg	Weight
E	Insulation class
IEC 61869-10	IEC – standard referred to
25 Mar 2024	Date of production

Tab. 1. Labels abbreviation definitions according to IEC 61869-10

POSITION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
DATA	K	E	C	A		3	0	0		C	L	B	8	3			S	/	N
POSITION	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38
DATA		1	V	L	T	5	4	2	2	0	1	2	3	4	5		2	5	
POSITION	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57
DATA	M	A	R		2	0	2	4		U	s	r		0	.	2	2	5	0
POSITION	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	
DATA	V		c	l	.		0	.	5	/	5	P	1	0					

02

— 03 KECA 300 CLB83 installation

— 04 Grounding of a shielded cable

— 05 Ferrules

— 06 Ground terminal

3. Instructions for installation

Safety instruction

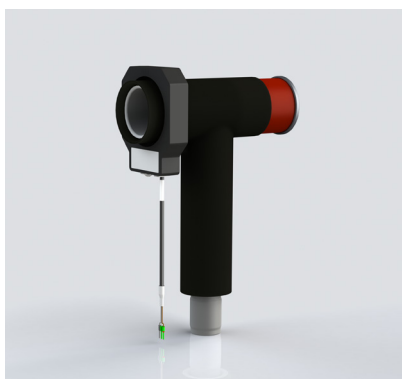
Always ground the LPCT, terminal M5.

Installation conditions

The LPCT should be installed in dry, indoor conditions. The temperature during the assembly must be between 0°C and +40°C. The LPCT cable should not be moved or bent if the temperature is below 0°C.

Sensor Installation

KECA 300 CLB83 should be centered to achieve optimal function in the application. Polarity of signal has to be considered and practically can be reversed in IED, if necessary. The LPCT can be used on various cable connectors with outer diameters in the range up to 83 mm (measured after cable connector installation on the bushing). All types of connectors which are used with LPCT must be shielded.



— 03

Installation on cable

The LPCT can be used also for cable installation. In this case the end of the shield near the device is grounded by a wire that passes through the sensor window, as shown in Figure 4.

The current flowing in the shield flows through the grounding lead, which is also in the LPCT window. The fluxes produced by the current flow in the shield and in the grounding lead are equal but opposite in direction and, therefore, the output of the LPCT is not affected by the flow of current in the shield.



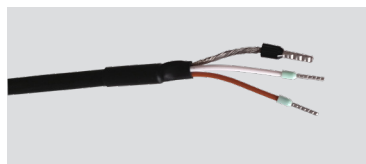
— 04

Secondary connections

The secondary cable is a single shielded cable designed to give maximum shielding. The LPCT is equipped with a cable for connection with the IED by ferrules.

The secondary cable is inseparable part of each LPCT and cannot be additionally extended, shortened, branched, modified, withdrawn or changed due to the guarantee of accuracy and performance of the sensor.

The cable must be connected directly to electronic measurement equipment (e.g. IED). The electrical shielding of cable must be earthed on "electronic measurement equipment" side. The cable must be fixed close to metal wall or inserted inside of metal cable tray far from power cables! The minimal bending radius for the cable is 20 mm. The cable is not to be moved if the temperature is below 0°C. If cable is damaged please contact the manufacturer for instructions.



— 05



— 06

A cable not connected to the relay can be left open or short-circuited without any harm for the LPCT. Even during a primary short-circuit the voltage in the secondary circuit of the current sensor will be below 100 V. Nevertheless it is a good safety practice to earth cables not connected to the relay.

Grounding terminal M5

The LPCT's grounding terminal is located on the bottom (see Fig. 06) of the sensor and must be connected to the ground during the device operation.

4. Instructions for Use

The LPCTs are used:

- To convert large currents in the primary circuit of the network to the appropriate signal for the secondary equipment (e.g. IEDs)
- To insulate primary and secondary circuits from each other
- To protect secondary equipment from harmful effects or large currents during abnormal situations in the network

The use of a LPCT for other purposes than those described above is forbidden.

Routine test report

The routine test report includes following tests:

- Verification of terminal marking
- Power-frequency withstand test on secondary terminals / Power-frequency voltage withstand test for low-voltage components
- Test for accuracy

5. Instructions for Maintenance

Excessive dust or other kinds of pollution must be brushed off the LPCT. Polluted devices can be cleaned with alcohol, petrol or toluene. Otherwise, during normal use the LPCTs do not need any additional maintenance.

6. Transport and Storage

The permissible transport and storage temperature for LPCT is from -40 to +80°C. During transport and storage the LPCTs must be protected against direct sunshine. The LPCTs are delivered packed into wooden boxes or transport pallets.

7. Recommended Procedure for Disposal of the LPCT

The product does not contain environmentally hazardous materials. For disposal of the product after it has been taken out of use, local regulations, if there are any, should be followed.

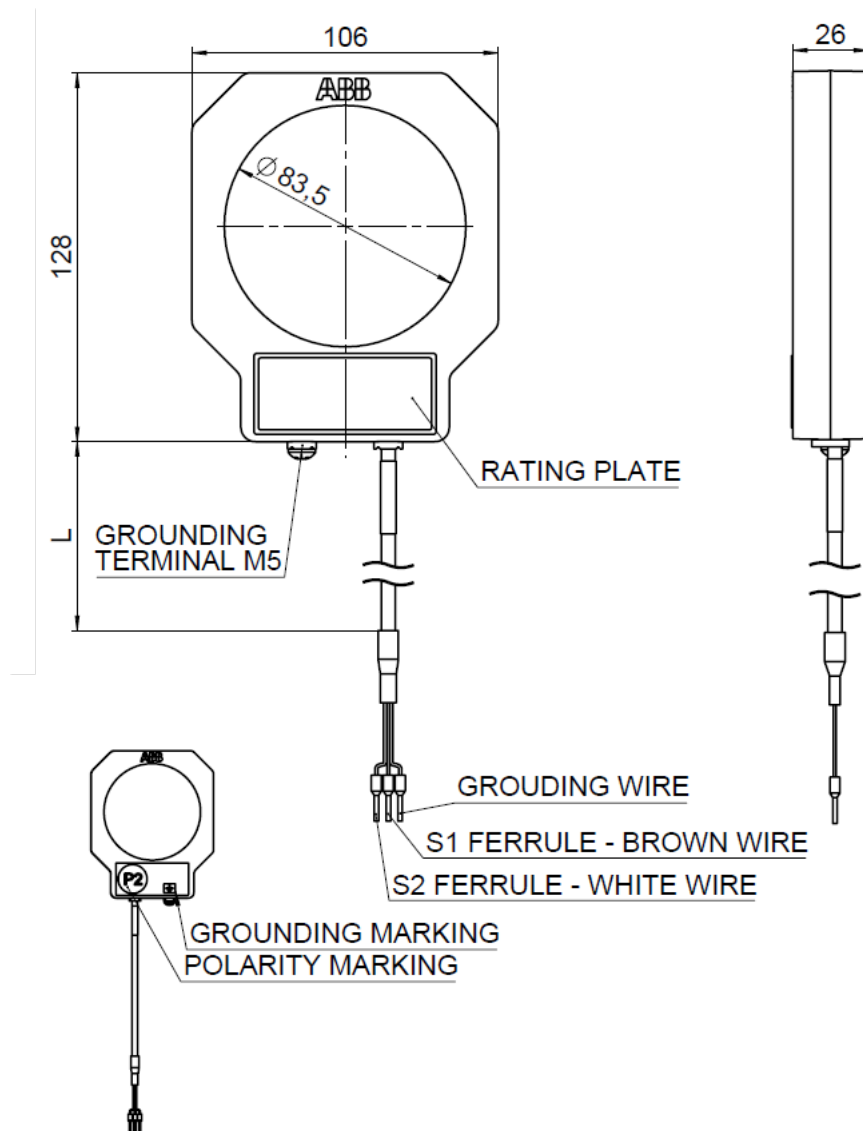
Dimensional Drawings

KEVA 24 C11(c)

Outline drawing numbers:

2RKA031137

Weight: 0.4 kg





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