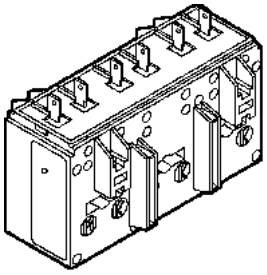
Three-phase CT current transformers

Cat. No(s): 4 121 57/58



CONTENTS **Page**

1. Description, use 1
2. Range, Cat. No. equivalence table 1
3. Dimensions.....1
4. Positioning - Connection.....1
5. General characteristics.....2
6. Compliance and approvals.....3

1. DESCRIPTION, USE

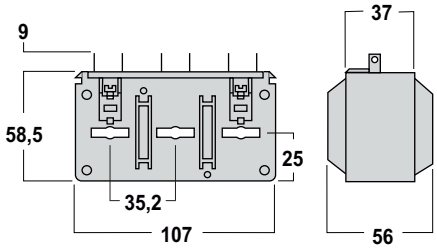
Three-phase current transformers.
Used with ammeters, electricity meters or measurement control units.
For mounting on cables and copper or aluminium busbars.
Provide a 5 A current at the secondary, proportional to the primary current
For fixing on a plate, on EN 60715 symmetrical rail or busbar
Secondary connected by terminals or lugs
Accuracy class 1 – 3

2. RANGE, CAT. NO. EQUIVALENCE TABLE

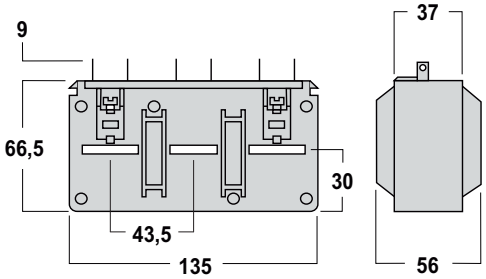
Cat. No.	Rating (A)	Equivalence to old Cat. Nos.
4 121 57	250	004698
4 121 58	400	004699

3. DIMENSIONS

Cat. No. 4 121 57



Cat. No. 4 121 58



4. POSITIONING - CONNECTION

4.1 Conductor dimensions

The current transformer rating is selected according to the conductor dimensions, but also according to the maximum prospective current in the circuit to be measured. In order to minimise measurement errors, the rating must be selected as close as possible to this value.
CTs cannot be used with a DC supply.

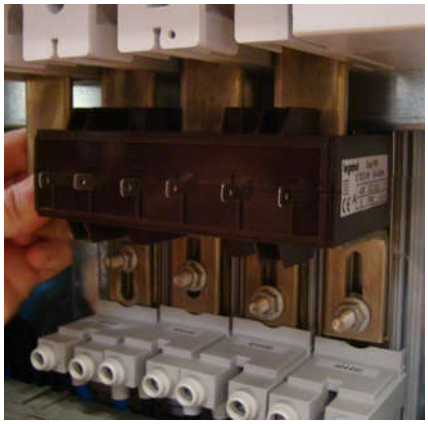
Cat. No. 4 121 57 for cable and busbar:



Cat. No. 4 121 58 for busbar:

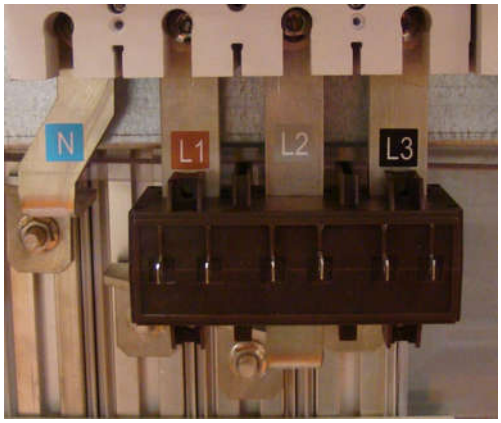


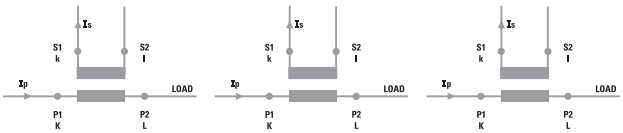
4.2 Fixing type
Fixing on vertical busbar



4.3 Connection diagram

The secondary terminals (S1 and S2) should be connected to the corresponding inputs on the measuring device (meter or control unit). The value sent to the meter or measurement control unit depends on the direction of mounting on the busbar or cable. To avoid errors, it is essential to make sure that the CT is in the right position. The current flow must enter at P1 (coming from the source) and exit at P2 (going towards the load).





4.4 Integration guide for HX^3 and VX^3 connection kits

Kit Cat. No.	CT Cat. No.
HX^3/VX^3 prefabricated connection kits in an XL^3 400 enclosure	
4 044 41	4 121 57
4 044 42	4 121 58
4 044 43	4 121 57
4 044 44	4 121 58
4 044 54	

5. GENERAL CHARACTERISTICS

5.1 Technical characteristics

Protection class (EN 60529):

- Case: IP20
- Terminals: IP00 (IP20 with sealable terminal shield)

96 hour salt spray resistance (red rust)

Rated frequency: 50 Hz

Operating frequency: 47 to 63 Hz

Continuous rated thermal current in accordance with standard EN 60044-1

Rated thermal short-circuit current: $I_{th} < 60\ I_n$

Rated dynamic current: $I_{dyn} = 2.5\ I_{th}$

Safety factor (SF): ≤ 5

Rated secondary current: $I_{sn} = 5$ A

Rated burden: see table 1

Accuracy class: see table 1

Maximum dissipated power:

4 121 57: ≤ 3 W

4 121 58: ≤ 7 W

Table 1

Cat. No.	Rating (A)	Cl 0.5/VA	Cl 1/VA	Cl 3/VA
4 121 57	250/5 A	-	2.5	3
4 121 58	400/5 A	-	3	5

5.2 Insulation characteristics

Air-insulated dry-type transformer

Maximum insulation voltage: Um = 0.72 kV rms value

Rated insulation voltage level: 3 kV rms value 50 Hz/1 min

Insulation class (EN 60044-1/EN 61869-1-2): B

5.3 Usage conditions

Non-exposed installation (EN 60044-1/EN 61869-1-2)

Reference temperature: 23°C ± 1°C

Usage temperature: -25 to 50°C

Daily average temperature: ≤ 30°C

Storage temperature: -40 to 85°C

Relative humidity: ≤ 85%

Suitable for use in tropical climates

5.4 Limits of current error and phase displacement (EN 60044-1)

For class 1 the current error and phase displacement at rated frequency must not exceed the value stated in the table when the secondary winding represents a value from 25% to 100% of the rated burden.

For class 3 - the current error and phase displacement at rated frequency must not exceed the value stated in the table when the secondary winding represents a value from 50% to 100% of the rated burden.

Table 2

Accuracy class	% current error (ratio) (±) as a percentage of the rated current stated below				
	5	20	50	100	120
1	3.0	1.5	-	1.0	1.0
3	-	-	3	-	3

5.5 Materials

Core: steel

Flange: PA

Winding: copper wire

Faston connector: brass

Half-shells: PC

Screws: iron

Nut: iron

5.6 Connection

Primary: conducting cable

Max. tightening torque for the conducting primary busbar fixing screws: 0.2 Nm

Secondary: screw terminal block, max. 2 separate 2.5 mm^2 wires

5.7 Weight

Cat. No.	Weight (g)
4 121 57	320
4 121 58	450

6. GENERAL CHARACTERISTICS

Compliant with the following standards:

EN 60044-1

EN 61869-1-2

EN 60529

Compliant with the following directives:

REACH

RoHS