



RC SYSTEMS

RC Systems has engineered and manufactured industrial electronic products for the instrumentation industry since 1979. As critical alarm monitoring experts, we specialize in interfacing various sensors and analyzer devices to our alarm and display products. Our products are known for their reliability, performance, and ease of use for applications where maintenance and safety are crucial. Some of these applications include fixed and temporary ambient gas detection as well as numerous other multi signal monitoring applications. In addition, we provide various solutions for hard wire or wireless systems. Our wireless monitoring ability/strategy continues to provide recognized solutions for countless customers worldwide.



ST-48 Non-Intrusive Single/Dual Sensor Transmitter

The ST-48 state-of-the-art sensor transmitter is designed specifically for gas detection applications. The versatile unit has a range of inputs and different modes for low power sensors (2-wire 4-20mA) and higher power sensors (3-wire 4-20mA). Its dual monitor mode dramatically reduces installation costs. Wireless model also available.



ST-48 in NEMA 7 Enclosure

FEATURES

- Accepts 4-20mA, electrochemical and bridge style sensors.
- Wireless (integral battery) and 2-wire 4-20mA low power models available for electrochemical toxic / oxygen monitoring.
- 10-30VDC powered model configurable as 3-wire single gas or 4-wire dual gas monitor with 4-20mA output for each gas.
- "Smart sensor" interface stores sensor type, gas range, alarm set points, calibration and many other transmitter variables.
- Magnetic keypad allows sensor calibration without hazardous area declassification.
- Front LED's and LCD clearly indicates alarm state. Screens for each gas include large engineering units, bar-graph and 30 minute trend.
- User programmable "In Cal" output signal inhibits alarms and notifies receivers during calibrations. Programmable "Power Up" and "Post Cal" time delays allow sensor stabilization and prevents false alarms.
- Real-time clock and calendar logs alarm, calibration and power-up events.
- Standard fault supervision circuitry continuously monitors for failures and transmits low mA output to signal fault conditions.
- Security mode allows locking of critical parameters.
- Available options include alarm relays, RS485 Modbus®, isolated 4-20mA, HART, wireless, Division 2 quick connectable sets, magnetic mount and pole mount.
- NRTL / ATEX certifications.

SPECIFICATIONS

ANALOG OUTPUTS

ST-48EC has standard 2-wire 4-20mA current sink output (2-wire 4-20 not available with ST-48Bridge or any option) ST-48Bridge models have 3-wire 4-20mA current source output with nominal 24VDC power supply, 2-wire max loop R is 500 ohms and 3-wire max loop R is 750 ohms

10-0234 Relays / RS-485 Modbus® (Optional)

Relays are Form C 5AMP @ 30VDC and 240VAC RESISTIVE RS-485 is 2-wire Modbus® RTU

NRTL CSA APPROVALS (File # 219995)

ST-48 with 10-0247 is Division 1 and 2 Group B,C,D Exia. Suitable for explosion proof and intrinsically safe installations
ST-48IS 10-0247IS is Division 1 and 2 Group A,B,C,D. Suitable for intrinsically safe installations only

IMPORTANT: Intrinsically safe installations require IS barrier number 10-0263 ATEX certified without sensor head and with 10-2072 sensor head

DISPLAY

64 x 128 pixel LCD displays 30-minute trend, bar-graph and large engineering units. Backlight active in 3-wire high power mode

ACCURACY

±5% of full scale ± 1 count

AMBIENT TEMPERATURE RANGE

-40 – 60 degrees C

TEMPERATURE DRIFT

Less than .1% per degree C over ambient temperature range

POWER SUPPLY

10 - 30 VDC at less than .75 Watts in 2-wire 4-20mA
10 - 30 VDC at less than 3 Watts in 3-wire 4-20mA with relays

HOUSING

Instrument enclosure suitable for Class 1, Division 1 and 2, Group A,B,C,D

ST-48 INPUTS BY MODEL

48-01	Model ST-48EC: EC sensor with 2-wire 4-20mA output
48-02	Model ST-48Bridge: both EC and bridge inputs
48-07	Model ST-48EC-I: both EC and 4-20mA inputs
48-51	Model ST-48I-I: dual 4-20mA inputs

ST-48 OPTIONS

*10-0234	Alarm Relays (3) with RS-485 Modbus®
*10-2455	Alarm Relays (3) with dual RS-485 Modbus®
**10-0250	Dual isolated 4-20mA outputs
**10-0351	HART Interface
10-0247IS	Smart sensor head stainless steel (Intrinsically safe)
10-0247	Smart sensor head stainless steel (Explosion proof)
10-2072	Atex sensor head
*ARCTIC	Consult factory; Adds 1 heater to sensor head and 4w heater in electronics
10-0242EC	Smart EC sensor PCB (less sensor; fits 10-0247 OR 10-0248)
10-0272EC	Smart 4 series EC PCB; less sensor; for 10-0247, 10-2072, 10-0248
10-0371EC	Smart 7 series EC PCB; less sensor; for 10-0247, 10-2072, 10-0248
*10-0272IR	Smart infrared PCB; less sensor; for 10-0247, 10-2072, 10-0248
*10-0279	Smart PID PCB; less sensor; for 10-0247, 10-2072, 10-0248
10-0242CAT	Smart LEL sensor PCB (less pellistors; fits 10-0247)
*0010-1200	"Y" fitting for dual sensor heads (For local mounting quantity two 10-0247)
10-0319	Magnetic mounting kit
10-0270	Stainless steel duct mount
10-0379	PVC duct mount

Add "SS" suffix to substitute stainless steel enclosure in place of the standard epoxy painted aluminum enclosure

* NOT AVAILABLE ON ST-48EC 2 WIRE
** NOT AVAILABLE ON ST-48EC 2 WIRE OR WITH 10-0234 ALARMS / MODBUS® OPTION

