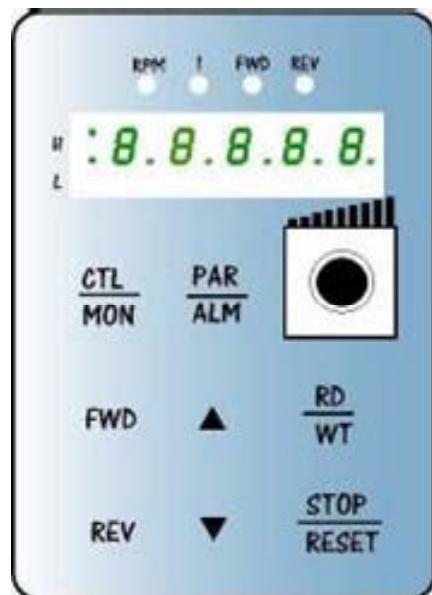


R-PANEL

USER MANUAL



Version : V1.02

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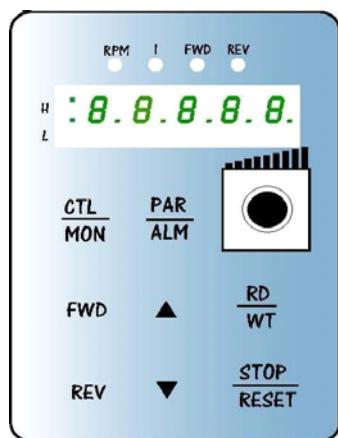
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1. R-PANEL

There are 5 Seven-segment displays, 6 LEDs, 8 buttons, and 1 AIP on this PANEL.

All control modes will be introduced below :

1.1 Control Mode 【CTL MODE】



Press "CTL/MON" button to change between CTL and MON mode.

After pressing "CTL/MON" button, if neither "RPM" nor "I" LED lights up, means it's now under "CTL MODE," user can control the motor directly.

The function description of buttons and AIP is as below:

【AIP】 : Rotate the VR to provide a voltage to CPU, the resolution is form 0 to 4095(12bits)

【FWD】 : Motor RUN Forward command (DI5 ON; DI6 OFF)

【REV】 : Motor RUN Reverse command (DI5 OFF; DI6 ON)

【STOP】 : Motor STOP command (DI5 OFF; DI6 OFF)

1.2 Monitor Mode 【MON MODE】

Press "CTL/MON" button to change between CTL and MON mode.

Press down and Hold "CTL/MON" button, if "RPM" lights up, the drive is under "MON MODE," user can monitor some status of Drive like speed "RPM," frequency "RPM" and current "I," and can control motor RUN Forward, Reverse, and Stop.

【Caution】 :『When R-PANEL connect to: JMD-SERIES-DRIVER』

- Neither "RPM" nor "I" light up, the drive is under "CTL MODE," the display shows Pr.056: RPM.
- Only "RPM" light up, the drive is under "MON MODE," the display shows Pr.056: RPM.
- Only "I" light up, the drive is under "MON MODE," the display shows Pr.018: I_RMS (Ampere).

【Caution】 :『When R-PANEL connect to: IRIS-SERIES-DRIVER』

- Neither "RPM" nor "I" light up, the drive is under "CTL MODE," the display shows Pr.019: RPM.
- Only "RPM" light up, the drive is under "MON MODE," the display shows Pr.019: RPM.
- Only "I" light up, the drive is under "MON MODE," the display shows Pr.204: AMP (%).

The function description of buttons is as below:

【FWD】 : Motor RUN Forward command (DI5 ON; DI6 OFF)

【REV】 : Motor RUN Reverse command (DI5 OFF; DI6 ON)

【STOP】 : Motor STOP command (DI5 OFF; DI6 OFF)

【▲】 : Change monitor parameter.

【▼】 : Change monitor parameter.

1.3 Parameter Editing Mode [PAR MODE]

Press "PAR/ALM" button to change between PAR and ALM mode.

Press "PAR/ALM," if display shows "Pr.nnn," the drive is under "PAR MODE," both "RPM" and "I" light up.

User can Edit or Monitor all parameters under this mode. The operate steps is as follows:

【Step1】 : Press "PAR/ALM," the display shows "Pr.nnn." (nnn means parameter number: 000~999)

【Step2】 : Press ▲ or ▼ to change parameter number, press "STOP" to change the digital position.

【Step3】 : Press "RD/WT" to read the value of selected parameter.

【Step4】 : Press ▲ or ▼ to verify the value, press "STOP" to change the digital position.

【Step5】 : Press "RD/WT" to write down the parameter.

Repeating step 1 ~ 5 to verify other parameters.

1.4 ALARM MODE [ALM MODE]

Press "PAR/ALM," to change between "PAR MODE" and "ALM MODE."

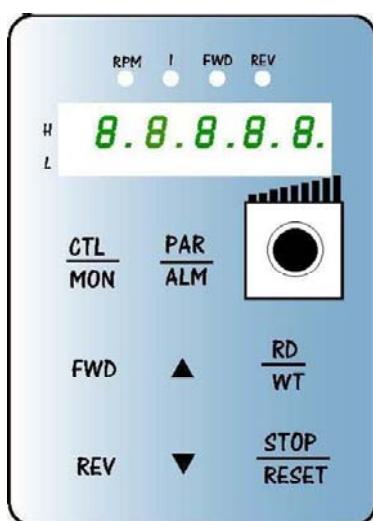
Continuously press "PAR/ALM," if the display shows "A0-xx," the drive is under "ALM MODE."

User can observe last four alarm record or RESET drive under this mode.

Press ▲ or ▼ to see historical alarm record.

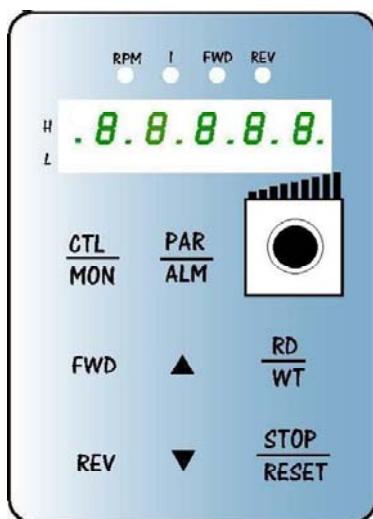
Press "STOP/RESET," to reset drive.

1.5 RD / WT 【Single-Word】 / 【Double-Word】 Parameters



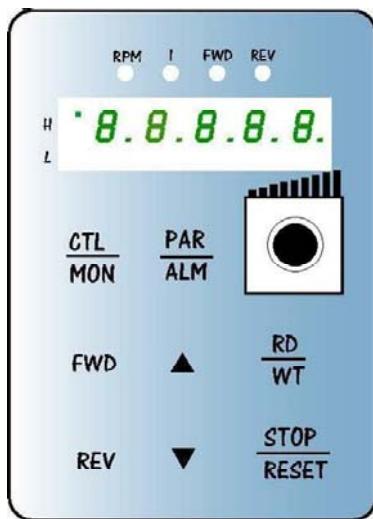
[Parameters belong to Single-Word]

- ※ R-PANEL connect to JMD-SERVO
- Press "PAR/ALM" button to enter "PAR MODE," press ▲ or ▼ to change parameter number.
Press "RD/WT" button, to read parameter value.
- If the parameter is belong to 【Single Word】 , the panel shows as the picture.
- Press ▲, ▼, or "STOP" button to change the value.
The display is flashing on this time.
- After deciding the value, press "RD/WT" button to write down the value. The display stop flashing means the value written down.



[Parameters belong to Double-Word display of low word]

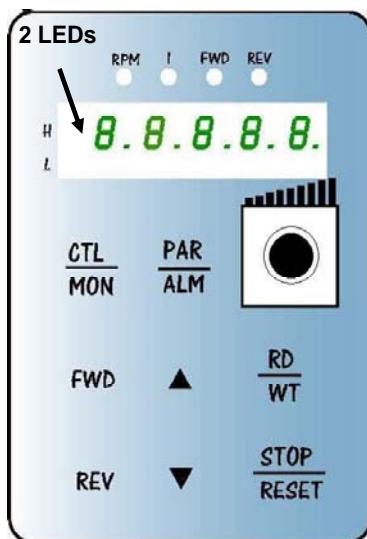
- ※ R-PANEL connect to JMD-SERVO
- Press "PAR/ALM" button to enter "PAR MODE," press ▲ or ▼ to change parameter number. Press "RD/WT" button, to read parameter value.
- If this parameter belongs to low word of a Double Word, the panel shows as the picture.
- To change to high word, press [FWD] .
- Press ▲, ▼, or "STOP" button to change the value.
The display is flashing on this time.
- After deciding the value, press "RD/WT" button to write down the value. The display stop flashing means the value written down.



[Parameter belong to Double-Word display of high word]

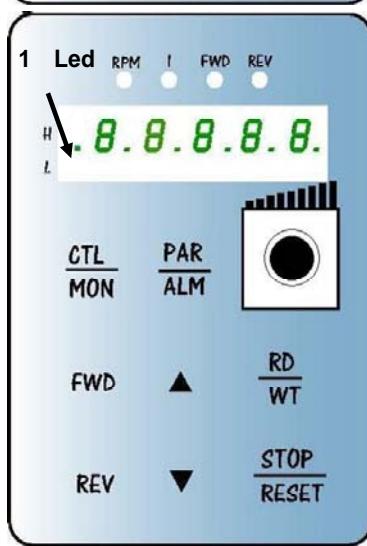
- ※ R-PANEL connect to JMD-SERVO
- Press "PAR/ALM" button to enter "PAR MODE," press ▲ or ▼ to change parameter number. Press "RD/WT" button, to read parameter value.
- If this parameter belongs to high word of a Double Word, the panel shows as the picture.
- To change to high word, press [REV] .
- Press ▲, ▼, or "STOP" button to change the value.
The display is flashing on this time.
- After deciding the value, press "RD/WT" button to write down the value. The display stop flashing means the value written down.
-

1.6 [Single-Word] / [Double-Word] Negative Numbers



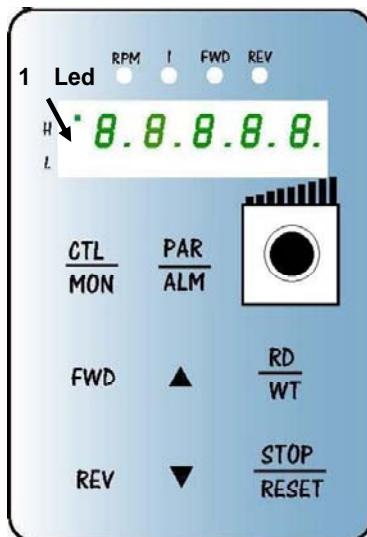
[Parameters belong to signed Single-Word]

- Refer to previous chapter, read or write parameters.
- To change between Positive and Negative, press “STOP” button for one second under “EDIT” status.
 - Only under “EDIT” status can change the sign.
 - Under this status, if the value is negative 2 LEDs flash.
 - Under this status, if the value is positive 2 LEDs lit up.
- ※ Edit status means one of the seven-segment displays flashing.
- ※ STOP button works only when parameters are signed.
- ※ If 2 LEDs not lit up, the value is positive single word.
- ※ If 2 LEDs flashing, the value is negative single word.
- ※ 示屬於【負數】的【Single Word】



[Parameters belong to signed Double-Word low word]

- Refer to previous chapter, read or write parameters.
- To change between Positive and Negative, press “STOP” button for one second under “EDIT” status.
 - Only under “EDIT” status can change the sign.
 - Under this status, if the value is negative 1 LED flash.
 - Under this status, if the value is positive 1 LED lit up.
- ※ Edit status means one of the seven-segment displays flashing.
- ※ STOP button works only when parameters are signed.
- ※ If 1 Led lit up, the value is positive.
- ※ If 1 Led flashing, the value is negative.



[Parameters belong to signed Double-Word high word]

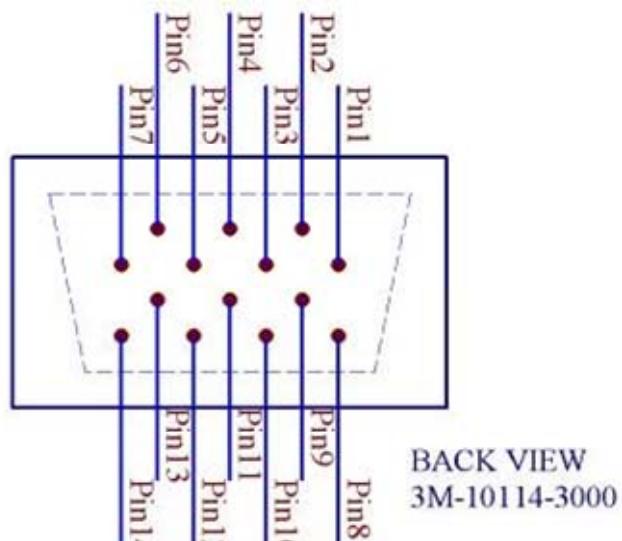
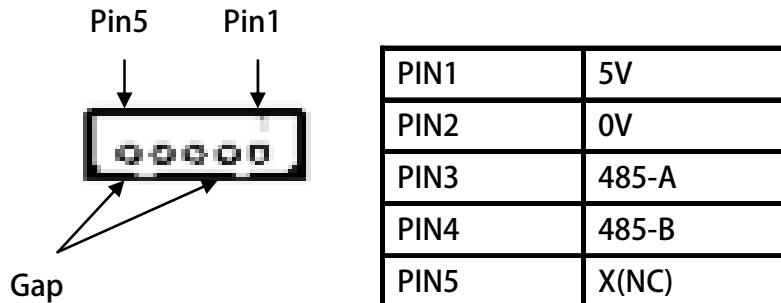
- Refer to previous chapter, read or write parameters.
- To change between Positive and Negative, press “STOP” button for one second under “EDIT” status.
 - Only under “EDIT” status can change the sign.
 - Under this status, if the value is negative 1 LED flash.
 - Under this status, if the value is positive 1 LED lit up.
- ※ Edit status means one of the seven-segment displays flashing.
- ※ STOP button works only when parameters are signed.
- ※ If 1 Led lit up, the value is positive.
- ※ If 1 Led flashing, the value is negative.

2. ALARM MODE [ALM MODE] CODE DESCRIPTION

ALARM CODE	DESCRIPTION and TROUBLESHOOTING
A0 - no	A0 — no → No Error No Error
A0 - PG	A0 — PG → PG Error Motor encoder signal feedback error
A0 - CF	A0 — CF → Fan Error Fan speed too slow or stopped
A0 — SE	A0 — SE → Memory Error EEPROM memory error
A0 — ES	A0 — ES → Emergency Stop Drive received emergency stop command from digital input or communication.
A0 — OD	A0 — Od → Discharge Overtime Drive electrical discharge time over protection time.
A0 - OL	A0 — OL → Over Load Drive over load time over protection time
A0 - OH	A0 — OH → Over Heat Temperature of heat sink over heat
A0 - OP	A0 — OP → Over Power Voltage over capacitance too high.
A0 - UP	A0 — UP → Low Power Voltage over capacitance too low, please check the power source.
A0 - OC	A0 — OC → Over Current Current output over protection level
A0 — Er.	A0 — Er. → Communication Fail Communication between panel and drive failed

3. [Definition of Cables]

JAM SC-5P Connector :

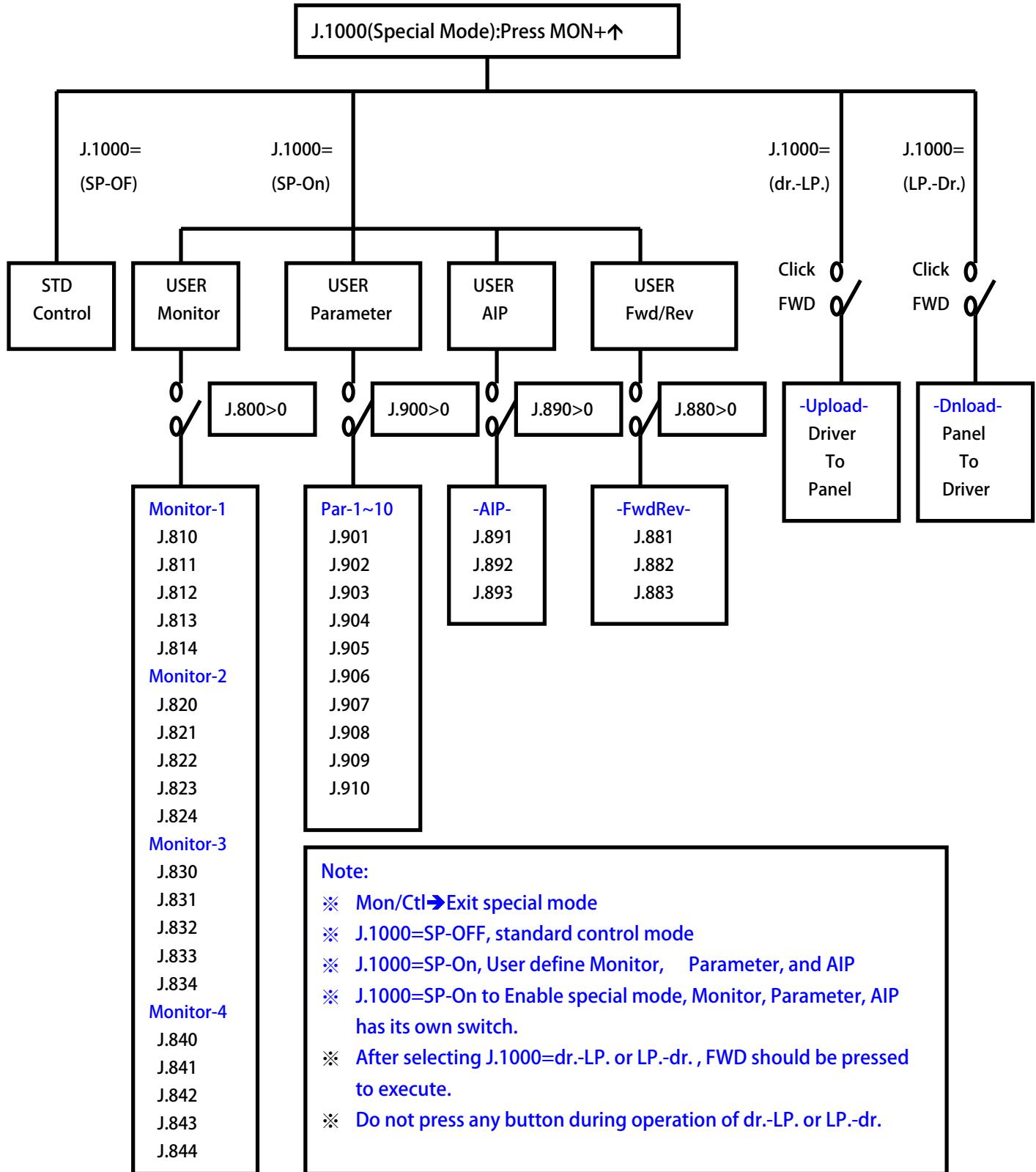


RS-485(RXSW→High)

(Pin No)	JPS Definition	Description
6	RXSW	Connect to V5(Pin8 or Pin10)
1	485-A	
3	485-B	
2,4	VSS	0V Panel needs power from drive.
8,10	V5	5V Panel needs power from drive.

4. R-Panel Special Function

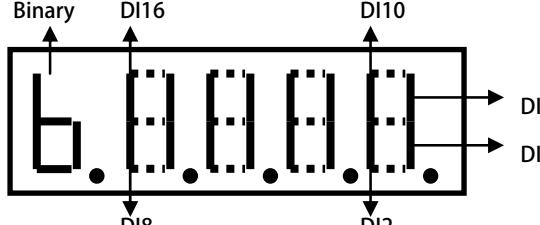
4.1 【R-Panel Structural Tree】



4.2 【R-Panel Special Application-User Assign Monitor】

【Attention】

Enter J.1000 read out value is not equal to the SP-OFF, please perform R-Panel of factory reset (Pr.1022 = 1) · Wait 3 seconds, and then re-power off and on again.

Description	J.1000	Description
Special Mode	=SP-OFF	<p>※ Standard R-Panel Mode</p>
Special Mode	=SP-On	<p>※User Define【Monitor】Mode</p> <p>【Monitor】Operation:</p> <p>When R-PANEL under Monitor Mode, every RPM/I/FWD/REV LED lit up refer to monitor parameter 1~4, description as below:</p> <ul style="list-style-type: none"> ● J.0800【Monitor Amount】 ----- [Range:0~4] 【When Setting=0, Standard monitor mode】 <p>----- [1st Monitor(RPM LED lit up)] -----</p> <ul style="list-style-type: none"> ● J.0810【Monitor-01 Parameter Number】 ----- [Range:0~520] ● J.0811【Monitor-01 Multiplication】 ----- [Range:1~60000] ● J.0812【Monitor-01 Division】 ----- [Range:1~60000] ● J.0813【Monitor-01 Type】 ----- [Range:0~6] <ul style="list-style-type: none"> ■ =0→Unsigned Short (1 Word:0~65535) ■ =1→Signed Short (1 Word:0~32767) ■ =2→Hex(1 Word:0x0000~0xFFFF) ■ =3→Unsigned Long (2 Word: Double Word) ■ =4→Signed Long (2 Word: Double Word) ■ =5→Reserved ■ =6→Unsigned Binary(1 Word: 0~65535)  <ul style="list-style-type: none"> ● J.0814【Monitor-01 Decimal Points】 ----- [Range:0~4] <p>----- [2nd Monitor(I LED lit up)] -----</p> <ul style="list-style-type: none"> ● J.0820【Monitor-02 Parameter Number】 -- [Range:0~520] ● J.0821【Monitor-02 Multiplication】 -- [Range:1~60000] ● J.0822【Monitor-02 Division】 -- [Range:1~60000] ● J.0823【Monitor-02 Type】 -- [Range:0~6] [Refer to J.0813] ● J.0824【Monitor-02 Decimal Points】 -- [Range:0~4] <p>----- [3rd Monitor(FWD LED lit up)] -----</p> <ul style="list-style-type: none"> ● J.0830【Monitor-03 Parameter Number】 -- [Range:0~520] ● J.0831【Monitor-03 Multiplication】 -- [Range:1~60000] ● J.0832【Monitor-03 Division】 -- [Range:1~60000]

		<ul style="list-style-type: none"> ● J.0833 【Monitor-03 Type】 -- 【Range:0~6】 [Refer to J.0813] ● J.0834 【Monitor-03 Decimal Points】 -- 【Range:0~4】 <hr/> <p style="text-align: center;">-----【4th Monitor(REV LED lit up)】-----</p> <ul style="list-style-type: none"> ● J.0840 【Monitor-04 Parameter Number】 -- 【Range:0~520】 ● J.0841 【Monitor-04 Multiplication】 -- 【Range:1~60000】 ● J.0842 【Monitor-04 Division】 -- 【Range:1~60000】 ● J.0843 【Monitor-04 Type】 -- 【Range:0~6】 [Refer to J.0813] ● J.0844 【Monitor-04 Decimal Points】 -- 【Range:0~4】
--	--	--

TIPS:(User Assign MONITOR):

- ※ To enable MONITOR, the amount is J.0800.
- ※ First MONITOR is defined by J.0810.
- ※ Multiply J.0811, divide J.0812.
- ※ Format defined by J.0813.
- ※ Decimal point defined by J.0814.
- ※ After setting, execute RESET.

4.3 【R-Panel Special Application- User Assign Parameter】

Description	J.1000	Application Description
Special Mode	=SP-On	<p>※User Define 【Parameter】 Mode</p> <p>【Parameter】 Operation:</p> <p>When R-PANEL under Parameter Mode, description as below:</p> <ul style="list-style-type: none"> ● J.0900 【Parameter Amount】 [Range:0~10] [When Setting=0, Standard monitor mode] ● J.0901 【GPr-01 Parameter Pointer】 -----1st----- [Range:0~520] ● J.0902 【GPr-02 Parameter Pointer】 -----2nd----- [Range:0~520] ● J.0903 【GPr-03 Parameter Pointer】 -----3rd----- [Range:0~520] ● J.0904 【GPr-04 Parameter Pointer】 -----4th----- [Range:0~520] ● J.0905 【GPr-05 Parameter Pointer】 -----5th----- [Range:0~520] ● J.0906 【GPr-06 Parameter Pointer】 -----6th----- [Range:0~520] ● J.0907 【GPr-07 Parameter Pointer】 -----7th----- [Range:0~520] ● J.0908 【GPr-08 Parameter Pointer】 -----8th----- [Range:0~520] ● J.0909 【GPr-09 Parameter Pointer】 -----9th----- [Range:0~520] ● J.0910 【GPr-010 Parameter Pointer】 -----10th----- [Range:0~520]

TIPS:(User Assign Parameter):

- ※ To enable Parameter, the amount is J.0900.
- ※ First Parameter defined by J.0901.
- ※ Second Parameter defined by J.0902.
- ※ Third Parameter defined by J.0903.
- ※ After setting, execute RESET.

4.4 [R-Panel Special Application-User Assign AIP]

Description	J.1000	Application Description
Special Mode	=SP-On	<p>※ User Define 【AIP】 Mode</p> <p>【AIP】 Operation:</p> <p>When R-PANEL under AIP-STD Mode,</p> <ul style="list-style-type: none"> ※ IRIS-Series Drive, AIP write to Pr.268 ※ Jupiter-Series Drives, AIP write to Pr.107 <p>AIP write to user define Parameters, set as follows:</p> <ul style="list-style-type: none"> ● J.0890 【AIP mode switch】 ----- [Range:0~1] <ul style="list-style-type: none"> ■ [Setting=0, Standard AIP Mode→AIP keep writing to specific parameter] ■ [Setting=1, User define AIP Mode→AIP keep writing to parameter pointed by J.0891] ● J.0891 【Special AIP Mode Parameter Pointer】 ----- [Range:0~520] ● J.0892 【Special AIP Mode Multiplication】 ----- [Range:1~4095] ● J.0893 【Special AIP Mode Division】 ----- [Range:1~4095]

TIPS:(User Assign AIP):

- ※ To enable AIP Function, J.0890=1.
- ※ Set value multiply J.0892 then divide J.0893
- ※ Write into the parameter that J.0891 points to.
- ※ After setting, execute RESET.

[Caution] :

- ※ If AIP parameter points to ROM, this function will keep writing AIP values to ROM. This will lead to EEPROM failure. Therefore, before using this function beware that J.0891 points to RAM.
- ※ Writing to ROM is much slower than writing to RAM.

4.5 [R-Panel Special Application- User Assign FWD/REV]

Description	J.1000	Application Description
Special Mode	=SP-On	<p>※ User Assign 【FWD/REV】 Mode 【FWD/REV】 Define the way to control FWD/REV buttons on panel. J.1000=SP-OFF (STD Mode) , ※ Press FWD, DI5-ON ; DI6-OFF ※ Press REV, DI5-OFF ; DI6-ON</p> <p>To change the way to control FWD/REV, setting as follows:</p> <ul style="list-style-type: none"> ● J.0880 【Enable FWD/REV Special Mode】 ----- 【Range: 0~1】 <ul style="list-style-type: none"> ■ [Setting=0, standard FWD/REV mode] ■ [Setting=1, special FWD/REV mode] ● J.0881 【Special mode " FWD" —Bit pointer】 ----- 【Range:0~15】 <ul style="list-style-type: none"> ■ Setting=0 ; DI1… ■ Setting=15 ; DI16… ● J.0882 【Special mode " REV" —Bit pointer】 ----- 【Range:0~15】 <ul style="list-style-type: none"> ■ Setting=0 ; DI1… ■ Setting=15 ; DI16… ● J.0883 【 "FWD/REV" under special mode】 -Range:xx~xx】 <ul style="list-style-type: none"> ■ Setting as FR.OF ; Disable "FWD/REV" <ul style="list-style-type: none"> ◆ Available only when J.1000=SP-ON. ■ Setting as T-Std ; Toggle type, 【Interlocking, Set ON】 <ul style="list-style-type: none"> ◆ Press 【FWD】 : J.0881 Bit---ON ; J.0882 Bit-OFF ◆ Press 【REV】 : J.0881 Bit---OFF. ; J.0882 Bit-ON ■ Setting as T-SPC ; Toggle type, 【Independent, Set ON】 <ul style="list-style-type: none"> ◆ Press 【FWD】 : J.0881 Bit---ON ; Press again 【FWD】 : J.0881 Bit-OFF ◆ Press 【REV】 : J.0882 Bit---ON ; Press again 【REV】 : J.0882 Bit-OFF ■ Setting as P-Std ; Push type, 【Independent, Momentary ON】 <ul style="list-style-type: none"> ◆ Press 【FWD】 and hold: J.0881 Bit---ON ; Release 【FWD】 : J.0881 Bit-OFF ◆ Press 【REV】 and hold: J.0882 Bit---ON. ; Release 【REV】 : J.0882 Bit-OFF ■ Setting as P-SPC; Push type, 【Independent, Time based ON】 <ul style="list-style-type: none"> ◆ Press 【FWD】 : J.0881 Bit---ON; After 150 ms OFF ◆ Press 【REV】 : J.0882 Bit---ON; After 150 ms OFF

TIPS: (User defined FWD/REV function)

- ※ To enable FWD/REV Control Function, J.0880=1.:
- ※ To change the Bit number of 【FWD】 , verify J.0881.
- ※ To change the Bit number of 【REV】 , verify J.0882.
- ※ 【FWD/REV】 button type defined by J.0883.
- ※ After setting, execute RESET.

4.6 【R-Panel Special Application- UP-LOAD(Upload Parameters to R-Panel)】

Description	J.1000	Application Description
Special Mode	=dr.-LP.	<ul style="list-style-type: none"> ● [Caution] Baud rate can only be 19200Mps during UP-LOAD/DN-LOAD. ● [Caution] To avoid data transmission failure, please do not SERVO-ON during UP-LOAD/DN-LOAD. ● When Editing Monitor is flashing. ● If UP-LOAD stop flashing, parameter is written down. ● When Panel shows UP-LOAD, press FWD to execute. ● During executing UP-LOAD process, do not press any key to interrupt. ● Panel (LP.) will move the value of parameters of Drive(Dr.) to the memory of LP. ● [Caution] LP. Memory(J.0000)~(J.0520) ● After executing, LP. displays as [-run-] & [-rst-], press RESET button to finish this process.

4.7 【R-Panel Special Application - Dn-LOAD(Download Parameters from R-Panel to Drives)】

Description	J.1000	Application Description
Special Mode	=LP.-dr.	<ul style="list-style-type: none"> ● [Caution] Baud rate can only be 19200Mps during UP-LOAD/DN-LOAD. ● [Caution] To avoid data transmission failure, please do not SERVO-ON during UP-LOAD/DN-LOAD. ● When Editing Monitor is flashing. ● If UP-LOAD stop flashing, parameter is written down. ● When Panel shows Dn-LOAD, press FWD to execute. ● During executing UP-LOAD process, do not press any key to interrupt. ● Panel (LP.) will move the value of parameters of the memory of LP. to Drive(Dr.). ● [Caution] (J.0000)~(J.0520) will be written to (Pr.000)~(Pr.520) ● After executing, LP. displays as [-run-] & [-rst-], press RESET button to finish this process.

4.8 [R-Panel Special Application Clear Memories]

To clear R-Panel memory, follow the steps below:

- Set J.1022=1 > Set R-Panel Memory Preload Function
- Press CTL/MON > Exit R-Panel Special Mode
- Press PAR/ALM > Enter PAR Mode
- Press PAR/ALM again > Enter ALM Mode
- Press STOP/RESET > Execute RESET

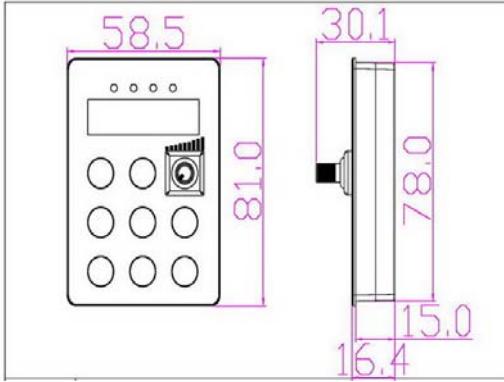
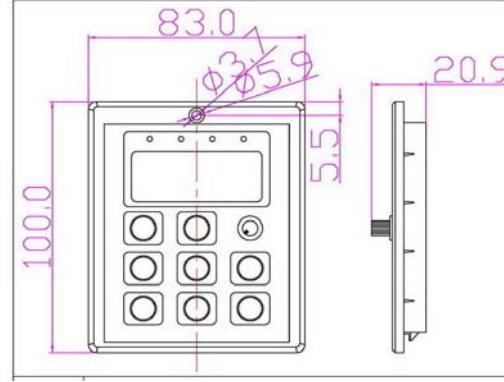
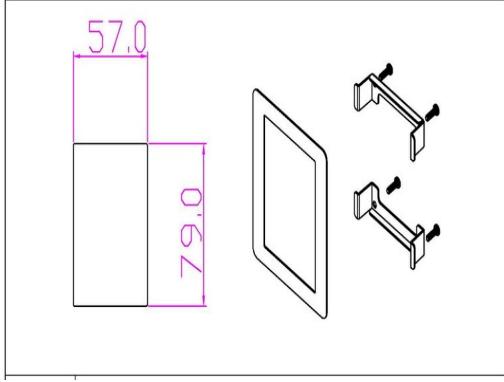
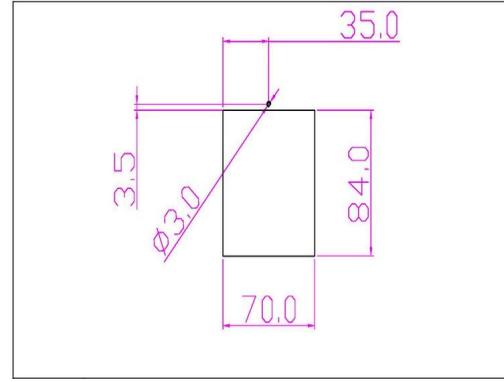
[Caution]

- R-Panel RESET > Under ALM mode, press RESET
- After clearing R-Panel Memories J.1022 becomes 0 automatically
- J.0800~J1022 will all be preloaded to factory value
- J.1000=SP-OF; Operation Mode becomes Standard Mode(STD-Panel-Control)

4.9 [R-Panel Special Application-Other Parameters]

- J1021: Panel Display Mode
 - =0 > Special Display, the seven-segment-displays will not show the number 0 on the most left.
For example, value 01234 only shows 1234
 - ◆ Ex: Panel shows 0, when the value is 0.
 - =1 > Standard Display, all of the 5 seven-segment-displays shows.
 - ◆ Ex: Panel shows 00000, when the value is 0.

5. R-Panel SIZE

馬力數 (HP)	0.5~5HP	3~224HP
面板類型 (PANEL)		
r- PANEL	R- PANEL	
面板尺寸 (PANEL SIZE)		
開孔建議 (hole size recommen- dation)		

(Unit:mm)