3-phase | Solar PV Energy | Bidirectional | MODBUS-RTU

ACR10R-DxxTEx Bidirectional Three-phase Reflux Monitoring Energy Meter

- **Measurement**: 3-phase Active Power, Reactive Power, Current, Voltage and etc.
- **Current Rating**: up to 300A (with CTs), up to 2000SA (with Rogowski Coil)
- **Communication**: RS485 (MODBUS-RTU)
- **Application**: Using in distributed Solar PV and Anti-reflux Inverter
- **Display**: LCD Display
- **Dimension**: 54*54*94mm (L*W*H)
- **Installation**: 35mm DIN Rail
- **Power Supply**: 85~265V AC or 100~350V DC
- **Standard&Certificate**: CE

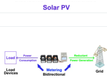
Features

Used for distributed&centralized Solar PV

- Rogowski Coil for Centralized Solar PV
- Split-core CTs for Distributed Solar PV
- Reflux monitoring
- Harmonic Monitoring

Bidirectional Power Metering

- Active Power Metering
- Reactive Power Metering



RS485 Communication

- MODBUS-RTU Protocol
- Communicate with Inverter to realize anti-reflux Function

Paired with external CTs or Rogowski Coil

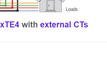
- Rated Current of CTs: up to 300A
- Rated Current of Rogowski Coil: up to 2000A

LCD Display

- Flexible Display
- Programming Interface

Keypads HMI for Programming

- Parameter Setting
- Communication(address, baud rate and etc.)
- Alarm, SP/AN,Alarm



Wiring Illustration

3P4W Wiring of ACR10R-DxxTE4 with external CTs

Practical Application

Solar PV Power Distribution Monitoring Solution

ACR10R-DxxTEx Practical Utility In Distributed Solar PV

Function

Function Model			ACR10R(H)-DxxT(E)E4/ACR10R(H)-DxxT(E)E3
Display mode		LCD (3-wire LCD)	●
Measuring parameter		Current/voltage/frequency/power factor	●
		Active power/reactive power/apparent power	●
		Four quadrant electric energy measurement	●
		Maximum demand	○
		Multiple rate electric energy measurement	○
Power quality monitoring		Total harmonic content	●
		subharmonic (2-31 times)	●
Data logging		Incident record	●
Display mode		Alarm	○
		Built-in clock	●
Communication		RS485 interface	●
Optional function (choose one)		J (DCI)	○
		K (KDI)	A+: (B1 of C1) (KD+/DCI or 4D+/DF)*
		pulse (3channels)	○

Note:
1. ● is standard allocation function, ○ is matching function , Above instrument started 1 channel RS485 communication;
2. Terminal connection mode corresponding to A1/B1/C1 and so on in selection function;
3. Pulse output and relay output can not be selected at the same time.
4. When you select an event logging feature you must configure the DI or DO

Technical parameter

Technical parameters			Indications
Input	Net work		3-phase 3-wire 3-phase 4 wire
	Frequency		45 ~ 65Hz
	Voltage		Rating: AC 57.7V100V(50Hz), 220V380V(400Hz)
			Overload 1.2-fold rating(continuous),2-fold rating/1second
			Consumption <0.2VA
	Current		Rating: 80A, 120A, 200A etc (See specific product specifications,special parameters can be customized)
			Overload 1.2-fold rating(continuous) 10-fold rating/1 second
			Consumption: < 0.2VA
Output	Electric energy		Output mode:Open-collector photocoupler pulse two way output
		Three-phase	Pulse constant 4000、8000imp/kWh
	Communication		RS485 interface,Modbus-RTU Protocol
	Display mode		LCD
Function	Switching	Input	Four way dry contact input
		Output	Output mode: two way relay +0 contact output
			Contact capacity: AC 250V/3A、DC 30V/3A
Measuring accuracy			Frequency0.05Hz、reactive electric energy1class、other 0.5class
Power supply			AC85 ~ 265V or DC100 ~ 350V、DC24V (±10%) 、DC48V (±10%) Consumption:≤1VA
Safety	Power-frequency withstand voltage		Power frequency withstand voltage between Auxiliary power and switch volume output 2KV/1min; Power frequency withstand voltage between Auxiliary power and switch volume input/ switch volume output and shell 2KV/1min; Power frequency withstand voltage between switch volume input and switch volume output and current input voltage input terminal is AC 2KV/1min; Power frequency withstand voltage between Auxiliary power and switch volume input and shell 2KV/1min; Power frequency withstand voltage between switch volume input and pulse output and switch volume input terminal is AC 1KV/1min
Environment	Insulation resistance		Input,Output terminal to housing>100MΩ
	Working temperature		-10℃ ~ +55℃ Storage temperature: -20℃ ~ +70℃
	Relative humidity		5% ~ 95% No condensation Altitude: ≤2000m

Note: **Price below Only for Reference, Contact us for your Best Quotation !!!**

Image & Outline	Type	Function	Price Range (US$)	Option	Module Price(US$)	Order Group
	ACR1-AF4RT	4 channels DCI-20A photovoltaic confluence detection, 3.5KV Hall isolation, RS485/Modbus-RTU protocol, accuracy 0.5, 5-1000V voltage measurement, 3 groups of external relays input (optical coupling or dry contact mode), auxiliary power supply optional DC100DV, DC160DV	145	L-2P P2-2P P3-2P or all		
	ACR1-AF8RT	8 channels DCI-20A photovoltaic confluence detection, 3.5KV Hall isolation, RS485/Modbus - RTU protocol, accuracy 0.5, 5-1000V voltage measurement, 3 groups of external relays input (optical coupling or dry contact mode), auxiliary power supply optional DC100DV, DC160DV	162			
	ACR1-AF12RT	12 channels DCI-20A photovoltaic confluence detection, 3.5KV Hall isolation, RS485/Modbus-RTU protocol, accuracy 0.5, 5-1000V voltage measurement, 3 groups of external relays input (optical coupling or dry contact mode), auxiliary power supply optional DC100DV, DC160DV	177			
	ACR1-AF16RT	16 channels DCI-20A photovoltaic confluence detection, 3.5KV Hall isolation, RS485/Modbus-RTU protocol, accuracy 0.5, 5-1000V voltage measurement, 3 groups of external relays input (optical coupling or dry contact mode), auxiliary power supply optional DC100DV, DC160DV	192			
	ACR1-AF20RT	20 channels DCI-20A photovoltaic confluence detection, 3.5KV Hall isolation, RS485/Modbus-RTU protocol, accuracy 0.5, 5-1000V voltage measurement, 3 groups of external relays input (optical coupling or dry contact mode), auxiliary power supply optional DC100DV, DC160DV	992			
	ACR1-AF24RT	24 channels DCI-20A photovoltaic confluence detection, 3.5KV Hall isolation, RS485/Modbus-RTU protocol, accuracy 0.5, 5-1000V voltage measurement, 3 groups of external relays input (optical coupling or dry contact mode), auxiliary power supply optional DC100DV, DC160DV	296			
	ACR1-AC-D200	Voltage, current, power measurement,Rated/Voltage AC100 V Rated RMS current AC20A	133			
	ACR10R-DxxTE	LCD display Single phase multifunction power meter	75	1 DI/0 10A,20A 40A,50A 2 DI/8-max 120A	D10 /5pieces	
	ACR1 DR1-DxxTE	LCD display Single phase multifunction power meter with THDi, THDu and 2-3Hz harmonic	100	3 D2/4 max 200A 4 D3/6 max 300A	D16 /12pieces	
	ACR10RH-DxxtE	LCD display Single phase multifunction power meter	75	1 D1/10 max 1000A 2 D1/20 max 2000A	D110 /40pieces	
		LCD display Single phase multifunction power meter with THDi, THDu and 2-31 or harmonic	100	3 D1/40 max 6300A 4 D1/80 max 20000A	D120 /170pieces	
	ACR10R-DxxTE-L	LCD display Three phase multifunction power meter	190		D24 /20pieces	
	ACR10RH-DxxTE-L	LCD display Three phase multifunction power meter with THDi, THDu and 2-31 or harmonic	220		D36 /37pieces	
	ACR10R-DxxtE-L	LCD display Three phase multifunction power meter	190	1 D1/10 max 1000A 2 D1/20 max 2000A 3 D1/40 max 6300A 4 D1/80 max 20000A	D120 /200pieces	
	ACR10RH-DxxtE-L	LCD display Three phase multifunction power meter with THDi, THDu and 2-31 or harmonic	220		D180 /260pieces	
	DJSF1352-RN	DC voltage, current, power measurement, forward and reverse energy metering, multi-rate energy statistics, SOE event record, 8-digit LCD display, infrared communication, voltage input maximum 1500V, current external shunt connection (75mV) or Hall element Access (0-5V), power accuracy level 1	145	1 2DI,2DO(4K) 2 The second DC energy metering	6 /29	