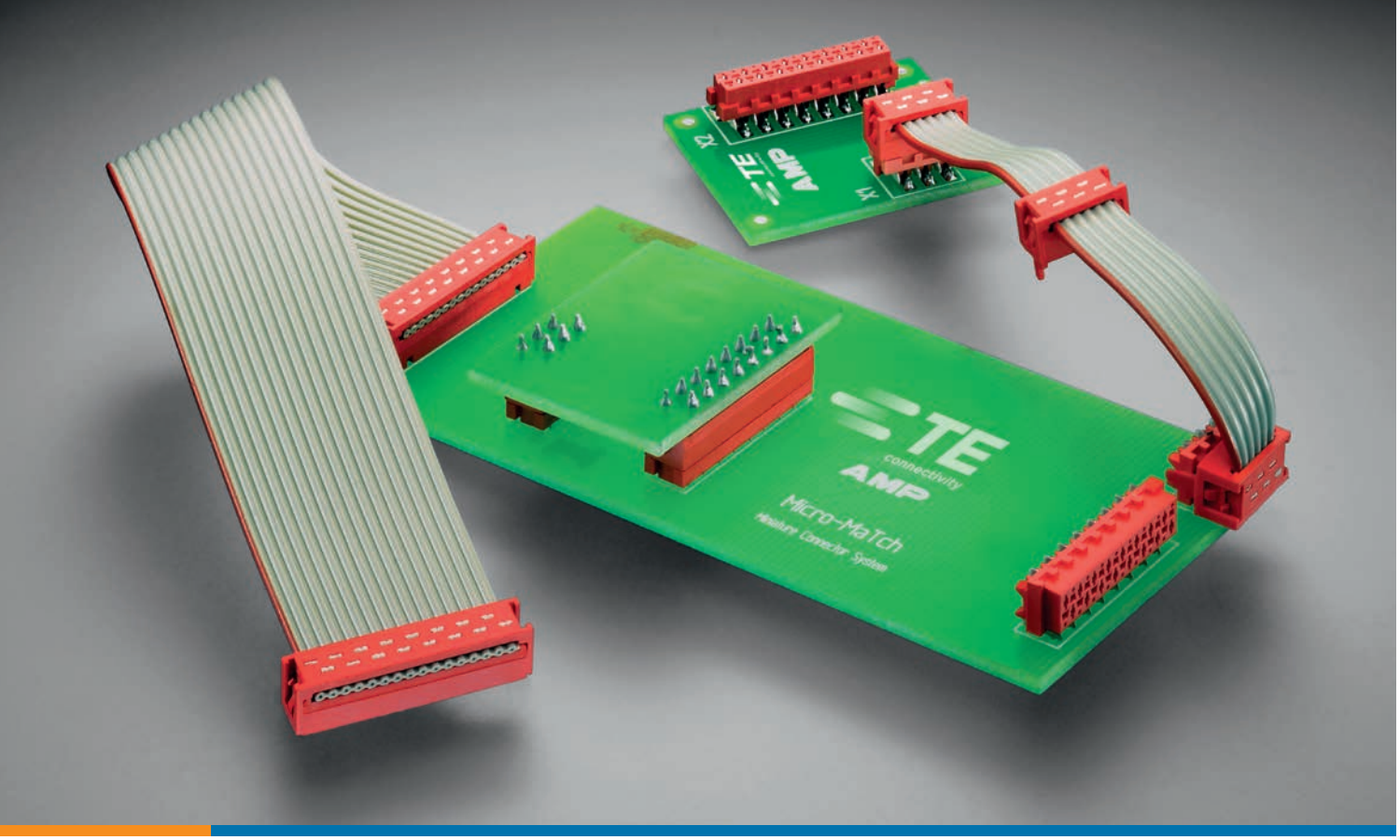


Quick Reference Guide
.050 CENTERLINE MICRO-MATCH CONNECTOR SERIES

The TE Connectivity (TE) Micro-MaTch connector family, with its contact spacing of 1.27 mm, offers a variety of wire-to-board and board-to-board interconnections. The Micro-MaTch contact helps prevent fretting corrosion, the traditional failure mode in tin-plated connections. Relative movements caused by vibrations/thermal expansion between male and female contacts are absorbed by an additional positioning spring in the female part. By preventing movements on the contact spot, a gas tight connection can make the Micro-MaTch contact spring system fretting corrosion resistant.

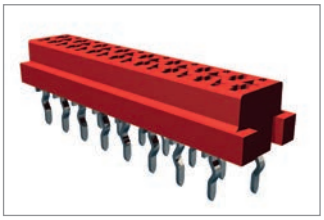
Features and Benefits

- Wire connectors supplied on-tape and suitable for mass termination of 28 AWG [0.08 mm2 to 0.09 mm2] ribbon cable
- Tin plated contact design
- Gas tight connections
- Fretting corrosion resistant
- Full range of application tooling from hand tool to fully automated equipment
- Wire to Board, and Board to Board Interconnection system

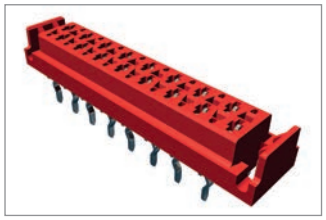
Product Applications

- Production & Material Handling equipment
- Control Units
- Robots & Motors
- Central Heating Units
- Car Radios
- Navigation Systems
- Dashboard Systems
- Base Stations
- Set Top Boxes
- Audio equipment

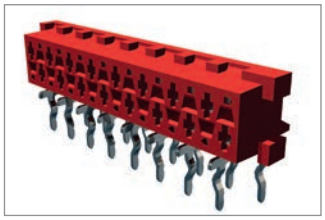
MICRO-MATCH PRODUCT PORTFOLIO



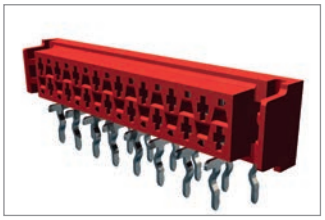
215079
Female-on-Board Connector Top Entry



338068
Female-on-Board Connector Top Entry with Latches



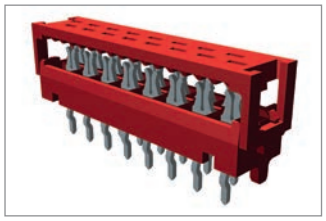
215460
Female-on-Board Connector Side Entry



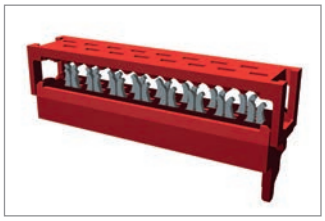
338070
Female-on-Board Connector Side Entry with Latches



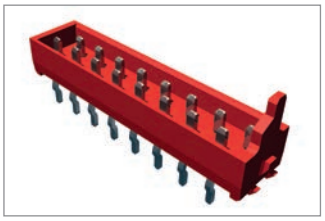
338095 & 338096 or 338097 (COSI) Crimp on Snap in (COS) Connector



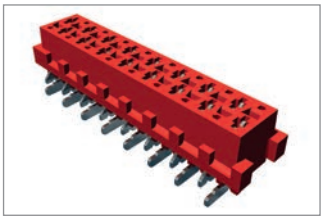
215570
Paddle Board Connector



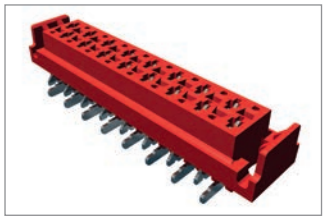
215083
Male-on-Wire Connector



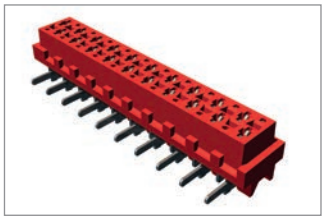
215464
Male-on-Board Connector



188275
Female-on-Board Connector Surface Mount Device (SMD)



338069
Female-on-Board Connector Top Entry SMD with Latches



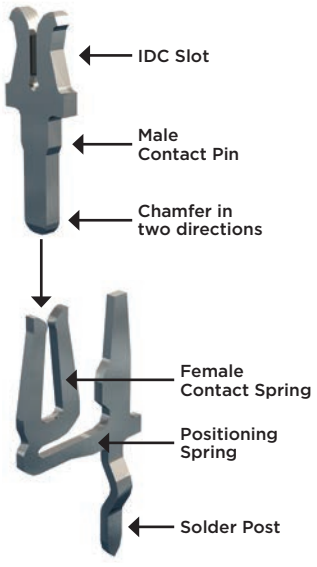
188431
Female-in-Board SMD Connector

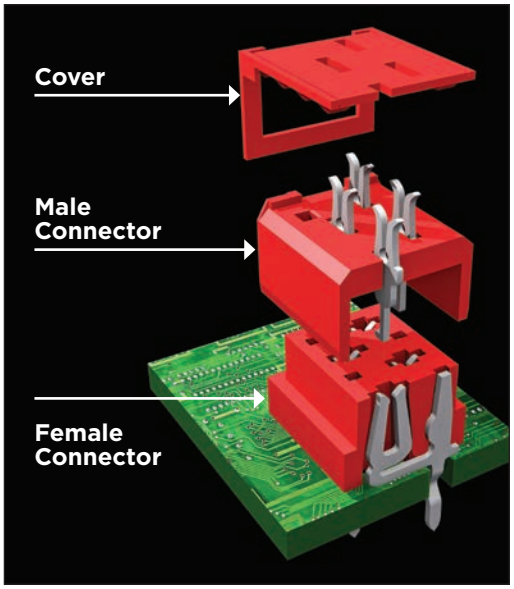


338728
Male SMD Connector

HOW MICRO-MATCH CONNECTORS WORK

The Micro-MaTch connector design helps prevent fretting corrosion which is the traditional failure mode in tin plated connections. Due to an additional positioning spring in the female part, relative movements caused by vibrations and thermal expansion between male and female contacts are absorbed. By preventing movements on the contact spot, a gas tight connection is made. This contact spring system featuring the positioning spring, compensates positional tolerances and provides the high contact force required for tin plated contact systems. The Micro-MaTch contact spring system is fretting corrosion resistant.

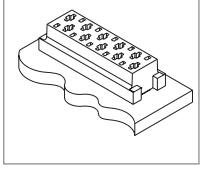




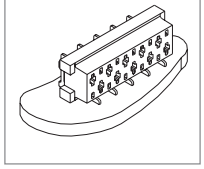
FEMALE AND MALE CONNECTOR APPLICATIONS

Female Connectors

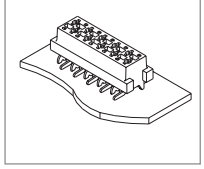
A 215079



B 215460

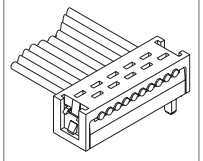


C 188275

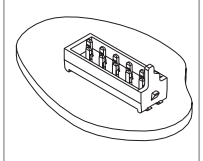


Male Connectors

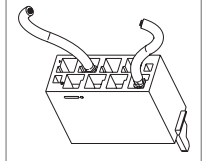
1 215083



2 215464

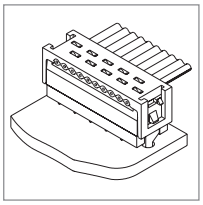


3 COSI

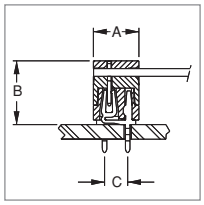


Mated Female and Male Connectors (application and dimension drawings)

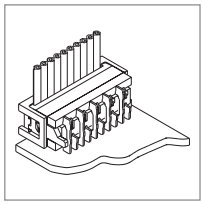
A1 Application



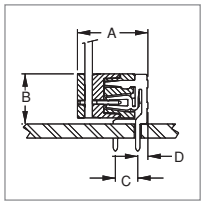
Dimensions



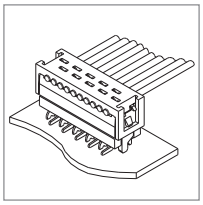
B1 Application



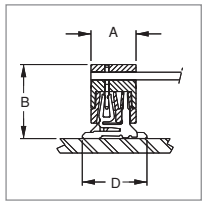
Dimensions



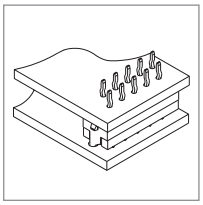
C1 Application



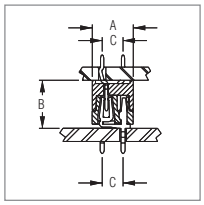
Dimensions



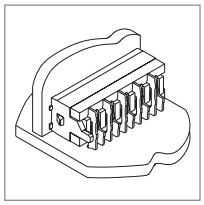
A2 Application



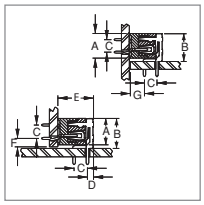
Dimensions



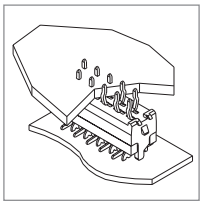
B2 Application



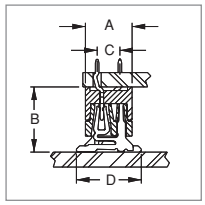
Dimensions



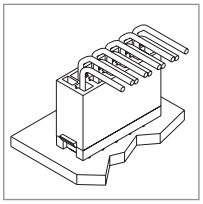
C2 Application



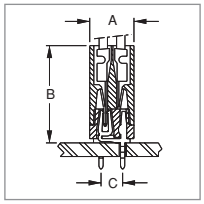
Dimensions



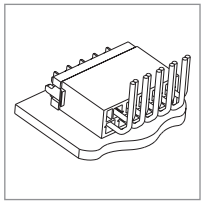
A3 Application



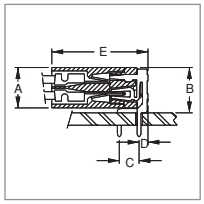
Dimensions



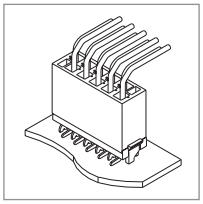
B3 Application



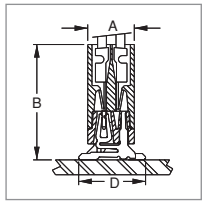
Dimensions



C3 Application



Dimensions



Female and Male Connector Dimensions

Image	Description	A (max)	B (max)	C	D (max)	E (max)	F (max)	G (max)
A1	Wire-to-Board through hole	5.2	7.5	2.54	-	-	-	-
A2	Board-to-Board through hole	5.2	6.2	2.54	-	-	-	-
A3	Wire-to-Board (discrete wire), through hole	5.2	9.7	2.54	-	-	-	-
B1	Wire-to-Board right angle, through hole	8.4	5.9	2.54	1.5	-	-	-
B2	Board-to-Board right angle, through hole	5.2	5.9	2.54	1.5	7.0	1.6	-
B2	Board-to-Board right angle, through hole	5.2	5.9	2.54	1.5	-	-	2.8
B3	Wire-to-Board right angle (discrete wire), through hole	5.2	5.9	2.54	1.5	10.6	-	-
C1	Wire-to-Board surface mount	5.2	8.5	-	7.1	-	-	-
C2	Board-to-Board surface mount, through hole	5.2	7.1	2.54	7.1	-	-	-
C3	Wire-to-Board (discrete wire), surface mount	5.2	10.7	-	7.1	-	-	-

FEMALE-ON-BOARD CONNECTOR: TOP ENTRY

Position Size		4		6		8		10		12		14		16		18		20	
Base Number	215079	-4	-74	-6	-76	-8	-78	-10	-80	-12	-82	-14	-84	-16	-86	-18	-88	-20	-90
	338068	-4		-6		-8		-10		-12		-14		-16		-18		-20	
Package Size		Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box
		2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250

Mates With: 215083, 338095+338096, 338095+338097, 215464, 338728

FEMALE-ON-BOARD CONNECTOR: SIDE ENTRY

Position Size		4		6		8		10		12		14		16		18		20	
Base Number	215460	-4	-74	-6	-76	-8	-78	-10	-80	-12	-82	-14	-84	-16	-86	-18	-88	-20	-90
	338070	-4		-6		-8		-10		-12		-14		-16		-18		-20	
Package Size		Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box
		2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250

Mates With: 215083, 338095+338096, 338095+338097, 215464, 338728

FEMALE-ON-BOARD CONNECTOR: SURFACE MOUNT DEVICE (SMD)

Position Size		4		6		8		10		12		14		16		18		20		24	
Base Number	188275	-4	-74	-6	-76	-8	-78	-10	-80	-12	-82	-14	-84	-16	-86	-18	-88	-20	-90		
	338069	-4	-74	-6	-76	-8	-78	-10	-80	-12	-82	-14	-84	-16	-86	-18	-88	-20	-90	-24	-94
Package Size		No vac tape	Vac tape	No vac tape	Vac tape	No vac tape	Vac tape	No vac tape	Vac tape	No vac tape	Vac tape	No vac tape	Vac tape	No vac tape	Vac tape	No vac tape	Vac tape	No vac tape	Vac tape	No vac tape	Vac tape
		900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900	900

Note: Vac Tape = With vacuum pick and place tape

Mates With: 215083, 338095+338096, 338095+338097, 215464, 338728

MALE-ON-BOARD CONNECTOR

Position Size		4		6		8		10		12		14		16		18		20	
Base Number	215464	-4	-74	-6	-76	-8	-78	-10	-80	-12	-82	-14	-84	-16	-86	-18	-88	-20	-90
Package Size		Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box
		2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250

Mates With: 215079, 215460, 188275, 215079, 338068, 338069, 338070, 188431

MALE-ON-WIRE CONNECTOR

Position Size		4		6		8		10		12		14		16		18		20		24	
Base Number	215083	-4	-74	-6	-76	-8	-78	-10	-80	-12	-82	-14	-84	-16	-86	-18	-88	-20	-90	-24	-94
Package Size		Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box
		2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250

Application Spec: 114-19016 **Matching Cable:** 167019 **Mates With:** 215079, 215460, 188275, 215079, 338068, 338069, 338070, 188431

MALE PADDLE BOARD CONNECTOR

Position Size		4		6		8		10		12		14		16		18		20		24	
Base Number	215570	-4	-74	-6	-76	-8	-78	-10	-80	-12	-82	-14	-84	-16	-86	-18	-88	-20	-90	-24	-94
Package Size		Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box	Reel	Box
		2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250	2500	250

Application Spec: 114-19016 **Matching Cable:** 167019 **NO MATES** - Direct Soldering of ribbon cable to the PC board

CRIMP ON SNAP IN (COSI) CONNECTOR

Position Size		4	6	8	10	12	14	16	18	20
Base Number	338095	-4	-6	-8	-10	-12	-14	-16	-18	-20
Package Size		Box	Box	Box	Box	Box	Box	Box	Box	Box
		900	700	450	450	400	350	300	250	200

Mates With: 215079, 215460, 188275, 215079, 338068, 338069, 338070, 188431

CONTACTS

Base Number	Wire Size	ID	15000/Reel	750/Reel
338096	28-24 AWG	0.76-1.00	-1	-11
338097	24-20 AWG	1.27-1.52	-1	-11

FEMALE-IN-BOARD SMD CONNECTOR

Position Size		4	6	8	10	14	16	20
Base Number	188431	-74	-76	-78	-80	-84	-86	-90
Package Size		Reel	Reel	Reel	Reel	Reel	Reel	Reel
		1200	1200	1200	1200	1200	1200	1200

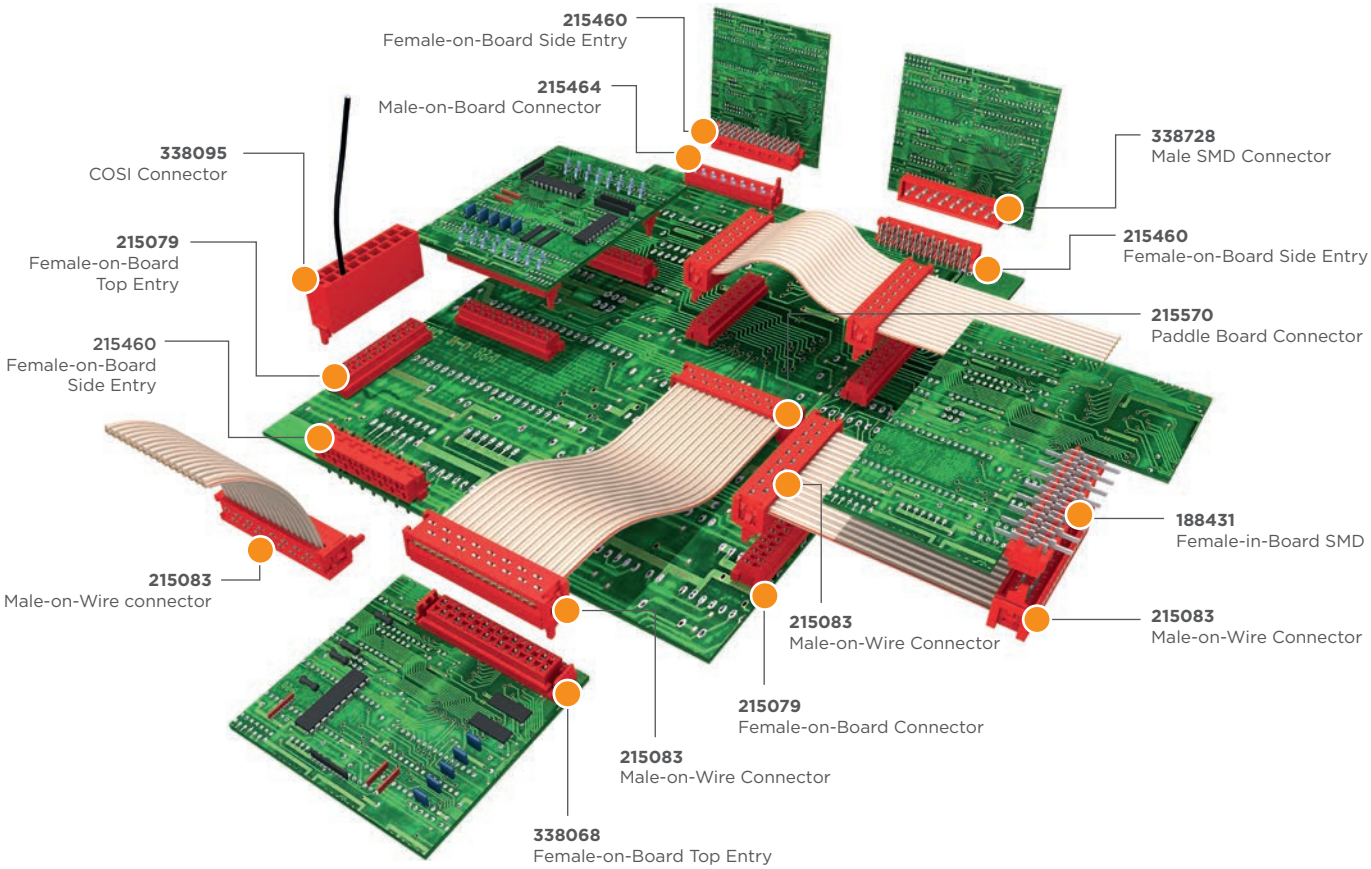
Mates With: 215083, 338095+338096, 338095+338097, 215464, 338728

MALE SMD CONNECTOR

Position Size		4		6		8		10		12		14		16		18		20	
Base Number	338728	-4	-74	-6	-76	-8	-78	-10	-80	-12	-82	-14	-84	-16	-86	-18	-88	-20	-90
Package Size		No cover	Vac cover	No cover	Vac cover	No cover	Vac cover	No cover	Vac cover	No cover	Vac cover	No cover	Vac cover	No cover	Vac cover	No cover	Vac cover	No cover	Vac cover
		1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500

Mates With: 215079, 215460, 188275, 215079, 338068, 338069, 338070, 188431

PRODUCT/APPLICATION SPECIFICATION



APPLICATION TOOLING

Hand Tools					
734155-1	**734024-1**	**734870-1**	**734870-2**	**654061-1**	
Pistol grip	Adapter set	COSI 24-20 AWG	COSI 28-24 AWG	Flat Cable cutting tool	

Bench Tools					
733280-3	**733278-2**	**1-547008-7**			
Termination Die Set	Sub-assy toolset (4-20p)	Lever press incl. toolset (4-24p)			

Semi-Automatic Tools					
2161400-1	**2151688**	**2151689**	**677412-7**	**519708-1**	**438685-1**
3K40 Terminator	Applicator for 3K40 Terminator 28-24 AWG	Applicator for 3K40 Terminator 24-20 AWG	Semi Automatic Base Press	Toolset for 215083	Toolset for 215570

SAMPLE BOXES

Large Sample Box with various connectors: **1377074-1** (available on order at TE)
Micro Sample Kit with 3 samples incl. cable assembly: **4-1773465-8** (available via Media Resource Center)

FREQUENTLY ASKED QUESTIONS

Can we make Micro-MaTch connectors with contacts in Gold plating?

No. The Micro-MaTch receptacle contact spring is designed to deliver a high normal-force as required for tinplated contact interconnections. This pressure is too high for gold plated interconnections, where much lower normal-forces are required.

We have noticed that the kinks of the Micro-MaTch thru-hole solder contacts on Top Entry as well as Side Entry Thru-hole solder Connectors, start with random direction. Is this technically OK?

Yes, this is OK and does not affect contact retention. For those connectors the kink direction in each row can start random, but sequential contacts within each row have kinks pointing in opposite directions.

Which flat ribbon cable is suitable for Micro-MaTch male-on-wire and paddle-board connectors and why?

TE Connectivity (TE) part number 167019-series Flat Ribbon Cable. The cable insulation's round shape at each position and the flat transition between the positions, both exactly match with corresponding shape in the cover. This enables accurate pre-positioning of the conductors regarding to the IDC-slots during the termination process. It is also Important that the conductor's pitch is within tolerance and that they are symmetrically positioned in the round insulation shape.

Are Micro-MaTch male-on-wire and paddle-board connectors also suitable for discrete wire termination?

No. For discrete wires, Micro-MaTch connectors offer the Crimp-On Snap-In (COSI) connectors in 2 wire ranges.

Is there retention force performance information available for the female connector versions with locking latches?

No. The plastic latches were not designed to retain the connectors but to produce an audible click when the connectors are fully mated.

Let's connect

We make it easy to connect with our experts and are ready to provide all the support you need. Just call your local support number or visit www.te.com/industrial to chat with a Product Information Specialist.

Technical Support

te.com/support-center

For more Information

te.com/products/micromatch

te.com

© 2014 Tyco Electronics Corporation, a TE Connectivity Ltd. Company. All Rights Reserved. 4-1773457-1 IND WR 11/2014

MICRO-MATCH, TE Connectivity and the TE connectivity (logo) are trademarks of the TE Connectivity Ltd. family of companies. Other logos, product and Company names mentioned herein may be trademarks of their respective owners. While TE has made every reasonable effort to ensure the accuracy of the information in this brochure, TE does not guarantee that it is error-free, nor does TE make any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. TE reserves the right to make any adjustments to the information contained herein at any time without notice. TE expressly disclaims all implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose. The dimensions in this brochure are for reference purposes only and are subject to change without notice. Specifications are subject to change without notice. Consult TE for the latest dimensions and design specifications.

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

TE Connectivity:

175977-2 CPF0402B37K4E1 MPT100C18RF 936348-1 SBCHE154R7K 1969656-1 2-292161-3 2310537-1 2377783-2 3-1393225-0 3430B2F51RTDF ROX05SJ18R 2005330-1 3631B101LL 917696-1 SBCHE64R7K U5254-000005-030PA 141991-2 2380312-2 CRGCQ2010J3K3 TE50BR39J 1-794222-0 1-962915-1 1903112-2 2834055-1 650075-000 SMW73R0JT 1393431-1 1743455-2 RH73H2A40MKTN