

GNR-1200A Industrial Controls Training System

Purpose

The Hampden **Model GNR-1200A** Industrial Controls Training System provides students with practical "hands-on" experience in designing, wiring, checking out, and troubleshooting "real-world" motor control systems. Instructor-controlled real world faults can be inserted in each module.

Description

The Hampden Industrial Controls Training System consists of a ¾" thick wood core white melamine panel, 41½"H x 41½"W, on which are mounted interchangeable unitized control modules. The student selects just the components needed for a particular system, secures them on the panel with Nylatch® fasteners and wires them in accordance with the control diagram. All control components are suitably rated for use with Hampden **Series 100** Rotating Machines or machines up to and including 1-HP. All components are factory wired to Hampden HB-3M, 5-way, color-coded, captive head binding posts.

Standard Module List

- GNR-1200-10** Pushbutton module consisting of two pushbuttons, one red, one green, N.O. and N.C., complete with (c/w) four faults.
- GNR-1200-11** Selector switch module consisting of one 3-position selector switch, one toggle switch SPDT, and c/w four faults.
- GNR-1200-15** Indicator lamp module consisting of two ½" lamps- one red and one green - c/w two faults.
- GNR-1200-20** Magnetic starter module consisting of one 3-pole magnetic starter c/w four faults.
- GNR-1200-21** Manual starter module consisting of one single-phase manual starter c/w two faults.
- GNR-1200-22** Reverse starter module consisting of one three-phase reverse starter c/w four faults.
- GNR-1200-27** Contactor module consisting of one 3-pole contactor c/w four faults.
- GNR-1200-30** Control relay module consisting of one 4-pole contactor with two N.O. and two N.C. contacts c/w four faults.
- GNR-1200-32** Time delay module consisting of one time delay relay with one timed N.O. and N.C. contact with timing from 0.1 to 600 second. Unit comes c/w three faults.

- GNR-1200-38** Control transformer module complete with one transformer with tapped primary of 104, 179 and 208V and secondary of 120V AC, c/w two faults.
- GNR-1200-40** Drum switch module consisting of one drum switch for single-phase, three-phase, and DC forward and reverse control c/w three faults.
- GNR-1200-42** Float switch module consisting of one N.O. or N.C. switch c/w two faults.
- GNR-1200-43** Limit switch module consisting of one limit switch with one N.O. or N.C. contact c/w two faults.
- GNR-1200-50** Resistor module consisting of three 10 ohm tapped resistors.
- GNR-1200-A** Interconnection cord set lug to lug.
- GNR-1200-B** Interconnection cord set plug to plug.
- GNR-1200-SP** Induction motor with prony brake mounted on a base with four feet, 1/3 HP, 3Ø.
- GNR-1200-MWS** Double-faced mobile work station, 76" high, 48" wide by 29" deep. Unit provides two sets of switch-controlled three-phase outputs, main circuit breaker, and 120VAC duplex receptacle. Each work area consists of two module mounting frame sets. Storage is provided for 21 single size modules as well as motor modules.
- GNR-1200-SPM** Split-phase motor, 1Ø, 115 volt.

Optional Module List

- GNR-1200-33** Solid state relay module consisting of one transistorized relay with a 120V AC coil and two N.O. and two N.C. contacts rated 120V AC, 10 amp, c/w four faults.
- GNR-1200-34** Latching relay module consisting of one latching delay relay with one N.O. and one N.C. contact, c/w four faults, and 120V AC input.
- GNR-1200-41** Sequence control timer module consisting of two N.O. or N.C. contacts c/w four faults.
- GNR-1200-44** Photoelectric reflector module.
- GNR-1200-45** Photoelectric transmitter-receiver module consisting of one photoelectric receiver with one N.O. and one N.C. contact c/w three faults and 120V AC input.
- GNR-1200-65** Diode module with six diodes rated 400 PRV 20A.
- GNR-1200-80** DC control relay module consisting of one DC control relay with two N.O. and two N.C. contacts c/w four faults.

- GNR-1200-81** DC contactor module consisting of one DC contactor with one main contact and one auxiliary contact c/w four faults.
- GNR-1200-82** DC time delay relay module consisting of one DC time delay relay with one N.O. and one N.C. contact c/w four faults.
- GNR-1200-85** SCR supply module consisting of one solid state DC motor control c/w three faults.
- GNR-1200-DCM** DC motor, 90 volt.
- GNR-1200-S** Induction motor with base, 1/3 HP, 3Ø.
- GNR-1200-VIL** Variable inertia load.
- BPS-101** DC Power Supply

A typical complement of Hampden **Model GNR-1200A** standard modules would consist of:

- | | |
|-----------------|------------------|
| (2) GNR-1200-10 | (1) GNR-1200-40 |
| (1) GNR-1200-11 | (1) GNR-1200-42 |
| (1) GNR-1200-15 | (1) GNR-1200-43 |
| (2) GNR-1200-20 | (1) GNR-1200-50 |
| (1) GNR-1200-21 | (1) GNR-1200-A |
| (1) GNR-1200-22 | (1) GNR-1200-B |
| (2) GNR-1200-27 | (1) GNR-1200-SP |
| (4) GNR-1200-30 | (1) GNR-1200-MWS |
| (2) GNR-1200-32 | (1) GNR-1200-SPM |
| (2) GNR-1200-38 | (1) Manual Set |

A typical complement of Hampden **Model GNR-1200A** optional modules would consist of:

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|-----------------|------------------|
| (1) GNR-1200-20 | (1) GNR-1200-81 |
| (1) GNR-1200-27 | (1) GNR-1200-82 |
| (1) GNR-1200-33 | (1) GNR-1200-85 |
| (1) GNR-1200-34 | (1) GNR-1200-DCM |
| (1) GNR-1200-41 | (2) GNR-1200-S |
| (1) GNR-1200-44 | (1) GNR-1200-VIL |
| (1) GNR-1200-45 | (1) BPS-101 |
| (1) GNR-1200-65 | |
| (1) GNR-1200-80 | |



Dimensions (w/Bench):
76"H x 48"W x 29"D
Shipping Weight: 800 lbs.

All Hampden units are available for operation at any voltage or frequency



Hampden
ENGINEERING CORPORATION