

# Din-Mon™ D2 Smart Meter

# E-Mon D-Mon

Advanced kWh/Demand Meters with Communication

Energy Monitoring Products & Systems

## Features

- Advanced 4-line display showing:
  - kWh
  - Power factor per phase
  - Amps per Phase
  - On-board set-up option for:
    - Meter date/time
    - ID codes for EZ7, Modbus and BACnet
  - kW demand (with peak date & time)
  - Real-time load in kW
  - Volts per phase
- 0.333 volt output split-core current sensors (standard) allow for enhanced safety and accurate remote mounting of sensors up to 500 feet from meter. (Optional solid-core sensors and 100mA output current sensors available.)
- Meters can be ordered without current sensors and used with commercially available 0.333V & 100mA output current sensors. (Specify V3 (0.333V) or C1(100mA) in model number and order without current sensors when using third-party current sensors).
- Two customer configurable pulse outputs:
  - Watt-hour and VAR-hour pulse outputs or
  - Watt-hour and phase loss (N.O. Contact)
- Onboard installation diagnostics and verification system.
- Built-in RS-485 communication capability supports the following connection configurations (or combinations not to exceed 52 devices per channel):
  - Up to 52 Din-Mon D2, Din-Mon D5, Class 3200, 3400 and 5000 meters and/or IDR interval data recorders
  - Cabling using 3-conductor, 18-22 AWG, up to 4,000 cable feet total.
- RS-485 Protocol Options
  - E-Mon Energy EZ7
  - Modbus RTU
  - BACnet MS/TP\* (BTL Testing Certified)
- Records kWh and kVARh delivered, kWh and kVARh received in first four channels. Data stored in 15-minute intervals for up to 72 days or 5-minute intervals for up to 24 days. Maintains data in a first-in, first-out format. (Interval data not available via BACnet.)
- Compatible with E-Mon Energy software via EZ7 protocol for automatic meter reading, energy billing and profiling.
- Meter is designed for use on both 3-phase, 3-wire (delta) and 3-phase, 4-wire (wye) circuits. Optional 1- and 2-element configuration available.
- Non-metallic enclosure with DIN rail mounting and surface mounting flexibility.
- UL/CUL Listed. Meter meets or exceeds ANSI C12.20 national accuracy standards. (+/- 0.2% from 1% to 100% of rated load.)
- CE Mark approved.
- Meter meets or exceeds MID accuracy standards.



Dimensions: 5.5" H x 4.3" W x 2.3" D

## Model Numbers

### 120/208-240V, 127/220V, 3-Phase

E-D2-208100-SEZ7SPL3-V3KIT3 (100 amp)  
 E-D2-208200-SEZ7SPL3-V3KIT3 (200 amp)  
 E-D2-208400-SEZ7SPL3-V3KIT3 (400 amp)  
 E-D2-208800-SEZ7SPL3-V3KIT3 (800 amp)

### 220/380V, 230/400V, 240/415V, 3-Phase

E-D2-400100-SEZ7SPL3-V3KIT3 (100 amp)  
 E-D2-400200-SEZ7SPL3-V3KIT3 (200 amp)  
 E-D2-400400-SEZ7SPL3-V3KIT3 (400 amp)  
 E-D2-400800-SEZ7SPL3-V3KIT3 (800 amp)

### 277/480V, 3-Phase

E-D2-480100-SEZ7SPL3-V3KIT3 (100 amp)  
 E-D2-480200-SEZ7SPL3-V3KIT3 (200 amp)  
 E-D2-480400-SEZ7SPL3-V3KIT3 (400 amp)  
 E-D2-480800-SEZ7SPL3-V3KIT3 (800 amp)

### 347/600V, 3-Phase

E-D2-600100-SEZ7SPL3-V3KIT3 (100 amp)  
 E-D2-600200-SEZ7SPL3-V3KIT3 (200 amp)  
 E-D2-600400-SEZ7SPL3-V3KIT3 (400 amp)  
 E-D2-600800-SEZ7SPL3-V3KIT3 (800 amp)

## RS-485 Communication Protocols

Above models supplied with EZ7 communication protocol for use with E-Mon Energy software.

Optional communication protocols:

- Modbus RTU - Replace **EZ7** in model with "RTU"  
 Ex. E-D2-480100SRTUSPL1-V3KIT1

- BACnet MS/TP - Replace **EZ7** in model with "BAC"  
 Ex. E-D2-208200SBACSPL3-V3KIT3

\*NOTE: Interval data not available via BACnet.

NOTE: All standard 3-phase meter kits include one set of three 0.333V split-core current sensors.

## Ordering Options

- Solid Core current sensors - Replace "SPL" in model with "SCS" (100A & 200A only)  
 Ex. E-D2-480400-SEZ7SCS3-V3KIT3

- 100mA current sensors instead of 0.333V sensors - replace "V3" in model with "C1" (200A, 400A and 800A only)  
 Ex. E-D2-480200-SEZ7SPL3-C1KIT3

- Single Element meter - Replace "SPL3" or "SCS3" with "SPL1" or "SCS1" AND change "KIT3" to "KIT1"  
 Ex. E-D2-208100-SEZ7SPL1-V3KIT1

- 2-Element meter - Replace "SPL3" or "SCS3" with "SPL2" or "SCS2" AND change "KIT3" to "KIT2" Ex. E-D2-208100-SEZ7SPL2-KIT2

To order meters without current sensors remove KIT1, KIT2 or KIT3 from the model.  
 NOTE: Be sure to specify if the meter is single element, 2-element or 3-phase and what type of sensors will be used (0.333V or 100mA) when ordering without sensors.

### ***Din-Mon Smart Meter Specifications***

Meter shall be fully electronic with 4-line LCD display showing:

- kWh
- kW demand (with peak date & time)
- Power factor per phase
- Real-time load in kW
- Amps per phase
- Volts per phase

Meter shall utilize 0.333 volt AC output current sensors and allow remote mounting up to 500 feet from meter. Up to 3 sets of 0.333V sensors can be paralleled for cumulative reading. Sensors shall be of split-core configuration to allow installation without disconnecting cabling, etc. Sensors shall be available from 100A to 800A. Current sensors shall be optionally available in 100mA output (200A, 400A & 800A) and/or solid-core configuration (100A & 200A.)

Meter shall be available without current sensors for use with commercially available 0.333V and 100mA current sensors. (Specify configuration and sensor type when ordering.)

Meter shall provide a RS-485 communication for interface to BAS systems. (Specify protocol when ordering.)

Meter shall provide current sensor installation diagnostics indicator.

Meter shall be field programmable for meter date/time, IP address and ID code for communication options.

Meter shall be enclosed in a non-metallic enclosure with DIN rail mounting and surface mounting flexibility. Dimensions: 5.5" H x 4.3" W x 2.3" D

Meter shall be UL/CUL Listed to latest applicable standards for safety.

Meter shall meet or exceed ANSI C12.20 accuracy standards.

Meter shall be CE Mark approved.

Meter shall meet or exceed MID accuracy standards.

BACnet protocol shall be BTL Certified.

Meter shall provide non-volatile memory to maintain reading during power outages.

Meter shall store interval data for kW and kVAR for up to 72 days in first-in first-out format. Interval data not stored in BACnet units.

Meter shall operate as slave device when used with Modbus options. Meter works as a master device on BACnet MS/TP.

Meter shall be capable of connecting using RS-485 communication in combinations of Din-Mon D2, Din-Mon D5, Class 3200s, 3400s, 5000s and IDRs not to exceed 52 devices. Cabling shall be through terminal block (3-conductor), 18-22 AWG, up to 4,000 cable feet total.

Meter shall be available with E-Mon Energy EZ7, Modbus RTU or BACnet MS/TP communication.

Meter shall provide two customer configurable pulse outputs:

- Watt-hour and VAR-hour pulse outputs or
- Watt-hour and phase loss (N.O. Contact)