

2.3Ⅱ(090Ⅱ), 4.8(187), 8.0(312)
防水コネクタ(ターミナル)
＜高信頼性ゴム栓版＞取扱説明書

Handling Manual For
2.3Ⅱ(090Ⅱ), 4.8(187), 8.0(312) Sealed Connector
(Terminal)＜High Reliability Wire Seal Ver.＞

注)

本取扱説明書は、発行先に対し連絡無しに改訂する場合がありますので
必要時には最新版を御依頼願います。

矢崎総業株式会社
矢崎部品株式会社
2020年09月02日

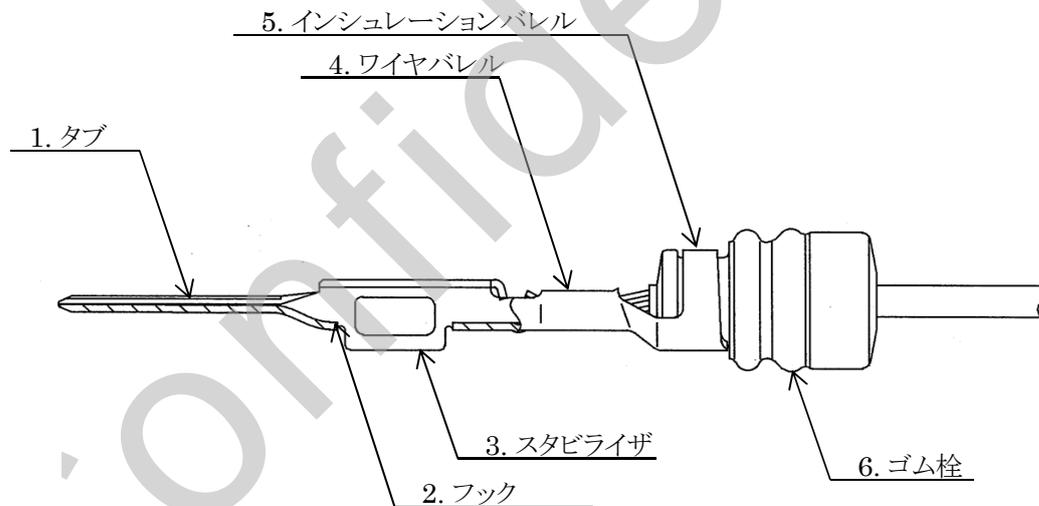
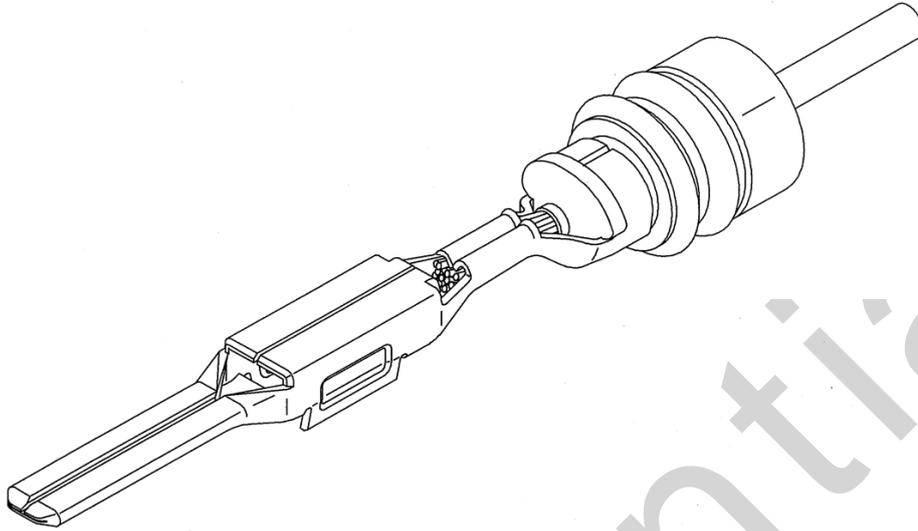
この度は、弊社コネクタを採用頂き有難うございます。
本説明書は、本製品をご使用頂く上で最低限必要な項目を記載したものです。
取扱の際には、本記載内容を遵守下さい。
弊社は本内容を遵守しないで起こった損害または誤使用により起こった
損害に対しては責任を負いません。

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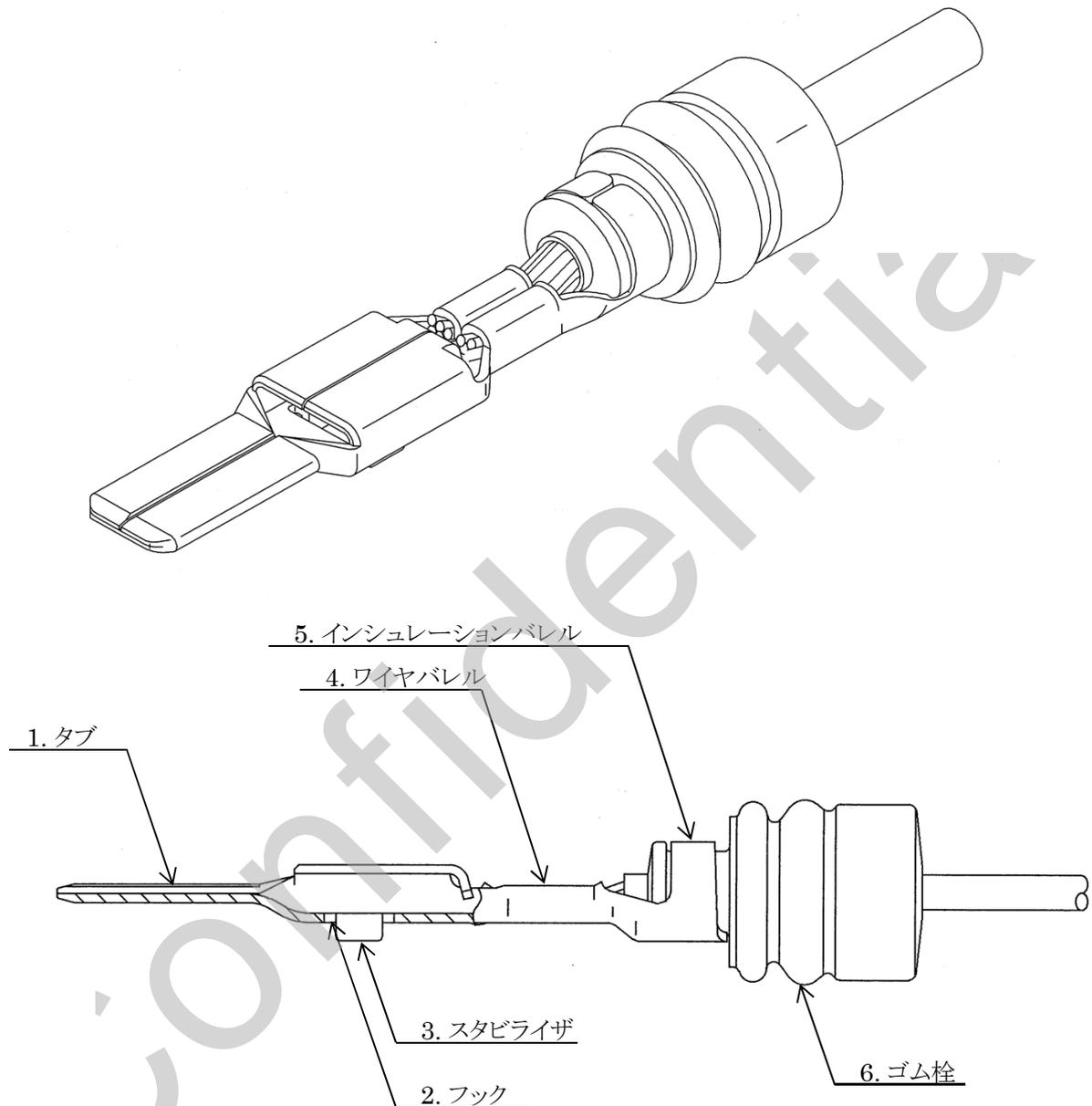
1. 部品形状と機能

1-1. オス端子 (2.3 II (090 II))



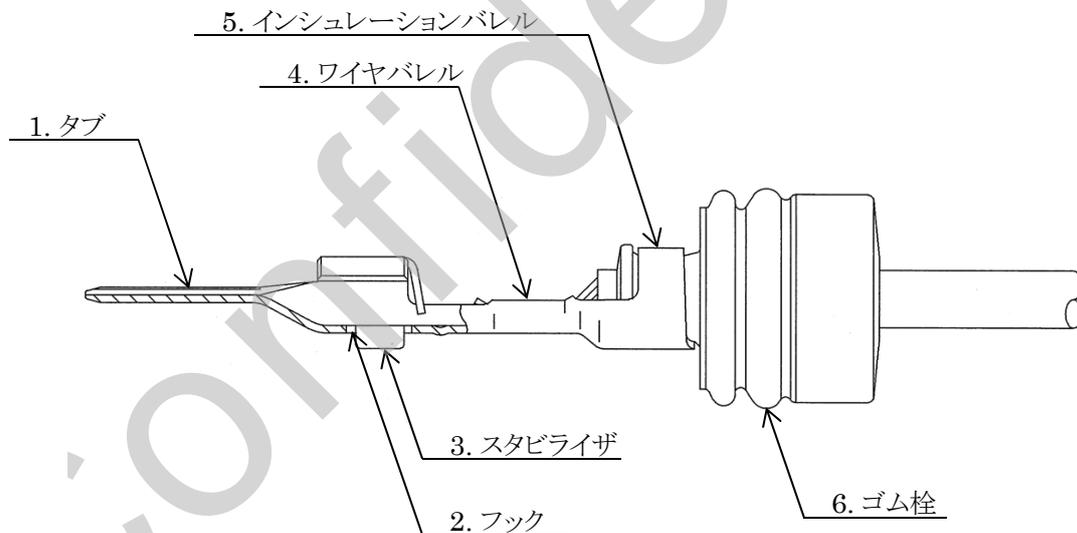
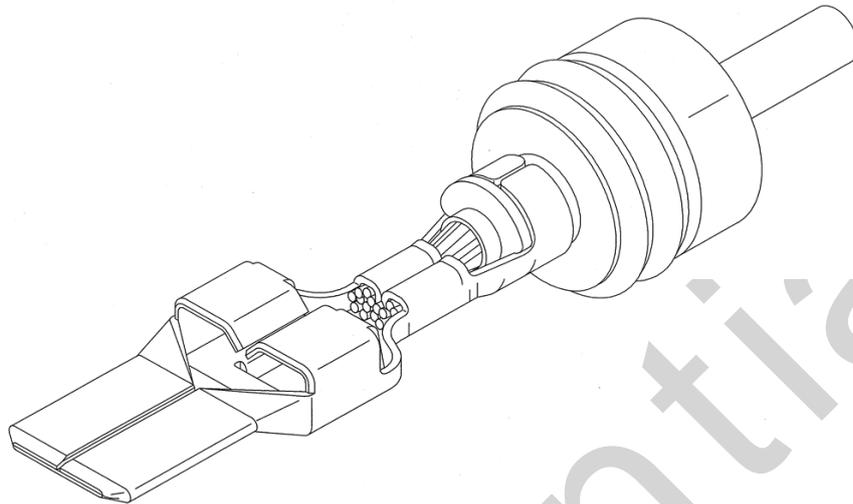
No.	名称	機能
1	タブ	メス端子との接触
2	フック	オスハウジングとの係止
3	スタビライザ	ハウジングへの逆挿入防止
4	ワイヤバレル	芯線圧着
5	インシュレーションバレル	絶縁体圧着
6	ゴム栓	電線とハウジング間の防水

1-2. オス端子(4.8(187))



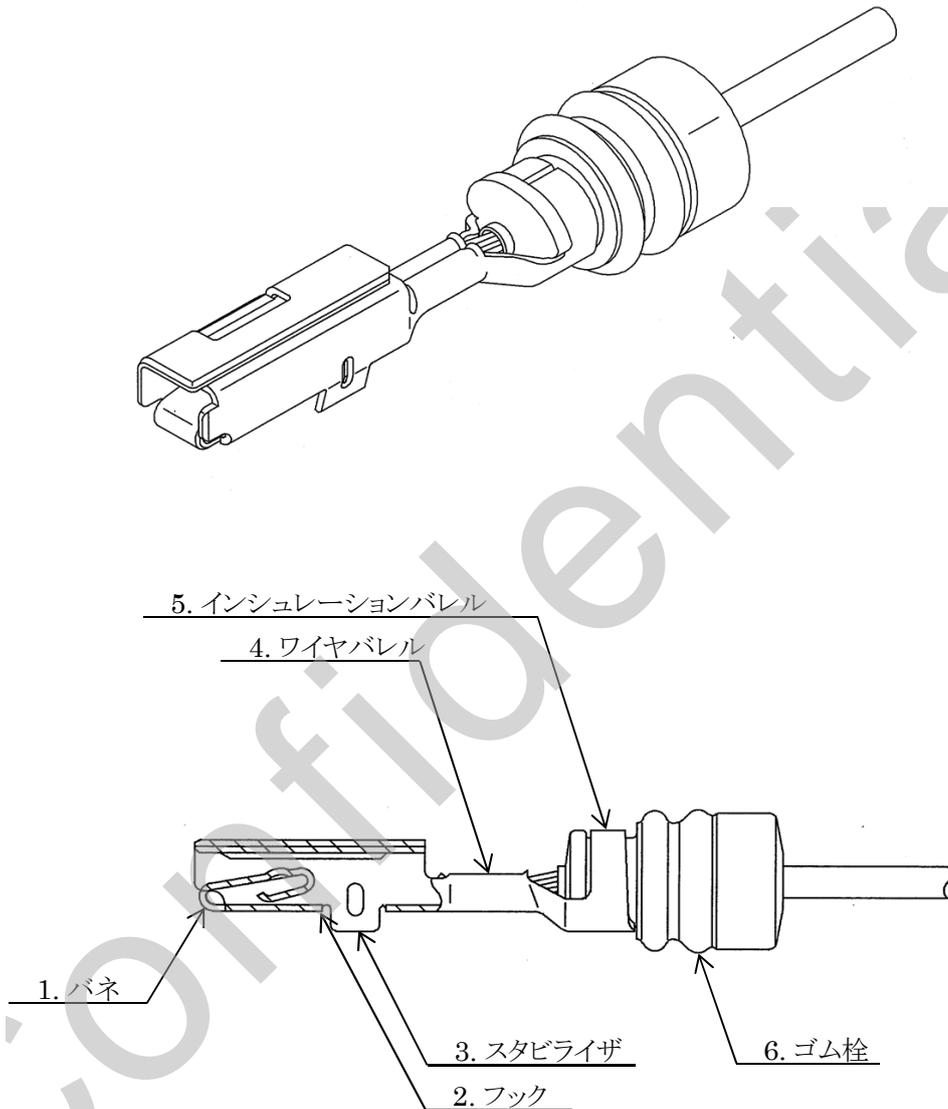
No.	名称	機能
1	タブ	メス端子との接触
2	フック	オスハウジングとの係止
3	スタビライザ	ハウジングへの逆挿入防止
4	ワイヤバレル	芯線圧着
5	インシュレーションバレル	絶縁体圧着
6	ゴム栓	電線とハウジング間の防水

1-3. オス端子 (8.0(312))



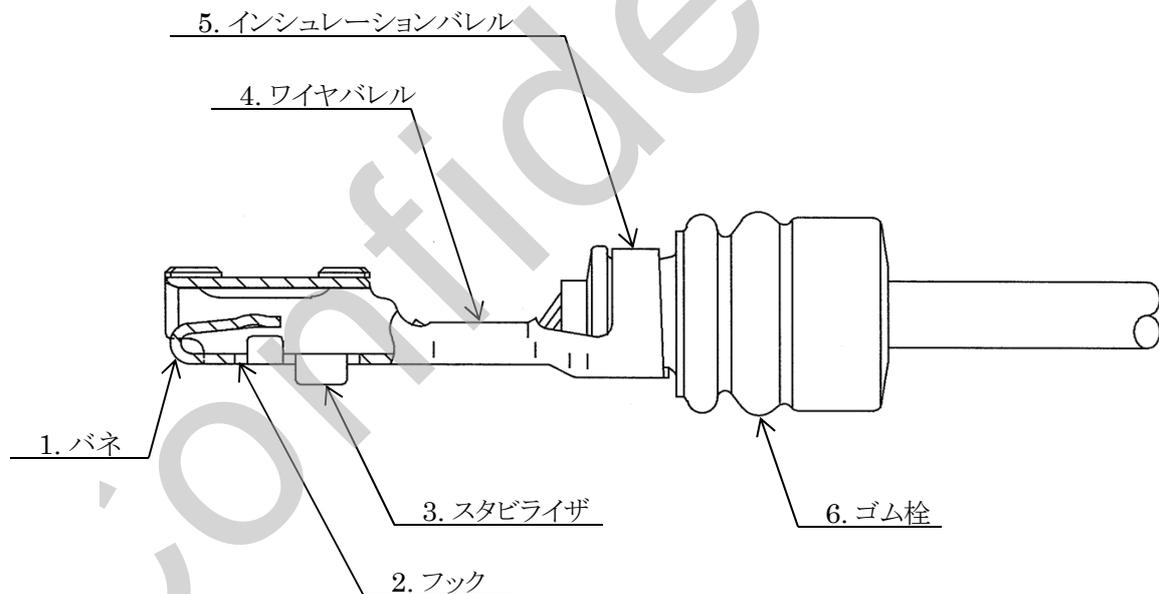
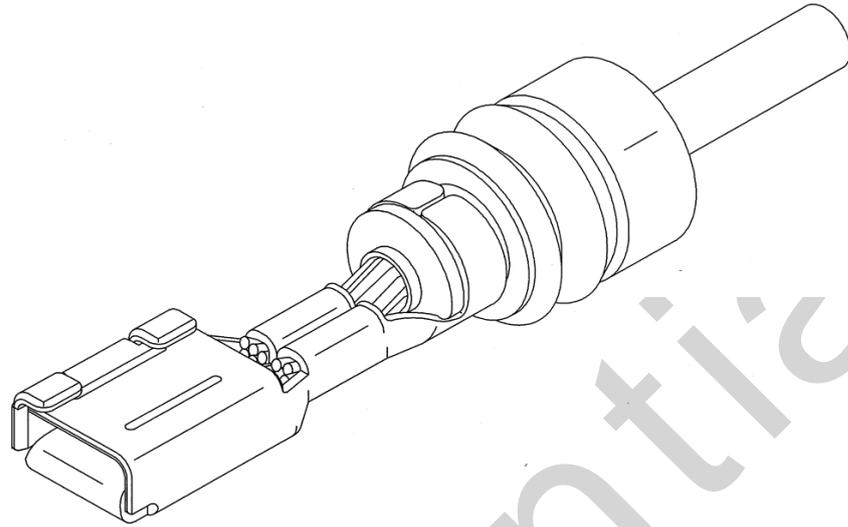
No.	名称	機能
1	タブ	メス端子との接触
2	フック	オスハウジングとの係止
3	スタビライザ	ハウジングへの逆挿入防止
4	ワイヤバレル	芯線圧着
5	インシュレーションバレル	絶縁体圧着
6	ゴム栓	電線とハウジング間の防水

1-4. メス端子(2.3Ⅱ(090Ⅱ))



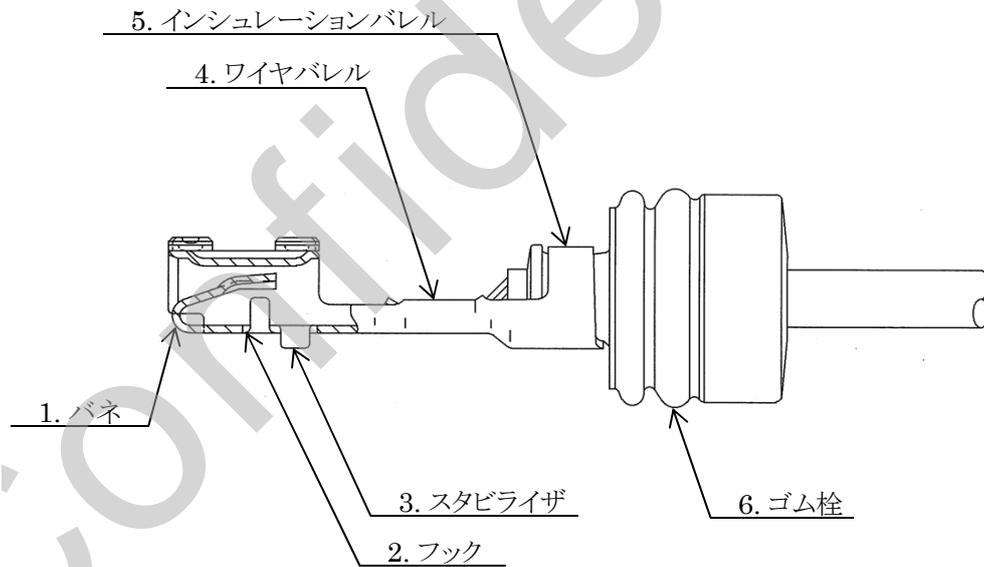
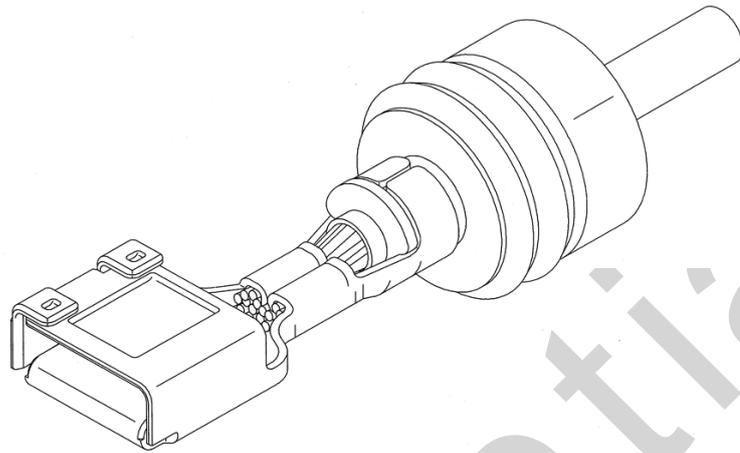
No.	名称	機能
1	バネ	オス端子との接触
2	フック	メスハウジングとの係止
3	スタビライザ	ハウジングへの逆挿入防止
4	ワイヤバレル	芯線圧着
5	インシュレーションバレル	絶縁体圧着
6	ゴム栓	電線とハウジング間の防水

1-5. メス端子(4.8(187))



No.	名称	機能
1	バネ	オス端子との接触
2	フック	メスハウジングとの係止
3	スタビライザ	ハウジングへの逆挿入防止
4	ワイヤバレル	芯線圧着
5	インシュレーションバレル	絶縁体圧着
6	ゴム栓	電線とハウジング間の防水

1-6. メス端子(8.0(312))



No.	名称	機能
1	バネ	オス端子との接触
2	フック	メスハウジングとの係止
3	スタビライザ	ハウジングへの逆挿入防止
4	ワイヤバレル	芯線圧着
5	インシュレーションバレル	絶縁体圧着
6	ゴム栓	電線とハウジング間の防水

2. 各部品の取扱いについて

2-1. 受入検査時の検査項目

部品受入時には、下記項目について検査を行って下さい。

1) 端子

- ・異物、異品の混入
- ・バリ、クラック、変形、傷
- ・変色、錆、汚れ、めっき剥がれ

2) ゴム栓、防水栓

- ・異物、異品の混入
- ・バリ、クラック、変形、傷

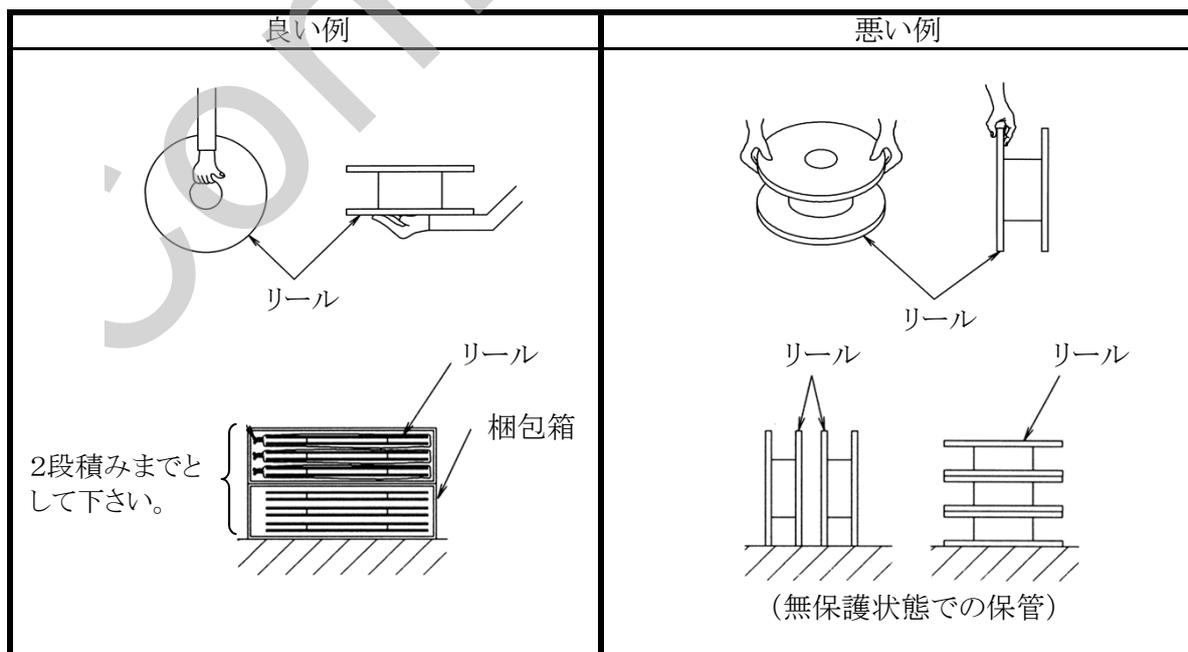
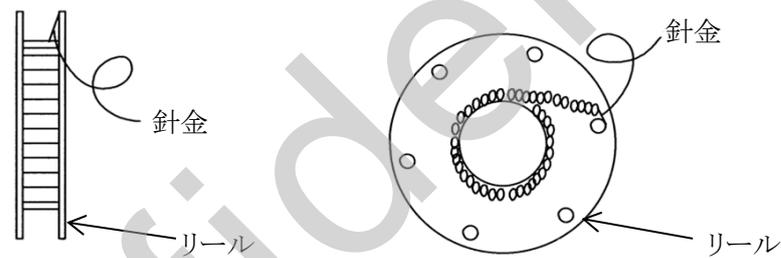
2-2. 部品の運搬、保管及び取扱い注意事項

変形や損傷を防ぐ為に、各部品の運搬・保管には次の内容を推奨します。

また、部品組立て工程等での製品使用環境・組付け条件の下での安全な取扱いにつきましては、適時弊社営業担当に問い合わせ下さい。

1) 端子

端子は、リールからのほつれを防ぐため、針金などでしっかりとリールに固定して下さい。
運搬・保管は、下記の方法で行って下さい。



運搬について

- ・リールは紙製なので、破損しないように注意して下さい。
- ・運搬時の衝撃を避けるため、梱包(保護)して下さい。
梱包時には、部品が変形や損傷を受けることがないように十分注意して下さい。
- ・落下などによる、強い衝撃を与えないように十分注意して下さい。

保管について

- ・端子(リール)は、運搬時に使用する梱包箱に入れて保管して下さい。
特に水、埃、油、有毒ガスから保護して、無保護状態で保管しないで下さい。
- ・端子(リール)は、直射日光を避け、室内で保管して下さい。
- ・端子(リール)は、高温多湿の場所を避けて保管して下さい。

2) ゴム栓、防水栓

運搬について

- ・運搬時の衝撃を避けるため、梱包(保護)して下さい。
梱包時には、部品が変形や損傷を受けることがないように十分注意して下さい。
- ・落下などによる、強い衝撃を与えないように十分注意して下さい。

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- ・部品は、直射日光を避け、室内で保管して下さい。
- ・部品は、高温多湿の場所を避けて保管して下さい。

3. 端子圧着仕様

3-1. 圧着規格

圧着規格については、適時弊社営業担当にお問い合わせ下さい。

<注記>

- ・ 圧着の際は、必ず規格内で圧着して下さい。規格外の場合、加締部の固着力・電気抵抗が維持できず、製品の機能に支障をきたす恐れがあります。
- ・ 本内容については、弊社の圧着型を使用した場合に限りです。

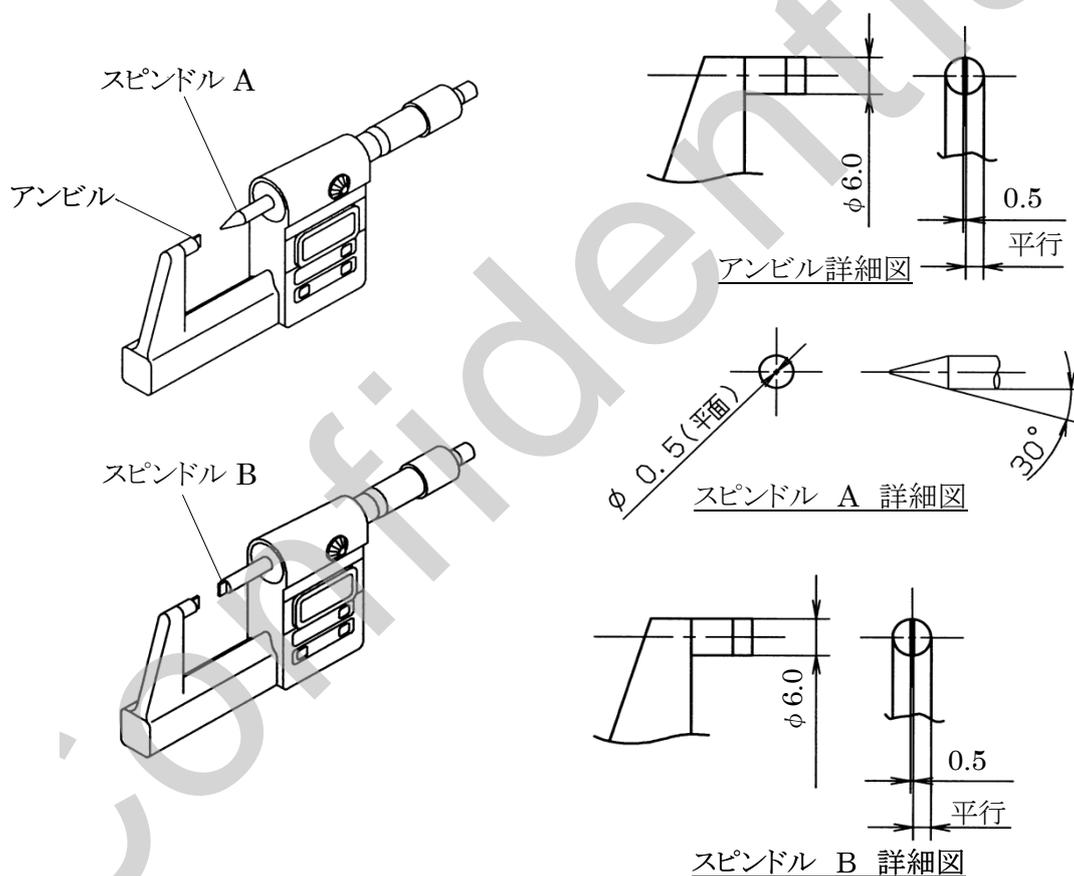
3-2. クリンプハイト及びクリンプワイドの測定器と測定方法

3-2-1. 測定器

マイクロメータを使用して測定して下さい。

マイクロメータは、下記仕様のアンビル、及びスピンドルを使用して下さい。

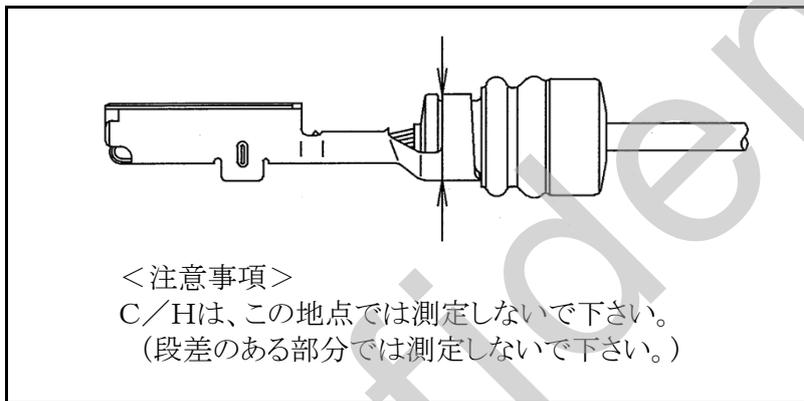
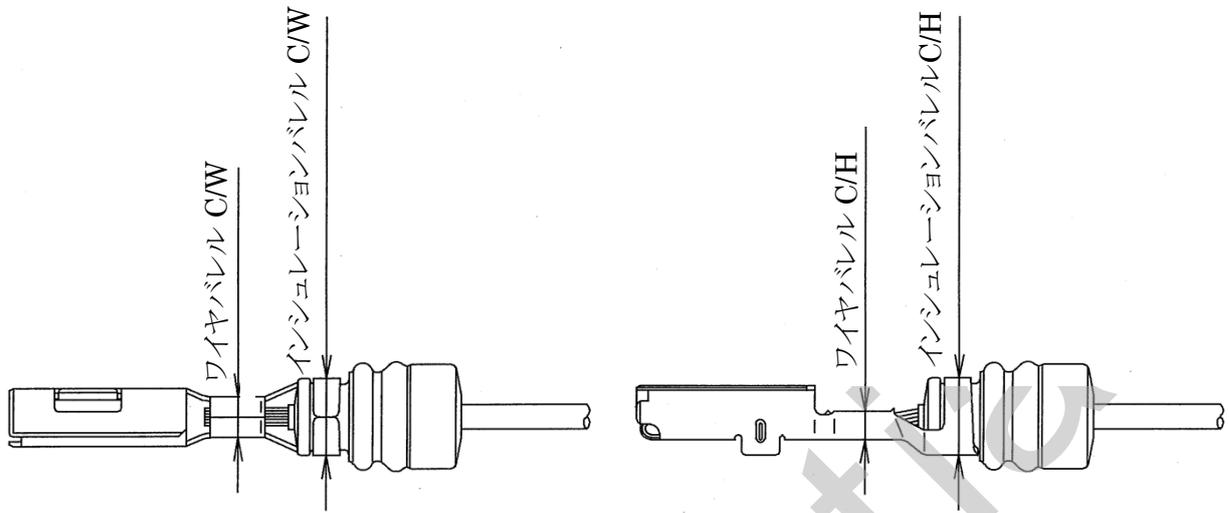
マイクロメータは、スタンドに固定して使用して下さい。



測定箇所	使用部品
ワイヤパレル クリンプハイト	スピンドル A
ワイヤパレル クリンプワイド	スピンドル B
インシュレーション クリンプハイト	
インシュレーション クリンプワイド	

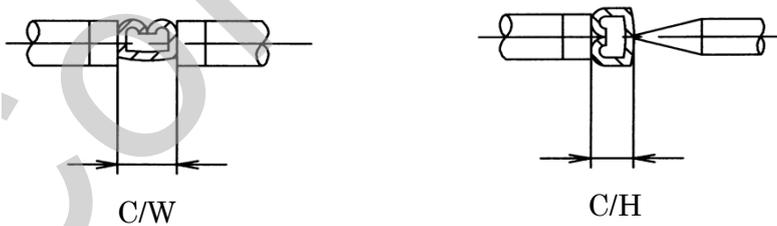
3-2-2. 測定方法

芯線圧着部及び絶縁体圧着部の寸法は、それぞれの圧着部中央を測定して下さい。

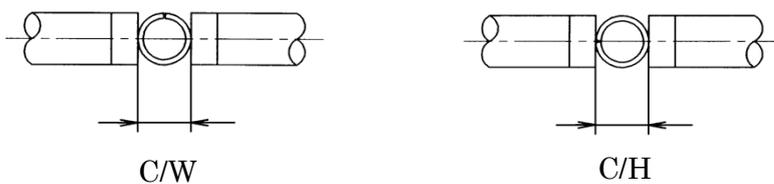


C/H: クリンプハイト
C/W: クリンプワイド

ワイヤバレル: マイクロメータを用いて、下図のように挟んで測定して下さい。

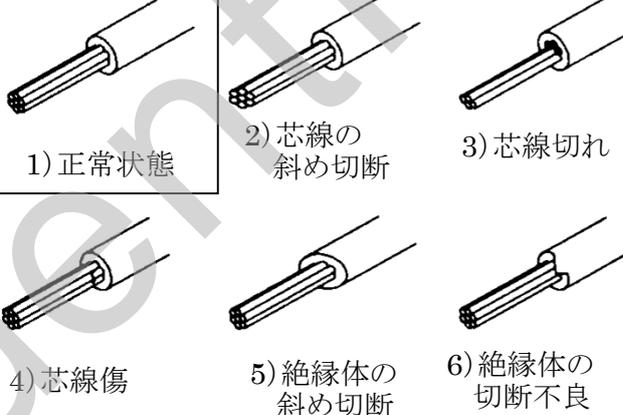
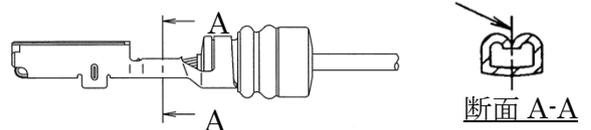
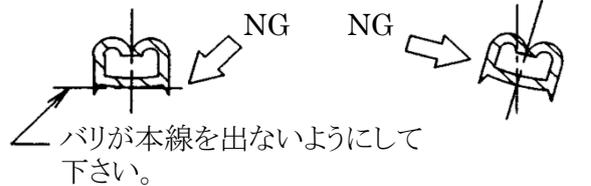
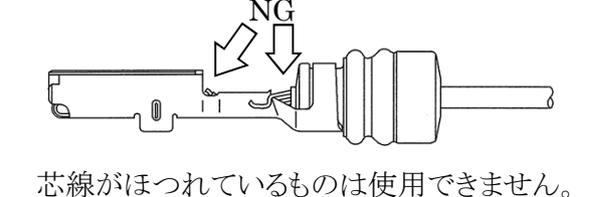
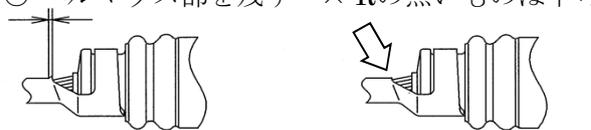


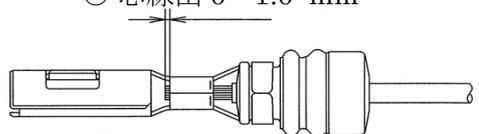
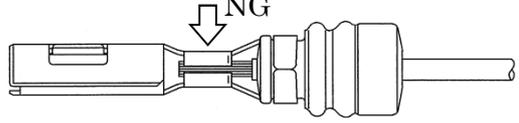
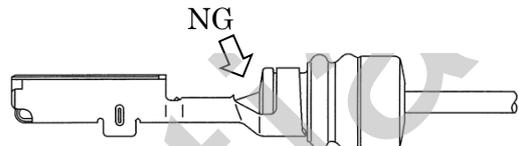
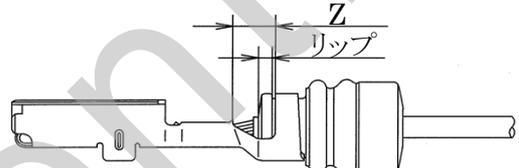
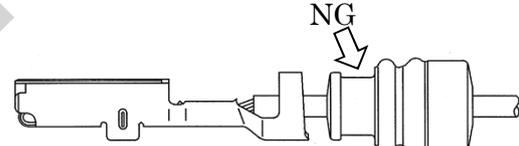
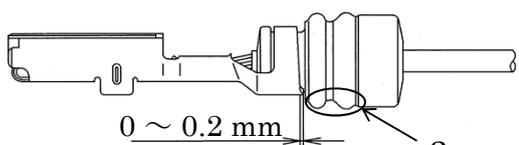
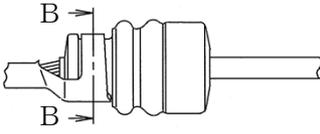
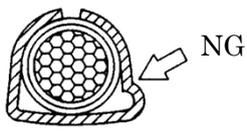
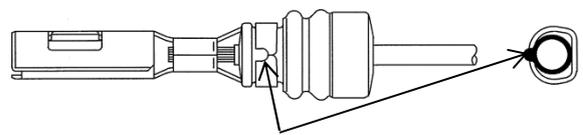
インシュレーションバレル: マイクロメータを用いて、下図のように挟んで測定して下さい。

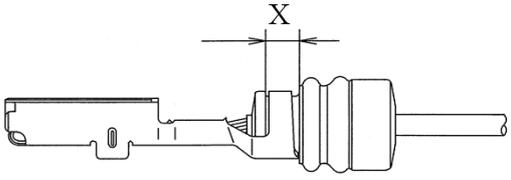
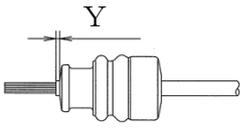
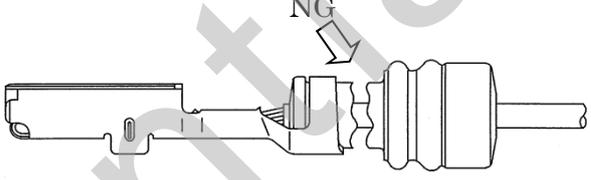
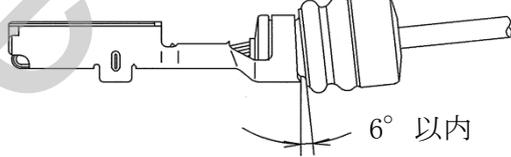


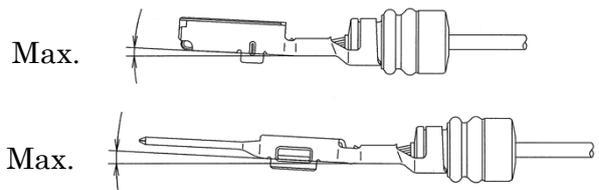
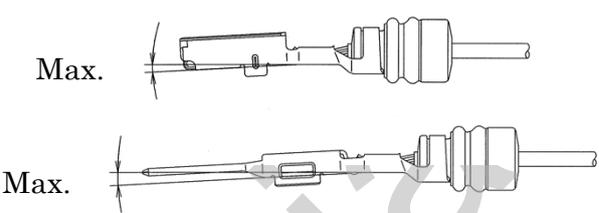
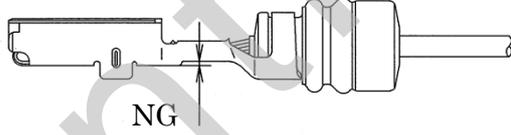
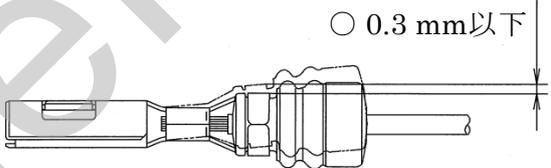
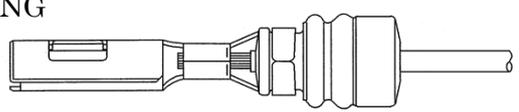
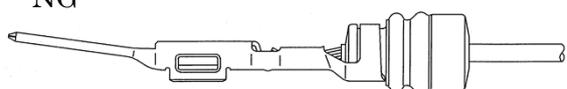
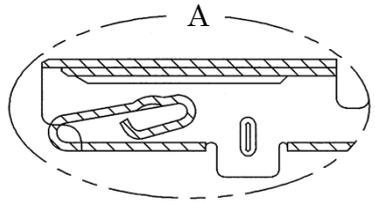
3-3. 端子圧着時の注意事項とチェック項目

- ・皮むきした電線は、すぐに圧着作業を行って下さい。
移動や保管は、芯線がばらけやすく不良の原因となりやすいので、避けて下さい。
 - ・変形や損傷した端子は絶対に使用しないで下さい。
 - ・圧着後は、速やかにハウジングに組付けて下さい。すぐに組付けない場合は、端子部を清潔なビニール袋などで保護して下さい。
 - ・端子圧着時には、下記の項目を確認して下さい。
表内に寸法指示がある項目は、指示寸法内で圧着して下さい。
 - ・圧着機を新規/変更で使用する場合には、タブ厚・箱部高さの機能に影響する部位を変形させない様注意して下さい。
また圧着前と後で寸法変化がないことを、寸法測定により確認して下さい。
- ※呼び0.13sq電線においては、0.13sq基準に基づき作業を実施して下さい。
- ・下記2点の理由の為、ゴム栓の挿入は皮むき前に実施して下さい。(別紙8参照)
 - (1) 皮むき後に挿入した場合、ゴム栓内側が傷付き、シール性の低下が懸念される。
 - (2) 芯線にゴム栓オイルが付着することにより、導通不良が懸念される。

部位	チェック項目	
1. 電線	電線皮むき 1) 正常状態 2) 芯線の斜め切断 3) 芯線切れ 4) 芯線傷 5) 絶縁体の斜め切断 6) 絶縁体の切断不良	
2. ワイヤバレル (オス・メス)	1) 正常圧着状態	本線基準に左右対照 
	2) バリ及びねじれ	 バリが本線を出ないようにして下さい。
	3) 芯線ほつれ	 芯線がほつれているものは使用できません。
	4) ベルマウス	○ ベルマウス部を残す × Rの無いものは不可 

部位	チェック項目	
2. ワイヤバレル (オス・メス)	5) 芯線飛び出し長さ	<p>○ 芯線出 0~1.0 mm</p> 
	6) すきま	<p>NG</p>  <p>ワイヤバレルに芯線が見えるような隙間がないことを確認して下さい。</p>
	7) ワイヤバレルによる 絶縁体圧着状態	<p>NG</p> 
3. インシュレー ションバレル (オス・メス)	1) 正常圧着状態	 <p>ゴム栓リップが、ワイヤバレルとインシュレーションバレルの間(Z区間)にあることを確認して下さい。</p>
	2) 被覆圧着不足による ゴム栓落ち	<p>NG</p> 
	3) つなぎ出し長さ	<p>0 ~ 0.2 mm</p>  <p>a部が傷付いていないことを確認して下さい。</p>
	4) しわ	  <p>断面 B-B</p>
	5) ゴム栓噛込み	

部位	チェック項目									
<p>3. インシュレーションバレル (オス・メス)</p>	<p>6) ゴム栓の位置</p>	<div style="text-align: center;">  </div> <p>インシュレーションバレルがX区間にあることを確認して下さい。</p> <div style="display: flex; align-items: center;"> <div style="margin-right: 20px;">  </div> <table border="1" data-bbox="1061 571 1388 728"> <thead> <tr> <th></th> <th>Y寸法</th> </tr> </thead> <tbody> <tr> <td>2.3 II (090 II)</td> <td>(0.7 mm)</td> </tr> <tr> <td>4.8 (187)</td> <td>(1.0 mm)</td> </tr> <tr> <td>8.0 (312)</td> <td>(1.2 mm)</td> </tr> </tbody> </table> </div>		Y寸法	2.3 II (090 II)	(0.7 mm)	4.8 (187)	(1.0 mm)	8.0 (312)	(1.2 mm)
	Y寸法									
2.3 II (090 II)	(0.7 mm)									
4.8 (187)	(1.0 mm)									
8.0 (312)	(1.2 mm)									
	<p>7) ゴム栓の傷、切れ</p>	<div style="text-align: center;">  </div> <p>傷及び切れがあるものは、使用できません。</p>								
	<p>8) ゴム栓の傾き</p>	<div style="text-align: center;">  </div>								

部位	チェック項目	
4. 圧着による端子の変形 (オス・メス)	1) ベンドアップ	
	2) ベンドダウン	
	3) ワイヤバレルの段付き	
	4) ねじれ	 <p>目視でねじれが認められるものは使用できません。</p>
	5) 送り不良	
5. 圧着による端子の変形 (オス)	タブの変形	 <p>目視で変形が認められるものは使用できません。</p>
6. 圧着による端子の変形 (メス)	1) 箱の変形	
	2) 右図A部分の変形	 <p>A部分に変形があるものは使用できません。</p>

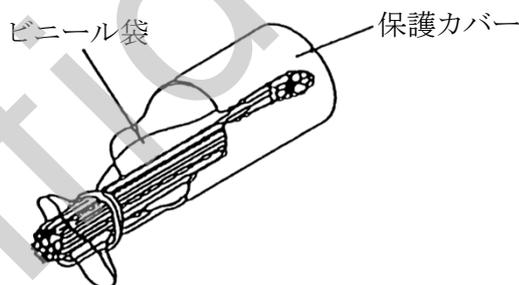
4. 端子圧着済品の取扱い

端子圧着後は速やかにハウジングに組付けて下さい。

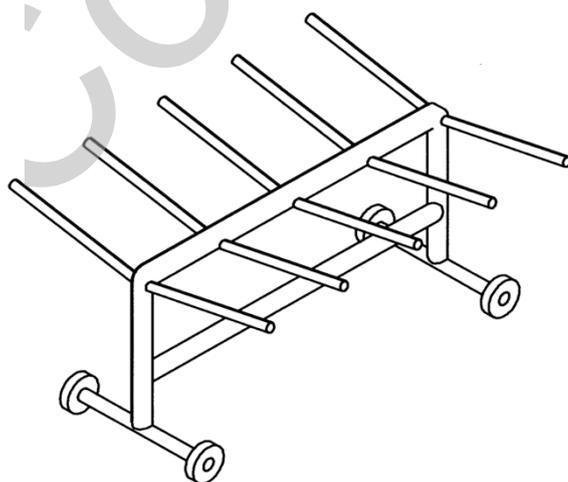
但し運搬・保管の際には、変形や損傷が発生しやすいため、下記項目を守って下さい。

- 端子圧着済品は、ばらばらにならないようにゴムなどで束ねて下さい。
束ね本数が多すぎると、端子同士の引っ掛かりや自重による変形や損傷の発生が考えられますので、一束の本数は100本以下とし、電線・端子サイズに合わせて束ね本数を確認して下さい。
束ねる時に、端子先端を叩いて揃えないで下さい。
- 端子圧着済品にはビニール袋を被せて、埃から保護して下さい。
運搬・保管の際は保護カバーを使用し、ハウジングに組付ける直前までビニール袋・保護カバーを外さないで下さい。
- 運搬は、線架台又は蓋付きのポリケース通い箱にて行い、端子圧着済品を積み重ねしないで下さい。
- 線架台に掛ける際は、端子先端が地面につかないよう留意して下さい。
- 投げ込みや投げ降しは絶対にしないで下さい。

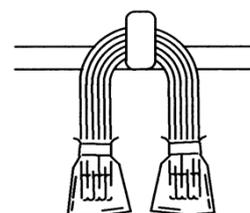
端子圧着済電線の処理例



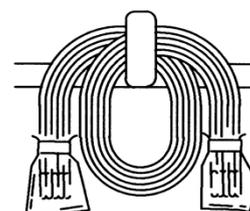
線架台使用例



<線架台>

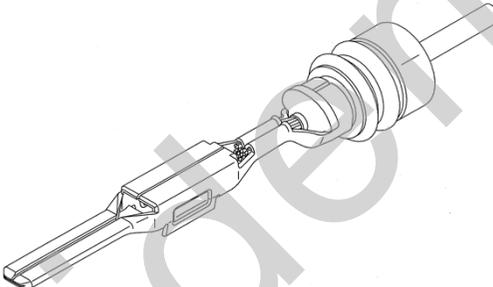


<短い電線>

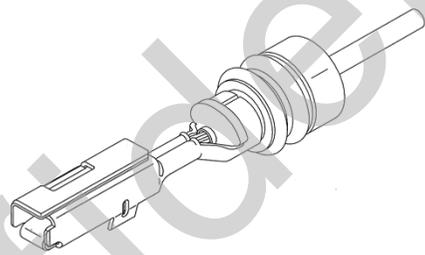


<長い電線>

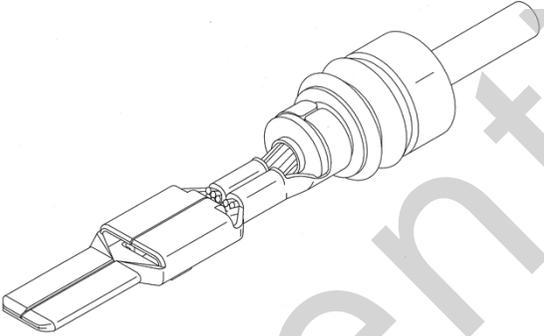
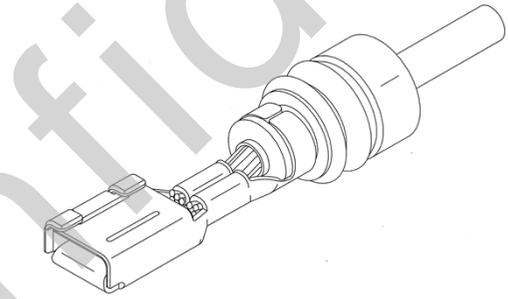
◎ 構成部品一覧表
 ターミナル
 2.3Ⅱ(090Ⅱ)タイプ

矢崎品番 (矢崎品名)	形状	適用電線サイズ	備考
7114-4025 2.3Ⅱ(090Ⅱ)SEALED TERMINAL MALE		AVSS 0.3 ~ AVS 0.5	めっき:Sn
7114-4025-08 2.3Ⅱ(090Ⅱ)SEALED TERMINAL MALE			めっき:Au
7114-4028-08 2.3Ⅱ(090Ⅱ)SEALED TERMINAL MALE			めっき:Au
7114-4026 2.3Ⅱ(090Ⅱ)SEALED TERMINAL MALE		AVS 0.85 ~ AVS 1.25	めっき:Sn
7114-4029-08 2.3Ⅱ(090Ⅱ)SEALED TERMINAL MALE			めっき:Au
7114-4027 2.3Ⅱ(090Ⅱ)SEALED TERMINAL MALE		AVSS 2.0	めっき:Sn

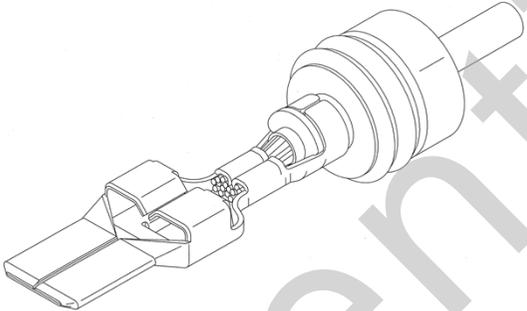
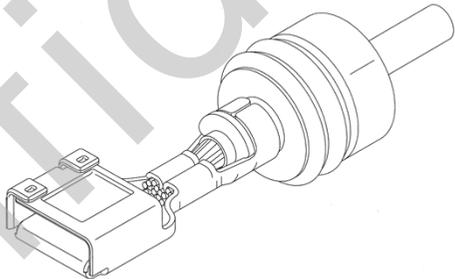
2.3Ⅱ(090Ⅱ)タイプ

矢崎品番 (矢崎品名)	形状	適用電線サイズ	備考
7116-4025 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE		AVSS 0.3 ~ AVS 0.5	めっき:Sn
7116-4025-08 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE			めっき:Au
7116-4028-08 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE			めっき:Au
7116-4542-02 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE			めっき:Sn(低挿入タイプ)
7116-5044-02 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE			めっき:Sn
7116-4026 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE			めっき:Sn
7116-4029-08 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE		AVS 0.85 ~ AVS 1.25	めっき:Au
7116-5045-02 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE			めっき:Sn
7116-4027 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE		AVSS 2.0	めっき:Sn
7116-5046-02 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE			めっき:Sn
7116-4627-02 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE		CHFS 1.5 ~ AVSS 2.0	めっき:Sn
7116-5037-02 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE			めっき:Sn
7116-6804-02 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE		CIVUS 0.13	めっき:Sn
7116-6804-08 2.3Ⅱ(090Ⅱ)SEALED TERMINAL FEMALE			めっき:Au

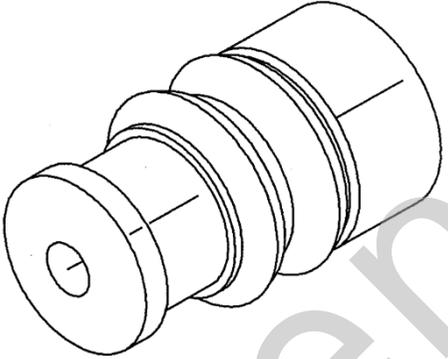
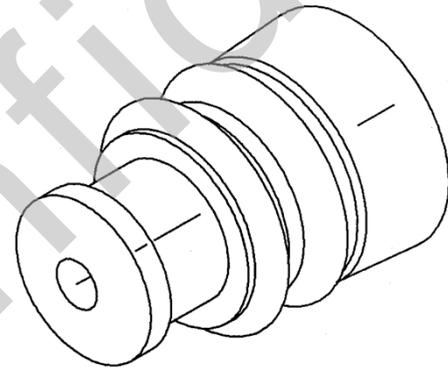
4.8(187)タイプ

矢崎品番 (矢崎品名)	形状	適用電線サイズ	備考
7114-4035 4.8(187)SEALED TERMINAL MALE		AVSS 0.3 ~ AVS 0.5	めっき:Sn
7114-4036 4.8(187)SEALED TERMINAL MALE		AVS 0.85 ~ AVS 1.25	めっき:Sn
7114-4037 4.8(187)SEALED TERMINAL MALE		AVS 2.0 ~ AVS 3.0	めっき:Sn
7116-4035 4.8(187)SEALED TERMINAL FEMALE		AVSS 0.3 ~ AVS 0.5	めっき:Sn
7116-4036 4.8(187)SEALED TERMINAL FEMALE		AVS 0.85 ~ AVS 1.25	めっき:Sn
7116-4037 4.8(187)SEALED TERMINAL FEMALE		AVS 2.0 ~ AVS 3.0	めっき:Sn

8.0(312)タイプ

矢崎品番 (矢崎品名)	形状	適用電線サイズ	備考
7114-6045 8.0(312)SEALED TERMINAL MALE		AVS 0.5 ~ AVS 1.25	めっき:Sn
7114-6046 8.0(312)SEALED TERMINAL MALE		AVS 2.0 ~ AVS 3.0	めっき:Sn
7114-6047 8.0(312)SEALED TERMINAL MALE		AVS 5.0 ~ AV 8.0	めっき:Sn
7116-6045 8.0(312)SEALED TERMINAL FEMALE		AVS 0.5 ~ AVS 1.25	めっき:Sn
7116-6046 8.0(312)SEALED TERMINAL FEMALE		AVS 2.0 ~ AVS 3.0	めっき:Sn
7116-6047 8.0(312)SEALED TERMINAL FEMALE		AVS 5.0 ~ AV 8.0	めっき:Sn

ゴム栓
 2.3Ⅱ(090Ⅱ)タイプ
 (1)高信頼性シリコンタイプ

矢崎品番 (矢崎品名)	形状	適用電線外径	備考
7158-3003-90 2.3Ⅱ(090Ⅱ) 5mm pitch RUBBER STOPPER		φ1.4～φ1.8	色:ブルー ※①
7158-3004-40 2.3Ⅱ(090Ⅱ) 5mm pitch RUBBER STOPPER		φ2.0～φ2.2	色:グレー
7158-3005-80 2.3Ⅱ(090Ⅱ) 5mm pitch RUBBER STOPPER		φ2.5～φ2.7	色:ブラウン ※②
7158-3006-90 2.3Ⅱ(090Ⅱ) 6mm pitch RUBBER STOPPER		φ1.4～φ1.8	色:ダークブルー ※①
7158-3007-10 2.3Ⅱ(090Ⅱ) 6mm pitch RUBBER STOPPER		φ2.0～φ2.2	色:ダークグレー
7158-3008-80 2.3Ⅱ(090Ⅱ) 6mm pitch RUBBER STOPPER		φ2.5～φ2.7	色:ダークブラウン ※②
7158-3893-30 2.3Ⅱ(090Ⅱ) 6mm pitch RUBBER STOPPER		φ0.81～φ0.95	色:ブラック ※③

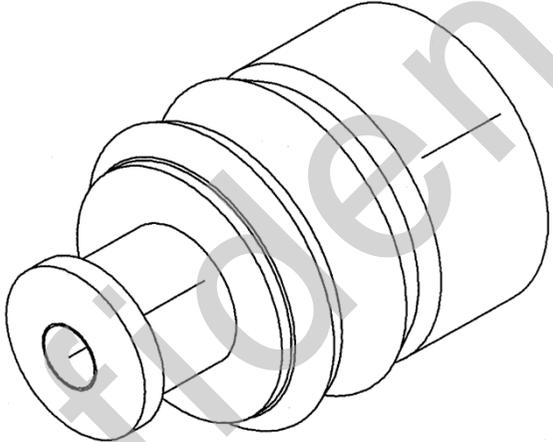
※・・・①呼び0.3で標準仕上外径φ1.8以上の電線は作業性の注意が必要。

②標準仕上外径φ2.7の電線は作業性の注意が必要。

③呼び0.13の電線は作業性の注意が必要。

4.8(187)タイプ

(1) 高信頼性シリコンタイプ

矢崎品番 (矢崎品名)	形状	適用電線外径	備考
7158-3014-90 4.8(187) RUBBER STOPPER		φ 1.4 ~ φ 1.8	色:ダークブルー ※①
7158-3015-10 4.8(187) RUBBER STOPPER		φ 2.0 ~ φ 2.7	色:ダークグレー ※②
7158-3016-80 4.8(187) RUBBER STOPPER		φ 2.9 ~ φ 3.1	色:ダークブラウン
7158-3017 4.8(187) RUBBER STOPPER		φ 3.6 ~ φ 3.8	色:ブラック ※③

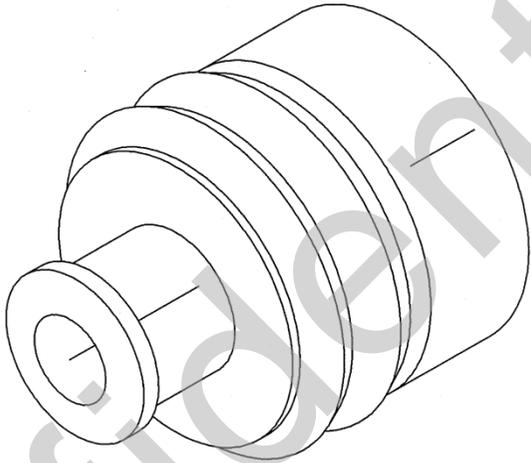
※・・・①呼び0.3で標準仕上外径 φ 1.8以上の電線は作業性の注意が必要。

②標準仕上外径 φ 2.7の電線は作業性の注意が必要。

③標準仕上外径 φ 3.7以上の電線は作業性の注意が必要。

8.0(312)タイプ

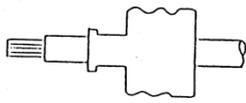
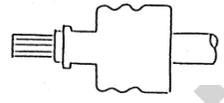
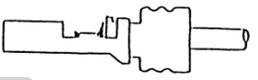
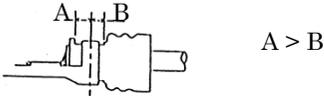
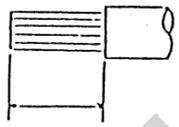
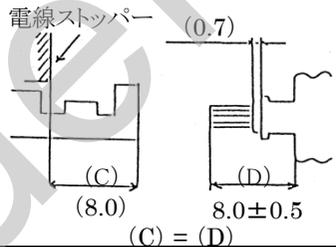
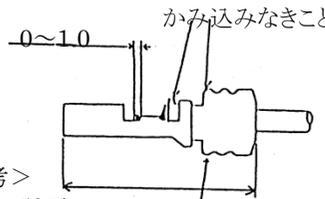
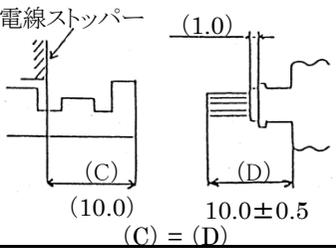
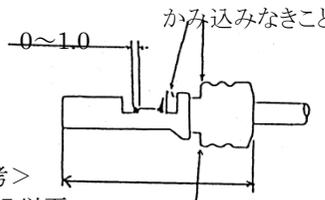
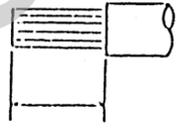
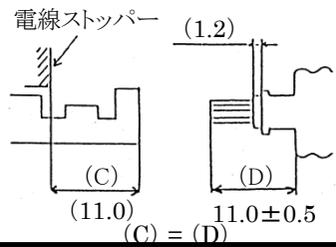
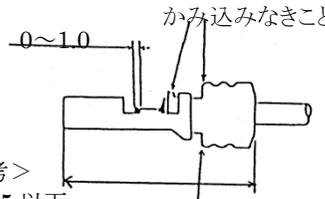
(1) 高信頼性シリコンタイプ

矢崎品番 (矢崎品名)	形状	適用電線外径	備考
<p>7158-3022-80 8.0(312) RUBBER STOPPER</p>		<p>φ 3.6～φ 3.8</p>	<p>色:ダークブラウン ※③</p>
<p>7158-3023 8.0(312) RUBBER STOPPER</p>		<p>φ 4.4～φ 4.6</p>	<p>色:ブラック ※④</p>

※……③標準仕上外径φ3.7以上の電線は作業性の注意が必要。

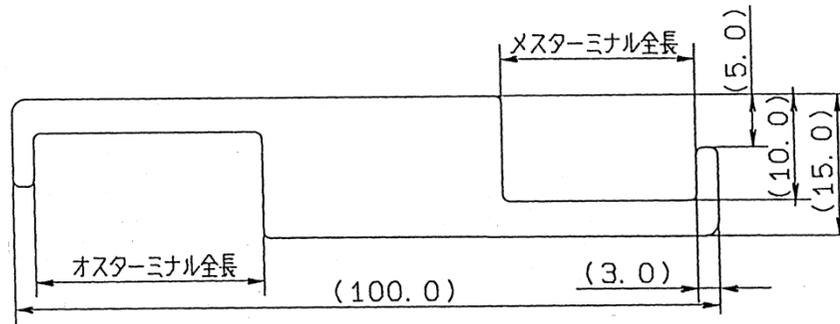
④標準仕上外径φ4.5以上の電線は作業性の注意が必要。

圧着, ハウジングへの挿入作業

		(1) ゴム栓挿入	(2) 皮むき	(3) ゴム栓位置合わせ	(4) ゴム栓, 電線の圧着
作業					
注意事項		ゴム栓への電線挿入は皮むき前に実施	←	下記寸法(C=D)を満足する為に、圧着時は芯線を電線ストッパーに押し当てる事。	ハウジングからのゴム栓飛び出し量に影響する為、ゴム栓は以下の位置での圧着がよい(センターより後端側) 
管理項目		_____	皮むき長さ	ゴム栓位置	芯線出代, ゴム栓圧着位置, 全長
	2.3II (090II)	_____	 4.5 ± 0.5 $\ast 0.13sq: 5.0 \pm 0.5$		 <参考> M 32.7 以下 F 23.7 以下
	4.8 (187)	_____	 5.5 ± 0.5		 <参考> M 38.7 以下 F 29.4 以下
	8.0 (312)	_____	 5.5 ± 0.5		 <参考> M 43.5 以下 F 33.9 以下

全長検査治具

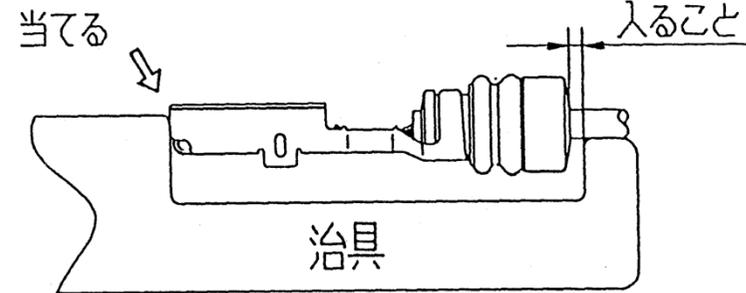
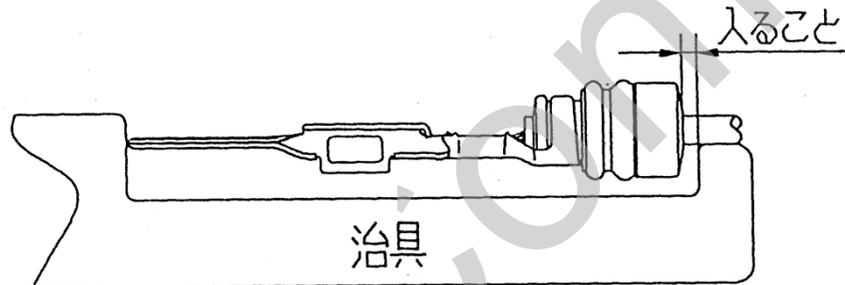
(参考形状)



種類	オスターミナル全長	メスターミナル全長
2.3Ⅱ(090Ⅱ)	32.7±0.01	23.7±0.01
4.8(187)	38.7±0.01	29.4±0.01
8.0(312)	43.5±0.01	33.9±0.01

測定方法

(ばね先端ではなく、箱部先端から測定する事。)



Handling Manual
For
2.3II (090II), 4.8 (187), 8.0 (312)
Sealed Connector (Terminal)
<High Reliability Wire Seal Ver.>

<NOTE>

This Handling Manual is subject to change without any prior notice.
Please ask us for the latest version as necessary.

Thank you for using our product.

This handling manual specifies the minimum requirements on using this product.

Please always observe all of these requirements when you handle this part.

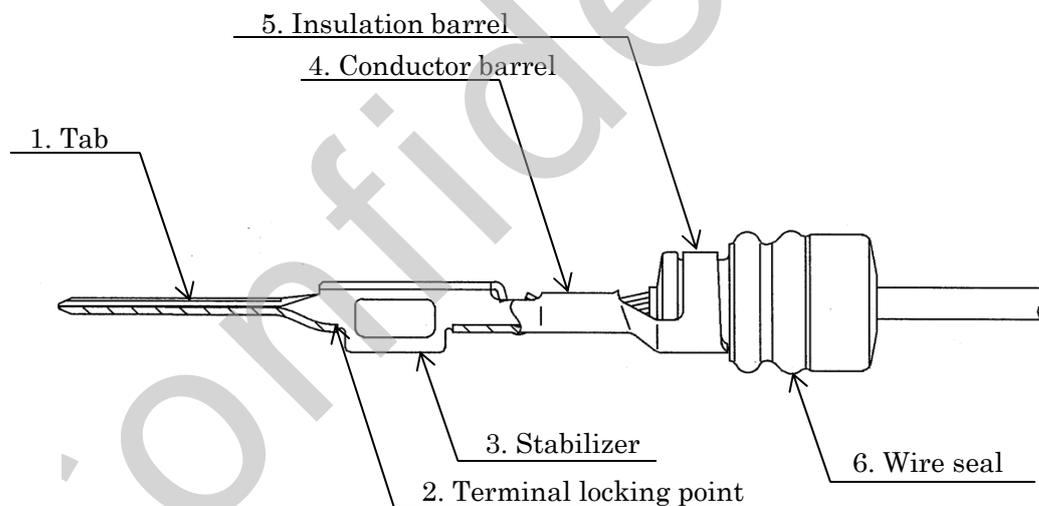
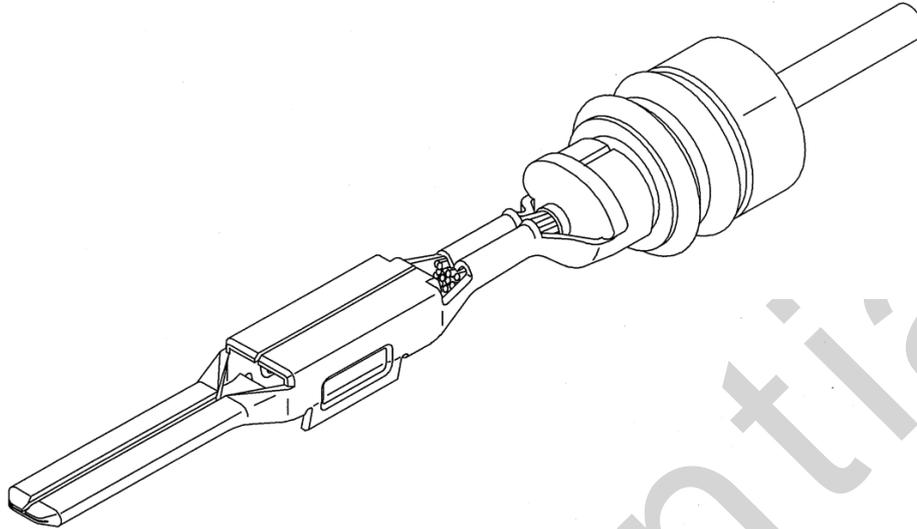
YAZAKI shall not be liable for any damage resulting from misuse or failure to follow this handling manual.

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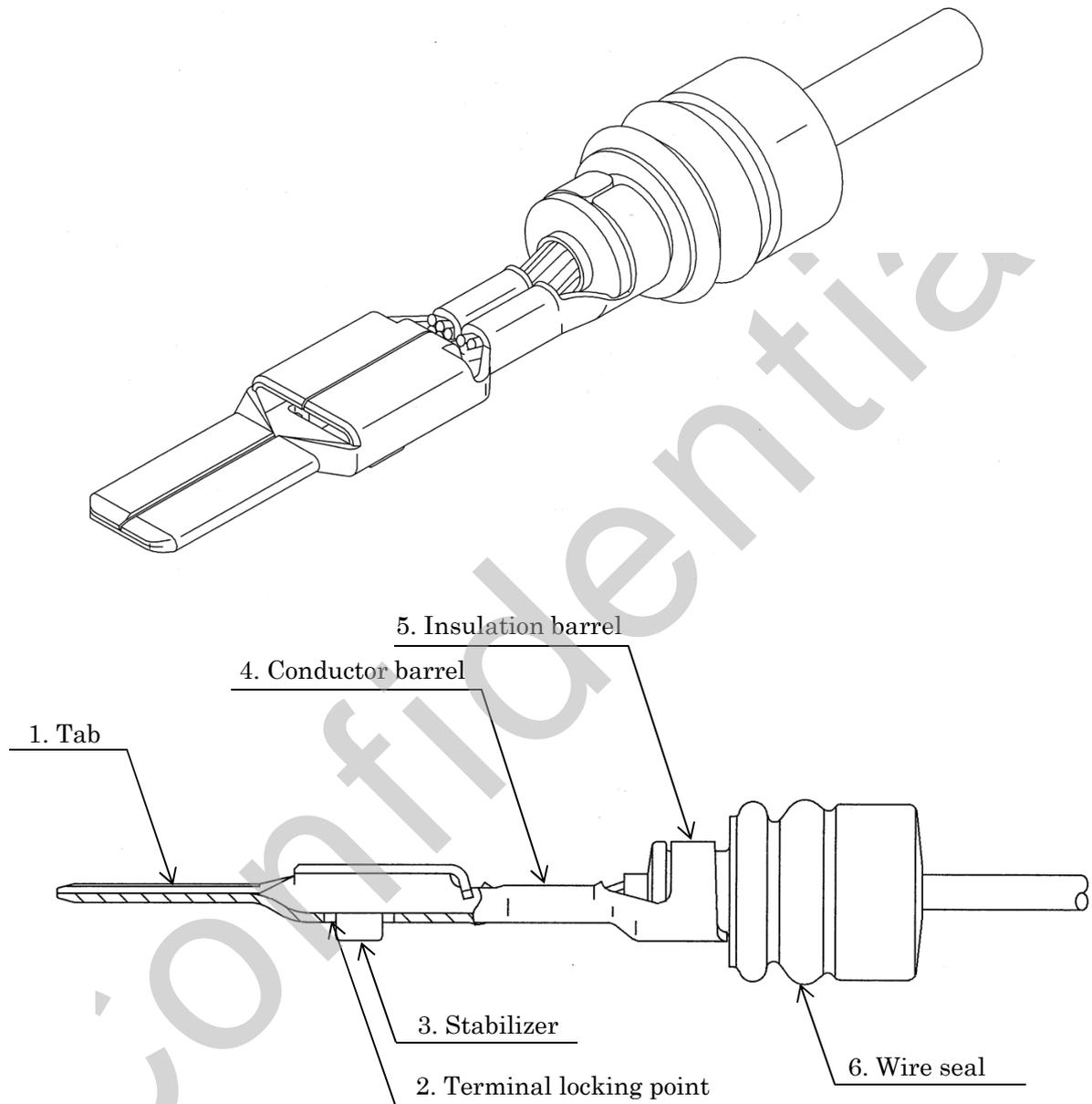
1. Parts: Shape and function

1-1. Male terminal (2.3II (090II))



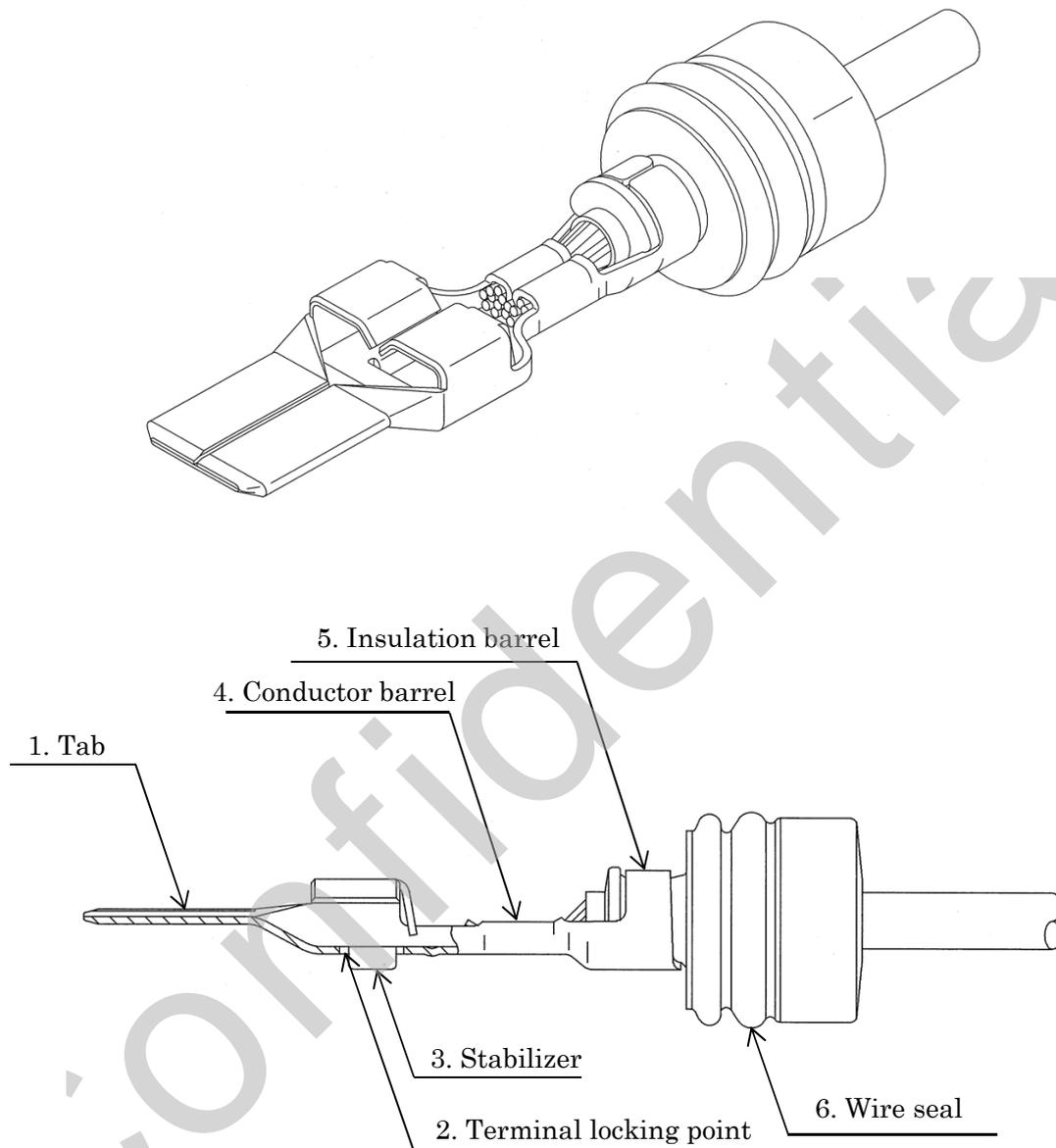
No.	Feature name	Function
1	Tab	Contact with a female terminal
2	Terminal locking point	Lock with a male housing
3	Stabilizer	Prevent terminal improper insertion to housing
4	Conductor barrel	Conductor crimping
5	Insulation barrel	Insulation crimping
6	Wire seal	Sealing between wire and housing

1-2. Male terminal (4.8 (187))



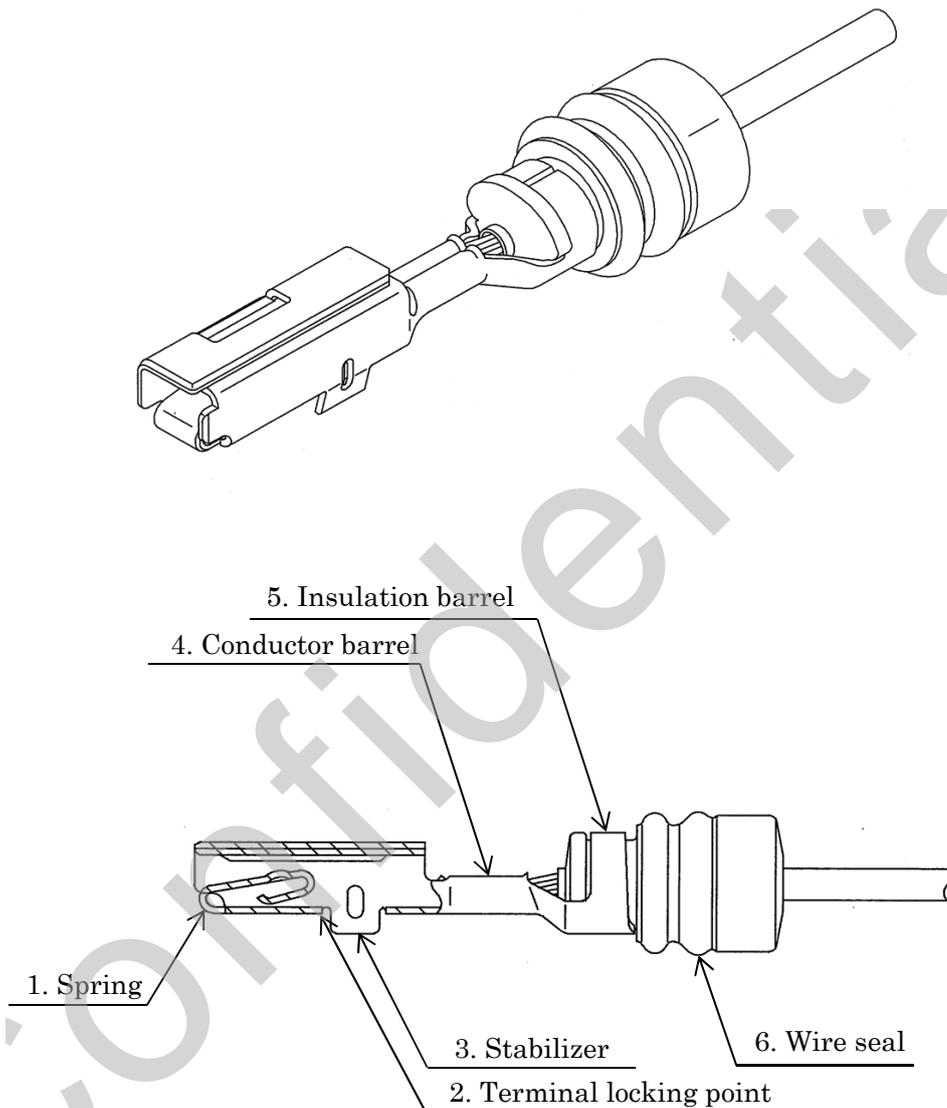
No.	Feature name	Function
1	Tab	Contact with a female terminal
2	Terminal locking point	Lock with a male housing
3	Stabilizer	Prevent terminal improper insertion to housing
4	Conductor barrel	Conductor crimping
5	Insulation barrel	Insulation crimping
6	Wire seal	Sealing between wire and housing

1-3. Male terminal (8.0 (312))



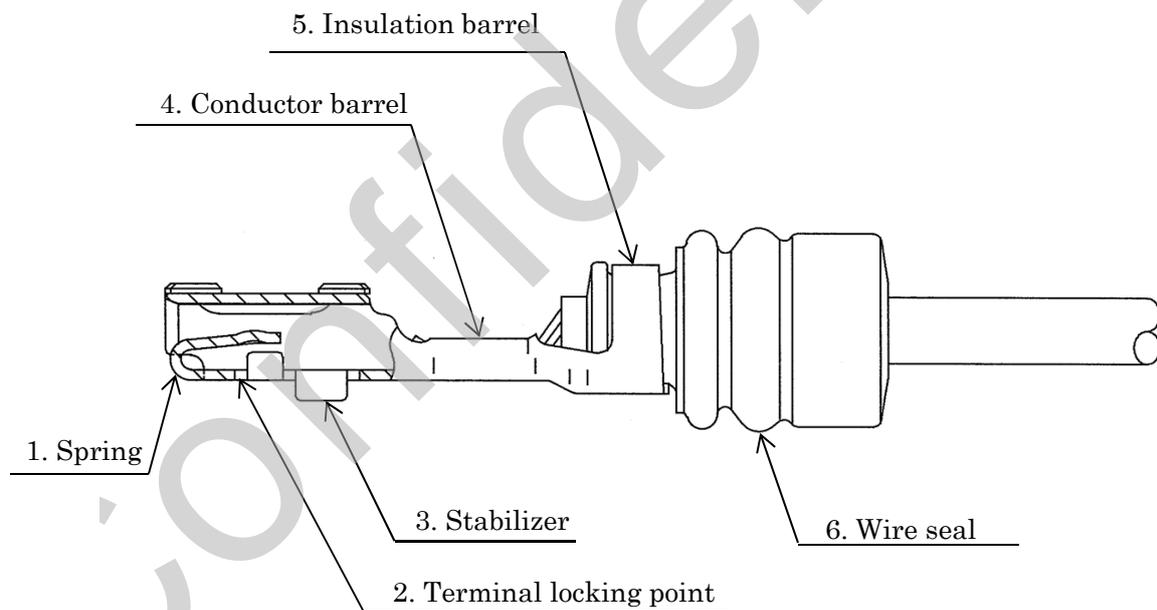
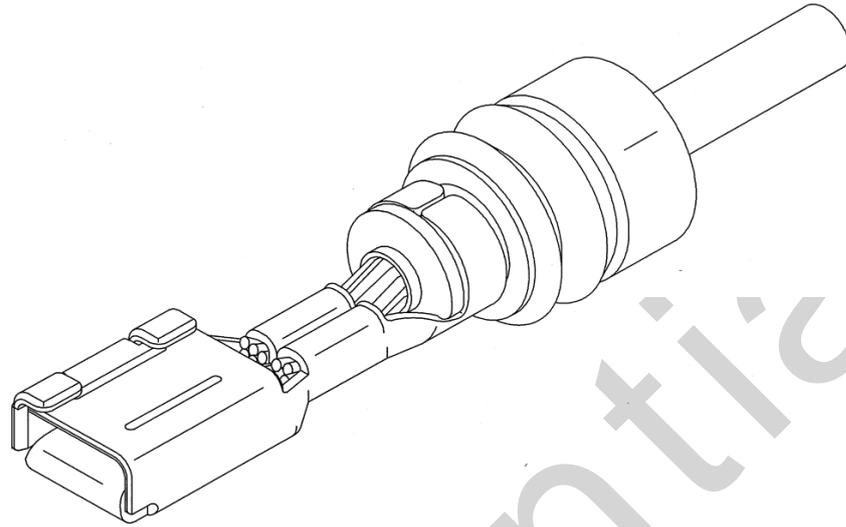
No.	Feature name	Function
1	Tab	Contact with a female terminal
2	Terminal locking point	Lock with a male housing
3	Stabilizer	Prevent terminal improper insertion to housing
4	Conductor barrel	Conductor crimping
5	Insulation barrel	Insulation crimping
6	Wire seal	Sealing between wire and housing

1-4. Female terminal (2.3II (090II))



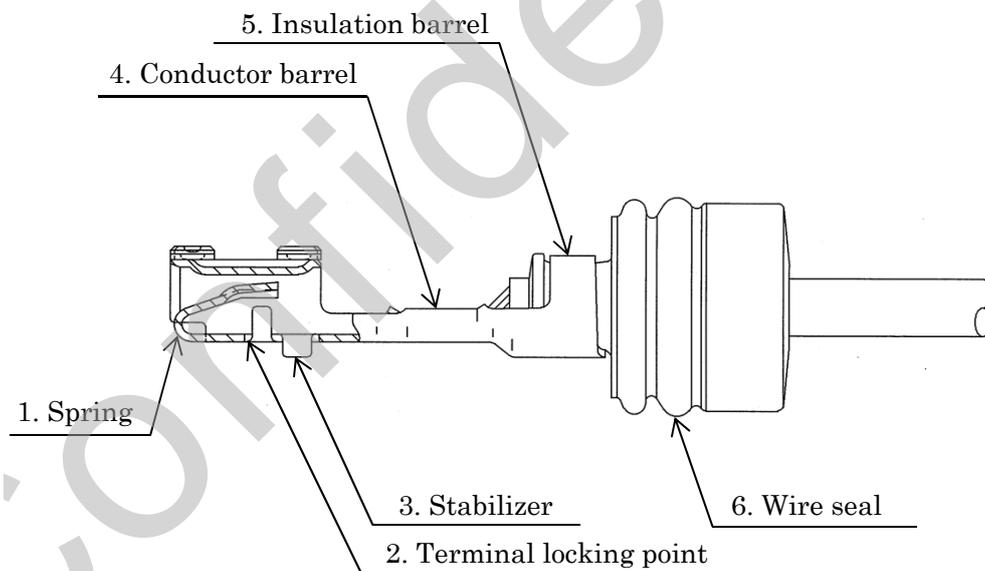
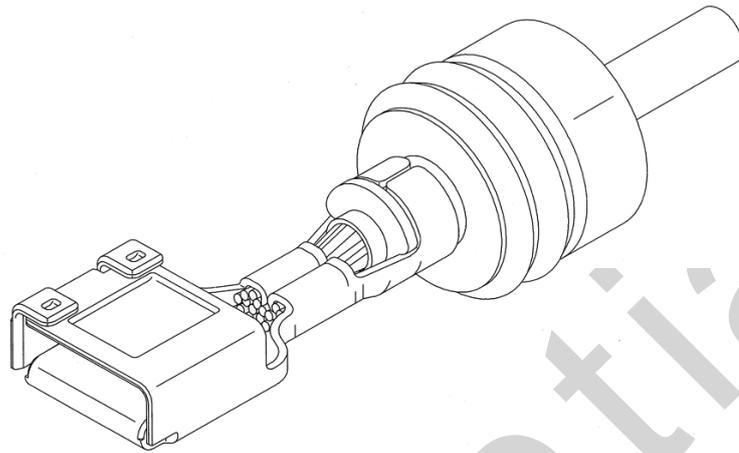
No.	Feature name	Function
1	Spring	Contact with a male terminal
2	Terminal locking point	Lock with a female housing
3	Stabilizer	Prevent terminal improper insertion to housing
4	Conductor barrel	Conductor crimping
5	Insulation barrel	Insulation crimping
6	Wire seal	Sealing between wire and housing

1-5. Female terminal (4.8 (187))



No.	Feature name	Function
1	Spring	Contact with a male terminal
2	Terminal locking point	Lock with a female housing
3	Stabilizer	Prevent terminal improper insertion to housing
4	Conductor barrel	Conductor crimping
5	Insulation barrel	Insulation crimping
6	Wire seal	Sealing between wire and housing

1-6. Female terminal (8.0 (312))



No.	Feature name	Function
1	Spring	Contact with a male terminal
2	Terminal locking point	Lock with a female housing
3	Stabilizer	Prevent terminal improper insertion to housing
4	Conductor barrel	Conductor crimping
5	Isulation barrel	Insulation crimping
6	Wire seal	Sealing between wire and housing

2. Handling of components

2-1. Inspection items at receiving

At the receiving of the parts, the inspection for the following items shall be conducted:

1) For terminal

- Foreign object or inappropriate product
- Burr, crack, deformation or flaw
- Discoloration, rust, unclean parts or peeling

2) For wire seal, dummy plug

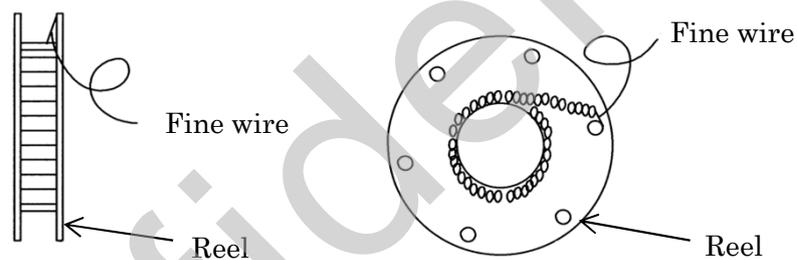
- Foreign object or inappropriate product
- Burr, crack, deformation or flaw

2-2. Parts transportation, storage and handling precautions

Recommend the following for transportation, storage and handling in order to avoid deformation or damage. The values to define the optimum environment and assembly conditions are available at our sales department.

1) For terminal

Fasten the terminal to the reel with a fine wire securely in order to prevent loosening. Method for transportation and storage of terminal reels are shown below.



Recommended method	Poor practice
<p>Maximum loading up to 2 boxes.</p>	<p>(Unprotected storage)</p>

Transportation

- Pay attention to handle paper-made reels not to damage.
- Packaging should prevent the impact on the components during transportation. Care shall be taken not to deform or damage the components during packing.
- Care shall be taken to avoid any harsh impact by dropping.

Storage

- Terminals (reels) should be stored in the box or the packaging in which they were shipped. Especially, parts should be protected from water, dust, oil and poisonous gas.
- Terminals (reels) should be stored indoors, away from direct sunlight.
- Terminals (reels) should be stored in an area avoiding high temperature and humidity.

2) For wire seal and dummy plug

Transportation

- Packaging should prevent the impact on the components during transportation. Care shall be taken not to deform or damage the components during packing.
- Care shall be taken to avoid any harsh impact by dropping.

Storage

- Parts should be stored in the box or the packaging in which they were shipped. Especially, parts should be protected from water, dust, oil and poisonous gas. Do not store in an unprotected condition.
- Parts should be stored indoors, away from direct sunlight.
- Parts should be stored in an area avoiding high temperature and humidity.

3. Terminal crimping specification

3-1. Crimping standard

Contact our sales department for the official crimping standard.

<NOTE>

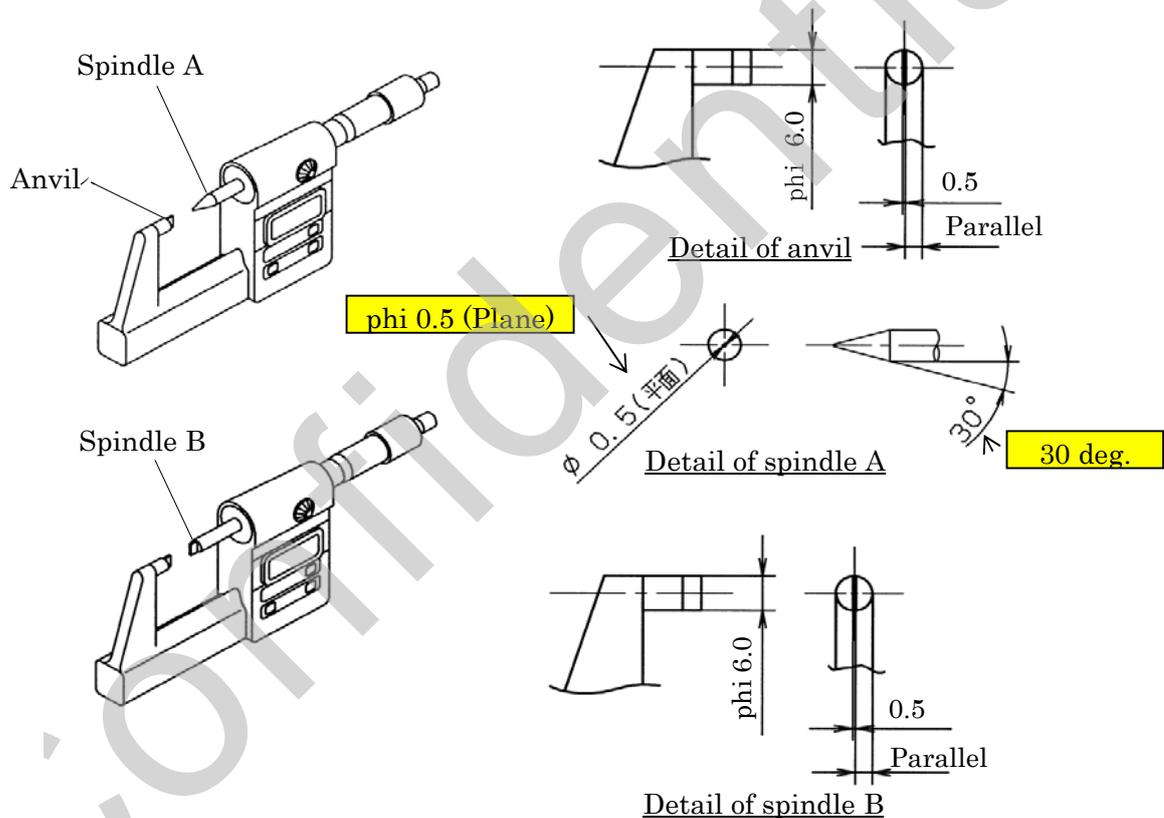
- Pay attention to crimp within the limit of the crimping standard.
If it is out of the standard, the function of the part may be affected because retention force of the crimping area and electrical resistance may not be satisfied.
- The above is limited to the case when Yazaki's crimping tool is used.

3-2. Measurement equipment and method for crimp height and width

3-2-1. Equipment

Micrometer shall be used for the measurement.

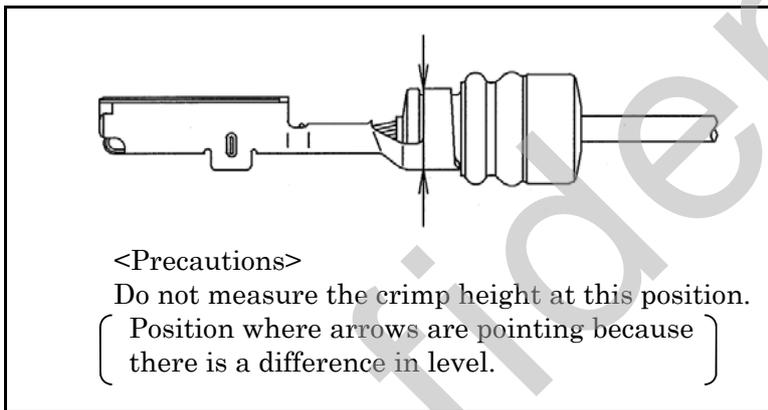
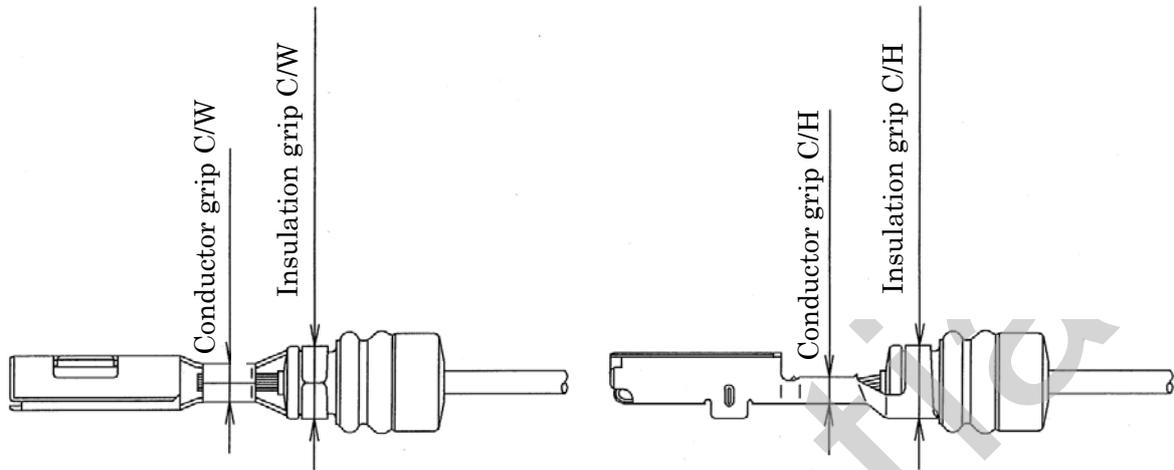
The recommended specifications of anvil and spindle of a micrometer are shown below.
The micrometer should be mounted on a stand during use.



Measuring area	Spindle to be used
Conductor grip crimp height	Spindle A
Conductor grip crimp width	Spindle B
Insulation grip crimp height	
Insulation grip crimp width	

3-2-2. Measurement method for crimp height and width

Measure the center of crimp height and width of both conductor grip and insulation grip.



C/H: Crimp Height
C/W: Crimp width

Conductor grip: Use a micrometer and measure as shown in the illustration below.



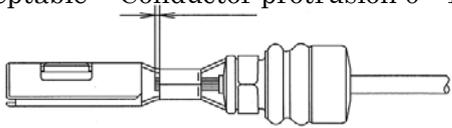
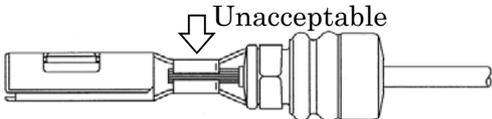
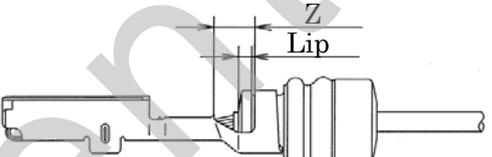
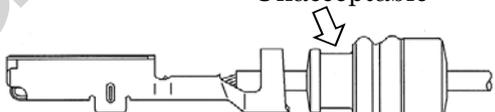
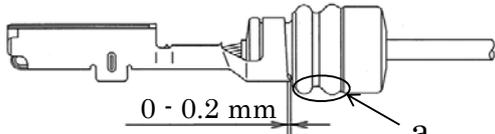
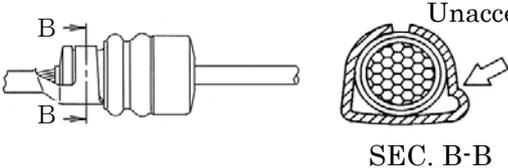
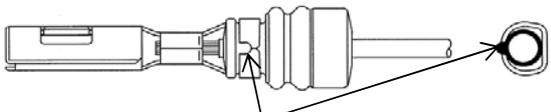
Insulation grip: Use a micrometer and measure as shown in the illustration below.

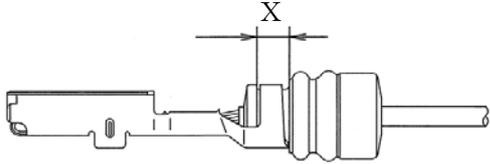
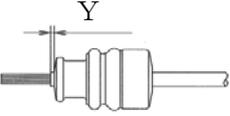
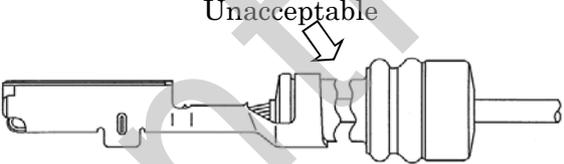
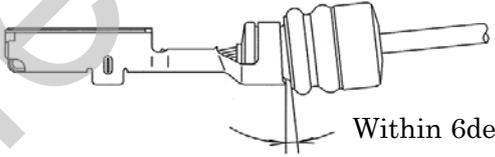


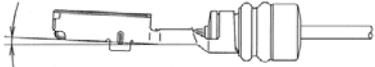
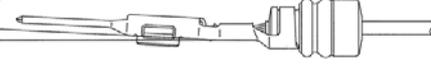
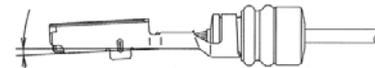
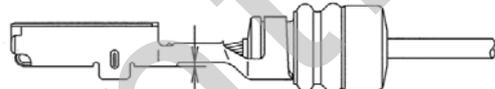
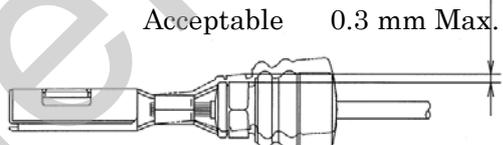
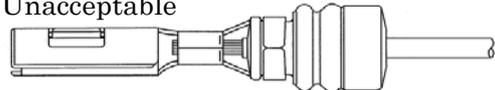
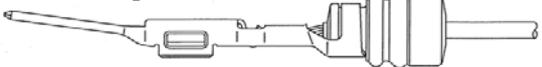
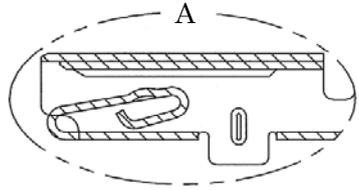
3-3. Crimping process description and check items

- Stripped wires should be crimped at once to avoid deforming wire strands. Storing and transportation of stripped wires should not be allowed.
 - Do not use terminals that have been deformed or damaged.
 - Assemble the terminals to housing after crimping. If immediate assembly is not available, protect the terminals with a clean plastic bag or a similar means.
 - During the crimping process, check the following items listed in the table. Crimp within indicated dimension in the table.
 - For using a new crimping machine or changing the crimping machine: Care shall be taken not to deform tab (thickness) and box (height) that affect terminal function.
- Confirm that there is no dimensional change before/after crimping by measuring the dimension.
- For the two reasons stated below, please attach the wire seal before stripping the wire insulation (See Attachment 8):
 - (1) If it is attached after stripping, the internal surface of the wire seal can get damaged and the sealing performance deteriorate.
 - (2) The conductor can get contaminated with the oil of the wire seal, which can cause failure in electrical conductivity.

Check points	Check items	
1. Wire	Insulation stripping 1) Normal condition 2) Diagonal cut conductor 3) Cut conductor 4) Flaw on conductor 5) Diagonal cut insulation 6) Damaged insulation	
2. Conductor grip (Male and Female)	1) Normal crimping conditions	Symmetrical with this
	2) Burr and twist	Unacceptable Unacceptable <p>Burr should not protrude from this line.</p>
	3) Conductor fray	Unacceptable <p>Terminal whose conductor is frayed shall not be used.</p>
	4) Bell-mouth	Acceptable with bell-mouth Unacceptable without R

Check points	Check items	
2. Conductor grip (Male and Female)	5) Top length of conductor	Acceptable  <p>Conductor protrusion 0 - 1.0</p>
	6) Clearance	Unacceptable  <p>Confirm no clearance, which allows the conductor to be seen, in conductor grip.</p>
	7) Insulation crimped by conductor barrel	Unacceptable 
3. Insulation grip (Male and Female)	1) Normal crimping condition	 <p>Confirm that the wire seal lip remains in the dimension 'Z' between the conductor and the insulation barrels.</p>
	2) Wire seal disengaged from insulation barrel	Unacceptable 
	3) Cut-off tab	 <p>Confirm no flaw in the area 'a'.</p>
	4) Buckling	 <p>Unacceptable</p> <p>SEC. B-B</p>
	5) Wire seal is pinched by insulation barrel	

Check points	Check items									
3. Insulation grip (Male and Female)	6) Wire seal position	 <p data-bbox="794 506 1353 568">Confirm that the insulation barrel remains within the dimension 'X'.</p>  <table border="1" data-bbox="1027 618 1337 757"> <thead> <tr> <th></th> <th>Y dimension</th> </tr> </thead> <tbody> <tr> <td>2.3II (090II)</td> <td>(0.7 mm)</td> </tr> <tr> <td>4.8 (187)</td> <td>(1.0 mm)</td> </tr> <tr> <td>8.0 (312)</td> <td>(1.2 mm)</td> </tr> </tbody> </table>		Y dimension	2.3II (090II)	(0.7 mm)	4.8 (187)	(1.0 mm)	8.0 (312)	(1.2 mm)
		Y dimension								
	2.3II (090II)	(0.7 mm)								
4.8 (187)	(1.0 mm)									
8.0 (312)	(1.2 mm)									
7) Scratch or cut in wire seal	 <p data-bbox="826 987 1209 1016">No scratch or cut is accepted.</p>									
8) Wire seal tilted	 <p data-bbox="1193 1160 1362 1189">Within 6deg.</p>									

Check points	Check items	
4. Terminal deformation due to crimping (Male and Female)	1) Bend up	1deg. Max.  1deg. Max. 
	2) Bend down	3deg. Max.  3deg. Max. 
	3) Step on the conductor grip	 Unacceptable
	4) Twist	Acceptable 0.3 mm Max.  Terminals with any deformation detected by
	5) Inappropriate terminal feeding	Unacceptable 
5. Terminal deformation due to crimping (Male)	Tab deformation	Unacceptable  Terminals with any deformation detected by
6. Terminal deformation due to crimping (Female)	1) Box deformation	 Normal condition  Unacceptable
	2) Deformation in the area 'A'	 Any deformation in an area 'A' is unacceptable.

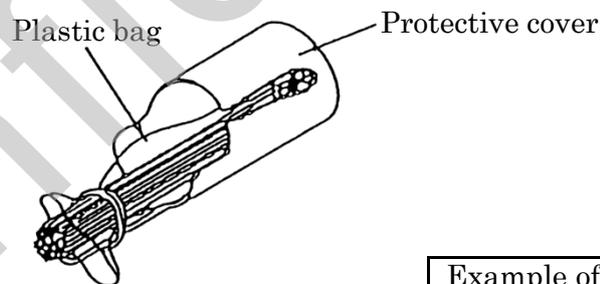
4. Handling of terminated wires

Insert the terminated wire to housing immediately after crimping.

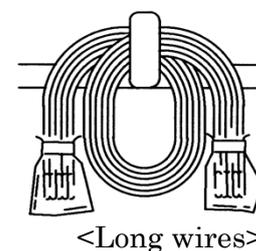
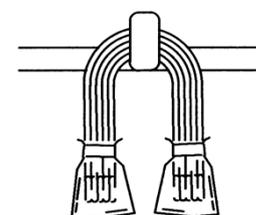
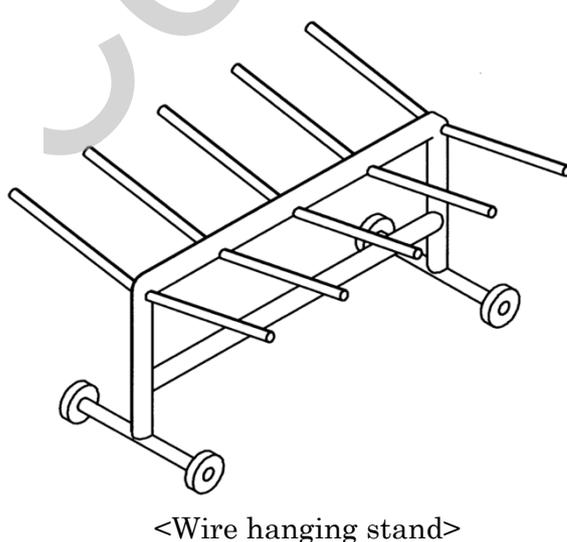
The following cares must be taken not to deform or damage the terminated wires during storage and transportation.

- The terminated wires should be bundled. The number of wires bundled together should be less than 100. Adjust the bundle size depending on the wire/terminal size. Bundles should be bound with elastic bands to prevent separation. If more than 100 wires are bundled together, deformation or damages may occur due to the weight of their own, or terminated wires are entangled with each other. Do not tap on the tips of the terminals when they are bundled.
- The terminated wires should be covered with a plastic bag to protect them from dust. During transportation and storage, use a protective cover over the plastic bag. Do not take the plastic bag or the protective cover off until right before insert to the housing.
- The terminated wire should be transported by a wire hanging stand or a covered container. Do not pile up the terminated wires.
- When hang up terminated wires on the wire hanging stand, care shall be taken not terminal tips to touch the ground.
- Do not throw the terminated wires during transportation.

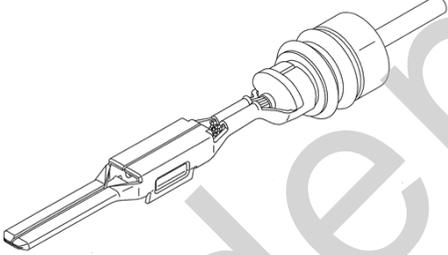
Example for handling of terminated wires



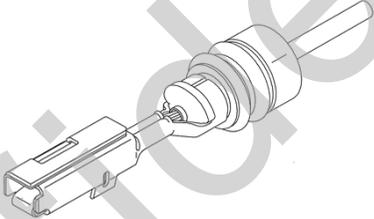
Example of wire hanging



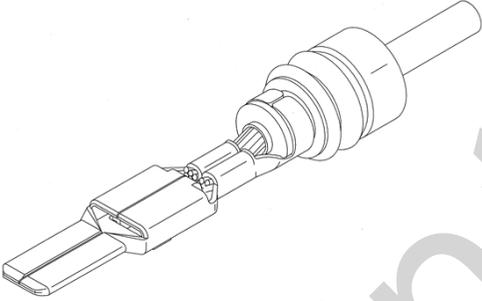
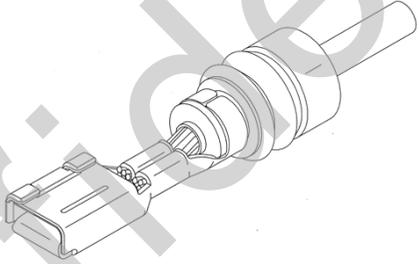
* Component list
Terminal
2.3II (090II) Type

Yazaki Part No. (Yazaki Part Name)	Configuration	Applicable wire size	Remarks	
7114-4025 2.3 II (090 II) SEALED TERMINAL MALE		AVSS 0.3 - AVS 0.5	Plating: Tin	
7114-4025-08 2.3 II (090 II) SEALED TERMINAL MALE			Plating: Gold	
7114-4028-08 2.3 II (090 II) SEALED TERMINAL MALE			Plating: Gold	
7114-4026 2.3 II (090 II) SEALED TERMINAL MALE			AVS 0.85 - AVS 1.25	Plating: Tin
7114-4029-08 2.3 II (090 II) SEALED TERMINAL MALE				Plating: Gold
7114-4027 2.3 II (090 II) SEALED TERMINAL MALE			AVSS 2.0	Plating: Tin

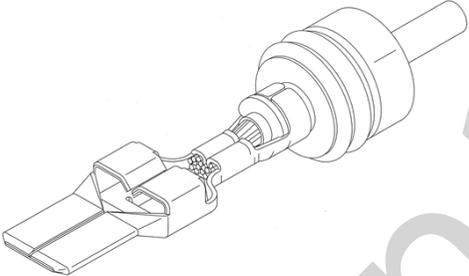
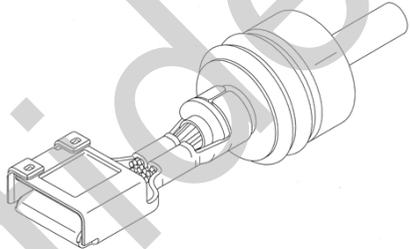
2.3II (090II) Type

Yazaki Part No. (Yazaki Part Name)	Configuration	Applicable wire size	Remarks
7116-4025 2.3 II (090 II) SEALED TERMINAL FEMALE		AVSS 0.3 - AVS 0.5	Plating: Tin
7116-4025-08 2.3 II (090 II) SEALED TERMINAL FEMALE			Plating: Gold
7116-4028-08 2.3 II (090 II) SEALED TERMINAL FEMALE			Plating: Gold
7116-4542-02 2.3 II (090 II) SEALED TERMINAL FEMALE (LOW INSERTION FORCE TYPE)			Plating: Tin (Low insertion force type)
7116-5044-02 2.3 II (090 II) SEALED TERMINAL FEMALE (LOW INSERTION FORCE TYPE)			Plating: Tin
7116-4026 2.3 II (090 II) SEALED TERMINAL FEMALE			AVS 0.85 - AVS 1.25
7116-4029-08 2.3 II (090 II) SEALED TERMINAL FEMALE		Plating: Gold	
7116-5045-02 2.3 II (090 II) SEALED TERMINAL FEMALE (LOW INSERTION FORCE TYPE)		Plating: Tin	
7116-4027 2.3 II (090 II) SEALED TERMINAL FEMALE		AVSS 2.0	Plating: Tin
7116-5046-02 2.3 II (090 II) SEALED TERMINAL FEMALE (LOW INSERTION FORCE TYPE)			Plating: Tin
7116-4627-02 2.3 II (090 II) SEALED TERMINAL FEMALE		CHFS 1.5 - AVSS 2.0	Plating: Tin
7116-5037-02 2.3 II (090 II) SEALED TERMINAL FEMALE (LOW INSERTION FORCE TYPE)			Plating: Tin
7116-6804-02 2.3 II (090 II) SEALED TERMINAL FEMALE (LOW INSERTION FORCE TYPE)		CIVUS 0.13	Plating: Tin
7116-6804-08 2.3 II (090 II) SEALED TERMINAL FEMALE (LOW INSERTION FORCE TYPE)			Plating: Gold

4.8 (187) Type

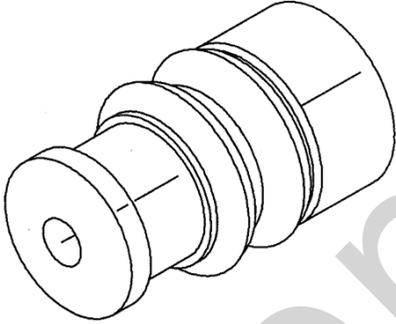
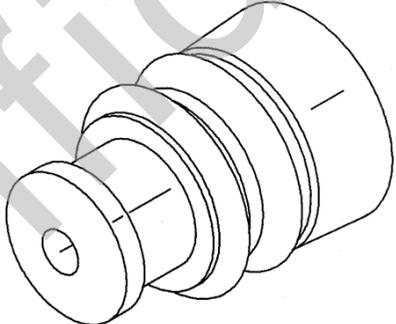
Yazaki Part No. (Yazaki Part Name)	Configuration	Applicable wire size	Remarks
7114-4035 4.8(187) SEALED TERMINAL MALE		AVSS 0.3 - AVS 0.5	Plating: Tin
7114-4036 4.8(187) SEALED TERMINAL MALE		AVS 0.85 - AVS 1.25	Plating: Tin
7114-4037 4.8(187) SEALED TERMINAL MALE		AVS 2.0 - AVS 3.0	Plating: Tin
7116-4035 4.8(187) SEALED TERMINAL FEMALE		AVSS 0.3 - AVS 0.5	Plating: Tin
7116-4036 4.8(187) SEALED TERMINAL FEMALE		AVS 0.85 - AVS 1.25	Plating: Tin
7116-4037 4.8(187) SEALED TERMINAL FEMALE		AVS 2.0 - AVS 3.0	Plating: Tin

8.0 (312) Type

Yazaki Part No. (Yazaki Part Name)	Configuration	Applicable wire size	Remarks
7114-6045 8.0(312) SEALED TERMINAL MALE		AVS 0.5 - AVS 1.25	Plating: Tin
7114-6046 8.0(312) SEALED TERMINAL MALE		AVS 2.0 - AVS 3.0	Plating: Tin
7114-6047 8.0(312) SEALED TERMINAL MALE		AVS 5.0 - AV 8.0	Plating: Tin
7116-6045 8.0(312) SEALED TERMINAL FEMALE		AVS 0.5 - AVS 1.25	Plating: Tin
7116-6046 8.0(312) SEALED TERMINAL FEMALE		AVS 2.0 - AVS 3.0	Plating: Tin
7116-6047 8.0(312) SEALED TERMINAL FEMALE		AVS 5.0 - AV 8.0	Plating: Tin

Wire seal
2.3II (090II) Type

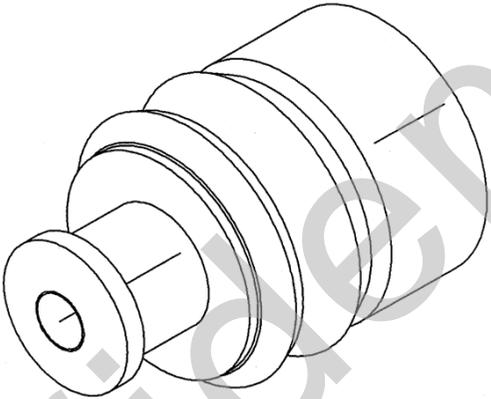
(1) High reliability silicone type

Yazaki Part No. (Yazaki Part Name)	Configuration	Outer diameter of applicable wire	Remarks
7158-3003-90 2.3II (090II) 5mm pitch RUBBER STOPPER		phi1.4-phi1.8	Color: Blue * (1)
7158-3004-40 2.3II (090II) 5mm pitch RUBBER STOPPER		phi2.0-phi2.2	Color: Gray
7158-3005-80 2.3II (090II) 5mm pitch RUBBER STOPPER		phi2.5-phi2.7	Color: Brown * (2)
7158-3006-90 2.3II (090II) 6mm pitch RUBBER STOPPER		phi1.4-phi1.8	Color: Dark blue * (1)
7158-3007-10 2.3II (090II) 6mm pitch RUBBER STOPPER		phi2.0-phi2.2	Color: Dark gray
7158-3008-80 2.3II (090II) 6mm pitch RUBBER STOPPER		phi2.5-phi2.7	Color: Dark brown * (2)
7158-3893-30 2.3II (090II) 6mm pitch RUBBER STOPPER		phi0.81-phi0.95	Color: Black * (3)

- * --- (1) For wires with nominal 0.3 and phi above 1.8 of standard outer diameter of finished wire, care shall be taken for the operation workability.
 (2) For wires with phi 2.7 of standard outer diameter of finished wire, care shall be taken for the operation workability.
 (3) For wires with nominal 0.13, care shall be taken for the operation workability.

4.8 (187) Type

(1) High reliability silicone type

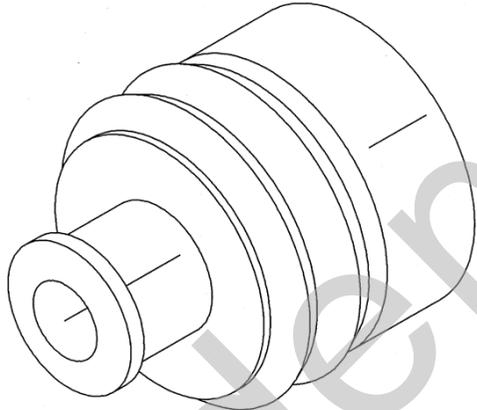
Yazaki Part No. (Yazaki Part Name)	Configuration	Outer diameter of applicable wire	Remarks
7158-3014-90 4.8(187) RUBBER STOPPER		phi1.4-phi1.8	Color: Dark blue * (1)
7158-3015-10 4.8(187) RUBBER STOPPER		phi2.0-phi2.7	Color: Dark gray * (2)
7158-3016-80 4.8(187) RUBBER STOPPER		phi2.9-phi3.1	Color: Dark brown
7158-3017 4.8(187) RUBBER STOPPER		phi3.6-phi3.8	Color: Black * (3)

* --- (1) For wires with nominal 0.3 and phi above 1.8 of standard outer diameter of finished wire, care shall be taken for the operation workability.

(2) For wires with phi 2.7 of standard outer diameter of finished wire, care shall be taken for the operation workability.

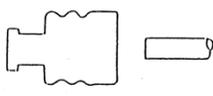
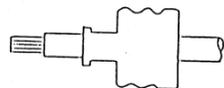
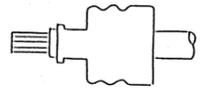
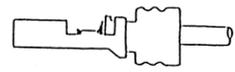
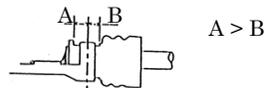
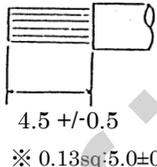
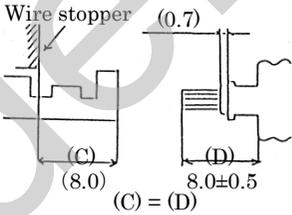
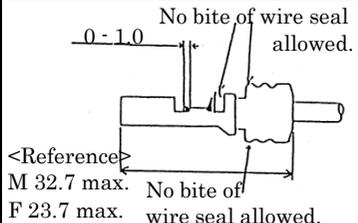
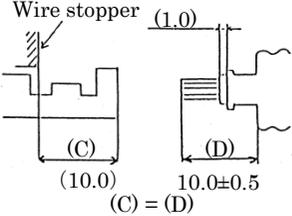
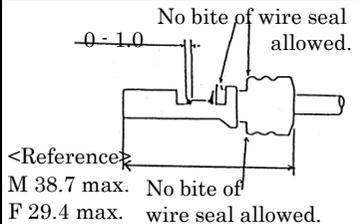
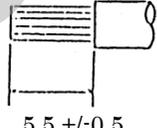
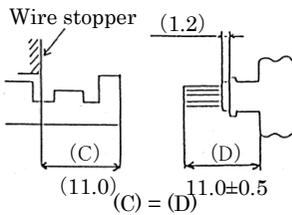
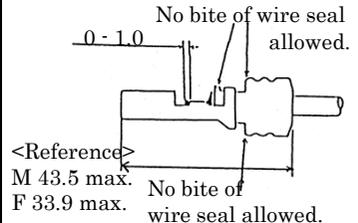
(3) For wires with phi above 3.7 of standard outer diameter of finished wire, care shall be taken for the operation workability.

8.0 (312) Type
 (1) High reliability silicone type

Yazaki Part No. (Yazaki Part Name)	Configuration	Outer diameter of applicable wire	Remarks
<p>7158-3022-80 8.0(312) RUBBER STOPPER</p>		<p>phi3.6 - phi3.8</p>	<p>Color: Dark brown * (3)</p>
<p>7158-3023 8.0(312) RUBBER STOPPER</p>		<p>phi4.4 - phi4.6</p>	<p>Color: Black * (4)</p>

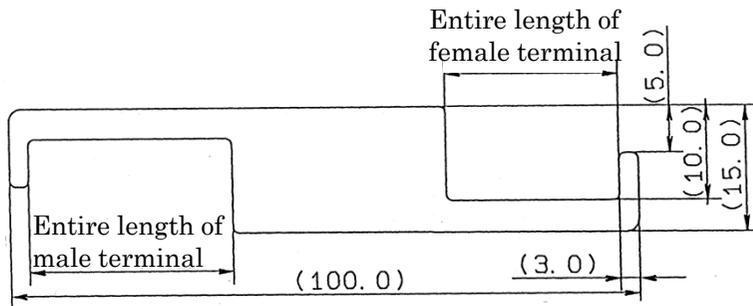
* --- (3) For wires with phi above 3.7 of standard outer diameter of finished wire, care shall be taken for the operation workability.
 (4) For wires with phi above 4.5 of standard outer diameter of finished wire, care shall be taken for the operation workability.

Operation of crimping and insertion to housing

		(1) Wire seal insertion	(2) Strip	(3) Alignment of wire seal	(4) Wire seal, wire crimping
Operation					
Precautions		Wire shall be inserted to wire seal prior to wire strip.		Hold the conductor to the wire stopper at crimping so as to satisfy the specification below (C=D).	Wire seal shall be crimped at this position since it may affect exposed length of the wire seal from the housing. (between the center and back end) 
Items to be controlled			Wire strip length	Wire seal position	Exposed length of conductor, Crimp position of wire seal, Entire length
		2.3II (090II)	 4.5 +/-0.5 ※ 0.13sq:5.0±0.5	 Wire stopper (0.7) (C) (8.0) (D) 8.0±0.5 (C) = (D)	 0 - 1.0 No bite of wire seal allowed. <Reference> M 32.7 max. No bite of wire seal allowed. F 23.7 max.
		4.8 (187)	 5.5 +/-0.5	 Wire stopper (1.0) (C) (10.0) (D) 10.0±0.5 (C) = (D)	 0 - 1.0 No bite of wire seal allowed. <Reference> M 38.7 max. No bite of wire seal allowed. F 29.4 max.
8.0 (312)	 5.5 +/-0.5	 Wire stopper (1.2) (C) (11.0) (D) 11.0±0.5 (C) = (D)	 0 - 1.0 No bite of wire seal allowed. <Reference> M 43.5 max. No bite of wire seal allowed. F 33.9 max.		

Inspection jig for entire length

(Reference configuration)



Type	Entire length of male terminal	Entire length of female terminal
2.3II (090II)	32.7 \pm 0.01	23.7 \pm 0.01
4.8(187)	38.7 \pm 0.01	29.4 \pm 0.01
8.0(312)	43.5 \pm 0.01	33.9 \pm 0.01

Measurement method

(Measure shall be taken from the end of terminal box, not from the tip of the spring.)

