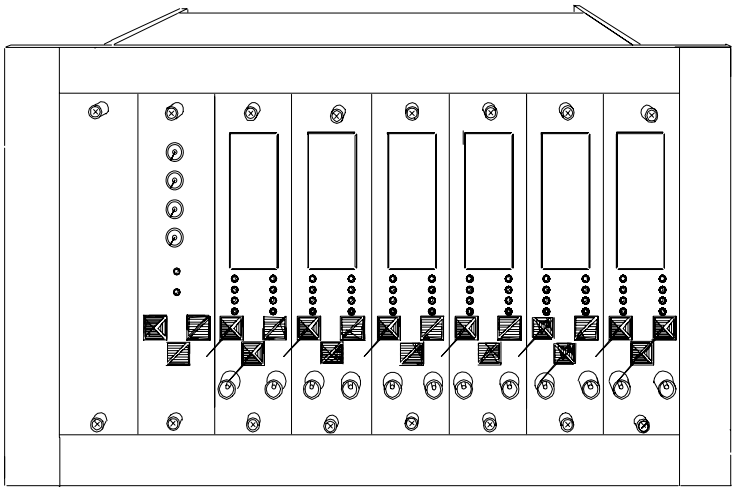
Installation Manual

Bently Nevada™ Asset Condition Monitoring



3300 System Installation

imagination at work

Part Number 80172-01
Rev. N (08/07)

Contact Information

The following ways of contacting Bently Nevada are provided for those times when you cannot contact your local representative:

Mailing Address	1631 Bently Parkway South Minden, Nevada USA 89423 USA
Telephone	1.775.782.3611 1.800.227.5514
Fax	1.775.215.2873
Internet	www.ge-energy.com/bently

Additional Information

Notice:

This manual does not contain all the information required to operate and maintain the product. Refer to the following manuals for other required information.

3300 System Overview (Part Number 80171-01)

3300 System Troubleshooting (Part Number 80173-01)

The above two documents and 80172 are available as Part Number 80170-01 or -02.

3300/12 AC Power Supply (Part Number 89602-01)

3300/14 DC Power Supply (Part Number 101256-01)

3300/03 System Monitor (Part Number 89604-01)

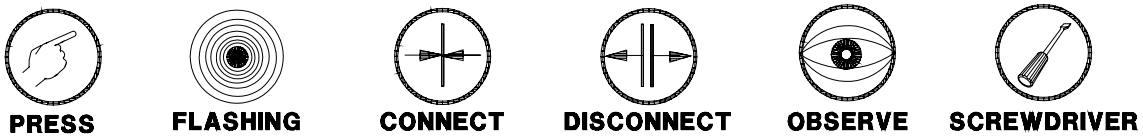
3300 Internal Barrier Manual (Part Number 88837-01)

Product Disposal Statement

Customers and third parties, who are not member states of the European Union, who are in control of the product at the end of its life or at the end of its use, are solely responsible for the proper disposal of the product. No person, firm, corporation, association or agency that is in control of product shall dispose of it in a manner that is in violation of any applicable federal, state, local or international law. Bently Nevada LLC is not responsible for the disposal of the product at the end of its life or at the end of its use.

Symbols

Special symbols are used in the manual to illustrate specifics in the step-by-step processes. For example:

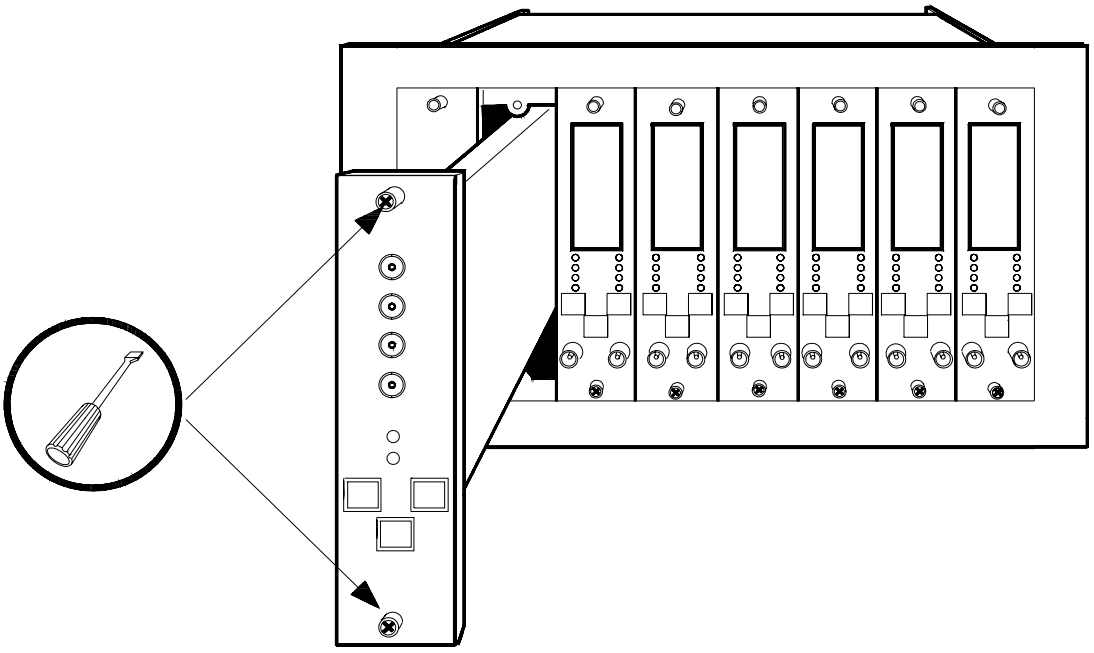


Contents

1. RECEIVING INSPECTION

1. Visually inspect the exterior of rack assembly and components for obvious shipping damage.

2. Inspect interior of monitors and power supply. Loosen screws to pull each monitor and power supply out from rack.



DAMAGE CLAIMS

If shipping damage is apparent, file a claim with the carrier and submit a copy to Bently Nevada Corporation.

2. HANDLING & STORING CONSIDERATIONS

Handling and storing of printed circuit boards is extremely critical. Circuit boards contain devices that are susceptible to damage when exposed to electrostatic charges. Damage caused by obvious mishandling of the board will void the warranty. To avoid damage, observe the following precautions in the order given.

CAUTION

Machinery protection will be lost when power is removed from the instrument.

- Prior to servicing, remove all power to the instrument.

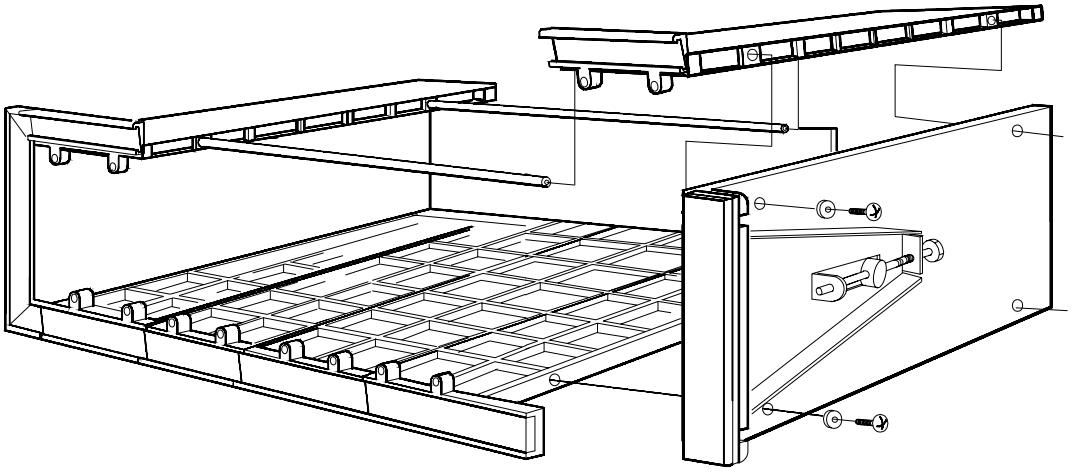
- Do not discharge static electricity onto the circuit board. Avoid tools or procedures that would subject the circuit board to static damage. Some of the possible causes include ungrounded soldering irons and nonconductive plastics or similar materials.

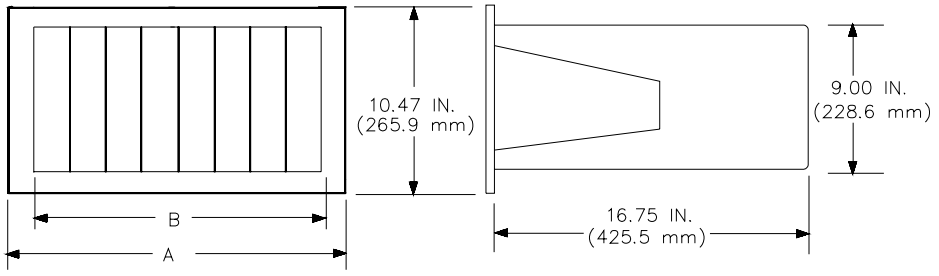
- Personnel must be grounded with a suitable grounding strap (such as 3M Velostat No. 2060) prior to handling or performing maintenance on a printed circuit board.

- Transport and store circuit boards in electrically conductive bags or foil.

- Use extra caution during dry weather. Relative humidity less than 30% tends to multiply the accumulation of static charges on any surface.

3. RACK ASSEMBLY OPTIONS



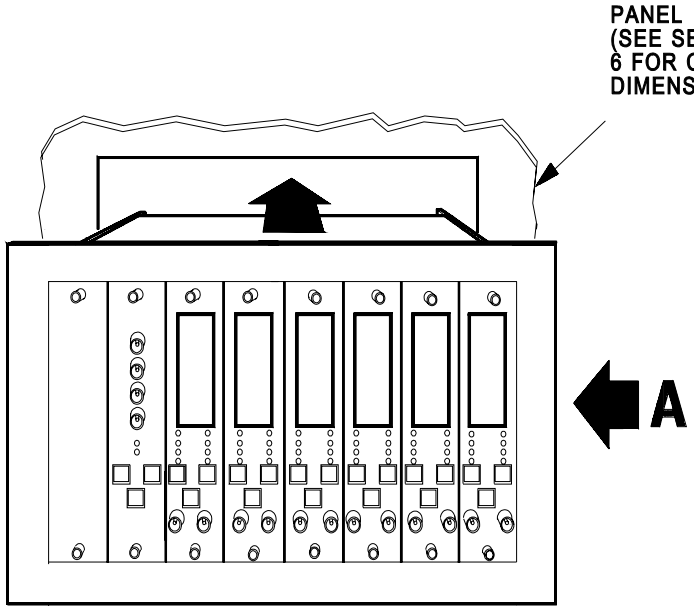


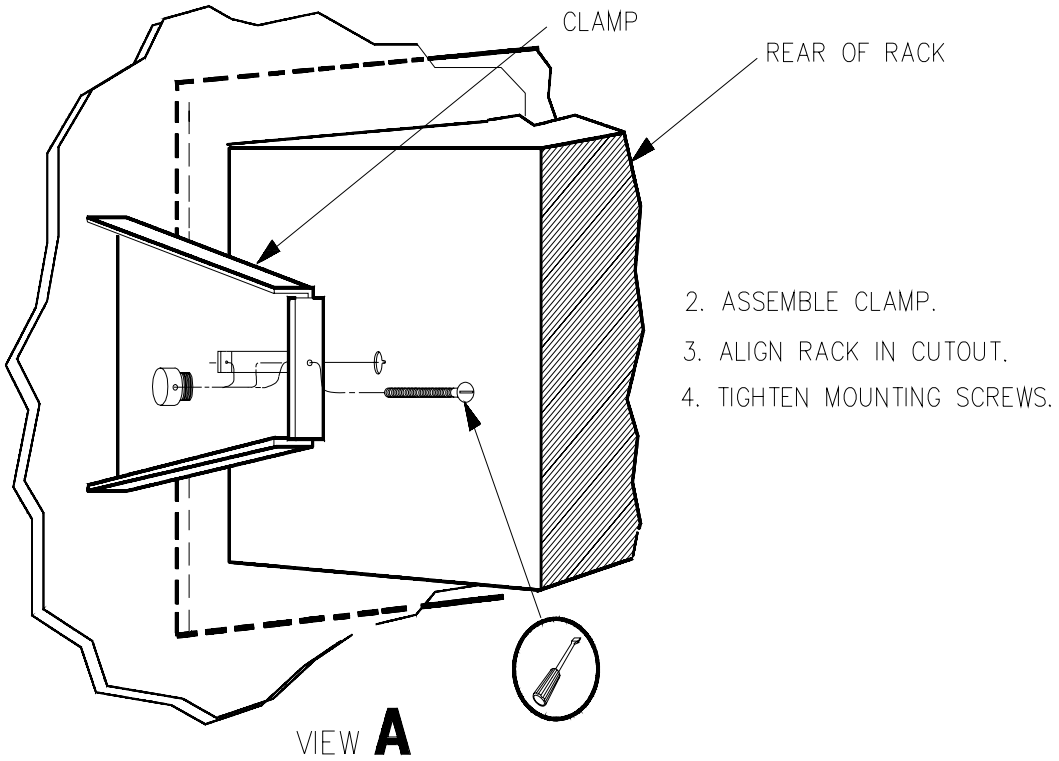
EXTERNAL DIMENSIONS

	A	B
01,11,21,31 = 4 POSITIONS	11.00 IN. (279.4 mm)	8.00 IN. (203.2 mm)
02,12,22,32 = 6 POSITIONS	15.00 IN. (381.0 mm)	12.00 IN. (304.8 mm)
03,13,23,33 = 8 POSITIONS	19.00 IN. (482.6 mm)	16.00 IN. (406.4 mm)
04,14,24,34 = 10 POSITIONS	23.00 IN. (584.2 mm)	20.00 IN (508.0 mm)
05,15,25,35 = 12 POSITIONS	27.00 IN (685.8 mm)	24.00 IN. (609.0 mm)
06,16,26,36 = 14 POSITIONS	31.00 IN. (787.4 mm)	28.00 IN. (711.2 mm)
07,17,27,37 = 8 POSITIONS	19.00 IN. (482.6 mm)	16.00 IN (406.4 mm)

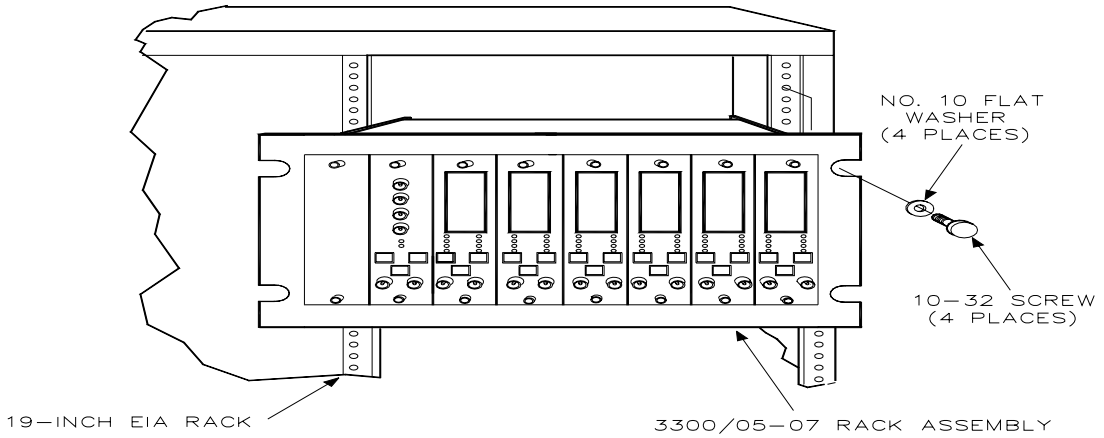
4. RACK INSTALLATION [PANEL MOUNT]

1. Slide rack through panel cutout.





5. RACK INSTALLATION [19-INCH EIA]

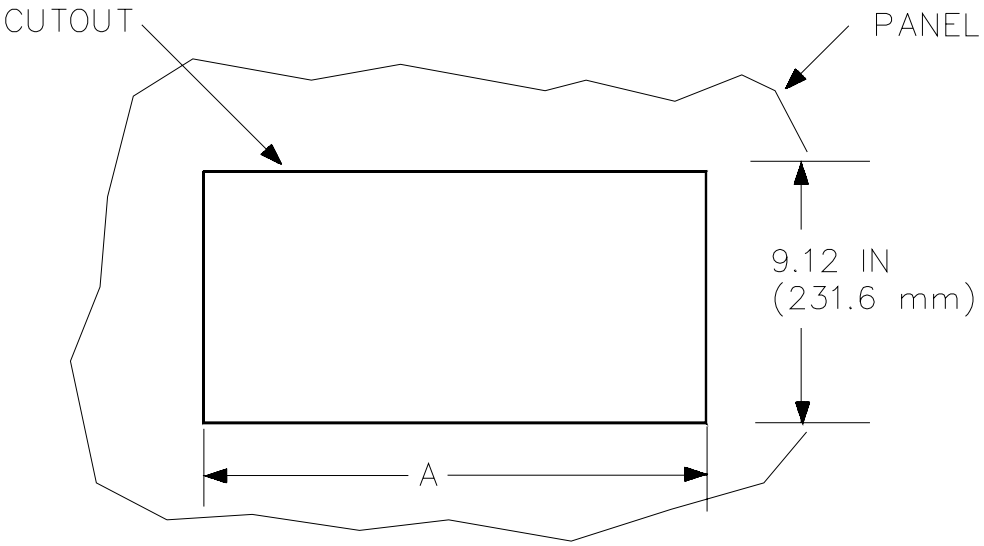


PART NO. 3300/05— AA [0 7] *

RACK SIZE
07 = 8 Position 19—Inch EIA Rack

* ALSO APPLICABLE TO AA OPTION 17, 27, AND 37.

6. PANEL CUTOUT DIMENSIONS



OPTIONS	RACK SIZE	A
01,11,21,31	4 POSITIONS	8.56 IN. (217.5 mm)
01.12.22.32	6 POSITIONS	12.57 IN (319.3mm)
03,13,23,33	8 POSITIONS	16.57 IN. (420.8mm)
04,14,24,34	10 POSITIONS	20.58 IN (522.7 mm)
05,15,25,35	12 POSITIONS	24.58 IN (624.3 mm)
06,16,26,36	14 POSITIONS	28.59 IN (726.2 mm)
07,17,27,37	8 POSITIONS	SEE SECTION 5

NOTE

The dimensions specified for "A" in the table above refer to the case where a panel is being cut out for the rack only and not for the weatherproof housing. The panel cutout dimensions for the weatherproof housing are specified in the "Tabulated Data" table in section 7 under the "E" column.

7. WEATHERPROOF HOUSING INSTALLATION

The next 5 pages contain the weatherproof housing installation drawing, 330006.

REVISION						
ZONE	LTR	DESCRIPTION	BY	DATE	APPD	DATE
	E	INC CCO 33499	FCL	JUL 94		JUL 94
	F	NOT RELEASED				
	G	INC CCO 37276	NT	20AUG 96	ALD	13SEP 96

△12 PURGE FLOW RATE (TIME REQUIRED TO PURGE 5 OR 10 VOLUMES OF AIR THROUGH HOUSING) IS DETERMINED BY; (A) TURN VALVE TO VENT POSITION AND READ GAUGE TO DETERMINE HOUSING PURGE PRESSURE, (B) FIND THAT PRESSURE ON (FIGURE 1) FOR N.F.P.A. INSTALLATIONS OR (FIGURE 2) FOR CANADIAN ELECTRICAL CODE INSTALLATIONS, (C) DETERMINE SIZE OF HOUSING THAT IS BEING PURGED AND READ FROM THAT COLUMN THE LENGTH OF TIME REQUIRED TO PURGE THE SYSTEM WITH YOUR HOUSING PRESSURE. THIS NUMBER, TIME IN MINUTES, SHOULD BE PERMANENTLY MARKED (ETCHED, STAMPED, ETC...) IN SPACE PROVIDED ON WARNING LABEL.

11. ALL TESTS AND RECOMMENDATIONS MADE BY B.N.C. ARE IN ACCORDANCE WITH SPECIFICATIONS AND REQUIREMENTS MADE BY N.F.P.A. IN PAMPHLET 496–1982 FOR TYPE Y PURGE, OR CANADIAN ELECTRICAL CODE C221–1986, PART 1. FOR ADDITIONAL INFORMATION ON PURGE REQUIREMENTS, REFER TO ABOVE STANDARDS.

△10 CONDUIT FILL: PERCENTAGE OF CONDUIT FILL SHOULD NOT EXCEED 40% AS SPECIFIED IN NATIONAL ELECTRICAL CODE, 1975, CHAPTER 9, TABLES 1 AND 2.

9. WIRE ROUTING: BOTH UPPER CONDUITS ARE FOR TRANSDUCER POWER, SIGNAL INPUT AND RECORDER OUTPUT WIRING. BOTH LOWER CONDUITS ARE FOR POWER INPUT AND RELAY WIRING. POWER INPUT AND RELAY WIRING SHOULD NOT BE MIXED IN THE SAME CONDUIT WITH TRANSDUCER, SIGNAL AND RECORDER WIRING.

△8 CONDUIT FITTING OPTION (–01) INCLUDES FOUR 1 1/4 NPT WEATHERPROOF HUBS. AIR PURGE FITTING OPTION (–01) INCLUDES FOUR 1 1/4 NPT POUR SEAL TYPE FITTINGS AND ONE 3/4 NPT WEATHERPROOF HUB, WITH FITTINGS TO REDUCE DOWN TO 1/4 NPT (FEMALE) FOR AIR INPUT. AIR PURGE FITTING OPTION (–02) INCLUDES; (–01) AIR PURGE FITTINGS, GAUGE ASSY, BULKHEAD CONNECTOR AND CONNECTING TUBE. WHEN AIR PURGE ACCESSORIES (–01 OR –02) ARE REQUIRED, CONDUIT FITTING OPTION (–01) IS ALSO REQUIRED.

7. SHT. 5 OF 5 SHOWS –01 & –02 AIR PURGE OPTIONS. SHT. 5 OF 5 IS NOT FURNISHED WITH CUSTOMER DRAWING PACKAGE WHEN THESE OPTIONS ARE NOT REQUIRED.

6. THIS HOUSING IS DESIGNED TO MEET NEMA 4 REQUIREMENTS.

△5 SEE FOLLOWING SHEETS FOR: CONDUIT FITTING OPTION AND AIR PURGE OPTION.

△4 LOCATING DIMENSIONS FOR AIR PURGE FITTING HOLES.

△3 LOCATING DIMENSIONS FOR CONDUIT FITTING HOLES.

△2 MARK APPLICABLE DASH NO, INSTALL APPROXIMATELY WHERE SHOWN.

△1 THREAD SEAL WASHERS ARE SUPPLIED WITH ALL HOUSINGS. THESE WASHERS SHALL BE INSTALLED UNDER <u>ALL</u> INTERNAL HEADS OF MOUNTING BOLTS OR NUTS TO OBTAIN A WATER-TIGHT SEAL.

NOTES: UNLESS OTHERWISE SPECIFIED

BASIC CAT. NO.	BASIC WEIGHT	CONDUIT OPT.	–01 AIR PURGE	–02 AIR PURGE
3300/06–01	45 LBS	1 LB	4 LBS	7 LBS
3300/06–02	52 LBS	1 LB	4 LBS	7 LBS
3300/06–03	59 LBS	1 LB	4 LBS	7 LBS
3300/06–04	66 LBS	1 LB	4 LBS	7 LBS
3300/06–05	73 LBS	1 LB	4 LBS	7 LBS
3300/06–06	80 LBS	1 LB	4 LBS	7 LBS

BNC CAT. NO. 3300/06 – ☐☐ — ☐☐ — ☐☐ — ☐☐

OPTION CODE	HOUSING SIZE
01	4 POSITION RACK
02	6 POSITION RACK
03	8 POSITION RACK
04	10 POSITION RACK
05	12 POSITION RACK
06	14 POSITION RACK

OPTION CODE	CONDUIT FITTING OPTION
00	NO FITTINGS REQUIRED
01	CONDUIT FITTINGS REQUIRED

OPTION CODE	AIR PURGE OPTION
00	NO AIR PURGE ACCESSORIES REQUIRED
01	AIR PURGE FITTINGS ONLY △8
02	AIR PURGE FITTINGS AND GAUGE

OPTION CODE	APPROVALS
00	NONE
02	BASEEFA AC P/S
12	BASEEFA DC P/S

TABULATED DATA

HOUSING SIZE OPTION CODE	"A" DIM	"B" DIM	"C" DIM	"D" DIM	"E" DIM	"F" PLCS	"G" DIM	"H" PLCS	"J" DIM	"K" DIM
–01	14.39	———	7.200	———	13.40	8	16.65	12	12.90	24.40
–02	18.44	———	9.220	———	17.45	8	20.70	12	16.95	28.45
–03	22.49	16.867	11.245	5.623	21.50	12	24.75	16	21.00	32.50
–04	26.54	19.905	13.270	6.635	25.55	12	28.80	16	25.05	36.55
–05	30.59	22.943	15.295	7.647	29.60	12	32.85	16	29.10	40.60
–06	34.64	25.980	17.320	8.660	33.65	12	36.90	16	33.15	44.65

△16 AFTER INSERTING RACK INTO WEATHERPROOF HOUSING, SECURE IN PLACE USING (4) 10–32 SCREWS AS SHOWN.

△15 BEFORE INSERTING RACK INTO WEATHERPROOF HOUSING, INSTALL SUPPORT BRACKETS ONE AT A TIME; REMOVE SCREW ON LOWER REAR SIDE PANEL, INSTALL BRACKET AND REPLACE SCREW.

14. THIS HOUSING IS <u>NOT</u> EQUIPPED WITH OVER PRESSURE PROTECTION. MAXIMUM WORKING PRESSURE SHOULD NOT EXCEED 2.49 KILOPASCALS (10 INCHES OF WATER).

13. STATIC PURGE PRESSURE (PRESSURE REQUIRED TO INSURE THAT A HAZARDOUS ATMOSPHERE DOES NOT ENTER HOUSING) MUST BE ABOVE 0.2 INCHES OF WATER (.05 KILOPASCALS) FOR INSTALLATIONS THAT REQUIRE N.F.P.A. 495–1982 SPECIFICATION. FOR INSTALLATIONS THAT REQUIRE CANADIAN ELECTRICAL CODE C22.1–1986 SPECIFICATION PRESSURE MUST BE ABOVE 0.25 KILOPASCALS (1.0 INCHES OF WATER). THIS IS MEASURED ON THE GAUGE (AFTER HOUSING HAS BEEN PURGED) WITH VALVE IN THE CLOSED POSITION.

△18 FOR BASEEFA APPROVALS, INSTALL (16) AND (17) WITH 3300/06–XX–XX–XX–02 OR 3300/06–XX–XX–XX–12.

△17 PLACE LABEL FOR BASEEFA APPROVED WEATHERPROOF HOUSING ON W/P DOOR APPROX AS SHOWN. REFER TO DWG 81969 FOR BASEEFA APPROVALS.

UNLESS OTHERWISE SPECIFIED
FINISHED MACHINED SURFACES
ANGULAR ±
FRACTIONAL ±
DECIMAL .XX = ± .02
.XXX = ± .010

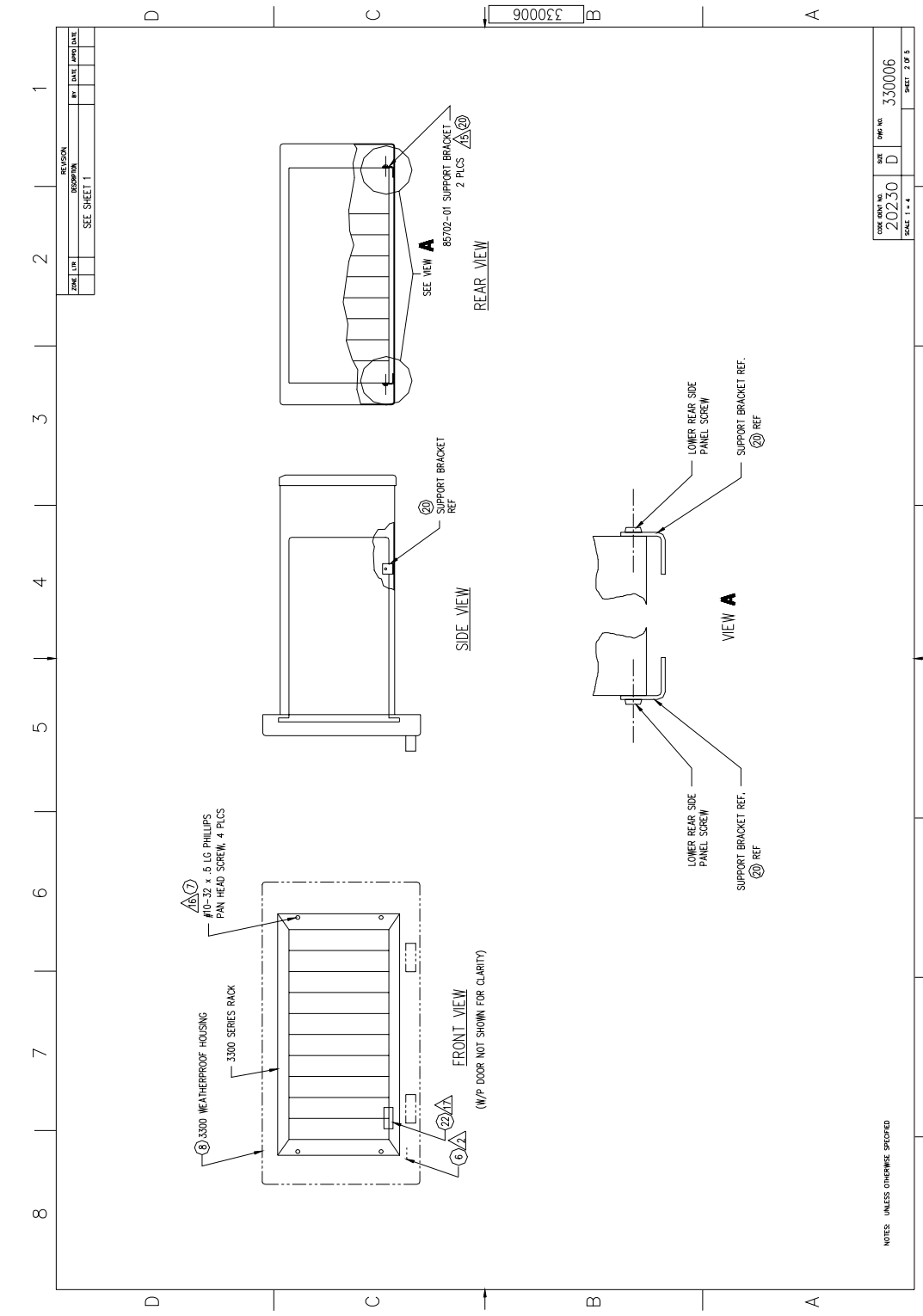
DRAWN ON CAD BY: S. BERG	DATE: 18 MAR. '91
CHECKED BY: E. JOHNSTON	18 MAR. '91
ENGINEER: J. BLACKWELL	18 MAR. '91
MFG.	
APPD	

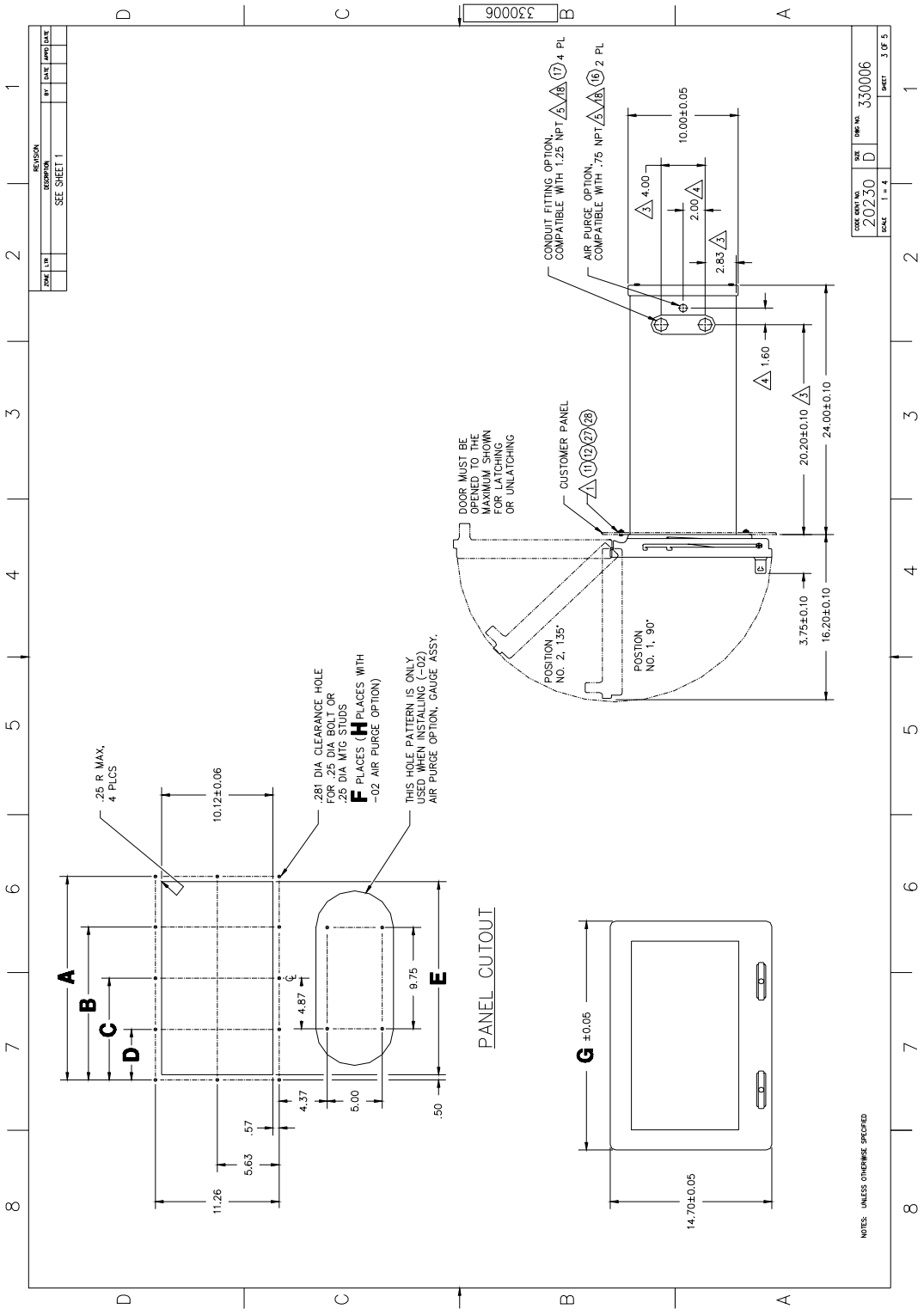
BENTLY NEVADA® MINDEN – NEVADA U.S.A. LEADER IN PROXIMITY MEASUREMENTS

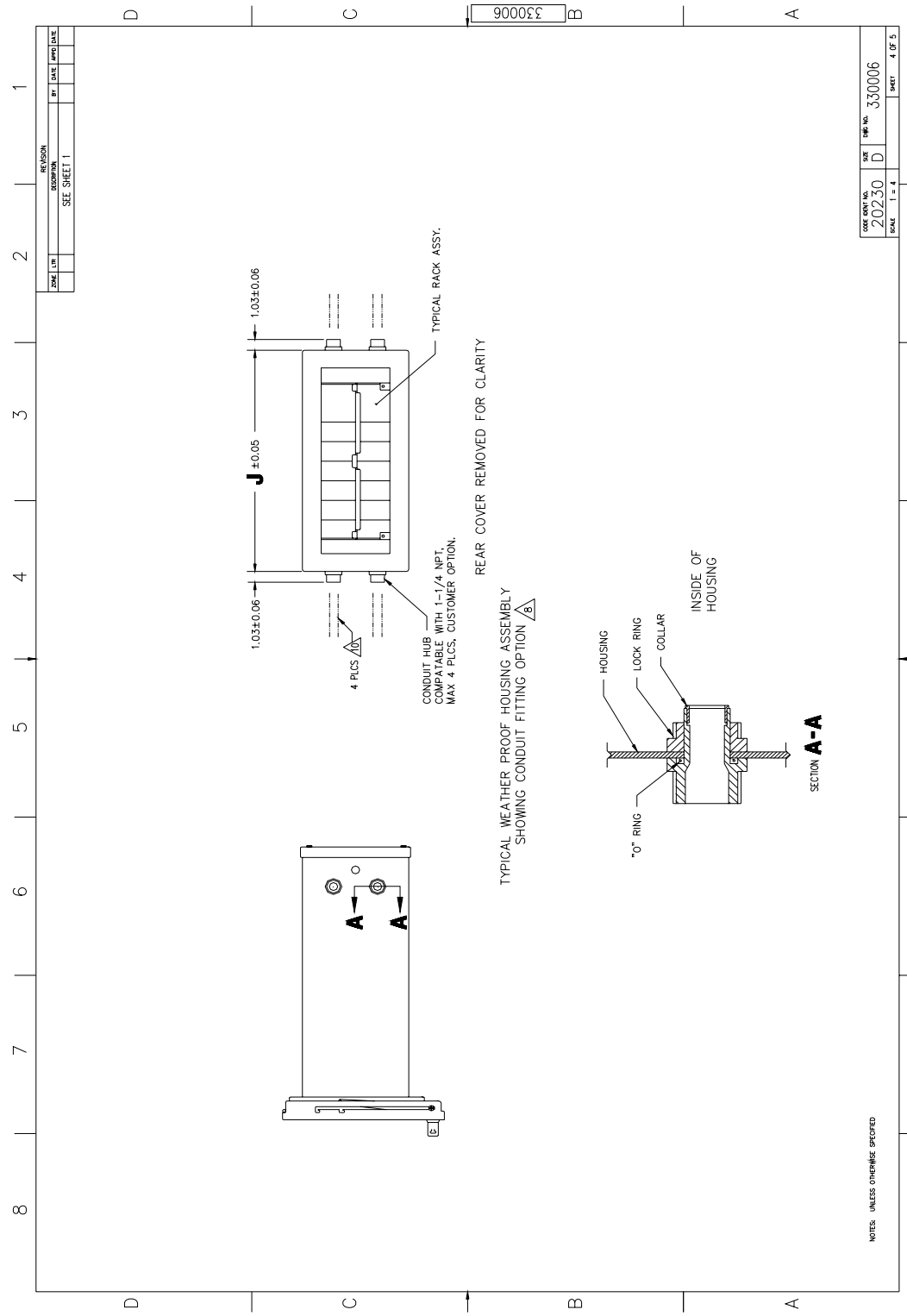
OUTLINE
WEATHERPROOF HOUSING, 3300 SERIES

CODE IDENT NO. 20230 | SIZE D | DWG NO. 330006
SCALE 1 = 1 | SHEET 1 OF 5

330006


330006
REVISION
ZONE LTR DESCRIPTION BY DATE APPD DATE
SEE SHEET 1
CODE IDENT NO. 20230
SIZE D
DWG NO. 330006
SCALE 1 = 4
SHEET 2 OF 5
85702-01 SUPPORT BRACKET 2 PLCS
SEE VIEW A
REAR VIEW
SUPPORT BRACKET REF
SIDE VIEW
LOWER REAR SIDE PANEL SCREW
SUPPORT BRACKET REF. REF
VIEW A
#10-32 x .6 LG PHILLIPS PAN HEAD SCREW, 4 PLCS
3300 SERIES RACK
3300 WEATHERPROOF HOUSING
FRONT VIEW
(W/P DOOR NOT SHOWN FOR CLARITY)
NOTES: UNLESS OTHERWISE SPECIFIED


330006
REVISION
SEE SHEET 1
CONDUIT FITTING OPTION, COMPATIBLE WITH 1.25 NPT
AIR PURGE OPTION, COMPATIBLE WITH .75 NPT
10.00±0.05
4.00
2.00
2.83
1.60
20.20±0.10
24.00±0.10
3.75±0.10
16.20±0.10
DOOR MUST BE OPENED TO THE MAXIMUM SHOWN FOR LATCHING OR UNLATCHING
CUSTOMER PANEL
POSITION NO. 2, 135°
POSTION NO. 1, 90°
.25 R MAX, 4 PLCS
10.12±0.06
.281 DIA CLEARANCE HOLE FOR .25 DIA BOLT OR .25 DIA MTG STUDS
F PLACES (H PLACES WITH -02 AIR PURGE OPTION)
THIS HOLE PATTERN IS ONLY USED WHEN INSTALLING (-02) AIR PURGE OPTION, GAUGE ASSY.
A
B
C
D
E
4.87
9.75
4.37
5.00
.50
.57
5.63
11.26
PANEL CUTOUT
G ±0.06
14.70±0.05
NOTES: UNLESS OTHERWISE SPECIFIED
CODE IDENT NO. 20230
SIZE D
DWG NO. 330006
SCALE 1 = 4
SHEET 3 OF 5


330006
REVISION
ZONE LTR DESCRIPTION BY DATE APPD DATE
SEE SHEET 1
CODE IDENT NO. 20230
SIZE D
DWG NO. 330006
SCALE 1 = 4
SHEET 4 OF 5
1.03±0.06
J ±0.05
1.03±0.06
4 PLCS
CONDUIT HUB COMPATABLE WITH 1-1/4 NPT, MAX 4 PLCS, CUSTOMER OPTION.
TYPICAL RACK ASSY.
REAR COVER REMOVED FOR CLARITY
TYPICAL WEATHER PROOF HOUSING ASSEMBLY SHOWING CONDUIT FITTING OPTION
HOUSING
LOCK RING
COLLAR
INSIDE OF HOUSING
"O" RING
SECTION A-A
NOTES: UNLESS OTHERWISE SPECIFIED

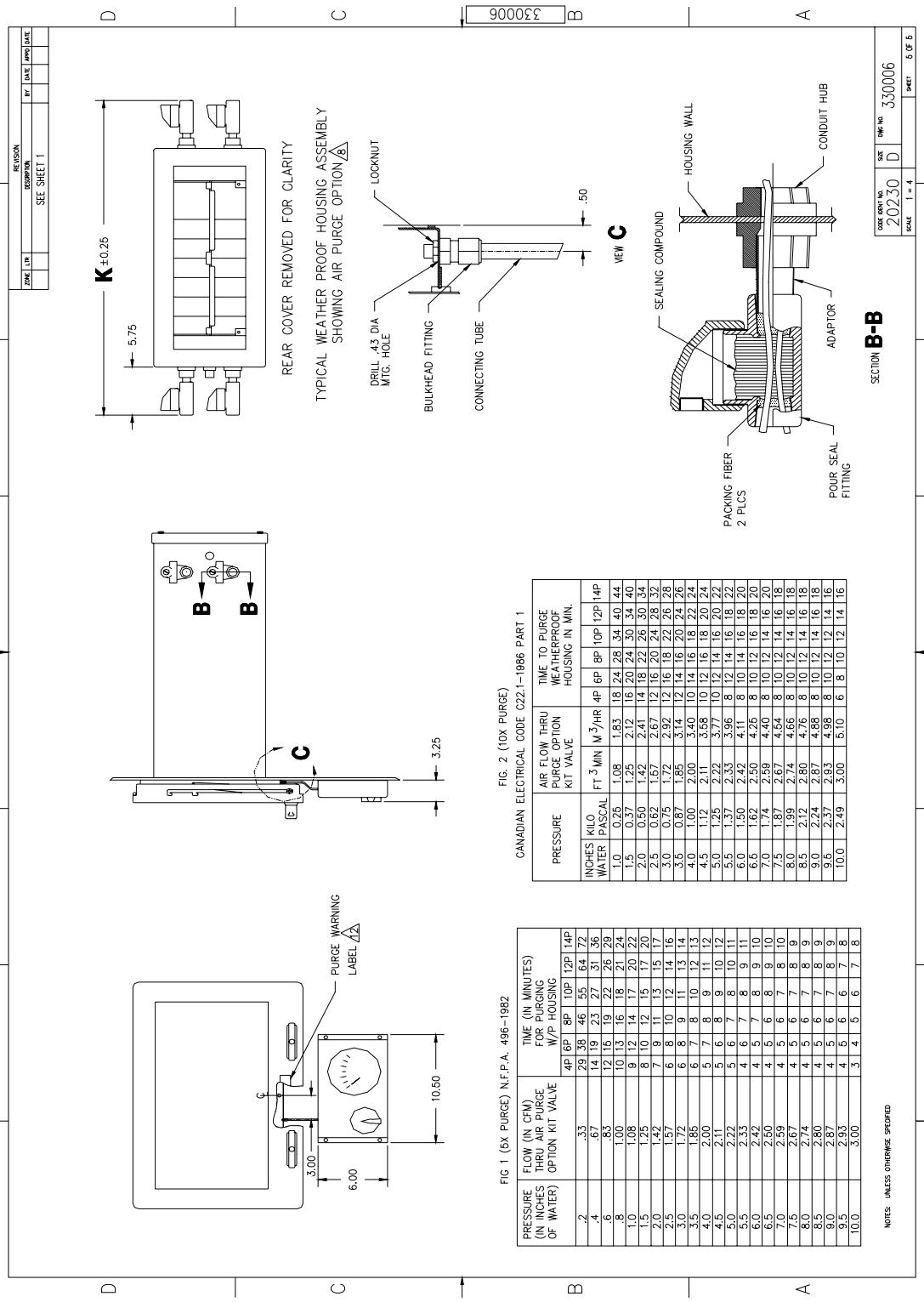


FIG 1 (6X PURGE) N.F.P.A. 496–1982

PRESSURE (IN INCHES OF WATER)	FLOW (IN CFM) THRU AIR PURGE OPTION KIT VALVE	TIME (IN MINUTES) FOR PURGING W/P HOUSING				
		4P	6P	8P	10P	12P	14P
.2	.33	29	38	46	55	64	72
.4	.67	14	19	23	27	31	36
.6	.83	12	15	19	22	26	29
.8	1.00	10	13	16	18	21	24
1.0	1.08	9	12	14	17	20	22
1.5	1.25	8	10	12	15	17	20
2.0	1.42	7	9	11	13	15	17
2.5	1.57	6	8	10	12	14	16
3.0	1.72	6	8	9	11	13	14
3.5	1.86	6	7	8	10	12	13
4.0	2.00	5	7	8	9	11	12
4.5	2.11	5	6	8	9	10	12
5.0	2.22	5	6	7	8	10	11
5.5	2.33	4	6	7	8	9	11
6.0	2.42	4	5	7	8	9	10
6.5	2.50	4	5	6	8	9	10
7.0	2.59	4	5	6	7	8	10
7.5	2.67	4	5	6	7	8	9
8.0	2.74	4	5	6	7	8	9
8.5	2.80	4	5	6	7	8	9
9.0	2.87	4	5	6	7	8	9
9.5	2.93	4	5	6	6	7	8
10.0	3.00	3	4	5	6	7	8

FIG. 2 (10X PURGE)
CANADIAN ELECTRICAL CODE C22.1–1986 PART 1

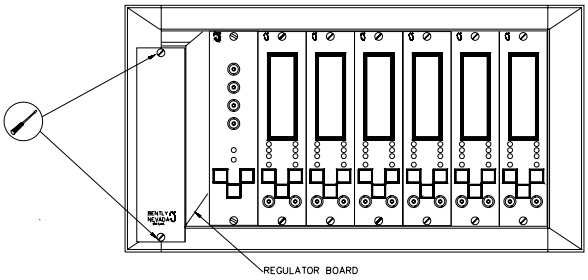
PRESSURE		AIR FLOW THRU PURGE OPTION KIT VALVE		TIME TO PURGE WEATHERPROOF HOUSING IN MIN.					
INCHES WATER	KILO PASCAL	FT^3 MIN	M^3/HR	4P	6P	8P	10P	12P	14P
1.0	0.25	1.08	1.83	18	24	28	34	40	44
1.5	0.37	1.25	2.12	16	20	24	30	34	40
2.0	0.50	1.42	2.41	14	18	22	26	30	34
2.5	0.62	1.67	2.67	12	16	20	24	28	32
3.0	0.75	1.72	2.92	12	16	18	22	26	28
3.5	0.87	1.86	3.14	12	14	16	20	24	26
4.0	1.00	2.00	3.40	10	14	16	18	22	24
4.5	1.12	2.11	3.58	10	12	16	18	20	24
5.0	1.25	2.22	3.77	10	12	14	16	20	22
5.5	1.37	2.33	3.96	8	12	14	16	18	22
6.0	1.50	2.42	4.11	8	10	14	16	18	20
6.6	1.62	2.50	4.25	8	10	12	16	18	20
7.0	1.74	2.59	4.40	8	10	12	14	16	20
7.5	1.87	2.67	4.54	8	10	12	14	16	18
8.0	1.99	2.74	4.66	8	10	12	14	16	18
8.5	2.12	2.80	4.76	8	10	12	14	16	18
9.0	2.24	2.87	4.88	8	10	12	14	16	18
9.5	2.37	2.93	4.98	8	10	12	12	14	16
10.0	2.49	3.00	5.10	6	8	10	12	14	16

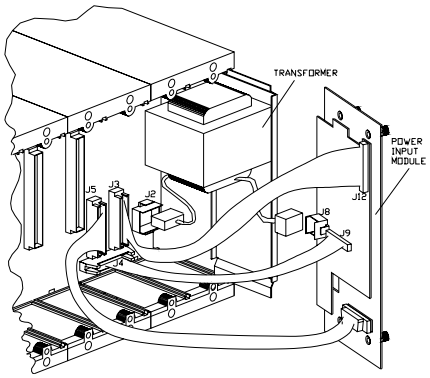
8. POWER SUPPLY INSTALLATION

For systems with the AC Power Supply, perform the following steps. For systems with the DC Power Supply, perform the steps on the following page.

WARNING

High voltage present
could cause shock,
burns, or death.
Do not touch exposed
wires or terminals.

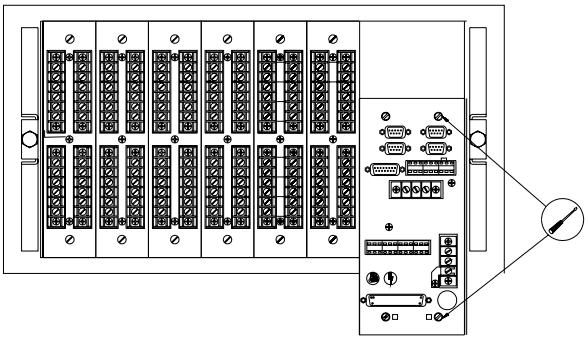




1. Slide Power Supply into rack and fasten two screws.

2. Slide the transformer assembly into the rack. Fasten the screw that mounts the support plate to the rack side panel. Connect cables to backplane and Power Input Module as shown.

3. Connect cables from backplane to Power Input Module as shown.

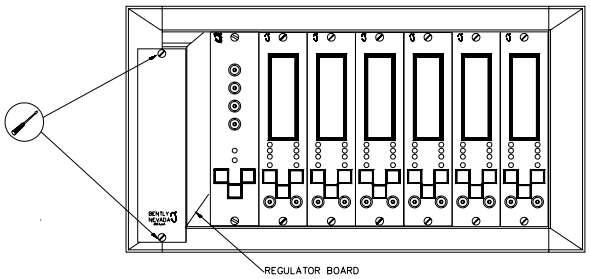


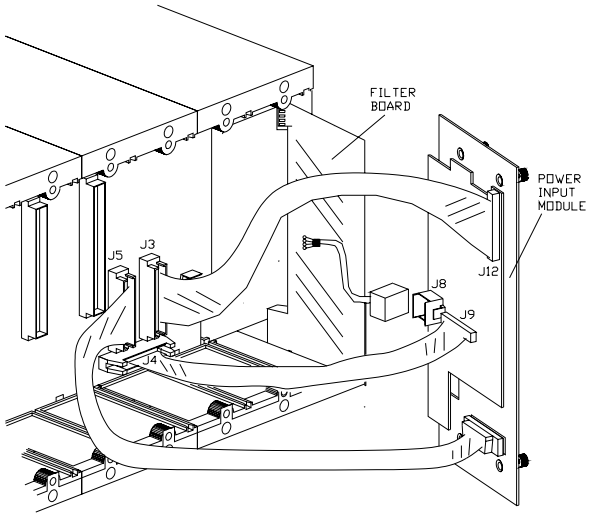
4. Place Power Input Module in position at rear of rack. Fasten retaining screws.

For systems with the DC Power Supply, perform the following steps.

WARNING

High voltage present
could cause shock,
burns, or death.
Do not touch exposed wires
or terminals.



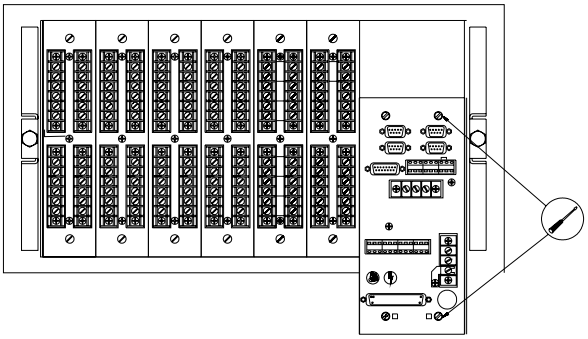


1. Slide Power Supply into rack and fasten two screws.

2. Insert filter board. Fasten screw that secures the filter board to the rack side panel. Connect cable from filter board to Power Input Module as shown.

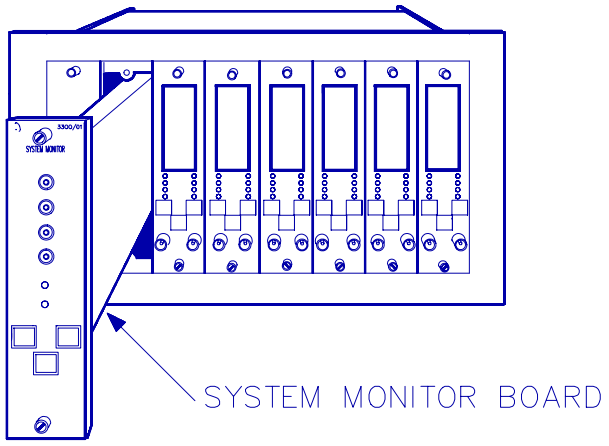
3. Connect cables from backplane to Power Input Module as shown.

4. Place Power Input Module in position at rear of rack. Fasten retaining screws.

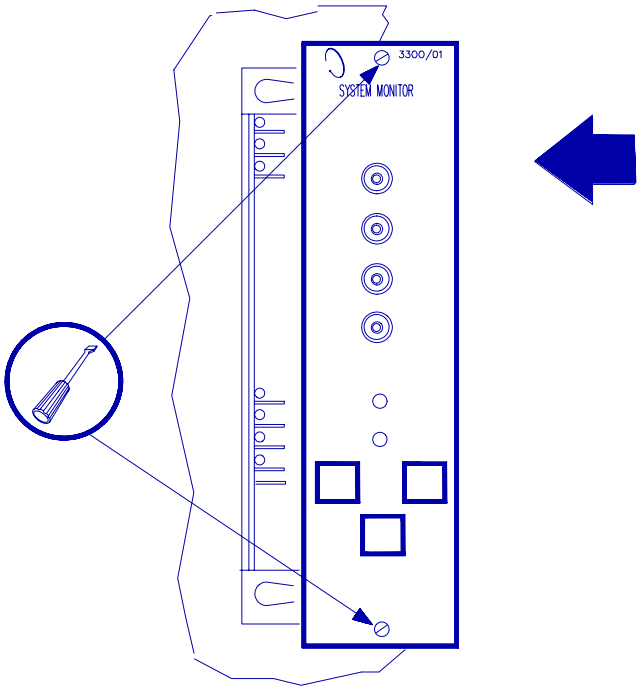


9. SYSTEM MONITOR INSTALLATION

1. Slide System Monitor panel to the right before inserting monitor. Slide System Monitor board into rack to engage connector on backplane.

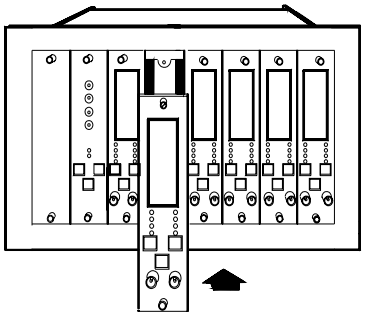


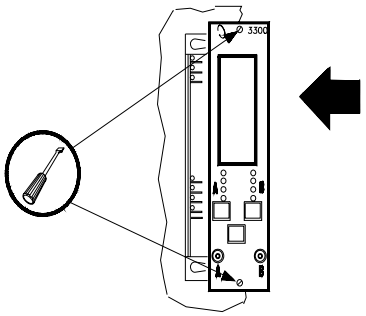
2. Slide front panel to the left and fasten two screws.



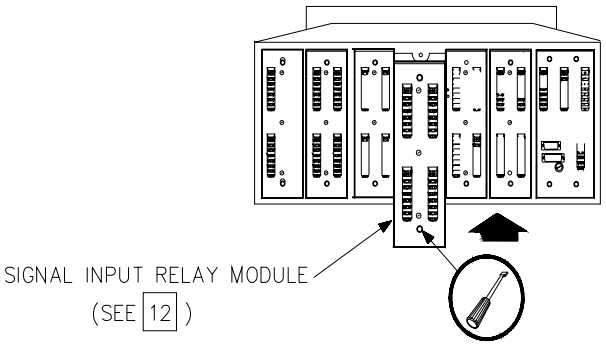
10. MONITOR INSTALLATION [TYPICAL]

1. Slide monitor front panel to the right before inserting monitor. Slide monitor circuit board into rack to engage connector on backplane. If the monitor is a dual width monitor with two separate circuit boards, line the lower edges of both boards up with the slots in the rack and slide the boards in simultaneously. Make sure that the connectors on both boards are fully seated in the backplane. ***NOTE:*** For the 3300/30 and 3300/35 dual width six channel temperature monitors, the left of the two boards (when facing the rack) must be in an odd numbered rack position (numbered from left to right starting at one) to communicate with a TDIX or a TDXnet.





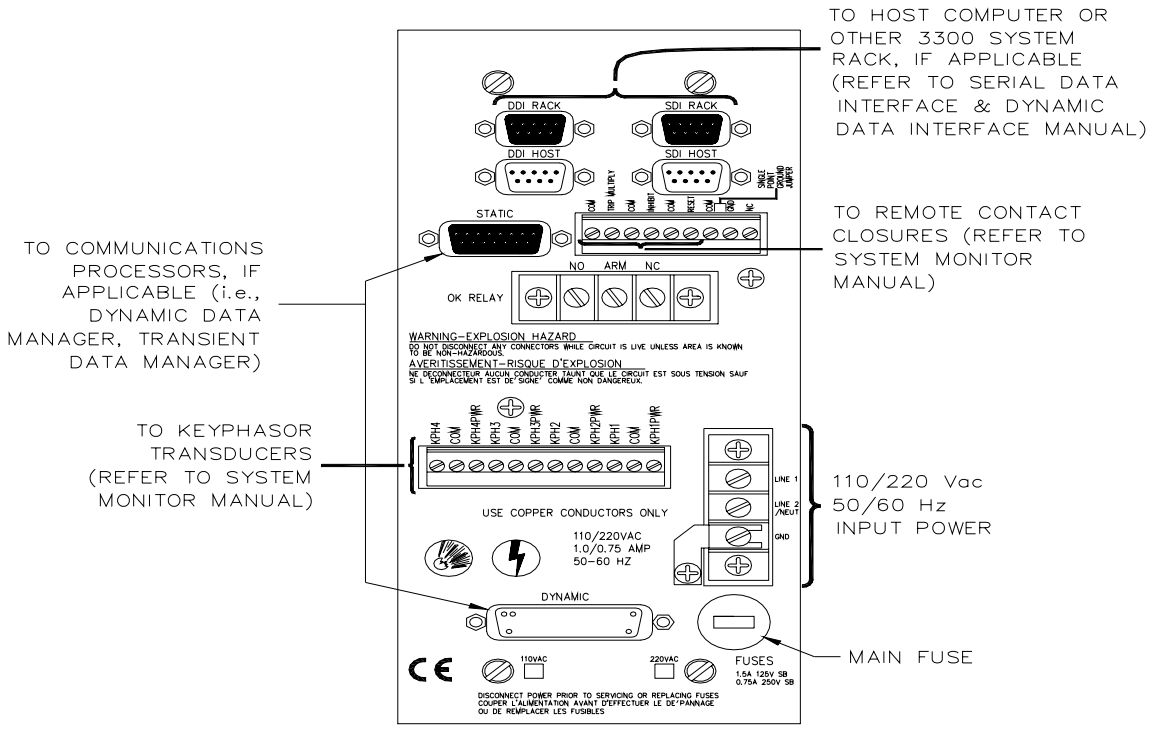
2. Slide front panel to the left and fasten to rack.



3. Install Signal Input Relay Module in rear of rack and fasten screws.

11. POWER INPUT MODULE

For grounding technique see Section 15.



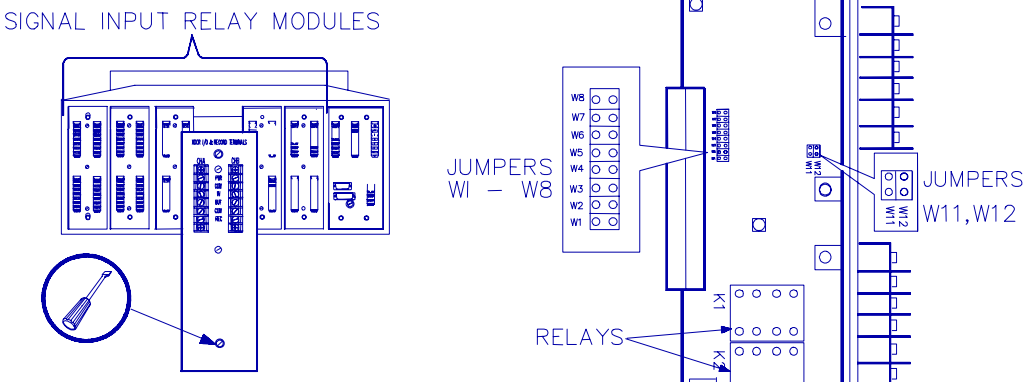
12. SIGNAL INPUT RELAY MODULES

WARNING

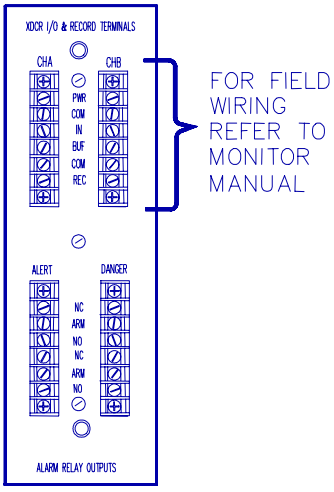
High voltage present
could cause shock,
burns, or death.
Do not touch exposed
wires or terminals.

CAUTION

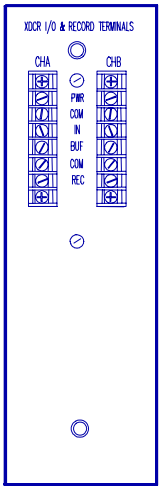
The following information is not applicable to the Velomitor. Refer to the 3300/55 Maintenance Manual for jumper configuration of the Velomitor Relay Module.



CIRCUIT BOARD
DUAL RELAYS



WITH DUAL RELAYS



WITHOUT RELAYS

ALERT RELAY	JUMPER*	
	IN	OUT
NORMALLY ENERGIZED	W3	W4,W11
NORMALLY DEENERGIZED	W4,W11	W3

DANGER RELAY	JUMPER*	
	IN	OUT
NORMALLY ENERGIZED	W2	W1,W12
NORMALLY DEENERGIZED	W1,W12	W2

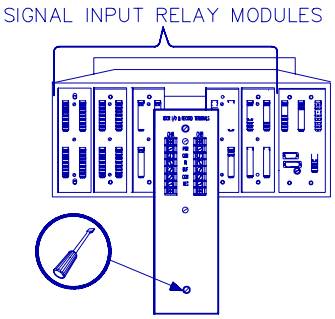
* FOR MORE INFORMATION ON RELAY CONFIGURATION REFER TO SECTIONS 13 AND 14.

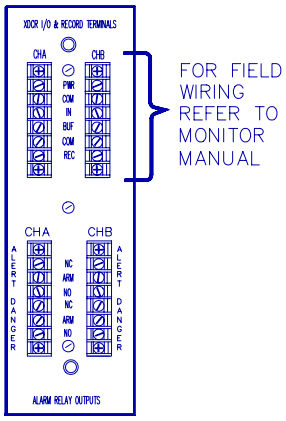
WARNING

High voltage present could cause shock, burns, or death. Do not touch exposed wires or terminals.

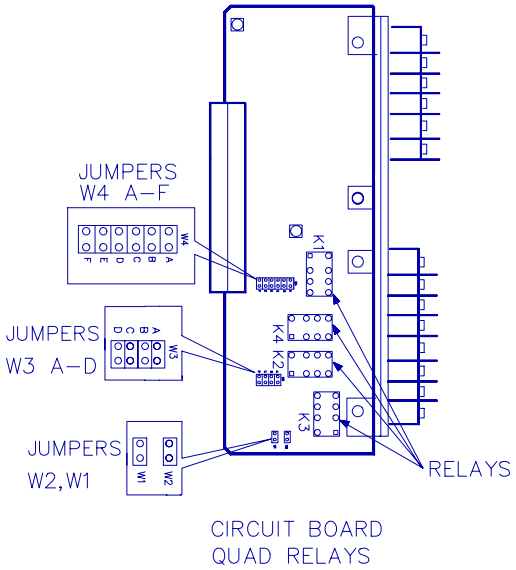
CAUTION

The following information is not applicable to the Velomitor. Refer to the 3300/55 Maintenance Manual for jumper configuration of the Velomitor Relay Module.





WITH QUAD RELAYS



CIRCUIT BOARD
QUAD RELAYS

SIGNAL INPUT/QUAD RELAY CARD OPTION *		
RELAY OPTIONS	INSTALL	REMOVE
ALERT RELAYS NORMALLY DE-ENERGIZED	W2,3C W3D,4D	W3A,4C
ALERT RELAYS NORMALLY ENERGIZED	W3A,4C	W2,3C W3D,4D
DANGER RELAYS NORMALLY DE-ENERGIZED	W1,3B W4A,4E	W4B,4F
DANGER RELAYS NORMALLY ENERGIZED	W4B,4F	W1,3B W4A,4E

* For more information on relay configuration refer to Sections 13 and 14.

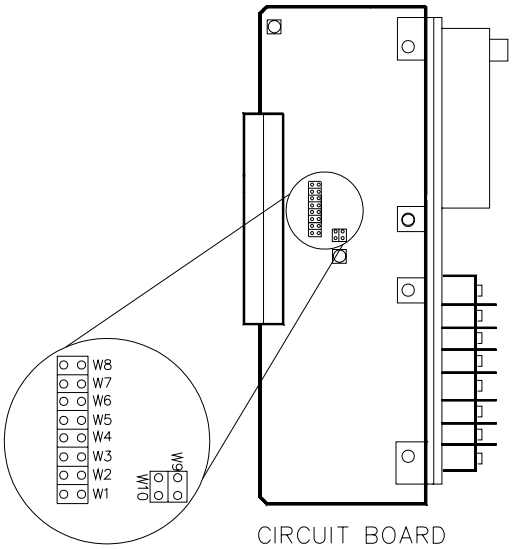
WARNING

High voltage present
could cause shock
burns or death

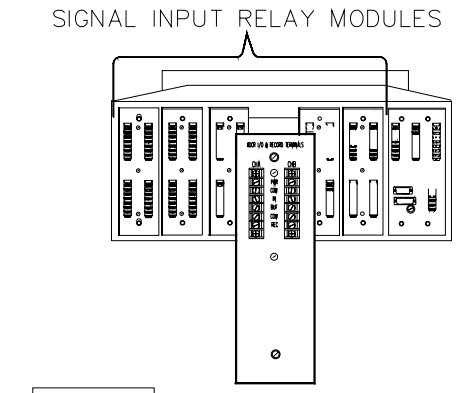
Do not touch exposed
wires or terminals

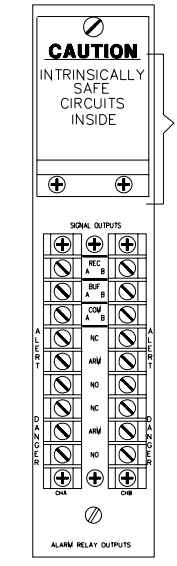
CAUTION

The following information is not applicable to the Velomitor. Refer to the 3300/55 Maintenance Manual for jumper configuration of the Velomitor Relay Module.



CIRCUIT BOARD
DUAL RELAYS WITH
INTERNAL BARRIERS





FOR FIELD WIRING REFER TO INTERNAL SAFETY BARRIER INSTALLATION MANUAL

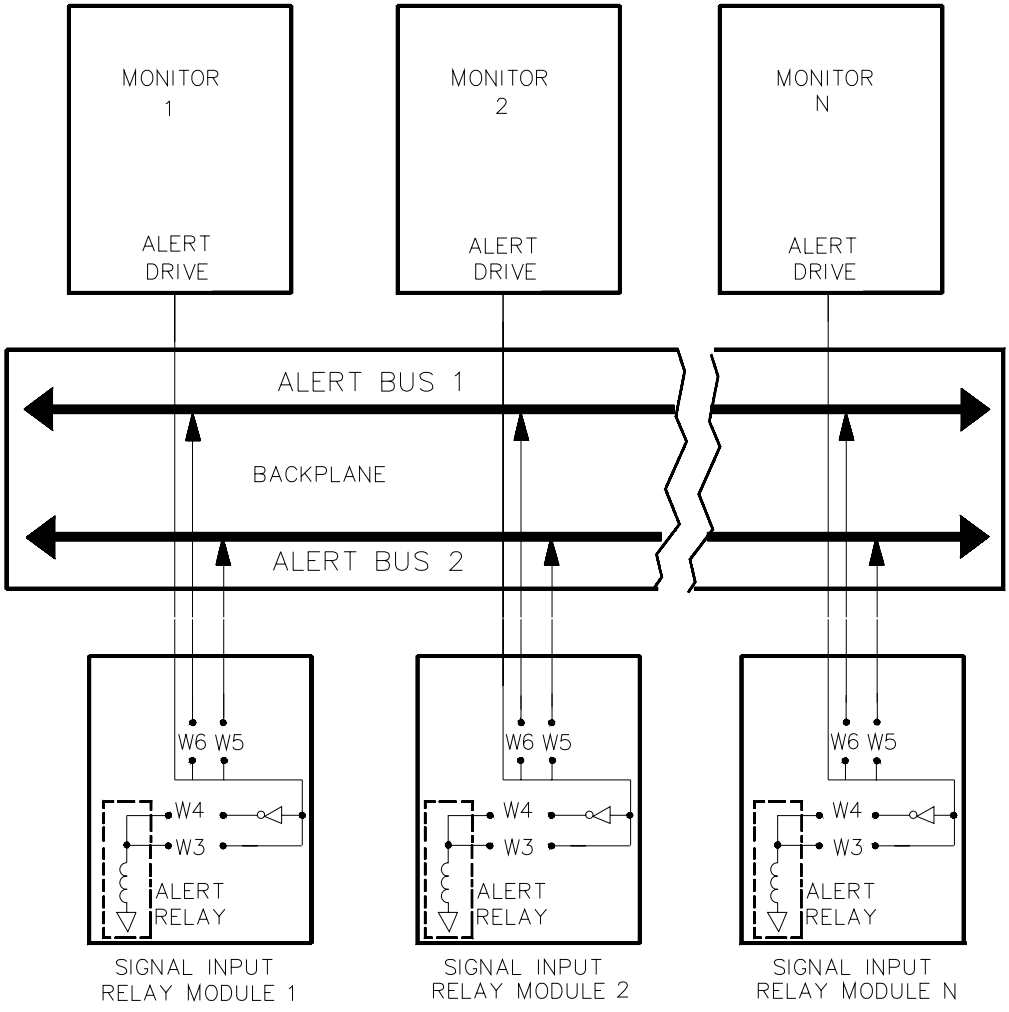
WITH DUAL RELAYS
AND INTERNAL BARRIERS

RELAY OPTIONS	JUMPER	
	INSTALL	REMOVE
ALERT RELAYS NORMALLY DE-ENERGIZED	W4,W9	W3
ALERT RELAYS NORMALLY ENERGIZED	W3	W4,W9
DANGER RELAYS NORMALLY DE-ENERGIZED	W1,W10	W2
DANGER RELAYS NORMALLY ENERGIZED	W2	W1,10

13. ALERT RELAY ACTUATION CIRCUITS

The following diagram shows the functional concept of jumper configurations for Alert relay bus actuation for the Dual Relay Module. For more detail refer to schematics in the applicable monitor manuals.

NOTE: The relay located directly behind a monitor is always driven by that monitor, and all other relays connected on the same bus will also be driven by that monitor.



CAUTION
The following information is not applicable to the Velomitor. Refer to the 3300/55 Maintenance Manual for jumper configuration of the Velomitor Relay Module.

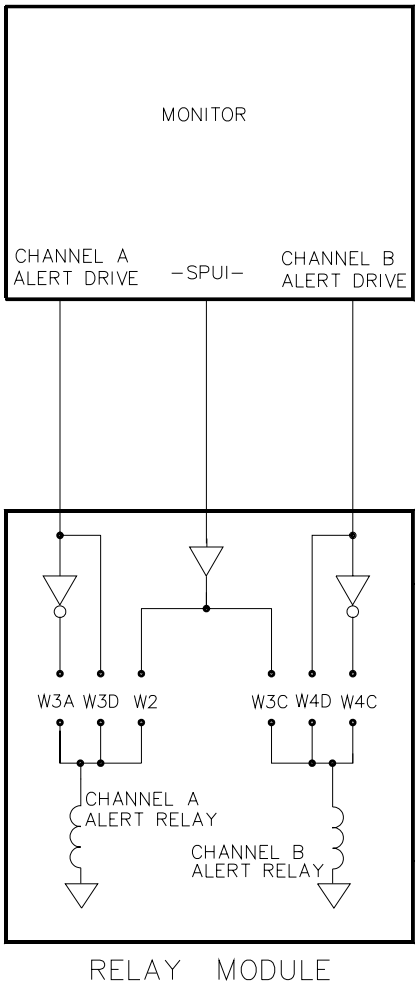
FUNCTION	JUMPER	
	INSTALL	REMOVE
Set Alert relay for normally energized operation*	W3	W4,W11
Set Alert relay for normally de-energized operation*	W4,W11	W3
Select Alert bus 1	W6	W5
Select Alert bus 2	W5	W6

* REFER TO SECTION 12 FOR JUMPER CONFIGURATION OF RELAYS IN A SYSTEM WITH INTERNAL BARRIERS.

The following diagram shows the functional concept of jumper configurations for Alert relay actuation for the Quad Relay Module. ***Note:*** The jumper configuration shown is not applicable to the Velomitor Signal Input Relay Module. Refer to the Dual Velocity Monitor Maintenance Manual. For more details refer to schematics in the applicable monitor manuals.

CAUTION

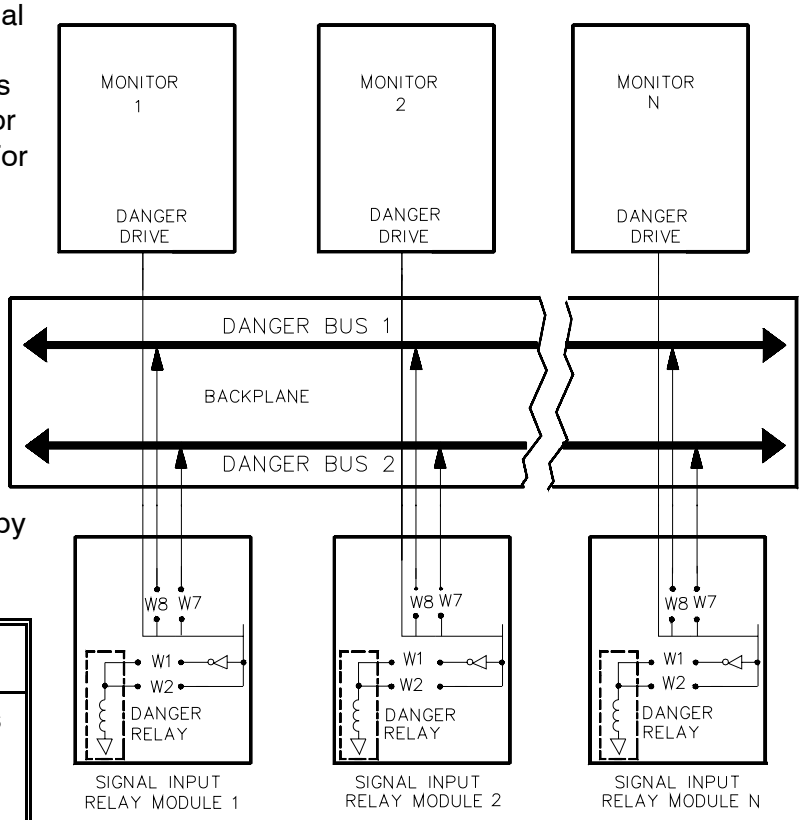
The following information is not applicable to the Velomitor. Refer to the 3300/55 Maintenance Manual for jumper configuration of the Velomitor Relay Module.



FUNCTION	JUMPER	
	INSTALL	REMOVE
Set Alert relays for normally energized operation	W3A,4C	W2,3C,3D,4D
Set Alert relays for normally de-energized operation	W2,3C,3D,4D	W3A,4C

14. DANGER RELAY ACTUATION CIRCUITS

The following diagram shows the functional concept of jumper configurations for Danger relay bus actuation for the Dual Relay Module. ***Note:*** The jumper configuration shown is not applicable to the Velomitor Signal Input Relay Module. For more details refer to schematics in applicable monitor manuals.



NOTE: The relay located directly behind a monitor is always driven by that monitor, and all other relays connected on the same bus will also be driven by that monitor.

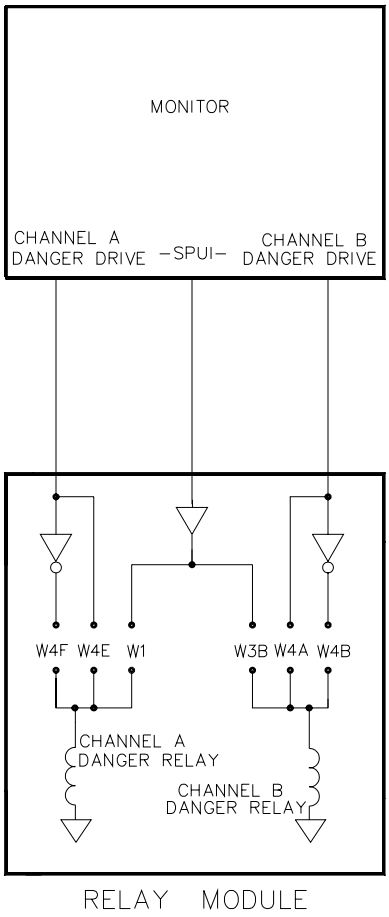
CAUTION

The following information is not applicable to the Velomitor. Refer to the 3300/55 Maintenance Manual for jumper configuration of the Velomitor Relay Module.

FUNCTION	JUMPER INSTALL	REMOVE
Set Danger relay for normally energized operation*	W2	W1,W12
Set Danger relay for normally de-energized operation*	W1,W12	W2
Select Danger bus 1 for operation	W8	W7
Select Danger bus 2 for operation	W7	W8

* REFER TO SECTION 12 FOR JUMPER CONFIGURATION OF RELAYS IN A SYSTEM WITH INTERNAL BARRIERS.

The following diagram shows the functional concept of jumper configurations for Danger Relay actuation for the Quad Relay Module. ***Note:*** The jumper configuration shown is not applicable to the Velomitor Signal Input Relay Module. For more details refer to schematics in the applicable monitor manuals.



CAUTION

The following information is not applicable to the Velomitor. Refer to the 3300/55 Maintenance Manual for jumper configuration of the Velomitor Relay Module.

FUNCTION	JUMPER	
	INSTALL	REMOVE
Set Danger relays for normally energized operation	W4B,4F	W1,3B,4A,4E
Set Danger relays for normally de- energized operation	W1,3B,4A,4E	W4B,4F

15. FIELD GROUNDING TECHNIQUE

1. Refer to the applicable monitor manual for monitor connections.

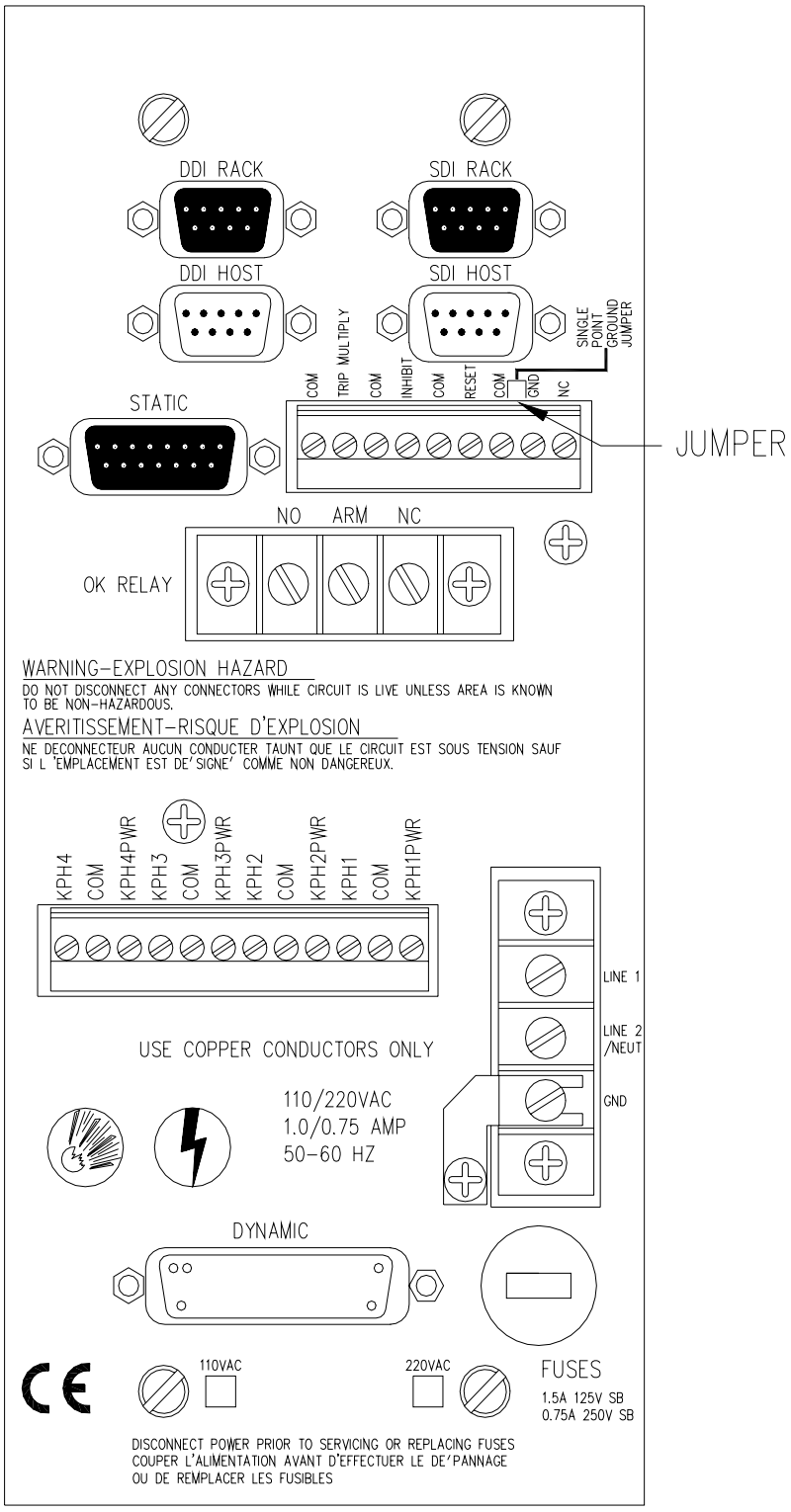
2. For single point ground on typical system installations, install a jumper wire between the terminals labeled "Single Point Ground" on the Power Input Module. For systems with external safety barriers, refer to the field wiring diagrams in the appropriate monitor maintenance manuals for grounding requirements. For systems with internal safety barriers, refer to the 3300 Internal Barriers Installation Manual for grounding requirements. ***NOTE:*** Keep in mind that when communicating with a host computer the communication and earth grounds inside the computer may be connected. Consider carefully when grounding to avoid ground loops and potential communication problems.

WARNING

High voltage present
could cause shock,
burns, or death.
Do not touch exposed
wires or terminals.

WARNING

DO NOT REMOVE JUMPER STRAPS UNLESS SYSTEM COMMON IS CONNECTED TO THE EARTH GROUND AT A DIFFERENT LOCATION. FAILURE TO HEED THIS WARNING COULD EXPOSE PERSONNEL TO DANGEROUSLY HIGH VOLTAGE LEVELS.


DDI RACK
SDI RACK
DDI HOST
SDI HOST
SINGLE POINT GROUND JUMPER
COM
TRIP MULTIPLY
COM
INHIBIT
COM
RESET
COM
GND
NC
STATIC
JUMPER
NO ARM NC
OK RELAY
WARNING–EXPLOSION HAZARD
DO NOT DISCONNECT ANY CONNECTORS WHILE CIRCUIT IS LIVE UNLESS AREA IS KNOWN TO BE NON–HAZARDOUS.
AVERITISSEMENT–RISQUE D'EXPLOSION
NE DECONNECTEUR AUCUN CONDUCTER TAUNT QUE LE CIRCUIT EST SOUS TENSION SAUF SI L 'EMPLACEMENT EST DE'SIGNE' COMME NON DANGEREUX.
KPH4
COM
KPH4PWR
KPH3
COM
KPH3PWR
KPH2
COM
KPH2PWR
KPH1
COM
KPH1PWR
LINE 1
LINE 2 /NEUT
GND
USE COPPER CONDUCTORS ONLY
110/220VAC
1.0/0.75 AMP
50–60 HZ
DYNAMIC
110VAC
220VAC
FUSES
1.5A 125V SB
0.75A 250V SB
DISCONNECT POWER PRIOR TO SERVICING OR REPLACING FUSES
COUPER L'ALIMENTATION AVANT D'EFFECTUER LE DE'PANNAGE OU DE REMPLACER LES FUSIBLES