

400-3H Shelf

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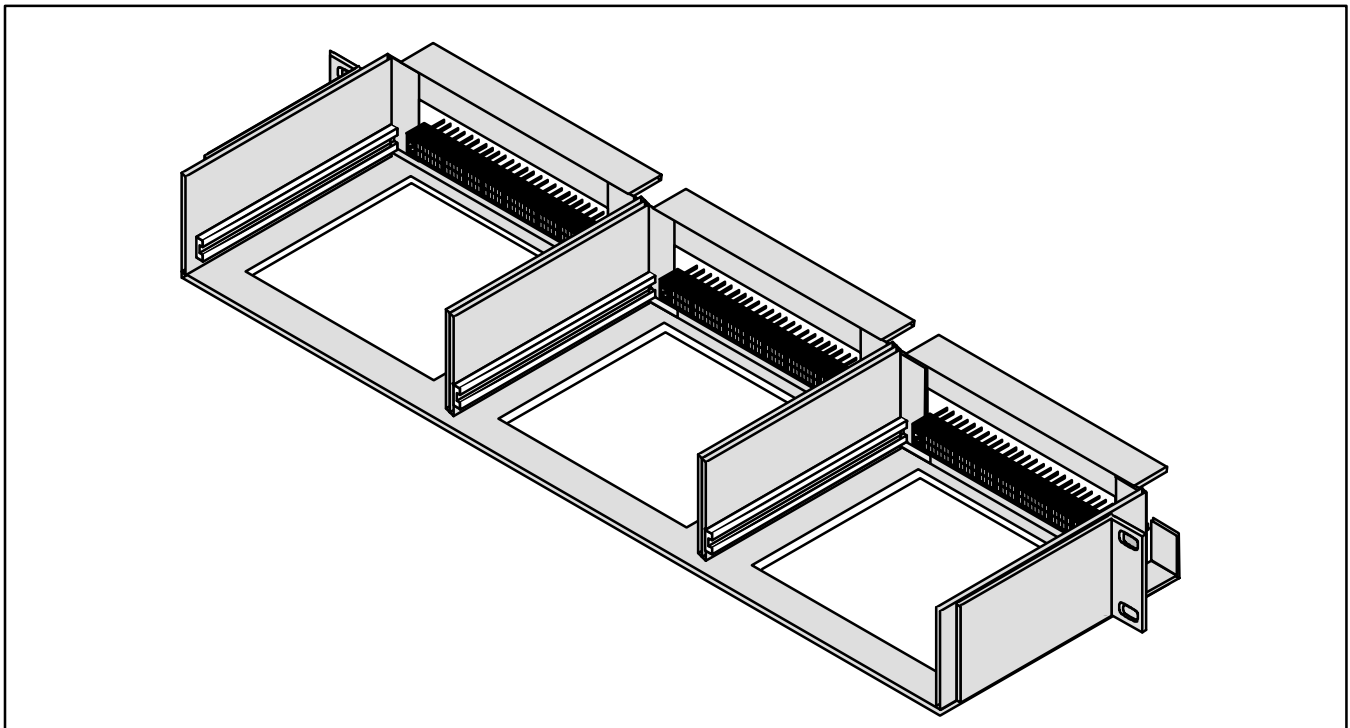


Figure 1. 400-3H Shelf

1. GENERAL

1.1 Document Purpose

This document provides a general description of the Charles Industries 400-3H shelf, shown in Figure 1.

1.2 Document Status

This document is reprinted to provide a general editorial update.

1.3 Equipment Purpose/Description

The 400-3H shelf is designed to mount in a 19-inch relay rack or cabinet, and can mount three 400-type Charles Industries modules in a horizontal orientation. Each module position is provided with a bifurcated, 56-pin wire-wrap connector mounted on the rear of the shelf for electrical connection of the module to the associated equipment.

1.4 Equipment Features

The 400-3H shelf provides the following features:

- 19-inch relay rack or cabinet mount
- Uses only 1 vertical mounting space
- Mounts three 400-type Charles Industries modules in a horizontal orientation
- Provided with three, 56-pin, bifurcated, wire-wrap connectors mounted on rear of the shelf
- Can be mounted in 23-inch relay racks or cabinets by using a Charles Industries 8482-01, or equivalent, adapter

2. APPLICATION GUIDELINES

When using this shelf to mount Charles Industries 400-type or equivalent modules, verify that the modules do not have any restrictions for non-vertical mounting. Components, such as mercury-wetted relays, may require proper orientation to operate without problems.

This shelf features an open top and ventilation openings on the bottom and rear of the shelf. When using this shelf, be sure the modules do not require vertical orientation or any other special requirements for ventilation or power dissipation.

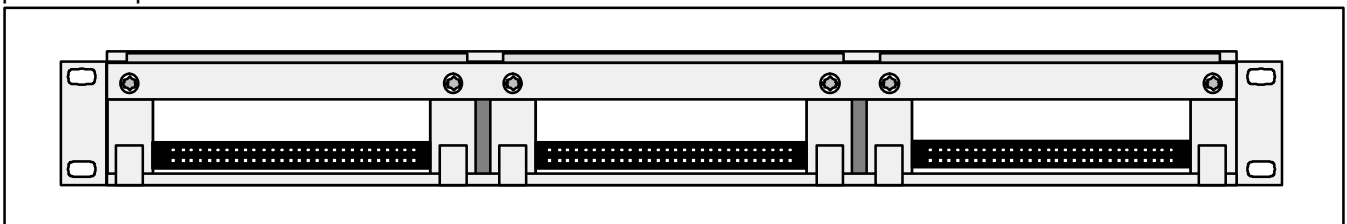


Figure 2. Rear View, 400-3H Shelf

3. INSPECTION

Inspect the equipment thoroughly upon delivery. If the equipment has been damaged in transit, immediately report the extent of damage to the transportation company.

Charles Industries equipment is identified by a model and issue number imprinted on the equipment. Each time a major engineering design change is made on the equipment, the issue number is advanced by one number on any subsequent models that are manufactured. Therefore, be sure to include both the model number and its issue number when making inquiries about the equipment.

4. MOUNTING

This shelf is provided with mounting ears on the sides and four screws to mount in a standard 19-inch relay rack. Each shelf requires only one vertical mounting space (1.75 inches) in a standard relay rack.

5. INSTALLATION

Install the 400–3H shelf in a standard 19-inch relay rack using the four screws provided.

6. INSTALLER CONNECTIONS

This shelf is provided with three 56-pin, bifurcated, wire-wrap connectors to make electrical connection to the associated equipment.

7. TECHNICAL ASSISTANCE

7.1 Technical Assistance — U.S.

If technical assistance is required, contact Charles Industries' Technical Services Center at:

847–806–8500

847–806–8556 (FAX)

800–607–8500

techserv@charlesindustries.com (e-mail)

7.2 Technical Assistance — Canada

Canadian customers contact:

905–821–7673 (Main Office)

905–821–3280 (FAX)

8. WARRANTY & CUSTOMER SERVICE

8.1 Warranty

Charles Industries, Ltd. offers an industry-leading, 5-year warranty on products manufactured by Charles Industries. Contact your local Sales Representative at the address or telephone numbers below for warranty details. The warranty provisions are subject to change without notice. The terms and conditions applicable to any specific sale of product shall be defined in the resulting sales contract.

Charles Industries, Ltd.

5600 Apollo Drive

Rolling Meadows, Illinois 60008–4049

Telephone: 847–806–6300 (Main Office)

847–806–6231 (FAX)

8.2 Field Repairs (In-Warranty Units)

Field repairs involving the replacement of components within a unit are not recommended and may void the warranty and compatibility with any applicable regulatory or agency requirements. If a unit needs repair, contact Charles Industries, Ltd. for replacement or repair instructions, or follow the *Repair Service Procedure* below.

8.3 Advanced Replacement Service (In-Warranty Units)

Charles Industries, Ltd. offers an “advanced replacement” service if a replacement unit is required as soon as possible. With this service, the unit will be shipped in the fastest manner consistent with the urgency of the situation. In most cases, there are no charges for in-warranty repairs, except for the transportation charges of the unit and for a testing and handling charge for units returned with no trouble found. Upon receipt of the advanced re-

placement unit, return the out-of-service unit in the carton in which the replacement was shipped, using the pre-addressed shipping label provided. Call your customer service representative at the telephone number above for more details.

8.4 Standard Repair and Replacement Service (Both In-Warranty and Out-Of-Warranty Units)

Charles Industries, Ltd. offers a standard repair or exchange service for units either in- or out-of-warranty. With this service, units may be shipped to Charles Industries for either repair and quality testing or exchanged for a replacement unit, as determined by Charles Industries. Follow the *Repair Service Procedure* below to return units and to secure a repair or replacement. A handling charge applies for equipment returned with no trouble found. To obtain more details of this service and a schedule of prices, contact the CI Service Center at 217–932–5288 (FAX 217–932–2943).

Repair Service Procedure

1. Prepare, complete, and enclose a purchase order in the box with the equipment to be returned.
2. Include the following information:
 - Company name and address
 - Contact name and phone number
 - Inventory of equipment being shipped
 - Particulars as to the nature of the failure
 - Return shipping address
3. Ship the equipment, purchase order, and above-listed information, transportation prepaid, to the service center address shown below.

CI Service Center
 Route 40 East
 Casey, IL 62420–2054

Most repaired or replaced units will be returned within 30 or 45 days, depending on the product type and availability of repair parts. Repaired units are warranted for either 90 days from the date of repair or for the remaining unexpired portion of the original warranty, whichever is longer.

9. SPECIFICATIONS

9.1 Electrical

Electrical connections are made to the 56-pin, wire-wrap, bifurcated connectors on the rear of the shelf. Wire size may be 18–30 gauge AWG. Wire type should be solid, copper or tinned copper.

9.2 Physical

See Table 1 for the physical characteristics of the Charles Industries 400–3H shelf.

Table 1. Physical Specifications

Feature	U.S.	Metric
Height	1.75 inches	4.45 centimeters
Width	19 inches	48.26 centimeters
Depth	7.25 inches	18.4 centimeters
Front Projection	4.75 inches	12.06 centimeters

9.3 Ordering Code

To order the Charles Industries 400–3H shelf, use part number 92–040050–A.

