● SINGLE PHASE VOLT-AMP-METER WITH VOLTAGE PROTECTION RELAY

KM-20

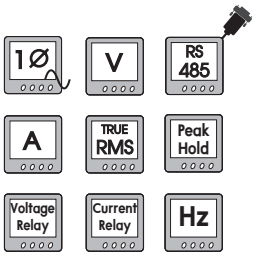
SINGLE PHASE VOLT-AMP-METER WITH VOLTAGE PROTECTION RELAY

PRIMUS

KM-20-P7

KM-20-P9

KM-20-DI



TECHNICAL SPECIFICATION

		KM-20-P7	KM-20-P9	KM-20-DI
Power Supply		230 VAC ±15 % 50-60 Hz		
		115 VAC ±15 % 50-60 Hz		
Power Consumption		2.5VA		
Display		7-Segment, Size 0.56 Inch, 4 Digit 2 Row		7-Segment, Size 0.39 Inch, 4 Digit 2 Row
Input	Voltage	Single Phase		
	Voltage Range	20-500 VAC		
	Accuracy Volt	±0.5% FS.		
	Current	Connection 1 CT, Direct		
	Current Transformer Ratio	1-2000		
	Primary	9999 AMP		
	Secondary	0.01-5A		
	Accuracy Current	±0.5% FS.		
Output	Relay Output	SPDT 2 Alarm 5A / 250VAC, 5A 30VDC		
Communication	Protocol	MODBUS RTU		
	Baud Rate	2400, 4800, 9600, 19200, 38400, 57600, 115200bps		
	Parity	None, Even, Odd		
	Stop Bits	1, 2		
	Data Bits	8 Bits		
	Support Device Node	255		
Ambient Operation	Temperature	-10 ˚C to 60 ˚C		
	Humidity	85 % RH Non-Condensing		
Ambient Storage	Temperature	-20 ˚C to 80 ˚C		
	Humidity	85 % RH Non-Condensing		
Protection Degree		IP30		
Installation		Panel Mounting		DIN RAIL
Material		ABS-V0		
Size (mm.)		72 x 72 x 73	96 x 96 x 76.6	89.5 x 74.6 x 61.5
Weight		280 g.	300 g.	280 g.

SINGLE PHASE VOLT-AMP-METER WITH VOLTAGE PROTECTION RELAY

DESCRIPTION

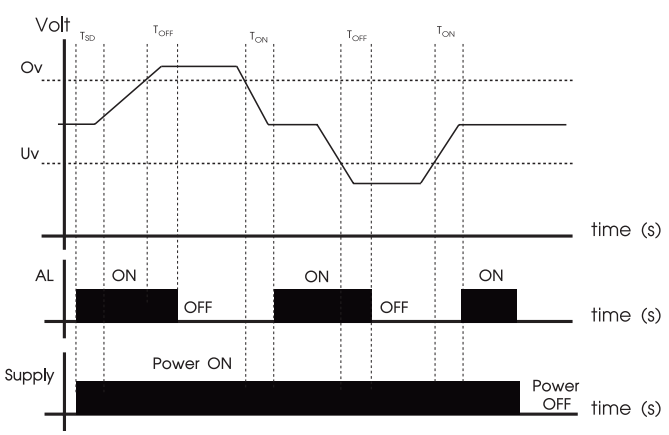
- Single phase voltage measurement system for up to maximum 500 VAC
- Current measurement range 0.01 - 5 A, showing maximum current value 9999 A by passing C.T. Ratio Range 1-2000 (10000 / 5A)
- Under and Over Voltage Protection Relay
- Under and Over Current Protection Relay
- Peak Hold for Maximum of voltage, current
- Fault Display with Memory
- RS - 485 Modbus RTU
- Manual / Auto Display Current and voltage values

OPERATION

The KM - 20 is a measurement and display device for both the voltage and current in the same phase along with Voltage Protection Relay to prevent power failure , Overload . Peak value of voltage and current can be remembered happened to analyze the feasibility of the system

Voltage Protection Relay can set the power to fall Overloaded during 20 - 500 VAC by setting delay before starting work from 1 - 3600 seconds (ON Delay Time) will capture the voltage . If the voltage is lower or higher than the value set, the Relay will order OFF within 0 - 3600 seconds, which can be set to cut fast or slow as needed and display the reason that Display when the voltage level returns to the voltage range at set Relay to return ON again within the set time (ON delaytime). After the KM-20-P7 circuit breaker or Relay OFF, can see the cause of the Relay OFF from the Display. Graph showing the operation of the Volt Protection is shown in graph 1.

Graph 1 shows operation of Voltage Protection Relay



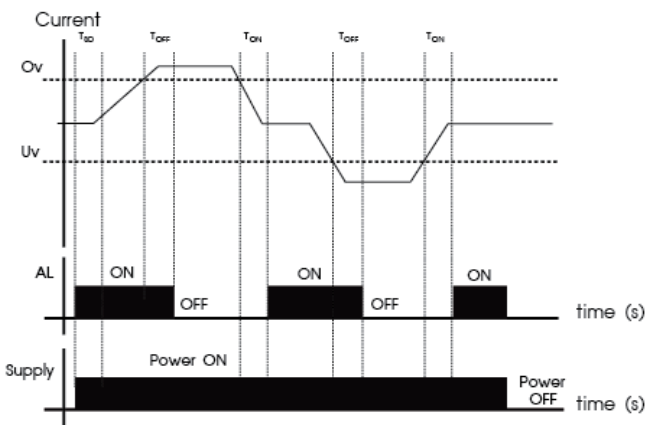
Graph 1

OPERATION

Current Protection Relay can set low current or can be between 0.1 to 9999A. Set the delay time before starting to run from 1 - 3600 seconds (ON delay time). When starting, it will catch the possibility of electricity. If the electricity is higher than that set, the Relay will order OFF within 0 - 3600 seconds, which can be set to cut fast or slow as needed and display the cause at Display. When the current level returns to the level below the set, Relay will return ON again within 1 - 3600 seconds

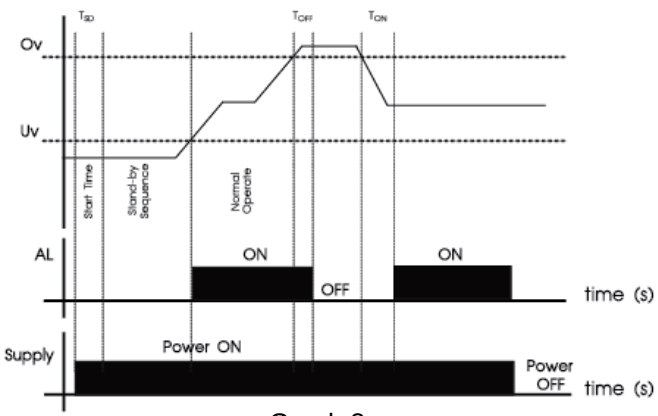
After the KM - 20 - DI circuit breaker or Relay OFF, can see the cause of the Relay OFF from the Display or reverse function. The current protection relay operation graph is shown in graph 2.

Graph 2 shows operation of Current Protection Relay



Graph 2

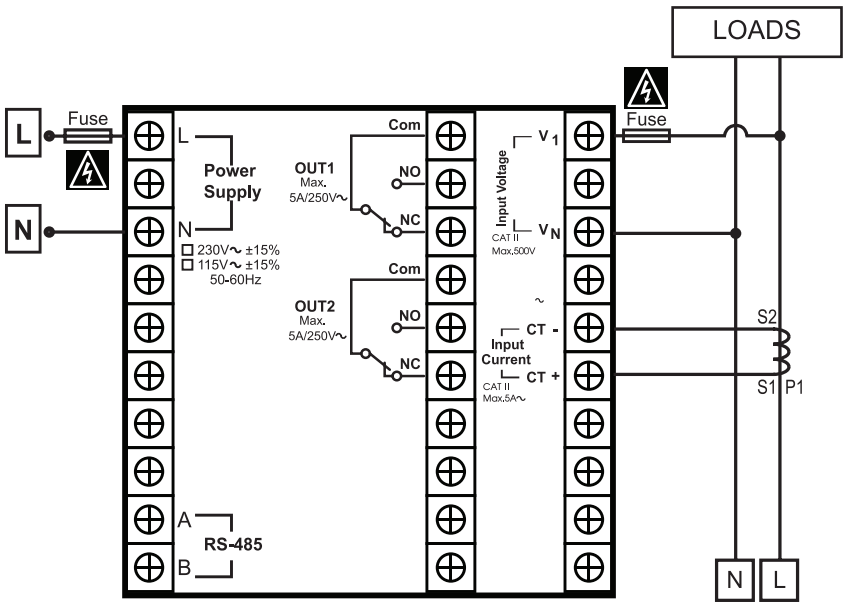
Graph 3 shows Voltage Stand-by sequence operation



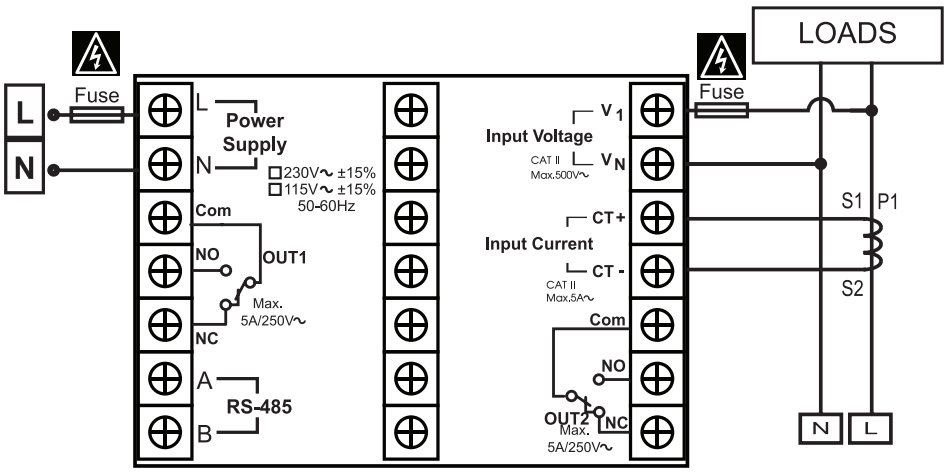
Graph 3

WIRING DIAGRAM

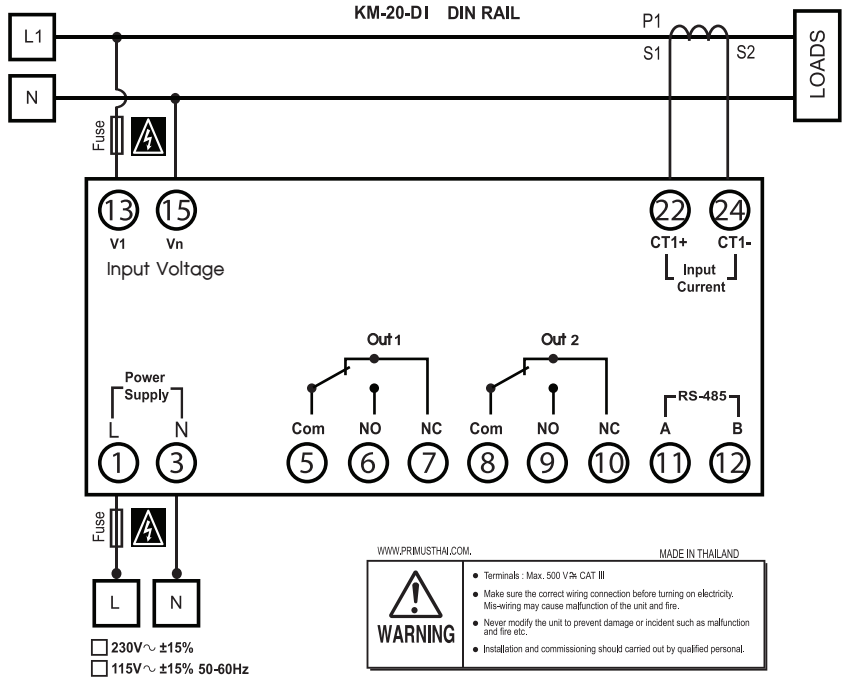
KM-20-P9



KM-20-P7

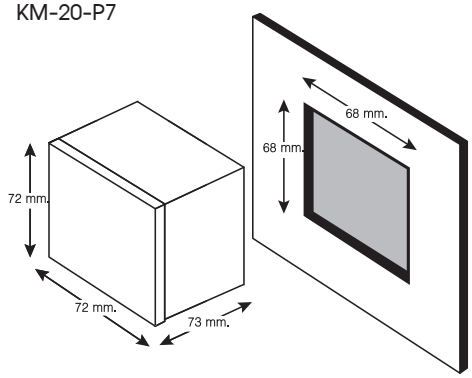


KM-20-DI

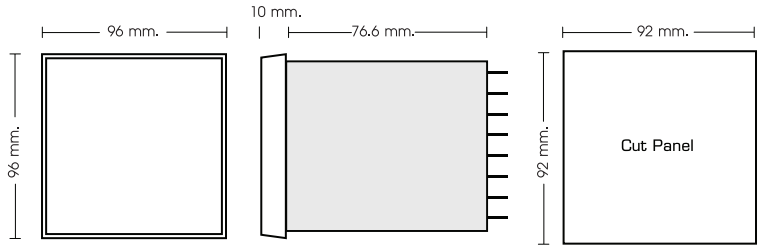


DIMENSION

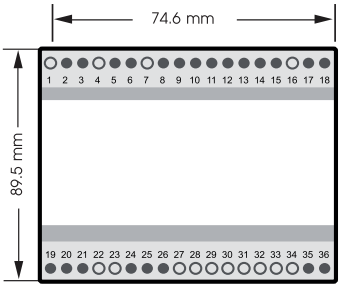
KM-20-P7

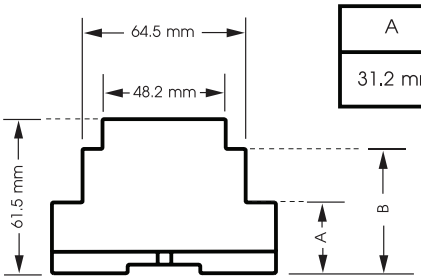


KM-20-P9



KM-20-DI



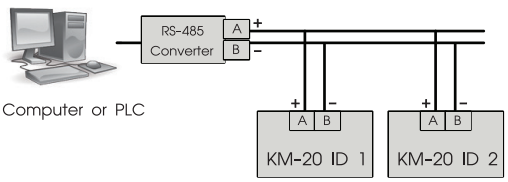


A	B
31.2 mm.	51 mm.

SERIAL COMMUNICATIONS

The KM-20 are Equipped With a RS-485 Series Communication Interface to Allow Connection to Computer or PLCs. MODBUS PROTOCOL is Provided as Standard Communication. The User Can Connect KM-20 as Network Up to 128 Meters.

Wiring Diagram



ORDERING CODE

KM-20 – [INSTALLATION] – A [OPTION 1] – [POWER SUPPLY]

INSTALLATION	
DI	DIN RAIL
P7	Panel 72x72
P9	Panel 96x96

OPTION 1	
None	None
B	Alarm Relay 2 : Voltage and Current Protection Relay Function
M	RS-485

CODE	POWER SUPPLY
NONE	230 VAC
115	115 VAC

Example : KM-20-P9-ABM means Volt, Amp Protection size 96x96 has Alarm A, B Option RS-485 Supply 230 VAC