

Power Meter HC 6035



HSIANG CHENG ELECTRIC CORP.

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Introduction

The HC 6035 Power Meter is microprocessor-based instrument intended for power and energy measurement. The HC 6035 is an Intelligent Electronic Device (IED) and stores these measured values and setting parameters in internal registers for communication. With the features, high accuracy, fully modularized design, and compact size, HC 6035 is very suitable for Electric Utility Substation Automation application.

This product is responsible by the Taiwan Hsiang Cheng Electric corp. to research and develop designs and makes the production

Features

- ◎ Over 20 power and energy parameters
- ◎ Modbus® RTU / Modbus® TCP / IP
- ◎ 3-AC current inputs, 5A or 1A (specified when ordering)
- ◎ 3-AC voltage inputs, maximum 600V
- ◎ True RMS conversion
- ◎ Instant maximum and minimum logger
- ◎ For factory and building automation
- ◎ Measured parameters for V, A, W, Var, WH, VarH, PF, Frequency
- ◎ Maximum demand control applicable
- ◎ Build in RTC (real time clock)
- ◎ Field programmable PT / CT ratio
- ◎ Accuracy up to 0.25%
- ◎ Low input burden 0.2VA (5A / 120V)
- ◎ 3 communication Port
RS-485 (rear) , RS-232 (front) , RJ-45 Ethernet
- ◎ Open / short circuit protection for safety
- ◎ Memory for all setup and energy data
- ◎ Comprehensive self test diagnostic
- ◎ “User Map” speed up communication (indirect accessing data)
- ◎ Easy in field maintenance

Model & Ordering Number

Model : HC 6035

Ordering :

HC 6035 — A — 5.0A — H — 1 — N

Version

Current Input

1.0A

5.0A

Power

H : AC 80-260V, DC 80-330V

L : DC 20-60V

Option

N : None

A : Relay control output x 6

B : Status input x 8

C : LCD Display

Communication Part

1 : RS-485 + RS-232

2 : RS-485 + RS-232 + RJ-45

Specification

Programmable measurements / accuracy / display readouts

Parameter	Digits	Display (maximum)	Accuracy	Phase1	Phase2	Phase3	Total	Average
Vx3	5	9.9.9.9.9. V/KV	0.25% fs	V1	V2	V3		VE
Ax3	5	9.9.9.9.9. A/KA	0.25% fs	A1	A2	A3		AE
Watts	5	9.9.9.9.9. W/KW/MW/GW	0.25% fs	W1	W2	W3	W	
Vars	5	9.9.9.9.9. Var/KVar/MVar/GVar	0.25% fs	Var1	Var2	Var3	Var	
VA	5	9.9.9.9.9. VA/KVA/MVA/GVA	0.5% fs	VA1	VA2	VA3	VAE	
PF	5	1.0000	0.25% fs	PF1	PF2	PF3	PF	
WH	8	9.9.9.9.9.9.9. WH/KWH/MWH/GWH	* 0.5% rd				WH	
VarH	8	9.9.9.9.9.9.9. VarH/KVarH/MVarH/GVarH	* 0.5% rd				VarH	
Hz	5	70.000	0.03% rd					

* Accuracy performance range for WH/VarH, PF ≥ 0.5

(-10 to 50°C)

PF = Cos θ for WH ; PF = Sin θ for VarH

Voltage $\geq 75V$; Current $\geq 5\%$ of rating

Input

- 3 - AC Currents (Aa, Ab, Ac)
- 3 - AC Voltage (Pa, Pb, Pc, Pn for 3-phase input)
- * Range
 - Voltage : 10~600 V
 - Current : Switch able for CT secondary rating
 - Maximum 6A for 5A rating
 - Maximum 1.2A for 1A rating
 - Frequency : 46~64 Hz

Burden

- Voltage < 0.15VA at 300V (or > 1 M Ω)
- Current < 0.2VA of rating
- * Overload Withstand
 - 3 CT continuous, 25 CT 2 sec, 50 CT 1 sec
 - 2 PT continuous for voltage rating

Display

- Standard : VFD / 3 rows of 8 alphanumeric
- Option : LCD / 3 rows of 8 alphanumeric / Chinese sub-title

Programmability (comm. Port and keyboard setting)

- * Communication Baud Rate / address
 - 1.2K / 2.4K / 4.8K / 9.6K / 19.2K / 38.4K bps
 - Address setting : 1-255
- * Measured Power System
 - 3P4W / 3P3W / 1P3W 50/60 Hz main frequency
 - PT ratio 1.0~5000.0
 - CT ratio 1.0~5000.0

Maximum / Minimum Logger

- 20 parameters with time-stamped :
VP1, VP2, VP3, VPE, VPS, VL1, VL2, VL3, VLE, VLS,
A1, A2, A3, AO, AE, W, Var, VA, PF, F

Communication Port

- RS232 (front panel) : Maintenance only
- RS485 (rear panel) : Modbus[®] RTU

Ethernet Port

- One 10/100 base-T Ethernet interface (RJ-45)
- Modbus[®] TCP / IP

Digital input (DI) option

- 8 status input with one common point

Digital output (DO) option

- 6 select relay ("a" contact)
- Contact rating 3A (250Vac / 30Vdc)

Real Time Clock (RTC)

- Maximum deviation 2 sec in 24 hours
- Time for Year / Month / Day / Hour / Minute / Second

Dielectric Strength

- IEC 255-5
- 2KV AC rms 1 minute between input / power / case
- 1.6KV AC rms 1 minute between input / output ; output / power

Impulse and Surge (EMI / EMS)

- ANSI / IEEE C37.90.1-1989 (3KV) SWC
- IEC 61000-4-12 CLASS III SWC
- IEC 61000-4-4 CLASS IV SWC
- IEC 61000-4-5 CLASS IV Impulse

CE Statement of conformity

- RFI Emission : EN 61326 : 1997+A1 : 1998+A2 :
2001+A3 : 2003
- EN 61000-3-2:2000+A2:2005
- EN 61000-3-3:1995+A1:2001

Stability

- Temperature range (-10 to +60°C), maximum 100 ppm/°C

Operating Condition

- Temperature range -25 to 60°C
- RH 10 to 95% non-condensing

Storage Condition

- Temperature range -40 to 80°C
- RH 10 to 95% non-condensing

Power Supply

- LO : DC 20~60V
- HI : AC 90~260V @ 40~70 Hz, DC 90~330 V
- Dissipation maximum 12 VA for AC and 8W for DC

Dimension

- 144 x 144 x 100 mm , panel mount, terminal connection type

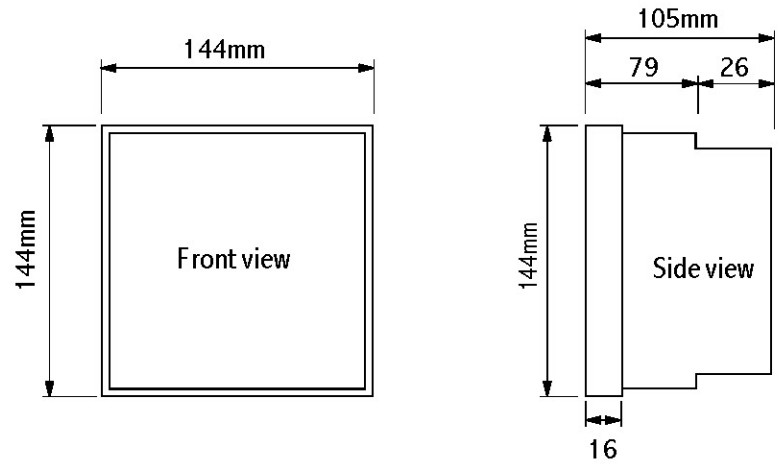
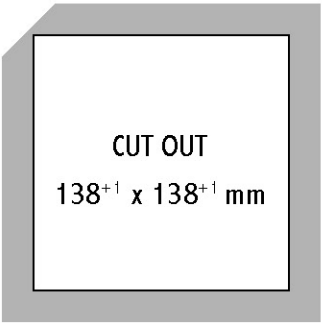
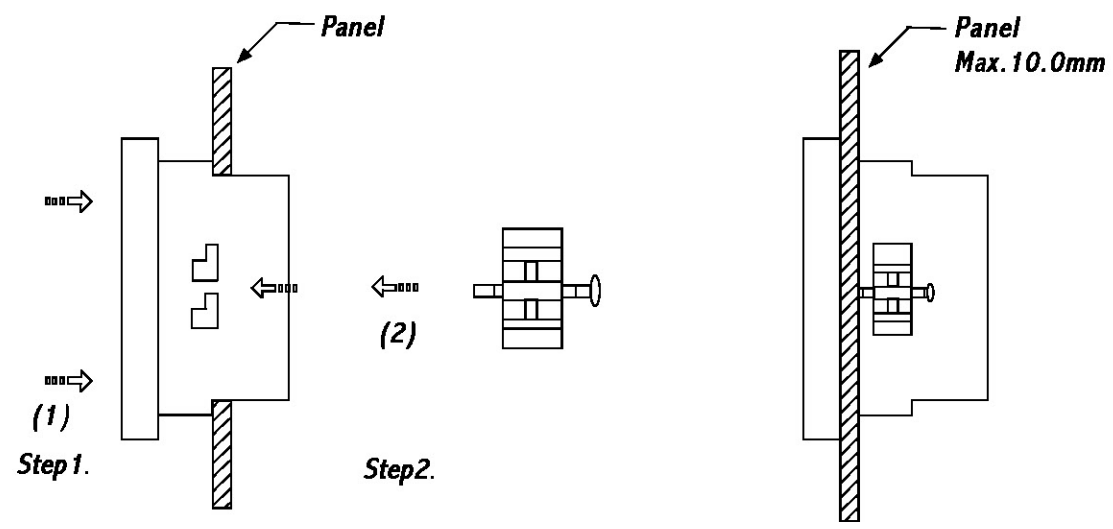
Case

- Polyester ABS : UL94 Class V-0

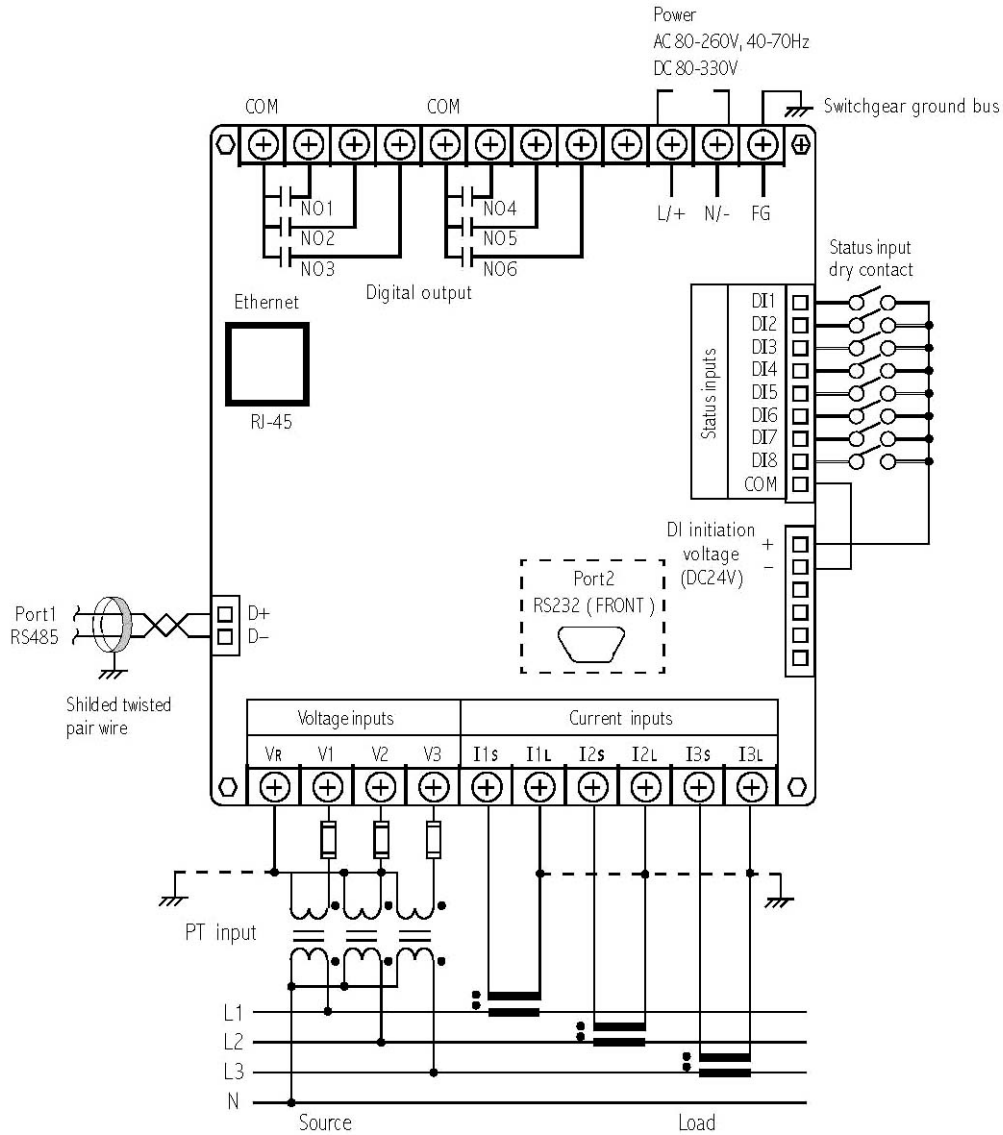
CUT OUT

- 138⁺¹ x 138⁺¹ mm

Dimension



Wiring



3 phase 4 wires WYE / 3VTs



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