

# ST-90 Dual Controller with Serial Interface



ST-90SSDUAL Stainless Steel  
90-05



ST-90PYDUAL Nema 4X Non- Metallic  
90-03

The ST-90 Dual Channel Controller provides simultaneous display and alarm functions for two monitored variables. Easy to configure and user friendly, the ST-90 Dual can function as a critical alarm controller for toxic gases, combustible gases, vibration, tank levels and other process values.

CSA certified for *Division 2 potentially hazardous areas*

## FEATURES

- Accepts inputs from one or two local or remote mounted sensors or transmitters. Generates 24VDC external device power for transmitters and other devices.
- Three adjustable independent alarm levels per channel. "Relay Acknowledge" feature allows silencing of external audible devices during existing alarm conditions.
- Graphic LCD readout displays monitored data as bar graphs, engineering units, and 30 minute trends. Alarm LED's flash when new and become steady after acknowledged.
- Two standard SPDT common alarm relays are configurable for HIGH and WARN or FAULT alarm conditions. Optional discrete channel alarm relays are also available.
- Modbus® slave RS-485 serial port interfaces to Modbus® masters such as PCs, PLCs and DCS.
- Cal Mode offers pushbutton zero/span calibration for direct sensor interface applications.
- Authorization mode allows locking of critical configuration variables.
- Touch and magnetic keypad standard for non-intrusive operation in potentially hazardous locations.
- Non- Metallic, Epoxy Coated Steel, 316 SS, NEMA 4X (Division 2 certified) and NEMA 7 Explosion-Proof wall mount packaging options available.
- Certified to CSA C22.2 NO. 152 for combustible detection and Class I, Division 2, Groups A,B,C,D CE Mark.
- Non-volatile memory retains all configuration data indefinitely.
- RS-485 Modbus® slave port for up to 128 devices to be multidropped on a single data highway for interrogation by another Modbus® master.

## SPECIFICATIONS

### INPUTS

Sensor input PCB's are available for dual bridge sensors, dual toxic (electrochemical), one bridge sensor / one toxic, and dual 4-20mA. All versions may be configured for 4-20mA inputs

### COMMON ALARM RELAYS (STANDARD)

Two programmable, 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)

Six 5 amp 30VDC or 250VAC resistive Form C

### SERIAL PORT (OPTIONAL)

Slave RS-485 port with Tx/Rx LED's

Protocol is Modbus® RTU

### DISPLAY

128 x 64 pixel graphic LCD with backlight displays bar graphs, and engineering units. Six discrete LED's indicate alarm status for three alarms per channel

### AMBIENT TEMPERATURE RANGE

-25 to +60 degrees C

### POWER SUPPLY

100-240 VAC / 10-30 VDC are standard primary power supplies

### HOUSING OPTIONS

NEMA 4X / IP66 Wall Mount in Carbon Steel, 316 SS, Non-Metallic are approved for Division 2. The NEMA 7 explosion-proof wall mount approved for Division 1 (also meets NEMA 4)

### APPROVALS

CSA C22.2 No 1010.1 and C22.2 No.152 for combustibles and ISA S82.02; EN55011 and EN61000 (CE Mark) UL 1604 / C22.2 No 213

90-03 = NEMA 4X = Division 2 Groups A,B,C,D,

90-02 NEMA 7= Division 1 Group B,C,D

## ENCLOSURE OPTIONS

90-03	ST-90N4DUAL non metallic extended
90-04	ST-90PCSDUAL painted carbon steel extended
90-05	ST-9DUALSS stainless steel extended
90-02	ST-90XPDUAL Dual bolt on lid
90-01	ST-90CPDUAL compact non metallic

## OPTIONS/ACCESSORIES

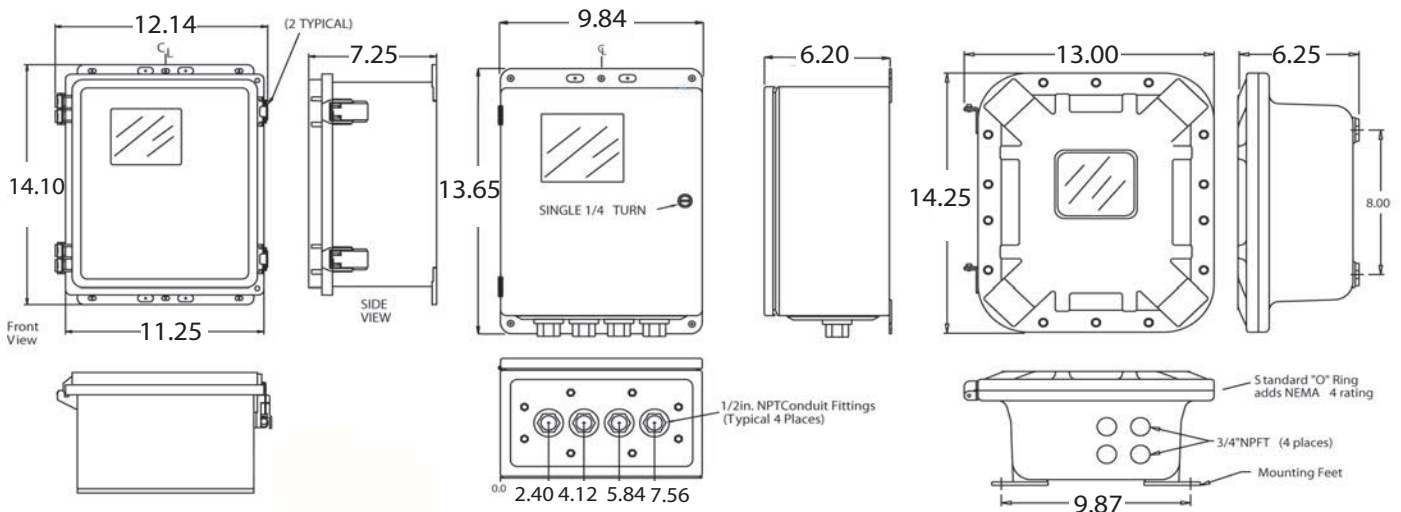
10-0221/2	Two Channel 4-20mA analog input PCB option
10-0222	Optional alarm relay board with six 5 amp Form C relays
10-0223	Dual 4-20mA output option
10-0216	One echem (Channel 1) and 1 bridge (Channel 2) sensor input option
10-0219	Dual bridge sensor input option
10-0220	Dual electrochemical sensor input option
10-0253	RS-485 / RS-232 Modbus® RTU interface option
*10-0377	100dB piezo audible option
*10-0284	Division 2 red xenon strobe light option
*10-0285	Division 2 xenon amber strobe light option
*10-0316	Division 2 xenon blue strobe light option
10-0314	NEMA 4X/7 Division 1, 50 Watt 24VDC external power supply
10-0315	NEMA 4X Division 2, 50 Watt 24VDC external power supply

\*These items only available with NEMA 4X Enclosure

ST-90PYDUAL NEMA 4X Non-Metallic Wall Mount  
90-03

ST-90SSQUAD NEMA 4X 316 SS Wall Mount  
90-52  
ST-90PCSQUAD NEMA4 Painted Steel  
90-51

ST-90XPDUAL NEMA 7 Explosion-Proof Wall Mount  
90-02



ALL DIMENSIONS IN INCHES

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