



## Selection guide

# Energy meters and CTs

# 1-phase energy meters



Type	EM10 DIN	EM 110
Current / voltage range	1-phase 230 VAC - 32 A direct	1-phase 230 VAC- 32A direct (max 45A)
Installation	DIN rail	DIN rail
Dimensions (HxWxD) mm	1 DIN module (90 x 18 x 67)	1 module (90 x 18 x 63)
<b>Technical specifications</b>		
Display	LCD 5+1-digit (energies)	electromechanical totalizer 6+1-digit (energies)
MID certification annex MI-003	■ (PF)	■ (PF)
Power supply	Self power supply	Self power supply
<b>Functions</b>		
	1-phase energy meter (kWh)	1-phase energy meter (kWh)
Total/partial energy (kvarh)		
Active energy (EN 62053-21)	Class 1	Class 1
Active energy (EN 50470-3)	Class B	Class B
Reactive energy (EN 62053-23)		
Recording Min, Max		
<b>Communication</b>		
Pulse or alarm outputs	1 pulse output (O1)	1 pulse output (O1)
<b>Reference</b>		
	EM10 DIN AV8 1 X O1 X	EM110 DIN AV8 1 X O1 X or PFB
	EM10 DIN AV8 1 X O1 PF	

Ordering key						
Model	EM10 DIN	AV8	1	X	O1	PF
Range code						
System						
Power supply						
Output						
Option						

Ordering key							
Model	EM110 DIN	AV8	1	X	O1	PF	B
Range code							
System							
Power supply							
Output							
Option							
Measurement							

# 1-phase energy meters/analyzers



Type	EM 111	EM 112
Current / voltage range	1-phase 230 VAC - 32A (max 45A)	1-phase 230 VAC - 100A direct
Installation	DIN rail	DIN rail
Dimensions (HxWxD) mm	1 module (90 x 18 x 63)	2 modules (90 x 36 x 63)
<b>Technical specifications</b>		
Display	backlit touch LCD 4 DGT (instantaneous variables) 7-digit (energies)	backlit touch LCD up to 2x4-digit (instantaneous variables) 8-digit (energies)
MID certification annex MI-003	■ (PF)	■ (PF)
Power supply	Self power supply	Self power supply
Software configuration	UCS	UCS
<b>Functions</b>		
	1-phase energy meter (kWh, kvarh) 1-phase energy analyzer (V, A, Cos phi, Hz, W, var, Wdmd)	1-phase energy meter (kWh, kvarh) 1-phase energy analyzer (V, A, Cos phi, Hz, W, var, Wdmd)
Multi tariff kWh	■ Dual tariff	■ Dual tariff
Polarity inversion indicator	■	■
Active energy (EN 62053-21)	Class 1	Class 1
Active energy (EN 50470-3)	Class B	Class B
Reactive energy (EN 62053-23)	Class 2	Class 2
Recording Min, Max	■ (kW max.)	■ (kW max.)
<b>Communication</b>		
Inputs	1 (dual tariff management)	1 (dual tariff management)
Pulse or alarm outputs	1 pulse output (O1)	1 pulse output (O1)
RS485 (Modbus RTU)	■ (S1)	■ (S1)
RS485 (M-Bus)	■ (M1)	■ (M1)
<b>Reference</b>		
	EM111 DIN AV8 1 X O1 X or PFA or PFB	EM112 DIN AV0 1 X O1 X or PFA or PFB
	EM111 DIN AV8 1 X S1 X or PFA or PFB	EM112 DIN AV0 1 X S1 X or PFA or PFB
	EM111 DIN AV8 1 X M1 X or PFA or PFB	EM112 DIN AV0 1 X M1 X or PFA or PFB

Ordering key							
Model	EM111	DIN	AV8	1	X	O1	PF B
Range code							
System							
Power supply							
Output							
Option							
Measurement							

Ordering key							
Model	EM112	DIN	AV0	1	X	O1	PF B
Range code							
System							
Power supply							
Output							
Option							
Measurement							

# 1-phase and 3-phase energy meters/analyzers



Type	EM 210 AV	EM 210 MV
Current / voltage range	1-phase, 3-phase, 3-phase + Neutral 230/400 VAC Current inputs by 5A CT.	1-phase, 3-phase, 3-phase + Neutral 230/400 VAC Current inputs 0.333mV
Installation	Panel mounting or DIN rail	Panel mounting or DIN rail
Dimensions (HxWxD) mm	72 x 72 x 65	72 x 72 x 65
<b>Technical specifications</b>		
Display	Detachable LCD display 3-digit (instantaneous variables) 6+1-digit (modules)	Detachable LCD display 3-digit (instantaneous variables) 6+1-digit (modules)
MID certification annex MI-003	■ (PF)	
Power supply	Self power supply (PH-PH)	Self power supply (PH-PH)
Software configuration	■ UCS	■ UCS
<b>Functions</b>		
	1-phase and 3-phase energy analyzer (kWh, kvarh) V, A, VA, var, W, Cos phi, Hz, phase sequence THD (A,V) Compatible with CT 5A	1-phase and 3-phase energy analyzer (kWh, kvarh) V, A, VA, var, W, Cos phi, Hz, phase sequence THD (A,V) Compatible with CTV-xX sensors or ROG4K Rogowski coils
Multi tariff kWh		
Polarity inversion indicator		
Active energy (EN 62053-21)	Class 1	Equivalent to Class 1
Active energy (EN 50470-3)	Class B	
Reactive energy (EN 62053-23)	Class 2	Equivalent to Class 2
Recording Min, Max		
<b>Communication</b>		
Pulse or alarm outputs	1 pulse output (O)	1 pulse output (O)
RS485 (Modbus RTU)	■ (High speed communication, S)	■ (High speed communication, S)
RS485 (M-Bus)		
<b>Reference</b>		
	EM210 72D AV5 3 X OX X or PFA or PFB	EM210 72D MV5 3 X O X X
	EM210 72D AV5 3 X OS X or PFA or PFB	EM210 72D MV5 3 X O S X
	EM210 72D AV6 3 X OX X or PFA or PFB	EM210 72D MV6 3 X O X X
	EM210 72D AV6 3 X OS X or PFA or PFB	EM210 72D MV6 3 X O S X

## Ordering key

Model	EM210 72D	AV5	3	X	O	X	X
Range code							
System							
Power supply							
Output 1							
Output 2							
Option							

## Ordering key

Model	EM210 72D	MV5	3	X	O	X	X
Range code							
System							
Power supply							
Output 1							
Output 2							
Option							

## 3-phase energy meters/analyzers



Type	EM 21 72R	EM 270
Current / voltage range	1-phase, 3-phase + Neutral for retrofit 230/400 VAC Current sensors with included split core	3-phase 3-phase + neutral 230/400 VAC 1-phase 230 VAC Current measurement by CT series TCD X
Installation	Panel mounting or DIN rail	Panel mounting or DIN rail
Dimensions (HxWxD) mm	72 x 72 x 65	72 x 72 x 65
<b>Technical specifications</b>		
Display	Detachable LCD display 3-digit (instantaneous variables) 6+1-digit (modules)	Detachable LCD display 3-digit (instantaneous variables) 6+1-digit (modules)
Power supply	Self power supply (PH-N)	Self power supply (PH-PH)
Software configuration	■ EM21SOFT	■ UCS
<b>Functions</b>		
	Retrofit energy analyzer + 3 x C.T 1-phase and 3-phase energy analyzer (kWh, kvarh) V, A, VA, var, W, Cos phi , Hz, phase sequence).	Energy meter (kWh, kvarh) and analyzer 1- /3-phase (V, A, W, var, VA) Compatible with triple CT TCD X series
Active energy (EN 62053-21)	Equivalent to Class 2	Equivalent to Class 1
Reactive energy (EN 62053-23)		Equivalent to Class 2
Recording Min, Max		■ (kW max)
<b>Communication</b>		
Outputs (pulse or alarm)	1 pulse output (O)	2 pulse outputs (O)
RS485 (Modbus RTU)	■ (S)	■ by means of VMU-B module
RS485 (Modbus RTU)		■ (S) double RS485 (2S)
<b>Reference</b>		
	EM21 72R VV2 3 X O X X (90 A)	EM270 72D MV5 3 X OS X
	EM21 72R VV2 3 X O S X (90 A)	EM270 72D MV5 3 X 2S X
	EM21 72R VV3 3 X O X X (150 A)	EM270 72D MV6 3 X OS X
	EM21 72R VV3 3 X O S X (150 A)	EM270 72D MV6 3 X 2S X
	EM21 72R VV5 3 X O X X (250 A)	
	EM21 72R VV5 3 X O S X (250 A)	

Ordering key							
Model	EM21 72R	VV5	3	X	O	X	X
Range code							
System							
Power supply							
Output 1							
Output 2							
Option							

Ordering key							
Model	EM270 72D	MV5	3	X	OS	X	
Range code							
System							
Power supply							
Output							
Option							

# 3-phase energy meters/analyzers



Type	EM 271	ET 272
Current / voltage range	3-phase 3-phase + neutral 230/400 VAC 1-phase 230 VAC Current measurement by CT series TCD M	3-phase 3-phase + neutral 230/400 VAC 1-phase 230 VAC Current measurement by CT series TCD M
Installation	Panel mounting or DIN rail	DIN rail
Dimensions (HxWxD) mm	72 x 72 x 65	72 x 72 x 65
<b>Technical specifications</b>		
Display	Detachable LCD display 3-digit (instantaneous variables) 6+1-digit (modules)	Optional LCD display 3-digit (instantaneous variables) 6+1-digit (modules)
Power supply	Self power supply (PH-PH)	Self power supply (PH-PH)
Software configuration	■ UCS	■ UCS
<b>Functions</b>		
	Energy meter (kWh, kvarh) and analyzer 1- /3-phase (V, A, W, var, VA) Compatible with triple CT TCD M series	Energy transducer (kWh, kvarh) and analyzer 1- /3-phase (V, A, W, var, VA) Compatible with triple CT TCD M series
Active energy (EN 62053-21)	Equivalent to Class 1	Equivalent to Class 1
Reactive energy (EN 62053-23)	Equivalent to Class 2	Equivalent to Class 2
Recording Min, Max	■ (kW max)	■ (kW max)
<b>Communication</b>		
Outputs (pulse or alarm)	2 pulse outputs (O)	
RS485 (M-Bus)	■ by means of VMU-B module	
RS485 (Modbus RTU)	■ (S) double RS485 (2S)	Double RS485 (2S) with SELF ADDRESSING function by VMU C
<b>Reference</b>		
	EM271 72D MV5 3 X OS X	ET272DINMV53X2SX
	EM271 72D MV5 3 X 2S X	
	EM271 72D MV6 3 X OS X	
	EM271 72D MV6 3 X 2S X	

## Ordering key

Model	EM271 72D	MV5	3	X	OS	X
Range code						
System						
Power supply						
Output						
Option						

## Ordering key

Model	ET272 DIN	MV5	3	X	2S	X
Range code						
System						
Power supply						
Output						
Option						

# 3-phase energy meters



<b>Type</b>	<b>EM 280</b>
Current / voltage range	3-phase 3-phase + neutral 230/400 VAC 1-phase 230 VAC Current measurement by CT series TCD 06B
Installation	Panel mounting or DIN rail
Dimensions (HxWxD) mm	72 x 72 x 65
<b>Technical specifications</b>	
Display	Detachable LCD display 3-digit (instantaneous variables) 6+1-digit (modules)
MID certification annex MI-003	
Power supply	Self power supply (PH-PH)
Software configuration	■ UCS
<b>Functions</b>	
	Energy meter (kWh, kvarh) and analyzer 1- /3-phase (V, A, W, var, VA) Compatible with CT TCD X series
Active energy (EN 62053-21)	Equivalent to Class 1
Active energy (EN 50470-3)	
Reactive energy (EN 62053-23)	Equivalent to Class 2
Recording Min, Max	■ (kW max)
<b>Communication</b>	
Inputs	
Outputs (pulse or alarm)	2 pulse outputs (O)
RS485 (Modbus RTU)	■ (S) double RS485 (2S)
RS485 (M-Bus)	■ by means of VMU-B module
<b>Reference</b>	
	EM280 72D MV5 3 X OS X
	EM280 72D MV5 3 X 2S X
	EM280 72D MV6 3 X OS X
	EM280 72D MV6 3 X 2S X

## Ordering key

Model	EM280 72D	MV5	3	X	OS	X
Range code						
System						
Power supply						
Output						
Option						

# 3-phase energy meters/analyzers



## Type

### EM 24 DIN

Current / voltage range	1-phase, 3-phase, 3-phase + Neutral 230/400 VAC Meter for energy from CT 5 A (AV5) Direct connection 65 A (AV2, AV9)
Installation	DIN rail
Dimensions (HxWxD) mm	4 modules (90 x 72 x 67)

## Technical specifications

Display	LCD display 3 x 4 DGT (instantaneous variables) 8-digit (energies)
MID certification annex MI-003	■ (PFA, PFB)
Power supply	Self power supply (AV2, AV9) Auxiliary supply: 115/230 VAC (AV5)
Software configuration	UCS

## Functions

	3-phase energy meter/analyser
Multi tariff kWh	■ 4 different tariffs (IS)
Polarity inversion indicator	■
Digital inputs from remote heating (kWh) meters	■ (IS), (DP)
Active energy (EN 62053-21)	Class 1
Active energy (EN 50470-3)	Class B
Reactive energy (EN 62053-23)	Class 2
Recording Min, Max	■ (A, W, va, max)

## Communication

Inputs	3 digital inputs (IS)
Outputs (pulse or alarm)	2 pulse outputs or 2 alarm outputs (O2 or R2)
Modbus	■ RTU by RS485 (IS), Ethernet TCP/IP (E1)
M-bus	■ (M1 or M2)
Dupline®	■ (DP)

## Reference

EM24 DIN (AV23X or AV53D) DP (X or PFA or PFB)

EM24 DIN (AV23X or AV53X) E1 (X or PFA or PFB)

EM24 DIN (AV23X or AV53H or AV53L or AV93X) (IS or M1 or M2 or O2 or DP) X

EM24 DIN (AV23X or AV53X or AV93X) (IS or M1 or M2 or O2 or DP) (PFA or PFB)

## Ordering key

Model	EM24 DIN	AV5	3	D	O2	PF	A
Range code							
System							
Power supply							
Inputs/Outputs							
Option							
Measurement							



## 3-phase power quality analyzers 96x96 mm



Type	EM 340	EM 330
Current / voltage range	3-phase, 3-phase + Neutral 230/400 VAC Current inputs 65A direct	3-phase, 3-phase + Neutral 400/480 VAC Current inputs by CT 5A
Installation	DIN rail	DIN rail
Dimensions (HxWxD) mm	3 modules (90 x 54 x 63)	3 modules (90 x 54 x 63)
<b>Technical specifications</b>		
Display	backlit touch LCD 3x4-digit (instantaneous variables) 8-digit (energies)	backlit touch LCD 3x4-digit (instantaneous variables) 8-digit (energies)
MID certification annex MI-003	■ (PF)	■ (PF)
Power supply	Self power supply	90 to 260 VAC/CC (H)
Software configuration	UCS	UCS
<b>Functions</b>		
	3-phase energy analyzer with touch LCD and detection of connection error 3 DIN modules	3-phase energy analyzer with touch LCD and detection of connection error 3 DIN modules
Multi tariff kWh	■ 2 different tariffs	■ 2 different tariffs
Total/partial energy (kvarh)		■
Polarity inversion indicator	■	
Active energy (EN 62053-21)	Class 1	Class 1
Active energy (EN 50470-3)	Class B	Class B
Reactive energy (EN 62053-23)	Class 2	Class 2
Recording Min, Max	■ (kW max)	■ (kW max)
<b>Communication</b>		
Inputs	1 (double tariff management)	1 (double tariff management)
Outputs (pulse or alarm)	1 pulse output (O1)	1 pulse output (O1)
RS485 (Modbus RTU)	■ (S1)	■ (S1)
RS485 (M-Bus)	■ (M1)	■ (M1)
<b>Reference</b>		
	EM340 DIN AV2 3 X O1 X or PFA or PFB	EM330 DIN AV5 3 H O1 X or PFA or PFB
	EM340 DIN AV2 3 X S1 X or PFA or PFB	EM330 DIN AV5 3 H S1 X or PFA or PFB
	EM340 DIN AV2 3 X M1 X or PFA or PFB	EM330 DIN AV5 3 H M1 X or PFA or PFB

### Ordering key

Model	EM340	DIN	AV2	3	X	O1	PF	B
Range code								
System								
Power supply								
Output								
Option								
Measurement								

### Ordering key

Model	EM330	DIN	AV5	3	H	O1	PF	B
Range code								
System								
Power supply								
Output								
Option								
Measurement								

## 3-phase power quality analyzers 96x96 mm



Type	CPT DIN BASIC	CPT DIN ADVANCED
Current / voltage range	3-phase / 3-phase + Neutral [AV53] 1-phase 230/400 VAC [AV51] Current inputs 5A by CT	3-phase / 3-phase + Neutral [AV53] 1-phase 230/400 VAC [AV51] Current inputs 5A by CT
Installation	DIN rail	DIN rail
Dimensions (HxWxD) mm	83.5 x 45 x 98.5	83.5 x 45 x 98.5
<b>Technical specifications</b>		
Display		
MID certification annex MI-003		
Power supply	18 to 60 VAC/CC (L) 90 to 260 VAC/CC (H)	18 to 60 VAC/CC (L) 90 to 260 VAC/CC (H)
Software configuration	■ CPTBSOFT	■ CPTASOFT
<b>Functions</b>		
	3-phase compact power transducer. Transmission by RS485 232 422	3-phase compact power transducer. Transmission by RS485 232 422
Multi tariff kWh		
Total/partial energy (kvarh)	■	■
Polarity inversion indicator		
Active energy (EN 62053-21)	Class 1	Class 1
Active energy (EN 50470-3)		
Reactive energy (EN 62053-23)	Class 2	Class 2
Recording Min, Max	■ (A, W, VA, Max) (Cos phi, Min)	■ (A, W, VA, Max) (Cos phi, Min)
<b>Communication</b>		
Inputs		
Outputs (pulse or alarm) (Modbus RTU)	RS485 [S1], RS232 [S2]	2 open collector [O2] or relay [R2]
Output (analogue)		[1] or [3], 20mA [A] or 10 VDC [V]
<b>Reference</b>		
	CPT DIN AV5 3 H S1 BX	CPT DIN AV5 3 or 1 H or L A1 or A3 AX
	CPT DIN AV53 L S1 BX	CPT DIN AV5 3 or 1 H or L S1 or S2 AX
	CPT DIN AV53 H S2 BX	CPT DIN AV5 3 or 1 H O2 or R2 AX
	CPT DIN AV53 L S2 BX	
	CPT DIN AV51 H S1 BX	
	CPT DIN AV51 L S1 BX	
	CPT DIN AV51 H S2 BX	
	CPT DIN AV51 L S2 BX	

### Ordering key

Model	CPT DIN	AV5	3	H	A3	AX
Range code						
System						
Power supply						
Output						
Model						

## 3-phase energy analyzers 96x96 mm



Type	WM12 96	EM26 96
Current / voltage range	3-phase / 3-phase + Neutral 230/400 VAC Current inputs by CT 5A	3-phase / 3-phase + Neutral 230/400 VAC 1-phase 230 VAC Current inputs 5A by CT
Installation	Panel mounting	Panel mounting
Dimensions (HxWxD) mm	96 x 96 x 61	96 x 96 x 61

### Technical specifications

Display	LED 3x3-digits	LCD 3x4-digits (instantaneous variables) 8-digits (energies)
Used and produced electrical energy		■
MID certification annex MI-003		■ (PFB)
Power supply	24 VAC (A), 48 VAC (B), 230 VAC (D), 18-30 VCC (3)	90 to 260 VAC/CC
Software configuration		■ UCS

### Functions

	3-phase multifunction	3-phase energy analyzer
Multi tariff kWh		■ 4 different tariffs
Total/partial energy (kvarh)		■
Polarity inversion indicator		■ (kWh, water, gas)
THD		■ (U, I) up to 15 <sup>th</sup> harmonics
Active energy (EN 62053-21)		Class 1
Active energy (EN 50470-3)		Class B
Reactive energy (EN 62053-23)		Class 2
Recording Min, Max	■ (W, A max)	■

### Communication

Inputs		3 digital inputs (Tariffs or remote meters) (I3)
Outputs (pulse or alarm)		1 output (O1) 3 pulse or alarm outputs (O3) 2 relay outputs (R2)
RS485 (Modbus RTU)	■ (S)	■ (S1)

### Reference

	WM12 96 AV5 3 D X	EM26 96 AV5 3 H I3 S1 XX
	WM12 96 AV5 3 D S	EM26 96 AV6 3 H O1 S1 XX
	WM12 96 AV5 3 A X	EM26 96 AV6 3 H O3 S1 XX
	WM12 96 AV5 3 A S	EM26 96 AV6 3 H R2 S1 XX
	WM12 96 AV5 3 B X	EM26 96 AV6 3 H O1 S1 PF B or PF A
	WM12 96 AV5 3 B S	EM26 96 AV5 3 H O3 S1 PF B or PF A
	WM12 96 AV5 3 3 X	
	WM12 96 AV5 3 3 S	

### Ordering key

Model	WM12 96	AV5	3	D	X
Range code					
System					
Power supply					
Option					

### Ordering key

Model	EM26 96	AV5	3	H	O3	S1	PF	A
Range code								
System								
Power supply								
Input/Output								
Communication								
Option								
Measurement								

## 3-phase power quality analyzers 96x96 mm



Type	<b>WM20 96</b>	<b>WM30 96</b>
Current / voltage range	3-phase / 3-phase + Neutral 1-phase 230/400 VAC Current inputs 5A by CT	3-phase / 3-phase + Neutral 1-phase 230/400 VAC Current inputs 5A by CT
Installation	Panel mounting	Panel mounting
Dimensions (HxWxD) mm	96 x 96 x 50	96 x 96 x 50
<b>Technical specifications</b>		
Display	backlit LCD display 4x4-digits - 9+1-digits (energies)	backlit LCD display 4x4-digits - 9+1-digits (energies)
Power supply	18 to 60 VAC/CC (L) 90 to 260 VAC/CC (H)	18 to 60 VAC/CC (L) 90 to 260 VAC/CC (H)
Software configuration	■ UCS	■ UCS
<b>Functions</b>		
	3-phase modular power quality analyzer	3-phase modular power quality analyzer
Multi tariff kWh		
Total/partial energy (kvarh)		■
Load curve - Hourcounter		
Polarity inversion indicator		
THD	■ (U, I) up to 32 <sup>nd</sup> harmonics	■ (U, I) up to 32 <sup>nd</sup> harmonics
Active energy (EN 62053-21)	Class 0.5	Class 0.5
Active energy (EN 50470-3)	Class C	Class C
Reactive energy (EN 62053-23)	Class 2	Class 2
Recording Min, Max	■	■
<b>Communication</b>		
Inputs		
Outputs (pulse or alarm)	1 pulse or alarm outputs O2 (static) R2 (Relay)	2 pulse or alarm outputs O2 (static) R2 (Relay)
RS485 (Modbus RTU, Profibus)	■ (MC 485 232, MCPB)	■ (MC 485 232, MCPB)
Ethernet (Modbus TCP/IP)	■	■
Ethernet (BACnet TCP/IP)	■	■
Ethernet and RS485 (BACnet MS/TP)	■	■
Local communication via optical port	■	■
Analogue outputs		
<b>Reference</b>		
	<b>WM20 AV4/AV5/AV6/AV7 3 H/L</b>	<b>WM30 AV4/AV5/AV6/AV7 3 H/L</b>
	<b>MOR2</b> (2 relay outputs)	<b>MOR2</b> (2 relay outputs)
	<b>MOO2</b> (2 static outputs)	<b>MOO2</b> (2 static outputs)
	<b>MOV2</b> (2 analogue outputs 0-10 V)	<b>MOV2</b> (2 analogue outputs 0-10 V)
	<b>MOA2</b> (2 analogue outputs +20 mA)	<b>MOA2</b> (2 analogue outputs +20 mA)
	<b>MCEI</b> (Ethernet IP)	<b>MCEI</b> (Ethernet IP)
	<b>MC BAC IP</b> (Bacnet/IP)	<b>MC BAC IP</b> (Bacnet/IP)
	<b>MC BAC MS</b> (Bacnet MSTP)	<b>MC BAC MS</b> (Bacnet MSTP)
	<b>MC 485 232</b> (Modbus RTU)	<b>MC 485 232</b> (Modbus RTU)
	<b>MC ETH</b> (Modbus TCP/IP)	<b>MC ETH</b> (Modbus TCP/IP)
	<b>MC PB</b> (Profibus)	<b>MC PB</b> (Profibus)
	<b>MC PB M</b> (Profibus with memory)	<b>MC PB M</b> (Profibus with memory)

## 3-phase power quality analyzers 96x96 mm



Type	WM40 96	WM50 96
Current / voltage range	3-phase / 3-phase + Neutral 1-phase 230/400 VAC Current inputs 5A by CT	3-phase / 3-phase + Neutral 1-phase 230/400 VAC Current inputs 5A by CT and additional split core CT blocks with 65A direct measurements
Installation	Panel mounting	Panel mounting
Dimensions (HxWxD) mm	96 x 96 x 50	96 x 96 x 50
<b>Technical specifications</b>		
Display	backlit LCD display 4x4 digits - 9+1-digits (energies)	backlit LCD display 4x4 digits - 9+1-digits (energies)
Power supply	18 to 60 VAC/CC (L) 90 to 260 VAC/CC (H)	90 to 260 VAC/CC (H)
Software configuration	■ UCS	■ UCS
<b>Functions</b>		
	3-phase modular power quality analyzer	3-phase modular power quality analyzer with Branch monitoring function (up to 96 channels)
Multi tariff kWh	■ (6 different tariffs)	
Total/partial energy (kvarh)	■	■
Load curve - Hourcounter	■ (M)	
Polarity inversion indicator	■	
THD	■ (U, I) up to 32 <sup>nd</sup> harmonics	■ (U, I) up to 32 <sup>nd</sup> harmonics
Active energy (EN 62053-21)	Class 0.5	Class 0.5
Active energy (EN 50470-3)	Class C	Class C
Reactive energy (EN 62053-23)	Class 2	Class 2
Recording Min, Max	■	■
<b>Communication</b>		
Inputs	up to 6 digital inputs (MFI606 or MFI6R4)	
Outputs (pulse or alarm)	Up to 8 pulse outputs and up to 16 alarm outputs 6 relay outputs (R6) 6 static outputs (O6)	1 pulse or alarm output O2 (static) R2 (Relay)
RS485 (Modbus RTU, Profibus)	■ MC 485232 MC 485232M, MC PB, MC PB M	■ (MC 485 232)
Ethernet (Modbus TCP/IP)	■	■
Ethernet (BACnet TCP/IP)	■	
Ethernet and RS485 (BACnet MS/TP)	■	
Local communication via optical port	■	■
Analogue outputs	■	
<b>Reference</b>		
	<b>WM40 AV4/AV5/AV6/AV7 3 H/L</b>	<b>WM50 AV5 3 H</b>
	<b>MOR2</b> (2 relay outputs)	<b>MOR2</b> (2 relay outputs)
	<b>MOO2</b> (2 static outputs)	<b>MOO2</b> (2 static outputs)
	<b>MOV2</b> (2 analogue outputs 0-10 V)	<b>MC 485 232</b> (Modbus RTU)
	<b>MOA2</b> (2 analogue outputs +20 mA)	<b>MC ETH</b> (Modbus TCP/IP)
	<b>MC BAC IPM</b> (Bacnet/IP with memory)	
	<b>MC BAC MSM</b> (Bacnet MSTP with memory)	
	<b>MC 485 232 M</b> (Modbus RTU with memory)	
	<b>MC ETH M</b> (Modbus TCP/IP with memory)	
	<b>MC EIM</b> (Ethernet IP with memory)	
	<b>MC PB</b> (Profibus)	
	<b>MC PB M</b> (Profibus with memory)	
	<b>MFI606</b> (6 digital inputs + 6 static outputs)	
	<b>MFI6R4</b> (6 digital inputs + 4 relay outputs)	

## The benefits of the EM100 and EM300 series

### TOUCH TECH display

The EM100 and EM300 are the first energy analyzers in the market to have the TOUCH TECH system, a display-integrated touch key-pad. The TOUCH TECH display makes page scrolling and programming simpler and more straightforward, avoiding all the issues related to mechanical keys.

In this way the LCD area, backlit after the first touch, can display a complete set of variables and data.



### Developed to communicate

Together with accurate measurement and a clear data display, communication is the most valuable benefit of the EM100 and EM300.

The energy analyzers are available with an integrated Modbus RTU or M-bus port. External M-bus gateways are no longer needed.

All the energy data and instantaneous values can be easily read by any supervisory system using the same driver for all the models of the EM100 and EM300 Series.

The EM100 and EM300 can also be optionally equipped with a pulse output to retransmit the consumed active energy to a supervisory PLC.

### EM100 Series: class 1 single-phase bidirectional and dual-tariff energy meters

- **EM110** 120 V or 240 V; 45 A direct connection Electromechanical display, 7-digit, Pulse output, 1-DIN module
- **EM111** 120 V or 240 V; 45 A direct connection Backlit LCD display, 7-digit, Pulse output, Modbus RTU or M-bus port, Digital input for dual tariff management, 1-DIN module
- **EM112** 120 V or 240 V; 100 A direct connection Backlit LCD display, 8-digit, Pulse output, Modbus RTU or M-bus port, Digital input for dual tariff management, 2-DIN module

### Compact size, extended current inputs

Thanks to their innovative measuring technique, the EM100 and EM300 can manage a high direct current in a very compact housing, with an extended accuracy range.

The nominal current of the 1-DIN module-housing EM110 and EM111 is 32A (but can manage up to 45A max continuously); EM112 can reach 100 A (1-phase) in just 2-DIN modules, EM330 5A by current transformers and EM340 up to 65 A (3-phase) in a 3-DIN modules.



### EM300 Series: class 1 three-phase bidirectional and dual-tariff energy meters

- **EM330** 400 to 480 VLL; 5 A by CT connection, Backlit LCD display, 3x8-digit, Pulse output, Modbus RTU or M-bus port, Digital input for dual tariff management, 3-DIN module
- **EM340** 230 V or 400 VLL; 65 A direct connection, Backlit LCD display, 3x8-digit, Pulse output, Modbus RTU or M-bus port, Digital input for dual tariff management, 3-DIN module



## EM21 72R and EM210 MV: the retrofit solutions

### Detachable display

- Detachable display to carry out up to 3 installation modes from the same instrument: DIN rail, panel mounting or transducer.

### Ready to use

- Miniature split-core current sensors supplied together with EM21 72R: everything is needed in just a single box.

### Easy installation

- Time saving installation system exploiting self-power supply, automatic phase detection and application oriented programming procedure.

### Communication

- Pulsing output for easy and quick data transmission to PC/ PLC for full load control.
- RS485 communication port for full BMS integration.

### Compact housing

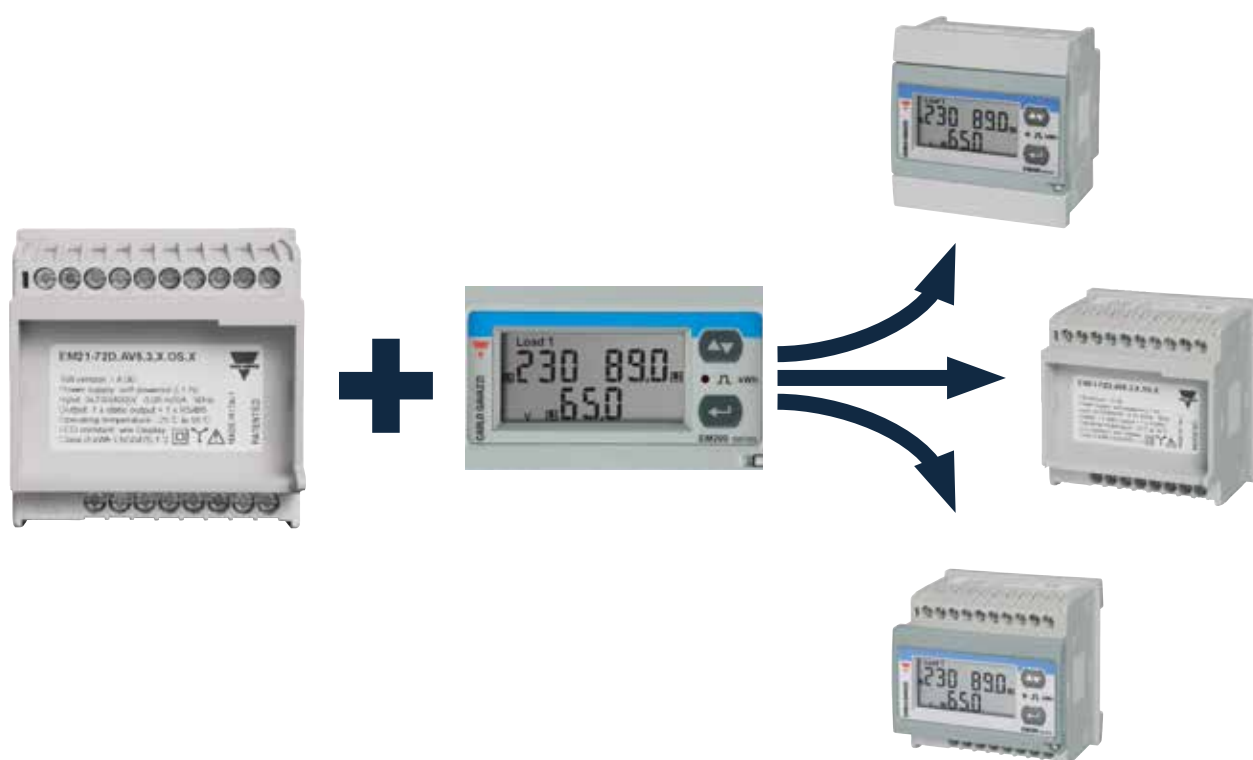
- Space saving on panel boards by means of its compact housing.
- EM21 72R and EM210 MV are two innovative, cost effective and compact energy meters for retro-fit applications: they are the first on the market to have a detachable display, allowing them to be mounted either on a panel with just 72x72 mm or on a DIN rail in only 4 modules, with neither any adaptor or external accessory. Current measurements are carried out by means of external split-core current sensors, which can be included in the box (72R) or not (EM210 MV).

### EM210 MV can manage the ROG4K Rogowski coils

- This solution amplifies the benefits of a Rogowski solution, embedding into the meter the signal conditioning function, that most of competitors provide by an external piece of hardware.
- Any ROG4K coil covers a wide primary current range, from 20 to 4000 A, also reducing stock needs.


### Standards

- Energy measurement equivalent to class 1 of the international standard IEC62053-21 (EM21-72V) or class 2 (including the whole measuring chain, in case of 72R model).




## EM 270, EM 271: Quick and cost effective installation


In case of retrofit applications, no-load disconnection, space saving and quick fitting are assured by split-core sensor groups.




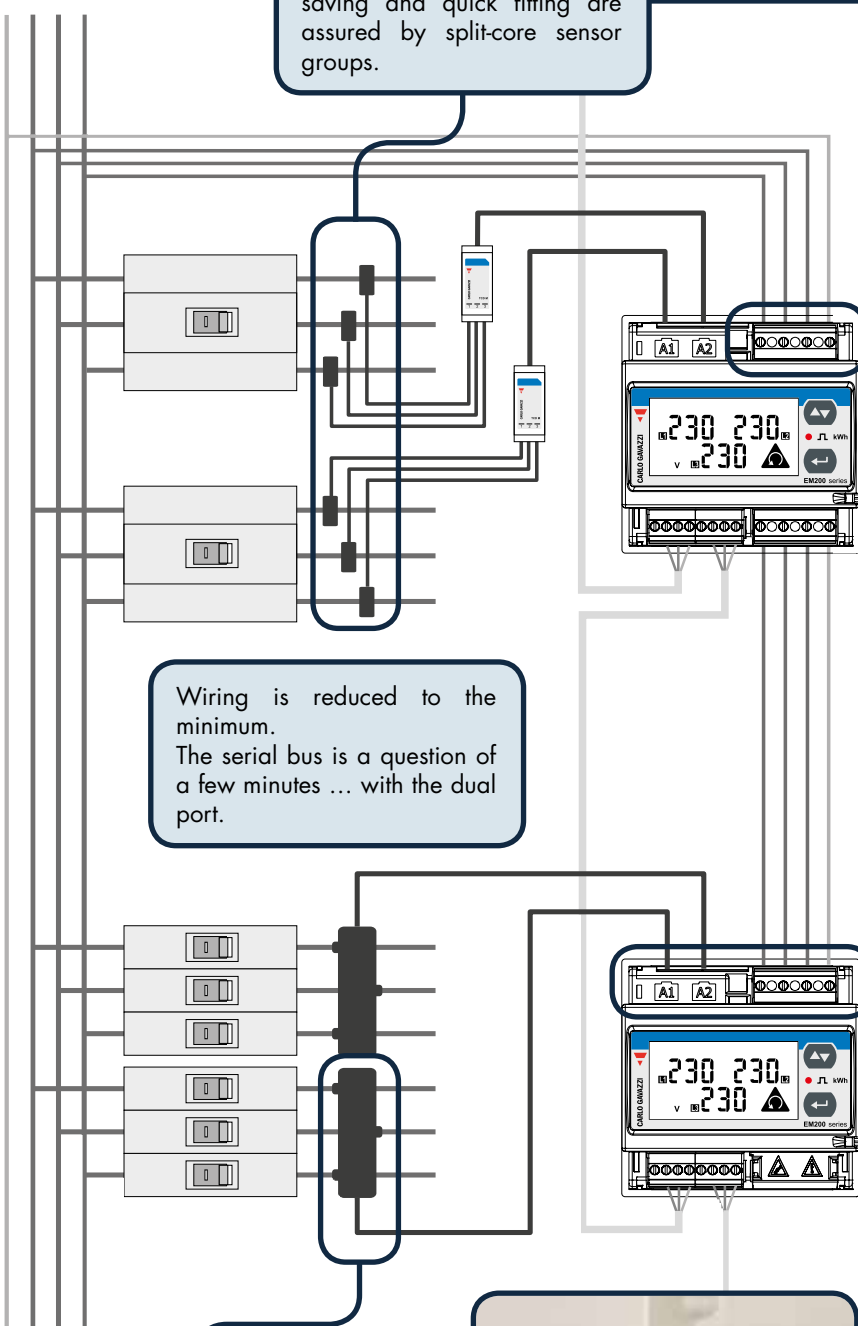
Wiring is reduced to the minimum. The serial bus is a question of a few minutes ... with the dual port.



Voltage in and... voltage out. Installation time is 10 times shorter than traditional metering.



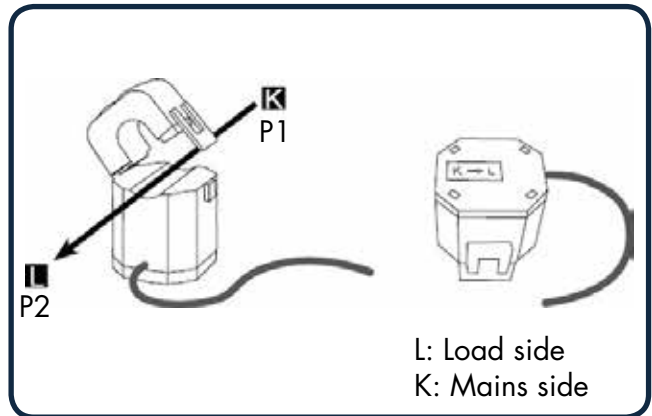
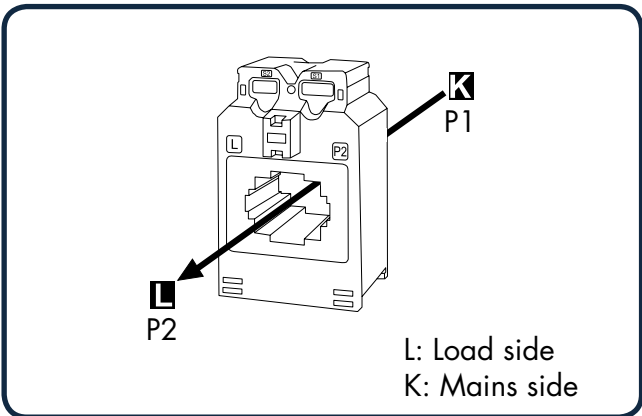
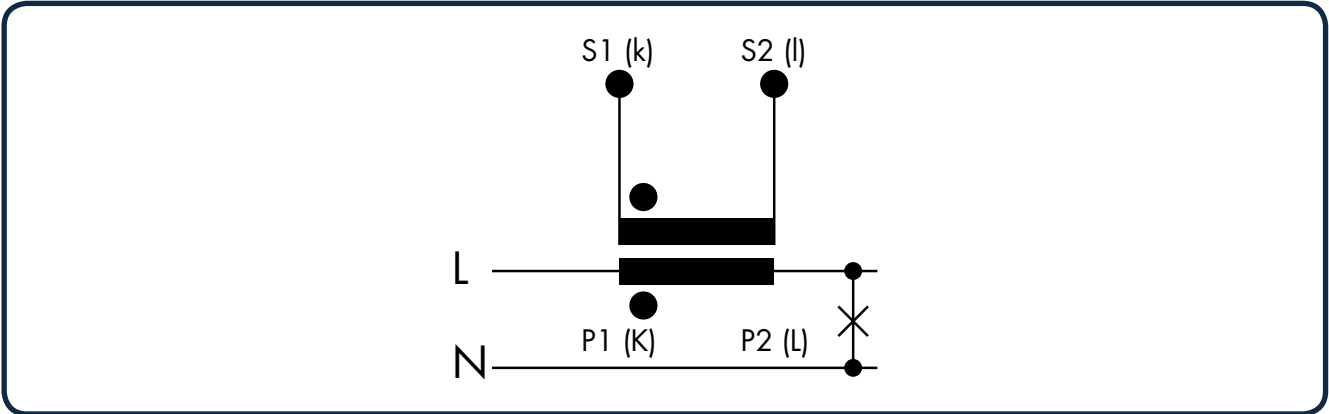
In the case of contiguous breakers, space saving is assured by the appropriate triple current transformer form factor.



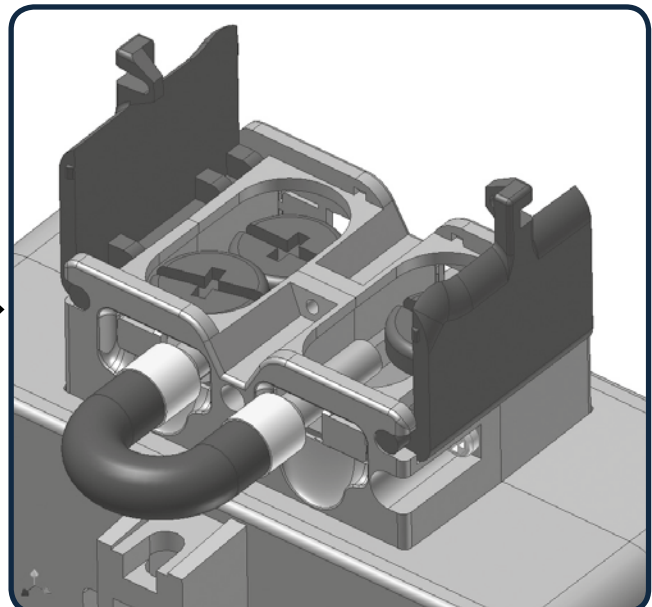
# Installation procedure




## CTs wiring diagrams



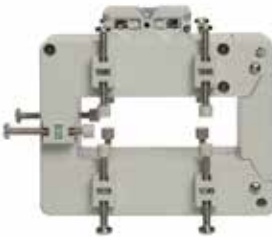






## Disconnection of secondary

For safety matters (dangerous voltage between the secondary terminals), do not let the secondary open, as shown in the picture.



Series	References		Primary current A	Burden (VA)			
	5A	1A		Class 0.5	Class 1	Class 3	
<b>CTD1X</b>  <p>Hole: Ø23.3 mm max. Size: 46.0 x 66.0 mm</p>	CTD1X505AXXX	CTD1X501AXXX	50		1	1.25	
	CTD1X605AXXX	CTD1X601AXXX	60		1	1.25	
	CTD1X705AXXX	CTD1X701AXXX	70		1.5	1.75	
	CTD1X755AXXX	CTD1X751AXXX	75	1	1.25	1.75	
	CTD1X805AXXX	CTD1X801AXXX	80	1.25	1.5	2	
	CTD1X1005AXXX	CTD1X1001AXXX	100	1.5	1.75	2.25	
	CTD1X1205AXXX	CTD1X1201AXXX	120	1.75	2	2.5	
	CTD1X1255AXXX	CTD1X1251AXXX	125	2	2.25	2.75	
	CTD1X1505AXXX	CTD1X1501AXXX	150	2.25	2.5	3	
	CTD1X1605AXXX	CTD1X1601AXXX	160	2.5	2.75	3.25	
	CTD1X2005AXXX	CTD1X2001AXXX	200	3	3.25	3.75	
	CTD1X2505AXXX	CTD1X2501AXXX	250	4.5	4.75	5.25	
	CTD1X3005AXXX	CTD1X3001AXXX	300	5	5.5	6	
	<b>CTD2X</b>  <p>Hole: 32.5 x 25.5 mm max. Size: 46.0 x 86.0 mm</p>	CTD2X405AXXX	CTD2X401AXXX	40			1.25
		CTD2X505AXXX	CTD2X501AXXX	50			1.5
		CTD2X605AXXX	CTD2X601AXXX	60			2
CTD2X705AXXX		CTD2X701AXXX	70			2.5	
CTD2X755AXXX		CTD2X751AXXX	75		1.75	2.5	
CTD2X805AXXX		CTD2X801AXXX	80		2	2.75	
CTD2X1005AXXX		CTD2X1001AXXX	100		2.5	3	
CTD2X1205AXXX		CTD2X1201AXXX	120		2.75	3.75	
CTD2X1255AXXX		CTD2X1251AXXX	125	2	2.75	3.75	
CTD2X1505AXXX		CTD2X1501AXXX	150	3	4	5	
CTD2X1605AXXX		CTD2X1601AXXX	160	3	4	5	
CTD2X2005AXXX		CTD2X2001AXXX	200	4	5	6.5	
CTD2X2505AXXX		CTD2X2501AXXX	250	5.5	7	8	
CTD2X3005AXXX		CTD2X3001AXXX	300	7	8.5	9.5	
CTD2X4005AXXX		CTD2X4001AXXX	400	12	13.5	14.5	
<b>CTD3X</b>  <p>Hole: 51.0 x 41.0 mm max. Size: 77.0 x 109.0 mm</p>		CTD3X505AXXX	CTD3X501AXXX	50			1.75
	CTD3X605AXXX	CTD3X601AXXX	60			2	
	CTD3X705AXXX	CTD3X701AXXX	70			2.5	
	CTD3X755AXXX	CTD3X751AXXX	75			3	
	CTD3X805AXXX	CTD3X801AXXX	80			3	
	CTD3X1005AXXX	CTD3X1001AXXX	100		2	3.5	
	CTD3X1205AXXX	CTD3X1201AXXX	120		2.25	4	
	CTD3X1255AXXX	CTD3X1251AXXX	125		2.5	4.5	
	CTD3X1505AXXX	CTD3X1501AXXX	150	2.25	3	6	
	CTD3X1605AXXX	CTD3X1601AXXX	160	2.5	3.5	6.5	
	CTD3X2005AXXX	CTD3X2001AXXX	200	3	4.5	8.5	
	CTD3X2505AXXX	CTD3X2501AXXX	250	3.5	6.5	10.5	
	CTD3X3005AXXX	CTD3X3001AXXX	300	7	10	13	
	CTD3X4005AXXX	CTD3X4001AXXX	400	9	14	17	
	CTD3X5005AXXX	CTD3X5001AXXX	500	14	18	21	
	CTD3X6005AXXX	CTD3X6001AXXX	600	17	21	24	
CTD3X7005AXXX	CTD3X7001AXXX	700	22	26	29		
CTD3X7505AXXX	CTD3X7501AXXX	750	24	28	31		
CTD3X8005AXXX	CTD3X8001AXXX	800	25	29	32		
CTD3X10005AXXX	CTD3X10001AXXX	1000	35	39	42		
CTD3X12005AXXX	CTD3X12001AXXX	1200	40	44	47		

Series	References		Primary current A	Burden (VA)		
	5A	1A		Class 0.5	Class 1	Class 3
<b>CTD4X</b>  <p>Hole: 64.0 x 51.0 mm max. Size: 90.0 x 113.0 mm</p>	CTD4X1505AXXX	CTD4X1501AXXX	150		2.5	
	CTD4X2005AXXX	CTD4X2001AXXX	200		3.25	
	CTD4X2505AXXX	CTD4X2501AXXX	250	2.5	4.5	2
	CTD4X3005AXXX	CTD4X3001AXXX	300	3	4	3
	CTD4X4005AXXX	CTD4X4001AXXX	400	6	9	3
	CTD4X5005AXXX	CTD4X5001AXXX	500	10	12.5	4
	CTD4X6005AXXX	CTD4X6001AXXX	600	11	13.5	4
	CTD4X7005AXXX	CTD4X7001AXXX	700	12.5	15	5
	CTD4X7505AXXX	CTD4X7501AXXX	750	13	15.5	5
	CTD4X8005AXXX	CTD4X8001AXXX	800	14	16.5	5
	CTD4X10005AXXX	CTD4X10001AXXX	1000	17.5	20	6
	CTD4X12005AXXX	CTD4X12001AXXX	1200	20	22.5	6
	CTD4X12505AXXX	CTD4X12501AXXX	1250	20	22.5	6
	CTD4X15005AXXX	CTD4X15001AXXX	1500	27.5	30	8
	CTD4X16005AXXX	CTD4X16001AXXX	1600	27.5	30	8
	<b>CTD8V</b>  <p>Hole: 31.0 x 81.0 mm max. Size: 87.0 x 113.0 mm</p>	CTD8V1505AXXX	CTD8V1501AXXX	150		
CTD8V2005AXXX		CTD8V2001AXXX	200			4
CTD8V2505AXXX		CTD8V2501AXXX	250			5
CTD8V3005AXXX		CTD8V3001AXXX	300		2	6
CTD8V4005AXXX		CTD8V4001AXXX	400	3	5	8
CTD8V5005AXXX		CTD8V5001AXXX	500	5	7	10
CTD8V6005AXXX		CTD8V6001AXXX	600	6	10	12
CTD8V7005AXXX		CTD8V7001AXXX	700	6	10	12
CTD8V7505AXXX		CTD8V7501AXXX	750	8	12	15
CTD8V8005AXXX		CTD8V8001AXXX	800	8	12	15
CTD8V10005AXXX		CTD8V10001AXXX	1000	10	15	20
CTD8V12005AXXX		CTD8V12001AXXX	1200	12	15	20
CTD8V12505AXXX		CTD8V12501AXXX	1250	12	15	20
CTD8V15005AXXX		CTD8V15001AXXX	1500	15	20	25
CTD8V16005AXXX		CTD8V16001AXXX	1600	15	20	25
CTD8V20005AXXX		CTD8V20001AXXX	2000	20	25	30
CTD8V25005AXXX	CTD8V25001AXXX	2500	25	30	40	
<b>CTD8H</b>  <p>Hole: 81.0 x 31.0 mm max. Size: 117.0 x 104.0 mm</p>	CTD8H1505AXXX	CTD8H1501AXXX	150			2
	CTD8H2005AXXX	CTD8H2001AXXX	200			4
	CTD8H2505AXXX	CTD8H2501AXXX	250			5
	CTD8H3005AXXX	CTD8H3001AXXX	300		2	6
	CTD8H4005AXXX	CTD8H4001AXXX	400	3	5	8
	CTD8H5005AXXX	CTD8H5001AXXX	500	5	7	10
	CTD8H6005AXXX	CTD8H6001AXXX	600	6	10	12
	CTD8H7005AXXX	CTD8H7001AXXX	700	6	10	12
	CTD8H7505AXXX	CTD8H7501AXXX	750	8	12	15
	CTD8H8005AXXX	CTD8H8001AXXX	800	8	12	15
	CTD8H10005AXXX	CTD8H10001AXXX	1000	10	15	20
	CTD8H12005AXXX	CTD8H12001AXXX	1200	12	15	20
	CTD8H12505AXXX	CTD8H12501AXXX	1250	12	15	20
	CTD8H15005AXXX	CTD8H15001AXXX	1500	15	20	25
	CTD8H16005AXXX	CTD8H16001AXXX	1600	15	20	25
	CTD8H20005AXXX	CTD8H20001AXXX	2000	20	25	30
CTD8H25005AXXX	CTD8H25001AXXX	2500	25	30	40	

Series	References		Primary current A	Burden (VA)		
	5A	1A		Class 0.5	Class 1	Class 3
<b>CTD8Q</b>  Hole: 101.0 x 55.5 mm max. Size: 129.0 x 144.0 mm	CTD8Q10005AXXX		1000	15		
	CTD8Q15005AXXX		1500	15		
	CTD8Q20005AXXX		2000	15		
	CTD8Q25005AXXX		2500	15		
	CTD8Q30005AXXX		3000	15		
	CTD8Q40005AXXX		4000	15		
<b>CTD9V</b>  Hole: 36.0 x 126.0 mm max. Size: 92.0 x 178.0 mm	CTD9V4005AXXX	CTD9V4001AXXX	400		3	6
	CTD9V5005AXXX	CTD9V5001AXXX	500	2	4	8
	CTD9V6005AXXX	CTD9V6001AXXX	600	4	6	10
	CTD9V7005AXXX	CTD9V7001AXXX	700	4	8	10
	CTD9V7505AXXX	CTD9V7501AXXX	750	4	8	10
	CTD9V8005AXXX	CTD9V8001AXXX	800	4	8	10
	CTD9V10005AXXX	CTD9V10001AXXX	1000	6	10	13
	CTD9V12005AXXX	CTD9V12001AXXX	1200	8	12	15
	CTD9V12505AXXX	CTD9V12501AXXX	1250	8	12	15
	CTD9V15005AXXX	CTD9V15001AXXX	1500	10	15	18
	CTD9V16005AXXX	CTD9V16001AXXX	1600	10	15	18
	CTD9V20005AXXX	CTD9V20001AXXX	2000	15	20	24
	CTD9V25005AXXX	CTD9V25001AXXX	2500	20	25	30
	CTD9V30005AXXX	CTD9V30001AXXX	3000	25	30	35
	CTD9V32005AXXX	CTD9V32001AXXX	3200	25	30	35
	CTD9V40005AXXX	CTD9V40001AXXX	4000	25	30	35
<b>CTD9H</b>  Hole: 126.0 x 36.0 mm max. Size: 162.0 x 109.0 mm	CTD9H4005AXXX	CTD9H4001AXXX	400		3	6
	CTD9H5005AXXX	CTD9H5001AXXX	500	2	4	8
	CTD9H6005AXXX	CTD9H6001AXXX	600	4	6	10
	CTD9H7005AXXX	CTD9H7001AXXX	700	4	8	10
	CTD9H7505AXXX	CTD9H7501AXXX	750	4	8	10
	CTD9H8005AXXX	CTD9H8001AXXX	800	4	8	10
	CTD9H10005AXXX	CTD9H10001AXXX	1000	6	10	13
	CTD9H12005AXXX	CTD9H12001AXXX	1200	8	12	15
	CTD9H12505AXXX	CTD9H12501AXXX	1250	8	12	15
	CTD9H15005AXXX	CTD9H15001AXXX	1500	10	15	18
	CTD9H16005AXXX	CTD9H16001AXXX	1600	10	15	18
	CTD9H20005AXXX	CTD9H20001AXXX	2000	15	20	24
	CTD9H25005AXXX	CTD9H25001AXXX	2500	20	25	30
	CTD9H30005AXXX	CTD9H30001AXXX	3000	25	30	35
	CTD9H32005AXXX	CTD9H32001AXXX	3200	25	30	35
	CTD9H40005AXXX	CTD9H40001AXXX	4000	25	30	35
<b>CTD10V</b>  Hole: 51.0 x 126.0 mm max. Size: 107.0 x 178.0 mm	CTD10V4005AXXX	CTD10V4001AXXX	400	1	7	10
	CTD10V5005AXXX	CTD10V5001AXXX	500	3	10	14
	CTD10V6005AXXX	CTD10V6001AXXX	600	5	12	17
	CTD10V7005AXXX	CTD10V7001AXXX	700	8	15	20
	CTD10V7505AXXX	CTD10V7501AXXX	750	10	15	20
	CTD10V8005AXXX	CTD10V8001AXXX	800	10	15	20
	CTD10V10005AXXX	CTD10V10001AXXX	1000	12	20	25
	CTD10V12005AXXX	CTD10V12001AXXX	1200	15	25	30
	CTD10V12505AXXX	CTD10V12501AXXX	1250	15	25	30
	CTD10V15005AXXX	CTD10V15001AXXX	1500	20	30	40
CTD10V16005AXXX	CTD10V16001AXXX	1600	20	30	40	
CTD10V20005AXXX	CTD10V20001AXXX	2000	25	40	50	
CTD10V25005AXXX	CTD10V25001AXXX	2500	30	50	60	

Series	References		Primary current A	Burden (VA)		
	5A	1A		Class 0.5	Class 1	Class 3
<b>CTD10V</b>	CTD10V30005AXXX	CTD10V30001AXXX	3000	30	50	60
	CTD10V32005AXXX	CTD10V32001AXXX	3200	30	50	60
<b>CTD10H</b>	CTD10H4005AXXX	CTD10H4001AXXX	400	1	7	10
	CTD10H5005AXXX	CTD10H5001AXXX	500	3	10	14
	CTD10H6005AXXX	CTD10H6001AXXX	600	5	12	17
	CTD10H7005AXXX	CTD10H7001AXXX	700	8	15	20
	CTD10H7505AXXX	CTD10H7501AXXX	750	10	15	20
	CTD10H8005AXXX	CTD10H8001AXXX	800	10	15	20
	CTD10H10005AXXX	CTD10H10001AXXX	1000	12	20	25
	CTD10H12005AXXX	CTD10H12001AXXX	1200	15	25	30
	CTD10H12505AXXX	CTD10H12501AXXX	1250	15	25	30
	CTD10H15005AXXX	CTD10H15001AXXX	1500	20	30	40
	CTD10H16005AXXX	CTD10H16001AXXX	1600	20	30	40
	CTD10H20005AXXX	CTD10H20001AXXX	2000	25	40	50
	CTD10H25005AXXX	CTD10H25001AXXX	2500	30	50	60
	CTD10H30005AXXX	CTD10H30001AXXX	3000	30	50	60
	CTD10H32005AXXX	CTD10H32001AXXX	3200	30	50	60
	<b>CTD11V</b>	CTD11V10005AXXX		1000	15	
CTD11V15005AXXX			1500	15		
CTD11V20005AXXX			2000	15		
CTD11V25005AXXX			2500	15		
CTD11V30005AXXX			3000	15		
CTD11V40005AXXX			4000	15		
<b>CTD11H</b>	CTD11H10005AXXX		1000	15		
	CTD11H15005AXXX		1500	15		
	CTD11H20005AXXX		2000	15		
	CTD11H25005AXXX		2500	15		
	CTD11H30005AXXX		3000	15		
	CTD11H40005AXXX		4000	15		
<b>CTD12V</b>	CTD12V10005AXXX		1000	15		
	CTD12V15005AXXX		1500	15		
	CTD12V20005AXXX		2000	15		
	CTD12V25005AXXX		2500	15		
	CTD12V30005AXXX		3000	15		
	CTD12V40005AXXX		4000	15		
<b>CTD12H</b>	CTD12H10005AXXX		1000	15		
	CTD12H15005AXXX		1500	15		
	CTD12H20005AXXX		2000	15		
	CTD12H25005AXXX		2500	15		
	CTD12H30005AXXX		3000	15		
	CTD12H40005AXXX		4000	15		
<b>CTD1Z</b>	CTD 1Z505AXXX		50		1.5	
	CTD 1Z1005AXXX		100		2.5	
	CTD 1Z1255AXXX		125		2.5	
	CTD 1Z1505AXXX		150		2.5	
	CTD 1Z2005AXXX		200		3.75	



Hole: 126.0 x 51.0 mm max.  
Size: 162.0 x 124.0 mm

**CTD11V**



Hole: 38.0 x 127.0 mm max.  
Size: 98.0 x 178.0 mm

**CTD11H**



Hole: 127.0 x 38.0 mm max.  
Size: 160.0 x 115.0 mm

**CTD12V**



Hole: 54.0 x 127.0 mm max.  
Size: 125.0 x 178.0 mm

**CTD12H**










Hole: 127.0 x 54.0 mm max.  
Size: 157.0 x 140.0 mm














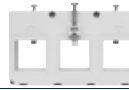
**CTD1Z**



Hole: Ø21.5 mm max.  
Size: 44.0 x 76.0 mm

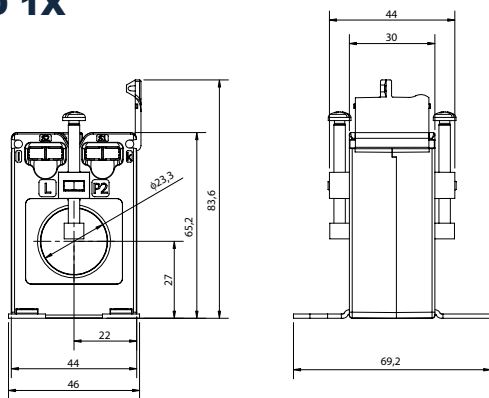
Series	References		Primary current A	Burden (VA)		
	5A	1A		Class 0.5	Class 1	Class 3
<b>TADK</b> 	TADK1A5A	TADK1A1A	1	10		
	TADK5A5A	TADK5A1A	5	10		
	TADK10A5A	TADK10A1A	10	10		
	TADK15A5A	TADK15A1A	15	10		
	TADK25A5A	TADK25A1A	25	10		
	TADK40A5A	TADK40A1A	40	10		
<b>TADK2</b> 	TADK21A5A	TADK21A1A	1	10		
	TADK25A5A	TADK25A1A	5	10		
	TADK210A5A	TADK210A1A	10	10		
	TADK215A5A	TADK215A1A	15	10		
	TADK225A5A	TADK225A1A	25	10		
	TADK240A5A	TADK240A1A	40	10		
	TADK250A5A	TADK250A1A	50	10		
	TADK260A5A	TADK260A1A	60	10		
	TADK280A5A	TADK280A1A	80	10		
	TADK2100A5A	TADK2100A1A	100	10		
	TADK2150A5A	TADK2150A1A	150	10		
	TADK2200A5A	TADK2200A1A	200	10		
	TADK2250A5A	TADK2250A1A	250	10		
	<b>CTD5S</b>  Hole: 26.7 x 32.0 mm max. Size: 83.0 x 94.0 mm	CTD 5S1005AXXX	CTD 5S1001AXXX	100		
CTD 5S1255AXXX		CTD 5S1251AXXX	125		1.5	1.5
CTD 5S1505AXXX		CTD 5S1501AXXX	150		1.5	2.5
CTD 5S2005AXXX		CTD 5S2001AXXX	200		1.5	5
CTD 5S2505AXXX		CTD 5S2501AXXX	250		1.5	5
CTD 5S3005AXXX		CTD 5S3001AXXX	300		2.5	7.5
CTD 5S4005AXXX		CTD 5S4001AXXX	400		5	10
<b>CTD6S</b>  Hole: 83.0 x 94.0 mm max. Size: 26.7 x 32.0 mm		CTD 6S1505AXXX	CTD 6S1501AXXX	150		
	CTD 6S2005AXXX	CTD 6S2001AXXX	200		1.5	2
	CTD 6S2505AXXX	CTD 6S2501AXXX	250		1.5	3.75
	CTD 6S3005AXXX	CTD 6S3001AXXX	300		1.5	5
	CTD 6S4005AXXX	CTD 6S4001AXXX	400		2.5	5
	CTD 6S5005AXXX	CTD 6S5001AXXX	500		5	10
	CTD 6S6005AXXX	CTD 6S6001AXXX	600		7.5	15
	CTD 6S7005AXXX	CTD 6S7001AXXX	700		7.5	15
	CTD 6S8005AXXX	CTD 6S8001AXXX	800		7.5	15
	CTD 6S9005AXXX	CTD 6S9001AXXX	900		10	15
	CTD 6S10005AXXX	CTD 6S10001AXXX	1000		10	15

Series	References		Primary current A	Burden (VA)			
	5A	1A		Class 0.5	Class 1	Class 3	
<b>CTD8S</b>    Hole: 31.0 x 81.0 mm max. Size: 133.0 x 87.0 mm	CTD 8S1505AXXX	CTD 8S1501AXXX	150			1.5	
	CTD 8S2005AXXX	CTD 8S2001AXXX	200			1.5	
	CTD 8S2505AXXX	CTD 8S2501AXXX	250			2	
	CTD 8S3005AXXX	CTD 8S3001AXXX	300			2	
	CTD 8S4005AXXX	CTD 8S4001AXXX	400		3	5	
	CTD 8S5005AXXX	CTD 8S5001AXXX	500		5	7	
	CTD 8S6005AXXX	CTD 8S6001AXXX	600		6	10	
	CTD 8S7005AXXX	CTD 8S7001AXXX	700		6	10	
	CTD 8S7505AXXX	CTD 8S7501AXXX	750		8	12	
	CTD 8S8005AXXX	CTD 8S8001AXXX	800		8	12	
	CTD 8S10005AXXX	CTD 8S10001AXXX	1000		10	15	
	CTD 8S12005AXXX	CTD 8S12001AXXX	1200		12	15	
	CTD 8S12505AXXX	CTD 8S12501AXXX	1250		12	15	
	CTD 8S15005AXXX	CTD 8S15001AXXX	1500		15	20	
	CTD 8S16005AXXX	CTD 8S16001AXXX	1600		15	20	
	CTD 8S20005AXXX	CTD 8S20001AXXX	2000		20	25	
	CTD 8S25005AXXX	CTD 8S25001AXXX	2500		25	30	
<b>CTD9S</b>    Hole: 36.0 x 126.0 mm max. Size: 92 x 126 mm	CTD 9S4005AXXX	CTD 9S4001AXXX	400			3	
	CTD 9S5005AXXX	CTD 9S5001AXXX	500		2	4	
	CTD 9S6005AXXX	CTD 9S6001AXXX	600		4	6	
	CTD 9S7005AXXX	CTD 9S7001AXXX	700		4	8	
	CTD 9S7505AXXX	CTD 9S7501AXXX	750		4	8	
	CTD 9S8005AXXX	CTD 9S8001AXXX	800		4	8	
	CTD 9S10005AXXX	CTD 9S10001AXXX	1000		6	10	
	CTD 9S12005AXXX	CTD 9S12001AXXX	1200		8	12	
	CTD 9S12505AXXX	CTD 9S12501AXXX	1250		8	12	
	CTD 9S15005AXXX	CTD 9S15001AXXX	1500		10	15	
	CTD 9S16005AXXX	CTD 9S16001AXXX	1600		10	15	
	CTD 9S20005AXXX	CTD 9S20001AXXX	2000		15	20	
	CTD 9S25005AXXX	CTD 9S25001AXXX	2500		20	25	
	CTD 9S30005AXXX	CTD 9S30001AXXX	3000		25	30	
	CTD 9S32005AXXX	CTD 9S32001AXXX	3200		25	30	
	<b>CTD10S</b>    Hole: 51.0 x 126.0 mm max. Size: 107 x 178 mm	CTD 10S4005AXXX	CTD 10S4001AXXX	400		1	7
		CTD 10S5005AXXX	CTD 10S5001AXXX	500		3	10
CTD 10S6005AXXX		CTD 10S6001AXXX	600		5	12	
CTD 10S7005AXXX		CTD 10S7001AXXX	700		8	15	
CTD 10S7505AXXX		CTD 10S7501AXXX	750		10	15	
CTD 10S8005AXXX		CTD 10S8001AXXX	800		10	15	
CTD 10S10005AXXX		CTD 10S10001AXXX	1000		12	20	
CTD 10S12005AXXX		CTD 10S12001AXXX	1200		15	25	
CTD 10S12505AXXX		CTD 10S12501AXXX	1250		15	25	
CTD 10S15005AXXX		CTD 10S15001AXXX	1500		20	30	
CTD 10S16005AXXX		CTD 10S16001AXXX	1600		20	30	
CTD 10S20005AXXX		CTD 10S20001AXXX	2000		25	40	
CTD 10S25005AXXX		CTD 10S25001AXXX	2500		30	50	
CTD 10S30005AXXX		CTD 10S30001AXXX	3000		30	50	
CTD 10S32005AXXX		CTD 10S32001AXXX	3200		30	50	

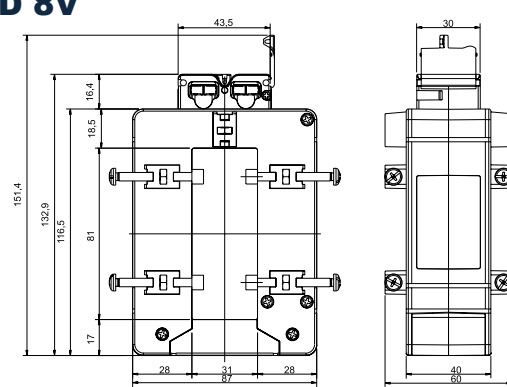
Series	References			Cable length	Primary current A	Accuracy Class
	Energy meter	Dimensions	Code			
<b>CTV 1X</b> 	EM210 MV	Hole: Ø6.0 mm Size: 25.5 x 40.0 mm	CTV1X60A333MV		60	1
<b>CTV 2X</b> 	EM210 MV	Hole: Ø15.7 mm Size: 31.4 x 46.0 mm	CTV2X100A333MV		100	1
<b>CTV 3X</b> 	EM210 MV	Hole: Ø15.5 mm Size: 41.0 x 66.0 mm	CTV3X200A333MV		200	1
<b>CTV 4X</b> 	EM210 MV	Hole: Ø20.5 mm Size: 50.0 x 50.0 mm	CTV4X400A333MV		400	1
<b>CTV 8X</b> 	EM210 MV	Hole: 50.0 x 89.0 mm Size: 110.0 x 115.0 mm	CTV8X800A333MV		800	1
<b>ROG4K</b> 	EM210MV	Coil: Ø12 mm	ROG4K1002Mxxx3X	400, 600 or 900 mm	4000	1
<b>TCD0M</b> 	EM271	Hole: Ø9.0 mm Size: 25.5 x 40.0 mm	TCD0M6080CMX	0.8 m	60	0.5
<b>TCD1M</b> 	EM271	Hole: Ø15.5 mm Size: 31.4 x 46.0 mm	TCD1M10080CMX	0.8 m	100	0.5
<b>TCD2M/TCD3M</b> 	EM271	Hole: Ø15.5 mm Size: 41.0 x 66.0 mm	TCD2M20080CMX	0.8 m	200	0.5
	EM271	Hole: Ø20.5 mm Size: 50.0 x 78.0 mm	TCD3M40080CMX	0.8 m	400	0.5
<b>TCD06BX</b> 	EM280	Hole: Ø7.0 mm Size: 117.0 x 34.0 mm	TCD06BX3280CMX	0.8 m	32	
	EM280	Hole: Ø7.0 mm Size: 117.0 x 34.0 mm	TCD06BX32150CMX	1.5 m	32	
	EM280	Hole: Ø7.0 mm Size: 117.0 x 34.0 mm	TCD06BX32200CMX	2.0 m	32	
<b>TCD12BS</b> 	WM50	Hole: Ø8.5 mm Size 221x54x49mm	TCD12BS32AX	Various	65	0.5
<b>TCD1X</b> 	EM270	Hole: 15.9 x 30.5 mm Size: 75.0 x 72.0 mm	TCD1X160A80CMX	0.8 m	160	0.5
	EM270	Hole: 15.9 x 30.5 mm Size: 75.0 x 72.0 mm	TCD1X160A150CMX	1.5 m	160	0.5
	EM270	Hole: 15.9 x 30.5 mm Size: 75.0 x 72.0 mm	TCD1X160A200CMX	2.0 m	160	0.5
<b>TCD2X</b> 	EM270	Hole: 21.3 x 25.3 mm Size: 105.0 x 72.0 mm	TCD2X250A80CMX	0.8 m	250	0.5
	EM270	Hole: 21.3 x 25.3 mm Size: 105.0 x 72.0 mm	TCD2X250A150CMX	1.5 m	250	0.5
	EM270	Hole: 21.3 x 25.3 mm Size: 105.0 x 72.0 mm	TCD2X250A200CMX	2.0 m	250	0.5
<b>TCD3X</b> 	EM270	Hole: 31.3 x 31.3 mm Size: 135.0 x 78.0 mm	TCD3X630A80CMX	0.8 m	630	0.5
	EM270	Hole: 31.3 x 31.3 mm Size: 135.0 x 78.0 mm	TCD3X630A150CMX	1.5 m	630	0.5
	EM270	Hole: 31.3 x 31.3 mm Size: 135.0 x 78.0 mm	TCD3X630A200CMX	2.0 m	630	0.5



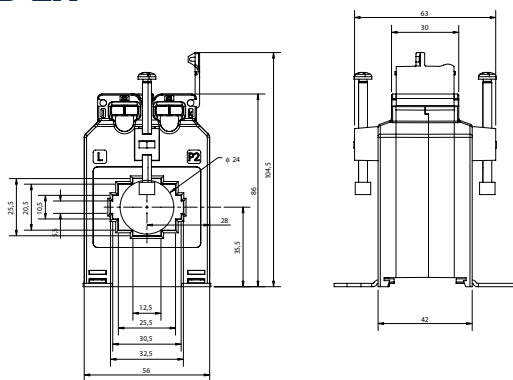
**CTD 1X**



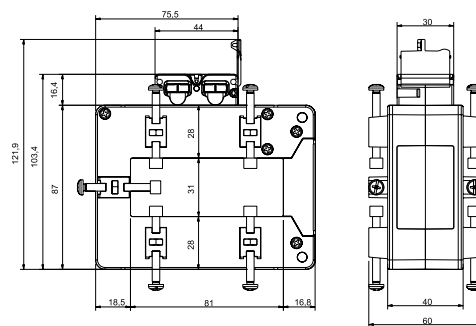
**CTD 8V**



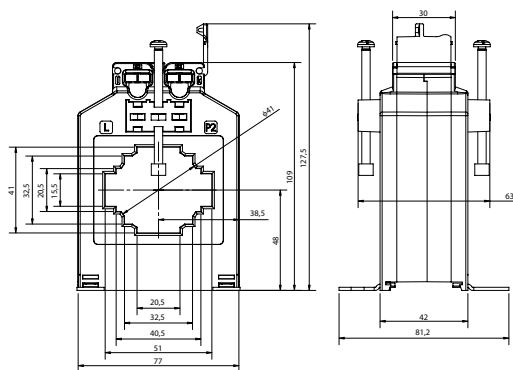
**CTD 2X**



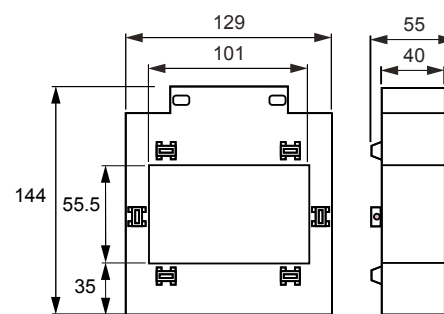
**CTD 8H**



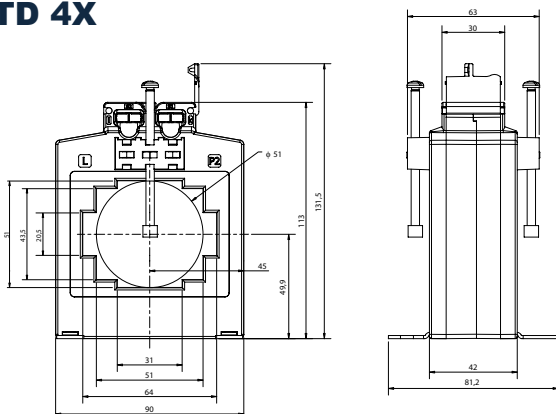
**CTD 3X**



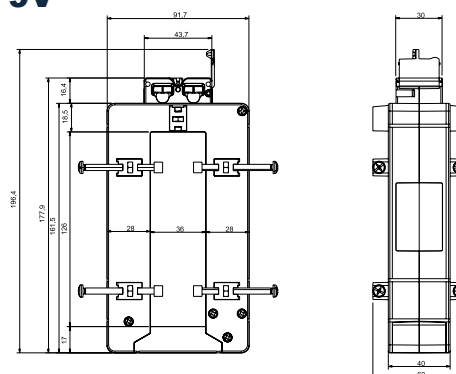
**CTD 8Q**



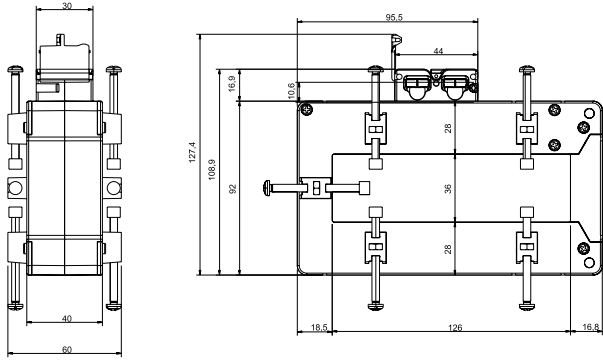
**CTD 4X**



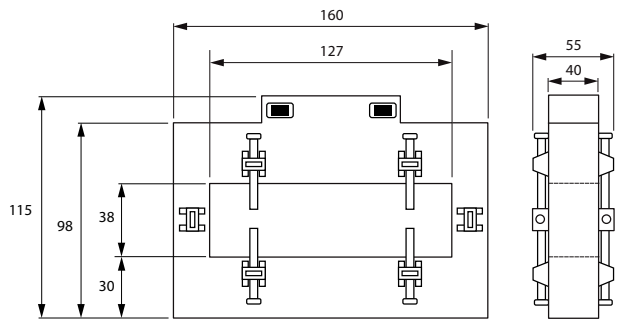
**CTD 9V**



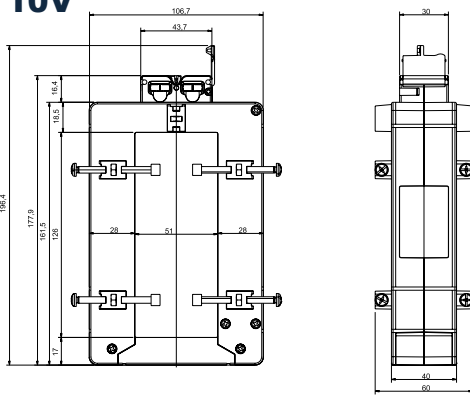
### CTD 9H



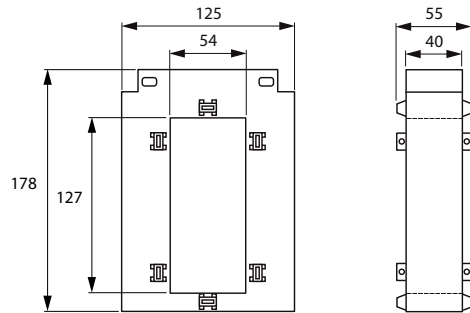
### CTD 11H



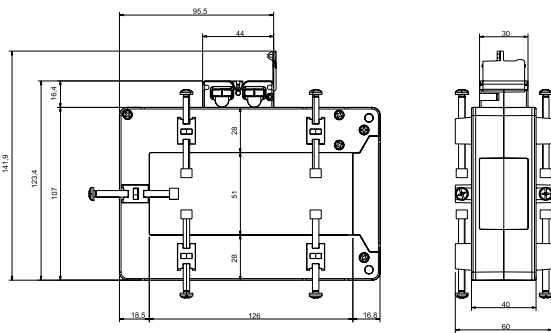
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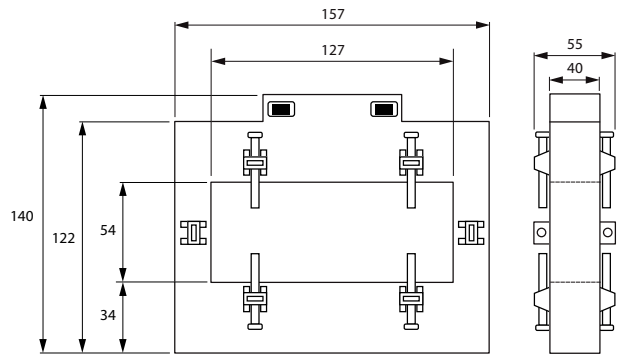
### CTD 12V



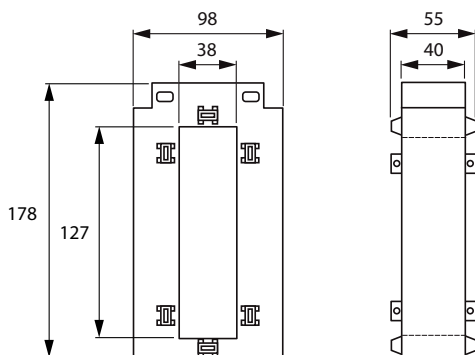
### CTD10H



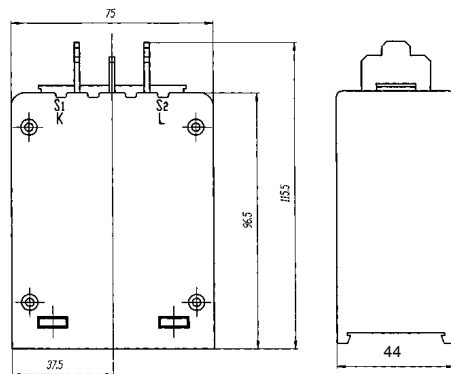
### CTD12H



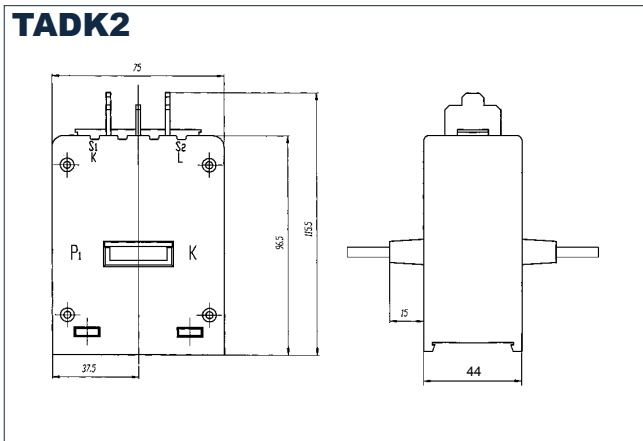
### CTD 11V



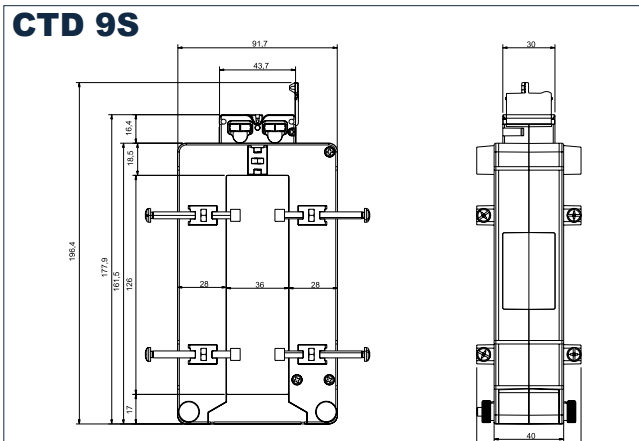
### TADK



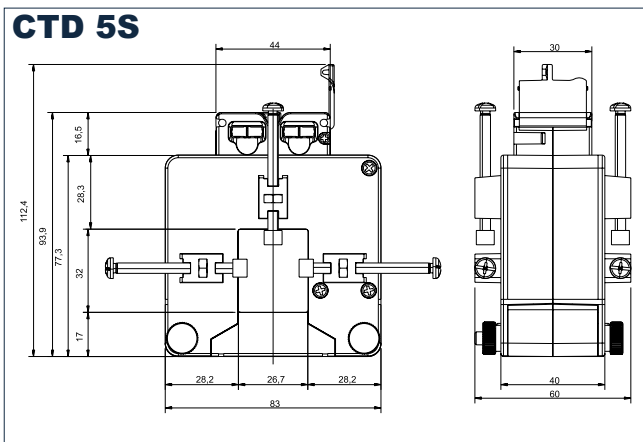
### TADK2



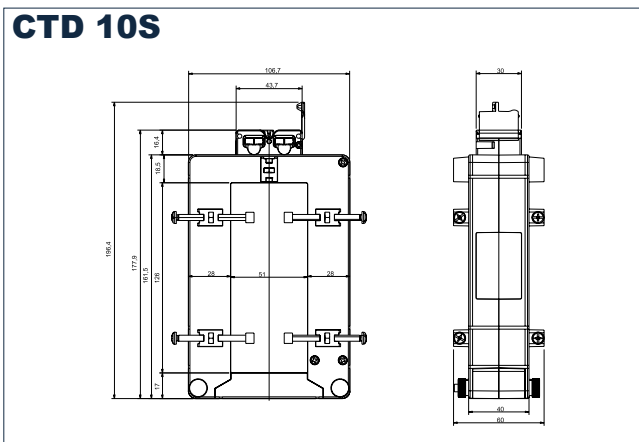
### CTD 9S



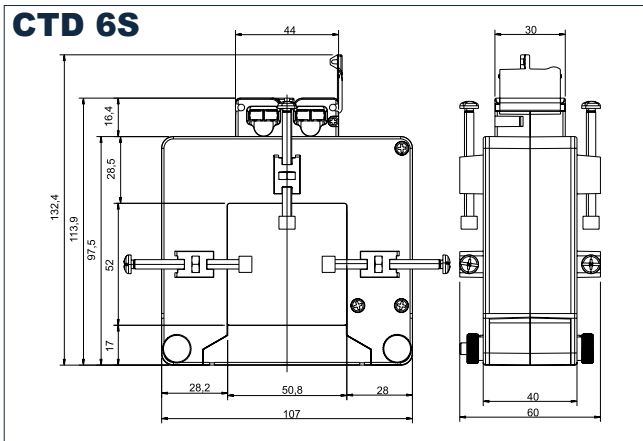
### CTD 5S



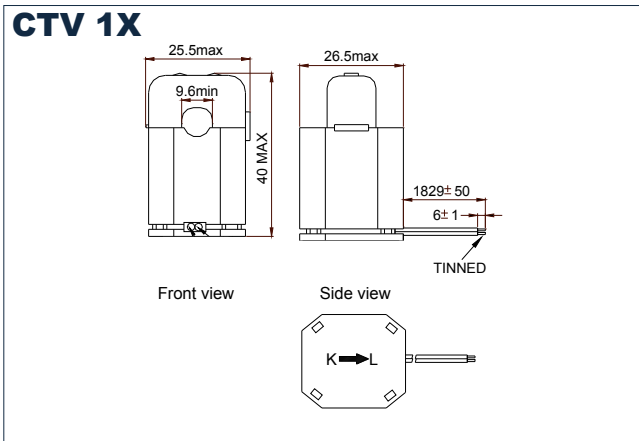
### CTD 10S



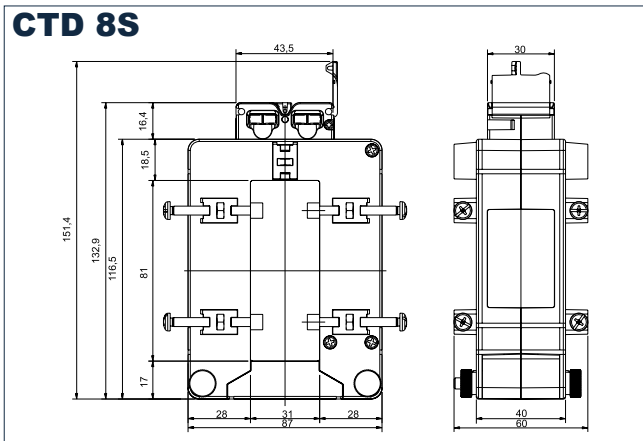
### CTD 6S



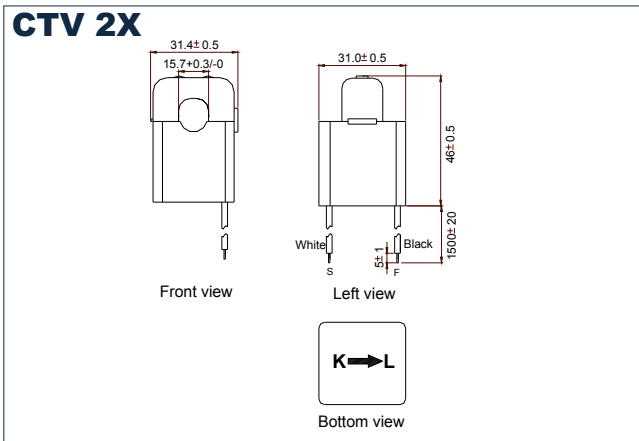
### CTV 1X



### CTD 8S

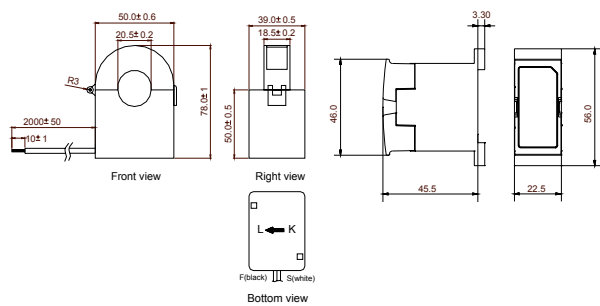


### CTV 2X

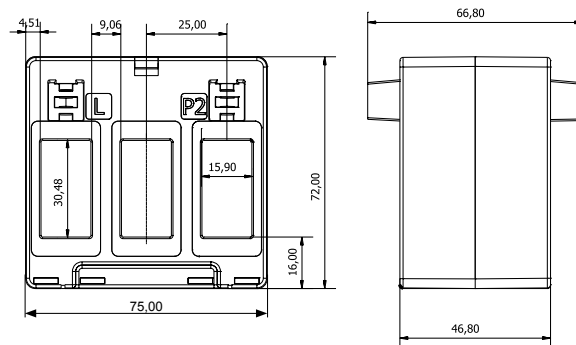




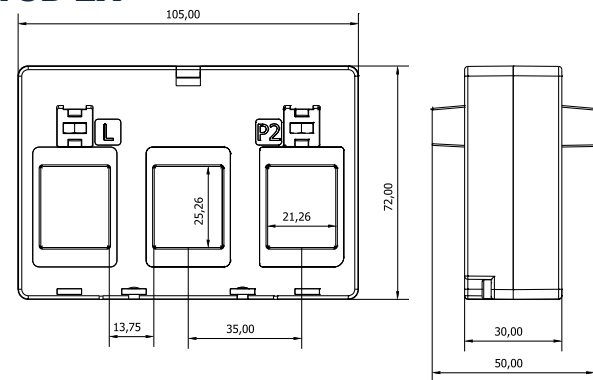
### TCD 3M



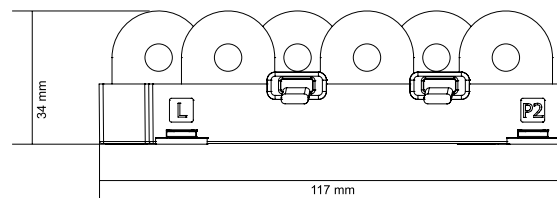
### TCD 1X



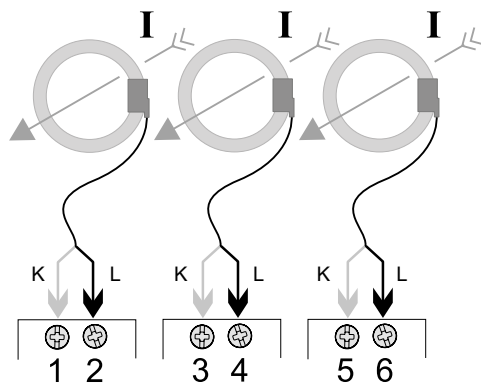
### TCD 2X



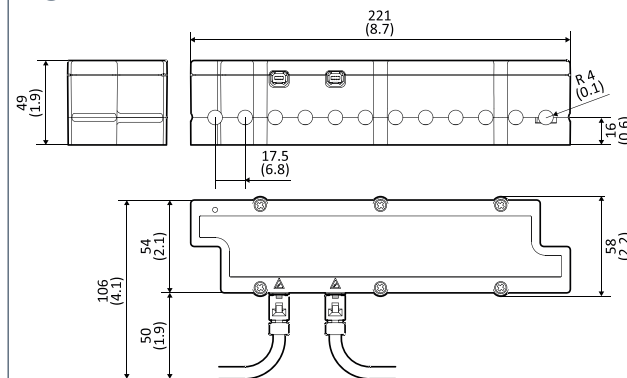
### TCD 06BX



### ROG 4 k



### TCD 12



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Carlo Gavazzi Controls SpA  
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### LITHUANIA

Uab Carlo Gavazzi Industri Kaunas  
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