

Series 6800

Multichannel Rack Receiver



SCOTT/BACHARACH
Gas Detection Products



**Use with Any
Scott/Bacharach
4-20mA transmitter**

— full scale range; engineering units (PPM, PPB, %, or blank); alarm set points, reset points, set and reset delays; alarm direction, latching/non-latching mode, failsafe/non-failsafe mode, and horn/no horn mode. These settings can be reviewed at any time by touching the “0” point on each channel’s bargraph display with a magnetic screwdriver.

The Multichannel Rack Receiver offers numerous output options. Each 8-channel “block” has five common relays (three alarm, one fail, and one horn), as well as an RS-232 connection (Modbus protocol). 4-20mA and 0-1V/0-5V retransmission is also provided for each channel. Optional DIN-rail mounted relay boards provide up to

Centralized Monitoring and Alarming for Gas Transmitters Applications

The Model 6800 provides centralized display/alarming capabilities and loop power for up to 16 EIT gas transmitters and other 4-20mA instruments.

Modular Design

The Multichannel Rack Receiver is designed in 8-channel “blocks” consisting of up to four 2-channel receiver modules and a power supply module. The Series 6800 is available in 8-channel (9” half rack) or 16-channel (18” full rack) versions depending on the number of transmitters which will be used. Flexible Configuration

For each channel, the Model 6800 provides a numeric and bar-graph LCD concentration display, LED alarm indicators (3 alarm and one fail), and a slide-in identification tag. All channel settings can be configured by the user via a plug-in hand-held programmer (included)

Features Flexible

Many parameters are user-adjustable (channel range, alarm set/reset points, alarm set/reset delays, and engineering units). Receiver can be used to monitor 2-16 transmitters. Self-regulating AC power supply and optional DC battery back-up provide additional flexibility.

Self-diagnostics

Loop power, AC power, and receiver electronics/software are continuously supervised, with problems indicated by fail relay and front-panel LED.

Secure design

Receiver modules can be “hot-swapped” without losing configuration data, and module replacement does not affect transmitter power. Removable hand-held programmer prevents tampering.

Multiple output options

Analog (both current and voltage), digital, and relay outputs are all available. Remote reset input enables relays to be reset with an external switch.

Centralized Monitoring and Alarming *(continued...)*

4 discrete relays per channel. User-settable jumpers enable individual alarm outputs to be assigned to specific relays (which enables two relays to be used together in a DPDT configuration). A remote reset input terminal enables users to reset relays from an external switch.

The power supply module in each "block" provides 24VDC power to all connected transmitters, as well as to the Multichannel Rack Receiver itself. A master alarm LED flashes when any alarm condition is present, and continues to flash until all alarms are reset (the appropriate channel alarm LEDs will also flash). A global inhibit LED lights if relay outputs from all channels in the "block" have been inhibited. AC, loop, and logic power LEDs are also provided. All field connections (which accept 2-, 3-, and 4-wire transmitters) are made via plug-in terminals on a rear backplane of the "block," which ensures that transmitters will continue to receive power even if receiver modules are removed or replaced. As an additional fail-safe feature, all channel settings are stored on a central CPU board, rather than on the receiver module. This enables receiver module cards to be "hot-swapped" without the need for re-configuring or

Specifications

POWER REQUIREMENT

Multichannel receiver ____ 90-280VAC 50/60Hz or 18-30VDC
Relay module (optional) __ 110VAC, 220VAC, or 24VDC (minimum capacity 1A)

Maximum loop load ____ 700W at 24VDC

REPEATABILITY _____ $\pm 0.1\%$ full scale

LINEARITY _____ $\pm 0.1\%$ full scale

INPUT

Multichannel receiver ____ 4-20mA, 24VDC loop, 2-/3-/4-wire configuration per channel

Relay module (optional) __ 8-conductor shielded cable, maximum length 25 feet from receiver

OUTPUT

Analog _____ (1) 4-20mA and (1) 0-1V or 0-5V per channel

Optional Digital _____ RS-232 (Modbus RTU protocol)

Relays (standard) _____ 3 common DPDT alarm, 1 common DPDT fail, 1 common SPDT horn (all 5A at 250V) per 8 channels

Relays (optional relay brd) 4 individual channel SPDT alarm relays (10A)

Horn _____ 85dB at 2 feet

DISPLAY

Per channel _____ 3.5 digit backlit, 25 segment concentration bargraph, 3 red alarm LEDs, 1 amber fail LED

Common _____ 1 red master alarm LED, 1 amber global inhibit LED, 3 green status LEDs (AC power, loop power, logic/electronics)

MOUNTING ENCLOSURE

Rack _____ NEMA1

Wall _____ NEMA4X or NEMA12X

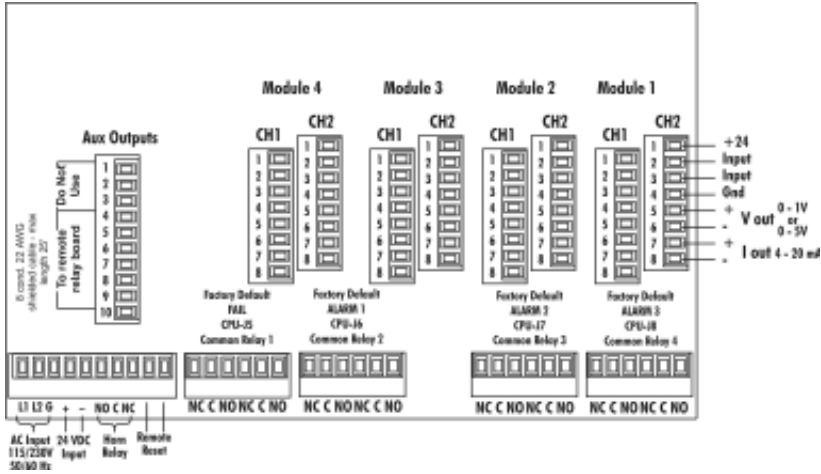
WEIGHT _____ 4.2 lbs(8 channel)

8.2 lbs (16 channel)

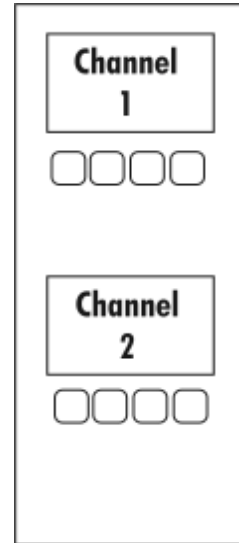
WARRANTY _____ 1 year

Installation Drawings

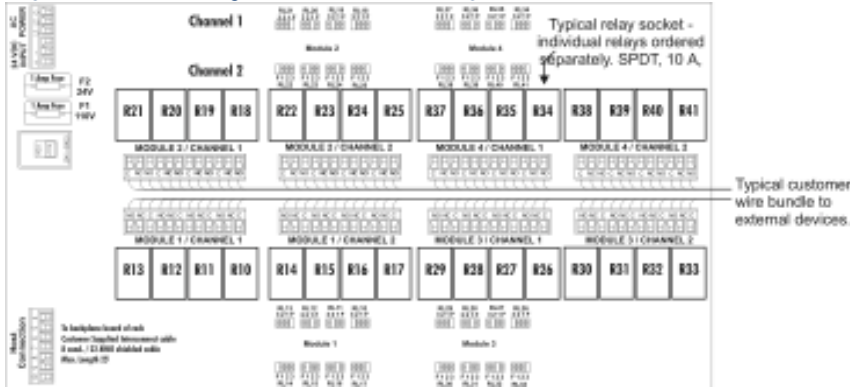
Series 6800 Backplane (One per 8-channel block)



Channel Receiver Module (Front View)

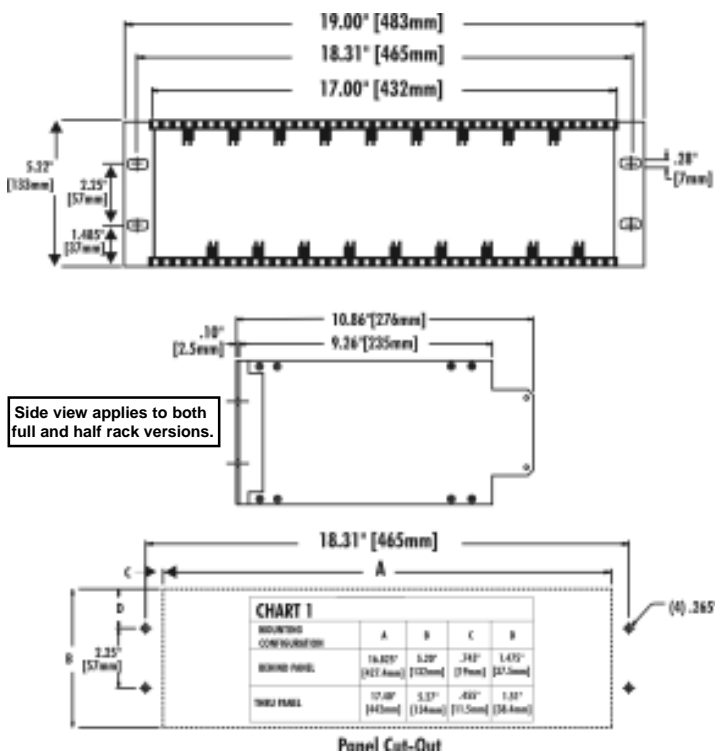


Optional Relay Board (One per 8-channel block)

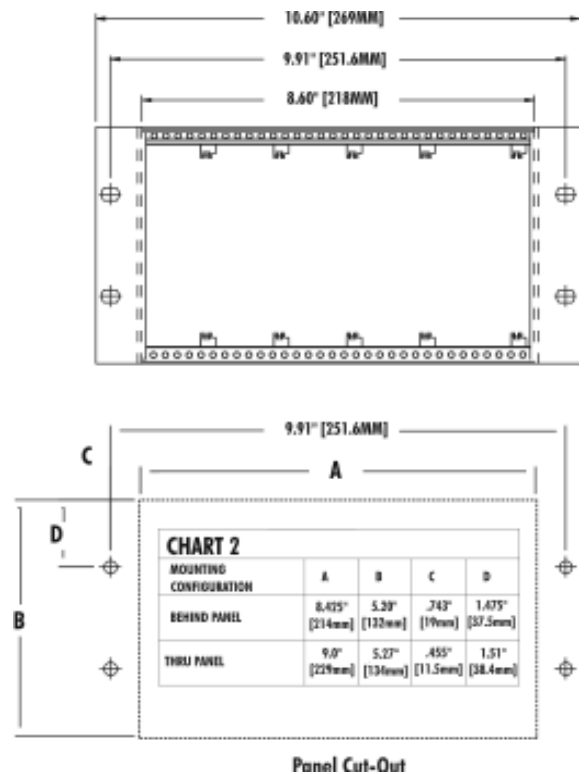


Dimensions

Full Rack (Two 8-Channel Blocks)



Half Rack (One 8-Channel Block)



Typical Specifications

- 1. General.** Receiver shall be rack-mounted with capability to monitor 2-16 separate channels. Receiver shall have a dedicated power supply, CPU, and backplane for each 8 channels. All channel settings shall be stored in non-volatile memory in a central CPU to permit channel card to be "hot-swapped" without loss of data. Terminal connections shall be made on the backplane so individual channel cards can be inserted and removed without connecting/disconnecting wires. All channel settings shall be made with a removable hand-held programmer.
- 2. Power.** Receiver shall use a self-regulating power supply which shall accept an input supply voltage from 90-280 VAC at 50/60 Hz or 18-30VDC. All connected transmitters shall be powered by the receiver, which shall maintain power to transmitters even if individual receiver channel cards malfunction. Receiver shall accept 2-, 3-, and 4-wire transmitters.
- 3. Display.** Receiver shall provide LCD concentration display, with concentration indicated in both numerical and bar-graph format, three alarm LEDs, and one fail LED for each channel. Receiver shall also provide a common alarm LED, an alarm reset button, a common alarm inhibit LED, and LEDs indicating AC, loop, and logic power status for each 8 channels.
- 4. Analog/Digital Output.** Receiver shall provide one 4-20 mA output and one 0-1V or 0-5V output per channel. For each 8 channels, receiver shall provide a Modbus-format RS232 output.
- 5. Relay Output.** Receiver shall provide three DPDT alarm relay contacts, one DPDT fault relay contact, and one SPDT horn relay contact for each 8 channels. All contacts shall be rated 5A at 250V. All alarm relays shall have user-adjustable set point, reset point, set delay, reset delay, latching/non-latching mode, energized/non-energized mode, and horn/no horn. For each 8 channels, receiver shall provide an input terminal for a remote alarm reset switch. An optional relay module shall provide up to 32 SPDT 10A relays per 8 channels. All relays shall be individually assignable to any of the 8 channels. Relay module shall be DIN-rail or panel mountable, with ability to be located up to 25 feet from receiver.
- 6. Horn Output.** Each 8 channels shall have a built-in horn for local warning.
- 7. Alarm Inhibit.** To prevent false alarms, output for all channels shall be inhibited for a user-adjustable period upon power-up. Receiver shall also permit users to globally inhibit output of all channels or of individual channels using hand-held programmer.

Ordering Information

When purchasing a complete system, order both the 6800 and the appropriate quantity of 6802's (1 per 2 channels). If individual relays are required, order the 6805 Relay Module Option and the specific quantity of relays needed (specify relay configuration). Each Relay Module accommodates up to 32 relays (8 channels x 4 relays per channel). Two relay modules are required for full rack systems.

Model 6800- A-B-C Rack System

A: Rack (includes Processor PC Board, Power Supply Module(s), Handheld Programmer and Module Blank Panels as required.)

- 1 - 9.5" Rack : up to 4 receiver modules (8 channels) and 1 power supply
- 2 - Full 19" Rack : up to 8 receiver modules (16 channels) and 2 power supplies

B: Mounting

- 1 - Panel Mount
- 2 - NEMA-12 Wall Mount
 - a. Half Rack, **NO** relay module
 - b. Half Rack with relay module [*Note: 6805 relay module must also be purchased*]
 - c. Full Rack, **NO** relay module
 - d. Full Rack with 2 relay modules [*Note: (2) 6805 relay modules must also be purchased*]
- 3 - NEMA-4X Wall Mount contact factory

C: NEMA 12 Wall Mount Options (does not apply to panel mount or NEMA 4X receivers)

- 1 - None
- 2 - External Horn, triple flashing light stack, and reset button (specify light colors and voltage)

Model 6802 2-Channel Receiver Module:

Part # 096-1273 -Specify total quantity of receiver modules required. Supplied with blank channel tags. See Accessories for custom channel tags.

Model 6805 - A Relay Module:

Specify one Model 6805 per 8 channels.

A: Mounting (includes DIN rail assembly)

- 1 - Panel mount -relays not included. See "Accessories" below for cost.

Accessories

Part#	Description
096-1273	Receiver Module Blank Panel
096-1274	Power Supply Module Blank Panel
016-0272	Custom Channel Tag (up to 3 lines, specify legend)
096-0818	Relay, 10A SPDT (Plug-in) with clip
096-1277	Relay Brd. DIN Mounting Kit
096-0754	Battery-backed power supply system (batteries not included), to a max. charging capacity of 60Ah.



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