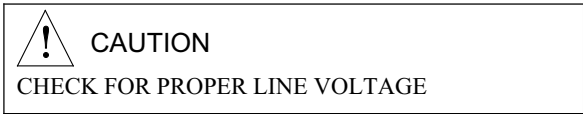


6. Automatic Control Panels



In laying out or installing the control panels, see the external dimensions, external wiring diagrams and inter-connection schematics in relevant completion or installation drawing.

6.1 Installation of Panels

1. Install the automatic control panel, starter panel and other controllers vertically where vibrations are minimum and the neighborhood of the purifier (which is within 10m away and visible).

NOTE

Vibrations must be within the limits of amplitude specified below. Higher vibrations shorten the life of parts and damage system reliability.

- 1~10Hz 3 mm (double amplitude)
- 10~60Hz 150/f² mm (single amplitude)
(f = Vibration frequency Hz)

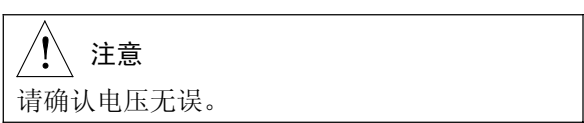
2. If the panels have any clearance between mounting legs and mounting seats, use lining to eliminate it for close fit.

NOTE

If installed without existing clearance eliminated, the panel box may be strained to result in poor working of the door.

3. Install the panels where ambient temperature does not exceed 45°C and humidity is lowest possible. (While relevant classification standards are prior, it is recommended that the ambient temperature be below 45°C)
4. Install the panels where they are easy to operate and which.

6. 自动控制盘部分



在制定计划或进行施工时，请参照完成图或施工图的控制盘外形图、柜外配线图及接线图。

6.1 盘类的安装

1. 请将自动控制盘、起动器等盘类垂直安装在振动少且靠近分油机的场所（距分油机 10m 以内，可完全看得到的地方）。

注

振动幅度最大只能允许以下值。如果振动幅度太大，会缩短使用寿命，并有损系统的可靠性。

- 1~10Hz 3 mm（双振幅）
- 10~60Hz 150/f² mm（单振幅）
(f=振动频率 Hz)

2. 当柜类的安装脚和安装座之间出现细小缝隙时，请插入垫片去除缝隙。

注

如果在不去除缝隙情况下安装，会因箱体产生变形，使箱门开闭不灵活。

3. 请设置在环境温度 45°C 以下且湿度尽可能低的场所。
(环境温度条件适用于各船级规格，这里推荐 45°C 以下。)
4. 请设置在便于操作监视的场所。

6.2 Wiring

1. Use cables that meet relevant classification standards, such as [JIS-C 3410 Cables and Flexible Cords for Electrical Equipment of Ships].
2. Connect cables to the terminal board with crimp-type terminal lugs (type of circle) on wires.
3. PC-PR and PC-PA terminal signals from the starter panel to the monitor panel are for starting motor and for clearing motor stop alarm, respectively.
4. Ground each panel by connecting to the hull from its grounding terminal in the electrically effective way.
5. For wiring schematics, see the completion, installation and other drawings separately furnished.

NOTE

Wire the cables of each detector or monitor separately. Never route them in the same conduit that is used for cables of other devices.

6.2 配线

1. 对于所使用的电线，请选用“JIS-C 3410 船用电线”等适合于船级规范的商品。
2. 请在电线上压接压接端子（圆型），然后在端子台上接线。
3. 在从起动器送到监视中心的信号中，端子编号 PC-PR 间为电动机的运转信号，PC-PA 间为电动机停止报警的取消用信号。
4. 请使用各盘类的接地端子与船体进行接地，并保证其电气有效性。
5. 有关配线系统，请参照其它图纸（完成图、施工图等）。

注

请将各检测器用的配线单独设置，不要与其它设备用的配线通入同一配管内。

7. Multi-Monitor (MM)

7.1 Outline for Multi-Monitor

Multi-Monitor is the device that adopts the signal such as the temperature, revolution number, pressure of the SELFJECTOR SJ-G series machine and take out the display and also warning signal such as feed rate, treating temperature, revolution number, leakage (Oil leakage), No-discharge, abnormal water content.

7. 综合检测器（多功能检测显示器：MM）

7.1 概要

综合检测器是检测 SELFJECTOR SJ-G 系列机的温度，转速，压力等信号，进行处理量，处理温度，转速，泄漏（异常流出），排出不良，水分异常等显示及发出报警信号的装置。

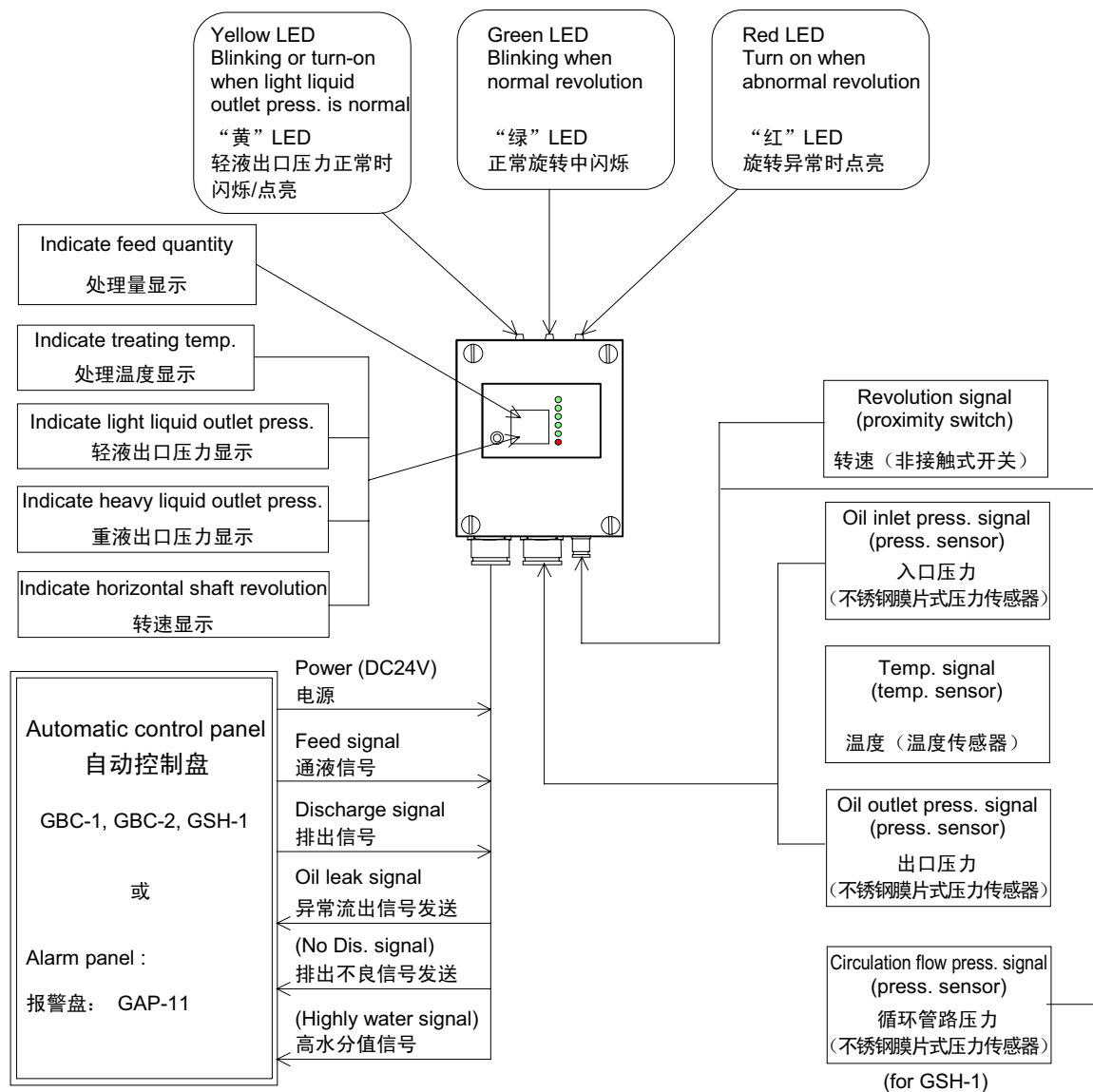


Fig 7-1 Explanatory diagram for Multi-Monitor
综合检测器（多功能检测显示器）说明图

7.2 Kind of Multi-Monitor

There are 3 kinds that show it to Multi-Monitor in the next table.

You can select it by the kind of automatic device.

7.2 综合检测器（多功能检测显示器）的种类

综合检测器（多功能检测显示器）分为以下 3 种类型。根据自动化装置的种类选定。

Table 7-1

Function	MM-1	MM-2	MM-3
Applied automatic control device 适用自动化装置	GBC-1, GBC-2 Alarm panel/报警盘: GAP-11	GBC-1, GBC-2 (with DD / 带 DD)	GSH
Detect oil leakage (LM) 泄漏检测功能	○	○	○
Indicate inlet temp. 入口温度显示	○	○	○
Indicate feed rate 处理量显示	○	○	○
Indicate oil outlet press. 出口压力显示	○	○	○
Detect no discharge (DD) 排出不良检测功能	—	○	○
Indicate horizontal shaft revolution. 转速显示	—	○	○
Water detects. (WD) 水分检测功能	—	—	○
Communication (RS485) 通信功能 (RS485)	—	○	○

7.3 Arrangement of the sensor

The arrangement of each sensor is shown to Fig 7-2.

7.3 传感器的配置

Fig 7-2 为各传感器的配置。

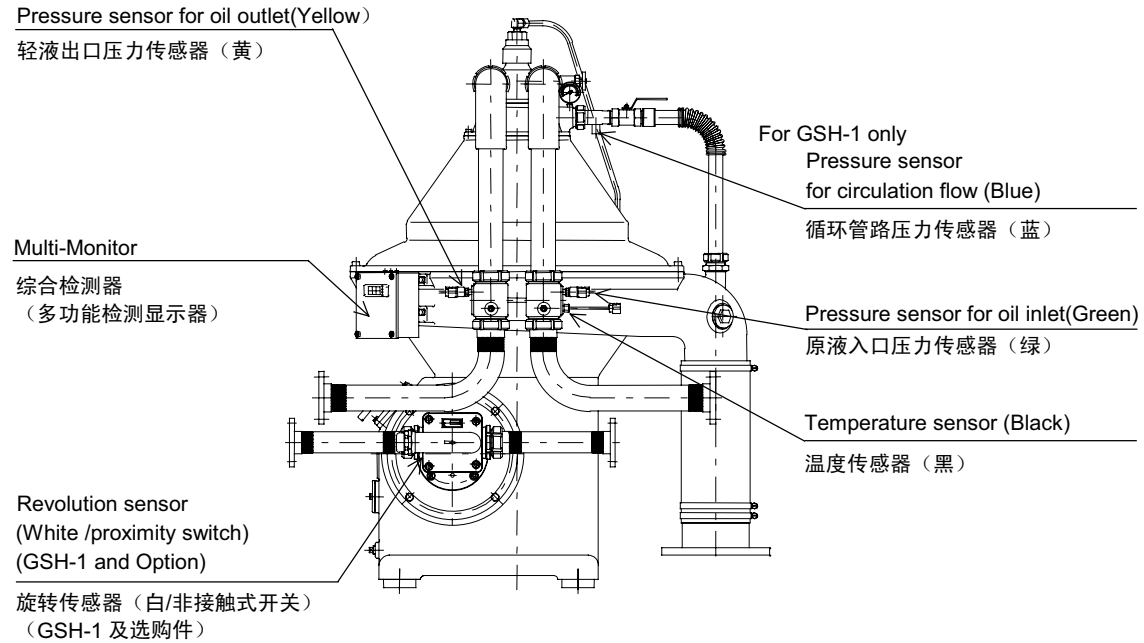


Fig 7-2 Sensor arrangement for Multi-Monitor
综合检测器 (多功能检测显示器) 传感器配置图

7.4 Wiring

Please make wiring work after opening rid of Multi-Monitor.

- 1) Don't use another wire than attached one.
- 2) It is able to connect with 7-core cable between Multi-Monitor and control panel.
- 3) Strip wire 5 or 6 mm at the end of wire.
- 4) Insert the end of wire to the lower hole of terminal block after insert screwdriver to the top hole of terminal block, then draw-out screwdriver. Wire connection will be completed.

7.4 配线

请打开综合检测器（多功能检测显示器）的护盖，将电源和信号线连接到端子台上。

- 1) 各传感器的信号电线，请使用附属品进行连接。
- 2) 综合检测器（多功能检测显示器）与自动控制盘（GSH-1），请使用 7 芯电缆连接。
- 3) 电线的绝缘皮覆层，请剥开 5~6mm 长。
- 4) 将小型螺丝刀插入端子台上部的孔内，然后将电线由下面孔插入，拔出螺丝刀则接线完成。

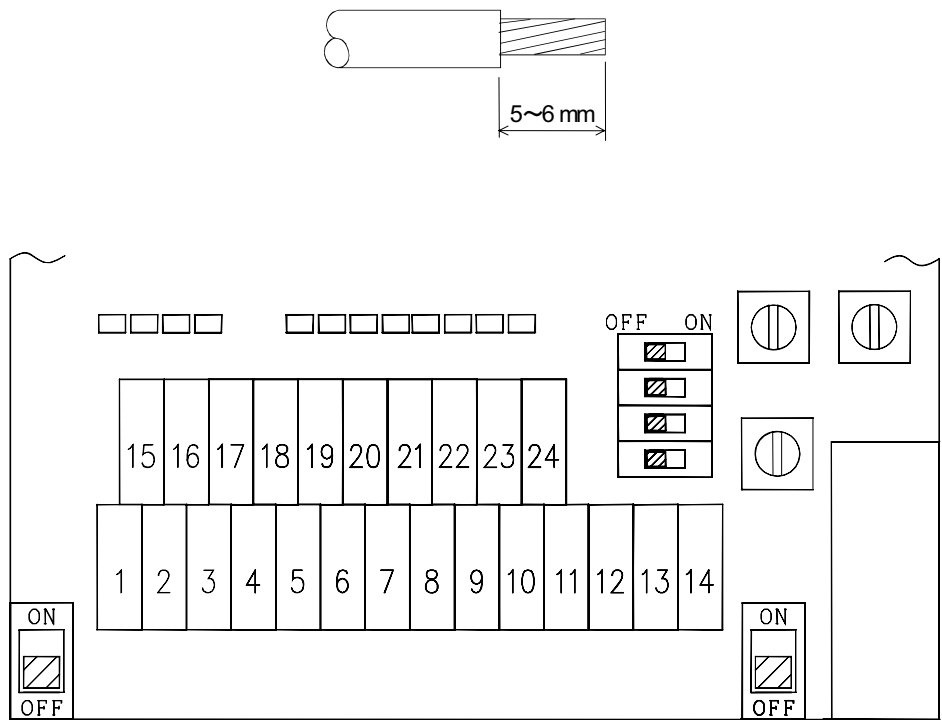


Fig 7-3 Terminal block
端子台

Terminal block arrangement is as follows.

下表为端子台的排列。

Table 7-2

Terminal No. 端子 No.		Connection 连 接	Connect to 连接对方	Terminal No. 端子 No.		Connection 连 接	Connect to 连接对方
MM1	MM2 MM3			MM1	MM2 MM3		
1	1	Power source (DC24V) 电 源 (DC24V)	Control panel 自动控制盘 Alarm panel 报警盘 Starter 起动机	7	13	Temp. signal (Black) 温度信号 (黑)	Temp. sensor (Black) 温度传感器 (黑)
2	2	GND		8	14	Temp. signal (Red) 温度信号 (红)	
3	3	Oil leakage Signal 异常流出报警信号		9	15	Oil inlet press. Signal (Black) 原液入口压力信号 (黑)	Oil inlet press. sensor (Green) 原液入口压力传感 器 (绿)
—	4	No discharge signal 排出不良信号		10	16	Oil inlet press. Signal (Green) 原液入口压力信号 (绿)	
—	5	Highly water signal 高水分值信号		11	17	Oil inlet press. signal (Red) 原液入口压力信号 (红)	
6	6	Oil feed signal 通液信号		12	18	Oil outlet press. signal (Black) 轻液出口压力信号 (黑)	Oil outlet press. Sensor (Yellow) 轻液出口压力传感 器 (黄)
—	7	Discharge signal 排出信号	旋转信号 (集电极)	13	19	Oil outlet press. signal (Yellow) 轻液出口压力信号 (黄)	
—	8	Spare output 输出信号 (备用)		14	20	Oil outlet press. signal (Red) 轻液出口压力信号 (红)	
—	9	Spare output 输出信号 (备用)	旋转信号 (发射极)	—	21	Circulation flow press. signal (Black) 循环管路压力信号 (黑)	Circulation flow press. sensor (Blue) (GSH-1) 循环管路压力传感 器 (蓝) (GSH-1)
—	10	Revolution. signal (Black) 旋转信号 (黑)	Rev. sensor (White) (GSH-1 & Option) 旋转传感器 (白) (GSH-1 及选购件)	—	22	Circulation flow press. signal (Pink) 循环管路压力信号 (粉红)	
—	11	Revolution. signal (White) 旋转信号 (白)		—	23	Circulation flow press. signal. (Red) 循环管路压力信号 (红)	
—	12	Revolution. signal (Red) 旋转信号 (红)		15	—	Oil leakage Signal (b/a contact) 异常流出报警信号 (b/a 接点)	Alarm panel 报警盘 Starter 起动机
				16			

Terminal NO.24 ; For option use (MM2/MM3)

Comments: 1) MM1 is Multi-Monitor type with LM function, MM2 is Multi-Monitor type with LM & DD Function, MM3 is Multi-Monitor type with LM, DD & WD function.

- 2) The terminal number 15 is used for “b-contact” and the terminal number 16 is used for “a-contact”
端子台 15 为 b 接点、端子台 16 为 a 接点。

7.5 Explanation of function

7.5 功能说明

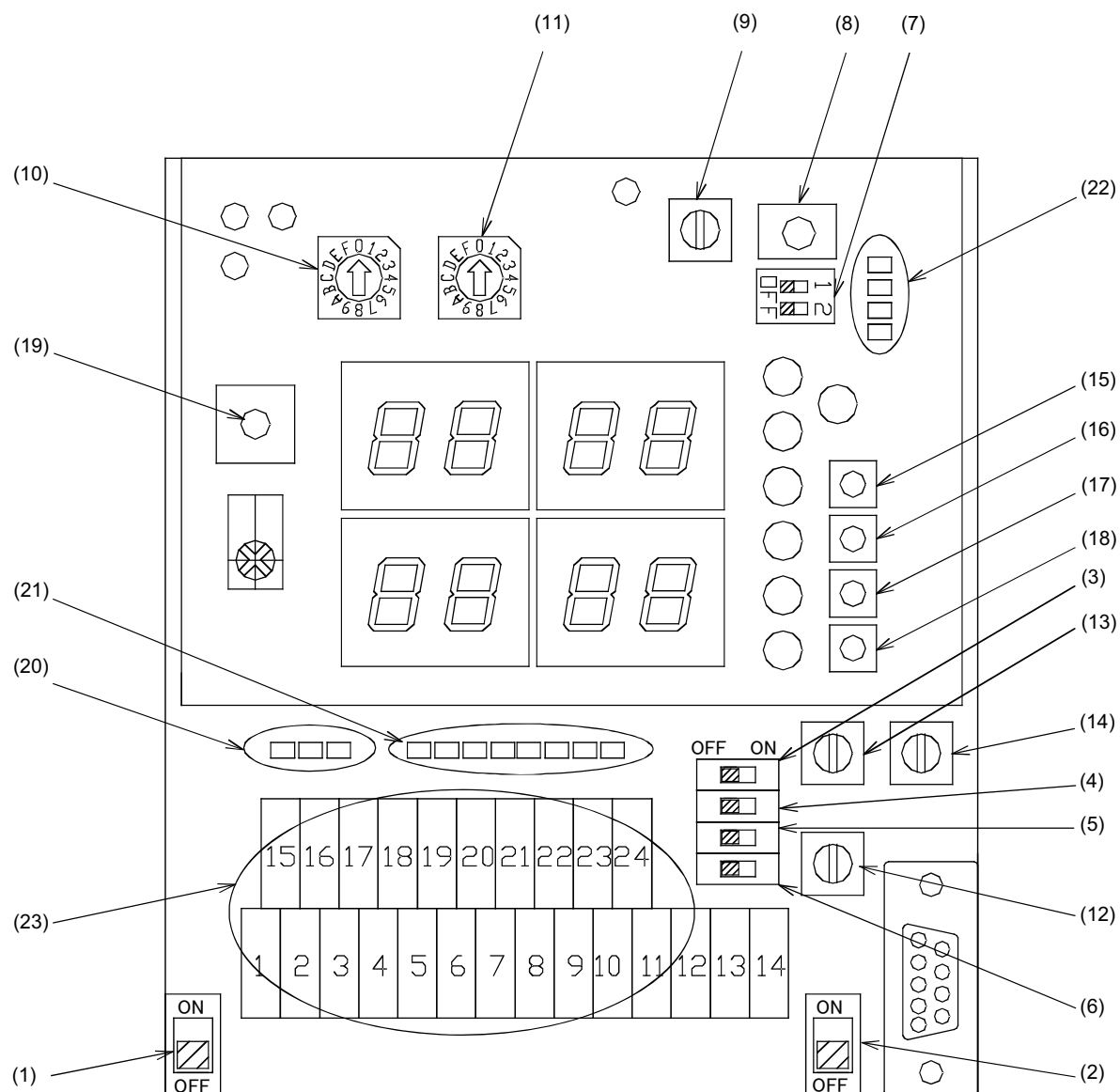


Fig 7-4 Printed circuit board
电路基板

NOTE

In case of the Multi-Monitor-1 (MM-1), switches from number (3) to (12) and (22) are not attached to the Multi-Monitor. The terminal block (23) consists of the board number 1 to 17.

注

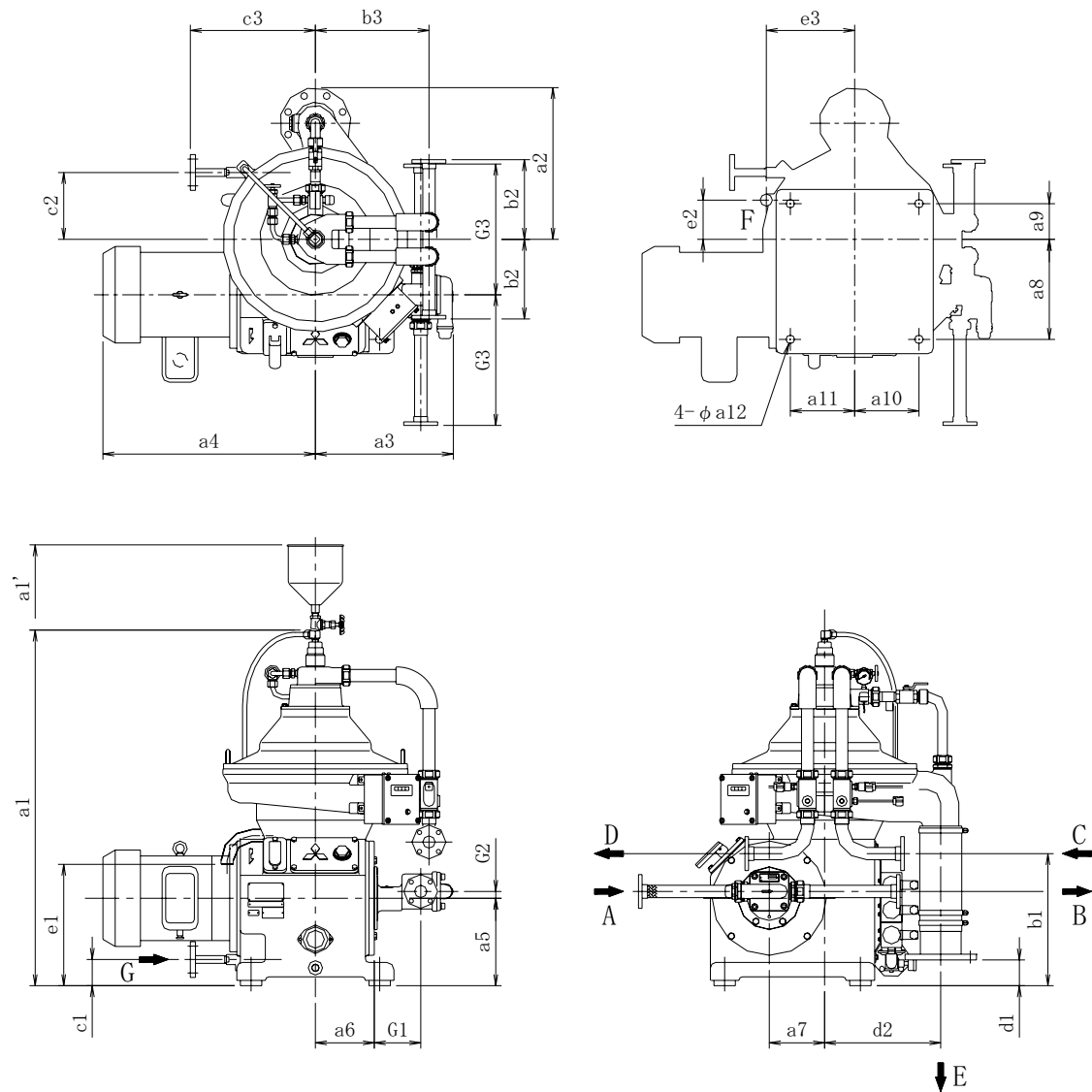
在多功能检测显示器-1 (MM-1) 中，未附带 (3) ~ (12) 及 (22)。
另外，端子台 (23) 只有 No.1 ~ No.17。

Table 7-3

No	Use 用途	No.	Use 用途
(1)	Power switch 电源开关	(13)	Control volume for temp. indication 温度显示调整旋钮
(2)	Switch for LM alarm output LM 报警输出开关	(14)	Control volume for flow indication 流量显示调整旋钮
(3)	Switch for DD alarm output 排出报警输出开关	(15)	Function setting switch (Switching of the items) 功能设定开关（设定项目的切换）
(4)	Switch for water detection output 水分检测输出开关	(16)	Function setting switch (Change setting value to forward) 功能设定开关（设定数值的上切换）
(5)	Switch for temperature alarm output 温度报警输出开关	(17)	Function setting switch (Change setting value to backward) 功能设定开关（设定数值的下切换）
(6)	Switch for rotation output 旋转输出开关	(18)	Function setting switch (Enter switch) 功能设定开关（决定）
(7)	1: Switch for frequency 50Hz / 60 Hz 1: 50Hz / 60Hz 切换开关 2: Switch for partial “ON”/“OFF” 2: 部分排出 “ON” / “OFF” 开关	(19)	Pressure display lock switch 压力显示固定开关
(8)	Switch for measuring partial discharge quantity 排出量测定开关	(20)	Confirmation LED for input signal. (Green) 输入信号确认 LED（绿）
(9)	Datum sensitivity 基准灵敏度 VR	(21)	Confirmation LED for output signal (Red) 输出信号确认 LED（红）
(10)	Setting center voltage of partial discharge quantity 排出量中心电压设定	(22)	Confirmation LED for partial discharge quantity 部分排出量确认 LED
(11)	Setting range width of partial discharge quantity 排出量幅度设定	(23)	Terminal block 端子台
(12)	Water detector selector dial 水分检测功能切换开关	—	—

8. Dimension of SJ-G series

8. 尺寸



SJ10G/GH ~ SJ150G/GH

(Gear Pump)

	GP10G	GP20G	GP30G	GP50G	GP70G	GP100G
G1	115.5	122.5	134	127.5	135	150
G2	16.2	19	19	28.5	28.5	28.5
G3	361	366	366	402	402	402

Bore of Piping Connection

Gear Pump

	Piping Connection	GP10G	GP20G	GP30G	GP50G	GP70G	GP100G
A	Gear pump inlet	25A			40A		50A
B	Gear pump outlet						

SJG

	Piping connection	SJ10 G/GH	SJ20 G/GH	SJ30 G/GH	SJ50 G/GH	SJ60 G/GH	SJ70 G/GH	SJ100 G/GH	SJ120 G/GH	SJ150 G/GH
C	Dirty oil inlet	25A			40A			50A		
D	Purified oil outlet									
E	Sludge & water outlet	100A						150A		
F	Operating water outlet	25A						40A		
G	Operating water inlet	15A								

NOTE

1. In case of manual type, measurement of height is indicated the column a1' in the above table.
2. Measurement of the column "a4" will be indicated the case of the our standard motor attached.

注

1. 手动规格中，高度为 a1' 尺寸。
2. a4 尺寸为安装本公司标准电动机时的尺寸。

Dimension

Model	Overall Dimension								Dimension of installation				
	a1	a1'	a2	a3	a4	a5	a6	a7	a8	a9	a10	a11	a12
SJ10G/GH	996	1,234	435	378	598	245	165	155	280	100	180	180	24
SJ20G/GH	1002	1,240	435	378	595	245	165	155	280	100	180	180	24
SJ30G/GH	1,027	1,265	435	393	595	245	165	155	280	100	180	180	24
SJ50G/GH	1,216	1,522	500	480	683	315	200	160	300	135	210	210	24
SJ60G/GH	1,216	1,522	500	480	755	315	200	160	300	135	210	210	24
SJ70G/GH	1,236	1,541	500	480	755	315	200	160	300	135	210	210	24
SJ100G/GH	1,407	1,712	623	565	830	330	220	160	290	150	240	240	28
SJ120G/GH	1,407	1,712	623	565	830	330	220	160	290	150	240	240	28
SJ150G/GH	1,444	1,749	643	590	880	330	220	165	315	150	240	240	28

Model	b1	b2	b3	c1	c2	c3	d1	d2	e1	e2	e3
SJ10G/GH	378	223	330	75	198	511	67	335	340	110	270
SJ20G/GH	378	223	330	75	198	511	67	335	340	110	270
SJ30G/GH	378	223	345	75	198	511	67	335	340	110	270
SJ50G/GH	399	335	420	75	233	546	145	400	430	145	300
SJ60G/GH	399	335	420	75	233	546	145	400	430	145	300
SJ70G/GH	399	335	420	75	233	546	145	400	430	145	300
SJ100G/GH	469	490	500	100	258	556	80	490	445	155	380
SJ120G/GH	469	490	500	100	258	556	80	490	445	155	380
SJ150G/GH	469	490	525	100	258	556	80	510	445	155	380