

## LOW-COST

### DESCRIPTION

The model ESP2 Watthour meter is used to measure energy at the input to electrical load centers or branch circuits. The unit displays Volts, Amps, Watts and power factor, in addition to import and export energy.

The unit is DIN-rail mounted and has optional indoor and outdoor enclosures. Solid-core or split-core current transformers are available.

### FEATURES

- Easy-to-install DIN-rail package
- Indoor or outdoor package options
- Optional split-core current transformers

### APPLICATIONS

- Input to electrical load centers
- Branch circuits



## CONNECTION OPTIONS

SYSTEM CONFIGURATION	VOLTAGE INPUT (Vac)	MODEL ESP2-
1-Phase 2-Wire*	120	354EDM-N
1-Phase 2-Wire*	240	354EDM-N
1-Phase 3-Wire*	120/240	25EDS-N
1-Phase 3-Wire Network*	120/208	354EDM-N
3-Phase 3-Wire*	208	354EDM-N
3-Phase 4-Wire*	120/208	354EDM-N

\*Use in a 1Φ2W system requires 1 CT, use in a 1Φ3W or 3Φ3W system requires 2 CTs, use in a 3Φ4W system requires 3 CTs. Solid and Split-Core CTs are available separately. See SCT and BCT spec sheets.

**18 MONTH WARRANTY**



### ORDERING INFORMATION

Example: 3Φ3W Watthour Meter with 208Vac and 200Aac Input, with Split-core CTs in Outdoor Surface-mount Enclosure

**ESP2-354EDM-N with SCT-013-200 (Qty 2) and ENC-OSM**

Enclosures for indoor and outdoor applications are available. See ENC spec sheet.

## SPECIFICATIONS

### INPUT

Current Range  
 With appropriate CTs\* ..... 0-200, 0-400, 0-600, 0-800Aac  
 Over-range without damage..... 125% F.S.  
 Voltage..... Nominal by Model ..... 120, 208, 240V<sub>LL</sub>  
 Operating Range..... 120, 208, 240Vac..... ±30%  
 Power Factor..... any  
 Frequency Range ..... 47-63Hz  
 Power Consumption..... <1VA

### OUTPUT

Pulse Value\*\* ..... 1.25Wh/Pulse x S.F., polarity sensitive  
 Contact Closure (Low-impedance).... low<3Ω, high>1MΩ  
 Duration... 50% duty cycle or 80ms, whichever is greater  
 Encoder Data ..... exactly matches register reading  
 Version 2.0 Meters ..... RS-485, 1200 baud (E,7,1)  
 Version 3.0 Meters ..... RS-485, 9600 baud (E,7,1)

### DISPLAYED VALUES\*\* (5s per value)

	Resolution
Energy (Import and Export)..... (kWh)...	XXXXXX.XX
Volts (Per-Phase)..... (Vac).....	XXX.X
Amps (Per-Phase)..... (Aac).....	XXX.X
Power (Per-Phase and Total)..... (W) .....	XXXXX
Power Factor (Per-Phase w/Direction) ... (C or L) .....	X.XX

### DIELECTRIC TEST

Input/Output/Case..... 2250Vac

### \*\*SCALING FACTOR (for CTs with other than 200A primary)

Displayed Values and Pulse Values must be multiplied by a scaling factor that is determined by dividing the primary current rating of the CTs by 200. (for 200A primary, S.F. = 1)  
 For example: If using 400A CTs, S.F. = 400/200 = 2.  
 Pulse Value = 1.25 x 2 = 2.5Wh/Pulse.  
 Displayed Values: displayed values x 2 = actual

### TIME OF USE (Parameters Available via RS-485 Port)

Real-Time Clock Calendar with Battery Back-up  
 4 Tariff Periods Per Day  
 Max. Demand for 15-, 30-, or 60-Minute Intervals.  
 Resettable Demand via RS-485 Port  
 NOTE: See ESP2 Serial Reading & Programming Guide (7004-00096-A) for details.

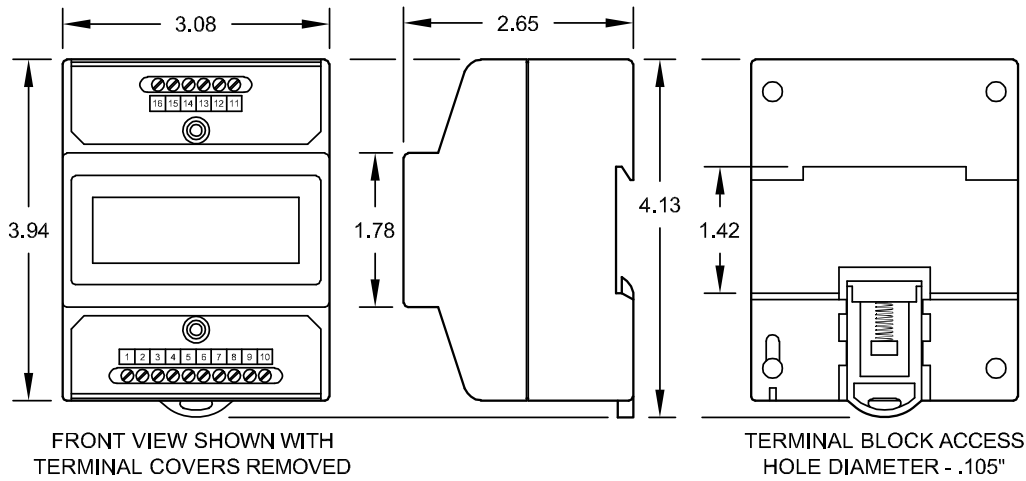
### ACCURACY

IEC 61036 5(200)A & 10(400)A ..... Class 0.5

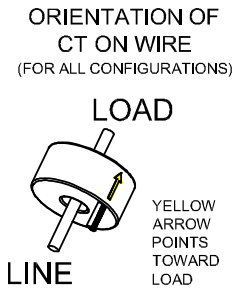
### PHYSICAL & ENVIRONMENTAL

Operating Range.....-30° to 55°C  
 Storage Range..... 0° to 40°C  
 Operating Humidity ..... 0-85% non-condensing  
 Weight..... 8.3 oz  
 Termination (Screw Compression)..... 20-16 AWG  
 Enclosure Material ..... ABS

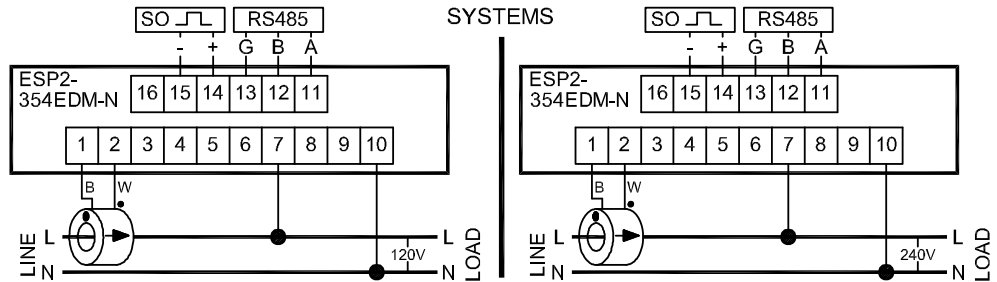
## CASE DIMENSIONS



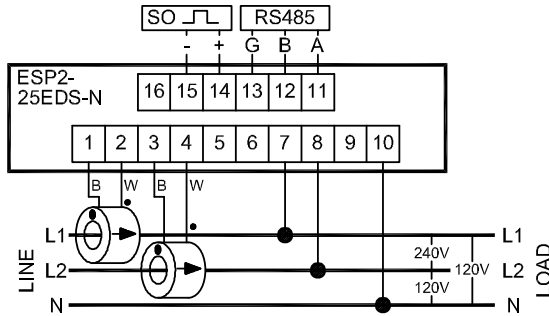
## CONNECTION DIAGRAMS



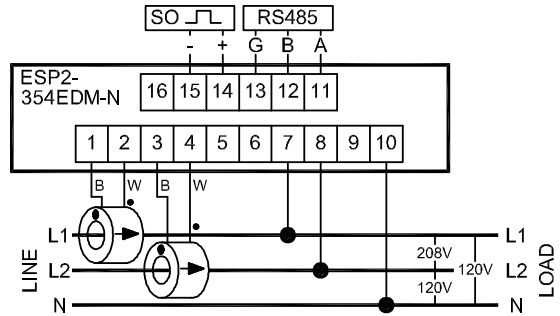
### 1-PHASE 2-WIRE SYSTEMS



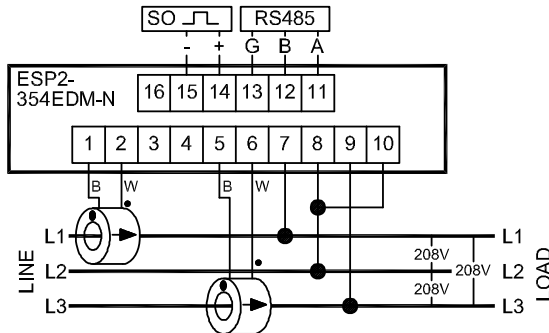
### 1-PHASE 3-WIRE SYSTEMS



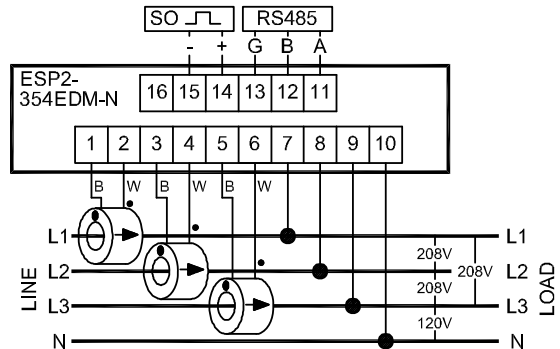
### 1-PHASE 3-WIRE NETWORK SYSTEMS



### 3-PHASE 3-WIRE SYSTEMS



### 3-PHASE 4-WIRE SYSTEMS



0902-00836-B Rev I