

FURUNO

OPERATOR'S MANUAL

MULTI-DISTRIBUTOR

MODEL MD-550



FURUNO ELECTRIC CO., LTD.
NISHINOMIYA, JAPAN



SAFETY INSTRUCTIONS

CAUTION

The mounting location should satisfy the following conditions:

Sparate from radio transmitter, radar, direction finder (at least 3m).

Locate the equipment away from air conditioner vents.

Keep the equipment out of direct sunlight.

Vibration should be minimal.

The location should be free of water spray.

Do not install this unit on the overhead.

Do not use the cable having a diameter greater than 11.7 mm.

CAUTION



Ground the equipment cable armor to prevent mutual interference and electrical shock.

Observe the following compass safe distances to prevent deviation of a magnetic compass:

	Standard compass	Steering compass
MD-550	1.40 m	0.95 m

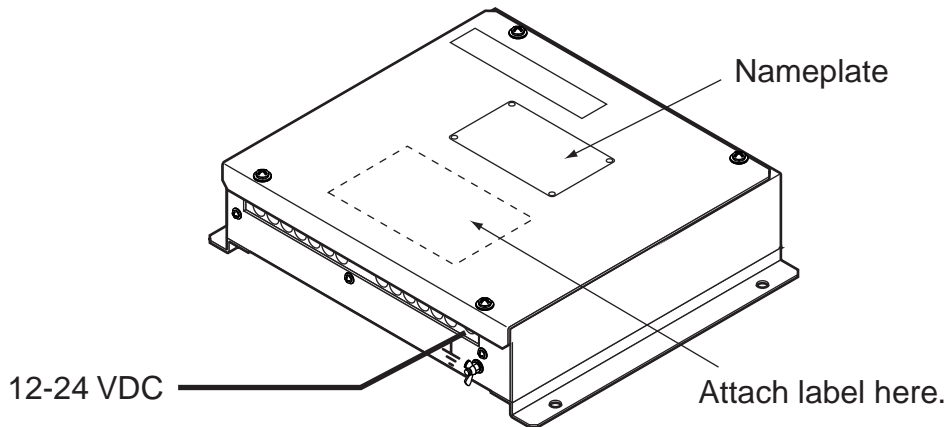
Turn off the power switch at the switchboard before beginning the installation.

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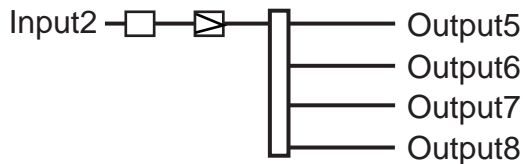
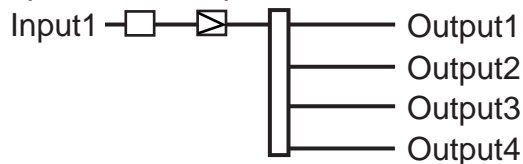
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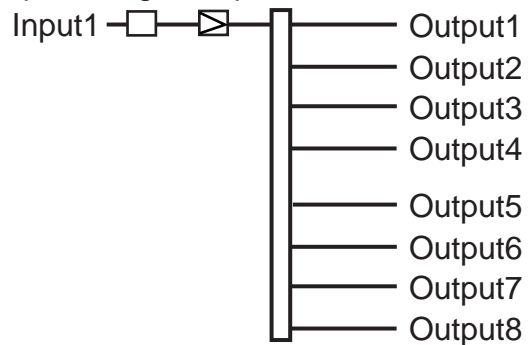
System Configuration



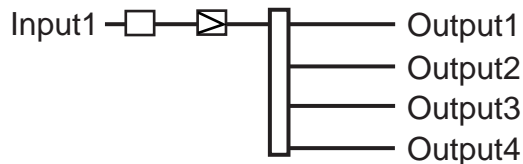
Distribute NMEA from one input to four output



Distribute NMEA from one input to eight output



Distribute AD-10 format



When connecting by current loop, the standard FURUNO receive circuit (current limiter circuit: 470 Ω , photocoupler: PC-400/900 are included) accepts one unit per output line. For connection of multiple equipment, contact a FURUNO agent or dealer for details.

Note: Write on the label the signal name of output 1-8 with an oil-based magic marker, and then attach it below the nameplate. Clean the location before attaching the label.

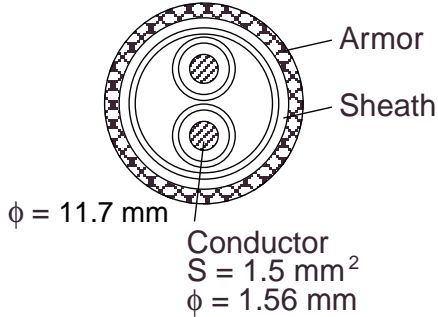
Installation materials and Spare parts

Name	Type	Code No.	Qty	Remarks
Self-tapping screw	4x16 SUS304	000-162-605-10	4	CP14-06601
Label	14-070-1006	100-337-840-10	1	
Fuse	FGMB 125V 0.5A PBF	000-157-462-10	1	SP14-03001

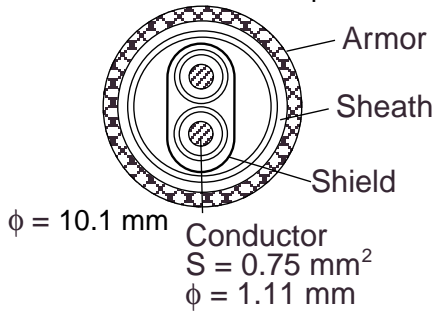
Cables

Use the following cables (Japan Industrial Standard cables) or the equivalents.

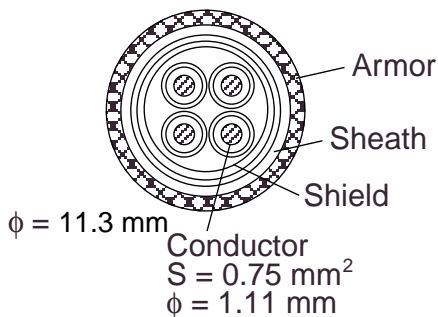
DPYC-1.5 Power cable



TTYCS-1 (Twisted pair cable)
Current loop or RS-422

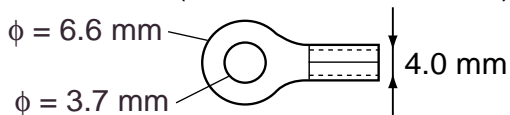


TTYCS-1Q (Four core twisted)
AD-10 format



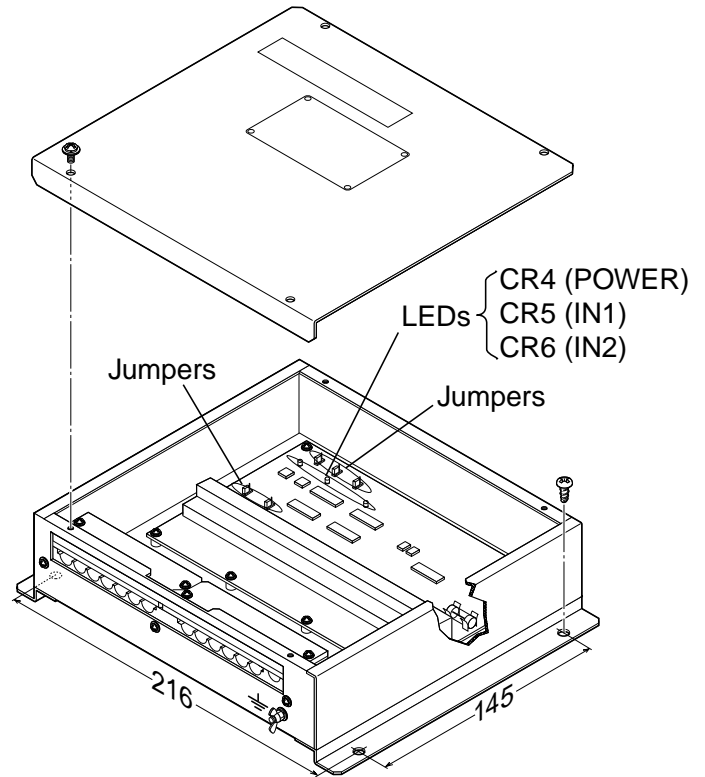
We recommend use of the following crimp-on lug.

FV1.25-M3 (Code no.: 000-538-110)



Mounting

This unit has not power switch. If you do not connect the MD-550 to power switchboard or circuit breaker, install an external power switch (local supply), locating it near the MD-550.

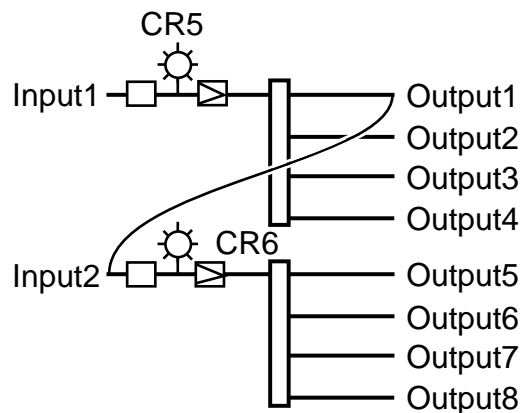


POWER LED: Lights when the power is supplied.

IN1 LED: Blinks when data is input.

IN2 LED: Blinks when data is input.

Note: You can confirm working of output port (by LED) by connecting it to the other input port. (Refer to schematic diagram.)



Connection for confirming working of output port

Setting

Factory jumper settings are for current loop and "1 in 4 out".

	IN1 (OUT1-4)	IN2 (OUT5-8)
Current loop	JP1 (#1-#2), JP2 (#1-#2), JP3 (#1-#2)	JP4 (#1-#2), JP5 (#1-#2), JP6 (#1-#2)
RS-422	JP1 (#2-#3), JP2 (#2-#3), JP3 (#2-#3)	JP4 (#2-#3), JP5 (#2-#3), JP6 (#2-#3)

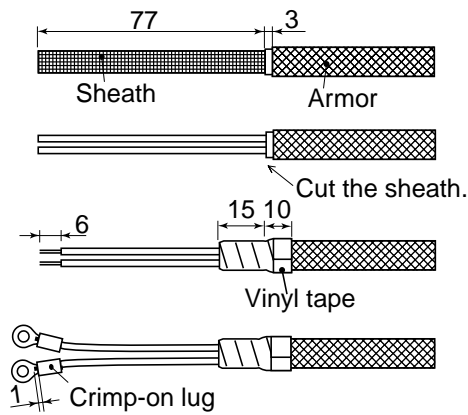
	JP7
1 in 4 out	#1-#2
1 in 8 out	#2-#3

Note1: Put short jumper into connector in same direction as before.

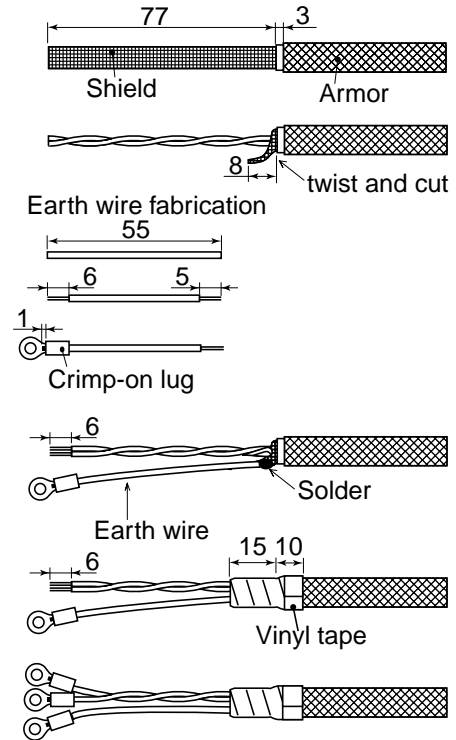
Note2: Do not short jumpers JP13 & JP14. They should be "open."

Fabrication of signal cable

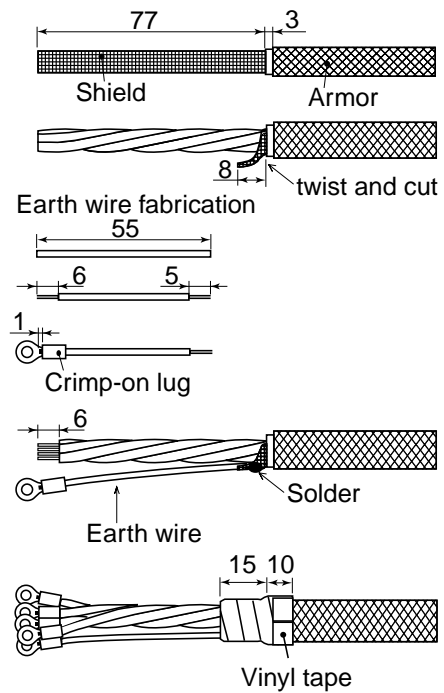
DPYC-1.5



TTYCS-1



TTYCS-1Q



SPECIFICATIONS OF MULTI-DISTRIBUTOR MD-550

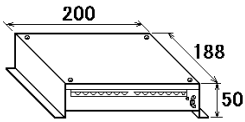


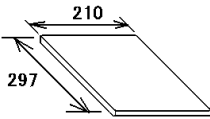
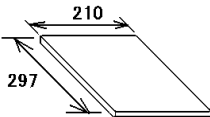
This equipment is used for distribution of navaid data from navigation equipment. It provides four outputs each from two independent inputs or eight outputs from one input by changing an internal setting. AD-10 format signal is also available to distribute four outputs from one input.

- | | |
|----------------------|---|
| 1. Port | Input: 2 ports (data / shift lines)
Output: 8 ports (4 output for one input) |
| 2. Type of Signal | Serial Signal
Input: IEC 61162-1 or NMEA 0183 Ver. 1.5/2.0
(RS-422 or current loop)
Output: IEC 61162-1 (RS-422) |
| 3. Transmission Rate | 4800 bps to 38400 bps |
| 4. Power Supply | 12-24 VDC: 0.25-0.15 A |
| 5. Coating Color | 2.5G7/2 Newtone No.5 |

PACKING LIST

A-1
14CK-X-9851 -4 1/1

MD-550

NAME	OUTLINE	DESCRIPTION/CODE	Q'TY
ユニット UNIT			
分配器 MULTI-DISTRIBUTOR		MD-550 000-043-102-00	1
予備品 SPARE PARTS			
予備品 SPARE PARTS		SP14-03001 004-010-880-00	1
工事材料 INSTALLATION MATERIALS			
工事材料 INSTALLATION MATERIALS		CP14-06601 001-011-190-00	4
図書 DOCUMENT			
取扱説明書(英) OPERATOR'S MANUAL		OME-44080-* 000-809-267-0*	1
取扱説明書(和) OPERATOR'S MANUAL		OMJ-44080-* 000-809-266-0*	1

型式/コード番号が2段の場合、下段より上段に代わる過渡期品であり、どちらかが入っています。なお、品質は変わりません。

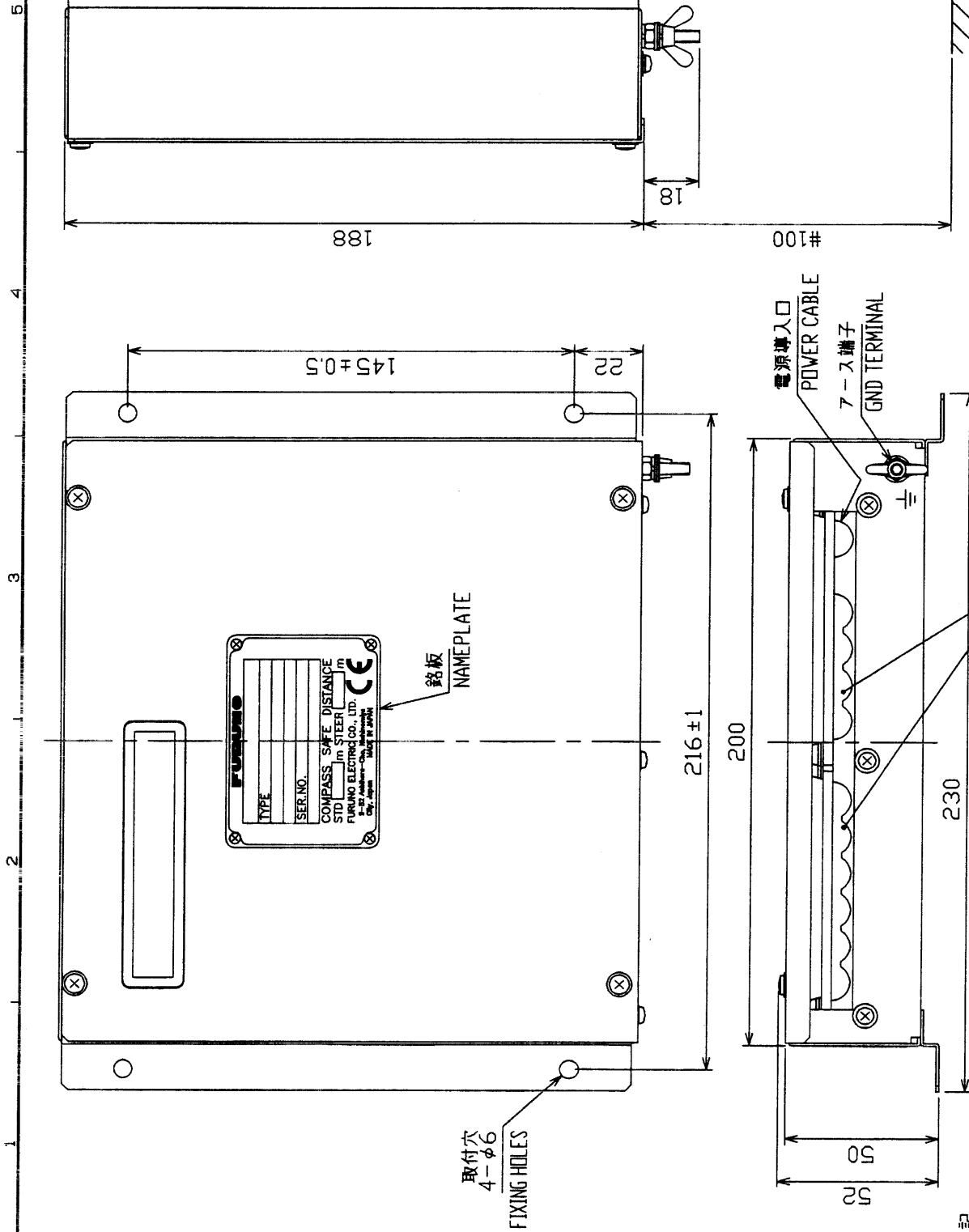
TWO TYPES AND CODES MAY BE LISTED FOR AN ITEM. THE LOWER PRODUCT MAY BE SHIPPED IN PLACE OF THE UPPER PRODUCT. QUALITY IS THE SAME.

(略図の寸法は、参考値です。 DIMENSIONS IN DRAWING FOR REFERENCE ONLY.)

14CK-X-9851

寸法区分 (mm) DIMENSIONS	公差 (mm) TOLERANCE
L ≤ 50	± 1.5
50 < L ≤ 100	± 2.5
100 < L ≤ 500	± 3

表 1 TABLE 1



DRAWN	Nov. 21 01 I. YAMASAKI	TITLE	MD-550
CHECKED	May 21 '01 Y. K.	名称	分配器
APPROVED	Nov 21 '01 Y. K.	外寸図	
SCALE	1/2 MASS 1.6 kg	WAVE	MULTI-DISTRIBUTOR
DWG No.	C4408-601-D		OUTLINE DRAWING
	14-070-1000-3		

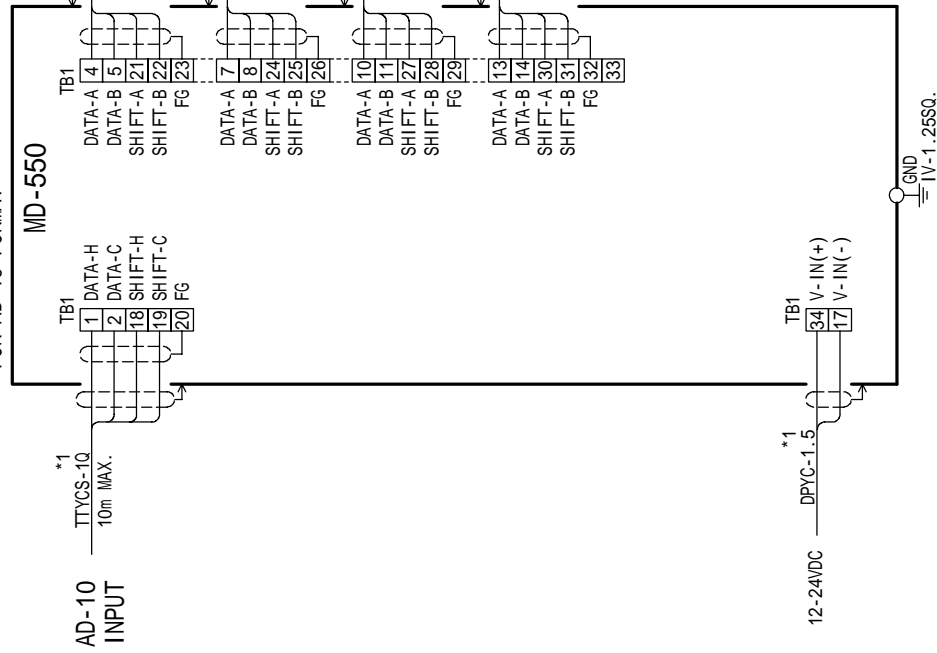
注 記

- 1) #印寸法は最小サージ空間寸法とする。
- 2) 指定外の寸法公差は表1による。
- 3) 取付用ネジは+トラスケッピンネジ SUS304 4X16を使用のこと。

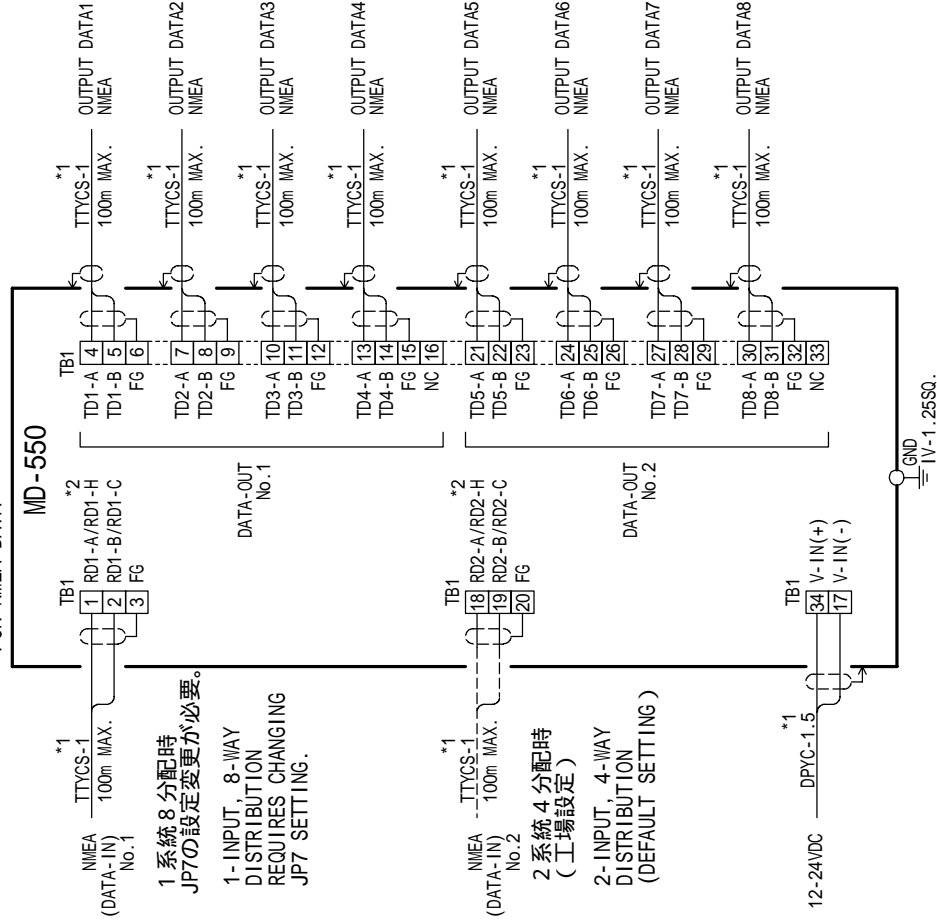
NOTE

1. #1 RECOMMENDED SERVICE CLEARANCE.
2. TABLE 1 INDICATES TOLERANCE OF DIMENSIONS.
3. USE TAPPING SCREWS SUS304 4x16 FOR FIXING THE UNIT.

AD-10フォーマットのとき
FOR AD-10 FORMAT



NMEA データのとき
FOR NMEA DATA



*1 系統 8 分配時
JP7 の設定変更が必要。

1- INPUT, 8-WAY
DISTRIBUTION
REQUIRES CHANGING
JP7 SETTING.

*1 系統 4 分配時
(工場設定)

2- INPUT, 4-WAY
DISTRIBUTION
(DEFAULT SETTING)

注記 *1) 造船所手配

*2) 工場設定: カレントループ。

NOTE *1. SHIPYARD SUPPLY.

*2. DEFAULT SETTING: CURRENT LOOP.

DRAWN	Nov. 10, '04	E. MIYOSHI	TITLE	MD-550
CHECKED		TAKAHASHI, T	名称	分配器
APPROVED		Y. Hatai	相互結線図	
SCALE		MASS kg	NAME	MULTI-DISTRIBUTOR
DWG No.	C4408-C01-G			INTERCONNECTION DIAGRAM
				14-070-5001-1



(Elemental Chlorine Free)

The paper used in this manual
is elemental chlorine free.

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Printed in Japan

Pub. No. OME-44080

(YOSH) MD-550

FIRST EDITION : NOV. 2001

B : JAN. 11, 2007



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