

## LOW-COST

### DESCRIPTION

The model ESP3 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

- Single model for all 1Φ and 3Φ applications over range of 120-240Vac
- Indoor or outdoor package options
- Optional split-core current transformers



## CONNECTION OPTIONS

SYSTEM CONFIGURATION	VOLTAGE INPUT (Vac)	MODEL ESP3-
1-Phase 2-Wire*	120	354EDM-N
1-Phase 2-Wire*	240	
1-Phase 3-Wire*	120/240	
1-Phase 3-Wire Network*	120/208	
3-Phase 3-Wire*	208	
3-Phase 4-Wire*	120/208	

\*1Φ2W system requires 1 CT, 1Φ3W or 3Φ3W system requires 2 CTs, 3Φ4W system requires 3 CTs. Solid and Split-Core CTs are available separately. See BCT and SCCT specs on page 3.

### APPLICATIONS

- Input to electrical load centers
- Branch circuits

**18 MONTH WARRANTY**



### ORDERING INFORMATION

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

**ESP3-354EDM-N with SCCT-013-200 (Qty 2) and ENC-OSM**

## SPECIFICATIONS

### INPUT

Current Range  
 With appropriate CTs ( $I_n$ ).....0-200, 0-400, 0-600Aac  
 Over-range without damage..... 125% F.S.  
 Voltage..... Nominal..... 120, 208, 240V<sub>L-L</sub>  
 Operating Range..... Nominal ±30%  
 Power Factor..... any  
 Frequency Range ..... 47-63Hz  
 Power Consumption..... <1VA

### OUTPUT

Pulse Value .....1.0kWh/Pulse, polarity sensitive  
 (NOTE: Unit is factory-programmed for CT ratio.)  
 Contact Closure (Low-impedance).....low<3Ω, high>1MΩ  
 Duration... 50% duty cycle or 80ms, whichever is greater  
 Serial..... RS-485, 9600 baud (E,7,1)

### DIELECTRIC TEST

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

### ACCURACY

IEC 62052-11 .....0.05( $I_n$ )..... Class 0.5

### DISPLAYED VALUES

#### Resolution

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

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

Real-Time Clock Calendar with Battery Back-up  
 4 Tariff Periods ( $T_1, T_2, T_3, T_4$ ) Per Day. (Active Taiff Period is shown on display below decimal point in kWh reading.)  
 Max. Demand for 15-, 30-, or 60-Minute Intervals.  
 Resettable Demand via RS-485 Port

### PHYSICAL & ENVIRONMENTAL

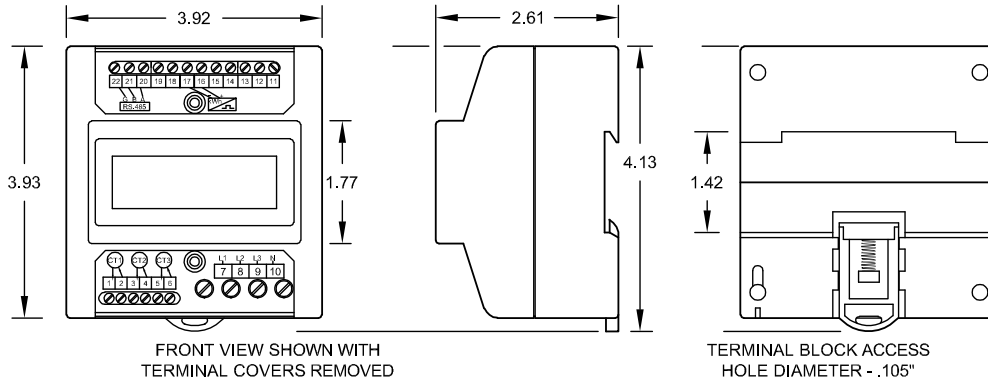
Operating Range.....0° to 40°C  
 Storage Range.....-30° to 55°C  
 Operating Humidity ..... 0-85% non-condensing  
 Weight..... 10.0 oz  
 Termination (Screw Compression).....20-16 AWG  
 Enclosure Material ..... ABS

**DISPLAY REGISTERS**

01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Total kWh	Reverse kWh	Volts L1	Volts L2	Volts L3	Amps L1	Amps L2	Amps L3	Watts L1	Watts L2	Watts L3	Total Watts	Cos L1	Cos L2	Cos L3

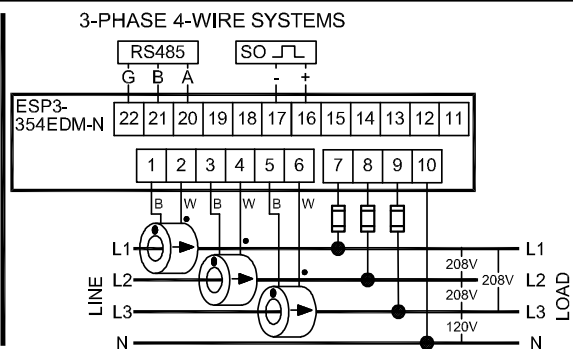
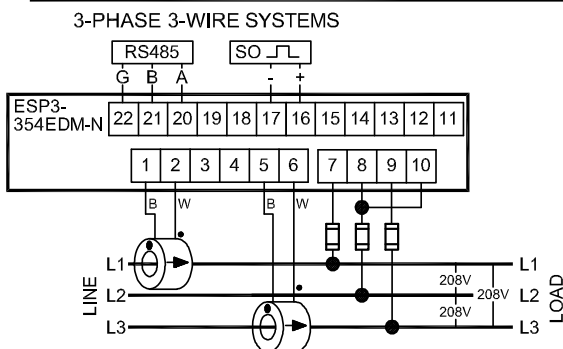
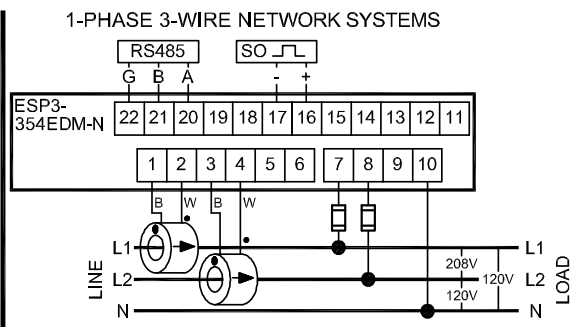
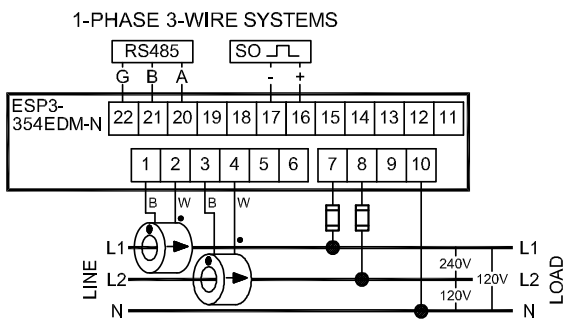
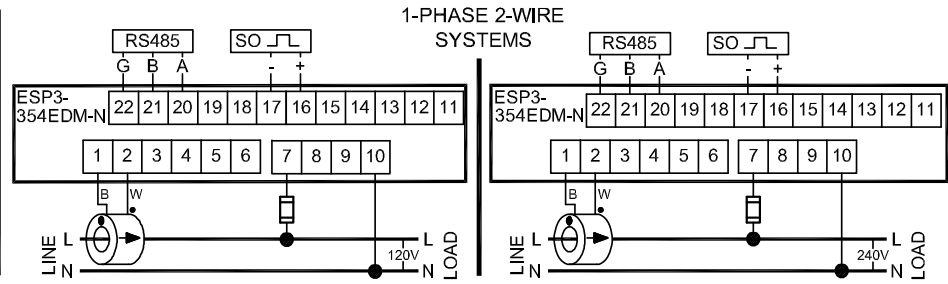
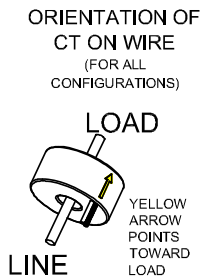
Display scrolls through each register with Total kWh displayed for 2 minutes, followed by the remaining registers for 3 seconds each.

**CASE DIMENSIONS**



Dwg# 0902-00949-B Rev A

**CONNECTION DIAGRAMS**



### FEATURES

- 0.5% Accuracy
- Split-core SCCT models
- Solid-core BCT models
- AC Output 26.6mA

### APPLICATIONS

- For use with ESP3 series Watt transducers
- Other metering applications



### MODEL SELECTION

INPUT AC AMPS	Solid-Core: MODEL BCT-
	0-26.6mAac OUTPUT
0 - 200	013-200
0 - 200	015-200
0 - 200	025-200
0 - 400	025-400
0 - 600	045-600

INPUT AC AMPS	Split-Core: MODEL SCCT-
	0-26.6mAac OUTPUT
0 - 200	013-200
0 - 400	032-400

***Intended for use over insulated conductors only!***

Optional inputs and outputs are available for BCT & SCCT. Consult factory.

### SPECIFICATIONS

#### INPUT

Current ..... See Model Selection Table  
 Over-current ..... 1.2 X F.S.  
 Frequency Range ..... 50-60Hz

ACCURACY ..... ±0.5% F.S.

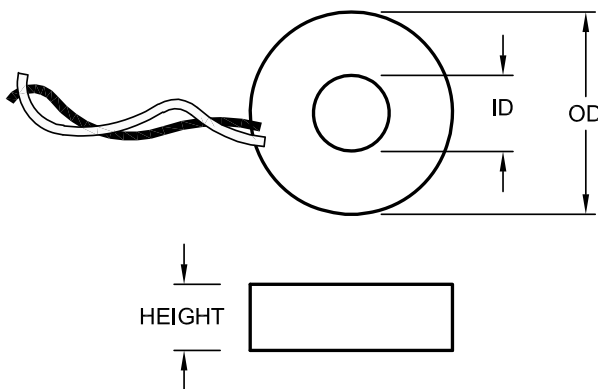
#### PHYSICAL & ENVIRONMENTAL

Weight ..... See Dimension Table  
 Lead Length ..... 72"  
 Lead Type ..... 22AWG stranded, White (X1) & Black  
 Operating Temperature ..... 55°C Max.

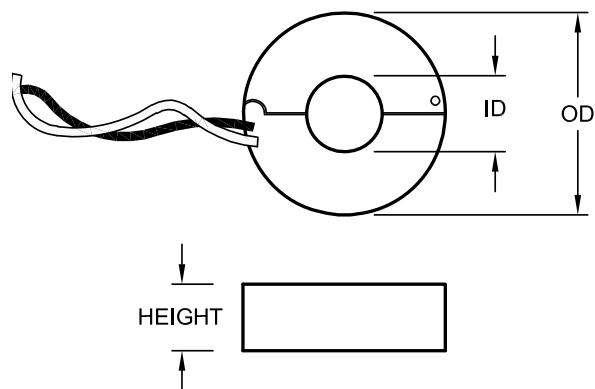
#### OUTPUT

Scaling ..... 0-F.S. Input = 0-26.6mAac Output  
 Burden ..... 1VA

### SENSOR DIMENSIONS



MODEL BCT-	DIMENSIONS (inches)			WT. (lbs.)
	Height	ID	OD	
013-200	0.8	0.51	1.73	0.2
015-200	0.8	0.59	2.43	0.3
025-200	0.79	0.98	2.13	0.3
025-400	0.79	0.98	2.13	0.3
045-600	0.95	1.77	3.50	0.6



MODEL SCCT-	DIMENSIONS (inches)			WT. (lbs.)
	Height	ID	OD	
013-200	0.8	0.53	1.73	0.2
032-400	0.8	1.26	3.11	0.5

Dwg# 0902-00851-B Rev A