

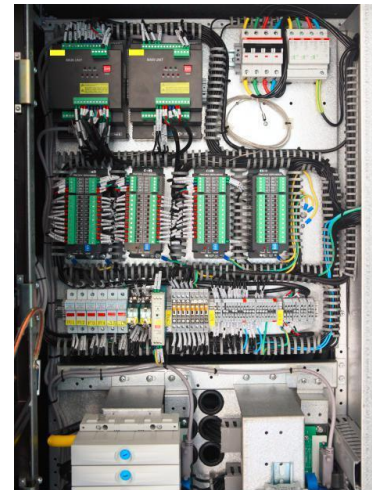
Application

- Load management
- Data Center
- Telecommunication



Function

- **Measuring:** 1 main circuit + 42 branch circuits
- **DI/DO:** 4 status inputs (dry contact) , 2 relay outputs, 1 pulse output
- **Settable Pre-Alarm function:**
Main circuit: Alarm for voltage, current, current unbalance (optional alarm for leakage current/ temperature alarm)
Branch circuit: Alarm for current (lo-lo-limit, lo-limit, hi-limit, hi-hi-limit)
- **Communication:** RS485, support Modbus-RTU protocol
- **Phase sequence of branch circuit is programmable**
- **Optional CT input for branch circuit:** 50A, 100A, 200A
- **Settable wiring for branch circuit:** Either single phase or 3 phase
- **Historical kWh record:** kWh yearly consumption of last 10 years, kWh monthly consumption of last 12 months



Measurement

Main circuit measuring:	Accuracy	Branch circuit measuring:	Accuracy
➤ Voltage—Ua, Ub, Uc	(0.5%)	➤ Current—I, Max. I,	(0.5%)
➤ Current—Ia, Ib, Ic, In, I unbal, Max. I	(0.5%)	➤ Active power—P,	(1.0%)
➤ Active power— Pa, Pb, Pc, ΣP	(1.0%)	➤ Reactive power—Q,	(1.0%)
➤ Reactive power — Qa, Qb, Qc, ΣQ	(2.0%)	➤ Power factor— PF	(1.0%)
➤ Power factor — PF	(1.0%)	➤ Active energy—kWh,	(1.0%)
➤ Frequency — F	($\pm 0.01\text{Hz}$)	➤ Reactive energy—kvarh,	(2.0%)
➤ Active energy — kWh	(1.0%)	➤ Demand (for I, P)and Max. demand	
➤ Reactive energy — kvarh	(2.0%)	➤ THD for I	
➤ Demand (for 3I, 3P, Ptot) and Max. demand			
➤ THD for U, I	(2~31 st)		
➤ Leakage current (optional)	(0.5%)		
➤ Temperature (optional)	(0~120°C)		

ECM202 & Accessories

Unit: mm

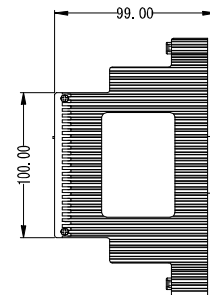
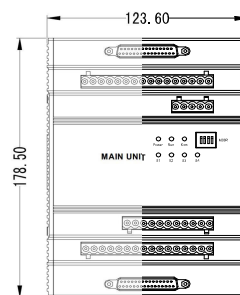
Main Module : Monitoring 21 or 42 branch circuits

ECM202-M (For multiple fixed CT strip)

ECM202-S1 (For 25mA input CT)

ECM202-S2 (For 50mA input CT)

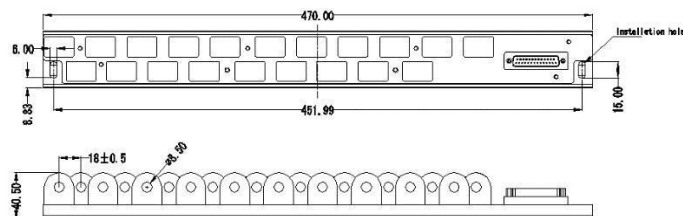
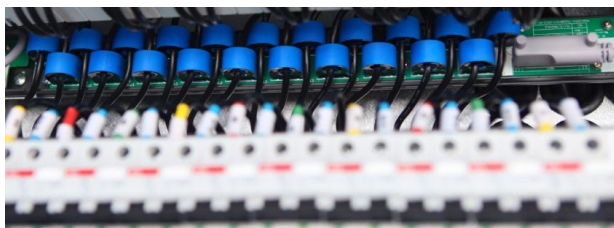
ECM202-S3 (For 100mA input CT)



CT module:

1) Multiple fixed CT strip: Multiple fixed CT strip, rated current 50A/ 25mA, Each CT strip has 21 fixed CTs. Accuracy: class 0.5

Unit: mm



2) Independent fixed CT: Rated current 50A/ 25mA, standard CT cable length : 2.5m, accuracy : class 0.5

Unit: mm



+



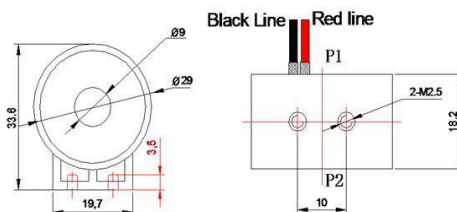
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Independent fixed CT

CT converter board

Connection cable
Cable Length: 1.5m



3) Split core CTs: Rated current: 50A/ 25mA, diameter: 10mm or 16mm (Optional), standard CT cable length: 2m, accuracy : class 0.5

Rated current: 100A/50mA or 100A/100mA, diameter: 16mm, standard CT cable length: 2m, accuracy : class 0.5

Rated Current: 200A/100mA, diameter 24mm, standard CT cable length: 2m, accuracy : class 0.5



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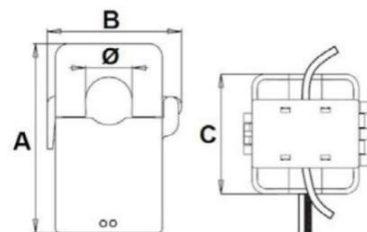
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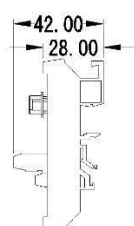
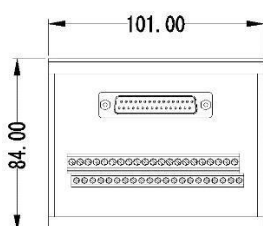
Split Core CT

CT converter board

Connection cable
Cable Length: 1.5m



Unit: mm



Unit: mm

Dimensions (mm/ inch)			
Ø	A	B	C
10.0 (0.39)	41.5 (1.63)	30.0 (1.18)	26.5 (1.04)
16.0 (0.63)	53.0 (2.09)	36.0 (1.42)	30.5 (1.20)

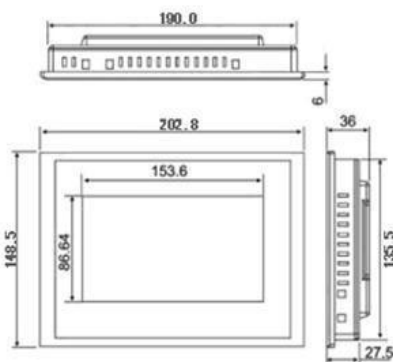
Optional devices:

- 1) **HMI:** 7" touch screen LCD. One HMI monitors max. 4 units of ECM202 main module

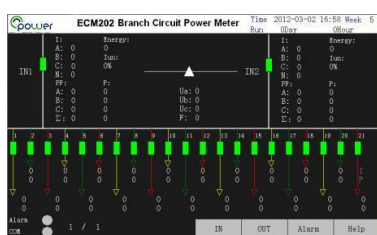
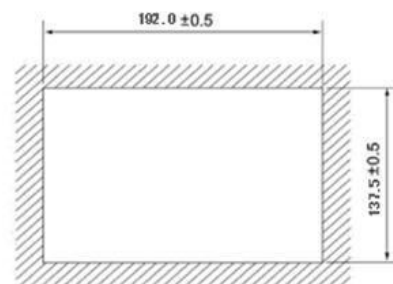
Resolution ratio: 800×480



ECM201V



Unit: mm



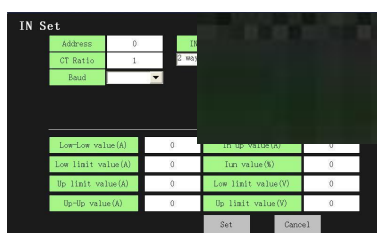
Circuit diagram

OUT	1 to 7							
Item/OUT	1	2	3	4	5	6	7	Unit
I	0	0	0	0	0	0	0	A
Max_I	0	0	0	0	0	0	0	A
Ded_I	0	0	0	0	0	0	0	A
Ded_Max_I	0	0	0	0	0	0	0	A
P	0	0	0	0	0	0	0	W
Ded_P	0	0	0	0	0	0	0	W
Ded_Max_P	0	0	0	0	0	0	0	W
FF	0	0	0	0	0	0	0	W
Energy	0	0	0	0	0	0	0	kWh
OUT_set	1Set	2Set	3Set	4Set	5Set	6Set	7Set	

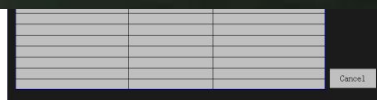
Real time measurement



1/3 Phase adjustment



Parameter and Alarm Setting



History and Alarm record

		thly														
				Main line		0		A/B								
		4	5	6	7	8	9	10	11	12	13	14	Unit			
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		11	12	13	14	Unit										
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		18	19	20	21	Unit										
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		25	26	27	28	Unit										
Energy data	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Branch line	20	30	11	2	2	2	2	2	2	2	2	2	2	2	2	
Energy data	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Branch line	30	37	38	39	40	41	42	Unit								
Energy data	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Search & date of last

1 Year

Refresh

Monthly

Back

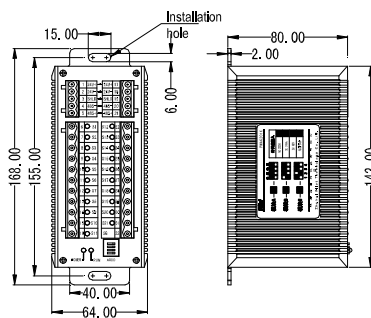
History Energy Record

- 2) DI module:** Each DI module has 21 digital input

Unit: mm



ECM201K

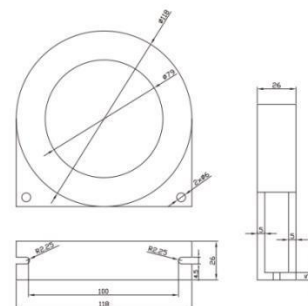


- ### 3) Leakage Current CT Module

Unit: mm



ECM503L-250



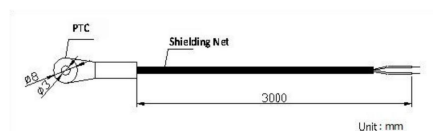
Accessories

- #### 4) Temperature Sensor

Unit: mm



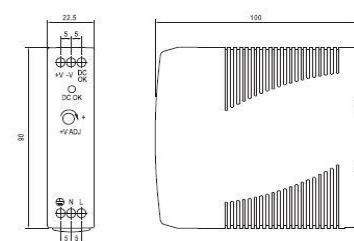
PT100



Unit : mm



MDR-20-24



24Vdc Power supply: 220Vac to 24Vdc,

24W Single Output Industrial DIN Rail Power Supply, Output 24VDC

Technical Specification

Incoming circuit	1 circuit, three phase 220V/380V ac	Demand	Demand Interval: 15 mins Slip interval: 60 mins
Outgoing circuit	Max. up to 42 circuit per unit	Communication	RS485 port Baud rate: 2400, 4800, 9600, 19200, 38400 (optional)
Power supply	24V DC , range: 18~30V DC	DI module	Incoming circuit: Dry contact Outgoing circuit: wet contact, 220V ac Range: 70%~120% or Dry contact
MTBF	≥50000h	Relay output capacity	250Vac/5A or 30Vdc/5A
Service Life	10 years	IP index	Main Module: IP20 HMI (Front board): IP65
Rated Voltage	220V/380V ac Range: 10%~120%, Accuracy: 0.5%	Insulation Resistance	≥100MΩ
Rated incoming circuit current	5A, Range: 1%~120%, Accuracy: 0.5%	Environment	Operation: -10°C ~ +55 °C Storage : -25°C ~ +70 °C Humidity: 5%~95%, non-condensing
Rated outgoing circuit current	CT strip: 50A/25mA (Max. 75A), Accuracy: 0.5% Independent CT: 50A/25mA(Max.75A), Accuracy: 0.5% Split core CT: 50A(75A), 100A, 200A, Accuracy: 0.5%		
Rated Frequency	50Hz, Range: 45~65Hz, ±0.01Hz		

Order Information

BCPM ECM202	Order code		Description
Main module	ECM202-42	- M - S1 - S2 - S3	for multiple fixed CT strip For 25mA input CT For 50mA input CT For 100mA input CT
Optional module	ECM201V ECM201K 503L-250 PT100		HMI - 7" touch screen LCD DI module - Each DI module has 21 digital input Leakage Current CT for 250A Temperature sensor
Accessory	MDR-20-24		24VDC Power supply
CT Accessory (for other measure range, please contact us)	CT for - M (25mA Secondary)		50A CT Strip : Φ8.5mm , 50A/ 25mA, Class 0.5 21 unit CT in one Strip.
	CT for - S1 (25mA Secondary)		Independent Fixed CT: Φ9mm, 50A/25mA, Class 0.5 Split Core CT: Φ10mm, 50A/25mA, Class 0.5 Split Core CT: Φ16mm, 50A/25mA, Class 0.5
	CT for - S2 (50mA Secondary)		Split Core CT: Φ16mm, 100A/50mA, Class 0.5
	CT for - S3 (100mA Secondary)		Split Core CT: Φ16mm, 100A/100mA, Class 0.5 Split Core CT: Φ24mm, 200A/100mA, Class 0.5

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