

**Part Number:** DI-003 Kit (UTC000100 or UTC000064 Card)

**Applicability:** G7

**Introduction:** The 120VAC Logic Interface option card mounts directly to the control terminal block on the drive and allows the use of 120VAC control logic circuits as digital inputs to the drive (S9 - S12). **Please check the note on Page 3 regarding power terminal strip interference.**

To use all 12 inputs of the G7 (S1 - S12), this option card must be used in conjunction with the DI-001 kit, which covers inputs (S1 - S8). **Please refer to page 2 for details on installing the DI-003 kit in conjunction with the DI-001 kit.**

**Receiving:** All equipment is tested against defect at the factory. Report any damages or shortages evident when the equipment is received to the commercial carrier who transported the equipment.

**Warning:** Hazardous voltage can cause severe injury or death. Lock all power sources feeding the drive and the option card's wiring in the "OFF" position.

**Important:** Before installing this option, a technically qualified individual, who is familiar with this type of equipment and the hazards involved, should read this entire installation guide.

### Installation and Wiring:

1. Disconnect all electrical power to the drive.
2. Remove the drive's front cover.
3. Verify that the "CHARGE" indicator lamp inside the drive is off.
4. Use a voltmeter to verify that the voltage at the incoming power terminals (L1, L2, L3) has been disconnected.
5. Complete all main circuit terminal connections as the installation of this board may block wiring access.
6. Complete all field wiring to the option card **BEFORE** mounting the card to the drive. Follow this procedure to prevent damage to the finger terminals of the option card.
7. Connect the Neutral (common) of the command signals to terminal X2 of the option card.
8. Connect the command signals to the desired inputs of the option card. See example in Figure 1.

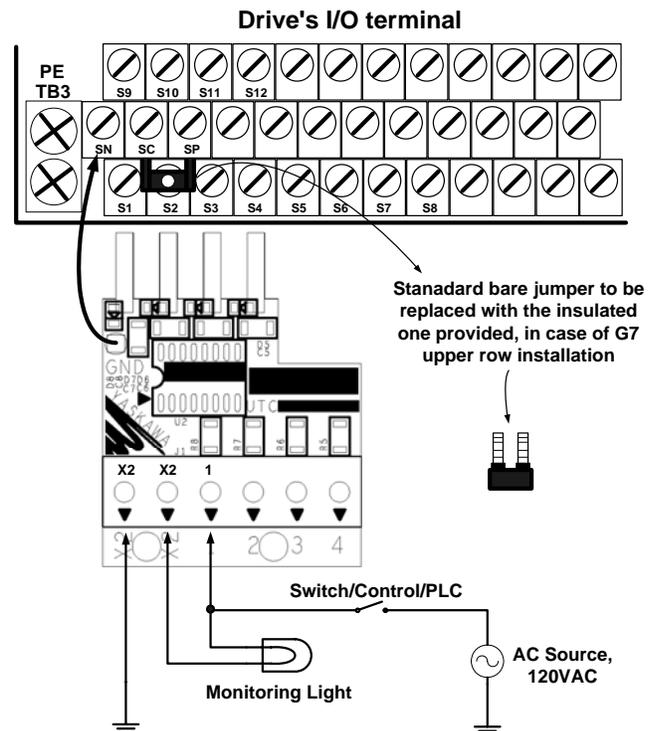
**Important:** Wires to the option card should be stripped  $0.2" \pm 20\%$  for maximum system safety. Solder dipping or ferrules are also highly recommended.

**Important:** For monitoring the input command signals, optional pilot lights such as Neon modules can be connected to the option card's input terminals. However, their Neutral **MUST** be connected to the second (unused) X2 pin to avoid erroneous operation in case of a wire break.

9. Remove the standard bare jumper between the drive's I/O terminals SC and SP and replace it with the insulated jumper included in the DI-003 kit.

**Important:** The provided insulated jumper will prevent any electrical and mechanical disturbances to the option card installation.

Table 1. General Specifications
Inputs: 4 + 2 Neutrals
Input Voltage: 120 VAC $\pm$ 15%, 57 - 63Hz
Input Impedance: 19 Kohm
Input Off Current: 4 mA
ON Response Time: 9 ms
OFF Response Time: 32 ms



One channel shown as example, remaining channels are identical.

Figure 1. 120VAC Logic Input Option Card

Table 2. Terminal and Wire Specifications			
Terminal Symbol	Terminal Screw	Clamping Torque Lb-in (N-m)	Wire Range AWG (mm <sup>2</sup> )
J1	M3	4.2 to 5.3 (0.5 to 0.6)	26 to 16 (Stranded: 0.14 to 1.5) (Solid: 0.14 to 1.5)

10. Insert the option card's P1 wire into the drive's I/O terminal SN. This must be done before proceeding to step 11.
11. Insert the option card, with the input terminals facing up, into the drive's I/O terminals S9 - S12 and tighten all 4 screws.
12. There are no adjustments to be made to this option card.
13. Reinstall and secure the drive's front cover.
14. Place this instruction sheet with the drive's technical manual.

**Installing the DI-001 with DI-003 on the G7:** To install both cards simultaneously, the following specific order must be followed which combines the installation procedures outlined in the DI-001 and DI-003 installation guides.

1. Complete all main power circuit terminal connections as the installation of these boards may block wiring access.
2. Wire and install the UTC000120 option card for I/O terminals S1 - S8. Do not land the option card ground wire (P1) to the drive's I/O terminal SN.
3. Remove the standard bare jumper between the drive's I/O terminals SC and SP and replace it with the insulated jumper included in the DI-003 kit. The provided insulated jumper will prevent any electrical and mechanical disturbances to the option card installation.
4. Complete all wiring to the I/O terminal's second row, as the installation of the UTC000100 card will block access to these terminals.
5. Insert both the UTC000100 and UTC000120 cards' P1 wires into terminal SN of the drive.
6. Wire and install the UTC000100 option card for I/O terminals S9 - S12.

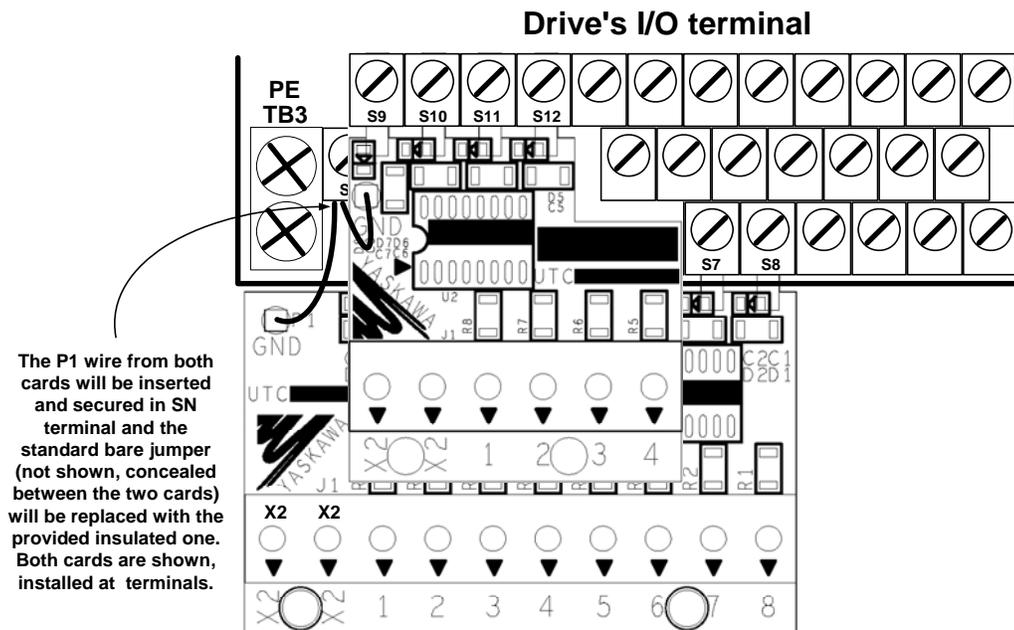


Figure 2. Installing both UTC000100 and UTC000120 on the G7 to cover all 12 digital inputs, S1 thru S12.

**Important:** Some drive models manufactured prior to the release of the DI-001 120VAC Interface option kit may have a power terminal strip label that will interfere with the installation of the UTC000120 option card. If you have one of the drive models listed in Table 3 with an interfering power terminal strip label part number, please contact your Yaskawa sales representative and order the corresponding replacement label listed.

Drive Model: CIMR-G7Uxxxx	Interfering Labels	Acceptable Labels	Replacement Label to Order for Interfering Label
2018	UNP00074-11 or NPJT31282	UNP00141-1 or NPJT31399	UNP00141-1
2022	UNP00075-11 or NPJT31283	UNP00142-1 or NPJT31400	UNP00142-1
4018	UNP00075-11 or NPJT31283	UNP00142-1 or NPJT31400	UNP00142-1
4022	UNP00075-11 or NPJT31283	UNP00142-1 or NPJT31400	UNP00142-1
4030	UNP00076-11 or NPJT31284	UNP00143-1 or NPJT31401	UNP00143-1
4037	UNP00076-11 or NPJT31284	UNP00143-1 or NPJT31401	UNP00143-1
4045	UNP00076-11 or NPJT31284	UNP00143-1 or NPJT31401	UNP00143-1