

# Compact Size DIN72 MULTI-METER

**DAIICHI**

**POWER LINE SUPER MULTI-METER**

**SQLC-72L**

## FEATURE

### ■ COMPACT SIZE

- Space saving series: DIN72x72mm.

### ■ COMMON USE FOR

- 1P2W, 1P3W, 3P3W, 3P4W  
- AC110V, AC220V, AC440V (Direct)

### ■ INTERNATIONAL STANDARD

- IEC 60688:2012 (Transducer), IEC 62053:2003 (Wh), CE Marking

### ■ CLAMP TYPE CURRENT SENSOR

- Easy installation in limited space.  
- Easy for replacement & maintenance.

### ■ HIGH-VISIBILITY

- High brightness white backlight.  
- Large wide viewing display (75° between up & down, left & right).



## SPECIFICATION

Items		Specifications		Remarks	
Input Phase Wire		3P4W, 3P3W (2VT2CT, 2VT3CT) 1P3W, 1P2W		Selectable	
Input	Rated Voltage	3P3W, 1P2W: AC110V, 220V, 440V Common Use 50/60Hz		Selectable	
		1P3W: AC100-200V 50/60Hz			
		3P4W: AC 110V/√3V, 220V/√3V, 440V/√3V Common Use 50/60Hz			
	Rated Current	Current Sensor	5A 50/60Hz *1		Selectable
			50A 50/60Hz *2		
			100A 50/60Hz *2		
200A 50/60Hz *2					
400A 50/60Hz *2					
Leakage Current	Low Voltage Zero Phase Current Transformer (ZCT)	Sensitivity Current		-	
		0.05A/0.1A/0.2A/0.4A/0.8A			
		Omron Corporation: OTG Series			
		Hitachi Industrial Equipment System Co.,Ltd.: ZR Series			
		Taiwa Electric Co.,Ltd.: ZB, ZD Series			
Control Input (DI)	Non-Voltage Contact Input: 1ch, Contact Capacity: DC24V, Approx: 10mA		Select function: "Alarm Reset", "MAX/MIN Reset", "All Reset", "Status Input"		
	Fuji Electric Co.,Ltd.: Circuit Breaker (BW125)				
Output	Communication Output	MODBUS RTU: RS-485 Half-duplex 2-Wire System, Asynchronous Type		-	
	Contact Output	Optical MOS-FET Relay: 2ch, N.O. Contact, Contact Capacity: DC30V, 70mA		Select function: "Pulse kWh Output", "Alarm Output"	
Power Supply	Range Power Consumption (VA)	1. AC85...264V (Rated Voltage: AC100/110V 4VA, AC200/220V 5VA DC80...143V (Rated Voltage: DC100/110V 2W, AC/DC Common Use)		Specified	
	Starting Current (Time Constant)	1. AC110V: Below 2.2VA, AC220V: Below 4.4A, DC110V: Below 1.6A (Approx. 3ms) 2. DC24V: Below 2.7A, DC48V: Below 5.3A (Approx. 2.2ms)		Specified	

Measurement Items	Class*3	Specifications (Phase: 1,2,3,N; Total: Σ)				Max.	Min.	Remarks
		3P4W	3P3W	1P3W	1P2W			
Voltage	0.5	U12, U23, U31, ULLavg U1N, U2N, U3N, ULNavg	U12, U23, U31, ULLavg	U1N, U3N, U13, ULNavg	U	✓	✓	Select Phase Display: "L1-L2-L3-N", "R-S-T-N", "U-V-W-N"
Current	0.5	I1, I2, I3, IN, Iavg	I1, I2, I3, Iavg	I1, I3, IN, Iavg	I	✓	✓	-
Demand Current	0.5	Id1, Id2, Id3, IdN, Idavg	Id1, Id2, Id3, Idavg	Id1, Id3, IdN, Idavg	Id	✓	✓	-
Power	0.5	ΣP, P1, P2, P3	ΣP	P	P	✓	✓	-
Demand Power	0.5	ΣPd, Pd1, Pd2, Pd3	ΣPd	Pd	Pd	✓	✓	-
Reactive Power	0.5	ΣQ, Q1, Q2, Q3	ΣQ	Q	Q	✓	✓	Select Calculation: Q=Ulsinφ, Q=-(S2-P2)
Apparent Power	0.5	ΣS, S1, S2, S3	ΣS	S	S	✓	✓	3P3W is Balanced Load
Power Factor	1.5	ΣPF, PF1, PF2, PF3	ΣPF	PF	PF	✓	✓	"----" Display when Low Input
Frequency	0.5	f				✓	✓	0.0Hz Display when Low Input
Leakage Current	2.5	Io				✓	-	0 Display when Input is Below 3mA
Active Energy	2.0	Incoming / Outgoing				-	-	Measure Individually for Incoming / Outgoing
Reactive Energy	2.0	Incoming (LAG, LEAD) / Outgoing (LAG, LEAD)				-	-	Measure Individually for Incoming (LAG, LEAD) / Outgoing (LAG, LEAD)

\*1: Please connect 5A current sensor at secondary side of current transformer (CT).

\*2: This current sensor is for low voltage use. In case use in high voltage circuit, external connected current transformer (CT) is necessary.

\*3: It does not include the error of current sensor and zero phase current transformer (ZCT).

# ORDERING INFORMATION

Please specify the specification code of main product, accessory types and each quantity.

Type  
**1. Main Product SQLC-72L -**

Specification code

Hard Model	Power supply	Control Input, Communication Output, Contact Output	Input Frequency
A Hard Model A	1 AC85...264V DC80...143V	1 1x DI, MODBUS RTU, 2x DO	blank 45...65Hz
	2 DC20...56V		W 10...180Hz

## 2. Accessories

Current sensor for current measurement and zero phase current transformer for leakage current measurement is necessary.

Please order separately because current sensor and zero phase current transformer is an accessories.

### Current Sensor

Made by Multi Measuring Instrument Co.,Ltd.

Type	Primary Current	Diameter
CTF-5A	5A	10mm
CTF-50A	50A	10mm
CTF-100A	100A	16mm
CTF-200A	200A	24mm
CTF-400A	400A	37mm
CTF-600A	600A	37mm



CTF-5A

### Zero Phase Current Transformer (ZCT)

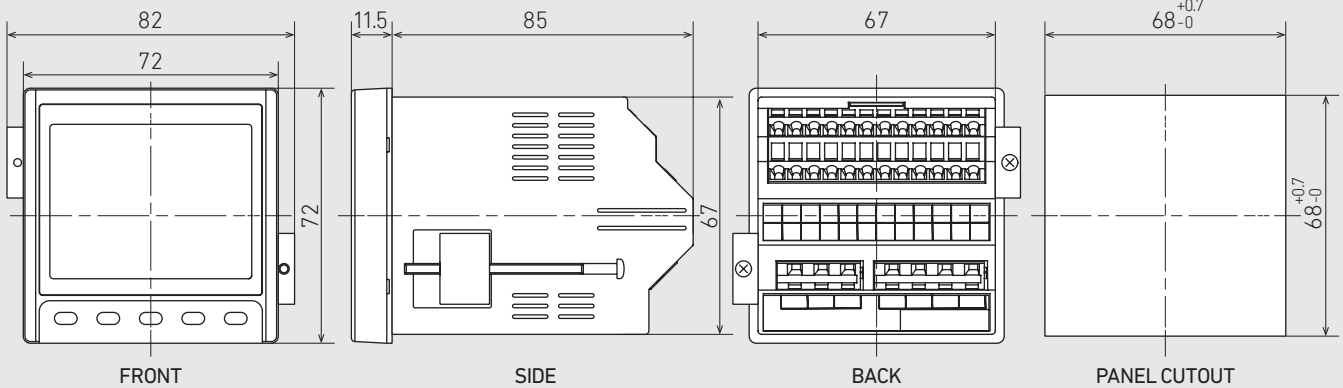
Made by Omron Corporation.

Type	Primary Current	Diameter	Usage
OTG-LA21	50A	21mm	Indoor
OTG-LA30	100A	30mm	Indoor
OTG-LA42	200A	42mm	Indoor
OTG-LA68	400A	68mm	Indoor
OTG-LA82	600A	82mm	Indoor
OTG-LA30W	100A	30mm	Outdoor

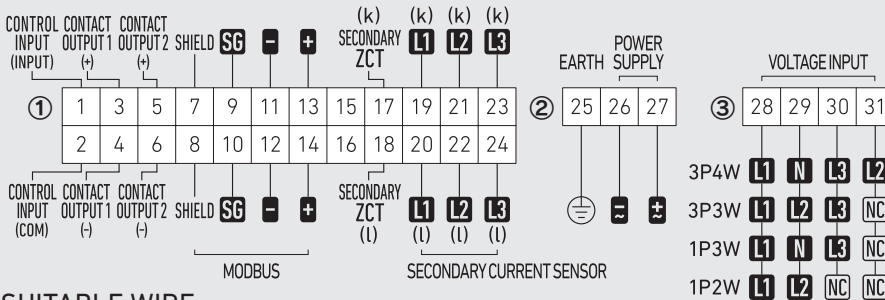
## DIMENSIONS

Weight : 250g

Unit : mm



## CONNECTION DIAGRAM



### SUITABLE WIRE

Size	Single Wire	Flexible Stranded Wire	Stranded Wire, Bar Terminal (Ferrule with Insulating Collar)	Stranded Wire, Bar Terminal (Ferrule without Insulating Collar)	Stranded Wire, Bar Terminal (Twin Ferrule with Insulating Collar)	Delamination of Wire
Cross-Sectional Area	0.08...2.5mm <sup>2</sup>		0.25...1.5mm <sup>2</sup>		2x 0.5mm <sup>2</sup>	5...6mm
AWG	28...12		24...16		22	

## SAFETY PRECAUTIONS

To ensure safety, technical knowledge is necessary when using this product. Please refer to manual instruction for correct operation. Please check connection diagram carefully before performing connections. Please DO NOT work with live wires. There is a risk of electric shock, device malfunction or fire.

**株式会社 第一エレクトロニクス**  
**DAIICHI ELECTRONICS CO., LTD.**

HEAD OFFICE 11-13, Hitotsuya 1-chome,  
 Adachi-ku, Tokyo 121-8639 Japan  
 TEL: +81-3-3885-2411  
 FAX: +81-3-3858-3966

<http://www.daiichi-ele.co.jp/>

NOTE: Reserves the right to update the specification without notification.

No.1702-1