

## FEATURES:

- Accepts up to 6 inputs from many different sensor types and signal ranges. Inputs may be analog, or Modbus® Master capability allows input data to be retrieved via RS-485 data highway reducing wiring costs at installation
- Dual Modbus serial ports for simultaneous master / slave operation
- 3 independent alarm levels per channel. *Relay Acknowledge* feature allows silencing of external audible devices during existing alarm conditions
- Large LED readout scans active channels and displays channel #, engineering units and value. Small LCD readout provides operator interface and diagnostics
- Standard A SPDT common alarm relays for Horn, HIGH, WARN & FAULT. Optional discrete channel alarm relays also available
- Options such as direct sensor inputs, 4-20mA outputs, discrete alarm relays and others are supported via an I<sup>2</sup>C expansion bus
- *Cal Mode* offers pushbutton zero / span calibration for direct sensor interface applications. *Authorization Mode* allows locking of critical configuration variables
- Magnetic keypad available for non-intrusive operation in potentially hazardous locations
- NEMA 4X, Explosion-Proof, surface mount, panel and rack mount packaging options available



NEMA 4X Wall Mount



Panel / Rack Mount

The R. C. Systems Co., Inc. Model ST-35 Display / Alarm Controller is designed to provide simultaneous display and alarm functions for up to 6 input variables. Three adjustable alarm levels are provided for each channel. Relay outputs allow control of beacons horns and other alarm events.

Analog inputs may be accepted and conditioned via sensor specific analog input cards. Alternatively, the standard Modbus Master port allows input data to be retrieved from Modbus slave devices including the many Modbus compatible R. C. Systems Co. Inc. sensor transmitter products.

The ST-35 is easy to configure and user friendly. Large LED characters indicate channel #, engineering units and values. A 2 x 16 LCD readout provides operator interface and diagnostic functions. Measurement ranges in engineering units, adjustable alarm set-points, dual serial interfaces and many other features combine to allow the ST-35 satisfy the needs of

many difficult applications. It is widely used for centralizing the display and alarm processing functions in critical multipoint monitoring applications. These include monitoring of ambient gas detection, rotating machinery tank levels, flow, temperature and others.

A RS-485 Modbus slave port allows up to 128 ST-35's to be multidropped onto a single data highway for interrogation by another Modbus master. ST-35's may also be cascaded by connecting one unit's master port to another's slave port.

ST-35 options such as discrete alarm relays per channel, 4-20mA I/O, direct sensor input conditioning and others are added by connecting to the economical I<sup>2</sup>C expansion bus. Familiar "telephone style" cables and connectors interface to this bus. This method allows versatile system configuration of options satisfying the most unusual user applications.

Nonvolatile memory retains all configuration data indefinitely.

## SPECIFICATIONS

### ANALOG INPUTS (OPTIONAL)

12 bit 4-20mA into 100 ohms input impedance; includes excitation terminals for each channel for routing power to 2, 3, or 4 wire transmitters.

### ANALOG OUTPUTS (OPTIONAL)

10 bit 4-20mA outputs

### DISCRETE ALARM RELAYS (OPTIONAL)

5 amp 30VDC or 250VAC resistive Form C

### SERIAL PORTS

Master & Slave RS-485 half or full duplex ports equipped with Tx / Rx LED's. Protocol = Modbus® RTU.

### COMMON ALARM RELAYS

5 amp 30VDC or 250 VAC resistive Form C

### DISPLAYS

.6" tall, 12 digit alphanumeric LED readout indicates channel #, polarity, up to 4 digit resolution value and 6 digits of engr units.

2 line by 16 character LCD readout provides operator interface to Channel & System configuration menus.

### AMBIENT TEMPERATURE RANGE

-20 - 60 degrees C.

### POWER SUPPLY

10 - 30VDC (24VDC nominal) 12 watts max

### HOUSING OPTIONS

NEMA 4X fiberglass wall mount (shown below)

1/2 length 19 inch rack / panel mount (shown below)

NEMA 7 explosion-proof wall mount (see instruction manual)

## ORDERING INFORMATION

035-00 = Model ST-35PM panel / rack mount housing

035-01 = Model ST-35N4 NEMA 4X wall mount

035-02 = Model ST-35XP NEMA 7 wall mount explosion-proof housing (includes magnetic keypad for non-intrusive control)

### AVAILABLE OPTIONS:

10-0144 = Auxiliary Alarm 1, Alarm 2 & Horn relay board adds 5 amp Form C common relays (piggybacks standard common alarm board)

10-0171 = 6 channel 12bit 4-20mA analog input board

10-0152 = 6 channel 10bit 4-20mA analog output board

10-0146 = 6 channel discrete 5 amp Form C relay board configurable for Alarm 1, Alarm 2 or FAIL with adjacent channel zoning capability

10-0151 = 6 channel Catalytic Bead Sensor input board (also configurable for 4-20mA inputs)

10-0153 = 24VDC 60 watt power supply

10-0172 = 24VDC 150 watt power supply

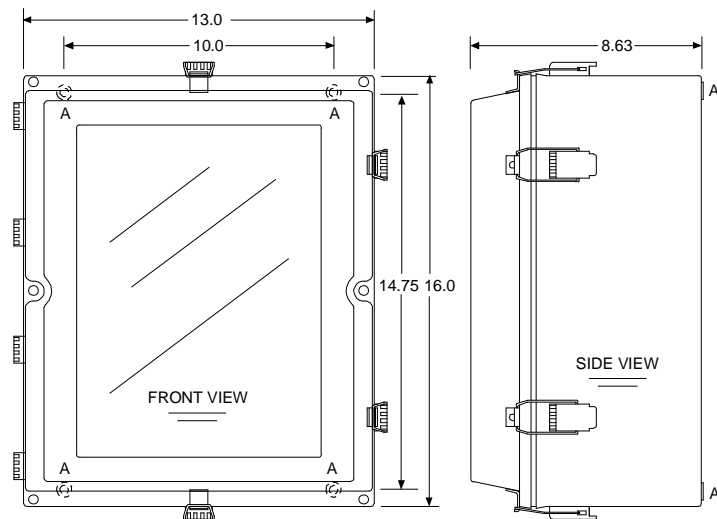
10-0154 = Non-Intrusive magnetic keypad

10-0178 = Expansion NEMA4X enclosure for 8 options

10-0177 = RS-485 to RS-232 Converter

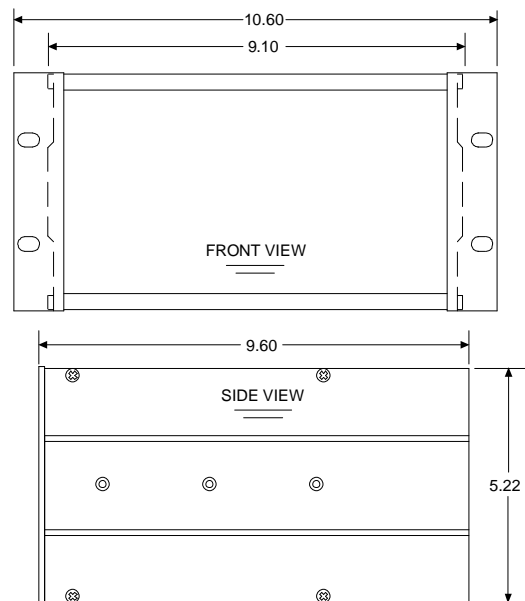
ST-51A = DIN Rail Loop Powered 4-20mA Isolator (isolates 4-20mA inputs or outputs)

Dimensions in Inches



Note: 4 'A' mounting holes are .31 dia.

NEMA 4X WALL MOUNT



Note: Panel cut-out = 5.25 X 9.20

RACK / PANEL MOUNT  
(19" RACK SPREADER PLATES &  
PANEL MOUNT BEZEL NOT SHOWN)