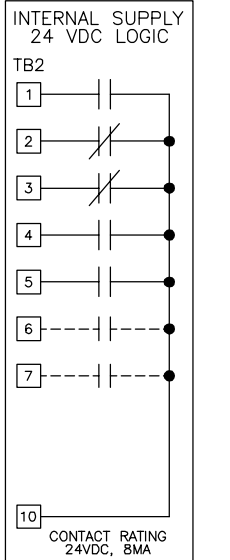


| CONTROL TRANSFORMER PRIMARY CONNECTIONS |           |      |                 |
|---|-----------|------|-----------------|
| INPUT VOLTS                             | TERMINALS |      | JUMPER LOCATION |
|   | A         | B    |                 |
| 208                                     | (H1)      | (H2) | NONE            |
| 460/480                                 | (H1)      | (H4) | (H2) TO (H3)    |



PROGRAMMABLE CONTACT INPUTS DI-1/2/3/4/5/6/7/8

- DI-1 RUN (AUTO MODE)
- DI-2 RUN ENABLE (SAFETY)
- DI-3 RUN INTERLOCK (BAS)
- DI-4 REMOTE TRANSFER
- DI-5 SMOKE PURGE BYPASS
- DI-6 SPARE
- DI-7 SPARE
- DI-8 S10
- IG24 S9
- IG24 24V COMMON
- 11 SHIELD GROUND
- 12 SHIELD GROUND

PROGRAMMABLE RELAYS DO-7/8/9/10

- DO-7 MOTOR RUN
- DO-8 HAND MODE
- DO-9 AUTO MODE
- DO-10 SYSTEM FAULT

AS SELECTED BY ELECTRONIC BYPASS CONTROL PARAMETERS Z2-23 TO Z2-26

CONTACTS FOR CUSTOMER USE  
RATED: 2A, 24VDC/120VAC +/- 15% MAX.  
CUSTOMER MUST PROVIDE PROPER SHORT CIRCUIT PROTECTION AND MEANS OF DISCONNECT.

RS485 SERIAL COMMUNICATION SELECTIONS AVAILABLE:

1. MODBUS
2. N2 / METASYS
3. FLN / APOGEE
4. BACNET (FACTORY SETTING)

HOA OPERATOR  
PART NUMBER JVOP-183

| REVISIONS |   |       |            |          |
|-----------|---|-------|------------|----------|
| REV.      | DESCRIPTION                                     | ECO # | DRAWN BY   | DATE     |
| 04        | CHANGED REACTOR L4 TERMINAL DESIGNATORS         | 8251  | R. ROH     | 11/09/17 |
| 03        | CHANGE REF NUMBERS 101-141 TO 201-241 ON PAGE 2 | 6330  | DJP        | 6/12/15  |
| 02        | ADDED DASHED LINE AROUND A6                     | 4453  | K. MALUSIC | 8/13/13  |

**YASKAWA**

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|                 |             |      |         |
|-----------------|-------------|------|---------|
| DRAWN BY        | K. MALUSIC  | DATE | 4/23/13 |
| CHECKED         | D.R. CMELAK | DATE | 4/23/13 |
| TECH            |             | DATE |         |
| APPROVED        | K. FLIERL   | DATE | 4/23/13 |
| ORIGINAL DESIGN | D.R. CMELAK | DATE | 4/23/13 |

TITLE: SCHEMATIC DIAGRAM Z1000 ELECTRONIC BYPASS

| SIZE | REVISION | PAGE   |
|------|----------|--------|
| D    | 04       | 1 of 2 |

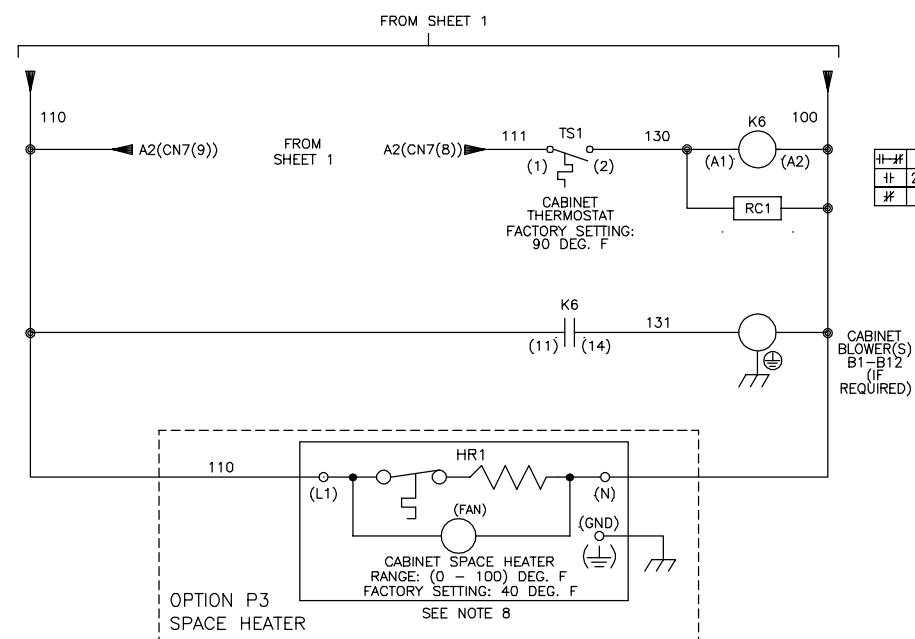
DRAWING #: DS.Z1B3.02

\* - INDICATES COMPONENTS NOT SUPPLIED BY YASKAWA.  
 - - INDICATES CUSTOMER WIRING.  
 - - CONNECTED TO THE CABINET OR PANEL.  
 SEE SHEET 2 FOR NOTES.

201  
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NOTES:

1. CUSTOMER TO CONNECT THE CABINET GROUND LUGS TO EARTH GROUND AND UTILITY GROUND.
2. CONDUIT FITTINGS/HUBS SHALL COMPLY WITH THE 'STANDARD FOR CONDUIT, TUBING, AND CABLE FITTINGS, UL 514B'. OR CONDUIT FITTINGS HAVING THE SAME ENVIRONMENTAL RATING AS THE ENCLOSURE SHALL BE USED.
3. INSULATED TWISTED SHIELDED WIRE IS REQUIRED. SHIELD TO CONNECT TO PROPER TERMINAL AS SHOWN. CONNECT THE SHIELD ONLY AT THIS END. STUB AND ISOLATE THE OTHER END. DO NOT RUN THESE WIRES IN THE SAME CONDUIT AS THE AC POWER AND THE AC CONTROL WIRES.
4. WITH A CONTROL TRANSFORMER, T1, POWER RATING 350VA OR GREATER, SECONDARY FUSE F6 IS ADDED.
5. CHANGING Z1-01 TO "1" WILL PROGRAM THE DRIVE AND BYPASS PARAMETERS TO THEIR FACTORY DEFAULT SETTINGS.
6. FOR 208VAC APPLICATIONS, SET E1-01 TO 208, AND SET E1-05 TO 208.
7. THE MOTOR OVERLOAD RELAY IS FACTORY SET FOR MANUAL RESET. CUSTOMER TO ADJUST THE MOTOR OVERLOAD RELAY TRIP SETTING FOR THE ACTUAL AC MOTOR'S FULL LOAD AMPS.
8. CUSTOMER TO ADJUST THE THERMOSTAT ON THE SPACE HEATER HR1 FOR THE MINIMUM DESIRED TEMPERATURE INSIDE THE DRIVE CABINET. THIS SET TEMPERATURE IS NORMALLY SELECTED TO BE SLIGHTLY HIGHER THAN THE MINIMUM AMBIENT TEMPERATURE OF THE AIR SURROUNDING THE CABINET. AND IS THE TEMPERATURE AT WHICH THE SPACE HEATER HR1 WILL SHUT OFF.



|  |                  |             |       |         |           |                         |        |  |
|--|------------------|-------------|-------|---------|-----------|-------------------------|--------|--|
| <b>YASKAWA</b>   | DRAWN BY:        | K. MALUSIC  | DATE: | 4/23/13 | TITLE:    | SCHEMATIC DIAGRAM       |        |  |
|  | CHECKED:         | D. CMELAK   | DATE: | 4/23/13 |           | Z1000 ELECTRONIC BYPASS |        |  |
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|  | APPROVED:        | K. FLIERL   | DATE: | 4/23/13 | D         | 04                      | 2 of 2 |  |
|  | ORIGINAL DESIGN: | D.R. CMELAK | DATE: | 4/23/13 | DRAWING#: | DS.Z1B3.02              |        |  |