# СТА, СТО, СТV Технические характеристики

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# СТА

### Split core current transformer







- Adaptability and flexibility. Effective for a wide range of currents, it can be installed in existent applications.
- Fast installation. The opening/closing mechanism makes installation fast even in existent applications. The analyzer only requires two cables to be connected per sensor.

### Description

Split core current transformer with compact dimensions, suitable for retrofit applications when used in combination with any energy meter with 5 A currents inputs.

It manages primary current from 100 A to 600 A (depends on the model).



### Applications

CTA is the ideal solution for quick and easy installation without disconnecting cables during installation. It is indicated for any application (residential, commercial and industrial), especially for retrofitting where installing a solid core current transformer is not possible.



#### Main features

- 5 A secondary current
- · 24 mm hole diameter for primary current up to 300 A
- 36 mm hole diameter for primary current up to 600 A



# Features



General

Material	PA66	
Protection degree	IP20	
Secondary output	UL R/C cable, 16AWG (1,3mm <sup>2</sup> )	
Secondary output	Length: see Electrical specifications	
Mounting	Cable	
$M_{air} = h (x)$	CTA 5X: 165	
weight (g)	CTA 6X: 275	
Cable diameter	CTA 5X: 24 mm	
	CTA 6X: 36 mm	



Note: see Electrical specifications

### **Environmental specifications**

Operating temperature	-20° to +65°C (-4 to 149 F°) CTA6X 600A: -20° to +50°C (-4 to 122 F°)
Storage temperature	-25° to +80°C (-13 to 176 F°)

UL note: insulation class: A (105), 55 °C rise type at 30°C ambient

### Conformity

Approvals	
Standards	EN 61869-2



### **Electrical specifications**

<b>—</b> · · · · · · · · · · · · · · · · · · ·		
Rated secondary current	5 A	
Frequency	50/60 Hz	
Rated system voltage	600 V ac	
Rated insulation level	0.72 kV ac, dielectric strength 3 kV ac for 1min	
Insulation class	Thermal class B (IEC 60085)	
Short time current rating		
Ith	12 x ln	
ldyn	2,5 x lth	

Model	Primary current	Accuracy (EN61869-2)	Cable lenght	Burden*
	100 A	Class 3	0.5 m	1 VA
	150 A	Class 3	0.5 m	1 VA
CTA 5X	200 A	Class 3	2 m	1 VA
	250 A	Class 1	1 m	1 VA
	300 A	Class 1	0.5 m	2.5 VA
	200 A	Class 3	1 m	1 VA
	300 A	Class 1	1 m	2.5 VA
CTA 6X	400 A	Class 1	1 m	5 VA
	500 A	Class 1	1 m	7.5 VA
	600 A	Class 1	1 m	10 VA

\*Note: cable included

# **Connection Diagrams**



# CTA CARLO GAVAZZI

# References

쿶 СТА 🗆 5А

Enter the code, replacing the symbol  $\Box$  with the selected option (e.g.: CTA **5X 100A** 5A).

Code	Options	Description
С		
Т		
Α		
	5X 100 A	
	5X 150 A	
	5X 200 A	
	5X 250 A	
	5X 300 A	Medal and primary ourrant
	6X 200 A	Model and primary current
	6X 300 A	
	6X 400 A	
	6X 500 A	
	6X 600 A	
5 A	-	Secondary current

### Further reading

Information	Document	Where to find it
Instruction manual	Instruction manual : CTA_X	

### CARLO GAVAZZI compatible components

Purpose	Component name/code key	NOTES
Measure and display consumption of connected circuits	EM24, EM210, EM330, ET330, WM15, WM20, WM30, WM40,	-

# Accessories AC Current Transformer (max 23mm Ø cable) Type CTD-1X

### **CARLO GAVAZZI**



### **Product Description**

Cable/Bus-bar type current transformer with DIN-rail/busbar and panel mounting facility. Rated primary currents from 50 A to 300 A.

- Cable and bus-bar type current transformer
- 0.5 class, currents from 50 to 300 A
- Removable DIN-rail mounting holder
- Removable panel fixing clips
- •2 cable/bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers

## Ordering Key CTD-1X 100 5A XXX

Model — Primary current — Secondary current Option — Primary current

## Optional fixing kit: CTD-kit

### **Type Selection**

Primary current	Secondary current	Option
From 50 to 300A	1A	XXX: none
(Refer to Range Table)	5A	XTX: tropicalization

### **Input Specifications**

Operating frequency	48 to 62 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class E (max 75°C)	
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 $I_n$ /1 s 2.5 $I_{th}$ The short-time thermal current $I_{th}$ is anyway limited by the cable/bus-bar size
Extended current rating	120%
Security factor (FS)	≤ 5 (Class: 0.5, 1 and 3)

### **General Specifications**

Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	DIN-rail bus-bar and panel mounting
Standard accessories	Two terminal block screws. Two sealable terminal block covers. Two panel mounting fixing clips. One DIN rail adapter.
Optional accessories	Extended fixing kit CTD-kit: Six cable/bus-bar fixing screws. Six plastic caps for cable/bus-bar fixing screws.

	Two panel mounting fixing clips.
Special features	1 A secondary current, Tropicalization
Working temperature	-25°C to +60°C (-13°F to 140°F) (R.H. < 90% non condensing @ 40°C)
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE, cUrus and CSA
Connection Cable cross section area	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 IP20 (with sealable terminal block covers + wire termi nals)
Cable diameter	Max. 23 mm
Bus-bar size	Max. 20x5 mm
Weight	From 150 to 200 g

### **Output Specifications**

Rated secondary current



Model CTD-1X from 50A to 100A			
Primary	Burden (VA)		<b>.</b>
Current			<b>'</b>
Α	CL 0.5	CL 1	CL 3
50 (@60°C/140°F)		1	1.25
60 (@60°C/140°F)		1	1.25
70 (@60°C/140°F)		1.5	1.75
75 (@60°C/140°F)	1	1.25	1.75
80 (@60°C/140°F)	1.25	1.5	2
100 (@60°C/140°F)	1.5	1.75	2.25

Model CTD-1X from 120A to 300A			
Primary Current	Burden (VA)		
Α	CL 0.5	CL 1	CL 3
120 (@60°C/140°F)	1.75	2	2.5
125 (@60°C/140°F)	2	2.25	2.75
150 (@60°C/140°F)	2.25	2.5	3
160 (@60°C/140°F)	2.5	2.75	3.25
200 (@60°C/140°F)	3	3.25	3.75
250 (@50°C/122°F)	4.5	4.75	5.25
300 (@50°C/122°F)	5	5.5	6

### **Benefits**



- Easy and quick mounting either on a panel or on a DIN-rail (see figure 1-2).
- Protection of screw terminals using specific sealable covers to assure always the best safety (see figure 3).
- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 4).
- Easy output and earth connection (see fig. 5).
- Screw terminals compatible with any kind of wire terminals (see figure 6-7-8-9).
- Multiple screws provided with insulation caps to grant a strong and reliable fixing of the current transformer to the bus-bar (see figure 10).

### **Wiring Diagram**



### **Dimensions (mm)**





# Accessories AC Current Transformer Type CTD-1Z





- Cable type current transformer
- Class 1, currents from 50 to 200 A
- Removable DIN-rail mounting holder

## **Product Description**

Cable type current Rated primary currents from transformer with DIN-rail 50 to 200 A. mounting facility.

Ordering Key	CTD-1Z	100	<b>5</b> A	XXX
Model				
Secondary current Option				

## **Type Selection**

Primary current	Secondary current	Option
From 50 to 200 A	5A	XXX: none

(Refer to Range Table)

## **Input Specification**

Operating frequency	50/60Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min @ 50 Hz
Insulation class	В
Short-time current rating	
l <sub>th</sub>	60 In/1s

## **Output Specification**

Rated secondary current

5A

### **General Specification**

Standards	According to EN61869-2	Connection	Screw type (4x8 mm)
Housing material	PC	Cable cross section area	2.5mm <sup>2</sup>
Mounting	DIN rail	Torque	Max screws tightening
Standard accessories	DIN rail adapter		torque relevant to terminal
	Terminal block covers		block screws: 2.6 Nm.
Working temperature	-10°C to 50°C	Protection degree	IP20
Storage temperature	-10°C to 50°C	Cable diameter	Max. 22 mm
Approvals	CE, UKCA	Weight	Approx. 140 g



Model CTD-1Z from 50 A to 100 A		
Primary current	Class	Burden (VA)
А		
50	3	1.5
100	1	1.5

Model CTD-1Z from 125 A to 200 A		
Primary current Class Burden (VA)		
А		
125	1	2.5
150	1	2.5
200	1	3.75

# Wiring Diagram



# **Dimensions (mm)**



# Accessories AC Current Transformer (max 30x10 mm bus-bar) Type CTD-2X

currents

### **CARLO GAVAZZI**



### **Product Description**

Cable/Bus-bar type current ty. Rated primary transformer with DIN-rail/bus- from 40 A to 600 A. bar and panel mounting facili-

Bus-bar type current transformer

- •0.5 class, currents from 40 to 600 A
- Integrated DIN-rail mounting holder
- Removable panel fixing clips
- •2 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers

### Ordering Key CTD-2X 200 5A XXX

Model — Primary current — Secondary current — Option —

Option

XXX: none XTX: tropicalization

### Optional fixing kit: CTD-kit

### **Type Selection**

Primary current	Secondary current
From 40 to 600A	1A
(Refer to Range Table)	5A

### **Input Specifications**

Operating frequency	45 to 65 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	E (max 75°C)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 $I_n$ /1 s 2.5 $I_{th}$ The short-time thermal current $I_{th}$ is anyway limited by the cable/ bus-bar size
Extended current rating	120%
Security factor (FS)	≤ 5 (Class: 0.5, 1 and 3)

### **General Specifications**

Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	DIN-rail bus-bar and panel mounting
Standard accessories	Two terminal block screws. Two cable/bus-bar fixing screws. Two sealable terminal block covers.
	Two panel mounting fixing clips. Two plastic caps for cable/bus-bar fixing screws.
Optional accessories	Extended fixing kit: CTD-kit Two panel mounting fixing clips. Six cable/bus-bar fixing screws.

	Six plastic caps for cable/bus-bar fixing screws.
Special features	1 A secondary current, Tropicalization
Working temperature	-25°C to +60°C (-13°F to 140°F) (R.H. < 90% non condensing @ 40°C)
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE, cUrus and CSA
Connection Cable cross section area	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 IP20 (with sealable terminal block covers + wire terminals)
Cable diameter	Max. 24 mm
Bus-bar size Horizontal Vertical	Max. 32x5; 30x10; 25x20 mm Max. 25x12 mm
Weight From 350 to 500 g	

### **Output Specifications**

Rated secondary current



Model CTD-2X from 40A to 125A			
Primary Current	E	Burden (VA)	
Α	CL 0.5	CL 1	CL 3
40 (@60°C/140°F)			1.25
50 (@60°C/140°F)			1.5
60 (@60°C/140°F)			2
70 (@60°C/140°F)			2.5
75 (@60°C/140°F)		1.75	2.5
80 (@60°C/140°F)		2	2.75
100 (@60°C/140°F)		2.5	3
120 (@60°C/140°F)		2.75	3.75
125 (@60°C/140°F)	2	2.75	3.75

Model CTD-2X from 150A to 600A			
Primary Current	Burden (VA)		
Α	CL 0.5 CL 1 CL 3		
150 (@60°C/140°F)	3	4	5
160 (@60°C/140°F)	3	4	5
200 (@60°C/140°F)	4	5	6.5
250 (@60°C/140°F)	5.5	7	8
300 (@60°C/140°F)	7	8.5	9.5
400 (@50°C/122°F)	12	13.5	14.5
500 (@50°C/122°F)	14	15.5	16.5
600 (@40°C/104°F)	17.5	19	20

### **Benefits**



















**Dimensions (mm)** 



56



- Easy and quick mounting either on a panel or on a DIN-rail (see figure 1-2).
- Protection of screw terminals using specific sealable covers to assure always the best safety (see figure 3).
- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 4).
- Easy output and earth connection (see fig. 5).
- Screw terminals compatible with any kind of wire terminals (see figure 6-7-8-9).
- Multiple screws provided with isolation cap screws to grant a strong and reliable fixing of the current transformer to the bus-bar (see figure 10).

### **Wiring Diagram**



# Accessories AC Current Transformer Type CTD-2Z





- Cable and bus-bar type current transformer
- Class 0.5, currents from 40 to 600 A
- Removable panel fixing clips
- 2 cable/bus-bar isolated fixing screws

### **Product Description**

Cable and bus-bar type current Rated primary currents from 40 to transformer with cable/bus-bar and 600 A. panel mounting facility.

Ordering Key CTD-2Z 200 5A XXX Model \_\_\_\_\_\_ Primary current \_\_\_\_\_\_ Secondary current \_\_\_\_\_\_

### **Type Selection**

Primary current	Secondary current	Option
From 40 to 600 A	5A	XXX: none

(Refer to Range Table)

### **Input Specification**

Operating frequency	50/60Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min @ 50 Hz
Insulation class	В
Short-time current rating	
l <sub>th</sub>	60 ln/1s

# **Output Specification**

Rated secondary current

5A

CE

### **General Specification**

Standards	According to EN61869-2	Approvals
Housing material	ABS	Connection
Mounting	Cable/bus-bar and panel	
mounting		Cable cross section area
Standard accessories	Two cable/bus-bar fixing	Torque
	screws. Two plastic caps for cable/	
	bus-bar fixing screws.	Protection degree
	Four panel mounting fixing	Cable diameter
	clips.	Bus-Bar size
	Terminal block covers.	Weight
Working temperature	-10°C~50°C	
Storage temperature	-10°C~50°C	

Connection	Screw type (4x10 mm fork
	lugs required)
Cable cross section area	2.5mm <sup>2</sup>
Torque	Max screws tightening torque
	relevant to terminal block screws
	2.6 Nm.
Protection degree	IP 20
Cable diameter	Max. 28 mm
Bus-Bar size	Max. 30x10; 25x15; 20x20
Weight	Approx. 580 g



Model CTD-2Z from 40 A to 200 A		
Primary current Class Burden (VA)		
Α		
40	3	2.5
50	3	2.5
100	0.5	2.5
150	0.5	2.5
200	0.5	3.75

Model CTD-2Z from 250 A to 600 A		
Primary current Class Burden (V		Burden (VA)
Α		
250	0.5	5
300	0.5	5
400	0.5	5
500	0.5	5
600	0.5	5

# Wiring Diagram



# Dimensions (mm)





# **Accessories** AC Current Transformer (max 51x15 mm bus-bar) Type CTD-3X

### **CARLO GAVAZZI**



### **Product Description**

Cable/Bus-bar type current transformer with DIN-rail/ bus-bar and panel mounting facility.

Rated primary currents from 50 A to 800 A.

- Bus-bar type current transformer
- •0.5 class, currents from 50 to 800 A
- Integrated DIN-rail mounting holder
- Removable panel fixing clips
- Up to 6 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers

# Ordering Key CTD-3X 800 5A XXX

Model Primary current Secondary current Option -

# Optional fixing kit: CTD-kit

### **Type Selection**

Primary current	Secondary current	Option	
From 50 to 800A (Refer to Range Table)		XXX: no XTX: tro	

### **Input Specifications**

<b>•</b> • • •	
Operating frequency	45 to 65 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	E (max 75°C)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 $I_n$ /1 s 2.5 $I_{th}$ The short-time thermal current $I_{th}$ is anyway limited by the cable/bus-bar size
Extended current rating	120%
Security factor (FS)	≤ 5 (Class: 0.5, 1 and 3)

### **General Specifications**

Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	DIN-rail bus-bar and panel mounting
Standard accessories	Two terminal block screws. Two cable/bus-bar fixing screws. Two plastic caps for cable/bus-bar fixing screws. Two panel mounting fixing clips. Two sealable terminal block covers.
Optional accessories	Extended fixing kit: CTD-kit Two panel mounting fixing clips. Six cable/bus-bar fixing screws.

	Six plastic caps for cable/bus-bar fixing screws.
Special features	1 A secondary current, Tropicalization
Working temperature	-25°C to +60°C (-13°F to 140°F) (R.H. < 90% non condensing @ 40°C)
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE, cUrus and CSA
Connection Cable cross section area	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 IP20 (with sealable terminal block covers + wire terminals)
Cable diameter	Max. 41 mm
Bus-bar size Horizontal Vertical	Max. 51x15; 40x20: 32x32 mm Max. 40x20 mm
Weight	From 550 to 700 g

### **Output Specifications**

**Rated secondary current** 

ne picalization



Model CTD-3X from 50A to 200A				
Primary Current	E	Burden (VA)		
Α	CL 0.5 CL 1 CL 3			
50 (@60°C/140°F)			1.75	
60 (@60°C/140°F)			2	
70 (@60°C/140°F)			2.5	
75 (@60°C/140°F)			3	
80 (@60°C/140°F)			3	
100 (@60°C/140°F)		2	3.5	
120 (@60°C/140°F)		2.25	4	
125 (@60°C/140°F)		2.5	4.5	
150 (@60°C/140°F)	2.25	3	6	
160 (@60°C/140°F)	2.5	3.5	6.5	
200 (@60°C/140°F)	3	4.5	8.5	

Model CTD-3X from 250A to 800A					
Primary Current	Burden (VA)				
Α	CL 0.5 CL 1 CL 3				
250 (@60°C/140°F)	3.5	6.5	10.5		
300 (@60°C/140°F)	7	10	13		
400 (@60°C/140°F)	9	14	17		
500 (@50°C/122°F)	14	18	21		
600 (@50°C/122°F)	17	21	24		
700 (@40°C/104°F)	22	26	29		
750 (@40°C/104°F)	24	28	31		
800 (@40°C/104°F)	25	29	32		

### **Benefits**



















## **Dimensions (mm)**



- safety (see figure 3).
  Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 4).
- Easy output and earth connection (see fig. 5).
- Screw terminals compatible with any kind of wire terminals (see figure 6-7-8-9).
- Multiple screws provided with isolation cap screws to grant a strong and reliable fixing of the current transformer to the bus-bar (see figure 10).

### Wiring Diagram







# Accessories AC Current Transformer Type CTD-3Z





- Cable and bus-bar type current transformer
- Class 0.5, currents from 100 to 600 A
- Removable panel fixing clips
- 2 cable/bus-bar isolated fixing screws

# **Product Description**

Cable and bus-bar type current transformer with cable/bus-bar and panel mounting facility.

Rated primary currents from 100 to 600 A.

CTD-	3 <b>Z</b> (	200	<b>5</b> A	XXX
	CTD-	CTD-3Z	CTD-3Z 200	CTD-3Z 200 5A

## **Type Selection**

Primary current	Secondary current	Option
From 100 to 600 A	5A	XXX: none

(Refer to Range Table)

## **Input Specification**

Operating frequency	50/60Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min @ 50 Hz
Insulation class	В
Short-time current rating	
l <sub>th</sub>	60 In/1s

# **Output Specification**

Rated secondary current

5A

## **General Specification**

According to EN61869-2	Approvals	CE
ABS	Connection	Screw type (4x10 mm, fork lugs
Cable/bus-bar and panel		required) 2.5mm <sup>2</sup>
	Cable cross section area	Max screws tightening torque
Two cable/bus-bar fixing	Torque	relevant to terminal block screws
screws.		2.6 Nm.
Two plastic caps for cable/		
bus-bar fixing screws.	Protection degree	IP 20
Four panel mounting fixing	Cable diameter	Max. 32 mm
clips.	Bus-Bar size	Max. 40x10; 30x20; 25x25;
Terminal block covers.	Weight	Approx. 500 g
-10°C~50°C		
-10°C~50°C		
	According to EN61869-2 ABS Cable/bus-bar and panel Two cable/bus-bar fixing screws. Two plastic caps for cable/ bus-bar fixing screws. Four panel mounting fixing clips. Terminal block covers. -10°C~50°C -10°C~50°C	According to EN61869-2       Approvals         ABS       Connection         Cable/bus-bar and panel       Cable cross section area         Two cable/bus-bar fixing screws.       Torque         Two plastic caps for cable/       Dus-bar fixing screws.         Four panel mounting fixing clips.       Protection degree         Terminal block covers.       Bus-Bar size         -10°C~50°C       Weight



Model CTD-3Z from 100 A to 250 A		Model CTD-3Z from 300 A to 600 A					
Primary current	Class	Burden (VA)	Primary current Class Burden (V				
Α			Α				
100	0.5	1.5	300	0.5	2.5		
150	0.5	1.5	400	0.5	5		
200	0.5	1.5	500	0.5	5		
250	0.5	2.5	600	0.5	5		

# Wiring Diagram



## **Dimensions (mm)**



# Accessories AC Current Transformer (max 64x20 mm bus-bar) Type CTD-4X

**CARLO GAVAZZI** 



### **Product Description**

Cable/Bus-bar type current Rat transformer with DIN-rail/ 150 bus-bar and panel mounting facility.

nt Rated primary currents from il/ 150 A to 1600 A.

- Bus-bar type current transformer
- •0.5 class, currents from 150 to 1600 A
- Removable panel fixing clips
- Up to 6 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers

# Ordering Key CTD-4X 1250 5A XXX

Model — Primary current — Secondary current

### Option\_\_\_\_\_

# Optional fixing kit: CTD-kit

### **Type Selection**

Primary current	Secondary current	Option
From 150 to 1600A (Refer to Range Table)		XXX: none XTX: tropicalization

### **Input Specifications**

Operating frequency	45 to 65 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	E (max 75°C)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 $I_n$ /1 s 2.5 $I_{th}$ The short-time thermal current $I_{th}$ is anyway limited by the cable/bus-bar size
Extended current rating	Refer to Range Table
Security factor (FS)	≤ 5 (Class: 0.5, 1 and 3)

### **General Specifications**

Standards	According to EN61869-2
Housing	PA66, self-extinguishing: UL 94 V-0
Mounting	Panel mounting
Standard accessories	Two terminal block screws. Two cable/bus-bar fixing screws. Two plastic caps for cable/bus-bar fixing screws. Two panel mounting fixing clips. Two sealable terminal block covers.
Optional accessories	Extended fixing kit: CTD-kit Two panel mounting fixing clips. Six cable/bus-bar fixing screws.

	Six plastic caps for cable/bus-bar fixing screws
Special features	1 A secondary current, Tropicalization
Working temperature Table (-13°F to: refer to Range Table) (R.H. < 90% non	-25°C to: refer to Range condensing @ 40°C)
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE, cURus and CSA
Connection Cable cross section area block screws: From 1 to 2 Nm	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal
	Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 IP20 (with sealable terminal block covers + wire terminals)
Cable diameter	Max. 51 mm
<b>Bus-bar size</b> Horizontal Vertical	Max. 64x20, 51x43 mm Max. 51x31 mm
Weight	From 450 to 700 g
<b>Output Specificatio</b>	ns

**Rated secondary current** 



Model CTD-4X from 150A to 700A						
Primary Current	Temperature	Extended current rating	Burden (VA)		'A)	
Α			CL 0.5 CL 1		CL 3	
150	(@60°C/140°F)	120%		2.5	(5)	
200	(@60°C/140°F)	120%		3.25	(6)	
250	(@60°C/140°F)	120%	2.5	4.5	2	
300	(@60°C/140°F)	120%	3	4	3	
400	(@60°C/140°F)	120%	6	9	3	
500	(@60°C/140°F)	120%	10	12.5	4	
600	(@60°C/140°F)	120%	11	13.5	4	
700	(@60°C/140°F)	120%	12.5	15	5	

Model CTD-4X from 750A to 1600A				
Primary Current	Temperature	Extended current rating Burden (VA)		en (VA)
Α			CL 0.5	CL 1
750	(@50°C/122°F)	120%	13	15.5
800	(@50°C/122°F)	120%	14	16.5
1000	(@50°C/122°F)	120%	17.5	20
1200	(@50°C/122°F)	100% <b>(+)</b>	20	22.5
1250	(@50°C/122°F)	100% <b>(+)</b>	20	22.5
1500	(@50°C/122°F)	100% <b>(*)</b>	27.5	30
1600	(@50°C/122°F)	100% <b>(*)</b>	27.5	30

(\*) A max overload of 120% for 1 min. every 30 min. is allowed. (+) A continuous overload of 120% of the range is allowed @ amb. temp. 40°C max.

### **Benefits**







**Dimensions (mm)** 



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- Easy and quick mounting on a panel (see figure 1).
- Protection of screw terminals using specific sealable covers to assure always the best safety (see figure 3).
- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 4).
- Easy output and earth connection (see fig. 5).
- Screw terminals compatible with any kind of wire terminals (see figure 6-7-8-9).
- Multiple screws provided with isolation cap screws to grant a strong and reliable fixing of the current transformer to the bus-bar (see figure 10).

### **Wiring Diagram**







# Accessories **AC Split-Core Current Transformer**

**Type CTD-5S** ( max 26x32 mm)



- Currents from 100 A to 400 A
- Up to 6 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers
- Sealable fixing split-core screws



### **Product Description**

Split-core current transformer with bus-bar mountng facility.

Rated primary currents from 100 A to 400 A.

## Ordering Key CTD-55 400 5A XXX

Model Primary current Secondary current Option -

### **Type Selection**

Primary current	Secondary current	Option
From 100A to 400A	1A (on request)	XXX:
(Refer to the Range Table)	5A	XTX:

none tropicalization (on request) XIX:

## **Input Specifications**

Operating frequency	48 to 62 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	E (max 75°C)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 I <sub>n</sub> /1 s 2.5 I <sub>th</sub> The short-time thermal current I <sub>th</sub> is anyway limited by the cable/bus-bar size
Extended current rating	120%
Security factor (FS)	≤ 5 (Class: 1 and 3)

### **General Specifications**

Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Six cable/bus-bar fixing screws. Six plastic caps for cable/bus-bar fixing screws. Two sealable terminal block covers.
Special features	1 A secondary current, Tropicalization

Working temperature	-25°C to +60°C (-13°F to 140°F) (R.H. < 90% non condensing @ 40°C)
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE, cURus and CSA
Connection Cable cross section area	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 (without sealable terminal covers) IP20 (with sealable terminal block covers + wire terminals)
Cable diameter	Max. 26 mm
Bus-bar size	Max. 26x32 mm
Weight	From 450 to 700 g

## **Output Specifications**

**Rated secondary current** 

5 A or 1 A





Model CTD-5S from 100A to 400A		
Primary	Burden (VA)	
Current		
А	CL 1	CL 3
100 (@60°C/140°F)	-	1.5
125 (@60°C/140°F)	1	1.5
150 (@60°C/140°F)	1.5	2.5
200 (@60°C/140°F)	1.5	5
250 (@60°C/140°F)	1.5	5
300 (@50°C/122°F)	2.5	7.5
400 (@50°C/122°F)	5	10



**Wiring Diagram** 

### **Benefits**



- Easy way to open and close the CT core by the dedicate seleable screws (see figure 1).
- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 2).
- Easy output and earth connection (see fig. 3).
- Multiple screws provided with isolation cap screws to grant a strong and reliable fixing of the current transformer to the bus-bar (see figure 4).
- Screw terminals compatible with any kind of wire terminals and protection of screw terminals using specific sealable covers to assure always the best safety (see figure 5-6-7-8).

### **Dimensions (mm)**





# Accessories **AC Split-Core Current Transformer**

# **Type CTD-6S** ( max 50x52 mm)





### **Product Description**

Split-core current transformer with bus-bar mountng facility.

Rated primary currents from 150 A to 1000 A.

### Bus-bar type split core current transformer

- Class 1 accuracy
- Currents from 150 A to 1000 A
- Up to 6 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers
- Sealable fixing split-core screws

## Ordering Key CTD-65 1000 5A XXX

Madal	
wodel —	
Primary current ——	
Secondary current —	
Option	

### **Type Selection**

Primary current	Secondary current	Option
From 150A to 1000A	1A (on request)	XXX:
(Refer to the Range Table)	5A	XTX:

none tropicalization (on request)

### **Input Specifications**

Operating frequency	48 to 62 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	E (max 75°C)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 I <sub>n</sub> /1 s 2.5 I <sub>th</sub> The short-time thermal current I <sub>th</sub> is anyway limited by the cable/bus-bar size
Extended current rating	120%
Security factor (FS)	≤ 5 (Class: 1 and 3)

### **General Specifications**

Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Six cable/bus-bar fixing screws. Six plastic caps for cable/bus-bar fixing screws. Two sealable terminal block covers.
Special features	1 A secondary current, Tropicalization

Working temperature	-25°C to +60°C (-13°F to 140°F) (R.H. < 90% non condensing @ 40°C)
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE, cURus and CSA
Connection Cable cross section area	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 (without sealable terminal covers) IP20 (with sealable terminal block covers + wire terminals)
Cable diameter	Max. 50 mm
Bus-bar size	Max. 50x52 mm
Weight	From 450 to 700 g

## **Output Specifications**

**Rated secondary current** 

5 A or 1 A



Model CTD-6S from 150A to 500A		
Primary Current	Burden (VA)	
А	CL 1	CL 3
150 (@60°C/140°F)	-	1.5
200 (@60°C/140°F)	1.5	2
250 (@60°C/140°F)	1.5	3.75
300 (@60°C/140°F)	1.5	5
400 (@60°C/140°F)	2.5	5
500 (@60°C/140°F)	5	10

Model CTD-6S from 600A to 1000A			
Primary Current	Burden (VA)		
Α	CL 1 CL 3		
600 (@60°C/140°F)	7.5	15	
700 (@60°C/140°F)	7.5	15	
750 (@50°C/122°F)	7.5	15	
800 (@50°C/122°F)	10	15	
1000 (@50°C/122°F)	10	15	

### **Benefits**



- Easy way to open and close the CT core by the dedicate seleable screws (see figure 1).
- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 2).
- Easy output and earth connection (see fig. 3).
- Multiple screws provided with isolation cap screws to grant a strong and reliable fixing of the current transformer to the bus-bar (see figure 4).
- Screw terminals compatible with any kind of wire terminals and protection of screw terminals using specific sealable covers to assure always the best safety (see figure 5-6-7-8).

### Wiring Diagram



### **Dimensions (mm)**



# Accessories AC Solid-core Current Transformer Type CTD-8Q (27 max 55x100 mm)

### **CARLO GAVAZZI**



### **Product Description**

Solid-core current trans- Rated primary current from former with bus-bar mount- 1000 to 4000A. ing facility.

#### Bus-bar type solid-core current transformer

- Accuracy class 0.5
- Current range from 1000 to 4000A
- Up to 8 bus-bar fixing screws
- Double screw terminals (up to 4-wire connections)
- Sealable terminal block covers



Model \_\_\_\_\_ Primary current \_\_\_\_\_ Secondary current \_\_\_\_\_ Option \_\_\_\_\_

### **Type Selection**

Model	Primary current	Secondary current	Option	
CTD-8Q	1000 1500 2000 2500 3000 4000	5A	XXX: none	

### **Input Specifications**

Operating frequency	50-60 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	В
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 $I_n$ /1 s 2.5 $I_{th}$ The short-time thermal current $I_{th}$ is anyway limited by the cable/bus-bar size
Security factor (FS)	≤ 10

Working temperature	-30°C to +40°C (-22°F to 104°F) (R.H. < 90% non condensing @ 40°C)	
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)	
Approvals	CE	
Connection Cable cross section area	Screw type From 1.5 to 4 mm <sup>2</sup>	
Protection degree	IP20	
Bus-bar size	Max. 55x100 mm	
Weight	< 1.1 Kg	

## **General Specifications**

Standards	According to EN61869-2
Housing	Polycarbonate UL94 V2
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Eight bus-bar fixing screws. Two sealable terminal block covers.

## **Output Specifications**

Rated secondary current	5 A
Burden	15 VA



Wiring Diagram



# Dimensions (mm)





# Accessories **AC Split-Core Current Transformer**

**Type CTD-8S** ( max 30x80 mm)





## **Product Description**

Split-core current transformer with bus-bar mountng facility.

Rated primary currents from 150 A to 2500 A.

- Bus-bar type split core current transformer
- Class 1 accuracy
- Currents from 150 A to 2500 A
- Up to 10 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers
- Sealable fixing split-core screws

## Ordering Key CTD-85 1500 5A XXX

Madal	
Primary current ——	
Secondary current —	
Option	

### Type Selection

Primary current	Secondary current	
From 150A to 2500A	1A (on request)	
(Refer to the Range Table)	5A	

# **Input Specifications**

Operating frequency	48 to 62 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	E (max 75°C)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 $I_n$ /1 s 2.5 $I_{th}$ The short-time thermal current $I_{th}$ is anyway limited by the cable/bus-bar size
Extended current rating	Refer to the Range Table
Security factor (FS)	≤ 5 (Class: 1 and 3)

### **General Specifications**

Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Ten bus-bar fixing screws. Ten plastic caps for bus-bar fixing screws. Two sealable terminal block covers.
Special features	1 A secondary current, Tropicalization

#### Working temperature -25°C to: refer to the Range Table (-13°F to: refer to the Range Table) (R.H. < 90% non condensing @ 40°C) -30°C to +70°C (-22°F to Storage temperature 158°F) (R.H. < 900% non condénsing @ 40°C) Approvals CE. cURus and CSA (150A to 1000A) Screw type Connection From 1.5 to 6 mm<sup>2</sup> Cable cross section area Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm Protection degree IP00 (without sealable terminal covers) IP20 (with sealable terminal block covers + wire terminals) **Bus-bar size** Max. 30x80 mm Weight From 450 to 700 g

## **Output Specifications**

**Rated secondary current** 

5 A or 1 A

#### Option

XXX: none XTX: tropicalization (on request)



Model CTD-8S from 150A to 750A				
Primary Current	Temperature	Extended current rating	Burden (VA)	
Α			CL 1	CL 3
150	(@60°C/140°F)	120%	-	1.5
200	(@60°C/140°F)	120%	-	1.5
250	(@60°C/140°F)	120%	-	2
300	(@60°C/140°F)	120%	-	2
400	(@60°C/140°F)	120%	3	5
500	(@60°C/140°F)	120%	5	7
600	(@60°C/140°F)	120%	6	10
700	(@60°C/140°F)	120%	6	10
750	(@60°C/140°F)	120%	8	12

Model CTD-8S from 800A to 2500A				
Primary Current	Temperature	Extended current rating	Burden (VA)	
Α			CL 1	CL 3
800	(@60°C/140°F)	120%	8	12
1000	(@50°C/122°F)	120%	10	15
1200	(@50°C/122°F)	120%	12	15
1250	(@50°C/122°F)	120%	12	15
1500	(@50°C/122°F)	100% <b>(+)</b>	15	20
1600	(@50°C/122°F)	100% <b>(*)</b>	15	20
2000	(@50°C/122°F)	100% <b>(*)</b>	20	25
2500	(@40°C/104°F)	100% <b>(*)</b>	25	30

(\*) A max overload of 120% for 1 min. every 30 min. is allowed. (+) A continuous overload of 120% of the range is allowed @ amb. temp. 40°C max.

### **Benefits**







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- Easy way to open and close the CT core by the dedicate seleable screws (see figure 1).
- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 2).
- Easy output and earth connection (see fig. 3).
- Multiple screws provided with isolation cap screws to grant a strong and reliable fixing of the current transformer to the bus-bar (see figure 4).
- Screw terminals compatible with any kind of wire terminals and protection of screw terminals using specific sealable covers to assure always the best safety (see figure 5-6-7-8).

### Wiring Diagram



### **Dimensions (mm)**





# Accessories **AC Solid-core Current Transformer** Type CTD-8V / CTD-8H ( max 30x80 mm)

### **CARLO GAVAZZI**



### **Product Description**

Solid-core current transformer with bus-bar mountng facility.

Rated primary currents from 150 A to 2500 A.

- Bus-bar type solid- core current transformer
- Class 0.5 accuracy
- Currents from 150 A to 2500 A
- Up to 10 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers



Primary current Secondary current Option -

### **Type Selection**

Model		Primary current Secondary current		Option
CTD-8V:	vertical mounting	From 150A to 2500A	1A (on request)	XXX: none
CTD-8H:	horizontal mounting	(Refer to the Range Table)	5A	XTX: tropicalization

### **Input Specifications**

Operating frequency	48 to 62 Hz		
Max. system voltage	0.72 kV		
Rated insulation level	3 kV/1 min. @ 50 Hz		
Insulation class	E (max 75°C)		
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 $I_n$ /1 s 2.5 $I_{th}$ The short-time thermal current $I_{th}$ is anyway limited by the cable/bus-bar size		
Extended current rating	Refer to the Range Table		
Security factor (FS)	≤ 5 (Class: 0.5, 1 and 3)		

### **General Specifications**

Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Ten bus-bar fixing screws. Ten plastic caps for bus-bar fixing screws. Two sealable terminal block covers.
Special features	1 A secondary current, Tropicalization

Working temperature	-25°C to: refer to the Range Table (-13°F to: refer to the Range Table) (R.H. < 90% non condensing @ 40°C)
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE. cURus and CSA (150A to 1000A)
Connection Cable cross section area	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 (without sealable terminal covers) IP20 (with sealable terminal block covers + wire terminals)
Bus-bar size	Max. 30x80 mm
Weight	From 450 to 700 g

## **Output Specifications**

**Rated secondary current** 

5 A or 1 A



Model CTD-8V and CTD-8H from 150A to 750A						
Primary Current	Temperature	Extended current rating	Burden (VA)			
Α			CL 0.5	CL 1	CL 3	
150	(@60°C/140°F)	120%	-	-	2	
200	(@60°C/140°F)	120%	-	-	4	
250	(@60°C/140°F)	120%	-	-	5	
300	(@60°C/140°F)	120%	-	2	6	
400	(@60°C/140°F)	120%	3	5	8	
500	(@60°C/140°F)	120%	5	7	10	
600	(@60°C/140°F)	120%	6	10	12	
700	(@60°C/140°F)	120%	6	10	12	
750	(@60°C/140°F)	120%	8	12	15	

Model CTD-8V and CTD-8H from 800A to 2500A						
Primary Current	Temperature	Extended current rating	Burden (VA)		/A)	
Α			CL 0.5	CL 1	CL 3	
800	(@60°C/140°F)	120%	8	12	15	
1000	(@50°C/122°F)	120%	10	15	20	
1200	(@50°C/122°F)	120%	12	15	20	
1250	(@50°C/122°F)	120%	12	15	20	
1500	(@50°C/122°F)	100% <b>(+)</b>	15	20	25	
1600	(@50°C/122°F)	100% <b>(*)</b>	15	20	25	
2000	(@50°C/122°F)	100% <b>(*)</b>	20	25	30	
2500	(@40°C/104°F)	100% <b>(*)</b>	25	30	40	

(\*) A max overload of 120% for 1 min. every 30 min. is allowed. (+) A continuous overload of 120% of the range is allowed @ amb. temp. 40°C max.

### **Benefits**





- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 1).
- Easy output and earth connection (see fig. 2).
- Screw terminals compatible with any kind of wire terminals (see figure 3-4-5-6).

# Dimensions Vertical mounting (mm)



### **Dimensions Horizontal mounting (mm)**

#### 44 16,4 Q Ο ø 28 Т Т 121,9 103,4 87 31 -U пL 00 28 L 16,8 18,5 81

75,5



### Wiring Diagram



# Accessories **AC Split-Core Current Transformer**

**Type CTD-9S** ( max 35x125 mm)



## **Product Description**

Split-core current transformer Rated primary currents from with bus-bar mountng facility.

400 A to 3200 A.

### Bus-bar type split core current transformer

- Class 1 accuracy
- Currents from 400 A to 3200 A
- Up to 10 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers
- Sealable fixing split-core screws

## Ordering Key CTD-95 2000 5A XXX

Model	
Primary current ——	
Secondary current —	
Option	

### **Type Selection**

Primary current	Secondary current	Option
From 400A to 3200A	1A (on request)	XXX: none
(Refer to the Range Table)	5A	XTX: tropicalization (on request)

## **Input Specifications**

Operating frequency	48 to 62 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	E (max 75°C)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 I <sub>n</sub> /1 s 2.5 I <sub>th</sub> The short-time thermal current I <sub>th</sub> is anyway limited by the cable/bus-bar size
Extended current rating	refer to the Range Table
Security factor (FS)	≤ 5 (Class: 1 and 3)

### **General Specifications**

<b>•</b> • •	
Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Ten cable/bus-bar fixing screws. Ten plastic caps for cable/bus-bar fixing screws. Two sealable terminal block covers.
Special features	1 A secondary current, Tropicalization

Working temperature Storage temperature	-25°C to: refer to the Range Table (-13°F to: refer to the Range Table) (R.H. < 90% non condensing @ 40°C) -30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE. cURus and CSA (400A to 2000A)
Connection Cable cross section area	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 (without sealable terminal covers) IP20 (with sealable terminal block covers + wire terminals)
Bus-bar size	Max. 35x125 mm
Weight	From 450 to 700 g

### **Output Specifications**

**Rated secondary current** 

5 A or 1 A

### **CARLO GAVAZZI**



Model CTD-9S from 400A to 1200A						
Primary Current	Temperature	Extended current rating	Burden (VA)			
Α			CL 1	CL 3		
400	(@60°C/140°F)	120%		3		
500	(@60°C/140°F)	120%	2	4		
600	(@60°C/140°F)	120%	4	6		
700	(@60°C/140°F)	120%	4	8		
750	(@60°C/140°F)	120%	4	8		
800	(@60°C/140°F)	120%	4	8		
1000	(@60°C/140°F)	120%	6	10		
1200	(@50°C/122°F)	120%	8	12		

Model CTD-9S from 1250A to 3200A				
Primary Current	Temperature Extended current rating		Burde	n (VA)
Α			CL 1	CL 3
1250	(@50°C/122°F)	120%	8	12
1500	(@50°C/122°F)	120%	10	15
1600	(@50°C/122°F)	120%	10	15
2000	(@50°C/122°F)	100% <b>(+)</b>	15	20
2500	(@50°C/122°F)	100% <b>(*)</b>	20	25
3000	(@40°C/104°F)	100% <b>(*)</b>	25	30
3200	(@40°C/104°F)	100% <b>(*)</b>	25	30

(\*) A max overload of 120% for 1 min. every 30 min. is allowed.
(+) A continuous overload of 120% of the range is allowed @ amb. temp. 40°C max.

4

### **Benefits**





3

### **Dimensions (mm)**







- Easy way to open and close the CT core by the dedicate seleable screws (see figure 1).
- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 2).
- Easy output and earth connection (see fig. 3).
- Multiple screws provided with isolation cap screws to grant a strong and reliable fixing of the current transformer to the bus-bar (see figure 4).
- Screw terminals compatible with any kind of wire terminals and protection of screw terminals using specific sealable covers to assure always the best safety (see figure 5-6-7-8).

### Wiring Diagram



# Accessories AC Solid-core Current Transformer Type CTD-9V / CTD-9H (@max 35x125 mm)

### **CARLO GAVAZZI**



### **Product Description**

Solid-core current transformer Rated prim with bus-bar mounting facility. 400 A to 32

Rated primary currents from 400 A to 3200 A.

- Bus-bar type solid-core current transformer
- Class 0.5 accuracy
- Currents from 400 A to 3200 A
- Up to 10 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers



Primary current \_\_\_\_\_ Secondary current \_\_\_\_\_ Option \_\_\_\_\_

### **Type Selection**

Model		Primary current	Secondary current	Option
CTD-9V:	vertical mounting	From 400A to 3200A	1A (on request)	XXX: none
CTD-9H:	horizontal mounting	(Refer to the Range Table)	5A	XTX: tropicalization

## **Input Specifications**

Operating frequency	48 to 62 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	E (max 75°C)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 l <sub>n</sub> /1 s 2.5 l <sub>th</sub> The short-time thermal current l <sub>th</sub> is anyway limited by the cable/bus-bar size
Extended current rating	refer to the Range Table
Security factor (FS)	≤ 5 (Class: 0.5, 1 and 3)

### **General Specifications**

Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Ten bus-bar fixing screws. Ten plastic caps for bus-bar fixing screws. Two sealable terminal block covers.
Special features	1 A secondary current, Tropicalization

Working temperature Storage temperature	-25°C to: refer to the Range Table (-13°F to: refer to the Range Table) (R.H. < 90% non condensing @ 40°C) -30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE. cURus and CSA (400A to 2000A)
Connection Cable cross section area	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 (without sealable terminal covers) IP20 (with sealable terminal block covers + wire terminals)
Bus-bar size	Max. 35x125 mm
Weight	From 450 to 700 g

### **Output Specifications**

**Rated secondary current** 

5 A or 1 A



Model CTD-9V and CTD-9H from 400A to 1200A					
Primary Current	Temperature	Extend. current rating	Bu	rden (\	/A)
Α			CL 0.5	CL 1	CL 3
400	(@60°C/140°F)	120%		3	6
500	(@60°C/140°F)	120%	2	4	8
600	(@60°C/140°F)	120%	4	6	10
700	(@60°C/140°F)	120%	4	8	10
750	(@60°C/140°F)	120%	4	8	10
800	(@60°C/140°F)	120%	4	8	10
1000	(@60°C/140°F)	120%	6	10	13
1200	(@50°C/122°F)	120%	8	12	15

Model CTD-9V and CTD-9H from 1250A to 3200A					
Primary Current	Temperature	Extend. current rating	Bu	rden (V	/A)
Α			CL 0.5	CL 1	CL 3
1250	(@50°C/122°F)	120%	8	12	15
1500	(@50°C/122°F)	120%	10	15	18
1600	(@50°C/122°F)	120%	10	15	18
2000	(@50°C/122°F)	100% <b>(+)</b>	15	20	24
2500	(@50°C/122°F)	100% <b>(*)</b>	20	25	30
3000	(@40°C/104°F)	100% <b>(*)</b>	25	30	35
3200	(@40°C/104°F)	100% <b>(*)</b>	25	30	35

(\*) A max overload of 120% for 1 min. every 30 min. is allowed.
(+) A continuous overload of 120% of the range is allowed @ amb. temp. 40°C max.

### **Benefits**





- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 1).
- Easy output and earth connection (see fig. 2).
- Screw terminals compatible with any kind of wire terminals (see figure 3-4-5-6).

# Dimensions Vertical mounting (mm)



## **Dimensions Horizontal mounting (mm)**

### **Wiring Diagram**







# **Accessories AC Split-Core Current Transformer**

**Type CTD-10S** ( max 50x126 mm)



## **Product Description**

Split-core current transformer Rated primary currents from with bus-bar mountng facility.

400 A to 3200 A.

### Bus-bar type split-core current transformer

- Class 1 accuracy
- Currents from 400 A to 3200 A
- Up to 10 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers
- Sealable fixing split-core screws

# Ordering Key CTD-105 2000 5A XXX

Model		
Primary current ——		
Secondary current —		
Option		

### **Type Selection**

Primary current	Secondary current	Option	
From 400A to 3200A	1A (on request)	XXX: none	est)
(Refer to the Range Table)	5A	XTX: tropicalization (on reque	

## **Input Specifications**

Operating frequency	48 to 62 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	E (max 75°C)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 $I_n$ /1 s 2.5 $I_{th}$ The short-time thermal current $I_{th}$ is anyway limited by the cable/bus-bar size
Extended current rating	refer to the Range Table
Security factor (FS)	≤ 5 (Class: 1 and 3)

### **General Specifications**

Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Ten bus-bar fixing screws. Ten plastic caps for bus-bar fixing screws. Two sealable terminal block covers.
Special features	1 A secondary current, Tropicalization

Working temperature Storage temperature	-25°C to: refer to the Range Table (-13°F to: refer to the Range Table) (R.H. < 90% non condensing @ 40°C) -30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE. cURus and CSA (400A to 2000A)
Connection Cable cross section area	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 (with sealable terminal covers) IP20 (with sealable terminal block covers + wire terminals)
Bus-bar size	Max. 51x125 mm
Weight	From 450 to 700 g

### **Output Specifications**

**Rated secondary current** 

5 A or 1 A

### **CARLO GAVAZZI**



	Model CTD-10S from 400A to 1200A			
Primary Current	Temperature	Extended current rating	Burde	en (VA)
Α			CL 1	CL 3
400	(@60°C/140°F)	120%	1	7
500	(@60°C/140°F)	120%	3	10
600	(@60°C/140°F)	120%	5	12
700	(@60°C/140°F)	120%	8	15
750	(@60°C/140°F)	120%	10	15
800	(@60°C/140°F)	120%	10	15
1000	(@60°C/140°F)	120%	12	20
1200	(@50°C/122°F)	120%	15	25

Model CTD-10S from 1250A to 3200A				
Primary Current	Temperature	Extended current rating	Burde	n (VA)
Α			CL 1	CL 3
1250	(@50°C/122°F)	120%	15	25
1500	(@50°C/122°F)	120%	20	30
1600	(@50°C/122°F)	120%	20	30
2000	(@50°C/122°F)	100% <b>(+)</b>	25	40
2500	(@50°C/122°F)	100% <b>(*)</b>	30	50
3000	(@40°C/104°F)	100% <b>(*)</b>	30	50
3200	(@40°C/104°F)	100% <b>(*)</b>	30	50

(\*) A max overload of 120% for 1 min. every 30 min. is allowed. (+) A continuous overload of 120% of the range is allowed @ amb. temp. 40°C max.

4

### **Benefits**





3

## Dimensions (mm)







- Easy way to open and close the CT core by the dedicate seleable screws (see figure 1).
- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 2).
- Easy output and earth connection (see fig. 3).
- Multiple screws provided with isolation cap screws to grant a strong and reliable fixing of the current transformer to the bus-bar (see figure 4).
- Screw terminals compatible with any kind of wire terminals and protection of screw terminals using specific sealable covers to assure always the best safety (see figure 5-6-7-8).

### Wiring Diagram



# **Accessories AC Solid-core Current Transformer** Type CTD-10V / CTD10-H ( max 50x125 mm)

### **CARLO GAVAZZI**



### **Product Description**

Solid-core current transformer with bus-bar mounting facility.

Rated primary currents from 400 A to 3200 A.

- Bus-bar type solid-core current transformer
- Class 0.5 accuracy
- Currents from 400 A to 3200 A
- Up to 10 Bus-bar isolated fixing screws
- Double screw terminals (up to 8-wire connections)
- Sealable terminal block covers



Primary current Secondary current Option -

### **Type Selection**

Model	Primary current	Secondary current	Option
<b>CTD-10V:</b> vertical mounting <b>CTD-10H:</b> horizontal mounting	From 400A to 3200A	1A (on request)	XXX: none
	(Refer to the Range Table)	5A	XTX: tropicalization

## **Input Specifications**

Operating frequency	48 to 62 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	E (max 75°C)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 I <sub>n</sub> /1 s 2.5 I <sub>th</sub> The short-time thermal current I <sub>th</sub> is anyway limited by the cable/bus-bar size
Extended current rating	Refer to the Range Table
Security factor (FS)	≤ 5 (Class: 0.5, 1 and 3)

### **General Specifications**

Standards	According to EN61869-2
Housing	ABS, self-extinguishing: UL 94 V-0
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Ten bus-bar fixing screws. Ten plastic caps for bus-bar fixing screws. Two sealable terminal block covers.
Special features	1 A secondary current, Tropicalization

Working temperature Storage temperature	-25°C to: refer to the Range Table (-13°F to: refer to the Range Table) (R.H. < 90% non condensing @ 40°C) -30°C to +70°C (-22°F to 159°C to +70°C (-22°F to
	condensing @ 40°C)
Approvals	CE. cURus and CSA (400A to 2000A)
Connection Cable cross section area	Screw type From 1.5 to 6 mm <sup>2</sup> Min/Max screws tightening torque relevant to terminal block screws: From 1 to 2 Nm Max screws tightening torque relevant to the cable/bus-bar fixing screws: 0,3 Nm
Protection degree	IP00 (without sealable terminal covers) IP20 (with sealable terminal block covers + wire terminals)
Bus-bar size	Max. 50x125 mm
Weight	From 450 to 700 g

## **Output Specifications**

**Rated secondary current** 

5 A or 1 A



Model CTD-10V and CTD-10H from 400A to 1200A					
Primary Current	Temperature	Extended current rating	Bu	rden (	VA)
Α			CL 0.5	CL 1	CL 3
400	(@60°C/140°F)	120%	1	7	10
500	(@60°C/140°F)	120%	3	10	14
600	(@60°C/140°F)	120%	5	12	17
700	(@60°C/140°F)	120%	8	15	20
750	(@60°C/140°F)	120%	10	15	20
800	(@60°C/140°F)	120%	10	15	20
1000	(@60°C/140°F)	120%	12	20	25
1200	(@50°C/122°F)	120%	15	25	30

Model CTD-10V and CTD-10H from 1250A to 3200A					
Primary Current	Temperature	Extended current rating	Bu	rden (\	/A)
Α			CL 0.5	CL 1	CL 3
1250	(@50°C/122°F)	120%	15	25	30
1500	(@50°C/122°F)	120%	20	30	40
1600	(@50°C/122°F)	120%	20	30	40
2000	(@50°C/122°F)	100% <b>(+)</b>	25	40	50
2500	(@50°C/122°F)	100% <b>(*)</b>	30	50	60
3000	(@40°C/104°F)	100% <b>(*)</b>	30	50	60
3200	(@40°C/104°F)	100% <b>(*)</b>	30	50	60

(\*) A Max overload of 120% for 1 min. every 30 min. is allowed. (+) A continuous overload of 120% of the range is allowed @ amb. temp. 40°C max.

### **Benefits**





- Bridging of current transformer output without changing the connection of the secondary, so to avoid any output overvoltage during either the maintenance or the installation procedure (see figure 1).
- Easy output and earth connection (see fig. 2).
- Screw terminals compatible with any kind of wire terminals (see figure 3-4-5-6).

### **Dimensions Vertical mounting (mm)**





### **Dimensions Horizontal mounting (mm)**

### Wiring Diagram







# Accessories AC Solid-core Current Transformer Type CTD-11V/11H (@max 35x125 mm)





### **Product Description**

Solid-core current trans- Rated primary current from former with bus-bar mount- 1000 to 4000A. ing facility.

### Bus-bar type solid-core current transformer

- Accuracy class 0.5
- Current range from 1000 to 4000A
- Up to 8 bus-bar fixing screws
- Double screw terminals (up to 4-wire connections)
- Sealable terminal block covers



Primary current ——		
Secondary current —		
Option		

## **Type Selection**

Model	Primary current	Secondary current	Option
<b>CTD-11V:</b> vertical mounting <b>CTD-11H:</b> horizontal mounting	1000 1500 2000 2500 3000 4000	5A	XXX: none

### **Input Specifications**

One veting frequency	50 60 LI-
Operating frequency	50-60 HZ
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	В
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 $I_n$ /1 s 2.5 $I_{th}$ The short-time thermal current $I_{th}$ is anyway limited by the cable/bus-bar size
Security factor (FS)	≤ 10

Working temperature	-30°C to +40°C (-22°F to 104°F) (R.H. < 90% non condensing @ 40°C)
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE
Connection	Screw type
Cable cross section area	From 1.5 to 4 mm <sup>2</sup>
Protection degree	IP20
Bus-bar size	Max. 35x125 mm
Weight	< 1.2 Kg

### **General Specifications**

Standards	According to EN60044-1
Housing	Polycarbonate UL94 V2
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Eight bus-bar fixing screws. Two sealable terminal block covers.

# **Output Specifications**

Rated secondary current	5 A
Burden	15 VA



## Wiring Diagram

# **Dimensions Vertical mounting (mm)**





## **Dimensions Horizontal mounting (mm)**



# Accessories AC Solid-core Current Transformer Type CTD-12V/12H (@max 53x125 mm)





### **Product Description**

Solid-core current trans- Rated primary current from former with bus-bar mount- 1000 to 4000A. ing facility.

### Bus-bar type solid-core current transformer

- Accuracy class 0.5
- Current range from 1000 to 4000A
- Up to 8 bus-bar fixing screws
- Double screw terminals (up to 4-wire connections)
- Sealable terminal block covers



Model	
Primarv current —	
Cooperations of the second	
Secondary current –	
Ontion	

# **Type Selection**

Model	Primary current	Secondary current	Option	
<b>CTD-12V:</b> vertical mounting <b>CTD-12H:</b> horizontal mounting	1000 1500 2000 2500 3000 4000	5A	XXX: none	

### **Input Specifications**

Operating frequency	50-60 Hz
Max. system voltage	0.72 kV
Rated insulation level	3 kV/1 min. @ 50 Hz
Insulation class	B (1000 to 4000A)
Short-time current rating I <sub>th</sub> I <sub>dyn</sub>	Typical 100 I <sub>n</sub> /1 s 2.5 I <sub>th</sub> The short-time thermal current I <sub>th</sub> is anyway limited by the cable/bus-bar size
Security factor (FS)	≤ 10

Working temperature	-30°C to +40°C (-22°F to 104°F) (R.H. < 90% non condensing @ 40°C)
Storage temperature	-30°C to +70°C (-22°F to 158°F) (R.H. < 90% non condensing @ 40°C)
Approvals	CE
Connection Cable cross section area	Screw type From 1.5 to 4 mm <sup>2</sup>
Protection degree	IP20
Bus-bar size	Max. 53x125 mm
Weight	< 1.3 Kg

## **General Specifications**

Standards	According to EN60044-1
Housing	Polycarbonate UL94 V2
Mounting	Bus-bar mounting
Standard accessories	Two terminal block screws. Eight bus-bar fixing screws. Two sealable terminal block covers.

### **Output Specifications**

Rated secondary current	5 A
Burden	15 VA



# Wiring Diagram

# Dimensions Vertical mounting (mm)





# **Dimensions Horizontal mounting (mm)**



# **CTV**







### Description

Split core current sensor (333 mV output) with compact dimensions, suitable for retrofit applications when used in combination with EM210 72 D MV energy analyzer. It manages primary current from 60 A to 800 A (it depends on the model).



CTV is the ideal solution for quick and easy installation without disconnecting cables during installation. It is indicated for any application (residential, commercial and industrial), especially for retrofitting where installing a solid core current transformer is not possible.



#### **Main features**

- Suitable for retrofit applications
- 9.5 to 36 mm hole diameter
- 50 x 90 mm hole diameter (CTV-8X model only)
- · Cable length: 1.5 m
- Detachable screw terminals (CTV-8X model only)
- · 333mV secondary output voltage



### **Benefits**

- · Adaptability and flexibility. Effective for a wide range of currents, it can be installed in existent applications.
- Fast installation. The opening/closing mechanism makes installation fast even in existent applications.



# Features



General

Material	PA66
Protection degree	IP20
Secondary output	cable, 24 AWG (0.3mm <sup>2</sup> )
	Detachable screw terminals (CTV-8X)
Mounting	Cable
	Busbar (CTV-8X)
	CTV1X: 60
Weight (g)	CTV2X: 66
	CTV3X: 118
	CTV4X: 200
	CTV6X: 300
	CTV8X: 725



38

16

42





### Fig. 1 *CTV-1X*





78



Fig. 4 CTV-4X





### **Environmental specifications**

Operating temperature	-40° to +65°C (-40 to 149 F°)
Storage temperature	-45° to +80°C (-49 to 176 F°)

UL note: insulation class: A (105), 55 °C rise type at 30°C ambient

### Conformity

# Approvals CECTUS

### **Electrical specifications**

Maximum current (con- tinuous)	1.2 x ln
Secondary output	333 mV
Rated system voltage	600 V ac
Accuracy	Class 1 according to EN 61000-4-8
Winding DC resistance at 20°C	CTV1X: 560 Ω max CTV2X: 384 ± 10 Ω max CTV3X: 160 Ω max CTV4X: 130 Ω max CTV6X: 90 Ω ±10%
Dieletric withstand volt- age (Hi-pot)	CTV1X, CTV2X: 2.5k V ac/1min Other models: 3k V ac/1min

Model	Primary current (A)	Max cable diameter (mm)	Max busbar size (mm)
CTV-1X	60	10	-
CTV-2X	100	16	-
CTV-3X	200	16	-
CTV-4X	200 400	21	-
CTV-6X	400	36	-
CTV-8X	800	-	50 X 90



# **Connection Diagrams**





# References

# 🔁 ст∨□ х□ зззм∨

Enter the code, replacing the symbol  $\Box$  with the selected option (e.g.: CTV **1**X **60A** 333MV).

Code	Options	Description
С		-
Т		-
V		-
	1X 60 A	Model and primary current
	2X 100 A	
	3X 200 A	
	4X 200 A	
	4X 400 A	
	6X 400 A	
	8X 800 A	
333 mV	-	Secondary current

### Further reading

Information	Document	Where to find it
Instruction manual	Instruction manual: CTV_X	

### CARLO GAVAZZI compatible components

Purpose	Component name/code key	Notes
Measure and display consumption of connected circuits	EM210, EM271, ET272	-
Connect CTV to EM271 or to ET272	TCDMM	-

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