

B564 Interface Module Product Guide

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Overview and General Concepts

The B564 is a general-purpose interface module device developed to communicate and function with Honeywell's INNCOM System-5 devices, protocols, and applications.

The INNCOM System-5 products are a family of electrical and electronic devices that operate together to perform climate and lighting control, energy management, and central electronic locking. System-5 can be viewed as a communication protocol that establishes a media gateway for both infrared (IR) and S5-bus (hard-wired) devices.

The B564 can be programmed for specific applications within System-5. The software for each specific application is loaded into the B564 at the factory or at a later date, by a trained field technician at an installation site.



Figure 1. B564 Interface Module

Application

The B564 can be programmed as an interface module or as a controller. For example, as an interface module the B564 can accept outside inputs and process the information to other devices, which then communicate over a computer network. As a controller, the B564 updates constant variable inputs from System-5 devices and relays the information to all other System-5 devices dependent upon these changes. It can be used, for example, as an interface between INNCOM's X06/X05 HVAC Controller and display devices, converting received analog data into digital data.

The following is a list of some engineering applications involving the B564:

- Interface with door chimes and other devices and report state condition (open/closed, on/off, etc.)
- Measure the availability of hot/cold water in a 4-pipe HVAC system
- Measure external thermistor input for outside air temperature sensing and display

Figure 3 shows the B564 wired to INNCOM's e528 Smart Digital Thermostat. INNCOM's Application Engineering Department can provide detailed explanations involving all applications of the B564.



Figure 2. B564 and Pre-Assembled Wire Harness

Technical Overview

The B564 is factory set to a particular physical System-5 address of 192 and channel 1. These values can be determined when the device is connected via the S5-bus, or via INNCOM's Communication Interface Net (CINET).

The B564 can have its address and channel changed to another setting by means of a user command. This capability is called the "address-learn" function. The B564 features a micro-switch, located near the LED, which can be activated with a pin-like device during address-learn mode. The address-learn function is important in applications using multiple B564's. Each B564 can possess its own address, and users can then communicate with individual B564's over the CINET.

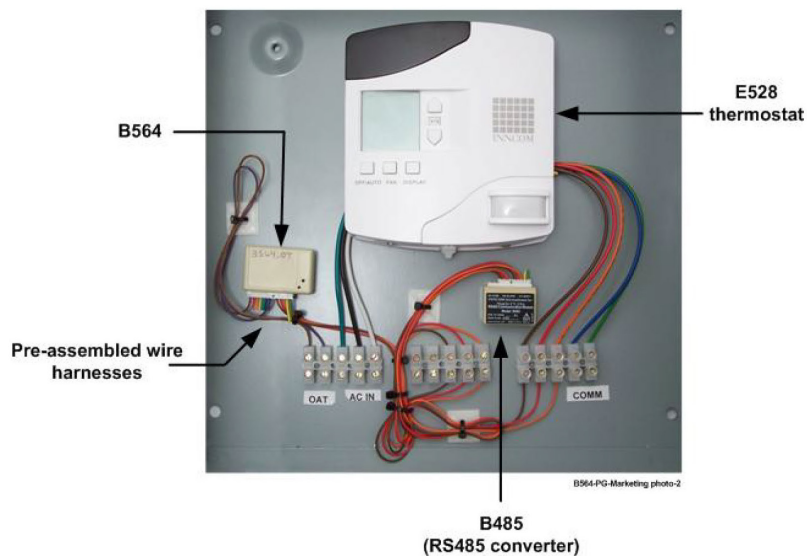


Figure 3. B564 Wired to an E-Series Thermostat

Installation Requirements

The B564 generally interfaces with other low-voltage control devices via preassembled wire harnesses. It has two built-in headers (See below): a 5-pin and a 7-pin. The 5-pin header is typically used for low-voltage supply power (input) of 12VDC and hard-wired S5-bus communication to other devices. The 7-pin header is typically used for the following inputs/outputs: dry-contact normally open (NO), dry contact normally closed (NC), analog, and thermistor input.



Figure 4. B564 Pins

Commissioning Requirements

The B564 device requires 12VDC power to operate. The device features a green LED that will flash solid upon power-up and then continue to flash at a slow blinking rate. The blinking rate is determined by the type of software loaded into the B564.

Headers

H1

Pin	Signal	Purpose	Wire Color
1	GND	Common	Brown
2	VEE	12VDC supply	Red
3	S5Bus	5VDC multi-drop network	Orange
4	InOut1	I/O or SCI-Tx (inverted)	Yellow
5	InOut2	I/O or SCI-Rx	Green

H2

Pin	Signal	Purpose	Wire Color
1	GND	Common	Brown
2	VEE	12VDC supply	Red
3	IO1	I/O	Orange
4	IO2	I/O	Yellow
5	IO3	I/O	Green
6	IO4	I/O	Blue
7	IO5/RTD	I/O or RTD (Thermistor)	Violet

Technical Specifications

Operating Voltage	12 ± 0.5 VDC
Current Consumption	40 mA
Operating Temperature Range	0-60 °C, 32-140 °F
Operating Humidity Range	0-95 % RH
NVRAM Capacity	256 Bytes
Program Code Capacity Volatile RAM	32 kBytes
Max. Injected Input Current IO1..IO5	3 mA, 0-5 VDC
Pull-up Resistor IO1..IO5 Input voltage range	IO1..IO5 10 kOhm
Max. Injected Input Current InOut1..2	15 mA, 0-5 VDC
Pull-up Resistor InOut1..2 Input Voltage Range	1.5 kOhm
S5-Bus Driving Impedance	150 Ohm
Dimensions	1.7" (4.32cm) L x 1.1" (2.79cm) W x 0.6" (1.52cm) H
Approvals	Complies with FCC Part 15

Ordering Specifications

The INNCOM Part Number for the B564 Interface Module is 01-9945.

Document Revision History

Revision	Date Issued	Reason for Change
1.0	30-JUNE-06	Original Release
1.1	14-JULY-08	Reformatting only
2.0	18-APRIL-17	Reformat to meet Honeywell Brand Specifications

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