

A9GT-80V4 type Video input interface module

Thank you for buying the MELSEC-GOT Series

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

User's Manual (Hardware)



MODEL	A9GT-80V4-U
MODEL CODE	1DM123
IB(NA)-0800167-D(0406)MEE	

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● SAFETY PRECAUTIONS ●

(Always read before starting use)

When using Mitsubishi equipment, thoroughly read this manual and the associated manuals introduced in the manual. Also pay careful attention to safety and handle the module properly.

These precautions apply only to the installation of Mitsubishi equipment and the wiring with the external device. Refer to the user's manual of the CPU module to be used for a description of the PLC system safety precautions.

These ● SAFETY PRECAUTIONS ● classify the safety precautions into two categories: "DANGER" and "CAUTION".



Procedures which may lead to a dangerous condition and cause death or serious injury if not carried out properly.



Procedures which may lead to a dangerous condition and cause superficial to medium injury, or physical damage only, if not carried out properly.

Depending on circumstances, procedures indicated by **CAUTION** may also be linked to serious results.

In any case, it is important to follow the directions for usage.

Store this manual in a safe place so that you can take it out and read it whenever necessary. Always forward it to the end user.

[DESIGN PRECAUTIONS]

DANGER

- Do not bundle control lines or communication wires together with main circuit or power lines, or lay them close to these lines.
As a guide, separate the lines by a distance of at least 100 mm (3.94 inch) otherwise malfunctions may occur due to noise.

[INSTALLATION PRECAUTIONS]

DANGER

- Before mounting or dismounting this module to or from the GOT, always shut off GOT power externally in all phases.
Not doing so can cause a module failure or malfunction.

CAUTION

- Use this module in the environment given in the general specifications of the GOT User's Manual.
Not doing so can cause an electric shock, fire, malfunction or product damage or deterioration.
- When installing this unit to the GOT, fit it to the connection interface of the GOT and tighten the mounting screws in the specified torque range.
Undertightening can cause a drop, failure or malfunction.
Overtightening can cause a drop, failure or malfunction due to GOT or screw damage.

[STARTUP AND MAINTENANCE PRECAUTIONS]

DANGER

- Before starting cleaning, always shut off GOT power externally in all phases.
Not doing so can cause a module failure or malfunction.

[STARTUP AND MAINTENANCE PRECAUTIONS]

CAUTION

- Do not disassemble or modify any module.
This will cause failure, malfunction, injuries, or fire.
- Do not touch the conductive areas and electronic parts of this module directly.
Doing so can cause a module malfunction or failure.
- Exercise care to avoid foreign matter such as chips and wire offcuts entering the module.
Not doing so can cause a fire, failure or malfunction.
- Always secure the cables connected to the module, e.g. run them in conduits or clamp them. Not doing so can cause module or cable damage due to dangling, moved or accidentally pulled cables or can cause a malfunction due to a cable contact fault.
- Do not hold the cable part when unplugging any cable connected to the module.
Doing so can cause module or cable damage or a malfunction due to a cable contact fault.
- Before handling the unit, touch a grounded metal or similar object to discharge the static electricity from the human body.
Failure to do so may cause the unit to fail or malfunction.

[DISPOSAL PRECAUTIONS]

DANGER

- Dispose of this product as industrial waste.

Manuals

The following manuals are relevant to this product.
Refer to the following list and order the required manuals.

Detailed Manual

Manual name	Manual No. (Model code)
A985GOT/A975GOT/A970GOT/A960GOT User's Manual (Available as option)	SH-4005 (1DM099)

Relevant Manual

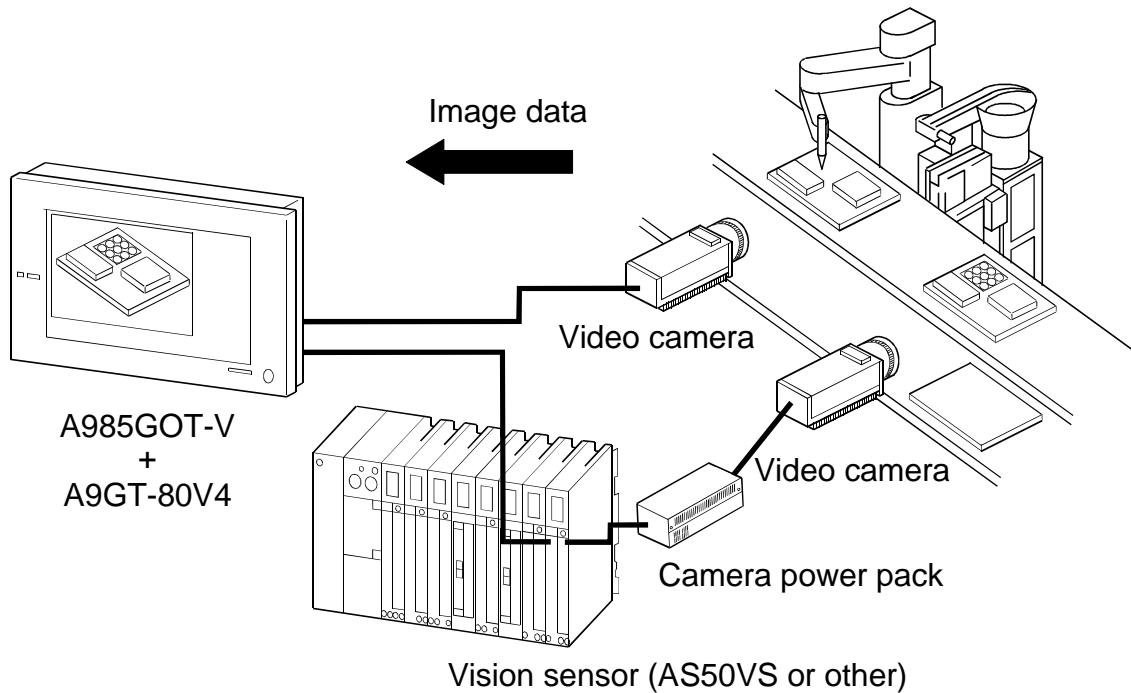
For relevant manual, refer to the PDF manual stored within the drawing software.

1. Overview

This User's Manual describes the A9GT-80V4 type Video input interface module (hereinafter, A9GT-80V4).

A9GT-80V4 can display the image taken by up to 4 video cameras on the A985GOT-V by connecting with A985GOT-TBA-V and A985GOT-TBD-V (hereinafter abbreviated as A985GOT-V).

It is possible to use A985GOT-V as the vision sensor monitor.



*The camera power pack may be necessary depending on the vision sensor used.

- A9GT-80V4 cannot be mounted to the GOT other than A985GOT-V.
- For details of the system configuration, refer to the GOT-A900 Series User's Manual (GT Works Version5/GT Designer Version5 compatible Connection System Manual).
- For details of the video window to display on A985GOT-V, refer to GT Works Version5/GT Designer Version5 Reference Manual.
- One of the following software packages are required for A9GT-80V4:
 F version of SW5D5C-GTWORKS-E (GT Works Version5) or higher
 F version of SW5D5C-GOTR-PACKE (GT Designer Version5) or higher

After opening the box, check that the following items are present.

Description	Quantity
A9GT-80V4	1

2. Specification

2.1 A9GT-80V4 specifications

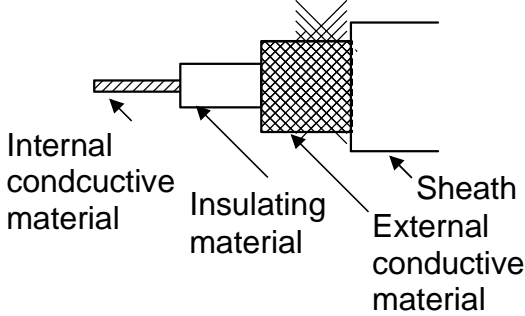
Item		Specifications
Video input system	Color	NTSC format, PAL format (interlaced format)
	Monochrome	EIA format, CCIR format (interlaced format)
Number of video input channels		4 channel
Display size [pixels]		640x480 (possible to reduce to 320x240, 160x120) 720x480 (possible to reduce to 360x240, 180x120)
Video external connection method		Coaxial cable
Applicable wire size		75Ω coaxial shield cable
Internal current consumption [A] (5 D VC)		0.19 (value for individual module)
Weight [kg](lb)		0.15(0.33)
Maximum cable length [m](feet)		30 (98.42)

2.2 Coaxial cable specifications

(1) Coaxial cable

Use high frequency coaxial cable "3C-2V" "5C-2V" (conforms to JIS C 3501) for coaxial cable.

The following shows the coaxial cable specifications.

Item	3C-2V	5C-2V
Construction	 <p>The diagram shows a cross-section of a coaxial cable. It consists of an inner conductor (Internal conductive material) surrounded by an insulating layer (Insulating material), which is further surrounded by an outer conductor (External conductive material) and an outer sheath (Sheath).</p>	
Cable diameter	5.4mm (0.21in)	7.4mm (0.29 in)
Allowable bending radius	22mm (0.87 in) or more	30mm (41.18 in) or more
Internal conductive material diameter	0.5mm (0.02 in) (Annealed copper wire)	0.8mm (0.03 in) (Annealed copper wire)
Insulation material diameter	3.1mm (0.12 in) (Polyethylene)	4.9mm (0.19 in) (Polyethylene)
External conductive material diameter	3.8mm (0.15 in) (Single annealed copper wire mesh)	5.6mm (0.22 in) (Single annealed copper wire mesh)
Applicable connector plug	Connector plug for 3C-2V (BNC-P-3-N1-CAU is recommended.)	Connector plug for 5C-2V (BNC-P-5-N1-CAU is recommended.)

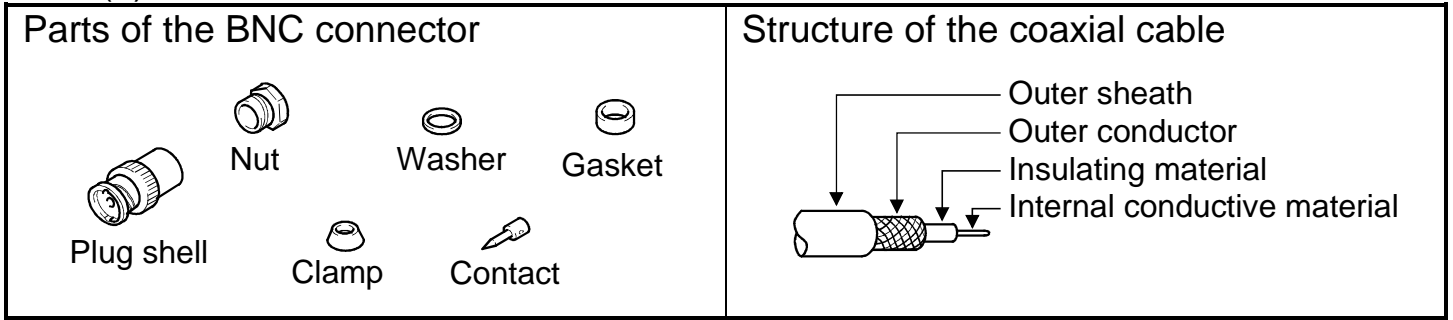
(2) Connector and connector cover

• GOT connector

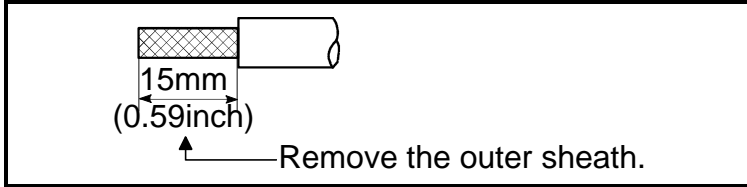
Use BNC connector for GOT side connector.

The following shows the connection method for BNC connector and coaxial cable.

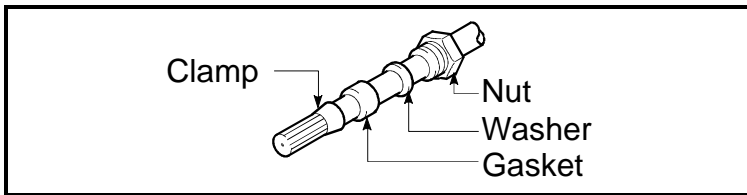
(a) Structure of BNC connector and the coaxial cable.



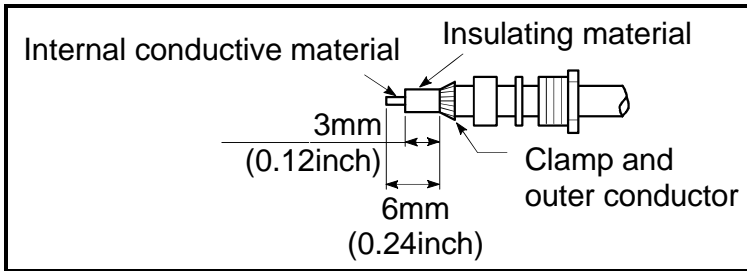
(b) Connecting the BNC connector with the coaxial cable.



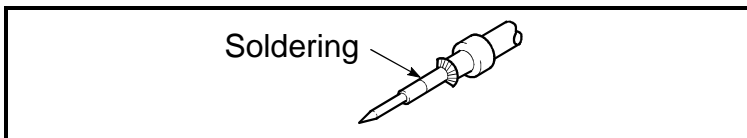
1) Remove the outer sheath of the end of the coaxial cable as shown below.



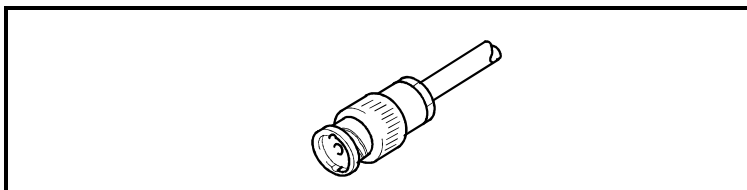
2) Slip a nut, a washer, a gasket, and a clamp on the coaxial cables as shown below, and loosen the outer conductor.



3) Cut the outer conductor, insulating material, and internal conductive material to specified dimensions shown below. Cut the outer conductor and extended it over the end of the clamp.



4) Solder the contact to the tip of the internal conductive material.



5) Insert the contact assembly in the plug shell, and engage the plug shell with the nut.

*1: Soldered part must not have excess solder mound.

*2: The tail end of the contact must come into close contact with the cut end of the insulating material. The contact must not be cutting in the insulating material.

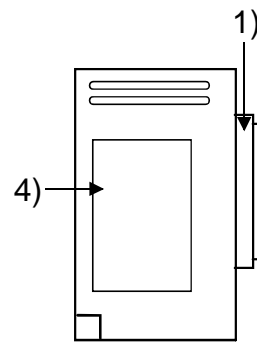
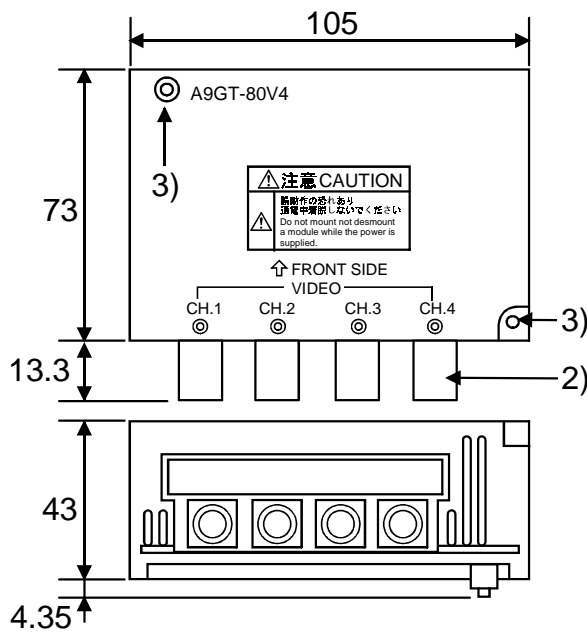
*3: Apply solder quickly so that the insulating material may not be deformed by heat.

- Connector at the video camera and vision sensor.
Use the connector applicable to the video camera and vision sensor.

(3) Precautions for cable preparation

The cable must be 30m (98.42feet) or shorter

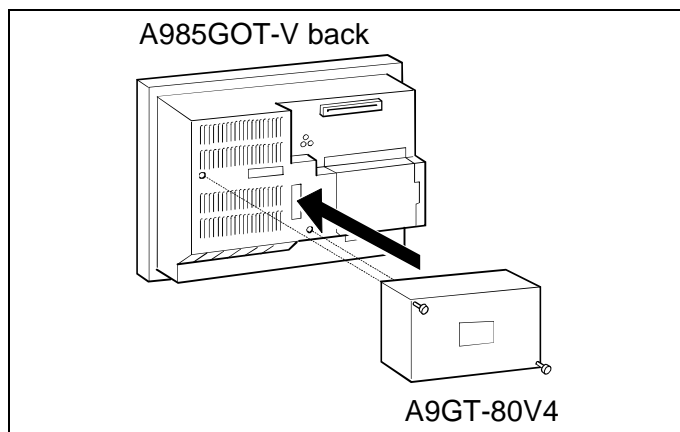
3. Name of the Part's and Outline Dimension Drawing



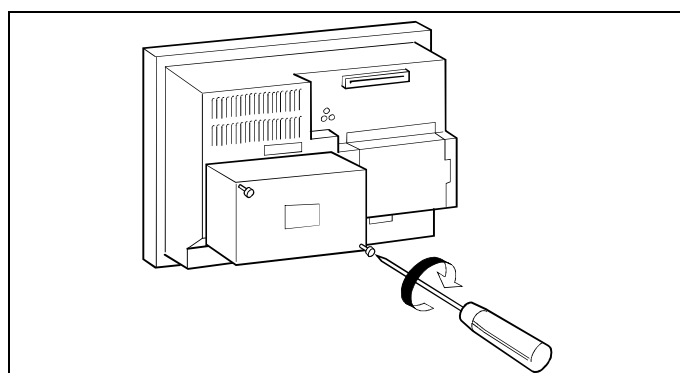
Unit:mm (inch)

No.	Name	Description
1)	Connector for connection	Connector for connection to the A985GOT-V
2)	Connector	Connector for mounting cable
3)	Option module mounting screw	Mounting screw to the A985GOT-V
4)	Rating plate	-

4. Installation Procedure



- (1) Insert the A9GT-80V4 connector into the option module interface at the back of A985GOT-V.



- (2) Tighten the attachment screw to a point within the prescribed torque range of 39 to 59 N•cm.

To remove the unit, reverse the installation procedure.

Warranty

Mitsubishi will not be held liable for damage caused by factors found not to be the cause of Mitsubishi; machine damage or lost profits caused by faults in the Mitsubishi products; damage, secondary damage, accident compensation caused by special factors unpredictable by Mitsubishi; damages to products other than Mitsubishi products; and to other duties.

For safe use

- This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.
- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi.
- This product has been manufactured under strict quality control. However, when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

Country/Region	Sales office/Tel	Country/Region	Sales office/Tel
U.S.A	Mitsubishi Electric Automation Inc. 500 Corporate Woods Parkway Vernon Hills, IL 60061 Tel : +1-847-478-2100	Hong Kong	Ryoden Automation Ltd. 10th Floor, Manulife Tower, 169 Electric Road, North Point, HongKong Tel : +852-2887-8870
Brazil	MELCO-TEC Rep. Com.e Assessoria Tecnica Ltda. AV. Paulista 1471, Conj. 308, Sao Paulo City, Sao Paulo State, Brazil Tel : +55-11-283-2423	China	Ryoden Automation Shanghai Ltd. 3F Block5 Building Automation Instrumentation Plaza 103 Cao Bao Rd. Shanghai 200233 China Tel : +86-21-6475-3228
Germany	Mitsubishi Electric Europe B.V. German Branch Gothaer Strasse 8 D-40880 Ratingen, GERMANY Tel : +49-2102-486-0	Taiwan	Setsuyo Enterprise Co., Ltd. 6F., No.105 Wu-Kung 3rd.RD, Wu-Ku Hsiang, Taipei Hsine, Taiwan Tel : +886-2-2299-2499
U.K	Mitsubishi Electric Europe B.V. UK Branch Travellers Lane, Hatfield, Herts., AL10 8XB,UK Tel : +44-1707-276100	Korea	HAN NEUNG TECHNO CO.,LTD. 1F Dong Seo Game Channel Bldg., 660-11, Deungchon-dong Kangsec-ku, Seoul, Korea Tel : +82-2-3660-9552
Italy	Mitsubishi Electric Europe B.V. Italian Branch Centro Dir. Colleoni, Pal. Perseo-Ingr.2 Via Paracelso 12, 20041 Agrate B., Milano, Italy Tel : +39-039-6053344	Singapore	Mitsubishi Electric Asia Pte, Ltd. 307 ALEXANDRA ROAD #05-01/02, MITSUBISHI ELECTRIC BUILDING SINGAPORE 159943 Tel : +65-6473-2308
Spain	Mitsubishi Electric Europe B.V. Spanish Branch Carretera de Rubi 76-80 08190 - Sant Cugat del Valles, Barcelona, Spain Tel : +34-93-565-3131	Thailand	F. A. Tech Co.,Ltd. 898/28,29,30 S.V.City Building,Office Tower 2,Floor 17-18 Rama 3 Road, Bangkokpong, Yannawa, Bangkok 10120 Tel : +66-2-682-6522
France	Mitsubishi Electric Europe B.V. French Branch 25 Boulevard des Bouvets, F-92741 Nanterre Cedex, France TEL: +33-1-5568-5568	Indonesia	P.T. Autoteknindo SUMBER MAKMUR Jl. Muara Karang Selatan Block A Utara No.1 Kav. No.11 Kawasan Industri/ Pergudangan Jakarta - Utara 14440 Tel : +62-21-663-0833
South Africa	Circuit Breaker Industries LTD. Tripswitch Drive, Elandsfontein Gauteng, South Africa Tel : +27-11-928-2000	India	Messung Systems Put,Ltd. Electronic Sadan NO:111 Unit No15, M.I.D.C BHOSARI,PUNE-411026 Tel : +91-20-712-2807
		Australia	Mitsubishi Electric Australia Pty. Ltd. 348 Victoria Road, PostalBag, No 2, Rydalmere, N.S.W 2116, Australia Tel : +61-2-9684-7777

MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : 1-8-12, OFFICE TOWER Z 14F HARUMI CHUO-KU 104-6212, JAPAN
NAGOYA WORKS : 1-14, YADA-MINAMI 5-CHOME, HIGASHI-KU, NAGOYA, JAPAN

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Specifications subject to change without notice.
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