

YPES-11-05-047

C タイプ コネクタ
製品規格

PRODUCT STANDARD
FOR
C TYPE CONNECTOR

本製品規格は、発行先に対し連絡無しに
改訂する場合がありますので、御了承下さい。

矢崎総業株式会社
矢崎部品株式会社
改訂年月日 2014年05月06日

1. 適用範囲

本規格は、自動車の低圧回路に使用するCタイプコネクタについて規定する。

2. 種類、部品符号、品番及び適用電線サイズ。

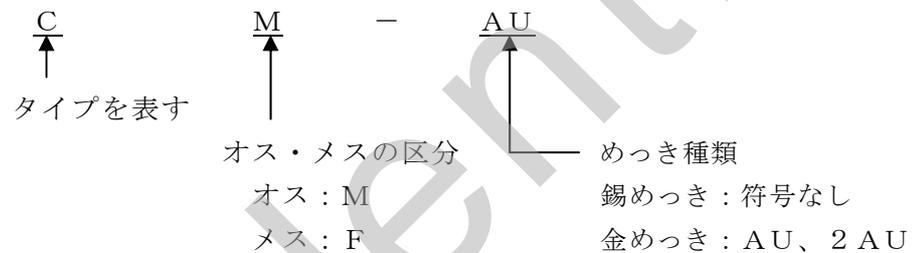
別紙－1，－2品番一覧表参照。

3. 用語の説明

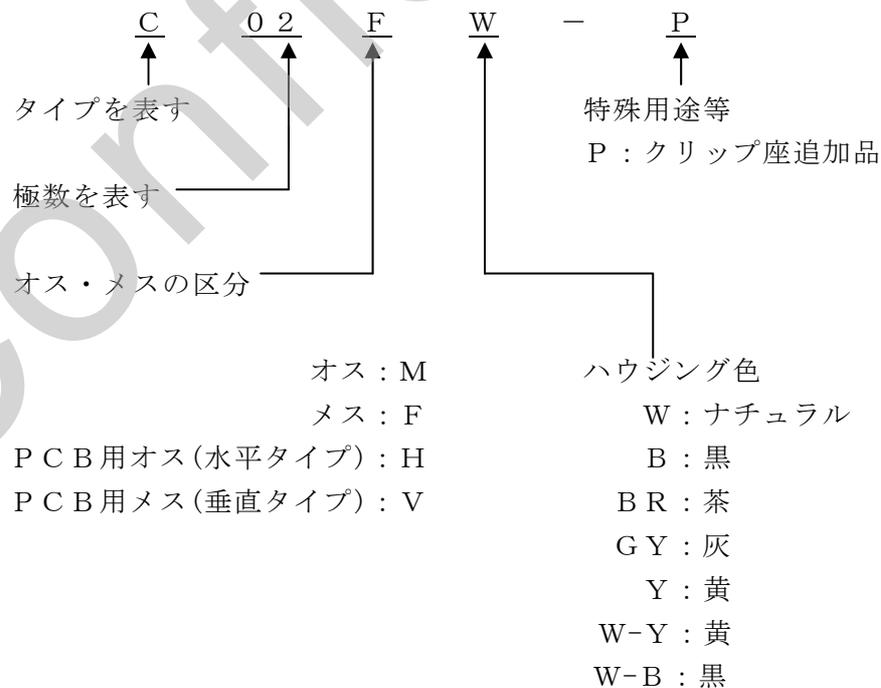
用語の意味は、この規格に付随する解説書(別紙－3「Cタイプコネクタ」の解説を参照)及び「Cコネクタ取扱説明書(Y P E S－1 5－0 2 4)」を参照の事。

4. 符号の説明

例－1) ターミナル



例－2)ハウジング



5. 構造及び材質

構造及び材質は、各部品図面の通りとする。

6. 取扱いについて

Cタイプコネクタ取扱説明書（Y P E S - 1 5 - 0 2 4）参照の事。

7. 品質及び性能

コネクタの品質及び性能は、第8項に定める試験を行った時、表-1、2の通りとする。

尚、特に指定のない場合、常温は $20 \pm 5^{\circ}\text{C}$ 、常湿は $65 \pm 20\%$ とする。

基本性能

表-1

No.	項 目	性 能	試験方法
7-1	外 観	有害な亀裂、ガタ、キズ、変形等なき事。	8-1
7-2	電圧降下	初期 : 15mV/A 以下 耐久試験後 : 15mV/A 以下	8-2
7-3	端子離脱力	錫めっき : $1.47 \sim 5.39\text{N}$ 金めっき : $1.47 \sim 6.37\text{N}$	8-3
7-4	電線固着力	表-3による	8-4
7-5	漏洩電流	初期 : $10\mu\text{A}$ 以下	8-5
7-6	絶縁抵抗	初期 : $100\text{M}\Omega$ 以上	8-6
7-7	耐電圧	AC 1000V 1分間の印加に耐える事。	8-7
7-8	温度上昇	初期 35°C 以下、 使用時雰囲気温度： 60°C 以下	8-8
7-9	コネクタ挿入離脱力	表-4参照	8-9
7-10	ロック強度	98N 以上	8-10
7-11	端子保持力	98N 以上	8-11
7-12	パネルロック強度	78.4N 以上	8-12

耐久環境性能

表-2

No.	項目	性能	試験方法
7-13	耐熱性	7-2を満足する。	8-13, 8-2

表-3

端子に固着された電線のサイズ		
0.3 mm ²	0.5 mm ²	0.85 mm ²
58.8 N以上	88.2 N以上	127 N以上

表-4

コネクタ	挿入力	離脱力	備考
2P	34.3 N 以下	挿入力と同じ	慣性ロック
3P	39.2 N 以下	〃	〃
4P	44.1 N 以下	〃	〃
6P	58.8 N 以下	〃	〃
8P	68.6 N 以下	〃	〃
10P	83.3 N 以下	〃	〃
12P	98.0 N 以下	〃	――
16P	118.0 N 以下	〃	――

8. 試験及び測定方法

8-1) 外観

目視及び触感により行う。

8-2) 電圧降下

コネクタ又は端子のオス・メスを嵌合した状態で第5表による電圧・電流にて通電し、圧着部より、各200mm離れた点で電圧降下量が安定した後電圧降下を測定し、(図-1のY-Y間) 400mmの電線抵抗分を差し引いて接触抵抗分を算出する。

表-5

順 序	適 用	開放電圧	短絡電流
1	微小電流回路	50mV以下	100 μ A

0.3mm ²	50.2m Ω /m	0.5mm ²	32.7m Ω /m
0.85mm ²	20.8m Ω /m		

・電線サイズと電気抵抗値

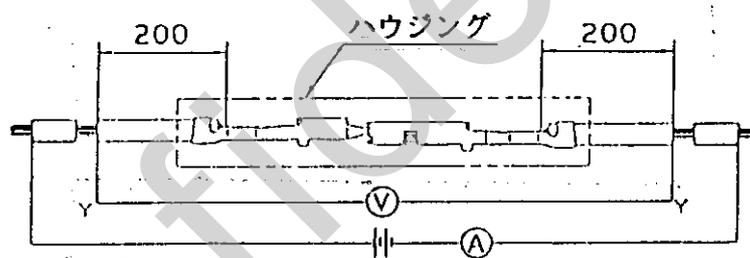


図-1

8-3) 端子離脱力

オス端子をメス端子に正規の嵌合位置まで挿入し、毎分20mmの速度で離脱し初回の離脱力を測定する。さらに10回挿入離脱を行い、同様の測定をする。

8-4) 電線固着力

電線を固着した端子を固定し、圧着部から50~100mmの位置より、電線を軸方向に毎分約200mmの速度で引張り、電線の破断又は圧着部から電線の引抜けたときの荷重を測定する。

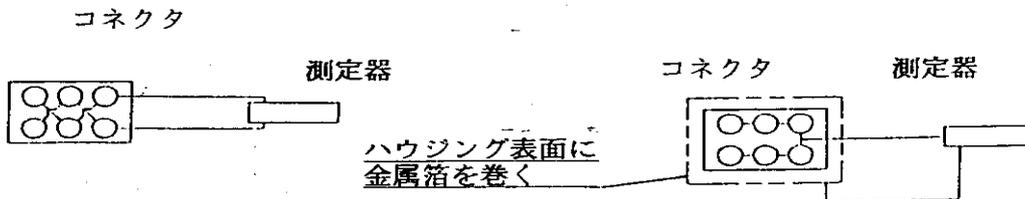
8-5) 漏洩電流

コネクタを嵌合した状態で、 $60 \pm 5^\circ\text{C}$ 、湿度90~95%の恒温恒湿槽内に1時間放置後、槽内に放置のまま、速やかに、隣接する端子相互間に

DC $13 \pm 1_0$ Vを加え、漏洩電流を測定する。

8-6) 絶縁抵抗

コネクタを嵌合した状態で隣接する端子相互間、及び端子とハウジング間(表面)を DC 500V の絶縁抵抗計で、絶縁抵抗を測定する。



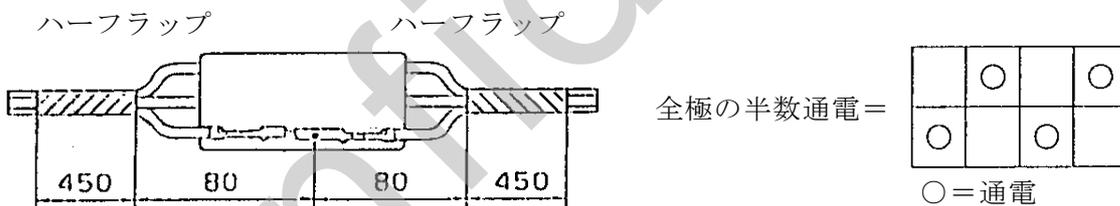
8-7) 耐電圧

コネクタを嵌合した状態で、隣接する端子相互間、及び端子とハウジング間(表面)に商用周波数の交流電圧 1000V を 1 分間加える。

8-8) 温度上昇

全極の半分を直列に接続したコネクタを無風室にて下記の電流を通電し、飽和温度に達した後、接触部付近の端子表面の温度を測定する。雰囲気温度は、60℃とする。電線サイズは下記とする。

下記の如く配線する事



形式	C
電流 (A)	6
電線サイズ (mm ²)	AVS 0.5

8-9) コネクタ挿入離脱力

端子を組み込んだハウジング、オス、メスを毎分約 20mm 速度で挿入力及び離脱力を測定する。ハウジングロック機構は、挿入の際は作用させ、離脱の際は作用させずに行なう。挿入力測定時、ハウジングをホールドせずフリーの状態ですらう方向に挿入する。

8-10) ロック強度

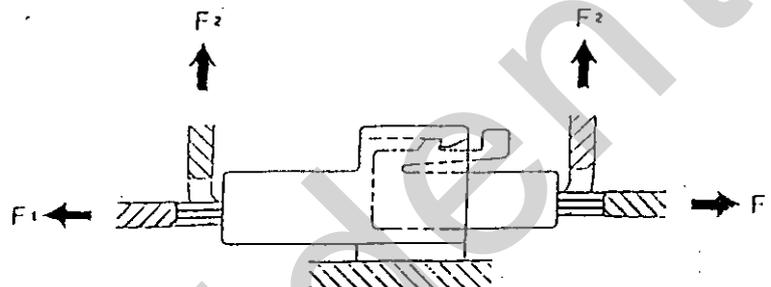
コネクタハウジングのオス、メスを嵌合し、ハウジングロックが作用した状態でハウジングの一方を固定し他方を軸方向に毎分約20mmの一定速度で引張り、ロック機構が離脱、又は破壊したときの荷重を測定する。

8-11) 端子保持力

ハウジングに電線を圧着した端子を組込み、ハウジングを固定し、圧着部より50～100mm位置より、電線を軸方向へ毎分約200mmの一定速度で引張り、端子がハウジングから引抜けた時の荷重を測定する。

8-12) パネルロック強度

端子が全極組込まれたコネクタをオス・メスを嵌合し、ケースホルダーに固定し、電線が軸方向及び 90° 傾いた方向に毎分約20mmの速度で引張り、コネクタが離脱又は、破壊したときの荷重を測定する。



8-13) 耐熱性

コネクタを嵌合した状態で 100°C に保たれた恒温槽の中に120時間放置し、その後取出して、常温に戻るまで放置する。

1) ターミナル

区分	符号	品番	適用電線サイズ	備考
オス端子	CM	7114-1300	AVS, CAVS 0.3	TIN
		7114-1301	AVS, CAVS 0.5 ~ 0.85	PLATING
	CM-AU	7114-1300-08	AVS, CAVS 0.3	GOLD
		7114-1301-08	AVS, CAVS 0.5 ~ 0.85	PLATING
	CM-2AU	7114-1601	AVX 0.5	GOLD
		7114-1602-08	CAVS 0.5 ~ 0.85	PLATING
メス端子	CF	7116-1300	AVS, CAVS 0.3	TIN
		7116-1301	AVS, CAVS 0.5 ~ 0.85	PLATING
	CF-AU	7116-1300-08	AVS, CAVS 0.3	GOLD
		7116-1301-08	AVS, CAVS 0.5 ~ 0.85	PLATING
	CF-2AU	7116-1601	AVX 0.5	GOLD
		7116-1602-08	CAVS 0.5 ~ 0.85	PLATING

Nonfidential

2) ハウジング (リアホルダ一体式)

オスハウジング		メスハウジング	
符 号	品 番	符 号	品 番
C02MW	7122-7820	C02FW	7123-7820
		C02FW-B	7123-7820-30
C02MB	7122-7821-30	C02FB	7123-7821-30
-	-	C02FBR	7123-7822-80
C03MW	7122-7830	C03FW	7123-7830
C04MW	7122-7840	C04FW	7123-7840
C04MW-Y	7122-7843-70		
C04MB	7122-7841-30	C04FB	7123-7841-30
C04MBR	7122-7842-80	C04FBR	7123-7842-80
C06MW	7122-7860	C06FW	7123-7860
C06MW-Y	7122-7860-70		
C06MB	7122-7861-30	C06FB	7123-7861-30
C06MBR	7122-7862-80	C06FBR	7123-7862-80
C08MW	7122-7880	C08FW	7123-7880
		C08FW(黒)	7123-7880-30
		C08FW(茶)	7123-7880-80
C10MW	7122-7900	C10FW	7123-7900
C12MW	7122-7920	C12FW	7123-7920
C12MW-Y	7122-7920-70		
C12MB	7122-7921-30	C12FB	7123-7921-30
C14MGY	7122-7943-40	C14FGY-P	7223-7943-40
C16MW	7122-7960	C16FW	7123-7960
C16MW-Y	7122-7960-70		
C16MB	7122-7961-30	C16FB	7123-7961-30
C16MBR	7122-7962-80	C16FBR	7123-7962-80
C06HW	7322-7864	C06FW	7123-7860
C16HW	7322-7969	C16FW	7123-7960
C16HBR	7322-7967-80	C16FBR	7123-7962-80
C16HB	7322-7968-30	C16FB	7123-7961-30
C16VW	7322-7966	C16FW	7123-7960

「Cタイプコネクタ」の解説

1. 用語の意味

1) Cタイプコネクタ

微小電流回路用コネクタで、タブサイズ t 0.6 × W 1.5 を使用するコネクタ。

2) ターミナル

ターミナルとは、単体あるいはコネクタの構成部品として使用する電氣的接触片をいう。

3)ハウジング

ハウジングとは、コネクタの構成部品として使用し、ターミナルを収容するものをいう。

4) リアホルダ

リアホルダは、ターミナルをハウジングに挿入した後に、ハウジング側面より挿入し、ターミナル不完全挿入を無くすために考案された部品で、プラスチックアームとリアホルダで、ターミナルがハウジングへ二重係止されることで、ターミナル保持力の強化になる。又、本リアホルダは本体と一体成形されたものである。

5) コネクタ

コネクタとは、ハウジングにターミナルとアッセンブリーしたものをいう。

2. 特長

本コネクタの設計で採用した、新機構・特長について、概略を説明する。尚、詳細は、「Cタイプコネクタ取扱説明書（Y P E S - 1 5 - 0 2 4）」を参照のこと。

1) ロック装置

本コネクタは、慣性ロックを採用している（12、16Pは除く）。

「慣性ロック方式」

雌雄コネクタを嵌合するとき、ロックの反発力が、雄ターミナルと雌ターミナルが接触する直前に零となり、作業者の力は、慣性力となってそのままターミナル挿入力に代わり、コネクタの完全嵌合が得られる。不完全嵌合状態では雌雄コネクタが離反、逸脱するように設計することによって、逆に作業者の完全嵌合操作を促すと共に、完全嵌合状態ではじめてロックされるようにすることにより、嵌合状態を係止確保し、常に完全な電氣的接続を図ることが目的である。

2) ターミナル二重係止機構（リアホルダ方式）

1-4)にも説明したが、ハウジングにターミナルを挿入した後、ハウジング側面からリアホルダを装着する事により、ターミナルの不完全挿入を無くし、確実な係止を得ることがこの方式の目的である。プラスチックアームとリアホルダによってターミナルが係止されるので、ターミナルの保持力強化にもなる。

YPES-11-05-047
~~VPSS-3170-119~~

CONFIDENTIAL
PRODUCT STANDARD
FOR
C TYPE CONNECTOR

Confidential

YAZAKI CORPORATION
CONNECTOR DEVELOPMENT OFFICE

	92-10-27	NEW
LET	DATE	REVISION



APPROVED	CHECKED	PREPARED
A. Eto	Thomas	C. Bryant

1. SCOPE OF APPLICATION

This standard specifies the requirements for C type connector to be used for the low pressure circuit of vehicles.

2. TYPE, PART SYMBOL, PART NO. AND APPLICABLE WIRE SIZE

According to table-1, 2 and 3.

1) Terminal

Table-1

CLASSIFICATION	SYMBOL	PART NO.	WIRE SIZE
MALE	CM	7114-1300	AVS, CAVS 0.3
		-1301	0.5-0.85
FEMALE	CF	7116-1300	AVS, CAVS 0.3
		-1301	0.5-0.85

2) Housing (with rear holder)

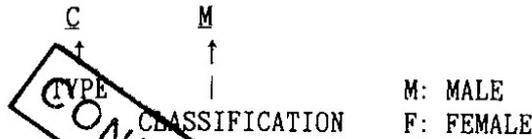
Table-2

MALE HOUSING		FEMALE HOUSING	
SYMBOL	PART NO.	SYMBOL	PART NO.
CO2MW	7122-7820	CO2FW	7123-7820
CO2MB	7122-7821-30	CO2FB	7123-7821-30
CO3MW	7122-7830	CO3FW	7123-7830
CO4MW	7122-7840	CO4FW	7123-7840
CO4MB	7122-7841-30	CO4FB	7123-7841-30
CO4MBR	7122-7842-80	CO4FBR	7123-7842-80
CO6MB	7122-7861-30	CO6FB	7123-7861-30
CO6MBR	7122-7862-80	CO6FBR	7123-7862-89
CO8MW	7122-7880	CO8FW	7123-7880
C10MW	7122-7900	C10FW	7123-7900
C12MW	7122-7920	C12FW	7123-7920
C12MB	7122-7921-30	C12FB	7123-7921-30
C16MW	7122-7960	C16FW	7123-7960
C16MB	7122-7961-30	C16FB	7123-7961-30
C16MBR	7122-7962-80	C16FBR	7123-7962-80
C16HW	7322-7969	C16FW	7123-7960
CO6HW	7322-7864	CO6FW	7123-7860
C16HBR	7322-7967-80	C16FBR	7123-7962-80
C16VW	7322-7966	C16FW	7123-7960

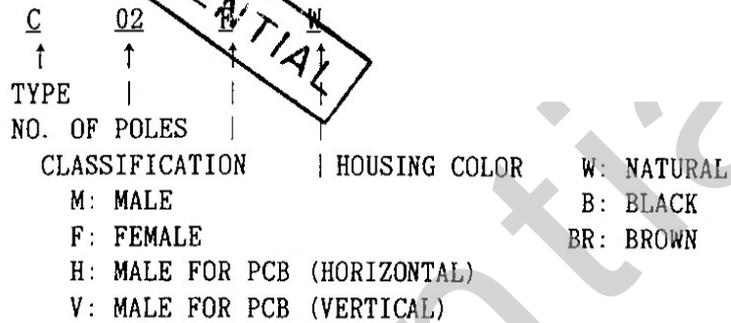
As for the terms, refer to the explanation attached to this standard or "Handling Manual for C Type Connector".

4. SYMBOL

EX. -1) Terminal



-2) Housing



5. STRUCTURE AND MATERIAL

The structure and material shall be as specified in the individual component drawings.

6. HANDLING

Refer to "Handling Manual for C Type Connector"

7. QUALITY AND PERFORMANCE

Quality and performance shall be as specified in Table-3 when tested in accordance with Item 8.

Basic performance Table-3

No.	Item	Performance	Method
7-1	Appearance	Free from detrimental cracks, loose parts, scratches, deformation, discoloration, etc.	8-1
7-2	Voltage Drop	Initial : 5mV/A or less After Test : 10mV/A or less	8-2
7-3	Terminal Removal Force	Initial : 3.43~6.37N (0.35~0.65kgf) After 10 times or test : 1.96~5.39N (0.20~0.55kgf)	8-3
7-4	Wire Retention Force	In accordance with Table-4	8-4
7-5	Leak Current	Initial : 10 μA or less After test : 10mA or less	8-5
7-6	Insulation Resistance	Initial : 100MΩ and over After test : 1MΩ and over	8-6
7-7	Dielectric Strength	To endure AC500V for 1 minute	8-7

NO.	Item	Performance	Method
7-8	Temperature Rise	Initial: 35°C or less After test: 40°C or less Temperature : 60°C or less	8-8
7-9	Connector Insertion & Removal force	See Table-5	8-9
7-10	Lock Strength	98N (10 kgf) and over	8-10
7-11	Terminal Retention Force	98N (10 kgf) and over Housing lance & rear holder only 49N (5kgf) and over	8-11
7-12	Panel Lock Strength	78.4N (8kgf) and over	8-12

Environmental Durability

No.	Item	Performance	Method
7-13	Vibration Resistance	10 microseconds. An occurrence of electric discontinuity of more than 1V of voltage drop shall not be observed. 7-1, 7-2 and 7-4 shall be satisfied.	8-13, 8-1 8-2, 8-4
7-14	Shock Resistance	10 microseconds. An occurrence of electric discontinuity of more than 1V of voltage drop shall not be observed. 7-2 shall be satisfied.	8-14, 8-2
7-15	Current Cycling	7-2, 7-4, 7-8 and 7-11 shall be satisfied.	8-15, 8-11, 8-2 8-4, 8-8
7-16	Fuse Matching	The housing shall not melt and the connector shall not be flashed.	8-16
7-17	Heat Resistance	7-2, 7-4 and 7-11 shall be satisfied.	8-17, 8-2, 8-11 8-4
7-18	Cold Resistance	7-2, 7-4 and 7-11 shall be satisfied.	8-18, 8-2, 8-11 8-4
7-19	Dust Resistance	7-2 shall be satisfied.	8-19, 8-2
7-20	Water Resistance	7-2, 7-5 and 7-6 shall be satisfied.	8-20, 8-2
7-21	Oil Resistance	7-2 shall be satisfied.	8-21, 8-2
7-22	Sulfurous Acid Resistance	7-2 shall be satisfied.	8-22, 8-2

Table-4

Wire Size Crimped to Terminal		
0.3SQ	0.5SQ	0.85SQ
58N (6kgf) and over	88.2N (9kgf) and over	127.4N (13kgf) and over

Table-5

Connector	Insertion Force	Removal Force
2P	34.3N (3.5kgf) or less	same as insertion force
3P	39.2N (4 kgf) or less	"
4P	44.1N (4.5kgf) or less	"
6P	58.8N (6 kgf) or less	"
8P	68.6N (7 kgf) or less	"
10P	78.4N (8 kgf) or less	"
12P	78.4N (8 kgf) or less	"
16P	98 N (10 kgf) or less	"

8-1) Appearance

Inspect visually or by touching.

8-2) Voltage Drop

With a male and a female terminals or terminals coupled, the following voltage drop shall be measured by applying the following voltage and current through the circuit. The measurement shall be made between the points which are 200mm apart from the wire crimp when the voltage drop has been stabilized. From the measured reading, the wire resistance over 400mm (between Y-Y in Fig.1) shall be deducted to obtain the contact resistance.

Order	Application	Open Circuit Voltage	Short Circuit voltage
1	Normal Current Circuit	$13 \pm \frac{1}{0} V$	1A
2	Max. Current Circuit	$13 \pm \frac{1}{0} V$	As specified in 8-8
3	Low Current Circuit	$13 \pm \frac{1}{0} V$	10mA

0.2mm ²	88.7mΩ/m	0.5mm ²	32.5mΩ/m
0.3mm ²	49.2mΩ/m	0.85mm ²	20.5mΩ/m

· Wire size and electric resistance

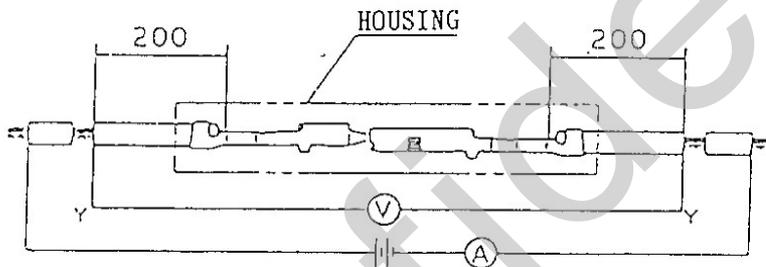


Fig.-1

8-3) Terminal Removal Force

With the male and female terminals coupled, the removal force shall be measured by extracting half of the mated parts at a speed of 200mm a minute. Then, the same measurement shall be made after 10 times of insertion and removal.

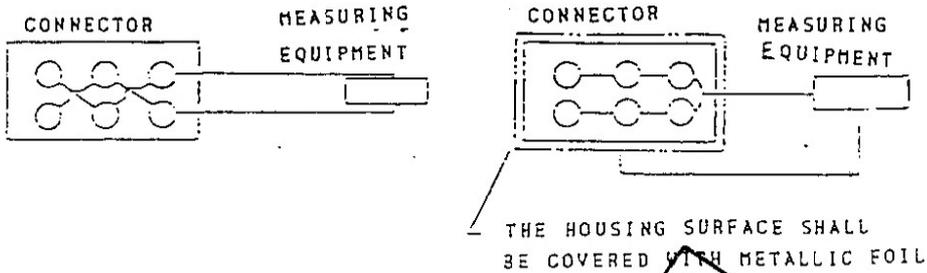
8-4) Wire Retention Force

The wire retention force shall be measured by pulling the wire at a point which is 50-100mm apart from the fixed wire-crimped terminal in the axial direction at the speed of 200mm a minute. The load shall be measured when the wire is broken or pulled out.

8-5) Leak Current

With the connector coupled, the leak current shall be measured between adjacent terminals under the voltage of DC $13 \pm \frac{1}{0} V$, after being exposed for 1 hour under the temp-humidity test condition. The test chamber shall be kept at $60 \pm 5^\circ C$ and the relative humidity of 90-95% is maintained.

With the connectors coupled, the insulation resistance shall be measured by applying the test potential of DC 500 V between the adjacent terminals, and surfaces of terminals and housings.



8-7) Dielectric Strength

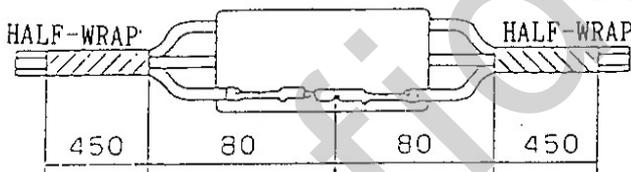
With the connectors coupled, the dielectric strength shall be measured by applying AC 500 V of commercial frequency between the adjacent terminals and between terminals and housings (surface) for 1 minute.

8-8) Temperature Rise

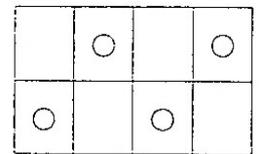
With the half of the poles connected in series, the connectors shall be energized with the following current and then the temperature at the surface near the terminal contact shall be measured when the temperature is stabilized. For current and the wire size, see below. The ambient temperature shall be 60°C.

* Tests shall be carried out in a draft free chamber.

Wiring



Current is passed through half of the terminals



○ = Passing through current

Type	C
Current (A)	6
Wire Size (mm ²)	AVS 0.5

8-9) Connector Insertion and Removal Force

The insertion and removal force shall be measured by connecting and disconnecting a mating pair of connector assemblies at a rate of 20mm per minute. The insertion force shall be measured with the locking device set in effect and the removal force shall be measured without. The housings shall be inserted in the direction of mating axis without being held.

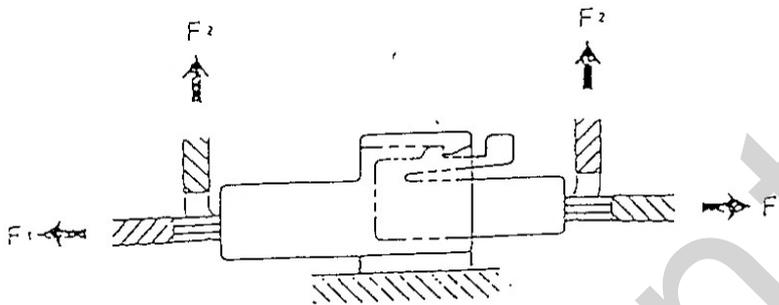
8-10) Locking Strength

With male and female connector housings coupled and the locking device set in effect, half of the mated parts shall be securely held and an axial pull force shall be applied at a rate of 200mm per minute. The load shall be measured when the locking device is unmated or broken.

Wire crimped terminals shall be assembled in the housings, and the housings shall be fixed. The terminal retention force shall be measured by applying an axial pull-off load to the point which is 50-100mm away from the crimp at 200mm a minute. The load shall be when the terminal is pulled out from the housing. The wire size shall be 0.85mm^2 .

8-12) Panel Locking Strength

Male and female connectors with terminals inserted in all poles shall be mated. Set the mated connectors on the case holder, and pull it in the axial direction and in the direction at an angle of 90° at 200mm a minute. Measure the load when the connectors are removed or broken.



8-13) Vibration Resistance

The connectors with half the poles connected in series shall be mounted on the vibration table and shall be vibrated while applying an open circuit voltage of $13 \pm 1\text{V}$, and the current (*) below. During vibration, the circuit shall be monitored for electric discontinuity of more than 10 microseconds.

(*) For the first 4 hours : 10mA See 8-8 for the second 4 hours.

- a) The wire shall be set as shown in Fig.2 at such a height that the test specimen does not touch the vibration table. The distance between the clamps shall be approx. 300mm to make the wire taut. It shall be vibrated for 8 hours with a vibration acceleration of 6.8G and a vibration frequency between 20 and 100Hz. Cycle duration is 8 minutes.

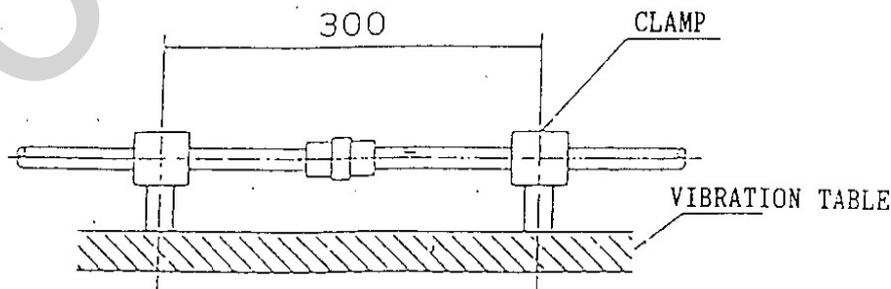
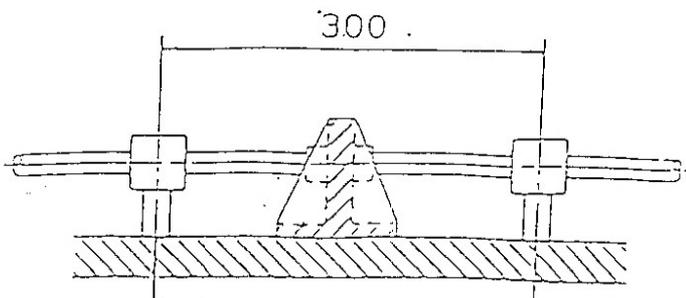


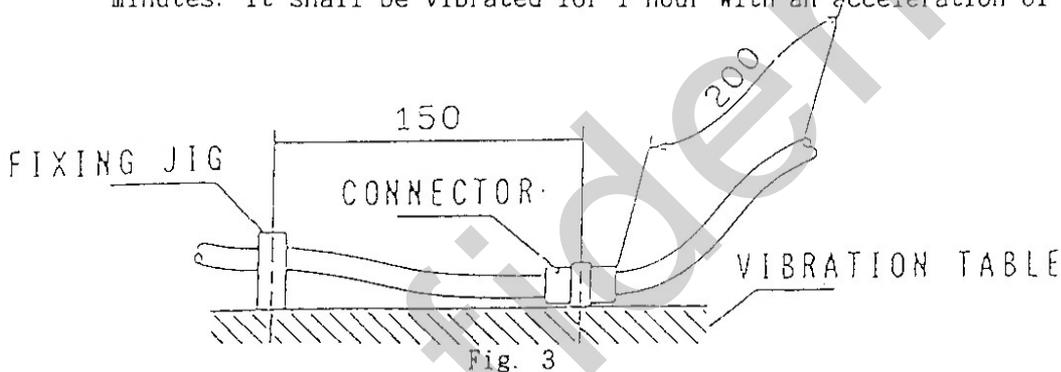
Fig.2

- b) As shown below, set the connector at a height at which the wire will not touch the vibration table as a result of the motion. The vibration shall change between 3000 and 12000 cpm (50~200Hz) continuously for 8 minutes. It shall be vibrated towards up and down, back and front, and left and right directions for 2 hours each. (Panel lock type connectors shall be tested in a condition that they are fixed on panels)



8-14) Impact Resistance

- a) As shown in Fig.3, fix the connector on a vibration table at a height that the connector touches the vibration table all the time, however it is not restrained. The vibration shall change between 600 and 3000 cpm (10~50Hz) continuously in 8 minutes. It shall be vibrated for 1 hour with an acceleration of 6.8G (66.6m/s²)



- b) While applying the open current 13 ± 0 V and the short current 10mA to the connector with all poles connected in series, apply impact to it in the up and down direction for 1 hour. See if there is an electrical discontinuity of more than 10 μ second.

8-15) Current Cycling Resistance

The mated connectors with half of the poles connected in series shall be passed through current at the ambient temperature of 60°C with the current α (see below) ; each cycle consists of passing through current for 45 minutes and stopping for 15 minutes. Do 1000 cycles.

Current α and wire size = Value shown in 8-8 Temperature Rise

8-16) Fuse Matching

The current 11A shall be applied to the half of the poles of the connector for 24 hours and the current 14A for 1 hour. Wire size shall be AVS0.5. Ambient temperature shall be 60°C.

8-17) Heat Resistance

The mated connector shall be left in the test chamber kept at 100°C for 24 hours. It shall be taken out and allowed to cool down to a room temperature.

The mated connector shall be left in the test chamber kept at $-40 \pm 10^{\circ}\text{C}$ for 24 hours.

8-19) Dust Resistance

The mated connector shall be exposed in the enclosed tank with dimensions of 1m cubed, 150mm away from the walls. 1.5kg of Portland cement (JIS R 5210) shall be blown by compressed air while dispersed by a fan for 10 seconds with a 15 minute suspension interval for a total of 1 hour. It shall then be taken out and disconnected and connected three times.

8-20) Water Resistance

JIS D 0203 (R2) shall be satisfied.

8-21) Oil Resistance

- a) The mated connector shall be immersed in an equal mixture of engine oil (SAE 10W or equivalent) and kerosene (JIS K 2203-2) at $50 \pm 2^{\circ}\text{C}$ for 2 hours. It shall then be taken out and allowed to cool down at a room temperature.
 - b) The mated connectors shall be immersed in gasoline for vehicles (JIS K 2202) at a room temperature for 10 minutes. It shall then be taken out.
- Tests a and b shall be carried out separately.

8-22) Sulfurous Acid Gas Resistance

The mated connector shall be exposed to sulfurous acid gas at a room temperature, concentration of 500ppm and humidity of 90% for 8 hours. The measurement shall be made immediately after it is taken out of the chamber.

1. Definition of Terminology

1) C Type Connector

The connector is for micro current circuits and uses tab size, $t 0.6 \times W 1.5$.

2) Terminal

A terminal is a point of connection on an electric circuit and is used independently or as a component part of a connector.

3) Housing

A housing accommodates a terminal and is used as a component part of a connector.

4) Rear Holder

A rear holder is a part that has been invented for prevention of terminal incomplete matings. It is to be inserted from the housing side after a terminal insertion into a housing. By locking a terminal doubly with a plastic arm and a rear holder, the terminal retention force is reinforced. This rear holder is molded with a housing.

5) Connector

A connector is an assembly of a housing and a terminal.

2. Specific features

Below is an explanation of new systems or features employed in the designing of this connector. For more detail, see "Handling Manual for C Type Connector".

1) Locking device

This connector employs an inertial locking system.

< Inertial locking system >

When mating male and female connectors, a repulsive force of locking becomes zero just before male and female terminals contact. A force of the operator becomes an inertial locking force which becomes a terminal insertion force consequently, and therefore, the connectors can be mated completely. In a situation such as imcompleted mating, male and female connectors have been designed to repulse and this encourage the operator to complete mating. Besides that, locking will not be done until the mating is completed. The purpose of the inertial locking system is to lock and keep a mating condition and constantly keep a good electrical contact.

2) Terminal Double Locking System (Rear Holder)

As explained in 1-4), the purpose of this system is to eliminate terminal incomplete matings by fixing a rear holder from a housing side after a terminal insertion into a housing. As a plastic arm and a rear holder lock a terminal doubly, the terminal retention force is reinforced.