***GENERIC SPECIFICATION FOR MULTIFUNCTIONPOWER AND ENERGY METER SHARK® 50B***

1. PRODUCT

2.1 POWER METER

1. The meter shall be UL listed and CE marked. Meter shall have third party certification for the following standards:
   * + 1. IEC 62053-22 0.5S Class Accuracy
       2. IEC 61326-1, IEC 61000-6-2, IEC 61000-6-4 and subordinate standards
       3. IEEE C37.90.1
       4. IEEE C62.41
2. Meter shall be designed for multifunction electrical measurement on 3 phase power systems.
   * + 1. The meter shall support 3 element Wye, 2.5 element Wye, 2 element Delta, 4 wire Delta systems.
       2. Voltage inputs are user programmable for voltage range to any PT ratio.
       3. Voltage burden of .36 VA per phase Max at 600 volts and 0.014 VA at 120 volts.
       4. Absolute voltage input range of (20-416) V L-N and (0- 721) Volts L-L.
       5. Color-coordinated voltage and current inputs.
       6. Phasor diagram that clearly shows wiring status.
       7. Dual input method for current inputs:
          1. CT allowed to pass directly through meter without any physical termination on meter.
          2. Provides additional termination pass-through bars, allowing CT leads to be terminated on meter.
       8. Fault current withstand of 100 A for 10 seconds, 300 A for 3 seconds, and 500 A for 1 second.
       9. Current programmable to any CT ratio.
       10. Current burden of 0.005VA per phase, Max at 11 A.
       11. 5 mA pickup current.
       12. Inputs and outputs galvanically isolated to 2500 V AC.
       13. Current inputs for Class 10: 5 A Nominal CT with overrange to 10 A secondary.
       14. Current inputs for Class: 2 1 A Nominal CT with overrange to 2 A secondary.
3. Meter shall have accuracy of +/- 0.4% or better for voltage and current, and 0.5% for power and energy. Meter shall meet accuracy requirements of IEC 62053-22 (Class 0.5S) and ANSI C12.20 (Class 0.5 CL).
   * + 1. Meter shall provide sampling at 400+ samples per cycle on all channels measured readings simultaneously.
       2. Meter shall have 6 simultaneous 24-bit Analog to Digital converters.
       3. Meter shall have an anti-dither algorithm to improve reading stability.
4. Meter shall have a three-line, bright red, .56” LED display, which presents a scrolling display of measured readings.
   * + 1. Meter shall display a 10 segment % of Load bar on the front panel to provide an analog feel.
5. Meter shall be a traceable revenue meter, containing a utility-grade test pulse for accuracy verification.
6. Meter shall have native BACnet support and offer seamless integration into a BACnet system:
   * + 1. Meter’s RS485 serial port shall be configured to speak BACnet MS/TP protocol.
       2. Meter’s BACnet implementation shall provide 56 pre-configured embedded BACnet objects consisting of standard voltage, current, and power parameters. The objects shall be named such that they can be readily identified.
7. Meter shall have an RJ45 Ethernet communication port.
   * + 1. The Ethernet port shall provide 100BaseT Ethernet communication speaking Modbus TCP/IP. The meter shall be capable of communicating BACnet MS/TP and Modbus TCP/IP simultaneously.
       2. The meter shall have an embedded web interface for configuration and viewing of data.
       3. Web interface shall have a feature that lets the user save BACnet Object data as a .csv file that can be viewed in word processing or spreadsheet applications.
       4. Web interface shall have a webpage that displays the BACnet objects, their readings, and information about the objects.
       5. Web interface shall have a webpage displaying statistics for the unit, e.g., the number of meter reboots, and the number of BACnet MS/TP packets sent and received.
       6. Web interface shall be viewable with any standard Internet browser.
8. Meter shall install in standard ANSI or DIN cutouts.
9. Meter shall have a 4-year warranty.
10. The following options shall be available for ordering:

|  |  |  |
| --- | --- | --- |
| Options | **Model** | **Mounting** |
|  | Shark 50B meter | -X:  ANSI Mounting |
|
| -DIN:  DIN Mounting Brackets |
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1. Acceptable product is Electro Industries/GaugeTech, Model SHARK50-V1-485P-X.

For specification information, contact:

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