Accurate, Reliable Alarm, Display, and Signal Retransmission…
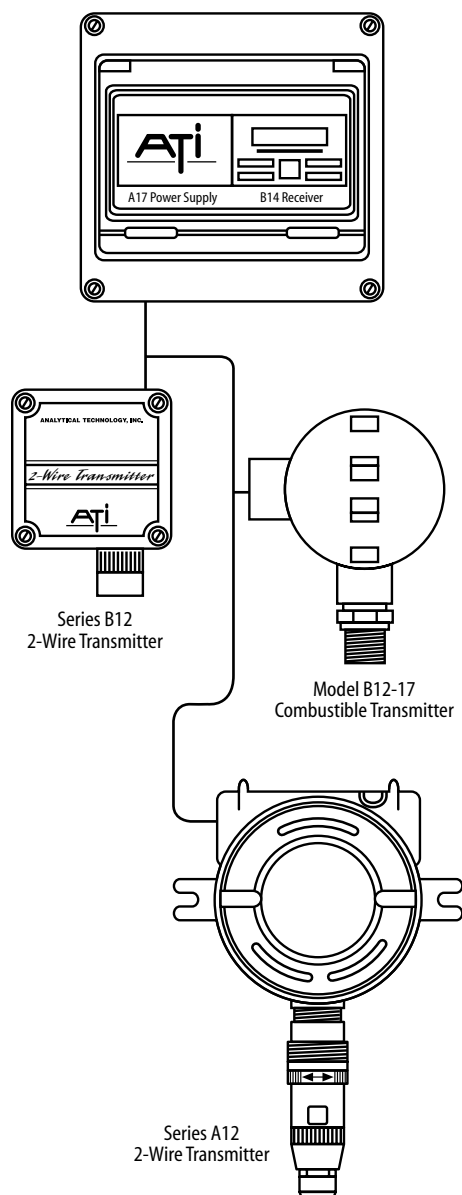
…*For Gas Detection Systems.*

Series B14

4-20mA Alarm Receiver

The Alarm Module With The Flexibility You Need.

ATI's Series B14 Receivers are compact electronic modules that provide local alarm, display, and signal retransmission functions for gas detection systems. The modules are designed to accept input from either two, three, or four wire 4-20 mA transmitters located up to 10,000 feet from the receiver. They're ideally suited for use with ATI's Series A12 or B12 two-wire toxic gas transmitters, or Model A12-17 or B12-17 three-wire combustible gas transmitter.

B14 Alarm Receivers are DIN rail mounted modules that can be supplied in single or multiple unit enclosures. Each alarm module offers a variety of functions:

- **LED Display:** Gas concentrations are indicated directly in PPM, PPB, percent, or percent LEL with the display range selectable by the user.
- **Three Alarm Setpoints:** Each module provides separate caution, warning, and alarm setpoints with LED bar indicators of each alarm point. LED indicators flash on initial alarm condition and change to steady on when the alarm is indicated.
- **Three Relay Outputs:** Modules contain individual alarm relays for each alarm setpoint. However, each relay can be assigned to any setpoint to allow multiple alarm functions at a single alarm point. Relays are configurable for either standard or fail-safe operation and for either latching or non-latching operation.
- **Separate Trouble Alarm:** A fourth LED alarm bar and relay are provided to indicate trouble conditions. The trouble alarm and relay will activate on loss of input signal or if the 4-20 mA input drops below a specific value.
- **Remote reset Input:** Isolated input contacts are provided to allow an unpowered switch input for acknowledgment of alarm conditions from a remote location or via telemetry equipment.
- **Internal Transmitter Power:** Modules provide a 24 VDC power supply to operate either 2 or 3 wire transmitters.
- **Signal Retransmission:** A 4-20 mA output is provided from each module, optically isolated from the input signal to avoid ground fault problems.
- **DC Powered:** B14 modules are powered from a 12 VDC power supply available as an option. Up to 3 modules can be powered from one power supply (or 2 if battery backup is used). Customers 12-28 VDC supplies may also be used.

A17 Power Supply   B14 Receiver

Series B12
2-Wire Transmitter

Model B12-17
Combustible Transmitter

Series A12
2-Wire Transmitter

System Enclosures

A variety of NEMA 4X enclosures are available to assemble detection systems from receivers and power supplies. ATI offers standard enclosures to house up to 12 modules, and can supply larger enclosures for systems requiring more points of detection. System integrators can use standard 35 mm DIN rail for mounting modules in their own enclosures.

Single Module Enclosure: Houses a single receiver module for use in DC powered applications where the user supplies the DC power to the system.

Two Module Enclosure: Houses two receivers or one receiver and one power supply. Normally used for single point AC powered detectors.

Three Module Enclosure: Accommodates two receivers and power supply or three receivers. Used mainly for two point detection systems.

Six Module Enclosure: Suitable for two power supplies and four receivers or six receivers. This enclosure is used primarily for four point gas detection systems.

Nine Module Enclosure: Shown on cover

Twelve Module Enclosure: Not shown.

Specifications

Concentration Display:	4 Digit LED, Programmable Range
Input:	2,3, or 4-wire 4-20 mA Transmitter
Output:	Isolated 4-20mA, 1000 ohms maximum load
Power:	12-28 VDC, 400 mA maximum.
Concentration Alarms:	Three adjustable concentration alarms. Setpoints adjustable from 5-100% of span.
Alarm Indicators:	LED bars for Caution, Warning, and Alarm.
Indicator Function:	Caution and Warning indicator non-latching. Alarm indicator latching.
Alarm Relays:	Three assignable relays, 7 A, 120 VAC (4 A, 220 VAC) resistive. Alarms assignable to any one of three programmable setpoints.
Relay Function:	Configurable for Normal/Fail-safe, Latching/Non-latching, 2/second/10 second delay, or external horn function.
Trouble Function:	Front panel LED bar indicator and SPDT, 7 A relay. Factory set for fail-safe operation.
Alarm & Relay Reset:	Activated from front panel switch or through remote reset switch.
External Reset:	Input terminals provided for unpowered contact input.
Gas Indicator:	LED bar on front panel with gas symbol overlay.
Electrical Connections:	Quick disconnect pluggable terminal blocks.
Module Enclosure:	Noryl
Module Mounting:	Mounts to 35 x 7.5 mm DIN rail.
Size:	2.8" W x 3.6" L x 2.3" D (70 mm x 90 mm x 58 mm)
Operating Temp.:	-40°C to +55°C.
Humidity:	0-99% RH, non-condensing.

How To Order

Specify each alarm module separately using the code number below. Then add the enclosure, power supply, and other options as needed for a complete system. Specify A12 or B12 transmitters separately.

Model B14-CC-DDD-E Alarm Module

Suffix CC-Gas Type

10 - Bromine	19 - Oxygen	28 - Arsine	37 - Ethylene Oxide (ETO)
11 - Chlorine	20 - Phosgene	29 - Diborane	38 - Formaldehyde
12 - Chlorine Dioxide	21 - Hydrogen Chloride	30 - Germane	39 - Alcohol
13 - Fluorine	22 - Hydrogen Cyanide	31 - Hydrogen Selenide	
14 - Ozone	23 - Hydrogen Fluoride	32 - Phosphine	
15 - Ammonia	24 - Hydrogen Sulfide	33 - Silane	
16 - Carbon Monoxide	25 - Nitric Oxide	34 - Hydrogen Peroxide	
17 - Combustible Gas	25 - Nitrogen Dioxide	35 - Iodine	
18 - Hydrogen	27 - Sulfur Dioxide	36 - Acid Gases	

Suffix DDDD - Measurement Range

Code the measurement range using a four digit number. The alarm module range is determined by the range of the transmitter connected to the module. For a 0-10 PPM chlorine transmitter input, the code would be 0010.

Suffix E - Units of Measurement

1 - PPM
2 - PPB
3 - %
4 - %LEL

Options and System Enclosures

80-0005	Single Module Enclosure
80-0006	Two Module Enclosure
80-0007	Three Module Enclosure
80-0008	Six Module Enclosure
80-0027	Large Six Module Enclosure
80-0024	Nine Module Enclosure
80-0026	Twelve Module Enclosure
00-0055	Power Supply Module (For 2 Alarm Modules and Battery Backup or 3 Alarm Modules)
28-0004	65 Watt Power Supply (For up to 6 Alarm Modules)
28-0005	115 Watt Power Supply (For up to 12 Alarm Modules)
00-0057	Battery Backup Unit
00-0058	Audible Horn, internal, 12 VDC
35-0008	Horn, Industrial External 120 VAC
35-0002	Strobe with red lens, 12 VDC
35-0005	Strobe with red lens, 120 VAC
03-0040	Explosion-proof Enclosure for receiver module only
03-0041	Explosion-proof Enclosure for receiver and power supply

Represented By: