

# ST-71,16 Channel Modbus® Master/Slave Display and Alarm Controller



ST-71PM Rack/Panel Mount 71-04

The ST-71 16 Channel Modbus® Master/Slave Display and Alarm Controller provides simultaneous display and alarm functions for up to 16 monitored variables. Easy to configure and user friendly, the ST-71 can function as a critical alarm controller for toxic or combustible gases, vibration, tank levels and other process values.



ST-71N4 NEMA 4X Wall Mount 71-01

CSA certified for Division 2 potentially hazardous areas (Division 1 model = ST-71XP)

## FEATURES

- Accepts up to 16 inputs from many sensor types and signal ranges. Modbus® master capability allows input data to be retrieved via RS-485
- Eight channel display mode and option boards allow economical configuration of systems requiring only 8 channels or less
- Dual Modbus® RS-485 serial ports for simultaneous master / slave operation
- Three independent alarm levels per channel. "Relay Acknowledge" feature allows silencing of external audible devices during existing alarm conditions
- Graphic LCD displays monitored data as trends, bar graphs and engineering units. Alarm LED's flash when new and become steady after acknowledged

- Standard SPDT common alarm relays for HORN, HIGH, WARN and FAULT
- Options such as Bridge Sensor Inputs, 4-20mA inputs, 4-20mA outputs, discrete alarm relays are supported via an I2C expansion bus
- Cal Mode offers push-button zero/span calibration or direct sensor interface applications
- Authorization Mode allows locking of critical config -variables
- Magnetic keypad standard for non-intrusive operation in potentially hazardous locations
- Enclosures include wall mount NEMA 4X Non-Metallic - 316 SS, NEMA 7 and Rack/Panel Mount

### SPECIFICATIONS

#### **ANALOG INPUTS (OPTIONAL)**

12 bit 4-20mA into 100 ohms input impedance; includes +power supply terminals for each channel for routing power to two or three wire transmitters

#### COMMON ALARM RELAYS (STANDARD)

5 amp 30VDC or 250VAC resistive Form C

#### ANALOG OUTPUTS (OPTIONAL)

10 bit 4-20mA output. Max load 800 ohms with nominal 24VDC power supply

#### DISCRETE ALARM RELAYS (OPTIONAL)

Four 5 amp 30VDC or 250VAC resistive Form C

#### SERIAL PORT (STANDARD)

Modbus Master and Slave RS-485 ports equipped with Tx / Rx LED's

#### DISPLAY

 $128 \ x \ 240$  pixel graphic LCD with backlight displays bar graphs, trends and engineering units. 52 discrete LED's indicate alarm status for three alarms per 16 channels and common relays

#### AMBIENT TEMPERATURE RANGE

-25 - 60 degrees C

#### POWER SUPPLY

10 - 30VDC 12 Watts max required by ST-71

10-0172 option = 150 Watt

#### **APPROVALS**

CSA C22.2 No 1010.1 and C22.2 No.152 for combustibles and ISA S82.02

UL 1604 / C22.2 No 213 (NEMA 4X = Division 2 Groups A,B,C,D,) EN55011 and EN61000 (CE Mark)

8.50

Model ST-71XP 71-02 = NEMA 7 Division 1 Group B,C,D

#### MODELS

| IVIODELS  |  |  |
|-----------|--|--|
| 71-01     | ST-71N4 NEMA 4X wall mount   |  |
| 71-02     | ST-71XP NEMA 7 wall mount explosion-proof  |  |
| 71-04     | ST-71PM panel mount rack (includes bezel/rack<br>hardware)                             |  |
| 71-06     | ST-71SS NEMA 4X 316 wall mount stainless steel   |  |
| ΟΡΤΙΟ     | NS/ACCESSORIES   |  |
| 10-0144   | Auxiliary relay board adds 5 amp Form C common relays for Alarm 1, Alarm 2 and Horn    |  |
| 10-0158   | 8 channel 4-20mA analog input board  |  |
| 10-0167   | 8 channel 4-20mA analog output board   |  |
| 10-0195   | 8 channel discrete 5 amp Form C relay board configurable for Alarm 1, Alarm 2 or FAULT |  |
| 10-0170   | 8 channel resistive/RTD/mA input board   |  |
| 10-0191   | 8 channel catalytic bead sensor input board  |  |
| 10-0192   | Dual catalytic bead modules for 10-0191  |  |
| 10-0172   | 24VDC 150 Watt power supply  |  |
| 10-0229   | Printer interface board (serial / parallel)  |  |
| 10-0178   | Expansion NEMA 4X enclosure for 8 options  |  |
| 10-0208   | Full 19" rack (Supports one or two 71-03's)  |  |
| ST-71-HMI | ST-71 HMI software   |  |
|           |  |  |



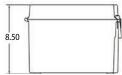
71-01

#### ST-71XP Nema 7 Explosion Proof

71-02

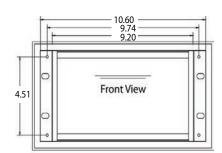
ST-71PM Rack/Panel Mount (19" Rack Spreader Plates Not Shown) 71-04

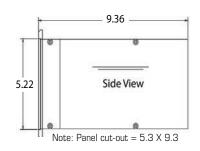




BOTTOM VIEW Jι 3/4" CONDUIT ENTR (TYP 4 PLACES) 9 1/16 0 0 2" CONDUIT ENTRY MOUNTING FOOT 16.00 17 3/4 Φ 0 ¢ FRONT VIEW 22.3/8 Φ Ф ¢ ALL DIMENSIONS IN INCHES

SYST





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