

Smart power quality meter that performs accurate analysis/diagnosis through real-time power quality assessment and precision measurement

gems7000

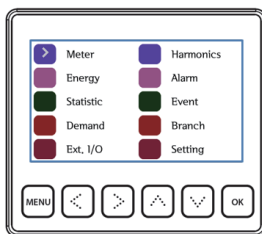


HIGH PERFORMANCE DIGITAL POWER QUALITY METER

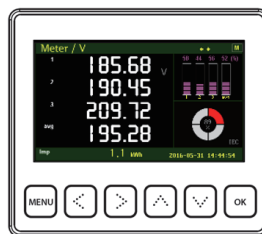
gems7000 is a multi-functional digital power quality meter with advanced features. It provides real-time measurement of three-phase power and energy, along with functions like power quality analysis and alarms. The measurement data is presented on a high-definition LCD, and the device supports a range of network communication options.

1. Accurate analysis/diagnosis through real-time power quality assessment and precision measurement
2. High-precision measuring equipment
Measurement precision: $\pm 0.5\%$ reading for voltage and current
Power/wattage: Complies with 0.5S Class based on IEC62053-22
3. High-definition LCD
High-definition 4.3" Color TFT LCD
Able to convey clear information and easily recognize the situation in which an event is occurred
4. Easy installation
Supports international standard wall-mount installation
Easy to install using dedicated hook
5. Supports various CTs
Supports various types of CT: 333mV / 100mA / 5A / Rogowski coil, etc.
6. Gateway function
Data transmission and confirmation through direct RS-485 communication without gateway
7. Provides various functions
Waveform Display
Over/Under Limit Alarm
8. Statistical data
Provides information such as maximum and minimum voltage, current, and power
9. Power quality metrics
Voltage, current harmonic (31st order), voltage Sag / Swell
Voltage and current unbalance ratio
Active/reactive/apparent power
10. Various expansion modules
Communication module, DI/DO module, temperature sensor, DCM module
Supports connection with lower-level devices such as gems3500 and DIO expansion devices
11. Certification
KC/CE certification: ensuring safety and reliability

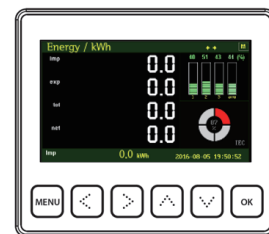
gems7000 provides measurement parameters such as voltage, current, and power, as well as power quality information such as harmonics and THD.



Main screen
(Select screen to display)



METER screen



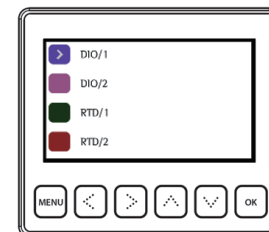
ENERGY screen



STATISTIC screen



DEMAND screen



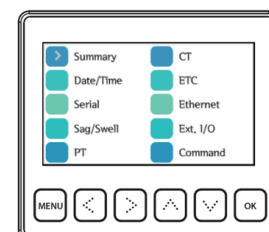
EXT. I/O(option) screen



HARMONICS screen



ALARM screen

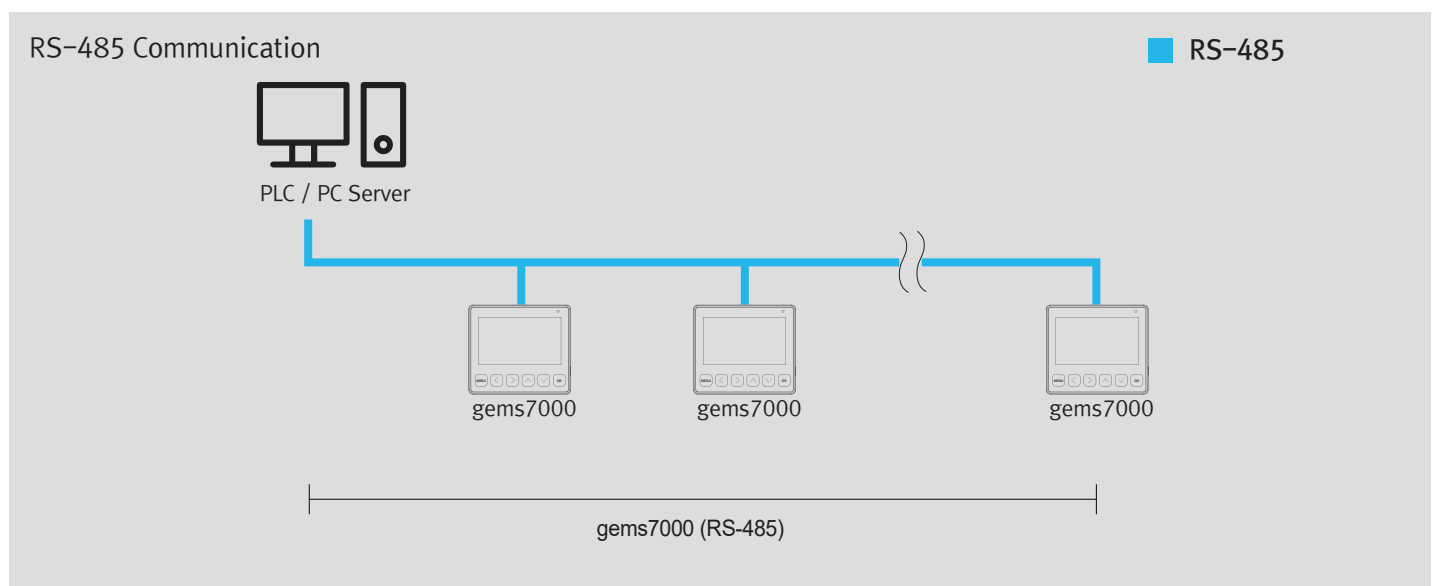
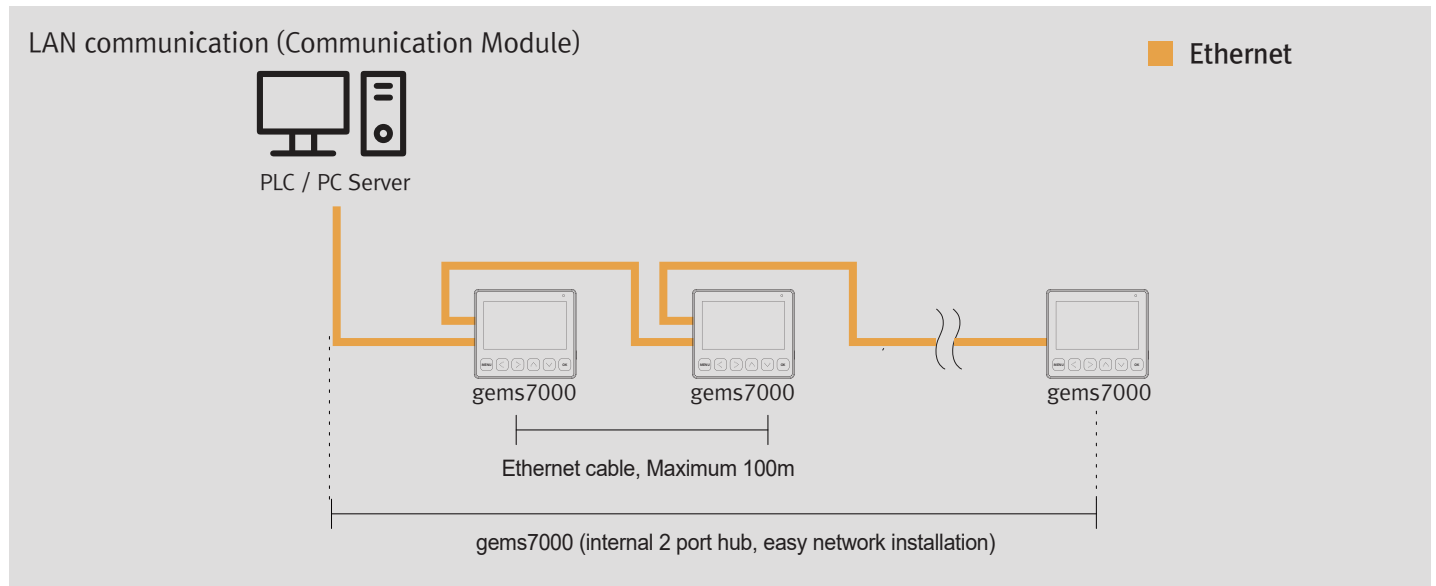


SETUP screen

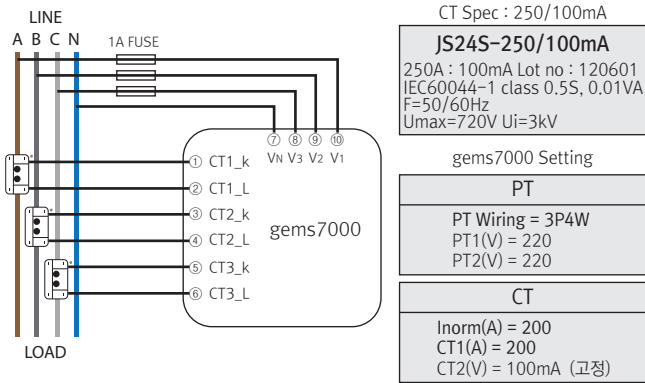
General	Current accuracy		±0.5% Reading
	Voltage accuracy		±0.5% Reading
	Active energy accuracy		±0.5% Reading
Instantaneous RMS values	Current, voltage, frequency		✓
	Active, reactive, apparent power	Total and per phase	✓
	Power factor	Total and per phase	✓
Energy values	Active, reactive, apparent energy		✓
	Settable accumulation modes		✓
Demand values	Current	Present and max. values	✓
	Active, reactive, apparent power	Present and max. values	✓
Power quality measurements	Harmonic distortion	Current and voltage	31 st
Communication	RS-485 port		1
	Ethernet port		2
	Serial port (Modbus)		✓
	Ethernet port (Modbus/TCP)		✓

Electrical characteristics	Measurement accuracy	Current & voltage	±0.5% Reading
		Active Power	Class 0.5S
		Active Energy	Class 0.5S
		Power factor	Class 0.5S
	Input-voltage characteristics	Specified accuracy voltage	AC 690V 3~ L-L
		Impedance	-
		Specified accuracy frequency	50/60 Hz
	Input-current characteristics	Specified accuracy current range	333mA, 100mA, 5A, Rogowski
Power supply AC/DC		AC/DC 100~240V	
Input/outputs	Digital output	Alarm (Max. 48V DC, 1A)	
Mechanical characteristics	Type		Panel Mounting
	Dimensions		120 x 105 x 71 mm
	LCD type		4.3" Color TFT LCD
	Weight		400g
Environmental conditions	Operating temperature	-10 °C to 55 °C	
	Storage temperature	-25 °C to 70 °C	
	Humidity rating	Maximum relative humidity 80 % for temperatures up to 31 °C	
	Operating altitude (maximum)	2000 m above sea-level	
Communication	Serial port RS-485	Baud rates of 2400 to 115200	
	Ethernet port(s)	(Module) 2 port switching Hub, 10/100BASE-TX, RJ45 connector (UTP)	
	Protocol	Modbus	
Display characteristics	Integrated or Remote display	4.3" Color TFT LCD	
	Languages	English	

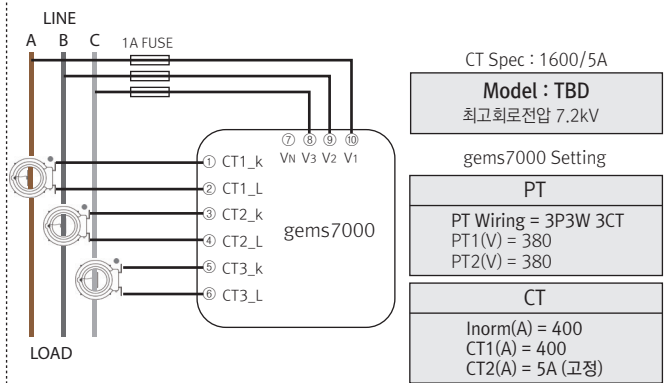
When the gems7000 is equipped with a communication module, network connection is supported through an Ethernet port connection. And flow data can be transmitted and confirmed through RS485 communication.



3P4W, 220V, CT=JS24S-250/100mA (Model=gems7000)

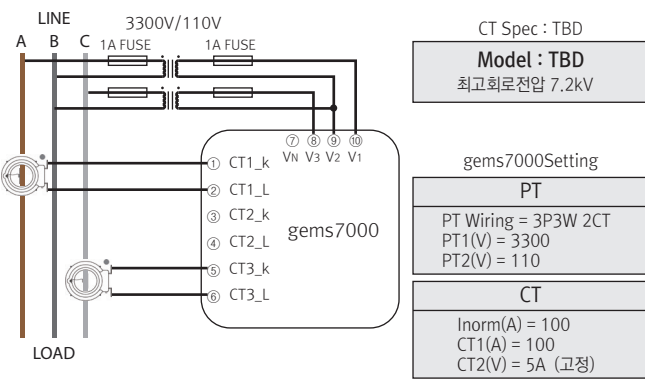


3P3W, 3CT, 380V, CT=400/5A (Model=gems7000)



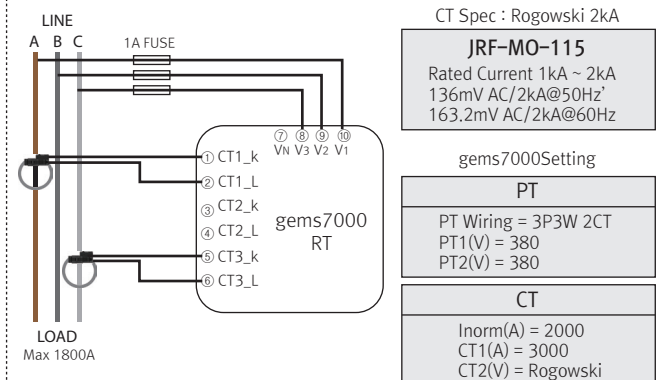
The 5T model has a built-in CT and uses a 5A output CT as the primary CT.

3P3W, 2CT, 380V, CT=100/5A (Model=gems7000)

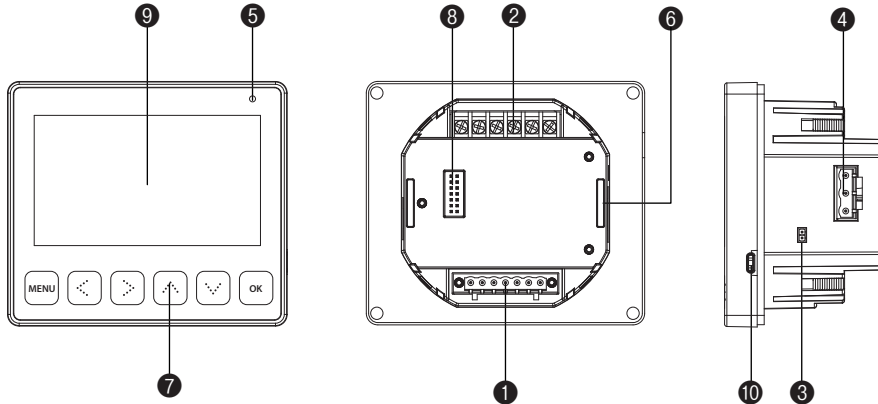


The 5T model has a built-in CT and uses a 5A output CT as the primary CT.

3P3W 2CT, 380V, CT=Rogowski coil (Model = gems7000)

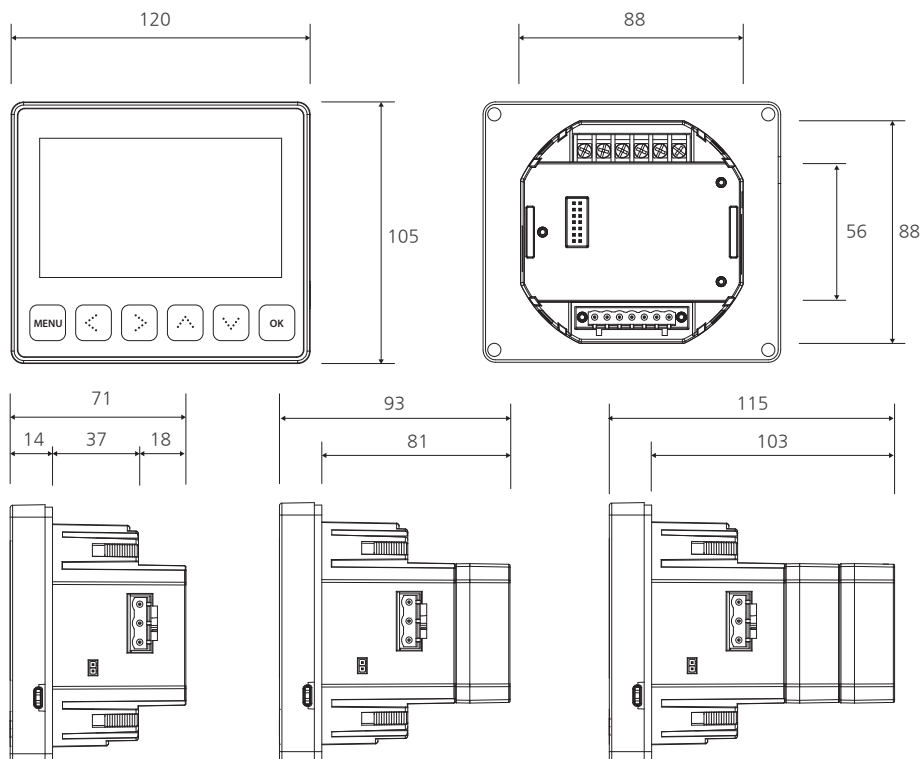


Part Names

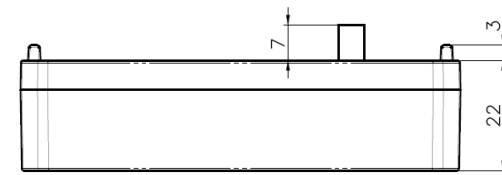
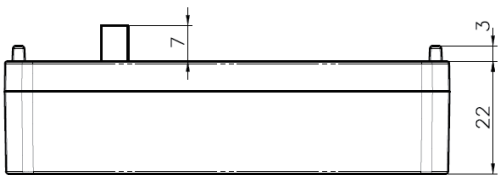
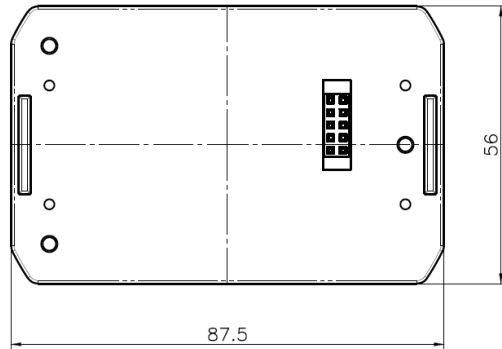
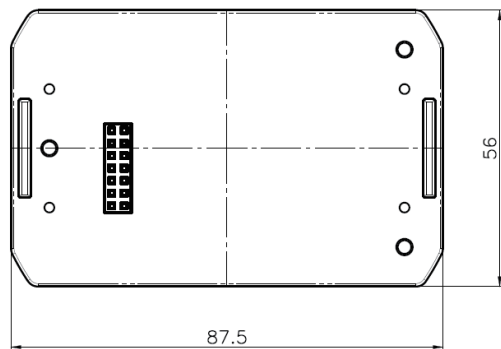
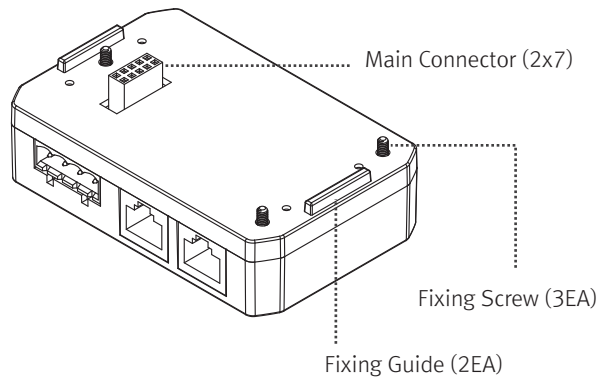


No.	Name	Description								
1	Voltage Measurement	Power input terminal for measurement. (Measurement of mains voltage in distribution board)								
2	CT Port	10mA, 100mA, 5A(secondary side) CT connection terminal.								
3	Temperature sensor	NTC temperature sensor connection terminal. Measure the external temperature using NTC.								
4	Operation power	Power for device operation (AC/DC 100~240V) <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Pin No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>N</td> <td>Neutral(AC), -(DC) Connection</td> </tr> <tr> <td>L</td> <td>Line(AC), +(DC) Connection</td> </tr> <tr> <td>F.G</td> <td>Frame Ground Connection</td> </tr> </tbody> </table>	Pin No.	Description	N	Neutral(AC), -(DC) Connection	L	Line(AC), +(DC) Connection	F.G	Frame Ground Connection
Pin No.	Description									
N	Neutral(AC), -(DC) Connection									
L	Line(AC), +(DC) Connection									
F.G	Frame Ground Connection									
5	Device status LED	BLUE lights up : Normal operating state RED blinking : Alarm occurred								
6	RS485 terminal	RS485 port to connect the device to a higher level system such as a PC (Modbus Master/Slave)								
7	Touch input KEY	6 electrostatic touch operation keys								
8	Expansion port	Connection terminal with external expansion module								
9	LCD screen	4.3" Color TFT LCD								
10	USB port	Terminal for upgrade								

Dimensions



Expansion Module



CODE	Division	Division	Note
Expansion module A	Communication module	2 port Ethernet switch, RS-485 1ea (for subsystem connection)	Modbus TCP
Expansion module B	DIO module 1	DI 6ea, DO 2ea, ZCT 1ea	
Expansion module C	Temperature module	RTD temperature sensor 4ea, ZCT 1ea	PT100
Expansion module D	DIO module 2	DI 8ea, DO 2ea	
Expansion module E	DC instrumentation module	DC Meter 1ea, DI 3ea, DO 1ea	DC Voltage/Current

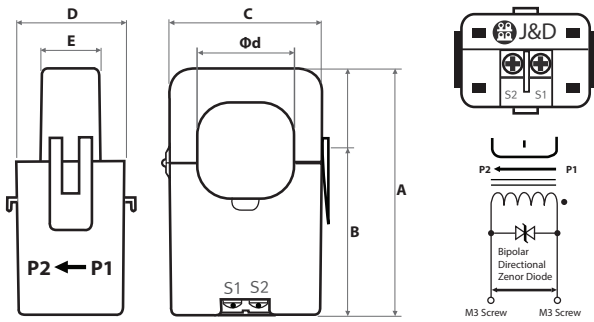
Caution	<ul style="list-style-type: none"> · The expansion modules available for the gems7000 are as above, and the functionality is expanded by physically fixing them on the back of the gems7000. · Up to three expansion modules can be used, but the communication module must be installed first.
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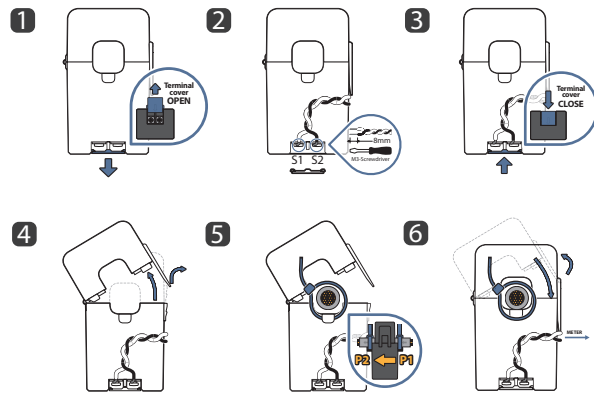
Model	Spec		
	Current	Internal diameter	Output wiring
G3CT-50A-75F	Three phase, 50A, 75mm	15.5x27mm	RJ12, easy wiring
G3CT-100A-75F	Three phase, 100A, 75mm	15.5x27mm	RJ12, easy wiring
G3CT-125A-90F	Three phase, 125A, 90mm	17x28mm	RJ12, easy wiring
G3CT-250A-105F	Three phase, 250A, 105mm	21x25mm	RJ12, easy wiring
G3CT-400A-140F	Three phase, 400A, 140mm	31x36mm	RJ12, easy wiring
G1CT-30A-35F-C (Single phase, 30A, Center)	Single phase, 30A, Center	9mm	RJ12, easy wiring
G1CT-30A-23F-S (Single phase, 30A, Side)	Single phase, 30A, Side	9mm	2-pin connector(Connect to 35F-C)
G1CT-50A-50F-LC, LS	Single phase, 50A, Left/Center, Left/Side	15.5x27mm	RJ12, easy wiring
G1CT-100A-50F-LC, LS	Single phase, 100A, Left/Center, Left/Side	15.5x27mm	RJ12, easy wiring
JS16FL-100A/100mA, 333mV	Three phase, 100A	16mm	2-pin terminal
JS24S-250A/100mA, 333mV	Three phase, 250A	24mm	2-pin terminal
JS36S-400A/100mA, 333mV	Three phase, 400A	36mm	2-pin terminal
JS36S-600A/100mA, 333mV	Three phase, 600A	36mm	2-pin terminal
JSC-01-250A, 400A/100mA	Three phase, 400A	36mm	2m Wire
JSC-02-400A, 600A, 1000A/100mA	Three phase	62mm	2m Wire
JSC-03-600A, 800A, 1000A/100mA	Three phase	62mm	2m Wire
JD51W (13Ø): 100A	Three phase, 100A	13mm	Wire
JP62W (19Ø)	Three phase, 200A	19mm	Wire
JRF-MO-115	Three phase, Max 3000A	115mm	Wire, 1.5m
JRF-MO-190	Three phase, Max 3000A	190mm	Wire, 1.5m
MF-300-80	Three phase, Max 300A	80mm	Wire, 1.5m
MF-3000-220	Three phase, Max 3000A	220mm	Wire, 1.5m



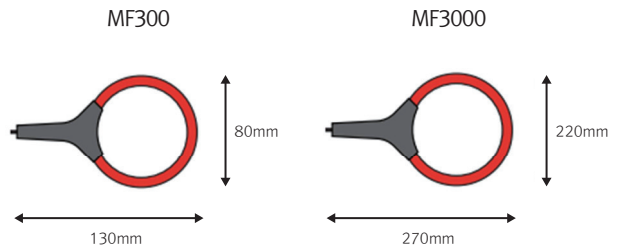
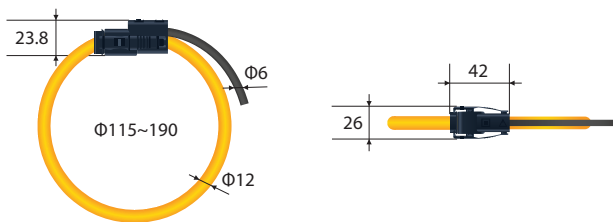
Split-core AC Current Transformer



MODEL		A	B	C	D	E	Ød
A	JC10F	50	38	23	26	14.5	10
	JC16F	55	41	29.5	31	19	16
C	JS17F	64.1	41.1	33.1	35.8	26.2	17
	JS24S	74.5	47	45	33.7	21.1	24
∅	JS36S	91.4	57	57.1	40.2	21.1	36

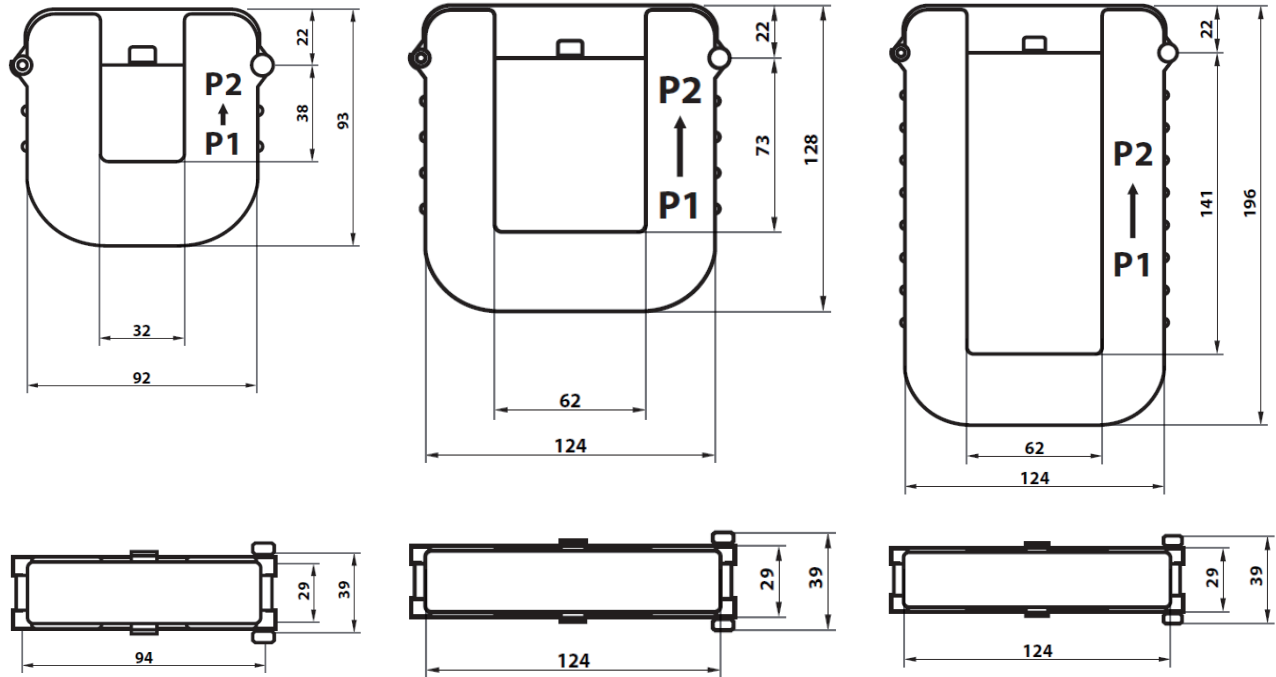


Clamp-on Flexible Rogowski Coil Current Transformer : JRFS-xxxA

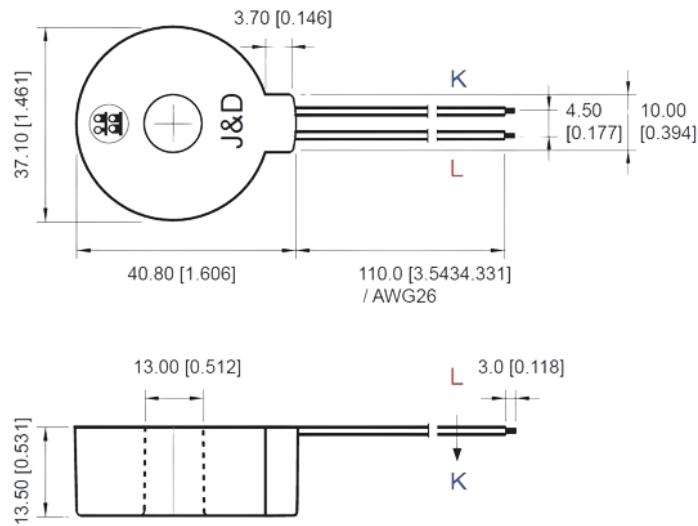




Split-core AC Current Transformer (JSCXX-XXXX/100mA)



SOLID-CORE CURRENT TRANSFORMER - JD51W



Unit : mm [inch]

