

ST1LE-MS799-SYS

ST1LE Batcher with Panel Mount Printer In MS799 Enclosure & Accessories



Features

- ST1LE Batch/Rate/Total in Fiberglass Enclosure with Panel Mount Impact or Thermal Printer
- Prewired with DC Power Supply and Terminal Block
- RS485 with Selectable Protocols Available
- MS799 Enclosure with Hinged Cover and Quick Release Latches

Description:

The ST1LE-SYS is a complete flow batching system including transaction printout. The system consists of one ST1LE Batch Controller with Rate and Total Display, one ML30-100 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. An optional Ethernet port is available for BACnet IP, BACnet MS/TP, Metasys N2, Modbus TCP, AB Ethernet IP, AB DF1, LonWorks*.

MS799 Enclosure

Part Number: MS799XXXX

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: ML30.100

Description:

115 VAC to 24 VDC power supply for FPC protocol converter

* LonWorks protocol requires a different module assembly from the other available protocols. LonWorks is not field selectable.

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 K Ω nominal
Pullup Resistance: 10 K Ω to 5 VDC (menu selectable)
Pull Down Resistance: 10 K Ω 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 K Ω
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, Prewarm 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

Enclosure Specifications:

Dimensions

(See drawing)

Standard Weight (empty): 12.0 Lbs.

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® 508A 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

ML30-100 Specifications:

Input

Input voltage: AC100-240V (Wide Range), 47...63Hz
Admiss. limits: AC 85...264V (DC 85...375V)

Input current: <0.6A (@ AC 100V, 30W Pout)
<0.35A (@ AC 196V, 30W Pout)

External Fusing: Not required, unit provides internal fuse (T3AH, not accessible)

Transient immunity: Transient resistance acc. to VDE 0160 / W2 (750V / 1.3ms), over entire load range

Hold-up time: >190ms bei AC 230V, 24V / 1.3A
>107ms @ AC 196V, 24V / 1.3A
>19ms @ AC 100V, 24V / 1.3A

Efficiency, Reliability

Efficiency typ. 87.5% (AC 230V, 24V / 1.3A)

Losses typ. 4.5W (AC 230V, 24V / 1.3A)

MTBF (Reliability):ca. 650.000h acc. to Siemensnorm SN 29500 (24V/1.3A, AC 230V, Tamb = +40°C)

Environmental Data, EMC, Safety

Ambient temperature range (measured 25mm below unit) storage, transport -25°C ... +85°C

operation -10°C ... +70°C

Humidity:max. 95% (without condensation)

Electromagnetic EN 61000-6-3 (includes

emissions (EME):EN 61000-6-4)

Class B (EN 55011, EN 55022) incl. output noise suppression

Electromagnetic: EN 61000-6-2 (includes immunity (EMI) EN 61000-6-1)

Safe low voltage: SELV (EN60950, VDE0100/T.410), PELV (EN50178)

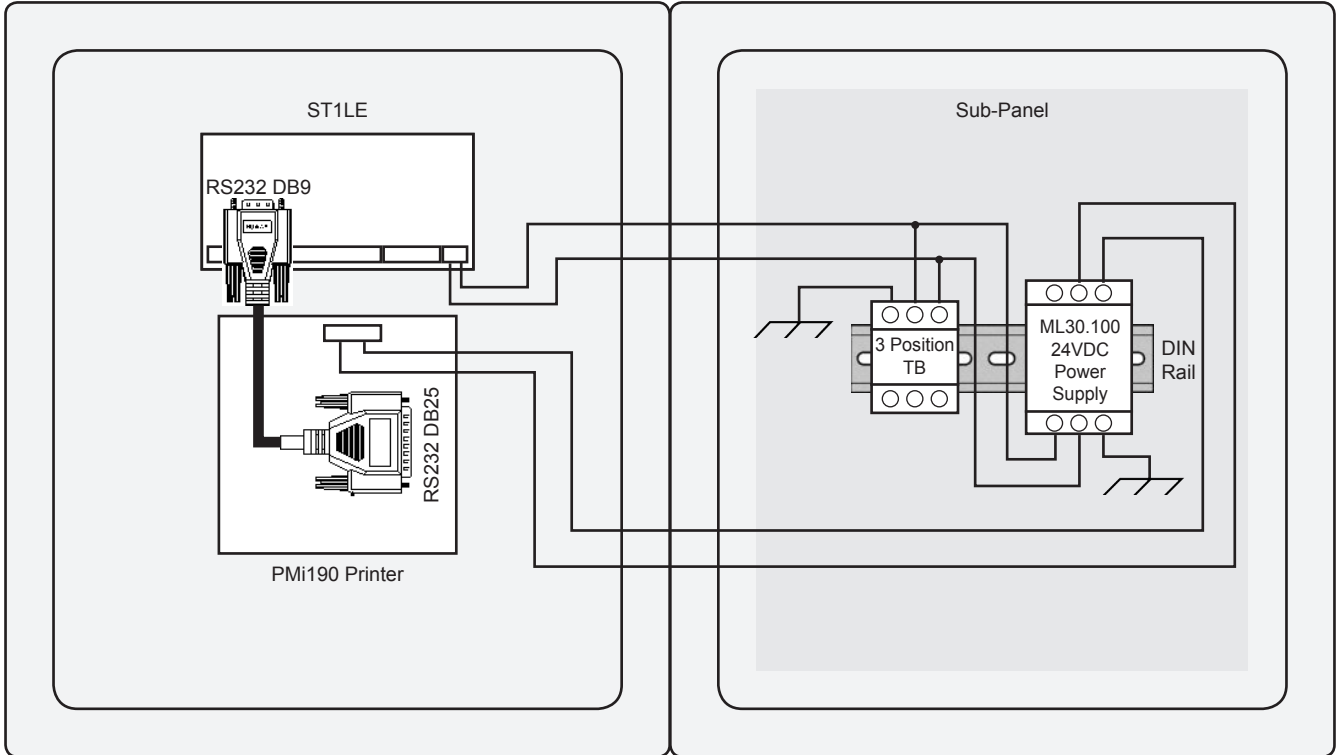
Prot. class/degree: Class I (EN60950) / IP20 (EN60529)

The PSU complies with all major safety approvals for EU (EN 60950, EN 60204-1, EN 50178), USA (UL 60950, E137006, UL508 LISTED, E198865),

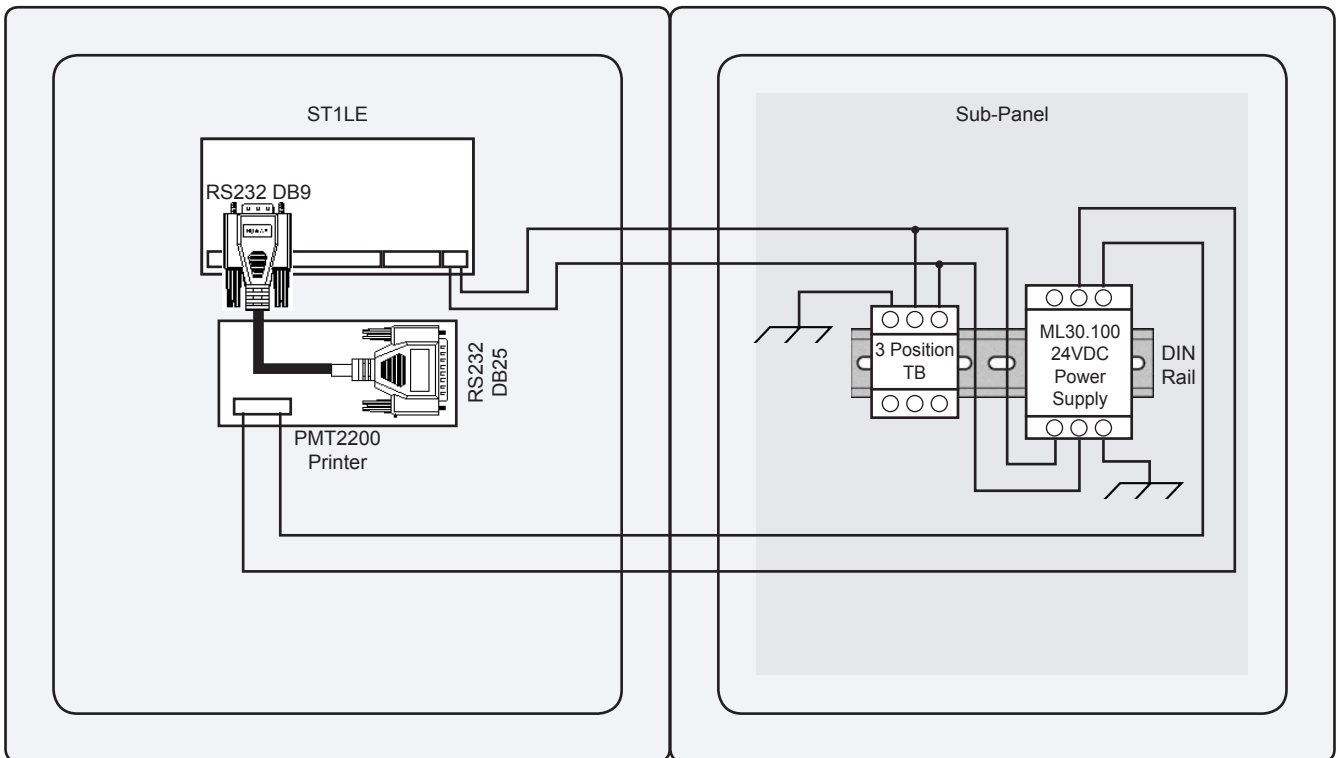
Canada (CAN/CSA-C22.2 No 60950 [CUR], CAN/CSA-C22.2 No. 14 [CUL]), CB Scheme (IEC 60950). NEC Class 2 Power Supply and Hazardous Location Class I Div. 2 (UL 1604)

Panel Layout

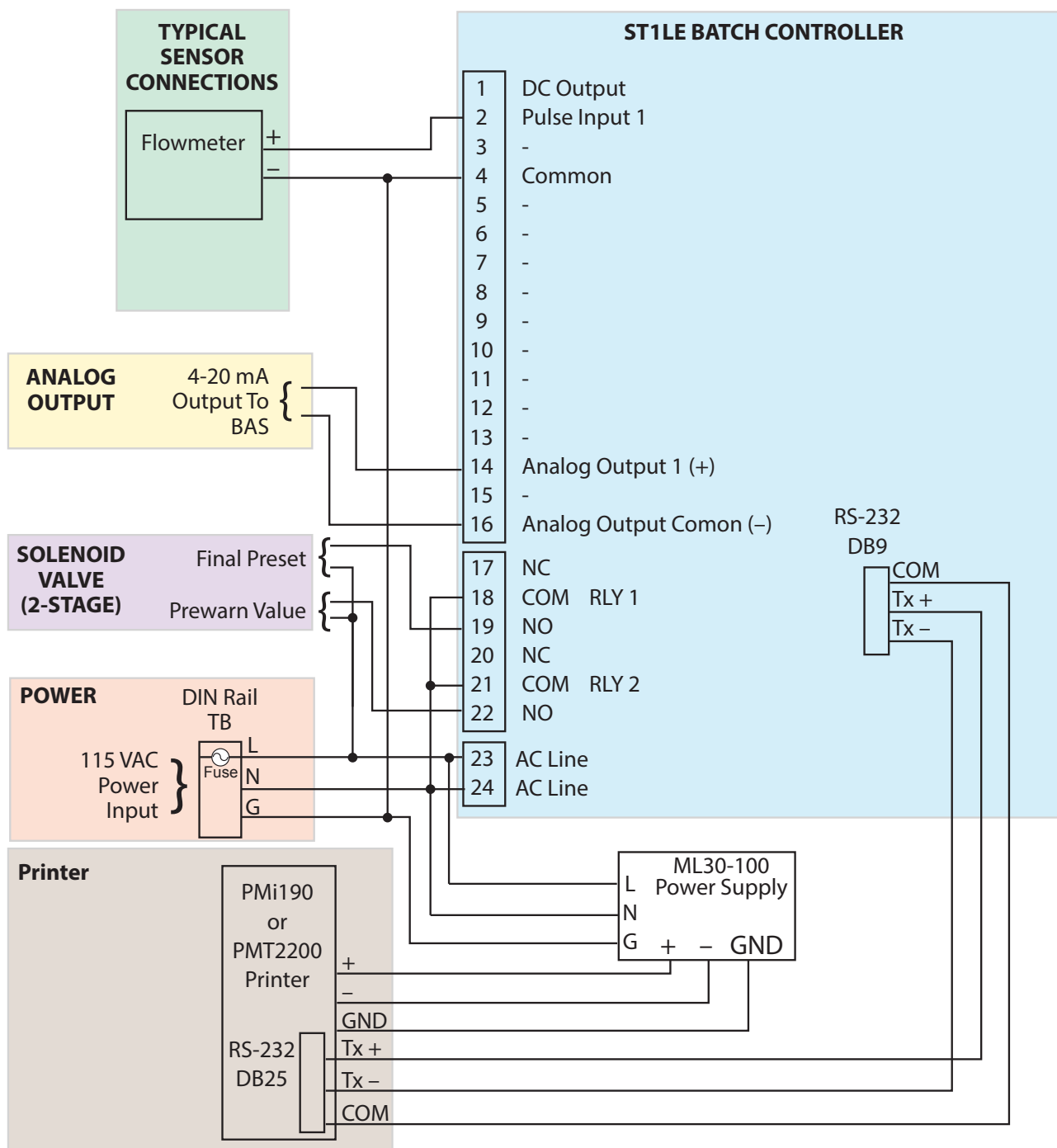
Internal Wiring Connections with PMi190 Printer



Internal Wiring Connections with PMT2200 Printer



System Block Diagram



REFER TO USER MANUAL FOR DETAILS

Dimensions

