

PRODUCT SPECIFICATIONS

(MDM-V4C25HW)

SAB466

Ver.1.0

CANARE ELECTRIC CO., LTD

1. **Scope** This product specification covers the performance of CANARE 75 Ω multi-pin coaxial connector.

2. General specifications

- (1) **Product name** 75 Ω multi-pin coaxial connector
- (2) **Model name** MDM-V4C25HW
- (3) **Nominal impedance** 75 Ω unbalanced
- (4) **Applicable standard** IEC 61169-29, DIN 47 297
- (5) **Construction** As shown in the drawing (BL466).
- (6) **Weight** Approx 52.8g
- (7) **Crimp tool** Frame: TC-1, Die: TCD-D253F
- (8) **Packaging** 1pc/package (150mm×50mm×45mm)

3. Ratings

- (1) **Operating temperature** -30 $^{\circ}\text{C}$ ~ +85 $^{\circ}\text{C}$
- (2) **Operating humidity** ~ 95%
- (3) **Storage temperature** -50 $^{\circ}\text{C}$ ~ +85 $^{\circ}\text{C}$

4. Characteristics

4.1 Electrical characteristics As shown in Table 1

Table 1

Items	Specified values	Procedure
Insulation resistance	1000M Ω minimum.	Measurement shall be made between the contacts, after an electrification time of 1 minute with a d.c. voltage of 500V.
Voltage proof	Without any damage such as electric breakdown etc.	750V a.c. shall be applied for 1 minute between the contacts. Trip current: 0.5mA.
Contact resistance	1. Between external contacts: 10m Ω maximum. 2. Between center contacts: 10m Ω maximum.	Measurement shall be made between the contacts with engaging a connector (1kHz:1mA a.c.).
Return loss	20dB or better.	An applied cable shall be attached to the plug, then it shall be terminated with 75 Ω . The measurement frequency up to 3GHz.

4.2 Mechanical characteristics As shown in Table 2

Table 2

Items	Specified values	Procedure
Intermatability	To be engaged without any abnormality.	An applicable connector shall be engaging.
Strength of coupling mechanism	1. Appearance: No damage. 2. No deformation shall be made.	Subject engaging sample to 105N of axial tensile force for 1 minute.
Cable connecting force	300N minimum.	An applied cable shall be attached to the plug, after which tensile strength shall be applied.
Mechanical endurance	Contact resistance: 2 times of the initial value maximum.	The endurance test consists of repeated engaging and separation of connector pairs. The number of operations shall be 1,500 cycles.
Vibration	1. Appearance: No damage. 2. No instantaneous disconnection for equal or longer than 1 μs .	Each terminal shall be connected in series and then 0.1A d.c. shall be applied. Only endurance conditioning by a frequency sweep shall be made. The entire frequency range, from 10Hz to 500Hz and return to 10Hz, shall be transversed in 1min. Amplitude (zero to peak): 0.75mm (or 98m/s ²). This motion shall be applied for a period of 10 cycles in each of 3 mutually perpendicular axis.
Shock	1. Appearance: No damage. 2. No instantaneous disconnection for equal or longer than 1 μs .	Each terminal shall be connected in series and then 0.1A d.c. shall be applied. Three successive shocks shall be applied in both direction of 3 mutually perpendicular axis (a total of 18 shocks).
Free fall	Appearance: No damage.	As per JIS C5402. Height: 1.5 meters. No of time: 4 axes, 3 times each.

4.3 Environmental characteristics As shown in **Table 3**

Items	Specified values	Procedure
Corrosion resistance (Salt mist)	1. Appearance: Noticeable no corrosion. 2. Contact resistance: 50mΩ maximum.	The connector shall be subjected continuously to a fine mist of salt solution at a temperature of 35±2 °C for 48 hours (Salt solution concentration: 5±1% by weight). Then it shall be subjected to standard atmospheric conditions.
Cold	1. Appearance: Normal condition. 2. Contact resistance: 2 times of the initial value maximum. 3. Voltage proof: No physical damage.	The connector shall be stored at temperature of -30±3 °C for 96 hours.
Dry heat	1. Appearance: Normal condition. 2. Contact resistance: 2 times of the initial value maximum. 3. Voltage proof: No physical damage.	The connector shall be stored at temperature of +85±3 °C for 96 hours.
Damp heat	1. Appearance: Normal condition. 2. Contact resistance: 2 times of the initial value maximum. 3. Voltage proof: No physical damage.	The connector shall be stored at temperature of 40±3 °C with relative humidity of 90% to 95% for 96 hours.
Change of temperature	1. Appearance: Normal condition. 2. Contact resistance: 2 times of the initial value maximum. 3. Voltage proof: No physical damage.	Performs 10 cycles of changing temperature. (-30 °C as low temperature for 30 minutes → +85 °C as low temperature for 30 minutes) Moving the sample from low to high temperature should be done in a few minutes.

5. Measurement conditions Unless otherwise specified, the standard range of atmospheric conditions for making measurements and tests are as follows: Ambient temperature (15 °C to 35 °C), Relative humidity (25% to 75%), Air pressure (86kPa to 106kPa). If there is any doubt about the results, measurements shall be made within the following limits: Ambient temperature (20±1 °C), Relative humidity (63% to 67%), Air pressure (86kPa to 106kPa).