MITSUBISHI ELECTRIC

Digital-Analog Conversion Module Type AJ65BT-64DAV/DAI

User's Manual

(Hardware)

Thank you for buying the programmable controller MELSEC-A Series

Prior to use, please read both this manual and detailed manual thoroughly and familiarize yourself with the product.

MELSEC

MODEL	AJ65BT-64DA-U-H-E
MODEL CODE	13J894
IB (NA)-66750-I(1806)MEE	

● SAFETY PRECAUTIONS ●

(Read these precautions before using this product.)

Before using this product, please read this manual and the relevant manuals carefully and pay full attention to safety to handle the product correctly.
The precautions given this manual are concerned with this product. Refer to the User's Manual of the CPU module in use for details on the safety precautions for the programmable controller system.
In this manual, the safety precautions are classified into two levels: "⚠WARNING" and "⚠CAUTION".

⚠WARNING	Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
⚠CAUTION	Indicates that incorrect handling may cause hazardous conditions, resulting in minor or moderate injury or property damage.

Under some circumstances, failure to observe the precautions given under "⚠ CAUTION" may lead to serious consequences.
Observe the precautions of both levels because they are important for personal and system safety.
Make sure that the end users read this manual and then keep the manual in a safe place for future reference.

[Design Precautions]

⚠WARNING

- Install a safety circuit external to the programmable controller that keeps the entire system safe even when there are problems with the external power supply or the programmable controller. Otherwise, trouble could result from erroneous output or erroneous operation.
  (1) The status of analog output changes depending on the setting of various functions that control the analog output. Take sufficient caution when setting for those functions.
  For details of analog output status, refer to Section 3.4.5 "Combinations of various functions"
  (2) Normal output may not be obtained due to malfunctions of output elements or the internal circuits. So build an external monitoring circuit that will monitor any single outputs that could cause serious trouble.

⚠CAUTION
● Do not bunch the control wires or communication cables with the main circuit or power wires, or install them close to each other. They should be installed 100mm (3.94inch) or more from each other. Not doing so could result in noise that would cause erroneous operation. ● At power ON/OFF, voltage or current may instantaneously be output from the output terminal of this module. In such case, wait until the analog output becomes stable to start controlling the external device.

[Installation Precautions]

⚠CAUTION
● Use the programmable controller in an environment that meets the general specifications in this manual. Failure to do so may result in electric shock, fire, malfunction, or damage to or deterioration of the product. ● For protection of the switches, do not remove the cushioning material before installation. ● Securely fix the module with a DIN rail or mounting screws. Tighten the screws within the specified torque range. Undertightening can cause drop of the screw, short circuit, or malfunction. Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction. ● Do not directly touch the module's conductive parts or electronic components. Touching the conductive parts could cause an operation failure or give damage to the module.

[Wiring Precautions]

⚠CAUTION
● Be sure to shut off all phases of the external power supply used by the system before installation or wiring. Not doing so can cause the product to be damaged or malfunction. ● Be sure to ground the FG terminals to the protective ground conductor. Not doing so could result in erroneous operation. ● Use applicable solderless terminals and tighten them with the specified torque. If any solderless spade terminal is used, it may be disconnected when the terminal screw comes loose, resulting in failure. ● When wiring in the programmable controller, be sure that it is done correctly by checking the product's rated voltage and the terminal layout. Connecting a power supply that is different from the rating or incorrectly wiring the product could result in fire or damage.

[Wiring Precautions]

⚠CAUTION

- Tighten the terminal screws with the specified torque.
  If the terminal screws are loose, it could result in short circuits, fire, or erroneous operation.
  Overtightening can damage the screw and/or module, resulting in drop, short circuit, or malfunction.
- Be sure there are no foreign substances such as sawdust or wiring debris inside the module.
  Such debris could cause fires, damage, or erroneous operation.
- Do not install the control lines together with the communication cables, or bring them close to each other. Failure to do so may cause malfunctions due to noise.
- When connecting the communication and power supply cables to the module, always run them in conduits or clamp them.
  Not doing so can damage the module and cables due to loose, moved or accidentally pulled cables or can cause a malfunction due to a cable connection fault.
- When disconnecting the communication and power supply cables from the module, do not hold and pull the cable part.
  Disconnect the cables after loosening the screws in the portions connected to the module.
  Pulling the cables connected to the module can damage the module and cables or can cause a malfunction due to a cable connection fault.

[Startup and Maintenance Precautions]

⚠CAUTION

- Do not touch the terminals while power is on. Doing so may cause malfunctioning.
- Be sure to shut off all phases of the external power supply used by the system before cleaning or retightening the terminal screws.
  Not doing so can cause the module to fail or malfunction.
- Do not disassemble or modify the modules.
  Doing so could cause trouble, erroneous operation, injury, or fire.
- Do not drop or apply strong shock to the module.
  Doing so may damage the module.
- Be sure to shut off all phases of the external power supply used by the system before mounting or dismounting the module to or from the panel.
  Not doing so could result in damage to the product.
- Do not install/remove the terminal block more than 50 times after the first use of the product. (IEC 61131-2 compliant)
- Before touching the module, always touch grounded metal, etc. to discharge static electricity from human body.
  Failure to do so can cause the module to fail or malfunction.

[Disposal Precautions]

⚠CAUTION

- When disposing of this product, treat it as industrial waste.

●安全注意事项●

（使用之前请务必阅读）

在使用本产品之前，应仔细阅读本手册以及本手册中所介绍的相关手册，同时在充分注意安全的前提下正确操作。
本手册中仅记载与本产品有关的注意事项。
关于使用本产品的系统方面的安全注意事项，请参阅所使用的CPU模块的用户手册。
在“安全注意事项”中，安全注意事项被分为“⚠警告”和“⚠注意”两个等级。

⚠警告	表示错误操作可能造成危险后果，导致死亡或重伤事故。
⚠注意	表示错误操作可能造成危险后果，导致中度伤害、轻伤或财产损失。

此外，根据情况不同，即使标注为“⚠注意”的事项也有可能会引发严重后果。
这两个等级的注意事项记载的均为重要内容，请务必遵守。
请妥善保管本手册以备需要时取阅，并将本手册交给最终用户。

【设计注意事项】

⚠警告

- 应在可编程控制器外部设置一个安全电路，使外部电源异常或可编程控制器故障时能保证整个系统安全运行。
  否则可能由于误输出、误动作而导致事故发生。
  (1) 模拟输出的状态会随着控制模拟输出的各种功能的设置状态而改变，设置时请务必充分注意。

⚠注意

- 请勿将控制线及通信电缆与主电路及动力线等捆扎在一起或相互靠得太近。
  应相距大约100mm以上距离。因为噪声有可能导致误动作。
  因为噪声有可能导致误动作。
- 电源ON/OFF时输出端子可能会瞬间输出电压或电流，请在模拟输出稳定后再开始进行控制。

【安装注意事项】

⚠注意

- 应在详细手册记载的一般规格环境下使用模块。
  如果在一般规格范围以外的环境中使用模块，可能导致触电、火灾、误动作、产品损坏或性能劣化。
- 为保护开关，在安装前请勿拆除缓冲材料。
- 模块应通过DIN导轨或者安装螺栓切实地加以固定，安装螺栓应在规定的扭矩范围内切实地扭紧。如果螺栓拧得过松，有可能导致掉落、短路或误动作。
  如果螺栓拧得过紧，有可能造成螺栓及模块损坏从而导致掉落、短路或误动作。
- 请勿直接触碰模块的导电部分。否则可能导致模块误动作、故障。

【配线注意事项】

⚠注意
● 在配线作业等时，必须将系统使用的外部供应电源全部断开后再进行操作。 如果未全部断开，有可能导致产品损坏。 ● 必须将FG端子与可编程控制器的专用接地线连接。否则有可能导致误动作。 如果使用Y型压装端子，端子螺栓松动时可能导致脱落或故障。 ● 进行模块配线作业时，应在确认产品的额定电压及端子排列的基础上正确进行操作。 如果连接了与额定值不符的电源或配线错误，可能导致火灾或故障。 ● 应在规定的扭矩范围内拧紧端子螺栓。如果端子螺栓拧得过松，有可能导致短路或误动作。如果端子螺栓拧得过紧， 有可能造成螺栓及模块损坏从而导致短路或误动作。 ● 应注意防止切屑及配线头等异物掉入模块内。 否则有可能导致火灾、故障或误动作。 ● 请勿将控制线及通信电缆与主电路及动力线等捆扎在一起或相互靠得太近。 因为噪声有可能导致误动作。 ● 与模块相连接的电线及电缆必须收入套管中，或者用夹具进行固定处理。 如果未将电缆收入套管或用夹具进行固定处理，可能由于电缆的晃动及移动、不经意的拉拽等造成模块及电缆破损、电缆接触不良而导致误动作。 ● 在拆卸与模块相连接的电缆时，请勿用手拉扯电缆部分。 请在松开与模块连接的部分的螺栓后再拆卸电缆。如果在与模块连接的状态下拉扯电缆，可能导致模块及电缆破损、电缆接触不良而导致误动作。

【启动／维护注意事项】

⚠注意
● 在通电状态下请勿触摸端子，否则可能导致误动作。 ● 在清洁模块或重新紧固端子螺栓时，必须将系统使用的外部供应电源全部断开后再进行操作。 如果未全部断开，有可能导致模块故障或误动作。 ● 请勿拆开或改造模块。否则可能导致故障、误动作、人身伤害或火灾。 ● 应防止模块掉落或受到强烈撞击。否则可能导致模块破损。 ● 在控制盘上拆装模块时，必须将系统使用的外部供应电源全部断开后再进行操作。 如果未全部断开，有可能导致模块故障或误动作。 ● 产品投入使用后，端子排的拆装次数不应超过 50 次。（根据 IEC61131-2 规范） ● 在触碰模块之前，必须先触碰已接地的金属等，释放掉人体等所携带的静电。如果不释放掉静电，有可能导致模块故障或误动作。

【报废处理注意事项】

⚠注意
● 本产品报废时，应当作工业废物处理。

● CONDITIONS OF USE FOR THE PRODUCT ●

(1) Mitsubishi programmable controller ("the PRODUCT") shall be used in conditions;
i) where any problem, fault or failure occurring in the PRODUCT, if any, shall not lead to any major or serious accident; and
ii) where the backup and fail-safe function are systematically or automatically provided outside of the PRODUCT for the case of any problem, fault or failure occurring in the PRODUCT.

(2) The PRODUCT has been designed and manufactured for the purpose of being used in general industries.
MITSUBISHI SHALL HAVE NO RESPONSIBILITY OR LIABILITY (INCLUDING, BUT NOT LIMITED TO ANY AND ALL RESPONSIBILITY OR LIABILITY BASED ON CONTRACT, WARRANTY, TORT, PRODUCT LIABILITY) FOR ANY INJURY OR DEATH TO PERSONS OR LOSS OR DAMAGE TO PROPERTY CAUSED BY the PRODUCT THAT ARE OPERATED OR USED IN APPLICATION NOT INTENDED OR EXCLUDED BY INSTRUCTIONS, PRECAUTIONS, OR WARNING CONTAINED IN MITSUBISHI'S USER, INSTRUCTION AND/OR SAFETY MANUALS, TECHNICAL BULLETINS AND GUIDELINES FOR the PRODUCT.
("Prohibited Application")
Prohibited Applications include, but not limited to, the use of the PRODUCT in;
- Nuclear Power Plants and any other power plants operated by Power companies, and/or any other cases in which the public could be affected if any problem or fault occurs in the PRODUCT.
- Railway companies or Public service purposes, and/or any other cases in which establishment of a special quality assurance system is required by the Purchaser or End User.
- Aircraft or Aerospace, Medical applications, Train equipment, transport equipment such as Elevator and Escalator, Incineration and Fuel devices, Vehicles, Manned transportation, Equipment for Recreation and Amusement, and Safety devices, handling of Nuclear or Hazardous Materials or Chemicals, Mining and Drilling, and/or other applications where there is a significant risk of injury to the public or property.

Notwithstanding the above, restrictions Mitsubishi may in its sole discretion, authorize use of the PRODUCT in one or more of the Prohibited Applications, provided that the usage of the PRODUCT is limited only for the specific applications agreed to by Mitsubishi and provided further that no special quality assurance or fail-safe, redundant or other safety features which exceed the general specifications of the PRODUCTs are required. For details, please contact the Mitsubishi representative in your region.

About Manuals

The following are manuals related to this product.
Request for the manuals as needed according to the chart below.

Detailed Manual

Manual name	Manual No. (Model code)
AJ65BT-64DAV/DAI Digital-Analog Conversion Module User's Manual	SH-3615 (13J895)

Related Manuals

Manual name	Manual No. (Model code)
CC-Link System Master/Local Module Type AJ61BT11/A1SJ61BT11 User's Manual	IB-66721 (13J872)
CC-Link System Master/Local Module Type AJ61QBT11/A1SJ61QBT11 User's Manual	IB-66722 (13J873)
CC-Link System Master/Local Module User's Manual	SH-080394E (13JR64)
MELSEC-L CC-Link System Master/Local Module User's Manual	SH-080895ENG (13JZ41)

COMPLIANCE WITH EMC AND LOW VOLTAGE DIRECTIVES

(1) Method of ensuring compliance
To ensure that Mitsubishi programmable controllers maintain EMC and Low Voltage Directives when incorporated into other machinery or equipment, certain measures may be necessary. Please refer to one of the following manuals.
• User's manual for the CPU module or head module used
• Safety Guidelines
(This manual is included with the CPU module, base unit, or head module)
The CE mark on the side of the programmable controller indicates compliance with EMC and Low Voltage Directives.

(2) Additional measures
To ensure that this product maintains EMC and Low Voltage Directives, please refer to one of the manuals listed under (1).

1. Overview

This user's manual describes the specification and handling of AJ65BT-64DAV digital analog-voltage conversion module (abbreviated as AJ65BT-64DAV from here on) and AJ65BT-64DAI digital-analog current conversion module (abbreviated as AJ65BT-64DAI from here on), which is used as the remote device station for the Control & Communication-Link (abbreviated as CC-Link from here on) data system.

After opening the package for AJ65BT-64DAV/DAI, check that the following components have been included.

For AJ65BT-64DAV

Model	Part name	Quantity
AJ65BT-64DAV	AJ65BT-64DAV digital analog conversion module.	1

For AJ65BT-64DAI

Model	Part name	Quantity
AJ65BT-64DAI	AJ65BT-64DAI digital analog conversion module	1

2. Specifications

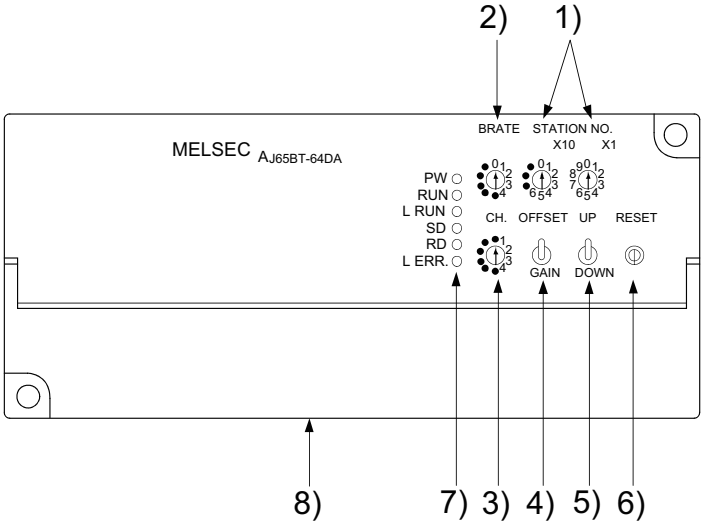
The performance specifications of the AJ65BT-64DAV/DAI is shown below.

<table>
<tr><td rowspan="2">Item</td><td colspan="4">Specification</td></tr>
<tr><td colspan="2">AJ65BT-64DAV</td><td colspan="2">AJ65BT-64DAI</td></tr>
<tr><td rowspan="2">Digital input value</td><td colspan="4">16-bit encoded binary (valid bit: 12 bits)</td></tr>
<tr><td colspan="2">-2048 to 2047</td><td colspan="2">0 to 4095</td></tr>
<tr><td>Analog conversion value</td><td colspan="2">Voltage: -10 to 10 VDC
(External load resistance:2KΩ to 1MΩ)</td><td colspan="2">Current: 4 to 20mADC
(External load resistance:0 to 600Ω)</td></tr>
<tr><td rowspan="7">I/O characteristics</td><td>Digital input value</td><td>Analog output value</td><td>Digital input value</td><td>Analog output value</td></tr>
<tr><td>2000</td><td>10V</td><td>4000</td><td>20mA</td></tr>
<tr><td>1000</td><td>5V</td><td>2000</td><td>12mA</td></tr>
<tr><td>0</td><td>0V</td><td>0</td><td>4mA</td></tr>
<tr><td>-1000</td><td>-5V</td><td colspan="2" rowspan="2"></td></tr>
<tr><td>-2000</td><td>-10V</td></tr>
<tr><td>Maximum resolution</td><td colspan="2">5mA</td><td colspan="2">4μA</td></tr>
<tr><td>Total accuracy (accuracy for the maximum value)</td><td colspan="2">±1% (±100mV)</td><td colspan="2">±1% (±200μA)</td></tr>
<tr><td>Maximum conversion speed</td><td colspan="4">Max. 1ms channels (4ms per 4 channels)</td></tr>
<tr><td>Output short-circuit protection</td><td colspan="4">Yes</td></tr>
<tr><td>Insulation system</td><td colspan="4">Across output channels: Non-insulated
Across external supply power and analog output: Transformer insulated</td></tr>
<tr><td>Analog output points</td><td colspan="4">4 channels per module</td></tr>
<tr><td>Offset/gain adjustment</td><td colspan="4">Yes (user setting or factory setting)</td></tr>
<tr><td>CC-Link station type</td><td colspan="4">Remote device station</td></tr>
<tr><td>Communication method</td><td colspan="4">Broadcast polling method</td></tr>
<tr><td>Number of occupied stations</td><td colspan="4">2 stations</td></tr>
<tr><td>Connector terminal block</td><td colspan="4">27-point terminal block (M3.5 × 7screws)</td></tr>
<tr><td>Supported cable size</td><td colspan="4">0.75 to 2.00mm^2</td></tr>
<tr><td>Supported solderless terminal</td><td colspan="4">RAV 1.25-3.5 (according to JIS C2805), RAV2-3.5</td></tr>
<tr><td>Module installation screw</td><td colspan="4">M4 × 0.7mm × 16mm or larger screw
(tightening torque 0.78 to 1.18 N•m) Installable within the DIN rail.</td></tr>
<tr><td>Supported DIN rail</td><td colspan="4">TH35-7.5Fe, TH35-7.5AI, TH35-15Fe (conforming to JIS C 2812)</td></tr>
<tr><td rowspan="3">External supply power</td><td colspan="4">24V DC (20.4V DC to 26.4V DC)</td></tr>
<tr><td colspan="2">Inrush current: 1.5A, within 0.67ms</td><td colspan="2">Inrush current: 3.2A, within 0.43ms</td></tr>
<tr><td colspan="2">Current consumption:0.18A
(at 24VDC)</td><td colspan="2">Current consumption:0.27A
(at 24VDC)</td></tr>
<tr><td>Noise resistance</td><td colspan="4">Noise voltage:500V$_{P-P}$
Measured using a noise simulator with 1 μs of noise amplitude and 25 to 60Hz of noise frequency.</td></tr>
<tr><td>Dielectric withstand voltage</td><td colspan="4">Power and communications systems batch-Analog output batch, 500VAC, one minute</td></tr>
<tr><td>Insulation resistor</td><td colspan="4">Power and communication systems batch-Analog output batch, 500VDC
10MΩ or more at the insulation resistance tester</td></tr>
<tr><td>Weight</td><td colspan="4">0.4kg</td></tr>
</table>

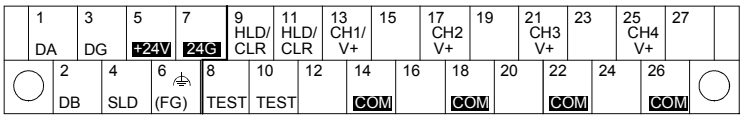
3. Name and Setting of Each Part

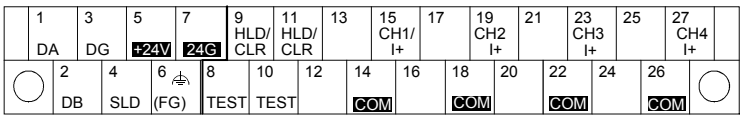
The name of each part in the AJ65BT-64DAV/DAI is described.

3.1 Name of each part



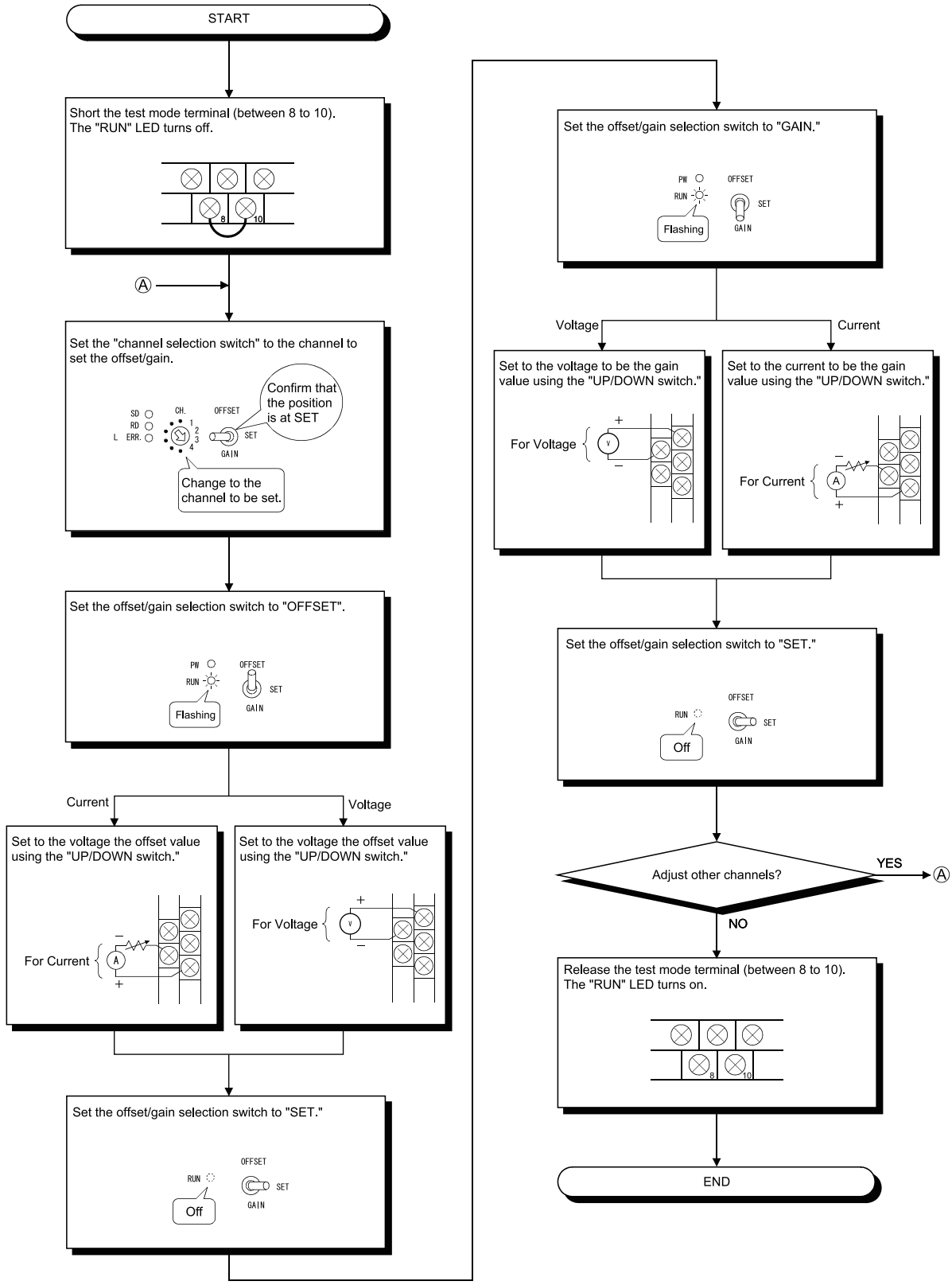
No.	Name	Description	
1)	Station number setting switch	ⓘX10 ⓘX1	The AJ65BT-64DAV/DAI station number is set within the range 1 to 63
2)	B RATE (transfer baud rate) setup switch	Setting number	Transfer baud rate
		0	156k bps(Factory shipment setting)
		1	625kbps
		2	2.5Mbps
		3	5Mbps
		4	10Mbps
		Other than 0 to 4	Unused (When a value other than 0 to 4 is set, L ERR. LED turns on, and results in a communication error.)
3)	CH.(CHANNEL) selection switch	Select the channel to perform offset adjustment or gain adjustment. (Positions other than 1 to 4 are not processed.)	
4)	OFFSET/GAIN (Offset/gain) setting switch	The switch to set the offset/gain values during test mode. (1) OFFSET position : Calibration mode for the offset value (2) GAIN position : Calibration mode for gain (3) SET position : When the switch is set from the OFFSET/GAIN position, which are modes to record offset/gain value to the SET position, to the SET position, the offset/gain value is recorded.	
5)	UP/DOWN switch	The switch to adjust the analog output value for the offset/gain of the specified channel. The analog output value increases/decreases by turning on the UP/DOWN switch	
6)	RESET switch	Resets the H/W. Initializes the AJ65-BT-64DAV/DAI I/O signals, remote register, and operation processing. When the switch is turned on, the AJ65BT-64DAV/DAI initial data processing request flag turns on.	

<table>
<tr><th>No.</th><th>Name</th><th colspan="3">Description</th></tr>
<tr><td rowspan="7">7)</td><td rowspan="7">Operation status display LED</td><td>PW LED</td><td colspan="2">ON : When the power is on
OFF: When the power is shut off</td></tr>
<tr><td rowspan="2">RUN LED</td><td>Normal mode</td><td>ON : Normal operation
Flashing : Write data error
OFF : 24VDC power shutoff or watchdog time error</td></tr>
<tr><td>Test mode</td><td>ON (Flashing):
Flashes in 0.5 second intervals when the offset/gain setting switch is at OFFSET or GAIN. Flashes in 0.1 second intervals when exceeding the upper or lower limits of the allowable setting using the UP/DOWN switch.
OFF : When the offset/gain setting switch is at SET.</td></tr>
<tr><td>L RUN LED</td><td colspan="2">ON : Normal communication
OFF: Communication interrupted (timeout error)</td></tr>
<tr><td>SD LED</td><td colspan="2">ON : Data being transferred</td></tr>
<tr><td>RD LED</td><td colspan="2">ON : Data being transferred</td></tr>
<tr><td>L ERR. LED</td><td colspan="2">On : When the baud rate or the station number setting is out of range.
Flashing at regular intervals :
When the baud rate or station number setting is changed after power-on or reset.
Flashing at irregular intervals :
When you forgot fitting the termination resistors or the module or CC-Link dedicated cable is affected by noise.
Off : Normal communication</td></tr>
<tr><td>8)</td><td>Terminal block</td><td colspan="3">AJ65BT-64DAV
 

AJ65BT-64DAI
 

HOLD/CLEAR setting terminal
HOLD is set by shorting between terminals, and CLEAR is set by releasing.
Test mode setting terminal
By shorting between terminals, the system enters the test mode.</td></tr>
</table>

3.2 Offset/gain setting



4. Handling

4.1 Precautions when handling

(1) Do not drop or apply strong shock to the module.
Doing so may damage the module.

(2) Do not remove the module print board from the case. This may cause breakdowns.

(3) Be sure there are no foreign substances such as sawdust or wiring debris inside the module.
Such debris could cause fires, damage, or erroneous operation.

(4) Tighten the screws such as module mounting screws with the following torque:

Screw location	Tightening torque range
Module mounting screw (M4 screw)	0.78 to 1.18N • m
Terminal block terminal screw (M3.5 screw)	0.59 to 0.88N • m
Terminal block installation screw (M4 screw)	0.78 to 1.18N • m

4.2 Installation environment

When an A sequencer is installed, avoid the following environments.

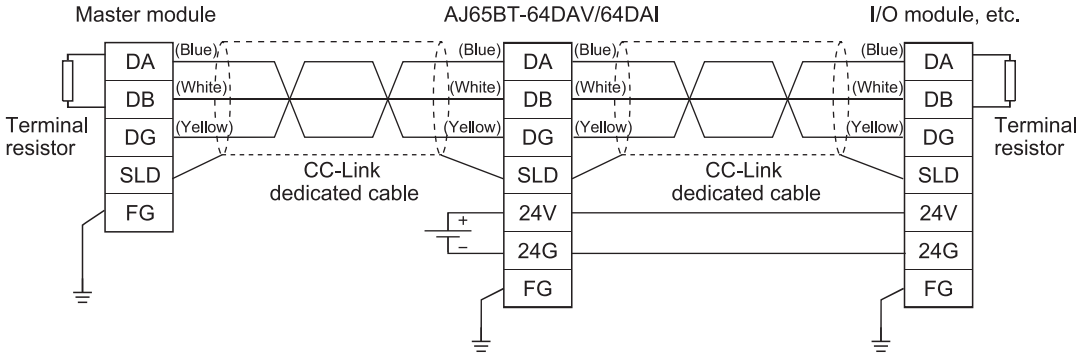
(1) A location where the ambient temperature exceeds 0 to 55°C.
(2) A location where the ambient humidity exceeds 10 to 90%RH.
(3) Locations where rapid changes in temperature could create condensation.
(4) Locations with corrosive or flammable gases.
(5) Locations with high concentrations of dust, oil mist, salt, organic solvents or metal particles that could conduct electricity.
(6) Locations exposed to direct sunlight.
(7) Locations with strong electrical or magnetic fields.
(8) Locations that could subject the main unit to direct impact or vibration.

5. Wiring the Data Link Cable

This section introduces the wiring of the dedicated CC-Link cable used for connecting the AJ65BT-64DAV/DAI to the master module.

5.1 CC-Link dedicated cable connections

The CC-Link dedicated cable connections between the AJ65BT-64DAV/DAI and master module are as follows:



6. Wiring

The precautions when wiring and the module connection example are shown in the following.

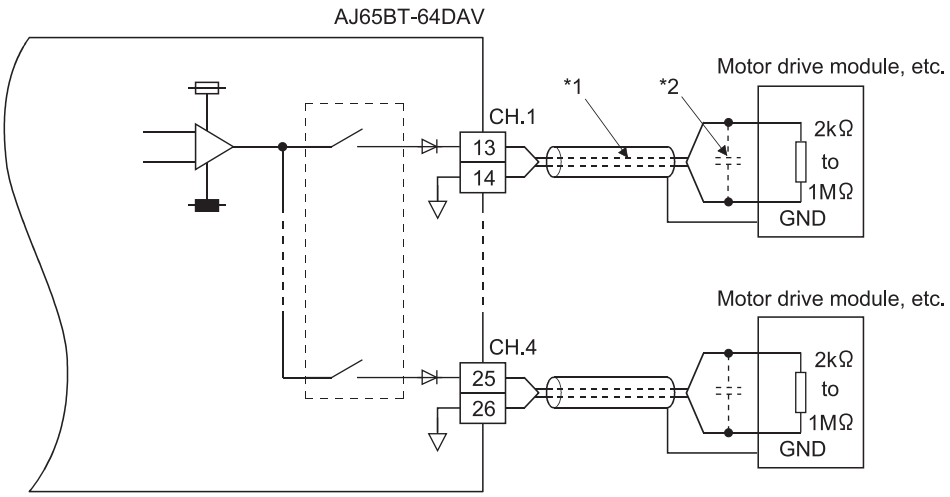
6.1 Precautions when wiring

To obtain maximum performance from the functions of AJ65BT-64DAV/DAI and improve the system reliability, an external wiring with high durability against noise is required.
The precautions performing external wiring for the AJ65BT-64DAV/DAI are shown below:

(1) Do not bunch the control wires or load cables from other than the programmable controller with the wires to the module, or install them close to each other. Doing this makes the wiring easy to accept the noise, surge or induction effects.
(2) Perform a one-point grounding for the shielded line or the shield of the shielded cable.

6.2 Module connection example

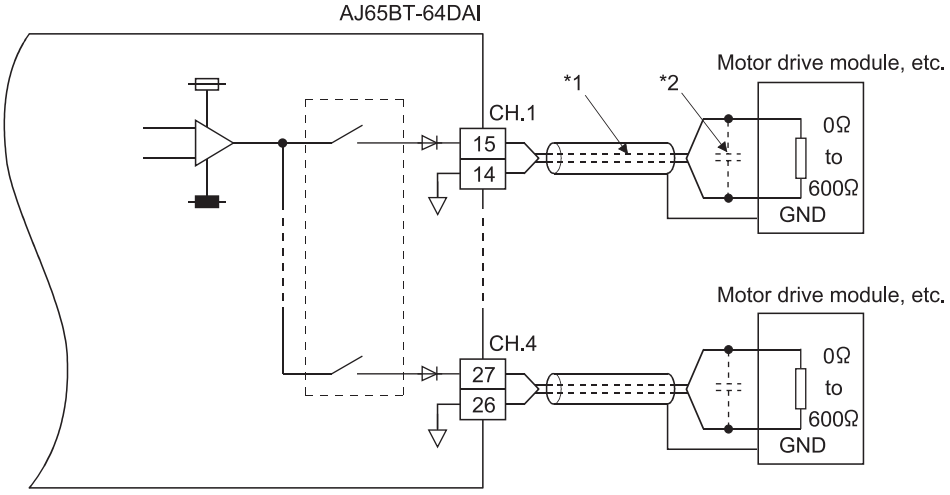
(1) The wiring example to external devices for AJ65BT-64DAV is shown below:



*1: Use two-core shielded line for the wiring.

*2: When noise or ripple generates within the external wiring, connect a condenser with 0.1 to 0.47μF (25V or more voltage resistance parts) specification to the input terminal of the external device.

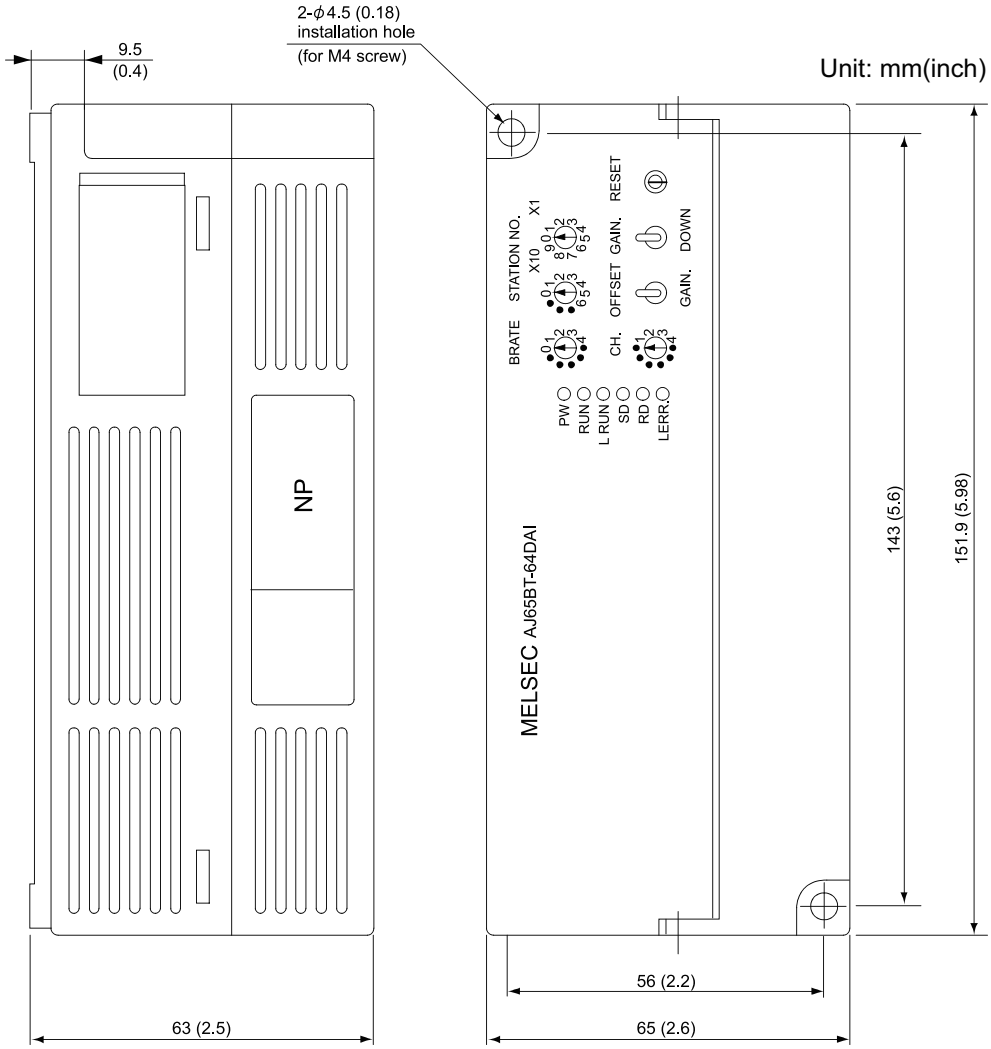
(2) The wiring example to external device for AJ65BT-64DAI is shown below:



*1: Use two-core twist shielded line for the wiring.

*2: When noise or ripple generates within the external wiring, connect a condenser with 0.1 to 0.47μF (25V or more voltage resistance parts) specification to the input terminal of the external device.

7. External Dimensions Diagram



8. Information for the New China RoHS and the Chinese Standardized Low

「电器电子产品有害物质限制使用标识要求」的表示方式

Note: This symbol mark is for China only.

含有有害6物质的名称，含有量，含有部品

本产品中所含有的有害6物质的名称，含有量，含有部品如下表所示。

产品中有害物质的名称及含量

部件名称	有害物质					
	铅（Pb）	汞（Hg）	镉（Cd）	六价铬（Cr(VI)）	多溴联苯（PBB）	多溴二苯醚（PBDE）
印刷基板	×	○	○	○	○	○
外壳	○	○	○	○	○	○

本表格依据SJ/T 11364 的规定编制。

○:表示该有害物质在该部件所有均质材料中的含量均在GB/T 26572 规定的限量要求以下。

×:表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572 规定的限量要求。

基于中国标准法的参考规格：GB/T15969.2

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