

# E61C20

## Basic Power Monitoring with Ethernet Connection



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The E61C20 Panel Mount Power and Energy Meter provides basic four quadrant metering capability with Modbus communication via Ethernet cable. It includes voltage and current inputs with digital and optical outputs with a multi-tariff feature for storing accumulated energy data.

The E61C20 requires external power to operate.

### SPECIFICATIONS

#### CONTROL POWER

AC	100 to 277 Vac <sub>L-N</sub> ± 10%; 100 to 415 Vac <sub>L-L</sub> ± 10%
DC	125 to 250 Vdc ± 20%
AC Burden	5 W/11 VA max. at 415 Vac
DC Burden	4 W max. at 125 Vdc
Frequency	50/60 Hz ± 5 Hz
Fuses	500 mA
Wire Size	0.82 to 3.31 mm <sup>2</sup> (18 to 12 AWG)
Terminal Block Torque	0.5 to 0.6 N·m (4.4 to 5.3 in-lb)

#### VOLTAGE INPUTS

Measured Voltage	UL CAT III, 20-347V <sub>L-N</sub> /35-600V <sub>L-L</sub> (Delta) IEC CAT III, 20-400V <sub>L-N</sub> /35-690V <sub>L-L</sub>
Frequency	50/60 Hz

#### CURRENT INPUTS

Nominal Current	1 A or 5 A
Measured Current	5 mA to 8.5 A
Withstand	20 A continuous; 50 A@10 sec/hr; 500 A@1 sec/hr
Frequency	50/60 Hz

#### DIGITAL OUTPUT

Maximum Load Voltage	40 Vdc
Maximum Load Current	50 mA
On Resistance	50 Ω max.
Pulse Width	50% duty cycle
Pulse Frequency	25 Hz max.
Leakage Current	0.03 μA
Isolation	5 kV RMS

## Ethernet

Easier Internet connection

## Multi-tariff

Track power use at peak and off-peak times

### APPLICATIONS

- Basic THD monitoring
- Industrial monitoring
- Energy and cost allocation
- Billing verification and energy procurement

## Easy installation

Standard 96x96 mm size...easy installation with standard size and no-tool clips

## Digital I/O

Synchronize with external pulses

#### LED OPTICAL OUTPUT

Pulse Width (orange LED)	200 μsec
Pulse Frequency	50 Hz max.

#### COMMUNICATION

Ethernet Port	10/100 Mbps; Modbus TCP/IP; 1 port
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#### MEASUREMENT ACCURACY

Accuracy	0.5%; IEC 61557-12 PMD/[SD][SS]/K70/0.5
Real Power and Energy	0.5%; Class 0.5 as per IEC 61557-12; Class 0.5S as per IEC 62053-22
Reactive Power and Energy	Class 2 as per IEC 61557-12; Class 2S as per IEC 62053-23
Current, Phase	0.5%; Class 0.5 as per IEC 61557-12
Voltage, L-N	0.5%; Class 0.5 as per IEC 61557-12

#### OPERATING CONDITIONS

Operating Temp. Range	-25 to 70 °C (-13 to 158 °F) 5 to 95% RH noncondensing Display functions to -25 °C with reduced performance
Storage Temp. Range	-40 to 85 °C (-40 to 185 °F)
Altitude of Operation	< 2000 m

#### WARRANTY

Limited Warranty	2 years
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#### COMPLIANCE INFORMATION

Approvals	CE; UL61010-1; IEC 61010-1; IEC62052-11; IEC61557-12
Housing	Pollution Degree 2, Installation Category III



\* The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.

Symbols per IEC 417 that may appear in this document

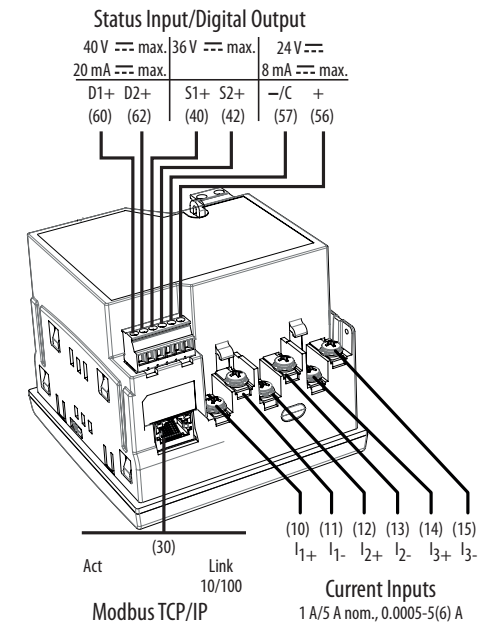
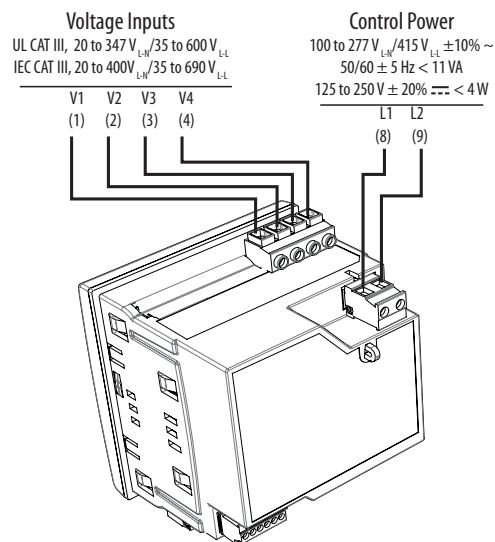
- ⎓ Direct Current (DC)
- ~ Alternating Current (AC)
- ⎓ AC/DC
- ⎓ 3phase AC



**ORDERING INFORMATION**

E61C20	
<b>INSTANTANEOUS RMS VALUES</b>	
Bi-directional energy measurements current (per phase and neutral)	•
Voltage (total, per phase L-L and L-N)	•
Frequency	•
Real, reactive, and apparent power (total and per phase)	•
True power factor (total and per phase)	•
<b>ENERGY VALUES**</b>	
Accumulated active, reactive and apparent energy	•
<b>POWER QUALITY MEASUREMENTS</b>	
THD, thd (Total Harmonic Distortion) I, VAC <sub>L-N</sub> , VAC <sub>L-L</sub> per phase	•
<b>OTHER MEASUREMENTS</b>	
Alarm counters and alarm logs	•
<b>DATA RECORDING</b>	
Min/max of instantaneous values, plus phase identification	•
Alarms with 1s timestamping	•
Data logging	•
<b>DEMAND VALUES</b>	
Current average	•
Active power	•
Reactive power	•
Apparent power	•
Demand calculation (sliding, fixed and rolling block, thermal methods)	•
Synchronization of the measurement window to input, communication command or internal clock	•
Settable demand intervals	•
<b>INPUTS &amp; OUTPUTS</b>	
Two digital outputs (form A relay)	•
Two digital inputs with timestamp	•
Whetting voltage	•

**WIRING DIAGRAMS**



**DIMENSIONAL DRAWING**

