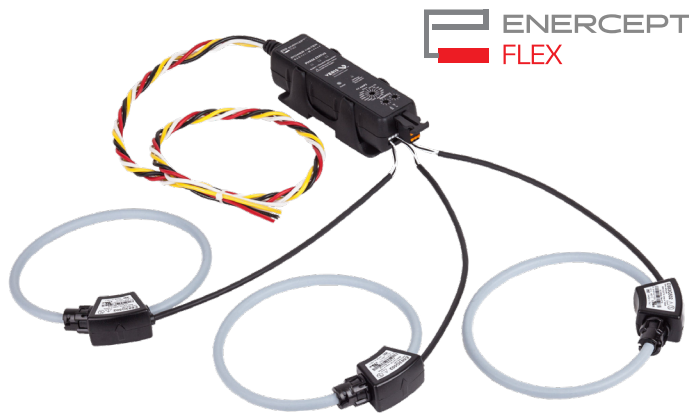


E2X FLEX SERIES

Uni-directional, Bi-directional,
Modbus, & BACnet



ANSI model shown with E683x Rogowski CTs (sold separately)

Enercept FLEX E2x Series power and energy meters provide a unique solution for measuring energy data. Designed with the user in mind, the E2x Series offers maximum application flexibility for retrofit applications.

The Enercept FLEX E2x Series is compatible with split-core, solid-core and Veris E683x Series rope-style Rogowski current transducers (CTs) from 5 to 5000 A, often allowing installers to utilize existing CTs with the meter. Adding to its versatility, the Enercept FLEX E2x Series has a wide input range of 90 to 480 Vac, alleviating the need to keep multiple models in stock. The meter's small form factor enables installation in existing panels with limited space, and does not require external mounting or the expense of extra enclosures or conduit runs. Communicating models support auto detection of baud rate, parity, and protocol for Modbus® RTU and BACnet® MS/TP.

SPECIFICATIONS

MEASUREMENT ACCURACY*	
Real Power & Energy, 1/3 Volt Current Input Mode	IEC 62053-22 Class 0.2S, ANSI C12.20, 0.2%
Real Power & Energy, Rogowski Current Input Mode	IEC 62053-22 Class 0.5S, ANSI C12.20, 0.5%
Reactive Power & Energy	IEC 62053-24 Class 1, 1%
INPUT VOLTAGE CHARACTERISTICS	
Measured AC Voltage	Min. 90 V _{L-N} (156 V _{L-L}) for stated accuracy; UL max.: 480 V _{L-L} (277 V _{L-N}); CE max.: 300 V _{L-N}
Impedance	2.5 MΩ _{L-N} / 5 MΩ _{L-L}
Frequency Range	45 to 65 Hz
INPUT VOLTAGE CHARACTERISTICS	
Measurement Range	0 to 0.333 Vac (+20% over-range)
Impedance	33 kΩ
CONTROL POWER	
AC	Drawn from phase A-B line-to-line voltage input 4 VA max.: 90V _{L-N} min. UL max.: 480 V _{L-L} (277 V _{L-N}) CE max.: 300V _{L-N}

High reliability

ANSI C12.20 0.2% accuracy, IEC 62053-22 Class 0.2S

Wide range of service types

Compatible with CTs from 5 to 5000 A

Easy ordering & stocking

Modbus and BACnet protocols along with uni-directional and bi-directional feature sets in one unit

90 to 480 Vac

Application versatility with fewer models to stock

Easy installation

DIN rail or screw mount options (with included mounting bracket)

Protocol support

Native Modbus and BACnet MS/TP support (no gateway) with serial rates up to 115.2 kbaud

APPLICATIONS

- Energy monitoring (BAS)
- Renewable energy
- Energy management
- Commercial sub-metering
- Industrial monitoring
- Cost allocation

Ride-through Time	50 ms at 120 Vac
MECHANICAL CHARACTERISTICS	
Ingress Protection (IEC 60529)	IP20
Plug Wire Size (I/O, Communications, CT)	24 to 16 AWG (0.2 to 1.5 mm ²)
Optional Bracket: Rail Mounted	T35 (35 mm) DIN rail per EN 50022
Optional Bracket: Wall Mounted	Two #10 or M5 screws, 2.953" (75 mm) center-to-center
ENVIRONMENTAL CONDITIONS	
Operating Temperature	-30 to 70 °C (-22 to 158 °F)
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Humidity Range	<95% RH (non-condensing)
Altitude of Operation	3 km max.
Pollution Degree	2
Mounting Location	Not suitable for wet locations. For indoor use only.



SPECIFICATIONS (CONT.)

METERING CATEGORY

UL	CAT III; for distribution systems up to 277 V _{L-N} / 480 Vac _{L-L}
CE	CAT III; for distribution systems up to 300 V _{L-N}
Dielectric Withstand	Per UL 61010-1, EN 61010-1
Conducted and Radiated Emissions	FCC part 15 Class A, EN 61000-6-4, EN 61326-1 Class A (industrial)
Conducted and Radiated Immunity	EN 61000-6-2, EN 61326-1 (industrial)

WARRANTY

Limited Warranty	5 years
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AGENCY APPROVALS

US and Canada	UL 61010-1
Europe (CE)	EN 61010-1

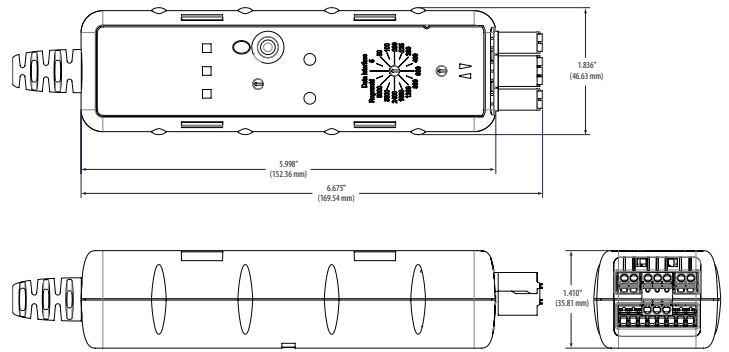


- * The meters were tested compliant to the norms:
- ANSI C12.20, Class 0.2, from 1% to 100% rated current
 - IEC 62053-22, Class 0.2S, from 1% to 100% rated current
 - IEC 62053-22, Class 0.5S for Rogowski coils, from 1% to 100% rated current
 - IEC 62053-24 Class 1, from 1% to 100% rated current

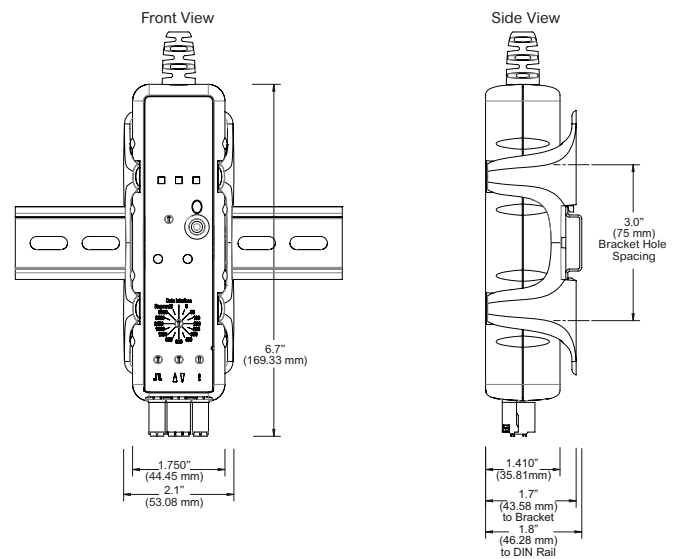
ORDERING INFORMATION

	E23CX
MEASUREMENT CAPABILITY - FULL DATA SET	
Bi-directional Energy Measurements	•
Power (3-phase Total and Per Phase): Real (kW) Reactive (kVAR), and Apparent (kVA)	•
Power Factor: 3-phase Average and Per Phase	•
Present Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA)	•
Import and Export Totals of Present Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA)	•
Peak Power Demand: Real (kW), Reactive (kVAR), and Apparent (kVA)	•
Current (3-Phase Average and Per Phase)	•
Voltage: Line-Line and Line-Neutral (3-phase Average and Per Phase)	•
Frequency	•
ANSI C12.20 0.2% Accuracy, IEC 62053-22 Class 0.2S	•
Accumulated Net Energy: Real (kWh), Reactive (kVARh), and Apparent (kVAh)	•
Accumulated Real Energy by Phase (kWh)	•
Import and Export Accumulators of Real and Apparent Energy	•
Reactive Energy Accumulators by Quadrant (3-phase Total and Per Phase)	•
Demand Interval Configuration: Fixed or Rolling Block	•
Demand Interval Configuration: External Sync to Comms	•
OUTPUTS	
RS-485 Serial (Modbus RTU Protocol)	•
RS-485 Serial (BACnet MS/TP Protocol)	•

DIMENSIONAL DRAWING



DIMENSIONS, MOUNTED



ORDERING INFORMATION

Data Set	I/O	System Types & Wires
E		
23 = Uni/Bi Dir (FDS)	C = RS-485 MB/BAC	5 = 1, 2, or 3ph (A-B-C-N) IEC International 6 = 1, 2, or 3ph (A-B-C-N) ANSI North & South America
Example:		
E	23	C 6

