LOC	DIST
CM	00

REVISIONS

P	LTR	DESCRIPTION	DATE	DWN	APVD
	S	REVISED PER ECR-20-000541	15MAY2020	PC	SW

YES	71.12[2.800]	28	6-644511-8
YES	68.58[2.700]	27	6-644511-7
YES	66.04[2.600]	26	6-644511-6
YES	63.50[2.500]	25	6-644511-5
YES	60.96[2.400]	24	6-644511-4
YES	58.42[2.300]	23	6-644511-3
YES	55.88[2.200]	22	6-644511-2
YES	53.34[2.100]	21	6-644511-1
YES	50.80[2.000]	20	6-644511-0
YES	48.26[1.900]	19	5-644511-9
YES	45.72[1.800]	18	5-644511-8
YES	43.18[1.700]	17	5-644511-7
YES	40.64[1.600]	16	5-644511-6
YES	38.10[1.500]	15	5-644511-5
YES	35.56[1.400]	14	5-644511-4
YES	33.02[1.300]	13	5-644511-3
YES	30.48[1.200]	12	5-644511-2
YES	27.94[1.100]	11	5-644511-1
YES	25.40[1.000]	10	5-644511-0
YES	22.86[.900]	9	4-644511-9
YES	20.32[.800]	8	4-644511-8
YES	17.78[.700]	7	4-644511-7
YES	15.24[.600]	6	4-644511-6
YES	12.70[.500]	5	4-644511-5
YES	10.16[.400]	4	4-644511-4
YES	7.62[.300]	3	4-644511-3
YES	5.08[.200]	2	4-644511-2
YES	12.70[.500]	5	3-644511-5
NO	71.12[2.800]	28	~~2-644511-8~~
NO	68.58[2.700]	27	~~2-644511-7~~
NO	66.04[2.600]	26	~~2-644511-6~~
NO	63.50[2.500]	25	~~2-644511-5~~
NO	60.96[2.400]	24	~~2-644511-4~~
NO	58.42[2.300]	23	~~2-644511-3~~
NO	55.88[2.200]	22	~~2-644511-2~~
NO	53.34[2.100]	21	~~2-644511-1~~
NO	50.80[2.000]	20	~~2-644511-0~~
NO	48.26[1.900]	19	~~1-644511-9~~
NO	45.72[1.800]	18	~~1-644511-8~~
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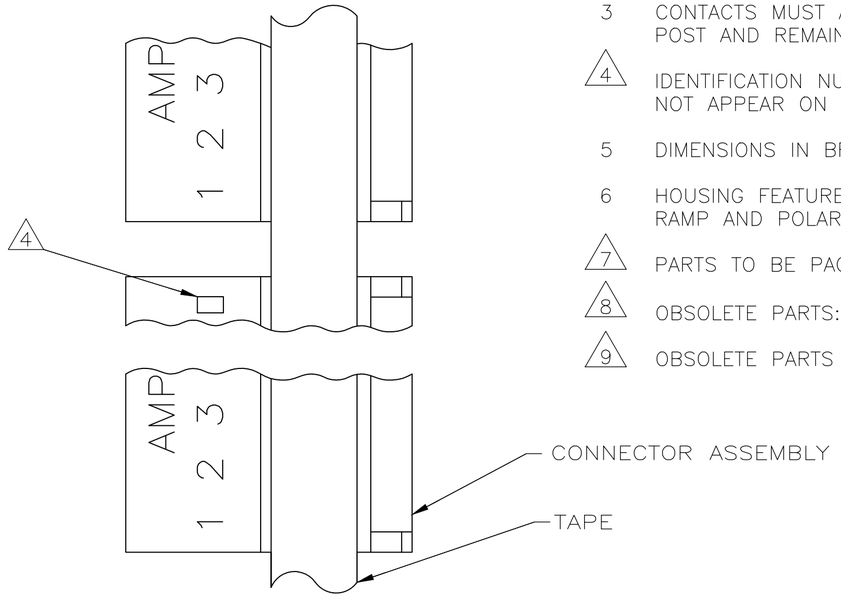
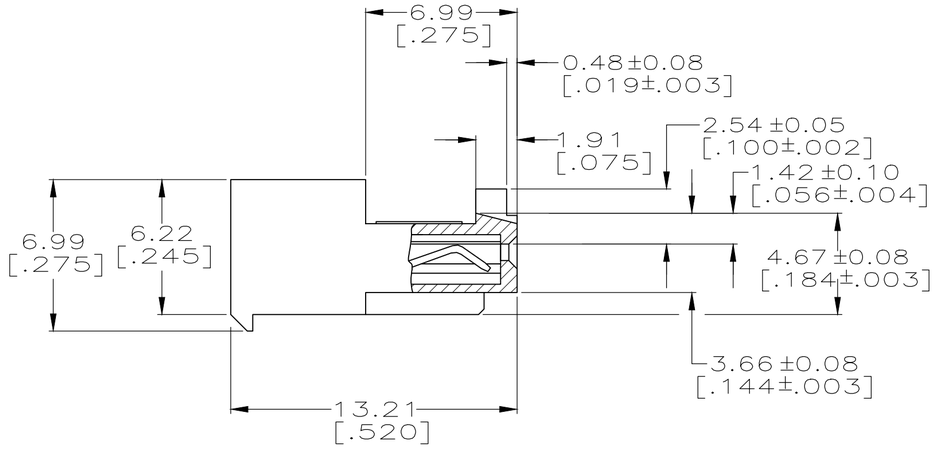
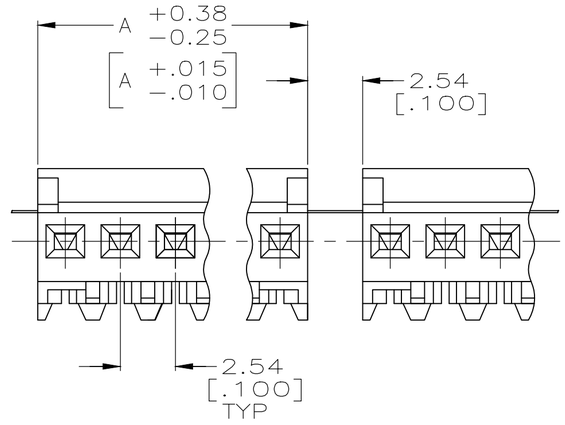
NO	12.70[.500]	5	~~644511-5~~
NO	10.16[.400]	4	~~644511-4~~
NO	7.62[.300]	3	~~644511-3~~
NO	5.08[.200]	2	~~644511-2~~
LEADFREE	DIM A	NO. OF CIRCUITS	PART NO.

7 8 SUPERSEDED 9 SUPERSEDED

1471-9 (3/11)







1. MATERIAL: CONNECTOR – NYLON UL94-V2 (RED)
CONTACTS – 0.30[.012] THICK COPPER ALLOY
BRIGHT TIN-LEAD 0.00203[.000080] MIN. THICK
FOR CONTACTS 644511-2 THRU 2-644511-8.
MATTE WHISKER MITIGATED TIN PLATE 0.00203[.000080] MIN. THICK
OVER NICKEL UNDERPLATE FOR CONTACTS 3-644511-5 AND 4-644511-2
THRU 6-644511-8.

2. CONTACTS ACCEPT 22 AWG WIRE WITH 1.52[.060] MAX INSULATION DIAMETER.

3. CONTACTS MUST ACCEPT 0.64±0.03[.025±.001] POST AND REMAIN LOCKED IN POSITION.

4. IDENTIFICATION NUMBER FOR LAST CIRCUIT MAY NOT APPEAR ON ALL ASSEMBLIES.

5. DIMENSIONS IN BRACKETS ARE IN INCHES.

6. HOUSING FEATURES ARE: CLOSED END WITH LOCKING RAMP AND POLARIZING TAB.

7. PARTS TO BE PACKAGED ON CORRUGATED PLASTIC REEL.

8. OBSOLETE PARTS: OBSOLETE CIS STREAMLINING PER D.RENAUD/D.SINISI

9. OBSOLETE PARTS

THIS DRAWING IS A CONTROLLED DOCUMENT.

DIMENSIONS: mm [INCHES]

TOLERANCES UNLESS OTHERWISE SPECIFIED:
0 PLC ±
1 PLC ±
2 PLC ±
3 PLC ± 0.13 [.005]
4 PLC ±
ANGLES ±

MATERIAL 1

FINISH 1

DWN	S. CARPENTER	08AUG2003
CHK	D. BOSSI	08AUG2003
APVD	D. BOSSI	08AUG2003

PRODUCT SPEC 108-1050

APPLICATION SPEC 114-1019

WEIGHT

CUSTOMER DRAWING

TE Connectivity

NAME MTA-100 CONNECTOR ASSEMBLY, 22 AWG, STANDARD, TAPE MOUNTED

SIZE	CAGE CODE	DRAWING NO	RESTRICTED TO
A2	00779	C-644511	–

SCALE	SHEET	REV
5:1	1 OF 1	S

644511

NOTE
All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of ±0.13 [±.005] and angles have a tolerance of ±2°. Figures and illustrations are for identification only and are not drawn to scale.

1. INTRODUCTION

This specification covers the requirements for application of wire to TE Connectivity MTA (Mass Termination Assembly) 100 connectors. These requirements are applicable to hand or automatic machine application tools. Specific wire and insulation ranges relative to the products covered in this specification are 28-22 AWG tip-plated solid, concentric fused stranded and concentric stranded wire with standard PVC thermoplastic insulation having a maximum insulation diameter of 1.52 mm [.060 in.] when terminated one position at a time, or 1.27 mm [.050 in.] when mass terminating. Stranded wire approved by TE engineering per Underwriters Laboratory Inc. (UL) Style 1007 and 1061 is 24-22 AWG 7 and 19 stranded, and 28-26 AWG 7 stranded. Other wire sizes, styles, and insulation materials shall be approved by TE. See Figure 10 for TE approved wires.

When corresponding with TE Personnel, use the terminology provided in this specification to facilitate your inquiries for information. Basic terms and features of this product are provided in Figure 1.

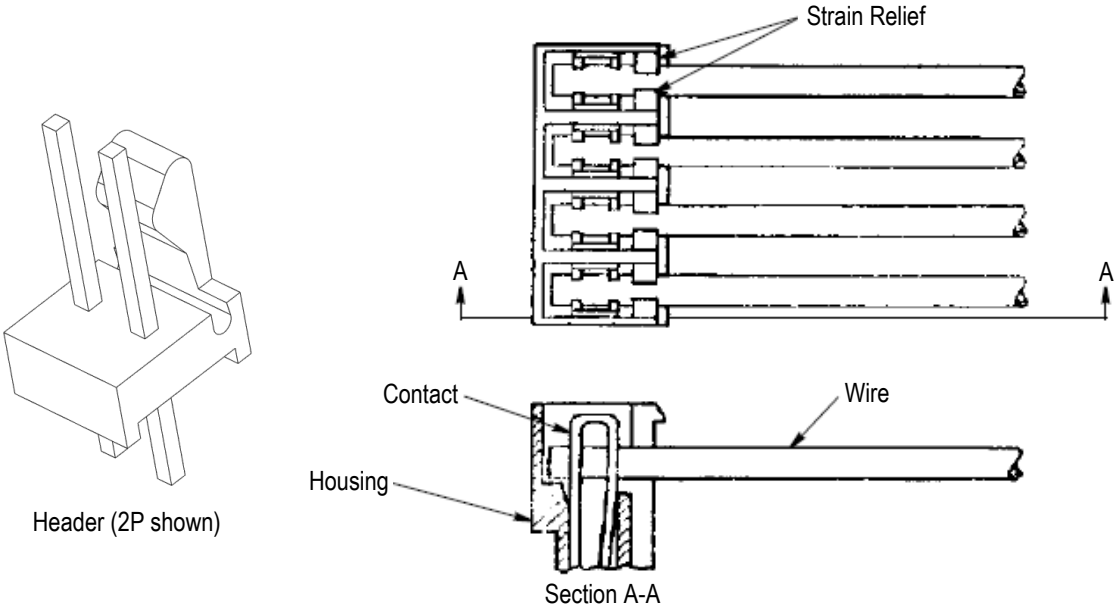


Figure 1

2. REFERENCE MATERIAL

2.1. Revision Summary

- Updated Paragraph 3.2.B and added Figure 2.
- Added Section 4.
- Added Figure 10

2.2. Customer Assistance

Reference Product Base Part Number 640440 is representative of MTA 100 connectors. Use of these numbers will identify the product line and help you to obtain product and tooling information when visiting www.te.com or calling the number at the bottom of page 1.

2.3. Drawings

Customer drawings for product part numbers are available from www.te.com. Information contained in the customer drawing takes priority.

2.4. Specifications

Product Specification 108-1050 provides product performance and test results.

3. REQUIREMENTS

3.1. Safety

Do not stack product shipping containers so high that the containers buckle or deform.

3.2. Storage

A. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the product material.

B. Shelf Life

The product should remain in the shipping containers until ready for use to prevent deformation to components. The product should be used on a first in, first out basis to avoid storage contamination that could adversely affect performance.

When exposed to atmospheric environments for prolonged periods of time, deformation of the plastic during soldering is possible. To prevent plastic deformation, bake in oven at 85°C for 4 hours prior to soldering. Deformation not in the mating area is not detrimental to product performance. See Figure 2 for image of allowable deformation.

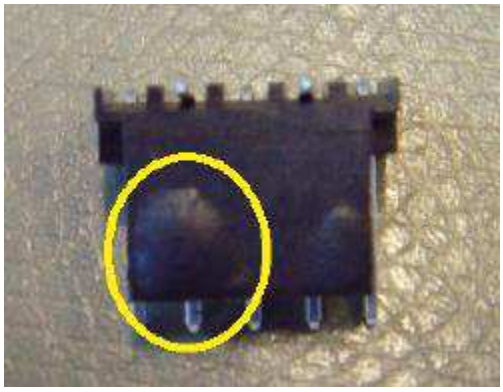


Figure 2

C. Chemical Exposure

Do not store product near any chemical listed below as they may cause stress corrosion cracking in the material.

Alkalies	Ammonia	Citrates	Phosphates Citrates	Sulfur Compounds
Amines	Carbonates	Nitrites	Sulfur Nitrites	Tartrates

3.3. Wire Termination

After termination, wire shall meet the requirements specific in Figure 3.

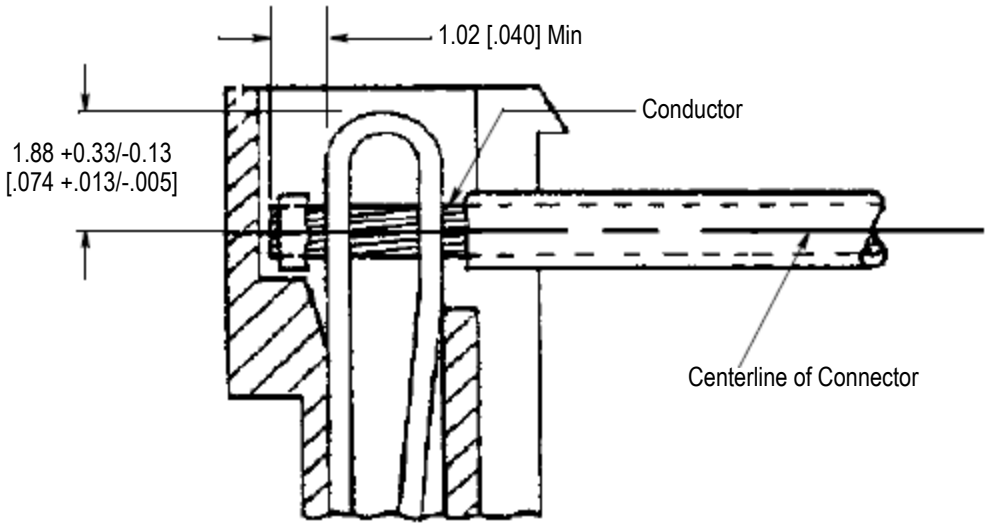


Figure 3

3.4. Contact Damage

There shall be no evidence of physical damage or distortion to any portion of the contact after wire termination.

3.5. Housing Damage

There shall be no cracks, breaks, or other visible damage to the housing due to wire termination.

Skiving of plastic on the inside wall of the housing cavity is permissible, provided that conditions specified in the previous statement are met.

3.6. Broken Strands

There shall be no broken strands in the conductor after termination.

3.7. Exposed Conductor

Exposed conductors shall not exceed the limits specified in Figure 4 after termination.

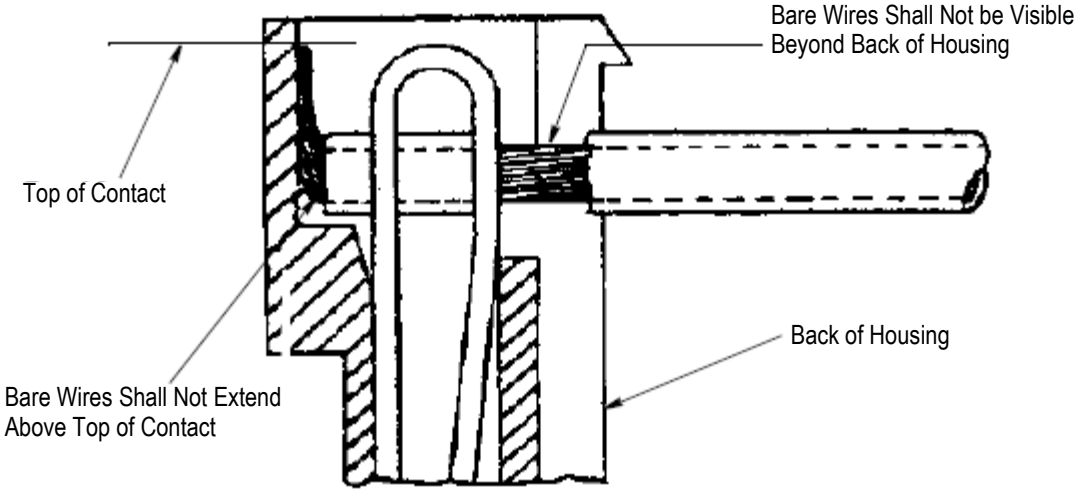


Figure 4

3.8. Conductor Insulation

Conductor insulation shall be contained within the confines of the insulation strain relief as indicated in Figure 5.

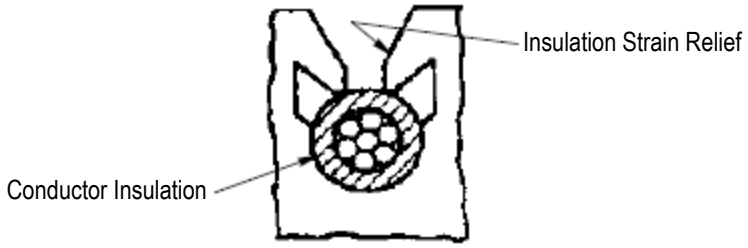


Figure 5

CONNECTOR ASSEMBLY PART NUMBERS†	WIRE SIZE (AWG)
640440	22
640441	24
640442	26
640443	28

†For other connector styles and plating types, consult TE Engineering.

Figure 6

3.9. Header Application

Standard temperature headers are recommended for solder dip, hand solder, or concentrated heat applications. They are not recommended for applications requiring preheating of the assembly.

High temperature headers may be used in similar applications as standard temperature headers and are also recommended for wave solder and infrared reflow solder processes. Temperature ratings for high temperature headers are listed in Figure 7. For solderability and heat resistance requirements, see Product Specification 108-1050.

Position	Temperature Rating (maximum)
2P – 12P	280°C
13P – 18P	235°C

Figure 7: Temperature Rating of High Temperature Headers

4. TOOLING

Applicators contain the tooling for feeding and crimping strip-form terminals. Automatic machines provide the power to operate the applicator. See Figure 9 for representative images.

Tooling information for product part numbers is available from www.te.com or by calling the Product Information Center at the number at the bottom of page 1.

CAUTION
Tool life may be significantly reduced when crimping comparable steel/nickel plated steel terminals.

4.1. Applicators

Applicators for product part numbers are available from the Applicator Search Portal on www.te.com or by calling the Product Information Center at the bottom of page 1.

4.2. Hand Tools

Hand tools for product part numbers are available from the Hand Tool Search Portal on www.te.com or by calling the Product Information Center at the bottom of page 1.

Ocean Applicator

Automatic Machine

Hand Tool Assembly

Figure 8

UL WIRE STYLE	WIRE WALL THICKNESS	TE APPROVED WIRE SIZE (AWG)			
		28	26	24	22
UL 1007 PVC Insulation	0.38 [.015]	✓	✓	✓	✓
UL 1061 Semi-Rigid PVC Insulation	0.23 [.009]	✓	✓	✓	✓
UL 1095 Semi-Rigid PVC Insulation	0.31 [.012]			✓	
UL 1371 TEFLON Insulation - TFE	0.15 [.006]		✓		✓
UL 1429 Irradiated PVC – X.L.P.V.C.	0.25 [.010]	✓	✓	✓	✓
UL 2464 PVC	0.33 [.013]		✓	✓	
UL 3265 Irradiated Polyethylene – X.L.P.E.	0.25 [.010]			✓	✓
UL 3266 Irradiated Polyethylene – X.L.P.E.	0.38 [.015]			✓	✓
MIL-W-16878, Type B-PVC Insulation	0.25 [.010]				✓
UL 1213 TEFLON Insulation – TFE	0.25 [.010]				✓

Figure 10