

# HVR800 High Voltage Relay Module



Fig. 1: HVR800 High Voltage Interface (Unboxed)

## Introduction

This document refers to HVR800s with a manufacturing date code of 43-03 or later. When used with a RIM800, RIM800 PCB must be Issue 9 or later. For earlier versions of HVR800, refer to TIB0496.

The HVR800 High Voltage Relay Interface is a non-addressable multi-voltage relay module (operating from 24 V dc, 24 V ac, 120 V ac and 240 V ac).

The encapsulated HVR800 provides a 10amp volt-free contact that can be used to extend the contact ratings of RIM800 Addressable Relay Module applications.

A maximum of two HVR800s can be individually driven and controlled by an MIO800 Small Addressable Multi-Input/Output module if all HVR800s are powered by 24 V dc or 24 Vac.

A maximum of four HVR800s can be individually driven and controlled by an MIO800 Small Addressable Multi-Input/Output module if all HVR800s are powered by 120 V ac or 240 V ac.

For ac operation, no external dc power supply unit is required to operate the relay.

The HVR800 must be mounted adjacent the MIO800 or RIM800. The maximum length of cable can not be greater than 1 metre between the HVR800 and the MIO800/RIM800.

## Construction

The HVR800 is contained on a single sided printed circuit board, which is fitted to a plastic tray and then potted (see Fig. 1).

## Mounting

The HVR800 may be mounted in any suitable electrical box or may be ordered already mounted in a D800 IP55

rated housing. Terminal blocks complying with the EC Low Voltage Directive must be used when 120 V ac and 240 V ac voltages are used. A warning label must be fitted to the electrical box and RIM when mains voltages are used.

In all 24 V dc and 24 V ac applications, all unused HVR800 wires must be individually isolated and insulated to prevent the risk of electrical shorting.



### WARNING

**In 120 V AC and 240 V AC applications, mains voltages (120 V AC or 240 V AC) will be present on some of the unused wires. In all these applications all unused HVR800 wires must be individually isolated and insulated to prevent risk of electrical shorting and electric shock.**

## Operation

The RIM800 is used to switch on the HVR800 relay for 24V dc, 24 V ac, 120 V ac and 240V ac operation.

When used to switch 24 V dc, the HVR800 must be provided with an external 24 V dc supply which should be switched through the clean contacts of an MIO100 or RIM800.

Please note that the GRY and PNK 'O' driver wires on the HVR800 must not be used in HVR800 24 V dc and 24 V ac applications.

## Technical specifications

### Overall Dimensions

	Module	Boxed
Height	6.5 mm	2124.5 mm
Width	73.6 mm	166.5 mm
Depth	41.5 mm	84.5 mm
Weight	87.5 g	289 g

Table 1: Overall Dimensions

### Environmental

Parameter	Value
Operating Temperature	-25 °C to +70 °C
Storage Temperature	-40 °C to +80 °C

Table 2: Environmental Characteristics

Parameter	Value
Relative Humidity	up to 95 % RH (non-condensing)

Table 2: Environmental Characteristics (cont.)

### Electrical Characteristics

Parameter	Value
Input Voltages	24 V dc, 24 V ac, 120 V ac, 230 V ac
Contact Rating	8 A @ 28 V dc 10A @ 28 V ac and 120 V ac 5 A @ 240 V ac (resistive)

Table 3: Electrical Characteristics

### EMC:

The HVR800 complies with the following:

- Product family standard EN50130-4 in respect of:
  - Conducted Disturbances
  - Radiated Immunity
  - Electrostatic Discharge,
  - Fast Transients
  - Slow High Energy
- EN61000-6-3 for Emissions

## Cabling

Cabling must conform to the current version of IEE Wiring Regulations.

## Ordering information

Item	Order Code
HVR800 High Voltage Relay Interface Module	568.800.004
HVR800 High Voltage Relay Interface Module (Boxed)	568.800.034
RIM800 Relay Interface Module	568.800.003
RIM800 Relay Interface Module c/w Cover	568.800.033
MIO800 Small Addressable Multi-Input/Output Module:	555.800.065

Fig. 2: Order codes



### Notes

- VIO, WHT, BLK and YEL wires must be individually isolated in this application
- Connect load wire to YEL for a normally, ON' load



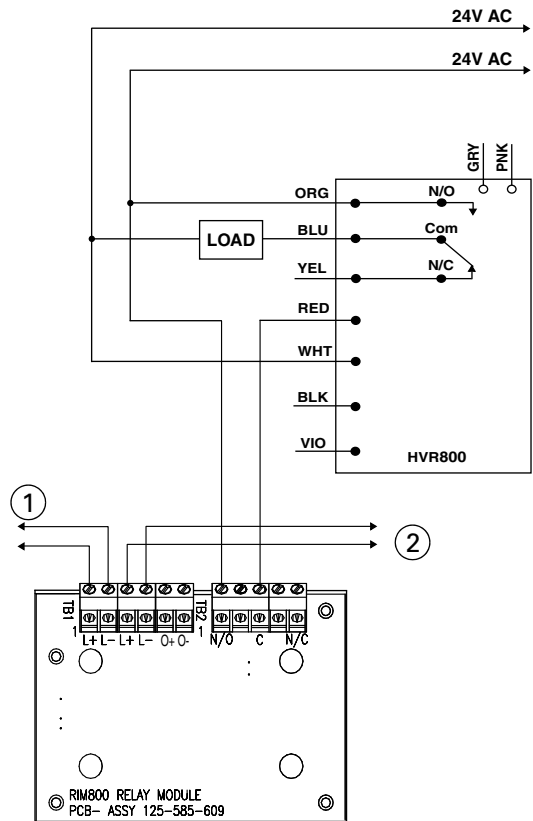


Fig. 4: HVR800 in 24V ac Application  
 1- From controller or preceding device  
 2- To controller or next device



**CAUTION**

- All unused HVR800 wires must be individually isolated and insulated to prevent the risk of electrical shorting and electrical shock.
- Connect load wire to ORG for a normally ON' load.



**WARNING**

**In this applications 120 V AC will be present on some of the unused wires of the HVR800.**

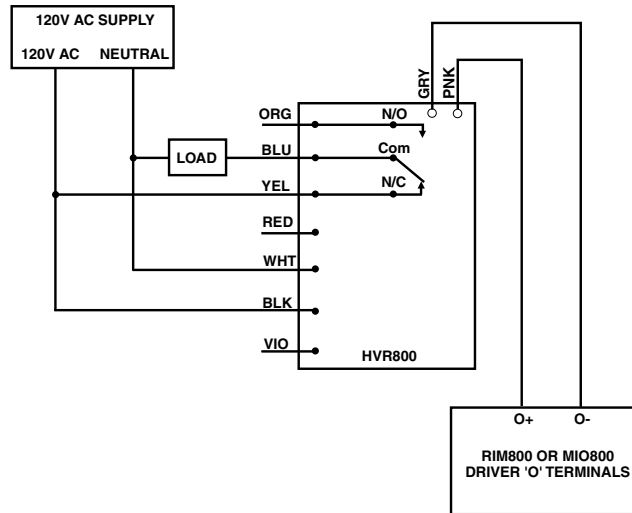


Fig. 5: HVR800 in 120V ac Application



**CAUTION**

- All unused HVR800 wires must be individually isolated and insulated to prevent the risk of electrical shorting and electrical shock.
- Connect load wire to ORG for a normally ON' load.



**WARNING**

**In this applications 240 V AC will be present on some of the unused wires of the HVR800.**

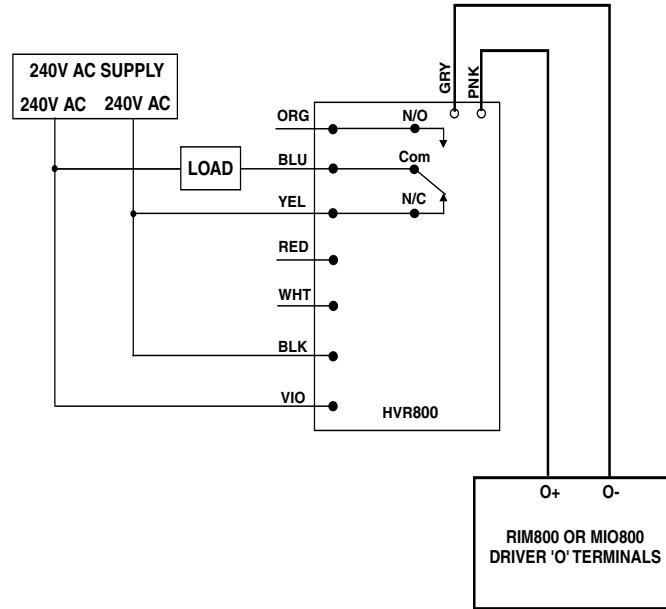


Fig. 6: HVR800 in 240V ac Application



**CAUTION**

All unused HVR800 wires must be individually isolated and insulated to prevent the risk of electrical shorting and electrica shock.



**WARNING**

In this applications 240 V AC will be present on some of the unused wires of the HVR800.

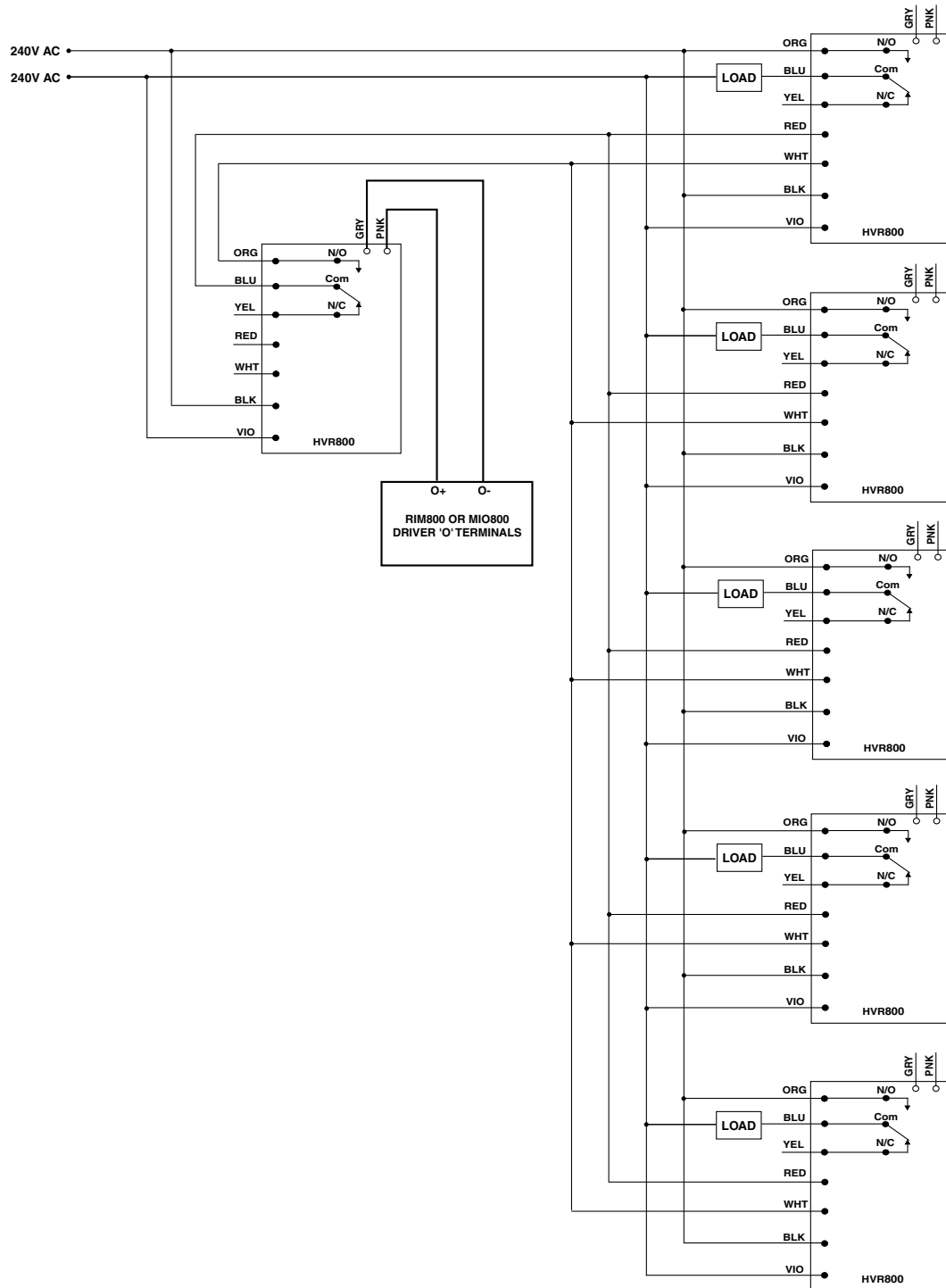



Fig. 7: HVR800 in Multi 240V ac Application

## CPR Information


<p>Tyco Fire &amp; Security GmbH, Victor von Bruns-Strasse 21, 8212 Neuhausen am Rheinfeld, Switzerland</p> <p>15 2831-CPR-F1630 21 0832-UKCA-CPR-F0134</p> <p>DoP-2015-4065</p>
<p><b>EN54-18: 2005</b> Input-output device for use in fire detection and alarm systems in buildings HVR800</p>
<p><b>Essential Characteristics</b> <b>EN54-18: 2005</b> Response delay (response time): Pass Performance under fire conditions: Pass Operational reliability: Pass Durability of operational reliability; temperature resistance: Pass Durability of operational reliability; vibration resistance: Pass Durability of operational reliability; humidity resistance: Pass Durability of operational reliability; corrosion resistance: Pass Durability of operational reliability; electrical stability: Pass</p>
<p>Fixing Instructions 120.415.528_17A-03-HVR</p>