ST1LE-PRN-SYS

ST1LE Batcher with Panel Mount Printer In Fiberglass Enclosure & Accessories

Features

- ST1LE Batch/Rate/Total in Fiberglass Enclosure with Panel Mount Impact Printer
- Prewired with DC Power Supply for Printer and Terminal Block for Live Power
- RS485 with Modbus RTU Protocols Available
- Fiberglass Enclosure with Hinged Cover and Quick Release Latches

Description:
The ST1LE-PRN-SYS is a complete flow rate/totalizing or flow batching system including transaction printout. The system consists of one ST1LE Rate/Totalizer or Batch Controller with Rate and Total Display, one PMi190 Impact Printer, one MD-20-24 power supply and one 3-Position Terminal Block. (Other accessories are available as needed) The system is enclosed in a fiberglass enclosure and is prewired by the factory prior to shipping (PW option).

ST1LE Batch Controller
Part Number: ST1LEL1A0P (LCD), ST1LEO1A0P (OLED)
Description:
The SUPERtrol-I LE can be programmed for rate/total indication or batching. The various pulse inputs and outputs can be “soft” assigned to meet a variety of common application needs. The user “soft selects” the usage of each feature while configuring the instrument. A 0-20mA or 4-20mA analog output is standard.
This system uses the standard RS-232 Serial Port for transaction printing to a printer. An optional RS-485 serial port using Modbus RTU protocol is available.

PMi190 Printer
Part Number: PMi190
Description:
Panel Mount Impact Printer, 24/40 Columns, 240 dots width, 4kb buffer

MS811 Enclosure
Part Number: MS811
Description:
Fiberglass Wall Mount Enclosure, 1 ST cutout, 1 Printer Cutout, Hinge Left, Sub Panel with DIN Rail, 3 Fused TB on Power Input, Prewired, Preassembled

24 VDC Power Supply
Part Number: MDR-20-24
Description:
100-264 VAC to 24 VDC power supply for PMi190 printer

ST1LE Specifications:

Environmental
Operating Temperature: 0°C to +50°C
Storage Temperature: -40°C to +85 C
Humidity : 0-95% Non-condensing
Materials: U.L. approved

Listing: UL/C-UL Listed (File No. E192404), CE Compliant

Display
Type: 2 lines of 20 characters
Types: Backlit LCD, OLED and VFD ordering options
Character Size: 0.2" nominal
User programmable label descriptors and units of measure

Keypad
Keypad Type: Membrane Keypad with 16 keys
Keypad Rating: Sealed to NEMA 4X / IP65

Enclosure
Depth behind panel: 6.5" including mating connector
Type: DIN
Materials: Plastic, UL94V-0, Flame retardant
Bezel: Textured per matt finish

Power Input
The factory equipped power option is internally fused. An internal line to line filter capacitor and MOV are provided for added transient suppression.
110 VAC Power Option: 85 to 127 Vrms, 50/60 Hz
220 VAC Power Option: 170 to 276 Vrms, 50/60 Hz
DC Power Option:
12 VDC (10 to 14 VDC)
24 VDC (14 to 28 VDC)

Flow Inputs:

Pulse Inputs:
Number of Flow Inputs: one (single or quadrature)
Input Impedance: 10 KΩ nominal
Pullup Resistance: 10 KΩ to 5 VDC (menu selectable)
Pull Down Resistance: 10 KΩ to common
Trigger Level: (menu selectable)
High Level Input
Logic On: 3 to 30 VDC
Logic Off: 0 to 1 VDC
Low Level Input (mag pickup)
Sensitivity:
10 mV or 100 mV
Minimum Count Speed:
User selectable (as low as 1 pulse/99 seconds)
Maximum Count Speed:
Selectable: 40 Hz, 3000 Hz or 20kHz
Overvoltage Protection: 50 VDC
Linearization: Average K or 16 Point linearization with separate forward and reverse tables

Control Inputs
Number of Inputs: 3
Switch Inputs are menu selectable for Start, Stop, Reset, Lock, Inhibit, Alarm Acknowledge, Print or Not Used.
Control Input Specifications
Input Scan Rate: 10 scans per second
Logic 1: 4 - 30 VDC
Logic 0: 0 - 0.8 VDC
Input Impedance: 100 KΩ
Control Activation:
Positive Edge or Pos. Level based on product definition for switch usage.

Excitation Voltage
Menu Selectable: 5, 12 or 24 VDC @ 100 mA (fault protected)

Data Logging
The data logger captures print list information to internal storage for approximately 1000 transactions. This information can be used for later uploading or printing. Storage format is selectable for Comma-Carriage Return or Printer formats.

Batching Features
Quick batching sequence, single or dual stage batching, slow fill, auto-batch restart and batch overrun compensation.

Serial Communication
The serial port can be used for printing, data logging, modem connection and communication with a computer.
RS-232:
Device ID: 01-99
Baud Rates: 300, 600, 1200, 2400, 4800, 9600, 19200
Parity: None, Odd, Even
Handshaking: None, Software, Hardware
Print Setup: Configurable print list and formatting.
Print Out: Custom form length, print headers, print list.
Print Initialization: Print on end of batch, key depression, interval, time of day or remote request.
RS-485: (optional 2nd COM port)
Device ID: 01-247
Baud Rates: 1200, 2400, 4800, 9600, 19200
Parity: None, Odd, Even
Protocol: Modbus RTU (Half Duplex)

Internal Multi-protocol Communication Card Option (Network Card Option 3)
Protocols:
BACnet MS/TP, BACnet IP, Modbus TCP, Metasys N2, AB DF1, AB EtherNet/IP, LonWorks

Relay Outputs
The relay outputs are menu assignable to (Individually for each relay) Low Rate Alarm, Hi Rate Alarm, Prewarn Alarm, Preset Alarm or General purpose warning (security).
Number of relays: 2 (4 optional)
Contact Style: Form C contacts
Contact Ratings: 5 amp, 240 VAC or 30 VDC

Isolated Pulse output
The isolated pulse output is assigned to Uncompensated Volume Total.
Pulse Output Form: Photomos Relay
Maximum On Current: 25 mA
Maximum Off Voltage: 30 VDC
Saturation Voltage: 1.0 VDC
Maximum Off Current: 0.1 mA
Pulse Duration:10 mSec or 100mSec (user selectable)
Pulse output buffer: 256
Fault Protection
Reverse polarity: Shunt Diode

Isolated Analog Output
The analog output is menu assignable to correspond to the Rate or Total.
Type: Isolated Current Sourcing
Available Ranges: 4-20 mA, 0-20 mA
Resolution: 12 bit
Accuracy: 0.05% FS at 20° C
Update Rate: 1 update/sec minimum
Temperature Drift: Less than 200 ppm/C
Maximum Load: 1000 ohms (at nominal line voltage)
Compliance Effect: Less than .05% Span
60 Hz rejection: 40 dB minimum
Calibration: Operator assisted Learn Mode
Averaging: User entry of damping constant to cause a smooth control action
Note: DC powered units are not isolated

MS811 Specifications:

Dimensions
(See drawing)
Material:

Cover/Base -	Ultraguard® Fiberglass reinforced polyester (Color RAL 7035)
Fasteners -	304 series stainless steel
Back panel inserts -	Brass
Gasket -	Closed cell neoprene
Mounting Feet -	304 series stainless steel

Test Spec:
Construction meets NEMA/EEMAC Type 1, 2, 3, 4, 4X, 12 & 13
UL® 508 listed; Type 1, 2, 3, 3R, 4, 4X, 12, and 13
CSA-C22 No. 14; Type 1, 2, 3, 3R, 4, 4X, 12, and 13
IEC60529 Type IP66
Compliant with RoHS (Restriction of Hazardous Substances)

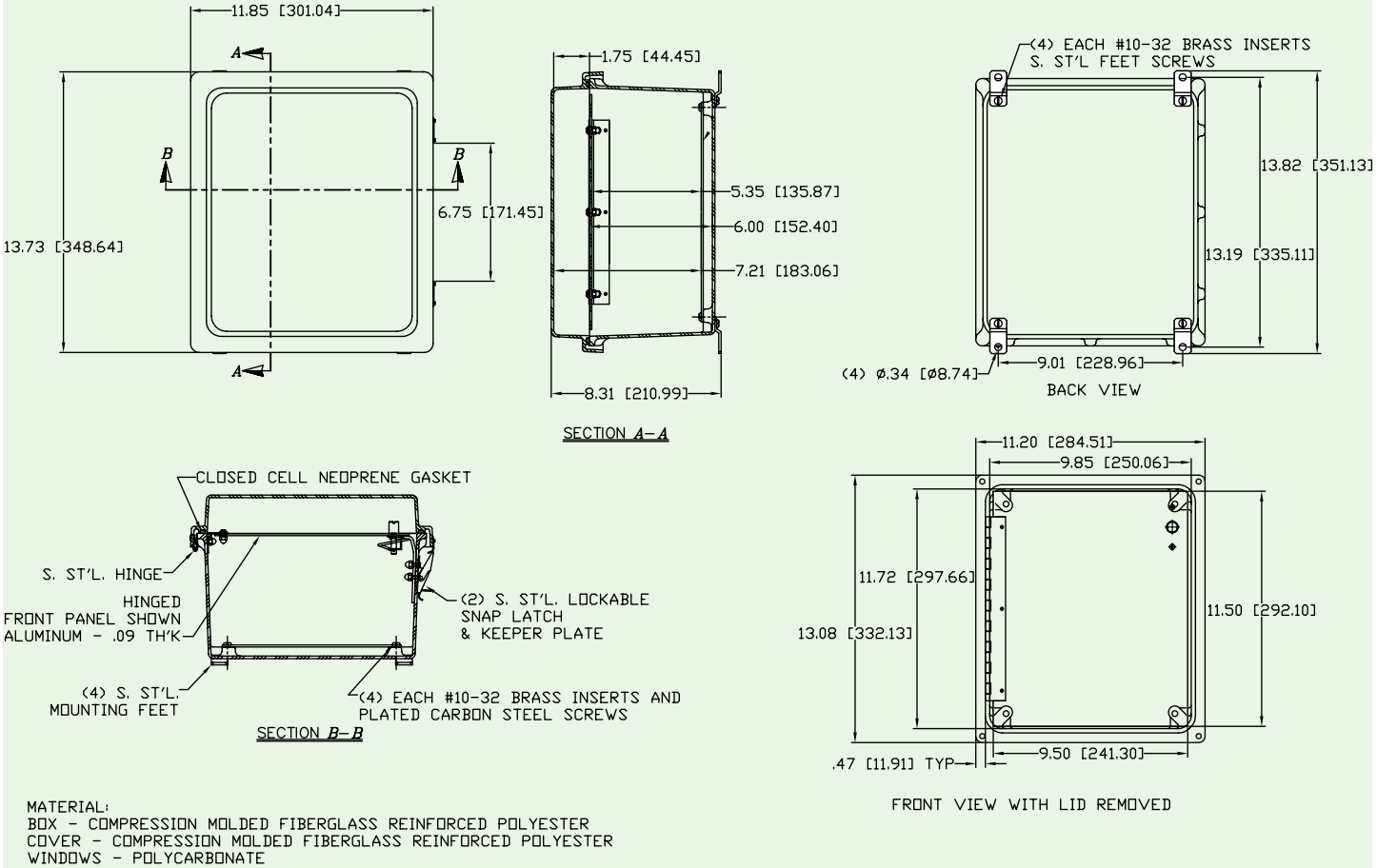
MDR-20-24 Specifications:

Current, Output	1A
Dimensions	0.885 L x 3.5 W x 3.94 D In.
Input Voltage	100-264VAC
Mounting Type	Din Rail
Number of Outputs	1
Operation	PFC
Output	24VDC@1A
Power, Output	24 W
Special Features	100% Full Load Burn-In Test, DC OK Active Signal, Short Circuit and Overload and Over Voltage Protections

Features:

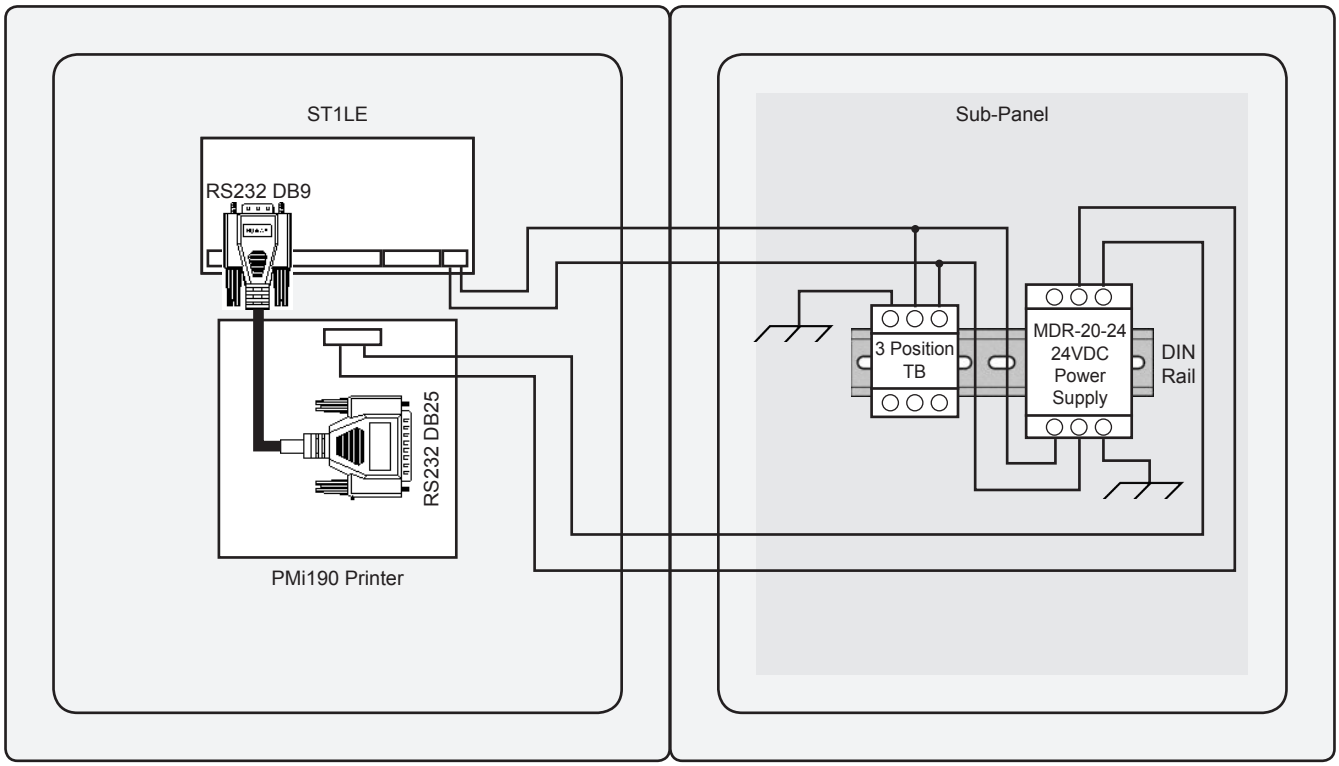
- Universal AC Input/Full Range
- Protections: Short Circuit, Overload, Over Voltage
- Cooling by Free Air Convection
- Can be Installed on DIN Rail TS-35/7.5 or 15
- NEC Class 2/LPS Compliant
- Built-In DC OK Active Signal
- LED Indicator for Power ON
- No Load Power Consumption 0.75 W
- 100% Full Load Burn-In Test

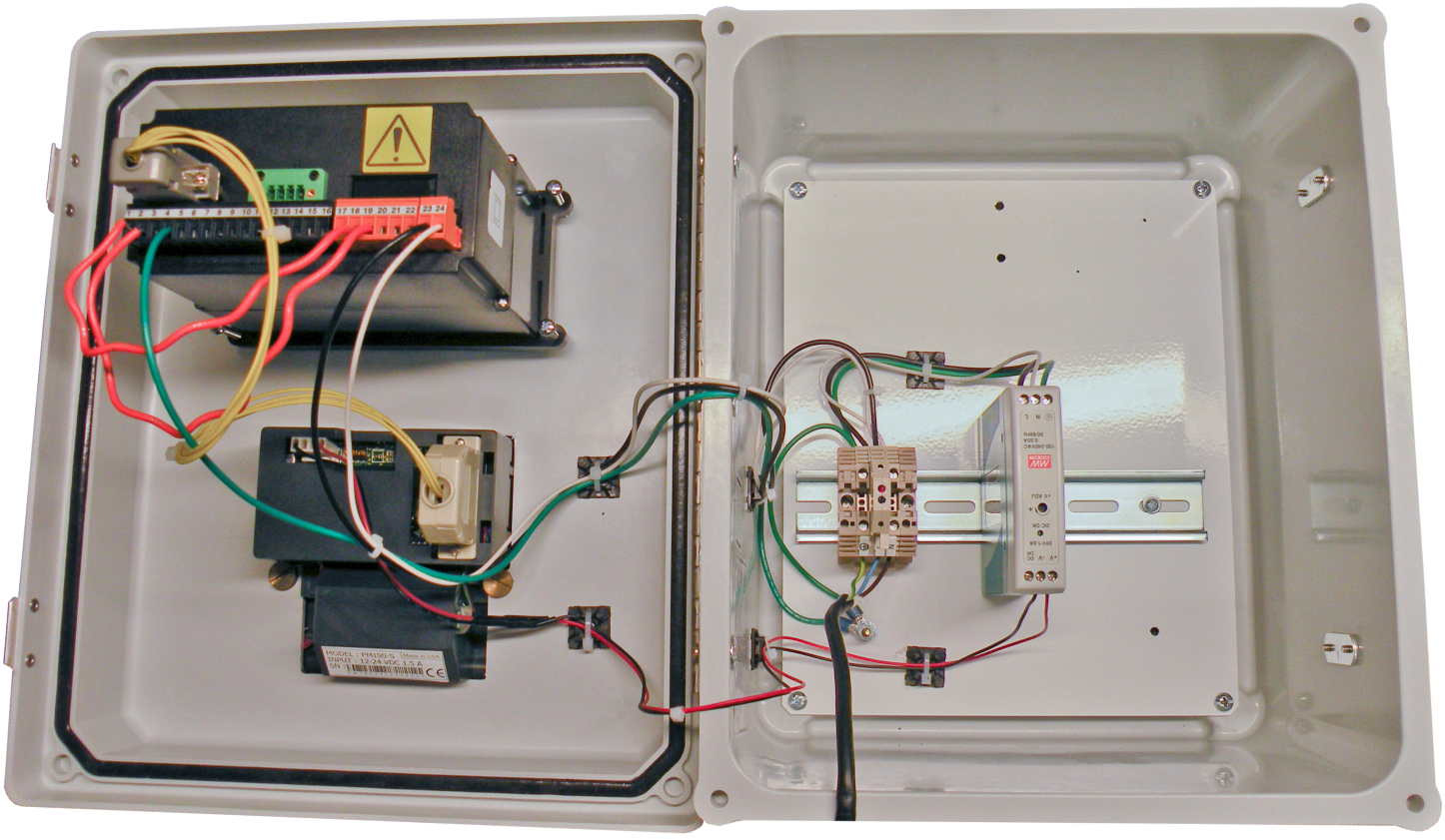
MS811 **Dimensions**



Panel Layout

Internal Wiring Connections with PMi190 Printer





System Block Diagram