

Spectra Series™ Power Panel boards

Installing Spectra Series (PCU) Process Control Units

WARNING: Danger of electrical shock or severe injury. Remove all jewelry prior to working on electrical equipment. Ensure electrical power is **OFF** ahead of the Panelboard or Switchboard before working inside the equipment. Do not remove circuit protective devices, or any other components until the power is turned **OFF**.

CAUTION: Read information thoroughly in the Overload Selection and Precautionary Table before installing or operating. See Figure 3.

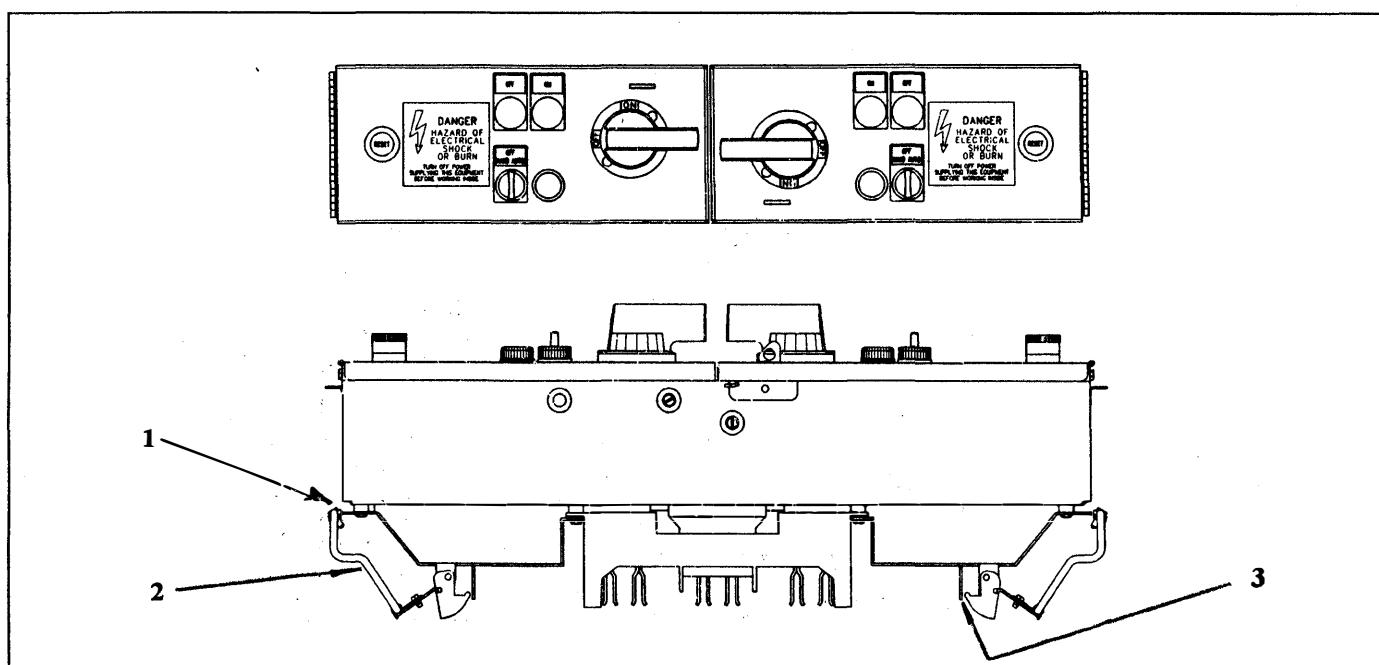


Figure 1.

GENERAL

To comply with the National Electrical Code and Underwriter's Laboratories, the switch must be installed in accordance with the information included in this instruction.

STEP 1. RETRACT RAIL LATCHES

Loosen rail latch screws (1) and retract latches (2) on both ends of the switch as shown. See Figure 1.

STEP 2. ALIGN UNIT

Locate the unit flush to the adjacent unit or main lug base allowing no space between units. Line up the guides (3) on both ends of unit to notches in the panelboard interior rails. See Figure 1

STEP 3. INSTALL THE UNIT

Push inward, until the unit pressure connectors are fully engaged (plugged) into the busbar. Release the latches. The latches will automatically lock into the interior rail when the switch is fully engaged and installed. Tighten the rail latch screw (1) to bolt and lock the unit in place.

STEP 4. WIRE CIRCUITS

Wiring diagram. See Figure 2.

CAUTION: Insert filler plates over all unused spaces before energizing Power Panel

STEP 5. FILLER PLATES

Filler kits are included with the unit. For replacement fillers order the appropriate one shown in Table 1.

CONTROL POWER TRANSFORMER KIT:

Control power transformer kits must be ordered with panelboards. Refer to GEH-6473.

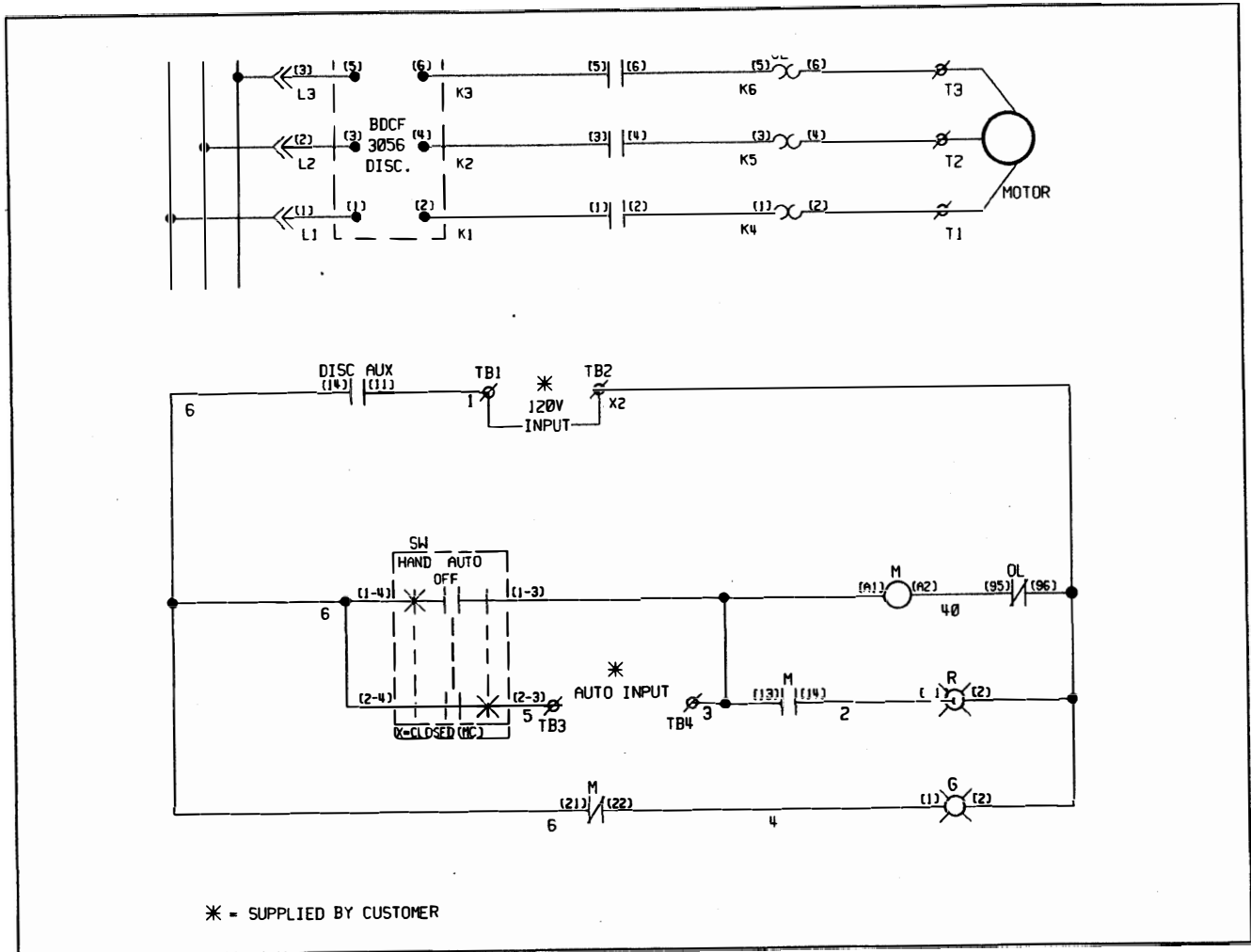


Figure 2.

Table 1. Spectra Series™ PCU Unit Selection Guide

Catalog Number	Configuration	Control Voltage	Unit Encl. Width	X Height space	Filler Kit
APCU151FNDPD	3-pole Module, Double	120	26	4X	AFP4X
APCU151FNDND	3-pole Module, Double	120	26	4X	AFP4X
APCU151FNDPS	3-pole Module, Single	120	26	4X	AFP4X
APCU151FNDNS	3-pole Module, Single	120	26	4X	AFP4X

COMBINATION MOTOR CONTROLLER - SPECTRA PCU

Overload Relay Selection and Data

1. Class 10 Protection
2. Tripping Current is 120% of Dial Setting

Selection and Dial Setting Guidelines

Motors with Service Factor of 1.0

1. Select overload relay on the FLA as shown on the motor nameplate.
2. Adjust overload relay dial to the motor nameplate FLA.

Motors with Service Factor Greater than 1.0

1. Select overload relay based on the following formula: FLA shown on the motor nameplate X Motor Service Factor X 0.95. For example: if the Motor Service Factor is 1.15, then choose the overload base on the formula (FLA X 1.15 X 0.95).
2. Adjust overload relay dial to the result of the formula shown above.

Caution:

This unit is fed from an external power source. Disconnect power and control wiring before performing inspection or maintenance.

Mise en garde:

Ce materiel est alimente a partir d'une source extreme. Deconnecter l'alimentation et le cablage de commande avant de proceder a l'examen ou a la maintenance.

Warning:

Overload relays with automatic reset may automatically start a motor connected to a 2 wire control circuit. When automatic restarting is not desired, use a 3 wire control circuit.

Avertissement:

Les relays de surcharge a rearmement automatique peuvent effectuer la mise en marche automatique d'un moteur connecte a un circuit de commande bifilaire. Si la mise en marche automatique n'est pas souhaitee, utiliser un circuit de commande trifilaire.

Danger:

Unless Class J fuses are used this switch may present a risk of fire and personal injury if installed on circuit capable of delivering more than 100,000 RMS symmetrical amperes.

Danger:

A moins d'utiliser des fusibles de class J, cet interrupteur peut presenter un risque d'incendie et de blessure s'il est installe sur un circuit pouvant debiter un courant efficace symetrique superieur a 100 000 A.

Attention:

The opening of the branch-circuit protection device may be indication that a fault has been interrupted. To reduce the risk of fire or electric shock, current-carrying parts and other components of the starter should be examined and replaced if damaged. If burnout of the overhead occurs, then the complete overhead relay must be replaced.

Attention:

Le declenchement du dispositif de protection de la derivation peut indiquer qu'un court circuit s'est produit. Afin de reduire le risque d'incendie ou de choc electrique les places conductrices et autres composants du demarreur devraient etre verifiees et remplacees s'ils sont endommages. Si le dispositif de protection contre la surcharge est detruit, on doit le remplacer au complet.

Fuse and Short Circuit Information:

When protected by Class J fuses, this switch is suitable for use on a circuit capable of delivering not more than 100ka RMS symmetrical, 600v. max.

OVERLOAD MANUAL AUTO RESET CATALOG NUMBER	MOTOR FULL LOAD 3ph, 3 Heater Ampere		RECOMM. TIME DELAY J FUSE
	MIN.	MAX.	
RT1B	0.16	0.26	1
RT1C	0.25	0.41	1
RT1D	0.40	0.65	1
RT1F	0.65	1.1	1.5
RT1G	1.0	1.5	2
RT1H	1.3	1.9	3
RT1J	1.8	2.7	4
RT1K	2.5	4.1	6
RT1L	4.0	6.3	9
RT1M	5.5	8.5	12
RT1N	8.0	12.0	20
RT1P	10.0	16.0	25
RT1S	14.5	18.0	30
RT1T	17.5	22.0	30

Amp Rating	Fuse Type (Class)	Maximum Horsepower (3 Phase)				
		200V	208V	240V	480V	600V
22A	J	5	7.5	7.5	15	15

* Horsepower Ratings are Determined by the Selected Overload Relays

Terminals: USE 75°C. CU. Wire ONLY

Load End Terminals: AWG wire size: 14-8
lb/in maximum: 14-20

Control Circuit Fusing:

REFER TO GEH-6473

Figure 3. OVERLOAD SELECTION AND PRECAUTIONARY INFORMATION

NOTE:

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation operation or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the ABB Company.