



369 Series Connectors

High-Reliability, Lightweight, Compact Connectors Suited to Harsh Aerospace Environments...

- EWIS Compliant
- Simple Install & Maintenance
- Space Efficient / Stackable



Inline Connectors

Introduction	3
Harsh	4
Standard	5 - 6
Panel-Mount Connectors	7 - 8
PCB-Mount Connectors	9 - 10
Part Numbering System	11
Contacts & Tooling	12
Common Part Numbers	13-14



Standard



Harsh



Panel-Mount



PCB-Mount

*See te.com for 3D models of our 369 family of products

TE Components . . . TE Technology . . . TE Know-how . . .

AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | Raychem | POLAMCO
SEACON | Rochester | DEUTSCH

Empower Engineers to Solve Problems, Moving the World Forward.



Inline Connectors

High-Reliability, Lightweight, Compact Connectors

RUGGED

- BACC options available
- Low smoke, toxicity and flammability
- Excellent temperature, vibration and fluid resistance
- Triple barrier wire seals
- Cork-in-bottle interface seal

WEIGHT AND SPACE SAVINGS

- Rectangular shape saves space
- Lightweight composite materials
- No fasteners to mount

ROBUST DESIGN

- Based on existing ARINC 809/EN4165
- AS39029/EN3155 contacts

CONVENIENT

- Color-coded keyed shells
- Scoop-proof interface for blindmating

SECURE

- Cable tie “locks out” the mating button

FLUIDS

- Fuel
- Mineral hydraulic fluid
- Synthetic hydraulic fluid
- Mineral lubricant
- Synthetic lubricant
- Cleaning products
- De-icing fluid
- Extinguishing fluid
- Cooling fluid

APPLICATIONS

- Cabin Lighting
- Oxygen Mask Systems
- Galley Systems
- Seat Actuation Systems
- Industrial
- Unmanned Vehicles
- Commercial & Military Helicopters



Versatile and Compact

369 series connectors from TE Connectivity (TE) have been designed to meet today's tightening industry regulations and Electrical Wiring Interconnect Systems (EWIS) best practices. Based on EN4165/ARINC 809 connectors, the lightweight, compact 369 series connectors, available in 3, 6, and 9 positions standard, are suited for applications where fewer contacts are needed in each connector and shielding is unnecessary.

Easy to Use

Installation and maintenance of cabling is simple, quick, and reliable with a range of individually color-coded keying options. Each mated half of the connector can be configured with either male or female contacts, doubling the keying configurations available and electrically protecting contacts on the powered-side of a system.

The connectors' rectangular shape permits space-efficient stacking, while cable ties allow versatile mounting without the need for additional lock-out fasteners. The scoop-proof interface is particularly suitable for blind-mating or low visibility conditions. A button-latching mechanism secures the mated connectors.

Sealed and Safe

The connectors are fully sealed for use in areas with high levels of moisture. High-performance composite materials help meet the low smoke, toxicity and flammability requirements of the aerospace industry.



Inline - Harsh

MECHANICAL CHARACTERISTICS

- **Operating Temperature:** -55°C to +175°C
- **Fluid Resistance:** EN2591-315
- **IP Rating:** IP67
- **Altitude:** EN2591-314: 12.1kPa (1.75 psi) @ 15 km (50,000 ft)
- **Humidity:** EN2591-321 / EIA-364-31 Method IV
- **Vibration:** EN2591-403, Method B, Level E, 8 hr/axis
- **Shock:** EN2591-402, Method A, severity 100
- **Smoke and Toxicity:** FAR 25.853, Appendix F; ABD0031
- **Flammability:** FAR 25.853 Appendix F; EN2591-317
- **Durability:** 500 mating cycles

Keying Color Codes



MATERIALS

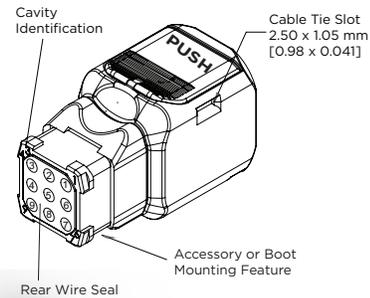
- **Body & Insert:** Thermoplastic
- **Contacts:** Copper alloy, gold plated
- **Seals & Panel Gasket:** Fluorosilicone rubber
- Designed to meet the requirements of RoHS

ELECTRICAL CHARACTERISTICS

- **Dielectric Withstanding Voltage:** 1500 Vrms mated, <2 mA leakage
- **Operating Current:** 5 A
- **Insulation Resistance:** ≥5000 MΩ initial

Instruction Documents

- Panel: 408-32194
- PCB Panel: 408-163008
- PCB In-Line: 408-163009
- Instruction Sheet: 408-32252





In-Line Standard

MECHANICAL CHARACTERISTICS

- **Operating Temperature:** -55°C to +175°C
- **Fluid Resistance:** EN2591-315
- **IP Rating:** IP65
- **Altitude/Humidity:** RTCA DO-160
- **Vibration:** EN2591-403, Method B, Level E, 8 hr/axis
- **Shock:** EN2591-402, Method A, severity 100
- **Smoke and Toxicity:** FAR 25.853, Appendix F; ABD0031
- **Flammability:** FAR 25.853 Appendix F; EN2591-317
- **Durability:** 500 mating cycles

Keying Color Codes



MATERIALS

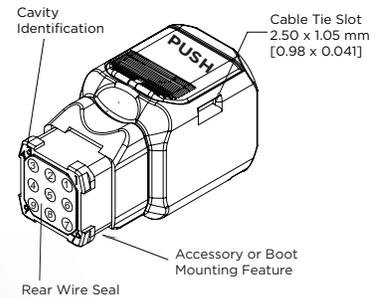
- **Body and Insert:** Thermoplastic
- **Contacts:** Copper alloy, gold plated
- **Seals & Panel Gasket:** Fluorosilicone rubber
- Designed to meet the requirements of RoHS

ELECTRICAL CHARACTERISTICS

- **Dielectric Withstanding Voltage:** 1500 Vrms mated, <2 mA leakage
- **Operating Current:** 5 A
- **Insulation Resistance:** ≥5000 MΩ initial

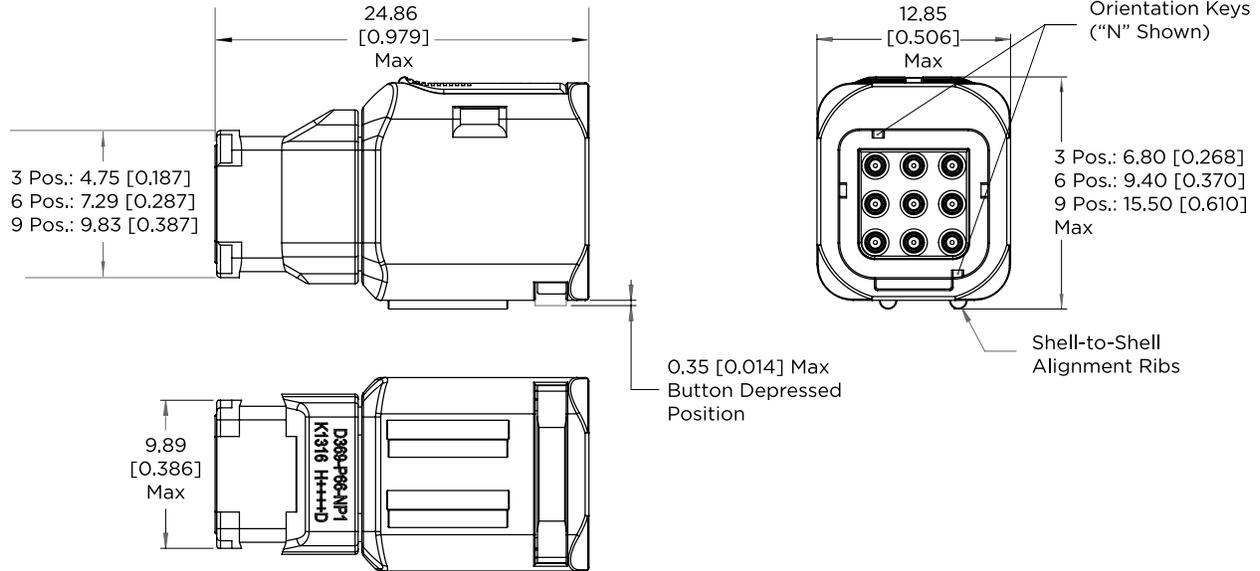
Instruction Documents

Panel: 408-32194
 PCB Panel: 408-163008
 PCB In-Line: 408-163009
 Instruction Sheet: 408-32252





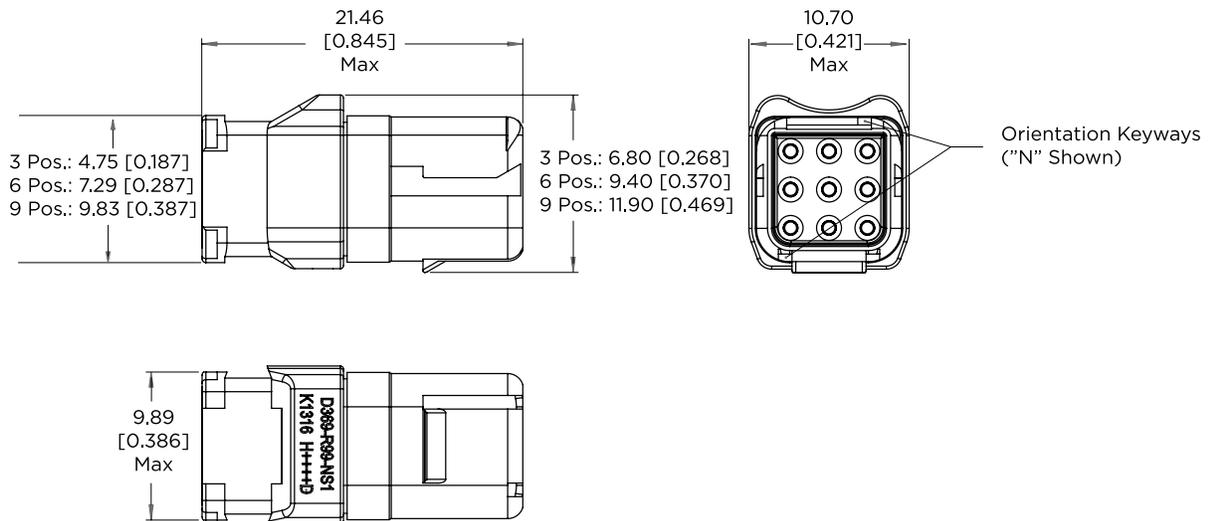
Plug Connector



Shell Size	Mass*
3	1.90 g [0.067 oz]
6	2.40 g [0.085 oz]
9	3.00 g [0.105 oz]

*Mass based on plug less male contact configuration
 Mass for 1 male contact = 0.073 g [0.0026]
 Recommended cable-tie: 2.5 mm [0.10"]

Receptacle



Shell Size	Mass*
3	1.00 g [0.035 oz]
6	1.50 g [0.053 oz]
9	2.00 g [0.070 oz]

*Mass based on receptacle less female contact configuration
 Mass for 1 female contact = 0.112 g [0.004 oz]



Panel-Mount Connectors

High-Reliability, Lightweight, Compact Connectors

EASY TO INSTALL

- Integrated panel latches for mtg.
- No fasteners required
- Simple push-in mounting
- One panel hole only

VERSATILE

- Replaceable gaskets accommodate various panel thicknesses and help prevent rattling
- Easily removed for maintenance

SPACE SAVING

- Compact design
- Tight mounting pitch of multiple connectors
- No additional space required for fasteners

WEIGHT SAVING

- Composite shells
- No additional fasteners required

RUGGED

- Low smoke, toxicity and flammability
- Excellent temperature, vibration and fluid resistance
- Triple barrier wire seals
- Cork-in-bottle interface seal

CONVENIENT

- Compatible with existing 369 series connectors
- Uses standard 369 wire strain-relief backshell
- Uses AS39029 Size 22 contacts

RELIABLE

- Positive button latching mechanism with audible click
- 100% scoop proof to minimize contact damage and allow blindmating

APPLICATIONS

- Cabin Lighting & Galley
- Seat Wiring & Actuation
- Passenger Service Units
- In-flight Entertainment
- Electronic Window Shutters



Fast, Easy Panel Mounting

369 series panel-mount connectors from TE Connectivity (TE), an extension to the existing 369 series product line, allow easy, fast mounting to an LRU (line-replaceable unit) panel, bracket, chassis, or frame. The integrated panel latches simply clip into a rectangular cut-out and require no additional fasteners or fixings. The latches also allow later removal from the panel. Suitable for multiple panel thicknesses, the connectors feature an anti-rattle panel gasket.

The connectors' rectangular shape permits space-efficient stacking, and remain fully compatible with standard 369 series connectors.

A button-latching mechanism secures the mated connectors.

Sealed and Safe

The electrical interfaces are fully sealed using cork-in-bottle and triple wire seal technology for use in areas with high levels of moisture. High-performance composite materials help meet the low smoke, toxicity and flammability requirements of the aerospace industry.



Specifications

MATERIALS

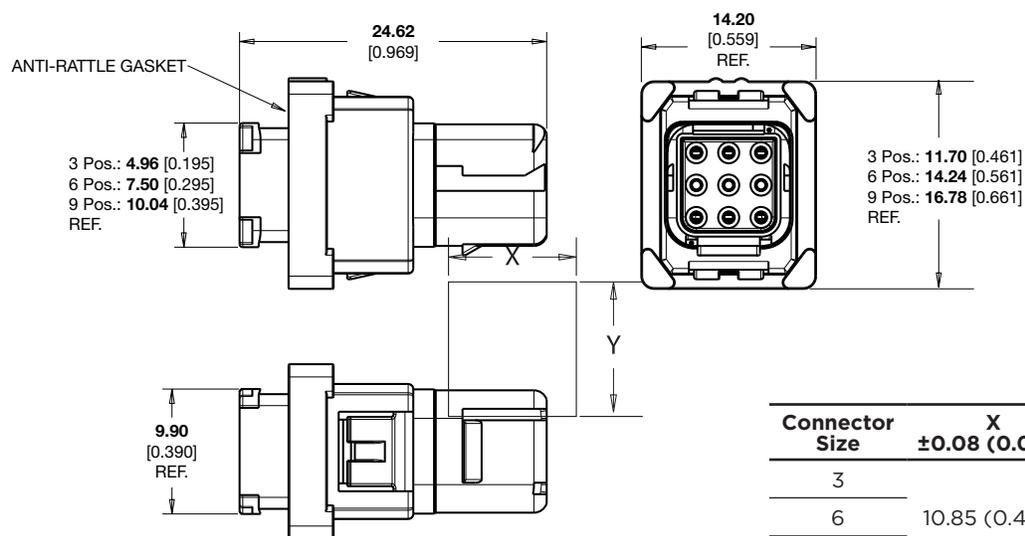
- **Seals and Panel Gasket:** Fluorosilicone
- **Body and Insert:** PEI
- **Contacts:** Copper alloy, gold plated

ELECTRICAL

- **Insulation Resistance:** ≥ 5000 M Ω
- **Dielectric Withstand:** 1500 V_{rms}, <2mA leakage
- **Operating Current:** 5 A

MECHANICAL/ENVIRONMENTAL

- **Temperature Range:** -55°C to +175°C
- **IP Rating:** IP65
- **Altitude/Humidity:** RTCA DO-160
- **Vibration:** EN2591-403, Method B, Level E, 8 hr/axis
- **Shock:** EN2591-402, Method A, Severity 100
- **Durability:** 500 mating cycles min.
- **Fluid Resistance:** EN2591-315
- **Flammability, Smoke, Toxicity:** FAR 25.853 Appendix F



Connector Size	X ± 0.08 (0.003)	Y ± 0.03 (0.001)
3		8.95 (0.352)
6	10.85 (0.420)	11.49 (0.452)
9		14.03 (0.552)

Keying Color Codes



For information on contacts, please refer to Contacts table on page 6.



PCB-Mount Connectors

High-Reliability, Lightweight, Compact Connectors

COMPATIBLE

- Fully compatible with 369 connector family
- Choice of in-line or panel-mount versions

SPACE SAVING

- Compact, high-density connectors
- Small PCB footprint
- Rectangular design enables close mounting pitch with adjacent connectors
- No fasteners required
- Eliminates flying leads for connectivity to board

EASY TO INSTALL

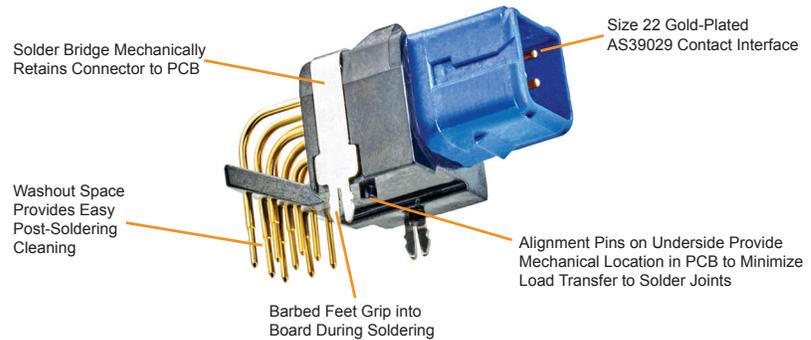
- Mechanically self-retaining during soldering of in-line connectors
- No additional solder fixtures required
- Easy washout for post-soldering cleaning

RELIABLE

- Mechanical location feature reduces mechanical stress on solder joints

APPLICATIONS

- Commercial and Business Aircraft
 - Lighting
 - Seat Wiring and Actuation
 - Passenger Service Units
 - On-board Entertainment Systems
 - Electronic Window Shutters
 - Galley
- Helicopter Lighting
- Military Land and Aerospace
- Mass Transit Lighting



369 series connectors from TE Connectivity (TE) have been designed to meet today's tightening industry regulations and Electrical Wiring Interconnect Systems (EWIS) best practices. Based on TE's successful DEUTSCH ARINC 809/EN4165 single module connector, the lightweight, compact 369 series connectors, available in 3, 6, and 9 positions standard, are suited for applications where fewer contacts are needed in each connector and shielding is unnecessary. The 369 series connectors are particularly suited to commercial and business jet aircraft cabin applications. The range now features a variety of options to suit most applications, including in-line and panel-mount versions.

An extension to the popular 369 connector series product line, the 369 PCB connector mounts to a printed-circuit board (PCB). The PCB connectors are available in an in-line version and a panel-mount version.

The PCB connector simply inserts into the board and is then soldered, requiring no additional fasteners or fixings. The end result is an easy and quick-to-mount aerospace-qualified connector with a very compact footprint to help ensure PCB real-estate is maximized.

Keying Color Codes





Specifications

MATERIALS

- **Seals and Panel Gasket:** Fluorosilicone
- **Body and Insert:** PEI
- **Contacts:** Copper alloy, gold plated

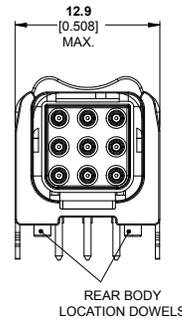
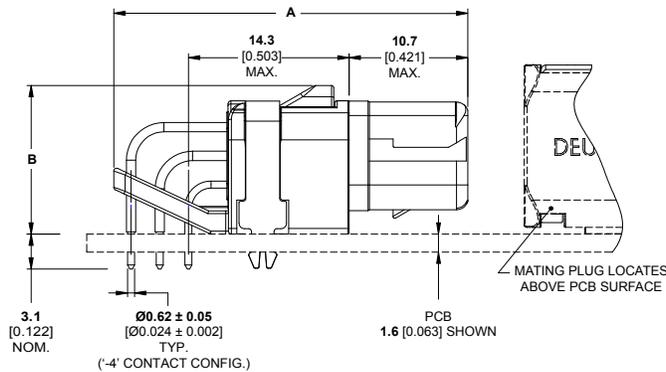
ELECTRICAL

- **Insulation Resistance:** $\geq 5000 \text{ M}\Omega$
- **Dielectric Withstand:** $1500 \text{ V}_{\text{rms}}$, $< 2\text{mA}$ leakage
- **Operating Current:** 5 A

MECHANICAL/ENVIRONMENTAL

- **Temperature Range:** -55°C to $+175^\circ\text{C}$
- **IP Rating:** IP65
- **Altitude/Humidity:** RTCA DO-160
- **Vibration:** EN2591-403, Method B, Level E, 8 hr/axis
- **Shock:** EN2591-402, Method A, Severity 100
- **Durability:** 500 mating cycles min.
- **Fluid Resistance:** EN2591-315
- **Flammability, Smoke, Toxicity:** FAR 25.853 Appendix F

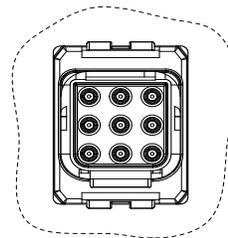
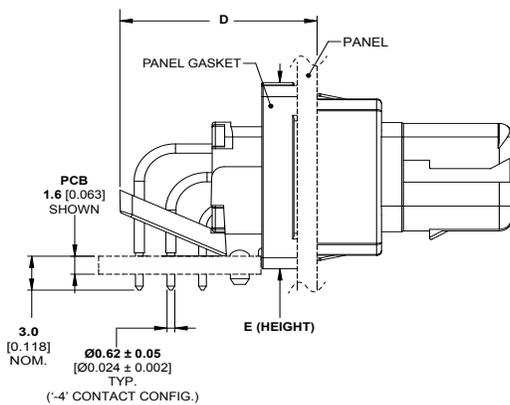
In-Line PCB Connectors



No. of Positions	A Max.	B Max.
3	26.6	8.4
6	29.1	10.9
9	31.6	13.4

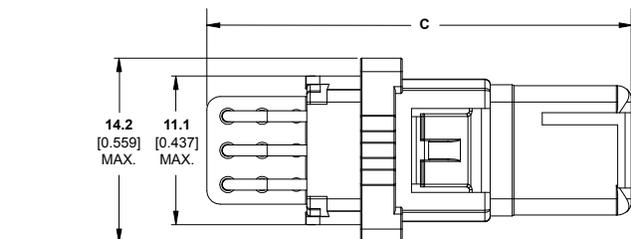
Millimeters Inches

Panel-Mount PCB Connectors



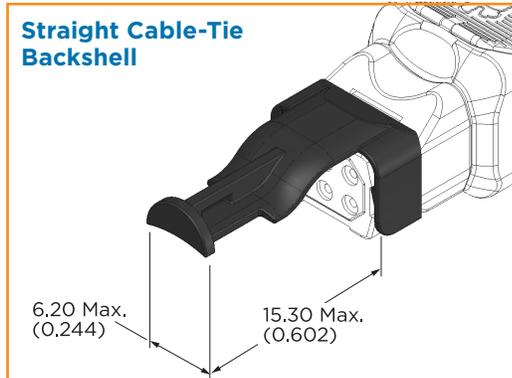
No. of Positions	C Max.	D Max.	E Max.
3	26.8	11.2	11.7
6	29.4	13.7	14.2
9	32.0	16.3	16.8

Millimeters Inches





Part Numbers



Shell Size	Strain Relief
3	D369-STB-3
6	D369-STB-6
9	D369-STB-9



Tooling

Connector panel-extraction tool: Part No. 612184-369

Part Numbering System

D369 - * P 3 3 - N P 1 -MOD

FAMILY
D369

VARIANT
Omit * in cabin application

H Outside Cabin Application

TYPE

- P** Plug
- R** Receptacle
- B** PCB, Panel Thickness for Panel Mount: 1.60mm (0.063")
- G** PCB, In-Line Mount

SHELL SIZE
3, 6, 9

NUMBER OF CONTACTS
3, 6, 9

SHELL KEYING
N Black / A Red / B Blue / C Green / D Yellow

CONTACT TYPE
P Pin
S Socket

CONTACT CONFIGURATION

- 0** Without Contacts
- 1** With Size 22 Contacts
- 3** With Size 20/22 Contacts
- 4** 90° PCB Mount, Gold Plated
- 5** 90° PCB Mount, Tin Dipped

MODIFICATION NUMBER (OPTIONAL)
-113L Outgassed



ELECTRICAL CONTACTS

Color Coding

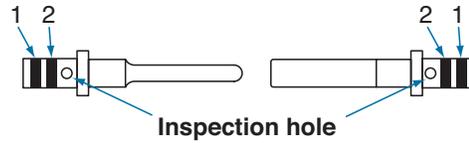
Pin: AS39029/58

Socket: AS39029/57



Color Coding

Pin and Socket: EN3155



Crimp Contacts



Contact Size	Wire Range		Type	Part No.			
	AWG	mm ²		TE	EN	MIL	BACC
22	26 - 22 AWG	0.15 - 0.40	Pin	38941-22L	—	M39029/58-360	BACC47GC
			Socket	38946-22L	—	M39029/57-354	—
20/22	24 - 20 AWG	0.25 - 0.60	Pin	182-0860-22	EN3155-070M2220	—	—
			Socket	182-0862-22	EN3155-071F2220	—	—

Tooling



Insertion/Extraction Tool
M81969/14-01



Crimp Tool
M22520/2-01
TE Part No. 601966-1



Crimp Positioners

Pin Contact
M22520/2-09
TE Part No. 601966-6

Socket Contact
M22520/2-06
TE Part No. 601966-4

Cavity Identification

(Plug or Receptacle. Viewed from Rear of Connector)



Using Pin (Male) Contacts



Using Socket (Female) Contacts



Part Numbers

No. of Positions	Housing Type	Insert	Part No.		
			With Contacts	Without Contacts	BACC Equivalent
STANDARD (inside cabin)					
3	Plug	Pin	D369-P33-NP1	D369-P33-NP0	—
		Socket	D369-P33-NS1	D369-P33-NS0	—
	Receptacle	Pin	D369-R33-NP1	D369-R33-NP0	—
		Socket	D369-R33-NS1	D369-R33-NS0	—
6	Plug	Pin	D369-P66-NP1	D369-P66-NP0	—
		Socket	D369-P66-NS1	D369-P66-NS0	—
	Receptacle	Pin	D369-R66-NP1	D369-R66-NP0	—
		Socket	D369-R66-NS1	D369-R66-NS0	—
9	Plug	Pin	D369-P99-NP1	D369-P99-NP0	—
		Socket	D369-P99-NS1	D369-P99-NS0	—
	Receptacle	Pin	D369-R99-NP1	D369-R99-NP0	—
		Socket	D369-R99-NS1	D369-R99-NS0	—
HARSH (outside cabin)					
3	Plug	Pin	D369-HP33-NP1	D369-HP33-NP0	BACC65 CP 1PN
		Socket	D369-HP33-NS1	D369-HP33-NS0	BACC65 CP 1SN
	Receptacle	Pin	D369-HR33-NP1	D369-HR33-NP0	BACC65 CR 1PN
		Socket	D369-HR33-NS1	D369-HR33-NS0	BACC65 CR 1SN
6	Plug	Pin	D369-HP66-NP1	D369-HP66-NP0	BACC65 CP 2PN
		Socket	D369-HP66-NS1	D369-HP66-NS0	BACC65 CP 2SN
	Receptacle	Pin	D369-HR66-NP1	D369-HR66-NP0	BACC65 CR 2PN
		Socket	D369-HR66-NS1	D369-HR66-NS0	BACC65 CR 2SN
9	Plug	Pin	D369-HP99-NP1	D369-HP99-NP0	BACC65 CP 3PN
		Socket	D369-HP99-NS1	D369-HP99-NS0	BACC65 CP 3SN
	Receptacle	Pin	D369-HR99-NP1	D369-HR99-NP0	BACC65 CR 3PN
		Socket	D369-HR99-NS1	D369-HR99-NS0	BACC65 CR 3SN
PANEL MOUNT					
3	Receptacle	Pin	D369-B33-NP0	D369-B33-NP1	D369-B33-NP4
		Socket	D369-B33-NS0	D369-B33-NS1	D369-B33-NS4
6	Receptacle	Pin	D369-B66-NP0	D369-B66-NP1	D369-B66-NP4
		Socket	D369-B66-NS0	D369-B66-NS1	D369-B55-NS4
9	Receptacle	Pin	D369-B99-NP0	D369-B99-NP1	D369-B99-NP4
		Socket	D369-B99-NS0	D369-B99-NS1	D369-B99-NS4



Part Numbers

No. of Positions	Housing Type	Insert	Part No. 90° PCB Contacts
PCB Inline Mount			
3	Receptacle	Pin	D369-G33-NP4
		Socket	D369-G33-NS4
6	Receptacle	Pin	D369-G66-NP4
		Socket	D369-G66-NS4
9	Receptacle	Pin	D369-G99-NP4
		Socket	D369-G99-NS4

See www.te.com for additional part numbers and alternative keying options available



369 Connectors Can Be Easily Secured with Cable Ties, Eliminating the Need for Additional Hardware or Cutouts



NOTES:

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

North America	+1 800 522 6752	Asia Pacific	+86 400 820 6015
North America (Toll)	+1 717 986 7777	Japan	+81 044 844 8180
EMEA/South Africa	+800 0440 5100	Australia	+61 2 9554 2695
EMEA (Toll)	+31 73 624 6999	New Zealand	+64 (0) 9 634 4580
India (Toll-Free)	+800 440 5100		

te.com/369

369, AMP, AGASTAT, CII, DEUTSCH, HARTMAN, KILOVAC, LL ROWE, MICRODOT, NANONICS, POLAMCO, Raychem, SEACON, TE, TE Connectivity and the TE connectivity (logo) are trademarks owned or licensed by TE Connectivity. Other products, logos, 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 herein, nothing herein constitutes any guarantee that such information is error-free, or any other representation, warranty or guarantee that the information is accurate, correct, reliable or current. The TE entity issuing this publication reserves the right to make any adjustments to the information contained herein at any time without notice. All implied warranties regarding the information contained herein, including, but not limited to, any implied warranties of merchantability or fitness for a particular purpose are expressly disclaimed. The dimensions herein 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.

© 2019 TE Connectivity Corporation All Rights Reserved.

1-1773704-7 rev 01/19