

Hoffman Controls

Installation & Operating Instructions

605-24

Voltage Monitor

General

The 605-24 Voltage Monitor protects motors and electrical equipment from voltage deviations that are outside electrical industry standards and/or tolerances. The Monitor samples the abnormal condition(s) for a defined period of time. Should the deviation continue, the control circuit is interrupted. The monitoring is programmed to assure that nuisance trips do not occur. The protection provided is typically described as:

- Phase Loss (Single Phasing)
- Low Voltage (Brownout/Sag)
- High Voltage (Overvoltage/Surge)
- Imbalance (Line to Line)
- Contactor Failure

The Monitor provides economical protection for the most common types of line voltage abnormalities that directly contribute to the failure of motors or electrical equipment. Red LED indicators are provided to identify the specific fault encountered. A green LED indicates normal operation.

In addition to electrical protection, the Monitor is provided with “short cycle” (anti-short-cycle) protection that delays restart after a fault (trip). Should faulting continue after three restarts, the Monitor “locks out” the control circuit until corrective measures are taken to restore the voltage to the normal operating range. Manual reset will be required to energize the control circuit after three “lock outs”.

Installation Instructions

Pre-Installation Requirements

Before installing, determine the nominal operating voltage of the three phase line as being 208V, 230V or 460VAC. In addition verify that the control voltage supplied to the contactor or starter is between 24V AC (Min.) and 240VAC (Max.).

Programming

Set only one of the three miniature DIP switches (Switch 1, 2 or 3) to the appropriate Nominal Line Voltage to be monitored. (Select only one).

Switch	NEMA Std.	ANSI Std.	605-24 Nominal
Sw #1	460V (Nominal)	480V (Nominal)	470VAC ± 12%
Sw #2	230V (Nominal)	240V (Nominal)	235VAC ± 12%
Sw #3	208V (Nominal)	208V (Nominal)	208VAC ± 12%

Mounting

Locate the 605-24 Series Monitor inside a weather protected control panel where the contactor starter or other typical controls are mounted.

- DO NOT mount on or near heat generating surfaces.
- DO NOT install where moisture or condensing environments exist.
- DO NOT install in an air tight control panel.

WARNING



Before beginning installation, disconnect all power to three phase lines being monitored and control voltage power serving the contactor starter.

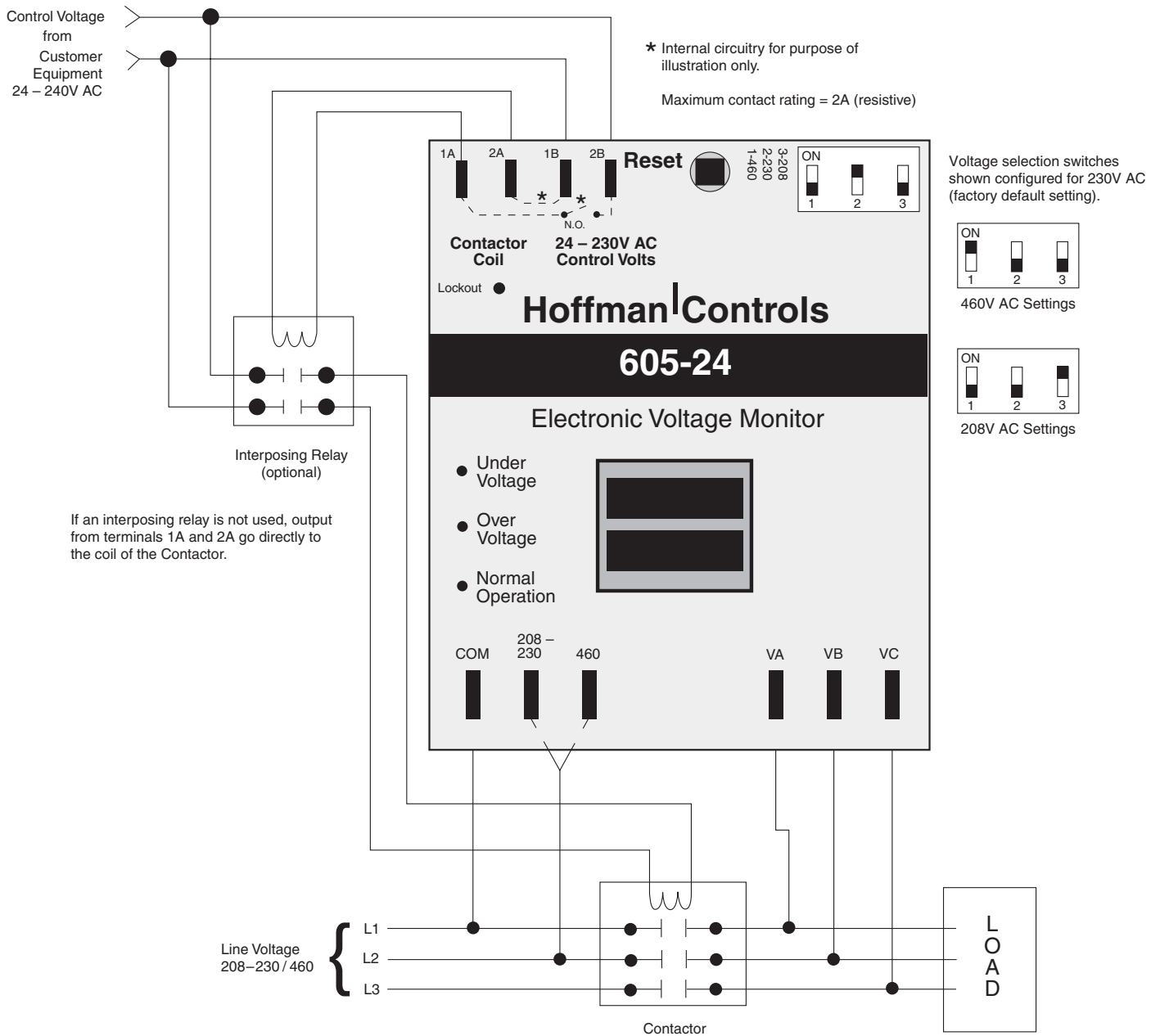
Wiring

Wire 605-24 in accordance with Local and National electrical codes. See diagram on back of these instructions.

1. Control Voltage: Wire contactor/starter,
 - a. Control Voltage (24 through 240VAC) to “Control Voltage” input terminals.
 - b. Coil to “Contactor Coil” output terminals.
2. Line Monitoring: Wire each phase from “Load Side” of contactor to the 605-24.
3. Wire uninterrupted line side power to “Com” and appropriate 208/230V or 460V terminal to power the Monitor.
4. Nominal Line Voltage Selection: Re-verify DIP switch is set to Nominal Line Voltage (see “Programming” or program instruction on wiring diagram or Monitor).
5. Verify all wiring has been correctly connected to appropriate terminals (1, 2 and 3 above).

Reapply Power

Energize all line, power and control voltage circuits to the Unit/Controller. Verify green light is on indicating normal operation.



605-24 Voltage Monitor Wiring Diagram

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