

MOTOMAN-GP120RL SUPPLEMENTAL INSTRUCTIONS

TYPE:

**YR-1-06VRL120-A0C (Improved L-axis Vibration and Special
Internal User I/O Wiring Harness Specification)**

Upon receipt of the product and prior to initial operation, read these instructions thoroughly, and retain for future reference.

MOTOMAN INSTRUCTIONS

MOTOMAN-GP120RL INSTRUCTIONS
MOTOMAN-GP120RL SUPPLEMENTAL INSTRUCTIONS
YRC1000 INSTRUCTIONS
YRC1000 OPERATOR'S MANUAL (GENERAL) (SUBJECT SPECIFIC)
YRC1000 MAINTENANCE MANUAL
YRC1000 ALARM CODES (MAJOR ALARMS) (MINOR ALARMS)

Introduction

This supplemental instruction manual describes MOTOMAN-GP120RL for improved L-axis vibration and special internal user I/O wiring harness specifications (YR-1-06VRL120-A0C).

Point of Difference

The YR-1-06VRL120-A0C differs from the YR-1-06VRL120-A00 in the following points:

- Improved L-axis vibration
- Special internal user I/O wiring harness
- Air hose (1 hose)

This manual differs from “MOTOMAN-GP120RL INSTRUCTIONS” (Manual No. HW1486107) in the following points.

- 7.2 Internal User I/O Wiring Harness and Air Line
- 7.3 Mating Connector for Internal User I/O Wiring Harness (Optional)
- 8.1 Position of Limit Switch (Optional)
- 8.2 Position of Servo ON Lamp (Optional)
- 8.3 Internal Connections
- 10 Recommended Spare Parts

7.2 Internal User I/O Wiring Harness and Air Line

The internal user I/O wiring harness ($2.0 \text{ mm}^2 \times 10$ wires, $0.5 \text{ mm}^2 \times 16$ wires) and an air hose are incorporated into the manipulator for driving peripheral devices mounted on the U-arm as shown in *fig. 7-2 "Connectors for Internal User I/O Wiring Harness and Air Line"*.

The internal user I/O wiring harness pin numbers are assigned as shown in *fig. 7-3 "Details of the Internal User I/O Wiring Harness Pin Numbers"*. Wiring must be performed by user.

The operating conditions are shown in the following table.

The allowable current for cables	13.0 A or less for each wire (2.0 mm^2) 7.5 A or less for each wire (0.5 mm^2)
The maximum pressure for the air hose	490 kPa (5 kgf/cm ²) or less. (The inside diameter: 8.0 mm)
The allowable temperature range of the air hose	0°C - +45°C

Fig. 7-2: Connectors for Internal User I/O Wiring Harness and Air Line

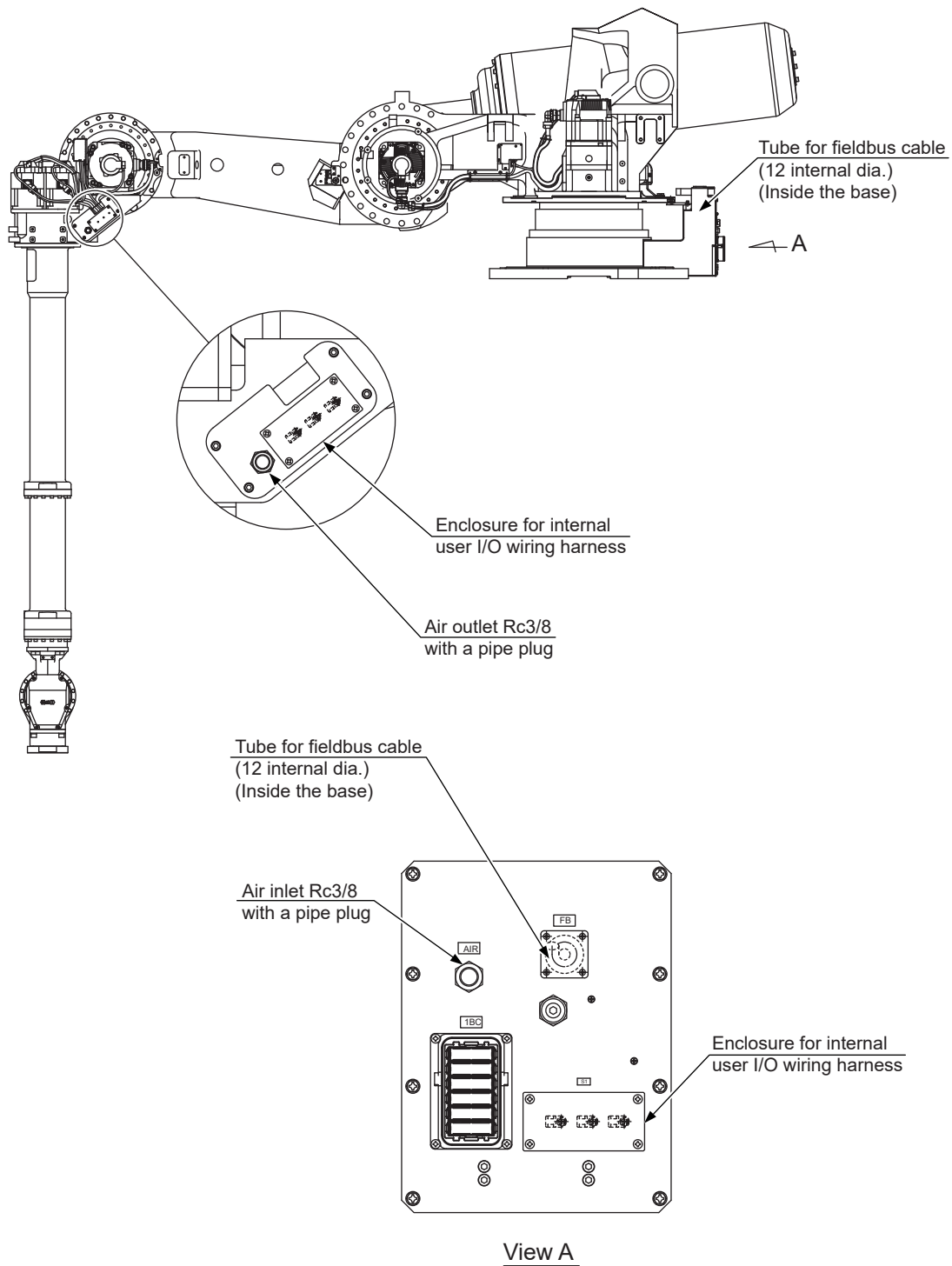
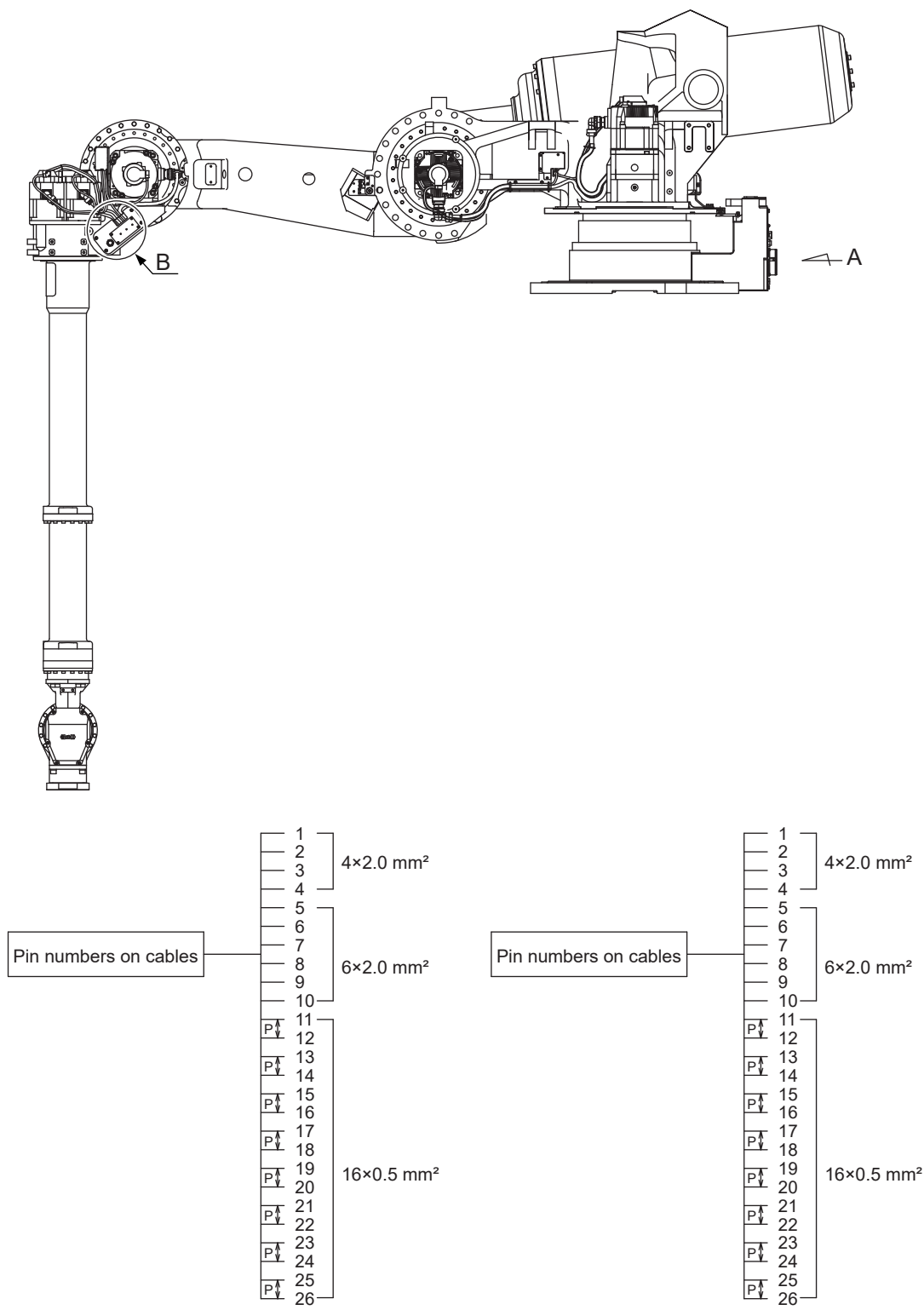


Fig. 7-3: Details of the Internal User I/O Wiring Harness Pin Numbers



Details of the internal user I/O wiring harness pin numbers (Casing side):B-part

Details of the internal user I/O wiring harness pin numbers (Base side):View A

7.3 Mating Connector for Internal User I/O Wiring Harness (Optional)

This specification will not support mating connector option for internal user I/O wiring harness.

8.1 Location of Limit Switch (Optional)

This specification will not support limit switch option.

8.2 Location of Servo ON Lamp (Optional)

This specification will not support servo ON lamp option.

8.3 Internal Connections

As shown in the following figures, diagrams for internal connections of the manipulator are changed.

Fig. 8-3(a): Internal Connection Diagram

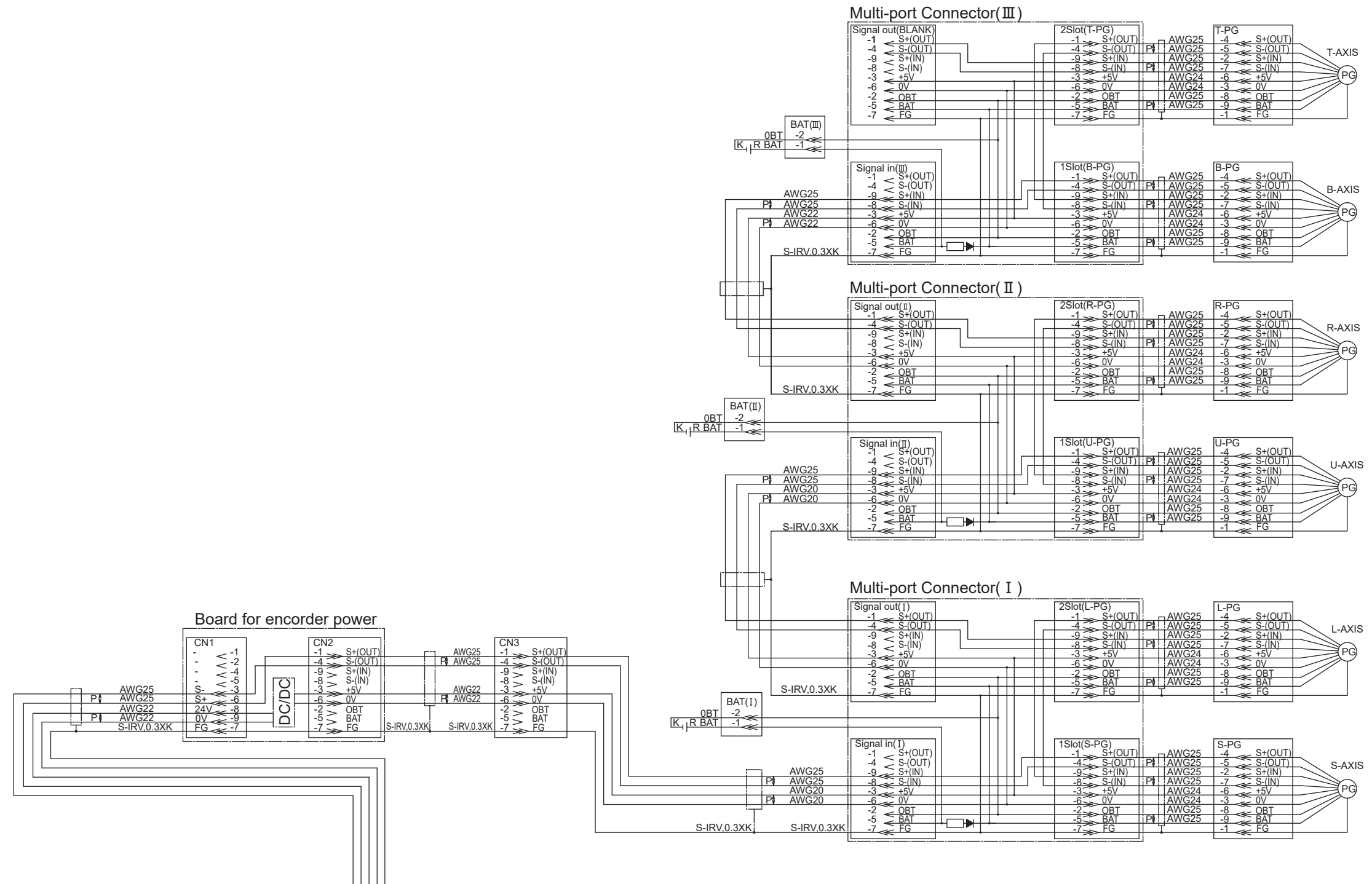
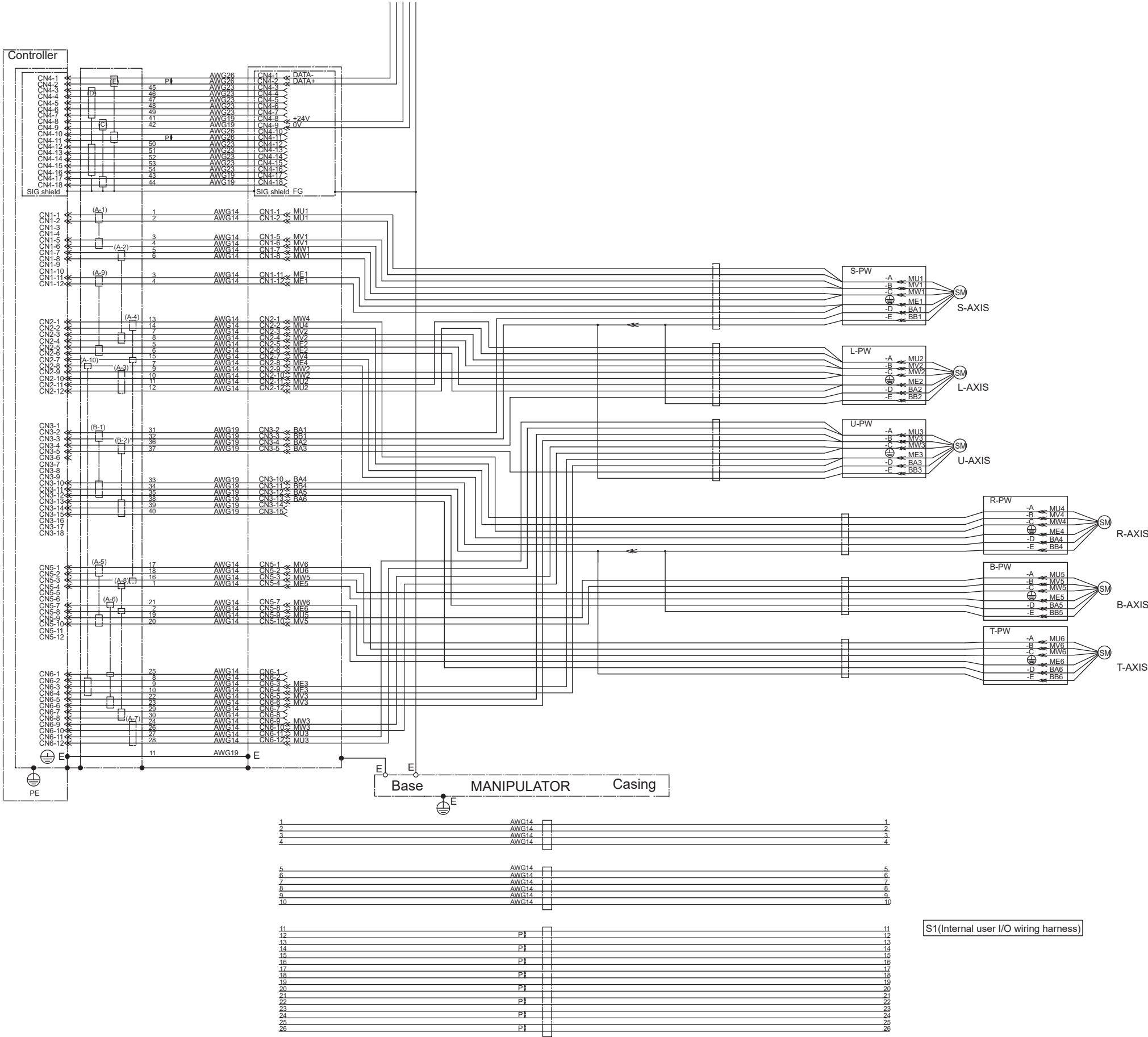


Fig. 8-3(b): Internal Connection Diagram



10 Recommended Spare Parts

It is recommended to keep the parts and components in the following table in stock as spare parts for the YR-1-06VRL120-A0C.

To purchase lead wires of the wire harness or etc., check the order/manufacture no. and contact your YASKAWA representative.

Product performance cannot be guaranteed when using spare parts from any company other than YASKAWA. The spare parts are ranked as follows:

- Rank A: Expendable and frequently replaced parts.
- Rank B: Parts for which replacement may be necessary as a result of frequent operation.
- Rank C: Drive unit.



For replacing parts in Rank B or Rank C, contact your YASKAWA representative.

Table 10-1: Recommend Spare Parts for the YR-1-06VRL120-A0C (Sheet 1 of 3)

Rank	Parts No.	Name	Type	Manufacturer	Qty	Qty per Unit	Remarks
A	1	Grease	Molywhite RE No.00	YASKAWA Electric Corporation	16 kg	-	
A	2	Grease	Alvania EP grease 2	Showa Oil Co., Ltd.	16 kg	-	
A	3	Liquid Gasket	TB1206C	Three Bond Co., Ltd.	-	-	
A	4	Adhesive	LOCTITE243	Henkel Japan Ltd	-	-	
A	5	Seal Tape	TB4501	Three Bond Co., Ltd.	-	-	
A	6	Battery Pack	HW1483880-A	YASKAWA Electric Corporation	1	3	
A	7	Lead Wire for Battery Replacement	HW1471281-A	YASKAWA Electric Corporation	1	-	
B	8	Replacement Kit for S-Axis Speed Reducer ¹⁾	HW1486117-A	YASKAWA Electric Corporation	1	1	Speed reducer: HW0388208-A Input gear: HW0314717-1
B	9	Replacement Kit for L-Axis Speed Reducer ¹⁾	HW1486118-A	YASKAWA Electric Corporation	1	1	Speed reducer: HW0390225-B Input gear: HW0301778-1
B	10	Replacement Kit for U-Axis Speed Reducer ¹⁾	HW1486119-A	YASKAWA Electric Corporation	1	1	Speed reducer: HW0388210-A Input gear: HW0301780-1
B	11	Replacement Kit for R-Axis Speed Reducer ¹⁾	HW1486120-A	YASKAWA Electric Corporation	1	1	Speed reducer: HW1382917-A
B	12	Replacement Kit for B-Axis Speed Reducer ¹⁾	HW1486121-A	YASKAWA Electric Corporation	1	1	Speed reducer: HW9380961-D
B	13	Replacement Kit for T-Axis Speed Reducer ¹⁾	HW1486122-A	YASKAWA Electric Corporation	1	1	Speed reducer: HW0389174-A

Table 10-1: Recommend Spare Parts for the YR-1-06VRL120-A0C (Sheet 2 of 3)

Rank	Parts No.	Name	Type	Manufacturer	Qty	Qty per Unit	Remarks
B	14	Wrist Unit	HW1173009-A	YASKAWA Electric Corporation	1	1	
B	15	Internal Wiring Harness	HW2170261-A	YASKAWA Electric Corporation	1	1	
B	16	Lead Wire for S-Axis Signal	HW1372910-E	YASKAWA Electric Corporation	1	1	Lead wire between the S-axis motor and the multi-port connector
B	17	Lead Wire for L-Axis Signal	HW1372910-F	YASKAWA Electric Corporation	1	1	Lead wire between the L-axis motor and the multi-port connector
B	18	Lead Wire for U-Axis Signal	HW1372597-K	YASKAWA Electric Corporation	1	1	Lead wire between the U-axis motor and the multi-port connector
B	19	Lead Wire for R-Axis Signal	HW1372597-L	YASKAWA Electric Corporation	1	1	Lead wire between the R-axis motor and the multi-port connector
B	20	Lead Wire for B-Axis Signal	HW1372597-M	YASKAWA Electric Corporation	1	1	Lead wire between the B-axis motor and the multi-port connector
B	21	Lead Wire for T-Axis Signal	HW1372597-N	YASKAWA Electric Corporation	1	1	Lead wire between the T-axis motor and the multi-port connector
B	22	Lead Wire	HW1471359-A	YASKAWA Electric Corporation	1	1	Lead wire between the multiport in the S-head and the multiport
C	23	Bypass Cable	HW1471212-C	YASKAWA Electric Corporation	1	1	Signal lead wires for tentative recovery from failure
C	24	S- and L-Axis AC Servomotor	SGM7G-37APK-YR1* HW1385397-A	YASKAWA Electric Corporation	1	2	
C	25	U-Axis AC Servomotor	SGM7G-44APK-YR2* HW1385399-A	YASKAWA Electric Corporation	1	1	
C	26	R-, B-, and T-Axis AC Servomotor	SGM7G-13APK-YR1* HW1385395-A	YASKAWA Electric Corporation	1	3	

Table 10-1: Recommend Spare Parts for the YR-1-06VRL120-A0C (Sheet 3 of 3)

Rank	Parts No.	Name	Type	Manufacturer	Qty	Qty per Unit	Remarks
C	27	Multi-port Connector	HW1384619-A	YASKAWA Electric Corporation	1	3	
C	28	Power Supply Board	HW1372943-A	YASKAWA Electric Corporation	1	1	
C	29	Dummy Connector	HW1471285-A	YASKAWA Electric Corporation	1	-	For dismounting function of the axis

1 The replacement kit for the speed reducer includes the following parts.

- Speed reducer and gear (described in Remarks)
- Required parts to change speed reducer (oil seals, bolts, or other parts)

For details of the replacement kit for the speed reducer, contact your YASKAWA representative.

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