Digital ATS Controller Installation Manual

rev.202603

Model

ACD-M-D

ATS Control Device Multi-Type Disply

O-Sung Electric Machinery Co., Ltd.

1 Specifications

Item	Description
Model Name	ACD-M-D
	Microcontroller : 32-BIT / 16 MHz
	128 × 64 Graphic LCD, High-brightness LED
Control Power	Operates using A/B-Power input voltage. If a PT is used for voltage input, a separate auxiliary power source (DC 24V) must be supplied. If both A/B-Power sources are unavailable and you need to maintain communication, LCD display, event logging, ATS position status, and controller operation status, the controller can be operated by supplying a separate auxiliary power source (DC 24V).
Auxiliary Power	DC 24V / 0.5A (Min 12V ~ Max 27V)
Input Contacts	2 points for ATS status, 3 points for optional inputs
Relay Outputs	1 point for each ATS-A/B transfer signal (AC 250V, 16A)
	1 point for ATS-OFF neutral position signal (AC 250V, 16A)
	1 point for generator start signal (AC 250V, 5A).
Communication	1 point for RS485
Operating Temperature	-25 ~ 70[°C]
Dimensions	(W)170mm x (H)89mm x (D)57mm
Weight	1.2Kg (Including Packaging Box)

1_1 Main Functions

- Automatic ATS operation
  (priority and operation time configurable)
- Manual ATS operation
- Generator start output: 1a contact
- Scheduled operation (up to 5 individual schedules)
- Remote Auto/Manual mode switching
  (Open Contact : Manu , Close Contact : Auto)
- Supports Korean and English menus with event logging

1_2 Protection Functions

- A-Power : Overvoltage, Undervoltage, Overfrequency, Underfrequency, Phase rotation, Phase loss
- B-Power : Overvoltage, Undervoltage, Overfrequency, Underfrequency, Phase rotation, Phase loss

1_3 Certification Standards

- KS C 9610-6-4, KS C 9610-6-2
- KC (EMC) Certification Number : OS0-ACD-M-D

2 Appearance

2 1 > Front View

2 2 > LED Indicator Lamps

No.	Function	Lamp Color	Description
①	A-Power Input	Green	ON - Power normal OFF - No power
②	B-Power Input	Red	
③	ATS A-ON Status	Green	ON - ATS-ON state OFF - ATS-OFF state
④	ATS B-ON Status	Red	
⑤	Operation Mode	Blue	AUTO : Automatic Mode
		Red	MANUAL : Manual Mode
⑥	Generator Start Status	White	ON - Generator is running OFF - Generator is stopped

2 3 > Lamp Blinking Patterns

Blinking Pattern	A/B-Power Lamp ①, ②	ATS Status Lamp ③, ④
0.5s Interval	-	ATS-ON/OFF Timer ActiveSynchronous Transfer Standby
2 blinks	Under voltage/frequency	ATS-ON Failure
3 blinks	Over voltage/frequency, Phase Reversal	ATS-OFF Failure
4 blinks	-	Synchronous Transfer Failure

※Manual reset available via Auto/Manual button

2 4 > Operation Button

Button	Name	Description
	ATS-A Manual Control	**In Manual Mode** : > For 2-Position type: ATS-A Manual ON > For 3-Position type: ATS-A Manual ON or OFF
	ATS-B Manual Control	**In Manual Mode** : > For 2-Position type: ATS-B Manual ON > For 3-Position type: ATS-B Manual ON or OFF
	AUTO / MANUAL	Toggles between AUTO and MANUAL operation modes.
	GENERATOR START / STOP	**In Manual Mode** : > Press and hold the button for more than 2 seconds to start the generator. > While the generator is running, press and hold for more than 2 seconds to stop it. **In Auto Mode** : > In case of normal power failure: The generator will start automatically. > When normal power is restored (recovery): The generator will stop automatically. > The startup/shutdown delay time can be adjusted in the settings.(Refer to section 3.6, Timer Settings in this manual.) When the generator starts : Output is ON. When the generator stops : Output is OFF.

※ 2-Position ATS (A↔B) / 3-Position ATS (A↔O↔B)

※ To prevent accidental operation, the control button is activated only when pressed for approximately 0.5 seconds.

2 5 > Setting Button (The setting is available in Manual Mode)

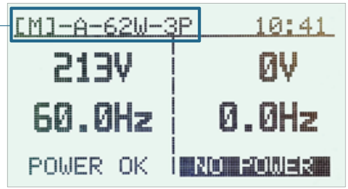
<table>
<tr><th>Button</th><th>Name</th><th>Description</th></tr>
<tr><td></td><td>Setup / Enter</td><td>On the Main Screen (Setup) :
> Press and hold for 1 second to enter setting mode.
* Automatic operation and ATS control functions are disabled while in setting mode.

In the Setting Screen (Enter) :
> Returns to the main screen or saves the modified value.</td></tr>
<tr><td></td><td>UP</td><td rowspan="2">On the Main Screen :
> Switches display pages.

In the Setting Screen :
> Navigates between items and increases/decreases setting values.</td></tr>
<tr><td></td><td>DOWN</td></tr>
<tr><td></td><td>MOVE</td><td>In the Setting Screen :
> Enters the detailed setting of the selected menu item.
> Moves the cursor between digits when editing a value.</td></tr>
</table>

2 6 > LCD Display Status (Main Screen)

Operation Mode &
Settings Status Display



[M] - A - 62W - 3P

Operation Mode Status

[A] : Automatic Mode
[A] : Remote Auto Control - Inverted Text Indication
[M]: Manual Mode

Power Priority Setting Status

A : Priority given to ATS-A
B : Priority given to ATS-B
N : No set priority; transfer based on condition only

Frequency Setting Status

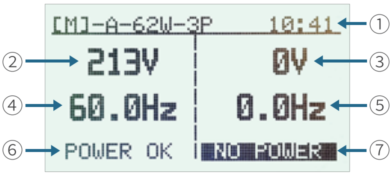
5 : 50Hz / 6 : 60Hz

ATS Transfer Method

2P : 2-Position ATS
A↔B Transfer only
Applicable Products : T3, TO, PC, PSO
3P : 3-Position ATS
A↔O↔B Transfer
Applicable Products : TN, PCN, ATCB

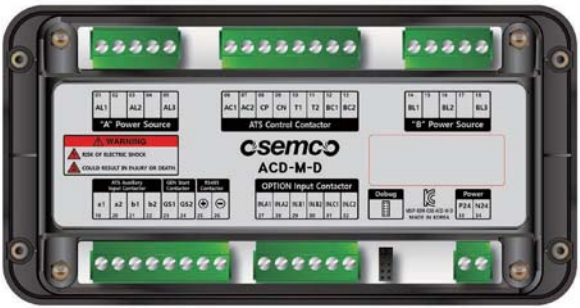
Wiring Configuration

2W : 1 Phase (Connected to L1 and L3)
3W : 3 Phase (Connected to L1, L2, and L3)



No.	Function	Description
①	Current Time	Time is displayed in 24-hour format (00–24 hours : 00–59 minutes) Modifiable in system settings (see section 3.2) **When remote peak control is active** : > Time display shows PEAK **When BYPASS input is active** : > Time display shows ByPassA or ByPassB **When waiting for synchronous transfer** : > Time display shows phase angle "SYSxxx"
②	A-Power Voltage	**Displays the line-to-line voltage** : Display range : 110 ~ 6600V > In case of abnormal voltage : The voltage value blinks with inverted text. > In case of phase reversal : The voltage value is displayed in inverted text.
③	B-Power Voltage	
④	A-Power Frequency	**Frequency display range** : 40Hz to 70Hz > In case of abnormal frequency : The value blinks with inverted text.
⑤	B-Power Frequency	
⑥	Status of ATS-A (Power or Timer)	Indicates the current power condition and the ATS transfer delay timer. > In case of power or ATS failure : An error status message is shown
⑦	Status of ATS-B (Power or Timer)	

2 7 > Rear View



2 8 > Terminal block configuration

<table>
<tr><th colspan="5">A-Power Source</th></tr>
<tr><th>Image</th><th>No.</th><th>Terminal Label</th><th>Signal</th><th>Description</th></tr>
<tr><td rowspan="5"></td><td>01</td><td>A L1</td><td rowspan="5">Voltage Input</td><td rowspan="5">A-Power Voltage Input
<table><tr><th colspan="2">Wiring Method</th><th>Input Voltage</th><th>Frequency</th></tr><tr><td>3 Phase</td><td>L1, L2, L3</td><td>AC220V ~ 440V</td><td>50Hz or 60Hz</td></tr><tr><td>1 Phase</td><td>L1, L3</td><td>AC220V ~ 440V</td><td>50Hz or 60Hz</td></tr></table>※ For voltages other than the input voltage, a "PT (Potential Transformer)" must be used.</td></tr>
<tr><td>02</td><td></td></tr>
<tr><td>03</td><td>A L2</td></tr>
<tr><td>04</td><td></td></tr>
<tr><td>05</td><td>A L3</td></tr>
</table>

ATS Control Contact

Image	No.	Terminal Label	Signal	Description
	08 / 09	CP / CN	Voltage Input	Control Power Input for OFF Function of 3-Position ATS (A↔OFF↔B) Refer to the wiring diagram in Section 5 for the power supply method.
	10 / 11	T1 / T2	Voltage Ouput	ATS-OFF Voltage Ouput
	06 / 07	AC1 / AC2	Relay Ouput 250V 16A	ATS A-ON output (activated when input command is held for 0.5 s)
	12 / 13	BC1 / BC2		ATS B-ON output (activated when input command is held for 0.5 s)
	※ * In manual mode, the contact output is maintained while the button is pressed to control the ATS.			

B-Power Source

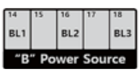


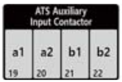
Image	No.	Terminal Label	Signal	Description
	14	B L1	Voltage Input	B-Power Voltage Input
	15			
	16	B L2		
	17			
	18	B L3		

B-Power Voltage Input

Wiring Method		Input Voltage	Frequency
3 Phase	L1, L2, L3	AC220V ~ 440V	50Hz or 60Hz
1 Phase	L1, L3	AC220V ~ 440V	50Hz or 60Hz

※ For voltages other than the input voltage, a “PT (Potential Transformer)” must be used.

AUX Contact

Image	No.	Terminal Label	Signal	Description
	19	a1	Contact Input	ATS A-ON Status Contact Input
	20	a2		
	21	b1		ATS B-ON Status Contact Input
	22	b2		
	Caution	• Use only "Dry Contact" for input signals. (Risk of damage) • Do not connect to any equipment other than ATS AUX, as it may cause malfunction.		

GEN Start Contact

Image	No.	Terminal Label	Signal	Description
	23	GS1	Relay Ouput 250V 5A	Generator Start Signal Output (Dry Contact)
	24	GS2		

RS485 Contact

Image	No.	Terminal Label	Signal	Description
	14	⊕	Communication	RS485 Communication Port, MODBUS / RTU
	15	⊖		

OPTION Input Contact

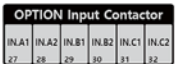


Image	No.	Terminal Label	Signal	Description
	27	IN.A1	Contact Input	When using a 3-Position ATS (A↔OFF↔B) > ATS-A Trip and Close Inhibit Input
	28	IN.A2		
	29	IN.B1		When using a 3-Position ATS (A↔OFF↔B) > ATS-B Trip and Close Inhibit Input
	30	IN.B2		
	31	IN.C1		Change to Auto Mode from External Source
	32	IN.C2		
[Note] The function can be changed in the input settings.	**Caution**	• Use only "Dry Contact" for input signals. (Risk of damage)		

Auxiliary Power

Image	No.	Terminal Label	Signal	Description
	33	P24 (+)	Power	Power Supply for LCD and Communication Activation During Power Outage > DC 24V / 0.5A (Min 12V ~ Max 27V)
	34	N24 (-)		
	Caution	• Pay attention to polarity and overvoltage when supplying auxiliary power. (Risk of damage)		

3 Settings

Pressing the **"Generator Start" button will reset the settings to the default factory values.** If no button operation occurs during the setting process, the system will switch to manual mode after 1 minute.

3 1 > Language Setting

Language Setting	Selection : Korean, ENGLISH	Factory Default : Korean
	Set the display language.	

3 2 > System settings

ATS Transfer Method	Selection : A-B , A-O-B	Factory Default : A-B
	Configure the ATS transfer method. . > **A↔B** : 2-Position ATS / Applicable Models : T3, TO, PC, PSO > **A↔O↔B** : 3-Position ATS / Applicable Models : TN, PCN, ATCB	
	※ A↔O↔B type allows intermediate stop (OFF) during transfer.	

Rated Voltage	Range : 100 ~ 6,600[V]	Factory Default : 380 [V]
	Set the rated voltage for A/B-Power. > When using **3-phase input (L1, L2, L3)**, enter the **line-to-line rated voltage** (Min 220V – Max 440V) > When using **1-phase input (L1, L3)**, enter the **single-phase rated voltage** (Min 220V – Max 440V).	
	※ For voltages above 440V, "**use a PT (110V for single-phase, 190V for three-phase)**" and configure the "**PT ratio**" accordingly.	

Rated Frequency	Selection : 50Hz, 60Hz	Factory Default : 60 [Hz]
	Set the rated frequency for A/B-Power.	

Voltage PT Ratio	Range : 00.10 ~ 90.00 / 1	Factory Default : 01.00/1
	Set the PT (Potential Transformer) ratio when using a PT. > **Single-phase** : When using 440V single-phase through a 110V PT input (440 / 110 = **04.00 : 1**) > **Three-phase** : When using 380V three-phase through a 190V PT input (380 / 190 = **02.00 : 1**) > **High voltage** : When using 6.6kV three-phase through a 190V PT input (6600 / 190 = **34.73 : 1**)	

Voltage Input	Selection : 1 Phase , 3 Phase	Factory Default : 3 Phase
	Set the voltage input method for A/B-Power. > For **1-phase input** : Connect to L1 and L3 > For **3-phase input** : Connect to L1, L2, and L3	
	※ When 1-phase is selected, Phase Loss Protection and Phase Reversal Detection are automatically set to Disabled.	

Power Priority	Selection : A-Power, B-Power, No Priority	Factory Default : A-Power
	Set the power priority to A-Power or B-Power (used in Auto Mode) > **A-Power Priority** : A-Power is recognized as the "**Normal Power Source**" and the system automatically transfers to A-Power. > **B-Power Priority** : B-Power is recognized as the "**Normal Power Source**" and the system automatically transfers to B-Power. > **No Priority** : If the currently used power source is normal, the system maintains the current transfer state.	

Phase Rotation	Selection : CW , CCW	Factory Default : CW
	> **Normal (CW)** : When using 3-phase input, phase rotation is set to clockwise > **Reverse (CCW)** : When using 3-phase input, phase rotation is set to counterclockwise	
	※ If the phase rotation does not match the configured value, an "**alarm and voltage abnormality**" will be triggered.	

Display OFF	Selection : Disable, 10 min, 30 min, 1 hour	Factory Default : 10 [min]
	Configure the automatic LCD backlight off time. > If there is no button input or power status change during the set time, the backlight will automatically turn off. > When the backlight is off, it will automatically turn back on if a button is pressed or the power status changes.	

Date Setting	Indication : 20YY-MM-DD-DOW
	Set the current **year, month, day**, and **day of the week**. > Used for scheduled operations and event logging.

Time Setting	Indication : HH-MM-SS
	Set the current **year, month, day**, and **day of the week.** > To minimize time deviation, please calibrate the clock every 6 months. > Used for scheduled operations and event logging.

Password Setting	Selection : 0000 ~ 9999	Factory Default : 0000
	Set the password. > The default password is 0000, and no password check is required when entering the menu. > Once a password is set, setting values can still be viewed, but changes will require password input.	

3 3 > Remote Communication Setting

MODBUS Slave ID	Range : 01 ~ 128	Factory Default : 01
	Set the MODBUS Slave ID for the RS485 communication port	

MODBUS BAUD	Range : 9600, 19200, 38400[bps]	Factory Default : 9600 [bps]
	Set the baud rate for the RS485 communication port.	

3 4 > Power Setting (Set A-power and B-power individually)

AP / BP Overvoltage Pick-up	Range : 105 ~ 130 [%]	Factory Default : 110 [%]
	Set the overvoltage pick-up level (% of rated voltage).	

AP / BP Overvoltage Drop-out	Range : Overvoltage Pickup Value -1 [%]	Factory Default : 105 [%]
	Set the overvoltage drop-out level (% of rated voltage). > If the overvoltage pick-up value is lower than or equal to the drop-out value, it will automatically be set to 1% below the overvoltage pick-up value.	

AP / BP Undervoltage Pick-up	Range : 70 ~ 99 [%]	Factory Default : 85 [%]
	Set the undervoltage pick-up level (% of rated voltage).	

AP / BP Undervoltage Drop-out	Range : Undervoltage Pickup Value -1 [%]	Factory Default : 90 [%]
	Set the undervoltage drop-out level (% of rated voltage). > If the undervoltage pick-up value is greater than or equal to the drop-out value, it will automatically be set to 1% above the undervoltage pick-up value.	

AP / BP Overfrequency Pick-up	Range : 101 ~ 130 [%]	Factory Default : 110 [%]
	Set the overfrequency pick-up level	

AP / BP Overfrequency Drop-out	Range : Overfrequency Pickup Value -1 [%]	Factory Default : 105 [%]
	Set the overfrequency drop-out level > If the overfrequency pick-up value is less than or equal to the drop-out value, it will automatically be set to 1% below the overfrequency pick-up value.	

AP / BP Underfrequency Pick-up	Range : 70 ~ 99 [%]	Factory Default : 90 [%]
	Set the underfrequency pick-up level	

AP / BP Underfrequency Drop-out	Range : Underfrequency Pickup Value -1 [%]	Factory Default : 95 [%]
	Set the underfrequency drop-out level > If the underfrequency pick-up value is greater than or equal to the drop-out value, it will automatically be set to 1% above the underfrequency pick-up value.	

3 5 > Timer Setting

A-Side Transfer Delay (ATS-A)	Range : 01s ~ 90m 59s	Factory Default : 05 [sec]
	For 2-Position ATS (A↔B) : Set the transfer delay time from B→A. > After confirming that the normal power has stabilized during the delay time, the system proceeds with the transfer. (e.g., in case of momentary outages) **For 3-Position ATS (A↔O↔B)** : Set the transfer delay time from O→A.	
B-Side Transfer Delay (ATS-B)	Range : 01s ~ 90m 59s	Factory Default : 05 [sec]
	For 2-Position ATS (A↔B) : Set the transfer delay time from A→B. > Prevents unnecessary transfer due to short-term recovery of the normal power. (e.g., momentary power loss). **For 3-Position ATS (A↔O↔B)** : Set the transfer delay time from O→B.	
A-Side Open Delay (ATS A-OFF)	Range : 00s ~ 90m 59s	Factory Default : 05 [sec]
	3-Position ATS (A↔O↔B) : Set the transfer delay time from A→O.	
B-Side Open Delay (ATS B-OFF)	Range : 00s ~ 90m 59s	Factory Default : 05 [sec]
	3-Position ATS (A↔O↔B) : Set the transfer delay time from B→O.	
Generator Start Delay	Range : 01s ~ 90m 59s	Factory Default : 05 [sec]
	Set the delay time for the generator start signal when an abnormal condition is detected in the normal power during Auto Mode.	

Parameter	Range	Factory Default
Generator Stop Delay	Range : 01s ~ 90m 59s	Factory Default : 05 [sec]
	Set the delay time for the generator stop signal after the normal power is restored during Auto Mode operation.	
Overvoltage Delay	Range : 0.1s ~ 2.0s	Factory Default : 1.0 [sec]
	Set the delay time for overvoltage operation.	
Undervoltage Delay	Range : 0.1s ~ 2.0s	Factory Default : 1.0 [sec]
	Set the delay time for undervoltage operation.	
Overfrequency Delay	Range : 0.1s ~ 2.0s	Factory Default : 1.0 [sec]
	Set the delay time for overfrequency operation.	
Underfrequency Delay	Range : 0.1s ~ 2.0s	Factory Default : 1.0 [sec]
	Set the delay time for underfrequency operation.	
Protective Relay Operation Delay	Range : 0.2s ~ 2.0s	Factory Default : 0.2 [sec]
	Sets the delay time for protective relay operation when protection signals are received.(ATO, BTO)	

3 6 > Generator Test

Enable Test-n (applies in Auto Mode)	Factory Default : Disable	
	Set whether to enable periodic generator testing. > **No-Load Test** : Starts and stops the generator without load during the configured test time. > **Load Test** : Starts the generator, then transfers the ATS to the generator side to operate under load during the configured test time.	
Test-n Interval + Day of the Week (DOW)	Factory Default : 1Week (Sun)	
	When generator testing is enabled, set the test interval. [1–5 weeks / Day: Sunday to Saturday (Sun–Sat)]	
Test-n Operation	Range : (00:00~23:59) ~ (00:00~23:59)	Factory Default : 00:00~00:00
	Set the generator test run time. > If the start time and end time are the same, or if the start time is set later than the end time, the test will not be executed.	

3 7 > Synchronous Transfer Setting

Synchronous	Range : Enable, Disable	Factory Default : Disable
	Disable : In manual transfer, asynchronous switching is performed. In Auto Mode, transfer is executed based on delay timer. **Enable** : If both power sources are normal, transfer (manual or automatic) is performed only when phase and frequency synchronization between the two power sources is achieved.	
	> While waiting for synchronous transfer, the upper line of the LCD displays the phase angle difference between sources (0–360°). > Since the ATS does not support CTTS (closed transition transfer), a momentary power interruption will occur during the transfer.	

Synchronous Phase Angle	Range : 10 ~ 50 deg	Factory Default : 30 [deg]
	Set the allowable phase angle difference for synchronization between the two power sources.	

Synchronous Voltage Difference	Range : 01 ~ 20 [%]	Factory Default : 10 [%]
	Set the allowable voltage difference for synchronization between the two power sources.	

Synchronous Frequency Difference	Range : 00 ~ 2.0 [Hz]	Factory Default : 1.0 [Hz]
	Set the allowable frequency difference for synchronization between the two power sources.	

Synchronous Transfer Delay	Range : 00s ~ 90m 59s	Factory Default : 05 [sec]
	Set the delay time for synchronous transfer when both power sources are in a normal condition	

Synchronous Transfer Timeout	Range : 00s ~ 90m 59s	Factory Default : 05 [min]
	If the phase, voltage, or frequency conditions between the two power sources are not met, the system will perform an asynchronous transfer after the specified delay time.	

3 8 > Equipment Check

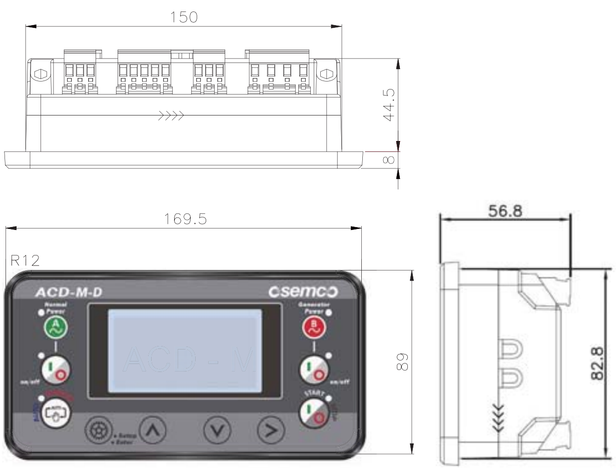
A-Side Transfer Count	Displays the number of **ATS A-ON operations**.	View Only
B-Side Transfer Count	Displays the number of **ATS B-ON operation**s.	
A-Side Operating Time	Displays the accumulated **ATS A-ON duration**.	
B-Side Operating Time	Displays the accumulated **ATS B-ON duration**.	
Open Time	Displays the accumulated **ATS-OFF duration**.	

3 9 > Usage History

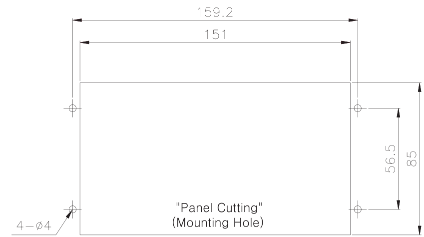
Usage History 0001 ~ 1024	You can check the "**Transfer, Fault, and Operation history**" of the ATS and controller in chronological order. Usage history is displayed as : Entry No. 0001 / YYYY-MM-DD / HH:MM:SS / DescriptionYou can scroll through the records using the **UP** and **DOWN** buttons. > **Event List** : - Power ON, Auto/Manual mode switching, Test Start/End, Generator Start/Stop - A or B-Power abnormality[1], ATS operation failure[2], ATS auto/manual transfer[3] > Input status changes : IN.A, IN.B, IN.C > When settings are changed (specific changes are not shown) ※ External or communication-based access to usage history is not supported.	View Only
	[1] **Power Abnormality List** : Overvoltage, Overfrequency, Undervoltage, Underfrequency, Phase Loss, Phase Reversal, Normal (Power Recovery) Input [2] **Operation Failure List** : Manual Insertion Failure, Manual Open Failure, Auto Insertion Failure, Auto Open Failure [3] **Auto/Manual Operation List** : Auto Insertion, Auto Open, Manual Button Operation, Manual Operation Complete	

4 Product Dimensions

4 1 > Outline Dimension



4 2 > Panel Cutout Dimension



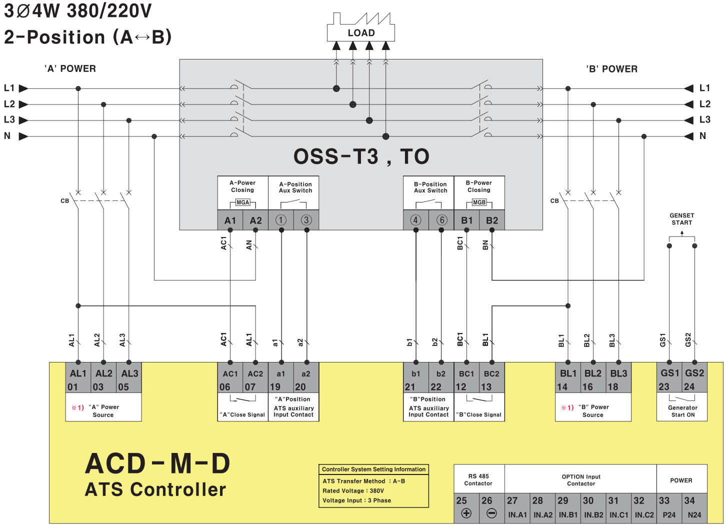
5 Wiring Diagrams

5 1 > T3, TO Wiring Diagram

OSS-T3, TO Type (AC220V)

3Ø4W 380/220V

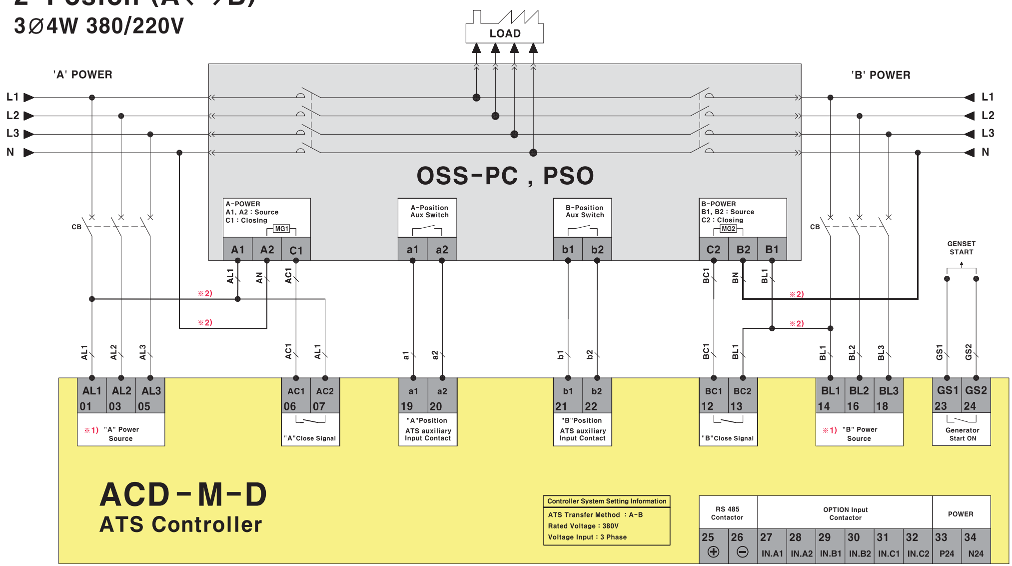
2-Position (A↔B)



※1) If the A/B-Power Source input is single phase, connect power to the AL1, AL3 & BL1, BL3 terminals.

5 2 > PC, PSO Wiring Diagram

OSS-PC, PSO Type (AC220V)
2-Posion (A<->B)
3∅4W 380/220V

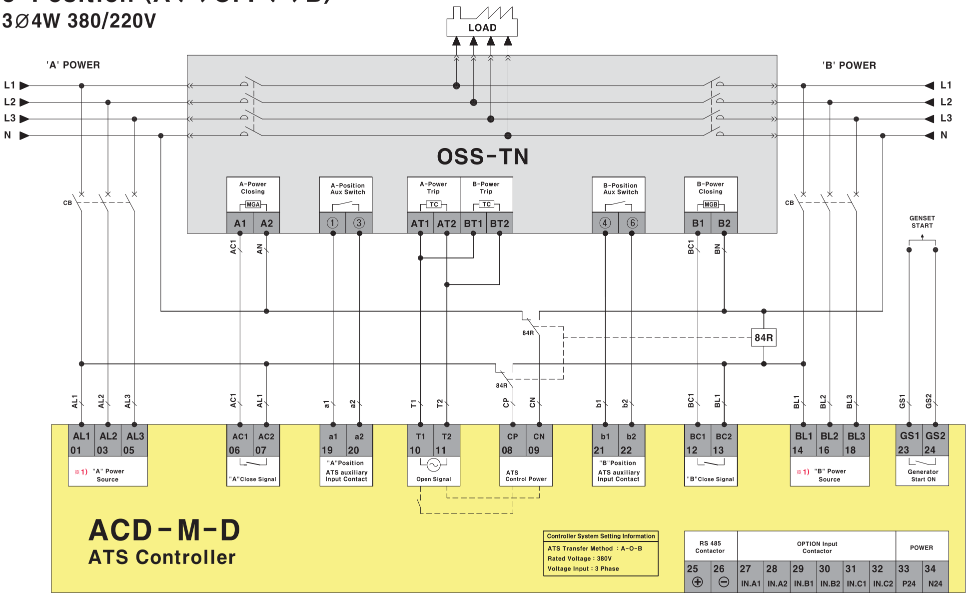


※1) If the A/B-Power Source input is single phase,
connect power to the AL1, AL3 & BL1, BL3 terminals.

※2) More than 2.5㎟ power cable used for 1,600A ATS or less.
More than 4.0㎟ power cable used for 2,000A ATS or over.
More than 6.0㎟ power cable used for 4,000A ATS or over.

5 3 > TN Wiring Diagram

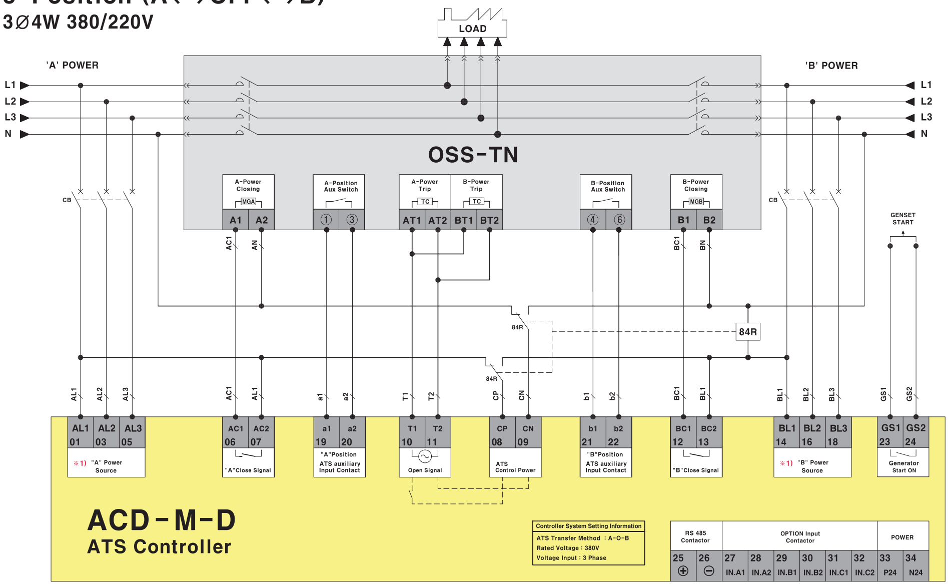
OSS-TN Type (AC220V)
3-Position (A<->OFF<->B)
3Ø4W 380/220V



※1) If the A/B-Power Source input is single phase, connect power to the AL1, AL3 & BL1, BL3 terminals.

5 3 > TN Wiring Diagram

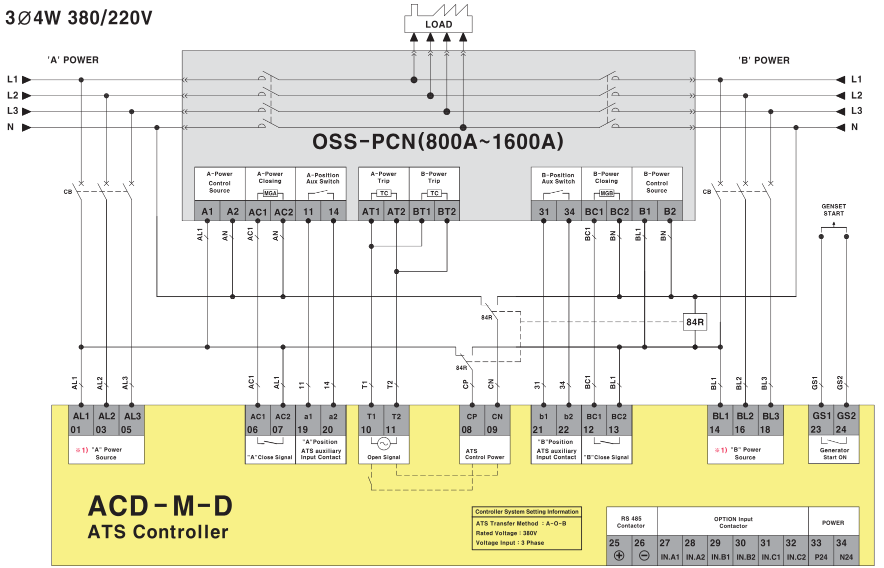
OSS-TN Type (AC220V)
3-Position (A<->OFF<->B)
3Ø4W 380/220V



※1) If the A/B-Power Source input is single phase, connect power to the AL1, AL3 & BL1, BL3 terminals.

5 4 > PCN Wiring Diagram

OSS-PCN Type (AC220V)
800A~1600A
3-Position (A<->OFF<->B)
3Ø4W 380/220V

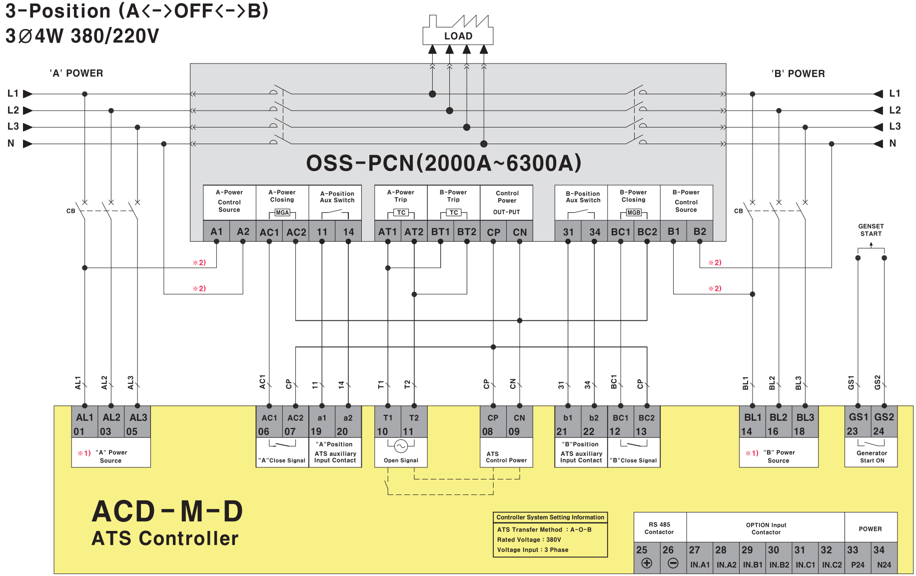


※1) If the A/B-Power Source input is single phase, connect power to the AL1, AL3 & BL1, BL3 terminals.

5 4 > PCN Wiring Diagram

OSS-PCN Type (AC220V)

2000A ~ 6300A
3-Position (A<->OFF<->B)
3∅4W 380/220V



※1) If the A/B-Power Source input is single phase,
connect power to the AL1, AL3 & BL1, BL3 terminals.

※2) More than 4.0㎟ power cable used for 2,000A ATS or over.
More than 6.0㎟ power cable used for 4,000A ATS or over.

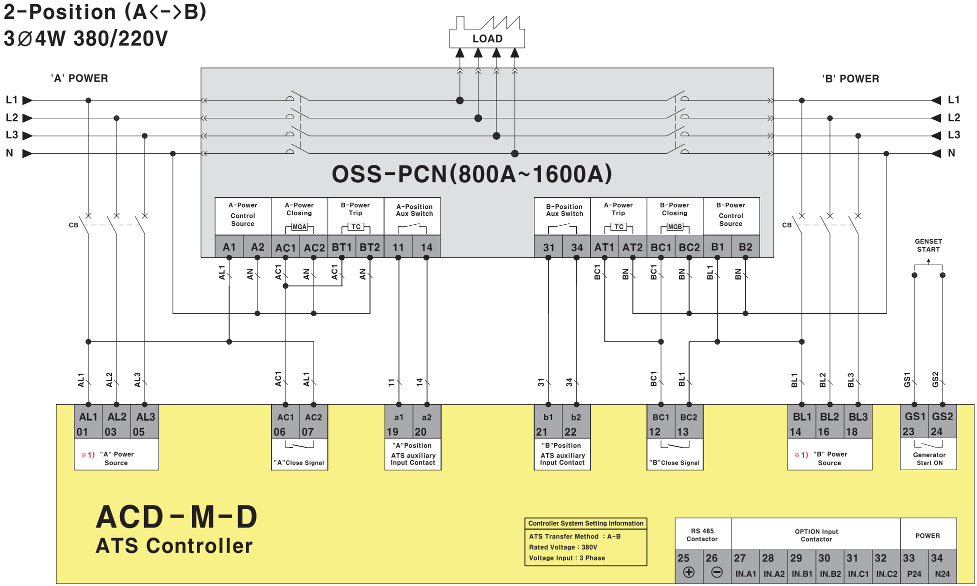
5 4 > PCN Wiring Diagram

OSS-PCN Type (AC220V)

800A ~ 1600A

2-Position (A<->B)

3Ø4W 380/220V



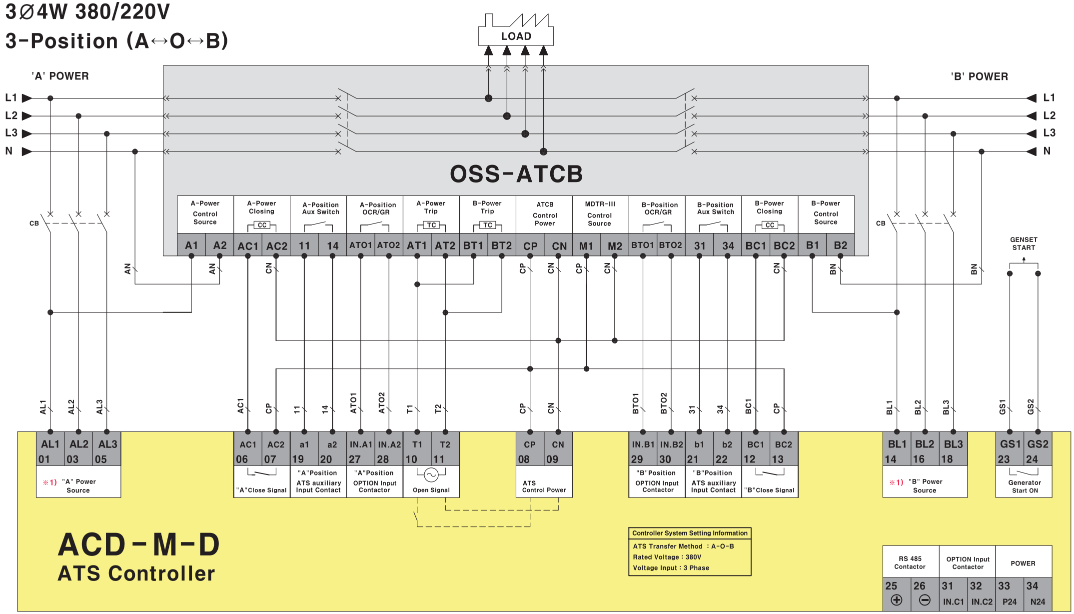
※1) If the A/B-Power Source input is single phase, connect power to the AL1, AL3 & BL1, BL3 terminals.

5 5 > ATCB Wiring Diagram

OSS-ATCB Type (AC220V)

3Ø4W 380/220V

3-Position (A↔O↔B)



※1) If the A/B-Power Source input is single phase, connect power to the AL1, AL3 & BL1, BL3 terminals.

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ACD-M-D RS-485 communication map
is availble the QR code