

MANUAL

Current transformers

Universal Motor Controller UMC100.3



General

Characteristics

- CT4L185R/4, CT4L310R/4, CT5L500R/4, CT5L850R/4 three-phase current transformers for usage with UMC and nominal motor currents > 63 A
- Only four types for I_e up to 850 A
- CT with linear characteristics

Approvals

All current transformers have in combination with UMC100.3 the following approvals

- ABS
- ATEX
- CCC
- cULus
- DNV - GL

Order data

Type	Rated primary current range I_e	Order code
CT4L185R/4	60 ... 185 A AC	1SAJ929500R0185
CT4L310R/4	150 ... 310 A AC	1SAJ929500R0310
CT5L500R/4	200 ... 500 A AC	1SAJ929501R0500
CT5L850R/4	400 ... 850 A AC	1SAJ929501R0850

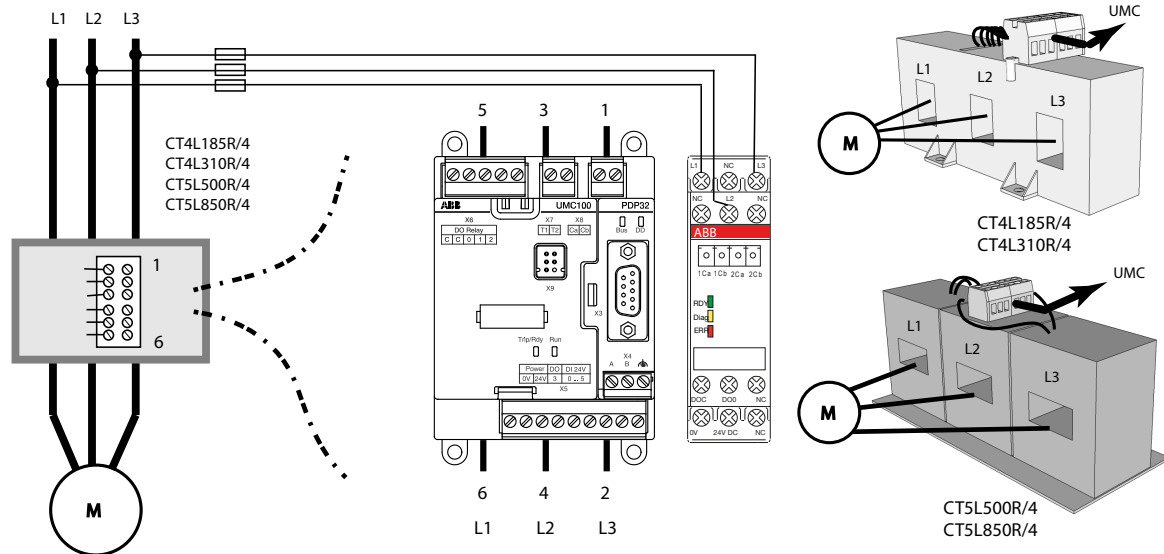
Functions

Application

The current transformers CT4L and CT5L are accessories for the ABB Universal Motor Controllers UMCxxx. The motor current flows through the current transformer. The UMC measures the secondary current (4 A at nominal current) and calculates the real current based on the parameter setting ,Current Factor'.

More information how to set this parameter is available in the UMC manuals.

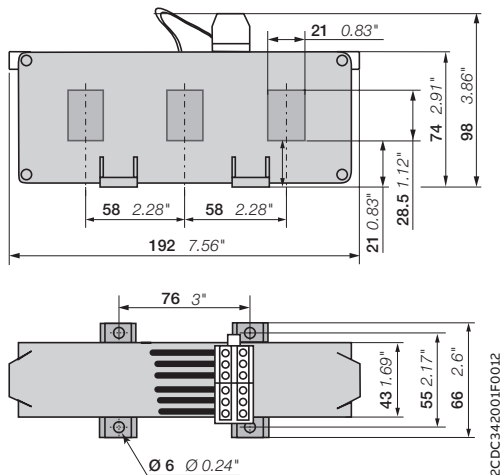
When using the current transformers together with the voltage module VI150 or VI155 the wiring schema shown below must be used to ensure proper operation of the $\cos \varphi$ (and thereof the power calculation) and phase sequence functions.



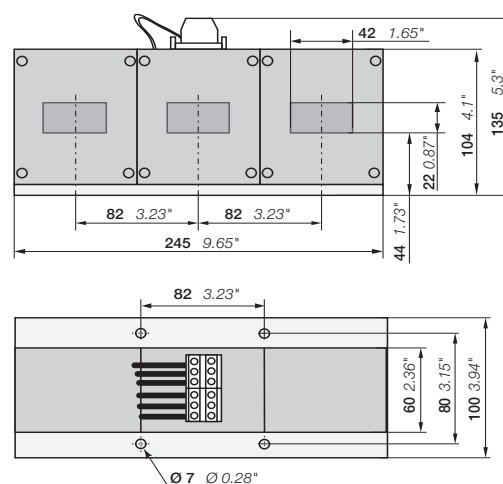
Wiring scheme for using current transformers with UMC and VI15x

Dimensions

in mm and inches



CT4L185R/4, CT4L310R/4



CT5L500R/4, CT5L850R/4

Technical data

Data at $T_a = 25\text{ °C}$ and rated values, unless otherwise indicated

General

Type	CT4L185R/4	CT4L310R/4	CT5L500R/4	CT5L850R/4
Rated primary current range I_e	60 ... 185 A AC	150 ... 310 A AC	200 ... 500 A AC	400 ... 850 A AC
Rated frequency	50/60 Hz			
Rated secondary current	4 A			
Rated burden	30...60 mΩ			
Performance under short circuit conditions: Coordination type 2 I_q : Rated conditional short circuit current	$I_q = 100\text{ kA}/1000\text{ V AC}$			
Tolerance of tripping time of UMC100 (incl. total ranges of current, temperature 0-60 °C, frequency 45-65 Hz)	UMC with external current transformer: ±14 %			
Accuracy class of the monitored current of UMC100 (range 50 % to 200 % of I_e)	UMC with external current transformer: 4 %			

Isolation data

Rated impulse withstand voltage U_{imp}	8 kV
Rated insulation voltage U_i	1000 V
Pollution degree	3
Overvoltage category	III

Standards / directives

Product standard	IEC60947-1 IEC60947-4-1
RoHS Directive	2002/95/EC

Environmental data

Ambient air temperature	Operation	0 ... +60 °C
	Storage	-25 ... +70 °C
Vibration (sinusoidal) acc. to IEC/EN 60068-2-6 (Fc)	5 g / 10 150 Hz	
Shock (half-sine) acc. to IEC/EN 60068-2-27 (Ea)	15 g / 11 ms	

General Data

Degree of protection	IP20			
Dimensions (W x H x D)	See dimensional drawing			
Mounting	With screws (M5/M6)			
Mounting position	Any			
Altitude	2000 m; 2000 - 5000 m refer to the UMC100.3 manual 2CDC135032D0204			
Duty time	100 %			
Rated continuous thermal current (I _{cth})	1.2 I _e			
Weight	1.6 kg	1.5 kg	1.7 kg	1.9 kg

Electrical Connection Secondary

Tightening torque terminals 1...6	0.8 Nm
Cross section terminals 1...6	Max. 6 mm ²

Electrical Connection Primary

Motor wire size	To be defined acc. IEC/EN 60204
Max. cross section	See dimension drawing

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**You can find the address of your local
sales organization on the ABB homepage**

abb.com/lowvoltage

**Additional information**

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