TECHNICAL BULLETIN

[Title] Compliance with EMC Directive for A9GT-RS2T Serial   **[Date of Issue]** Sep., '02
   Communication Board with Built-in Clock

[Relevant Models] A9GT-RS2T

Thank you for your continued support of Mitsubishi Graphic Operation Terminal GOT Series.

A9GT-RS2T Serial Communication Board with Built-in Clock (referred to as A9GT-RS2T) is now compliant with EMC Directive.

1. Compliance with EMC Directive

(1) Compliance with EMC Directive for A9GT-RS2T
    A9GT-RS2T is compliant with EMC Directive from hardware version C (manufactured in July, 2002.)
    The EMC Directive compliant A9GT-RS2T includes a CE mark logo on both the rating plate and packing box.

(2) Checking A9GT-RS2T hardware version and CE mark
    The A9GT-RS2T hardware version is shown on the rating plate of the product.
    The products including a CE mark logo on both the rating plate and packing box are compliant with EMC Directive.

Rating plate	Packing box
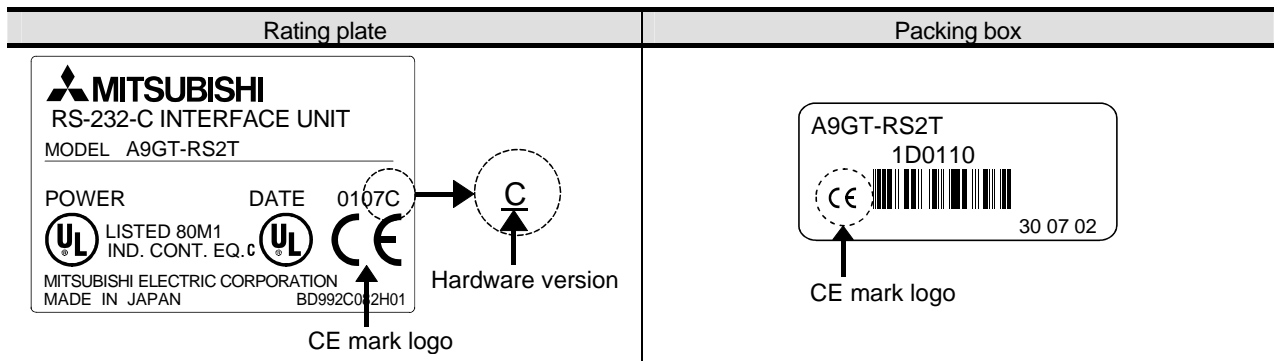
(3) Compliance with EMC Directive for GOT (as of July, 2002)
    The following table shows GOTs that comply with the EMC Directive when used with A9GT-RS2T.
    (The GOTs compliant with EMC Directive includes a CE mark logo on the rating plate and packing box.)

Model	Compatibility	EMC Directive complaint hardware version
A985GOT-TBA-EU	×	-
A975GOT-TBA-EU	○	Hardware version T (May, 2002) or later
A970GOT-TBA-EU	○	Hardware version T (May, 2002) or later
A970GOT-SBA-EU	○	Hardware version E (May, 2002) or later
A970GOT-LBA-EU	○	Hardware version A or later
A960GOT-EBA-EU	○	Hardware version L (May, 2002) or later

○: Compliant with EMC Directive   ×: Not compliant with EMC Directive

TECHNICAL BULLETIN

[Issue No.] T10-0024   [Page] 2/6
[Title] Compliance with EMC Directive for A9GT-RS2T Serial   [Date of Issue] Sep., '02
        Communication Board with Built-in Clock

[Relevant Models] A9GT-RS2T

(4) Checking GOT hardware version and CE mark
The GOT hardware version is shown on the rating plate at the rear of the GOT. The products including a CE mark logo on both the rating plate and packing box are compliant with EMC Directive.

Rating plate	Packing box

2. Connection cable

It is necessary to use a ferrite core for each connection cable and strip the braided shield surrounding the cable and attach it to a cable clamp in order for the A9GT-RS2T to comply with EMC Directive.

Produce the cable as shown below in (1) 'CPU direct connection'.
Ferrite cores and cable clamps are required to create the cable.
The following products were used for the EMC Directive compliance test.
 • ZCAT3035-1330 ferrite core (TDK Corporation)
 • AD75CK cable clamp (Mitsubishi Electric)

(1) CPU direct connection
      (a) For RS-232C cable (QC30R2)
          • Strip the outer insulation layer at both ends of the cable by the length shown below to expose the braided shield for grounding.
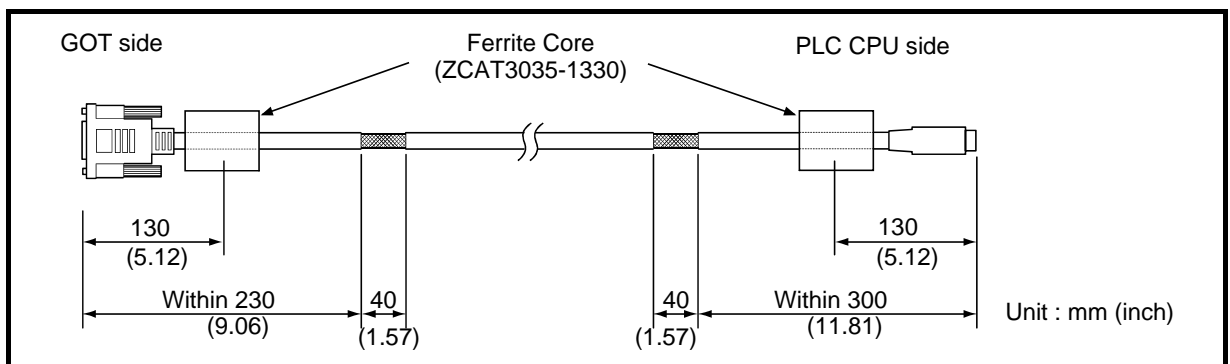
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TECHNICAL BULLETIN

[Title] Compliance with EMC Directive for A9GT-RS2T Serial   **[Date of Issue]** Sep., '02
       Communication Board with Built-in Clock

[Relevant Models]   A9GT-RS2T

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    (3) Computer link connection

        (a) For RS-232C cable

             Produce the RS-232C cable for connecting the GOT to the computer link unit (serial communication unit, computer link unit and PLC CPU with computer link connection).
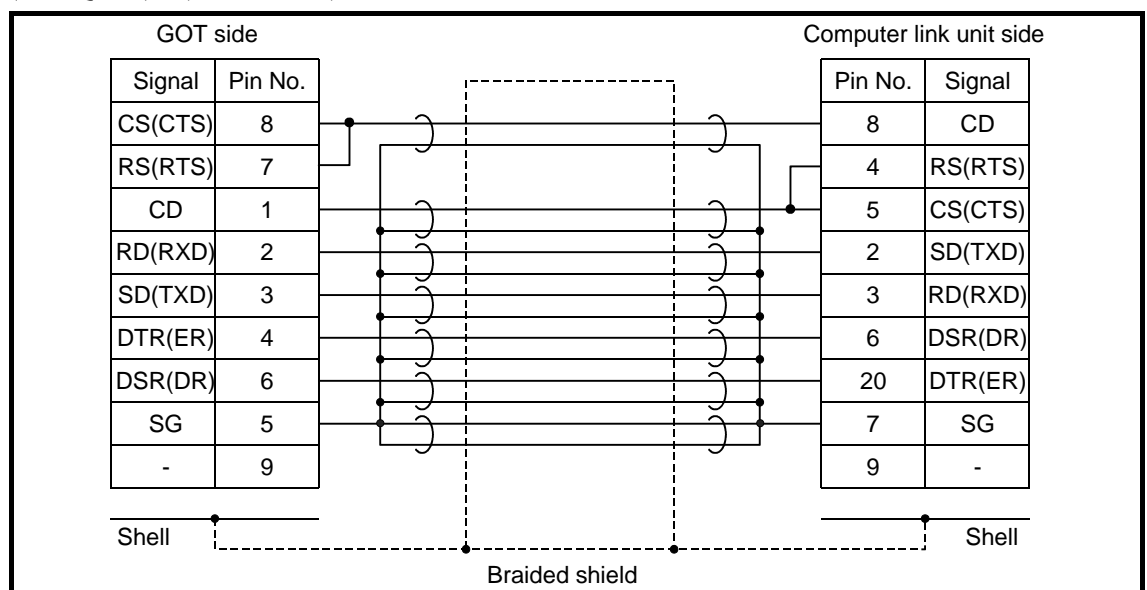
             The RS-232C cable connection diagram and connector pin-outs are as follows.

          1) Connection diagram

             • When D-sub 9-pin is used for the connector of the computer link unit.

               (A1SJ71QC24(R-2), A1SJ71UC24-R2, A1SJ71C24-R2, A1SCPUC24-R2, A2CCPUC24, QJ71C24(-R2))
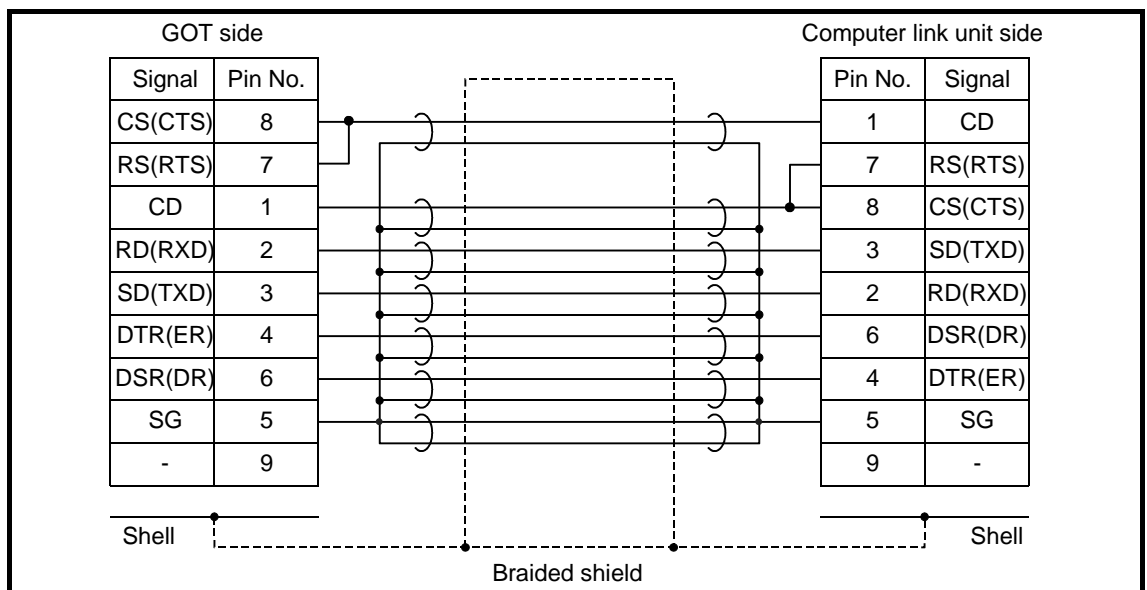
             • When D-sub 25-pin is used for the connector of the computer link unit.

               (AJ71QC24(-R2), AJ71UC24)

MITSUBISHI ELECTRIC CORPORATION

[Issue No.] T10-0024   **[Page]** 4/6

[Title] Compliance with EMC Directive for A9GT-RS2T Serial   **[Date of Issue]** Sep., '02
Communication Board with Built-in Clock

[Relevant Models] A9GT-RS2T

2) Precautions for producing the cable
- Use a twisted pair style between each signal cable and SG.
- Connect the braided shield to both ends of the connector shell.
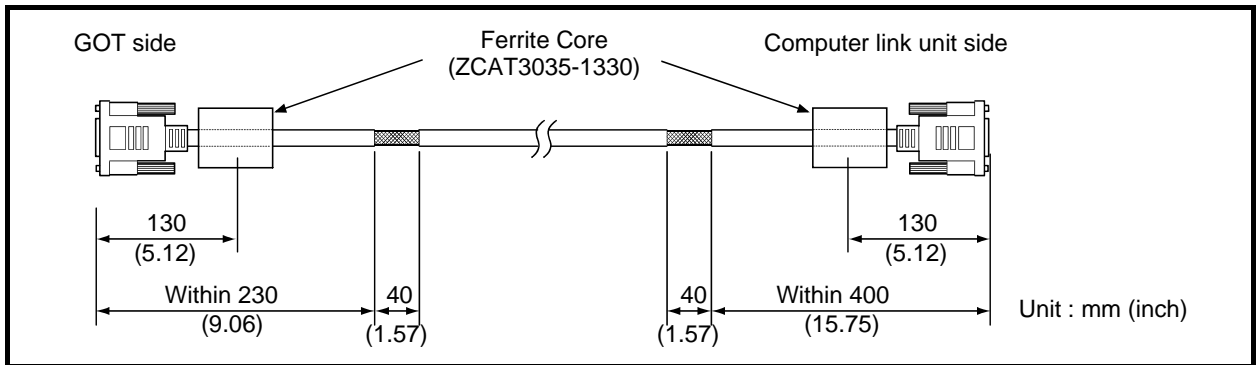- The following cable was used for the EMC Directive compliance test.

Item	Specification
Cable type	Shielded twisted pair cable
Conductor section area (mm^2)	0.2

3) Connector and connector cover
- GOT connector
  Use the connector matching the following model for the GOT.
  9-pin D-sub (male) inch screw type
  manufactured by DDK
  17JE-23090-27 (D3CC)
- Computer link unit connector
  Refer to the user's manual of the computer link unit.

4) Producing the cable
- Strip the outer insulation layer at both ends of the cable by the length shown below to expose the braided shield for grounding
- The cable length must be within 15m.

GOT side   Ferrite Core (ZCAT3035-1330)   Computer link unit side

130 (5.12)   130 (5.12)

Within 230 (9.06)   40 (1.57)   40 (1.57)   Within 400 (15.75)   Unit : mm (inch)

TECHNICAL BULLETIN

[Title] Compliance with EMC Directive for A9GT-RS2T Serial   **[Date of Issue]** Sep., '02
Communication Board with Built-in Clock

[Relevant Models] A9GT-RS2T

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(3) PLC and microcomputer (manufactured by other company) connection
Produce the cable (RS-232C cable) for connecting the GOT to a PLC or microcomputer (manufactured by other company) with reference to the GOT-A900 Series User's Manual (GT Works Version5/GT Designer Version5 Compatible Connection System Manual).

TIP
Configure the system to meet the EMC Directive specifications for the connected device when connecting the GOT with the PLC or microcomputer (manufactured by other company).   This section gives the instructions to comply with the EMC Directive. The manufacturer should finally decide the EMC Directive compliance method or judge if the configured system is compliant with the EMC Directive.

(a) For RS-232C cable
   • Use a twisted pair style for each signal wire (except SG, FG) with SG.
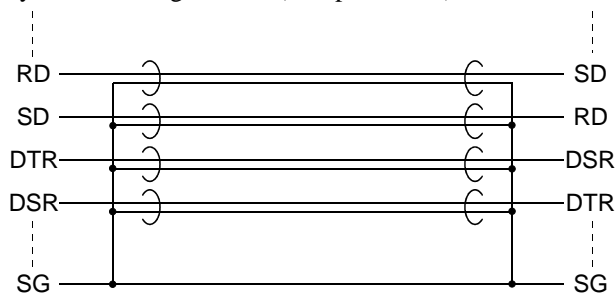
   • Strip the outer insulation layer at both ends of the cable by the length shown below to expose the braided shield for grounding.


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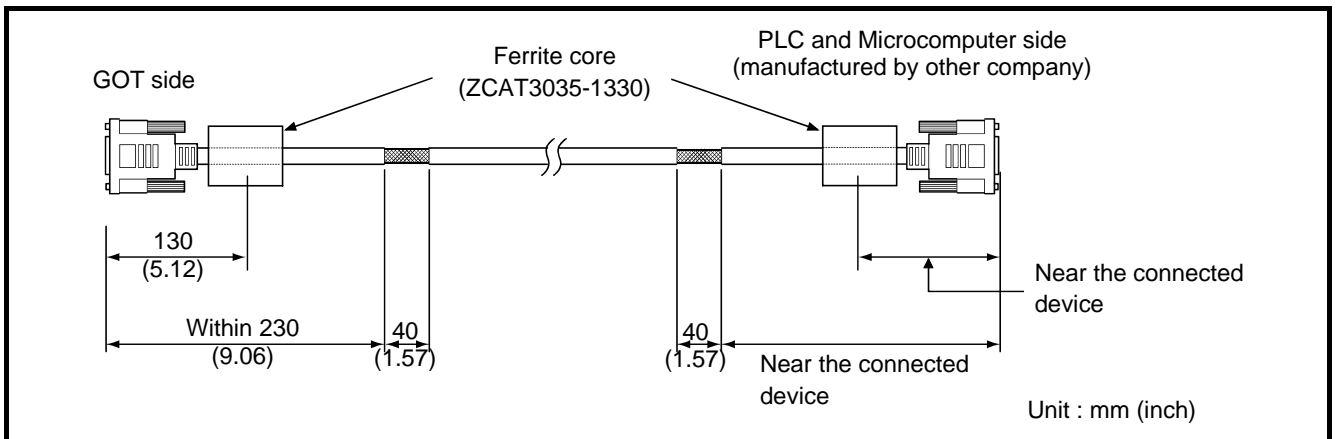
[Issue No.] T10-0024   **[Page]** 6/6
[Title] Compliance with EMC Directive for A9GT-RS2T Serial   **[Date of Issue]** Sep., '02
    Communication Board with Built-in Clock

[Relevant Models] A9GT-RS2T

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3. Grounding the cable

Ground the cable and ground wire onto the control panel that the GOT and base unit are to be installed in order for the A9GT-RS2T to comply with EMC Directive.

Grounding to the panel with the cable clamps
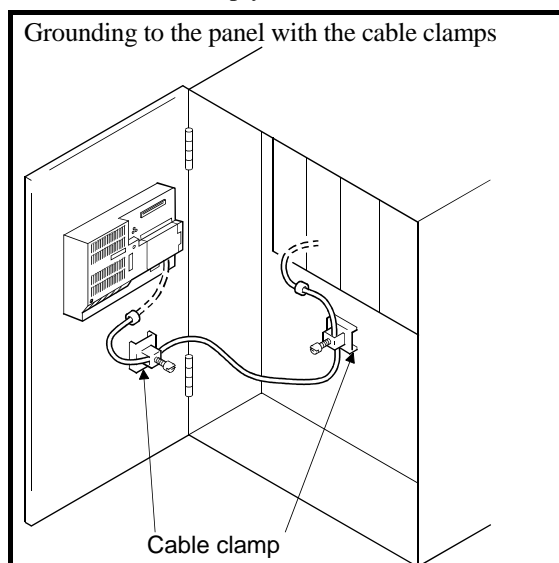
For RS-232C cable, ground the braided shield onto the panel with the cable clamp (AD75CK).

Cable clamp

4. Connected Devices

If connecting to the PLC or microcomputer other than Mitsubishi products (MELSEC-Q Series, MELSEC-QnA Series or MELSEC-A Series) please refer to the EMC Directive compliance manual for that specific device.

5. Purchasing the GOT

Please contact your local Mitsubishi representative, for the purchase of this product.