

Maintenance Manual

GPS Simulcast
Control Point

Volume 2

TRANSMIT CONTROL
TEST RACK

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	Mobile Radio	LBI-38902
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NOTICE!

Repairs to this equipment should be made only by an authorized service technician or facility designated by the supplier. Any repairs, alterations or substitution of recommended parts made by the user to this equipment not approved by the manufacturer could void the user’s authority to operate the equipment in addition to the manufacturer’s warranty.

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INTRODUCTION

This manual provides all documentation required for the GPS Simulcast Control Point, Transmit Control/Test Rack. All associated manuals collated with this manual are called for in the Table of Contents located on the front cover. This manual contains:

- Transmit Control/Test Rack Application Assembly Diagram 193D1474
- Interconnection Diagram 193D1254
- Connection List 350A1903
- Control Panel Data Cables RPM 113 2519/1, /2

APPLICATION ASSEMBLY DIAGRAM

Application Assembly Diagram 193D1474 identifies and shows the location of all equipment used in the GPS Simulcast Control Point, Transmit Control/Test Rack. This equipment includes:

- Control Panels A300 through A308 (19D902522P2):
A300 is an Analog/Digital (A/D) Control Panel (S01-S24)
A301 is a PTT Control Panel (S01-S03)
A302 is a PTT Control Panel (S04-S06)
A303 is a PTT Control Panel (S07-S09)
A304 is a PTT Control Panel (S10-S12)
A305 is a PTT Control Panel (S13-S15)
A306 is a PTT Control Panel (S16-S18)
A307 is a PTT Control Panel (S19-S21)
A308 is a PTT Control Panel (S22-S24)
- Transmission Test set 19B802566
- Digital Oscilloscope 349A9725
- Test Cables 188D6118
- Test Cable Drawer 19D438294
- Control Crossconnect Panels B410-B414 (ROA 117 2255)
- AC Power Strip 19B235073
- Power Supply 19A149978

CONTROL CROSSCONNECT PANEL INTERCONNECTION DIAGRAM

Interconnection Diagram 193D1254 provides interconnect wiring of Control Panel A300-A308 and Crossconnect panel B410-B414 for the GPS Simulcast Control Point Transmit/Test Rack.

CONNECTION LIST

Connection List 350A1903 provides information for Control Point, Transmit Control/Test Cabinet Intrarack Cabling. This list identifies cables used and points of connection. Example: An RPM 113 2519/1 cable connects from Crossconnect Panel B410-J1 to A/D Control Panel A300-P1 (Channels 1-24) Refer to Interconnection diagram 193D1254.

CONTROL PANEL DATA CABLES

RPM 113 2519/1

This is a 3 foot cable harness consisting of five (5) 50 conductor ribbon cables with 50 pin headers connected to each end of each (Refer to cable drawing 1301-RPM 113 2519/1).

RPM 113 2519/2

This is a 39 inch cable harness consisting of five (5) 50 conductor ribbon cables with 50 pin headers connected to each end of each (Refer to cable drawing 1301-RPM 113 2519/2).

TRANSMISSION TEST SET

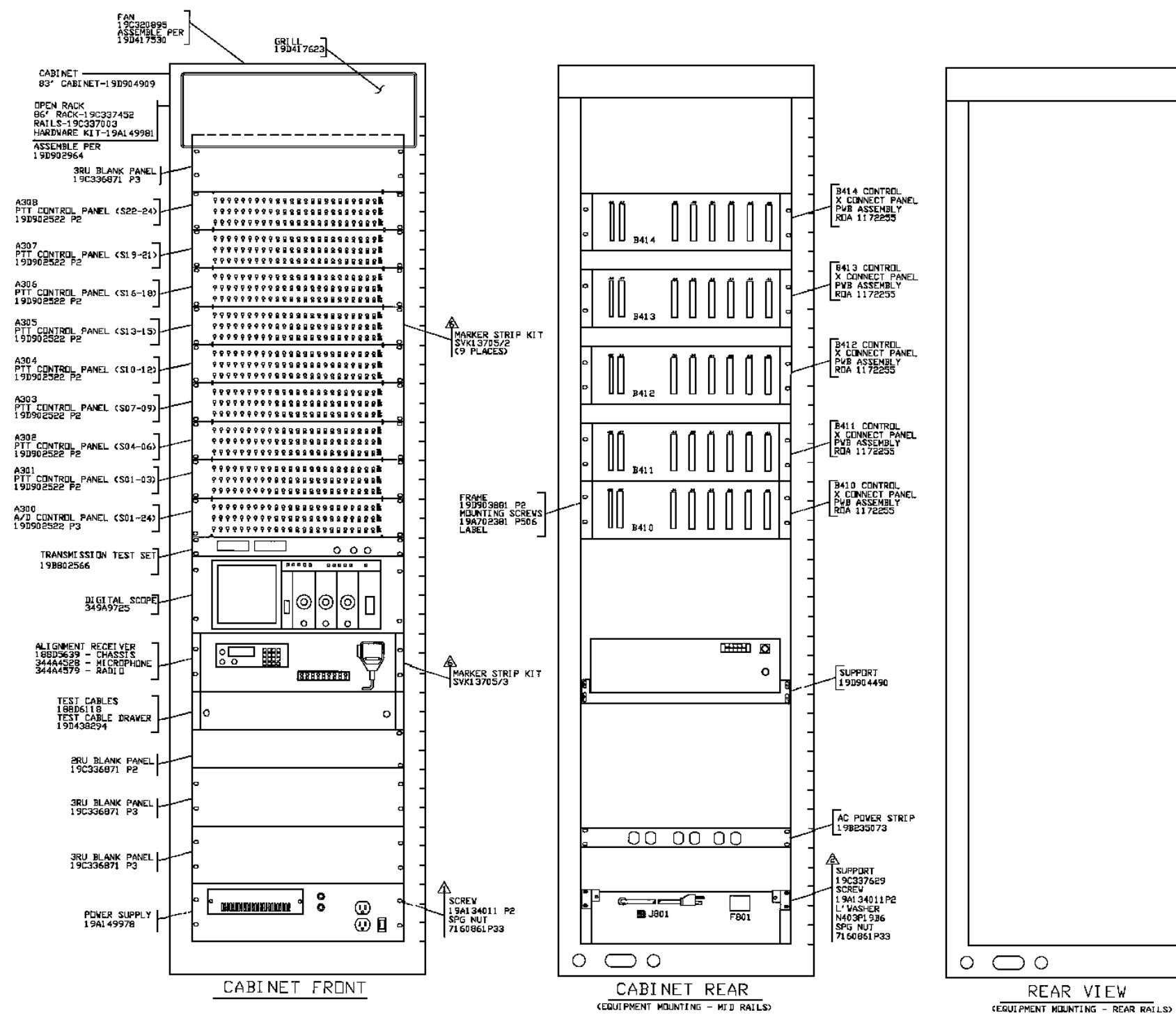
The Transmission Test Unit used in the GPS Simulcast Transmit Control/Test Rack is CONVEX catalog number 806-RA-03-03 or equivalent.

- 806** = Transmission Test Unit
- RA** = 1 Rack Unit High, 19 inches wide (with mounting holes per EIA)
- 03** = 115/230 VAC (45-65 Hz)
- 03** = Dual LED display

For more information concerning this Test Unit, refer to the manufacture’s maintenance manual supplied with the unit.

DIGITAL OSCILLOSCOPE

The oscilloscope used in the GPS Simulcast Transmit Control/Test Rack is Tektronix Model 430A (Replaced Model 2232). This oscilloscope is a two (2) channel digital oscilloscope (400 MHz, 100 MS/s) and includes a rack mount kit. For more information concerning this oscilloscope, refer to the maintenance manual supplied by the manufacturer.



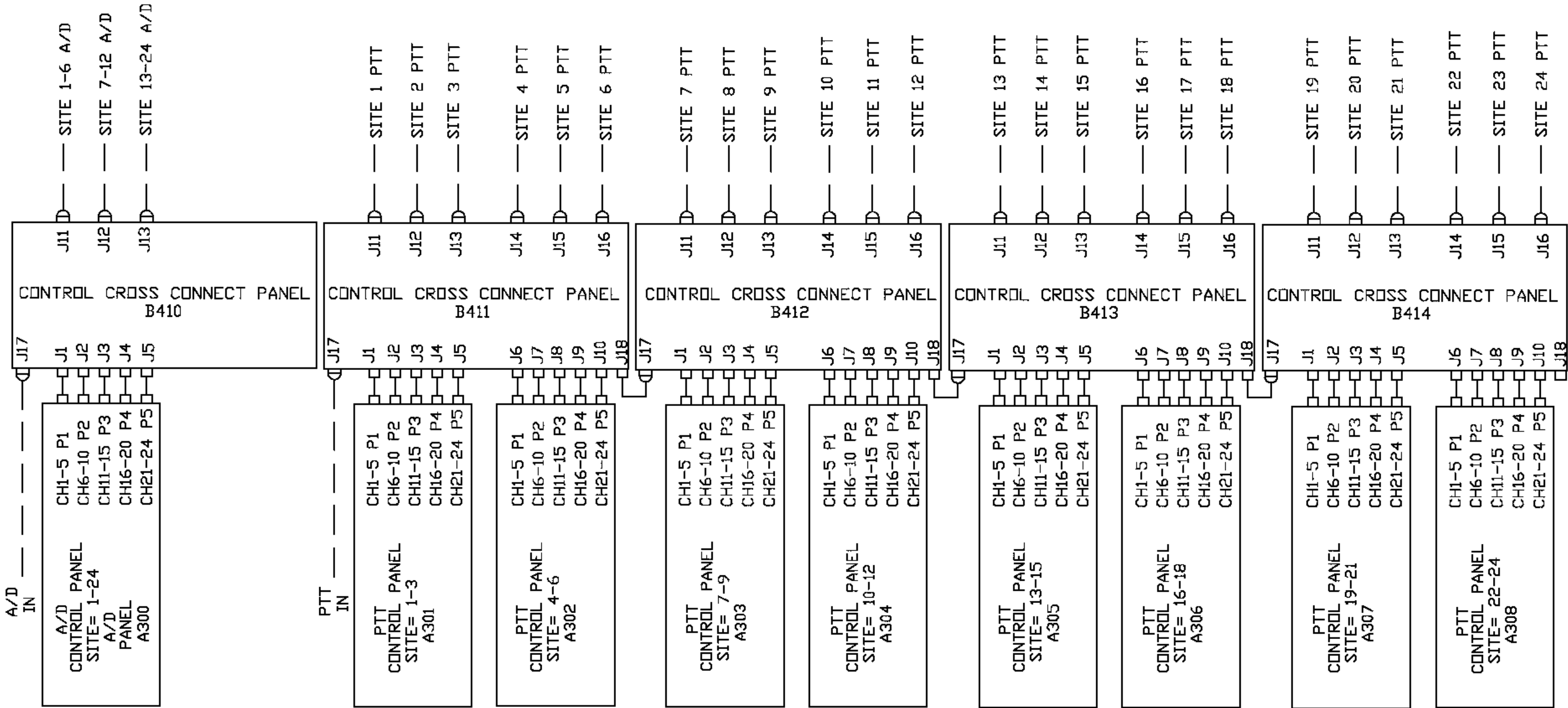
- ① TRANSMIT CONTROL/TEST RACK
- NOTES:
- △ PART OF HARDWARE KIT 19A130031G12 (STD CABINET).
 - △ PART OF HARDWARE KIT 19A149326GB (POWER SUPPLY).
 - 3. TEST RACKS PER 350A2022.

- 4. INSTALL INTRARACK CABLES PER 350A1903. SEE 193D1254 FOR INTERCONNECT DIAGRAM.
- 5. INSTALL BLANK PANELS IN PLACE OF UNEQUIPPED CONTROL PANELS.

△ REPLACE BLANK MARKERS WITH SXA 120 4317/1.

TX Control/Test Rack

(193D1574, Rev. 1)



Control Crossconnect Panel

(193D1254, Rev. 1)

GPS SIMULCAST TX CONTROL/TEST CABINET INTRARACK WIRING

PART 1 - UP TO 6 SITES

FROM	TO	CABLE
B410-J1	A300-P1	RPM 113 2519/1
B410-J2	A300-P2	
B410-J3	A300-P3	
B410-J4	A300-P4	
B410-J5	A300-P5	
B411-J1	A301-P1	RPM 113 2519/1
B411-J2	A301-P2	
B411-J3	A301-P3	
B411-J4	A301-P4	
B411-J5	A301-P5	
B411-J6	A302-P1	RPM 113 2519/2
B411-J7	A302-P2	
B411-J8	A302-P3	
B411-J9	A302-P4	
B411-J10	A302-P5	
ALIGN. RCVR TB1-1	POWER SUPPLY F801-1	19D903880P901
ALIGN. RCVR TB1-4	POWER SUPPLY F801-2	19D903880P902

PART 2 - SITES 7 THROUGH 12

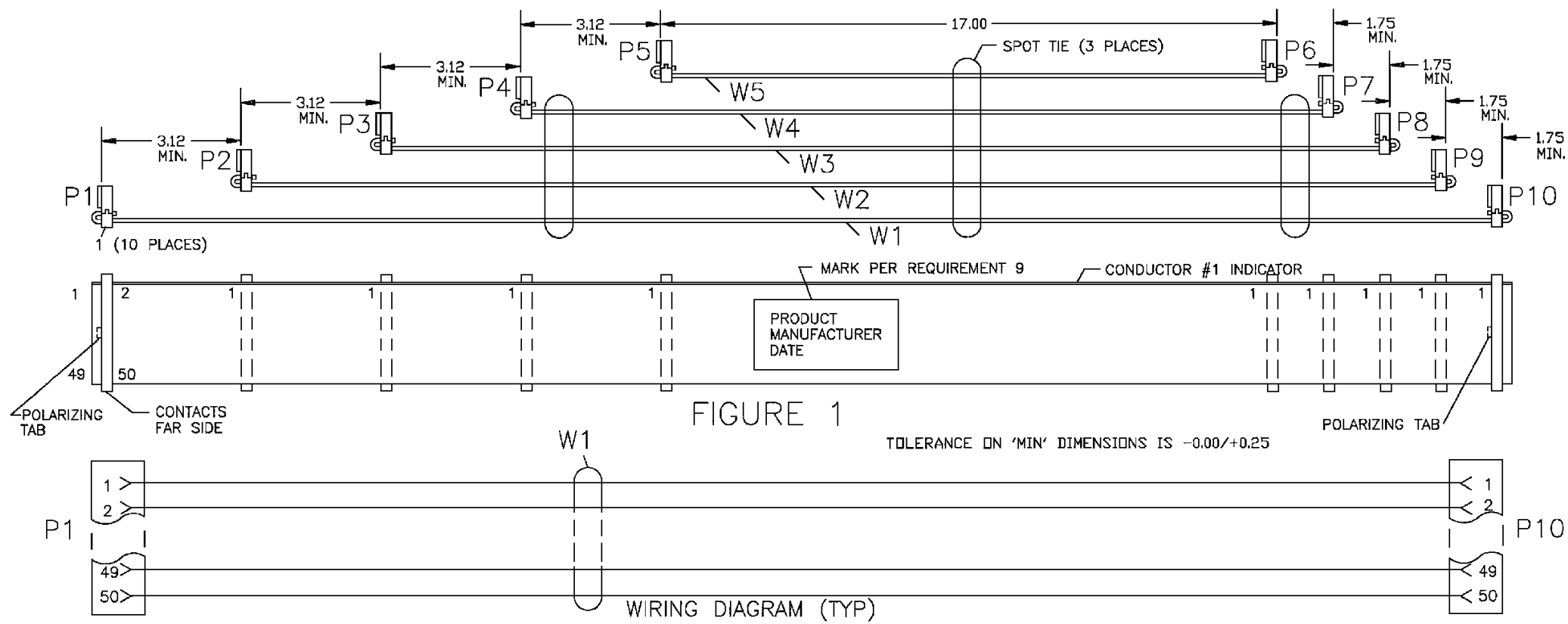
FROM	TO	CABLE
B412-J1	A303-P1	RPM 113 2519/1
B412-J2	A303-P2	
B412-J3	A303-P3	
B412-J4	A303-P4	
B412-J5	A303-P5	
B412-J6	A304-P1	RPM 113 2519/2
B412-J7	A304-P2	
B412-J8	A304-P3	
B412-J9	A304-P4	
B412-J10	A304-P5	
B412-J17	B411-J18	19D903985P932

PART 3 - SITES 13 THROUGH 18

FROM	TO	CABLE
B413-J1	A305-P1	RPM 113 2519/1
B413-J2	A305-P2	
B413-J3	A305-P3	
B413-J4	A305-P4	
B413-J5	A305-P5	
B413-J6	A306-P1	RPM 113 2519/2
B413-J7	A306-P2	
B413-J8	A306-P3	
B413-J9	A306-P4	
B413-J10	A306-P5	
B413-J17	B412-J18	19D903985P932

PART 4 - SITES 19 THROUGH 24

FROM	TO	CABLE
B414-J1	A307-P1	RPM 113 2519/
B414-J2	A307-P2	
B414-J3	A307-P3	
B414-J4	A307-P4	
B414-J5	A307-P5	
B414-J6	A308-P1	RPM 113 2519/2
B414-J7	A308-P2	
B414-J8	A308-P3	
B414-J9	A308-P4	
B414-J10	A308-P5	
B414-J17	B413-J18	19D903985P932



REQUIREMENTS < '*' INDICATES REQUIREMENT NOT APPLICABLE TO THIS PRODUCT >

1. GENERAL
- 1.1 CABLE ASSEMBLY SHALL BE CONSTRUCTED AS SHOWN IN FIGURE 1.
 - 1.2 LACE OR SPOT TIE AS REQUIRED TO MAINTAIN CABLE SHAPE AND DIMENSIONS.
 - 1.3 ALL CONDUCTORS SHALL BE STRANDED TINNED COPPER UNLESS OTHERWISE SPECIFIED.
 - 1.4 WIRE GAUGE AND COLOR SHALL BE AS SPECIFIED IN WIRING DIAGRAM OR CONNECTION LIST.
 - 1.5 WIRING SHALL BE PER WIRING DIAGRAM OR CONNECTION LIST AND 100% INSPECTED.
 - 1.6 ALL WIRE TERMINATIONS SHALL PROVIDE INSULATION SUPPORT.

2. DESIGN

MATERIAL LIST				
ITEM	ERICSSON PART NO. (FOR REF. ONLY)	VENDOR PART NO. (OR EQUIVALENT)	DESCRIPTION	QTY
P1-P10		AMP 1-748288-0	50 PIN HEADER	10
W1-W5		SPECTRA 135-2801-050	50 CONDUCTOR RIBBON CABLE	12 FT
1		AMP 499252-4	STRAIN RELIEF	10

- 2.2 PROTECTION - ASSEMBLED COMPONENTS SHALL MAINTAIN COMPONENT MANUFACTURERS SPECIFICATIONS.
- 2.3 UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES.
- 2.4 UNLESS OTHERWISE SPECIFIED, TOLERANCE FOR ALL DIMENSIONS IS [+/-0.50]

3. LIMITING VALUES - RATED VOLTAGE FOR CABLE ASSEMBLY = 600 VAC MIN.
4. ENDURANCE - *
5. ENVIRONMENTAL RESISTANCE - OPERATING TEMPERATURE RANGE -20 TO +75 DEG. C
MAX CONTINUOUS TEMPERATURE +75 DEG. C
6. SOLDERABILITY - *
7. CLEANING LIQUID RESISTANCE - *
8. FIRE RESISTANCE - *

9. MARKING - EACH ASSEMBLY SHALL BE MARKED WITH THE FOLLOWING INFORMATION.

PRODUCT NUMBER & R-STATE - <SEE 13. PRODUCT LIST>
MANUFACTURERS NAME OR TRADEMARK.
DATE OF MANUFACTURE CODE

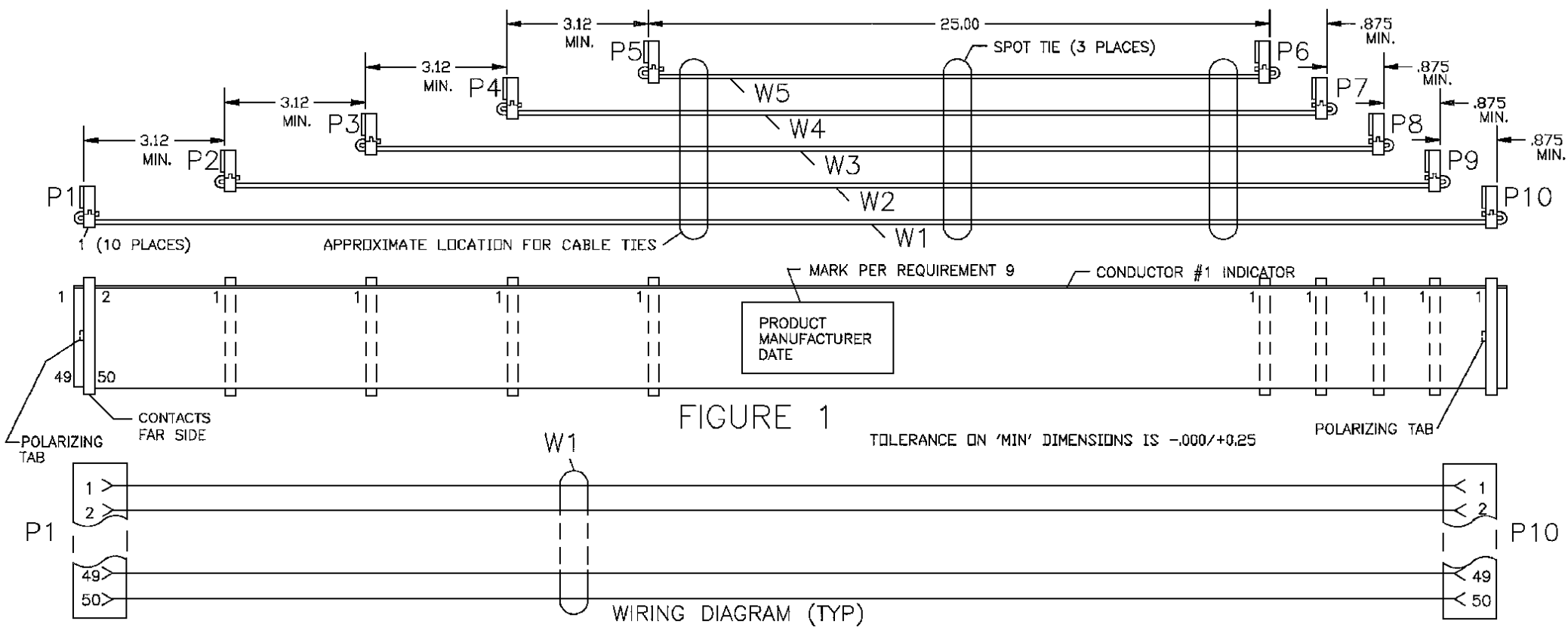
THE MARKING SHALL BE RESISTANT TO MECHANICAL WEARING THAT CAN ARISE AT NORMAL HANDLING, STORAGE AND OPERATION.

10. PACKING - THE PACKAGE SHALL BE MARKED WITH THE FOLLOWING INFORMATION.

PRODUCT NUMBER & R-STATE - <SEE 13. PRODUCT LIST>
MANUFACTURERS NAME OR TRADEMARK.
DATE OF MANUFACTURE CODE

11. REFERENCES - *
12. INTERNAL INFORMATION - *
13. PRODUCT LIST

PRODUCT NUMBER & R-STATE	DESCRIPTION
RPM 113 2519/1 R1A	CABLE, DATA, CONTROL PANEL



REQUIREMENTS < ** INDICATES REQUIREMENT NOT APPLICABLE TO THIS PRODUCT >

1. GENERAL
- 1.1 CABLE ASSEMBLY SHALL BE CONSTRUCTED AS SHOWN IN FIGURE 1.
- 1.2 LACE OR SPOT TIE AS REQUIRED TO MAINTAIN CABLE SHAPE AND DIMENSIONS.
- 1.3 ALL CONDUCTORS SHALL BE STRANDED TINNED COPPER UNLESS OTHERWISE SPECIFIED.
- 1.4 WIRE GAUGE AND COLOR SHALL BE AS SPECIFIED IN WIRING DIAGRAM OR CONNECTION LIST.
- 1.5 WIRING SHALL BE PER WIRING DIAGRAM OR CONNECTION LIST AND 100% INSPECTED.
- 1.6 ALL WIRE TERMINATIONS SHALL PROVIDE INSULATION SUPPORT.

2. DESIGN

2.1 MATERIAL LIST				
ITEM	ERICSSON PART NO. (FOR REF. ONLY)	VENDOR PART NO. (OR EQUIVALENT)	DESCRIPTION	QTY
P1-P10		AMP 1-746285-0	50 PIN HEADER	10
W1-W5		SPECTRA 135-2801-050	50 CONDUCTOR RIBBON CABLE	15 FT
1		AMP 499252-4	STRAIN RELIEF	10

- 2.2 PROTECTION - ASSEMBLED COMPONENTS SHALL MAINTAIN COMPONENT MANUFACTURERS SPECIFICATIONS.
- 2.3 UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES.
- 2.4 UNLESS OTHERWISE SPECIFIED, TOLERANCE FOR ALL DIMENSIONS IS ± 0.50

3. LIMITING VALUES - RATED VOLTAGE FOR CABLE ASSEMBLY = 600 VAC MIN.

4. ENDURANCE - *

5. ENVIRONMENTAL RESISTANCE - OPERATING TEMPERATURE RANGE -20 TO +75 DEG. C
MAX CONTINUOUS TEMPERATURE +75 DEG. C

6. SOLDERABILITY - *

7. CLEANING LIQUID RESISTANCE - *

8. FIRE RESISTANCE - *

9. MARKING - EACH ASSEMBLY SHALL BE MARKED WITH THE FOLLOWING INFORMATION.

PRODUCT NUMBER & R-STATE - (SEE 13. PRODUCT LIST)
MANUFACTURERS NAME OR TRADEMARK.
DATE OF MANUFACTURE CODE.

THE MARKING SHALL BE RESISTANT TO MECHANICAL WEARING THAT CAN ARISE AT NORMAL HANDLING, STORAGE AND OPERATION.

10. PACKING - THE PACKAGE SHALL BE MARKED WITH THE FOLLOWING INFORMATION.

PRODUCT NUMBER & R-STATE - (SEE 13. PRODUCT LIST)
MANUFACTURERS NAME OR TRADEMARK.
DATE OF MANUFACTURE CODE.

11. REFERENCES - *

12. INTERNAL INFORMATION - *

13. PRODUCT LIST

PRODUCT NUMBER & R-STATE	DESCRIPTION
RPM 113 2519/2	RIA CABLE, DATA, CONTROL PANEL

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