



369 Series Connectors

High-Reliability, Lightweight, Small Form Factor Connectors Suited to Harsh Environments . . .

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



In-Line Connectors

High-Reliability, Lightweight, Compact Connectors

RUGGED

- BACC options available
- EMI shielded option 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/ ARINC 854
- AS39029/EN3155 contacts

CONVENIENT

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

SECURE

- Cable tie “locks out” the mating button

FLUIDS

- Synthetic hydraulic fluid
- Mineral lubricant
- Synthetic lubricant
- Cleaning products
- De-icing fluid
- Extinguishing fluid
- Solvent for cleaning purposes

APPLICATIONS

- Cabin lighting
- Oxygen mask systems
- Galley systems
- Seat actuation systems
- Industrial
- Unmanned vehicles
- Commercial and 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 a variety of applications.

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 and integral ribs 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 with an audible click to confirm a complete connection.

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.

TE Components . . . TE Technology . . . TE Know-how . . .
AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem
SEACON | Rochester | DEUTSCH

Empower Engineers to Solve Problems, Moving the World Forward.



In-Line 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 and Insert:** Composite thermoplastic
- **Contacts:** Copper alloy, gold plated
- **Seals and Panel Gasket:** Fluorosilicone rubber
- Designed to meet the requirements of RoHS

ELECTRICAL CHARACTERISTICS

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

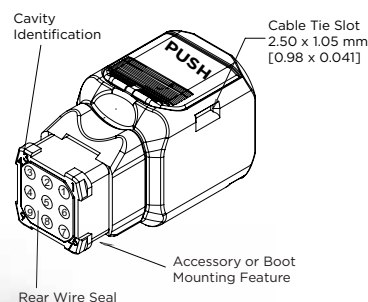
Instruction Documents

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:** IP67
- **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
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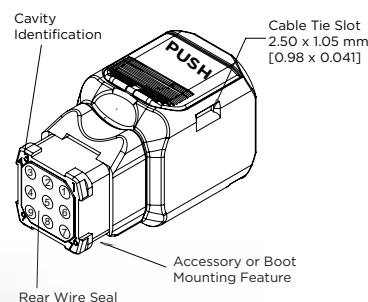
Instruction Documents

Panel: 408-32194

PCB Panel: 408-163008

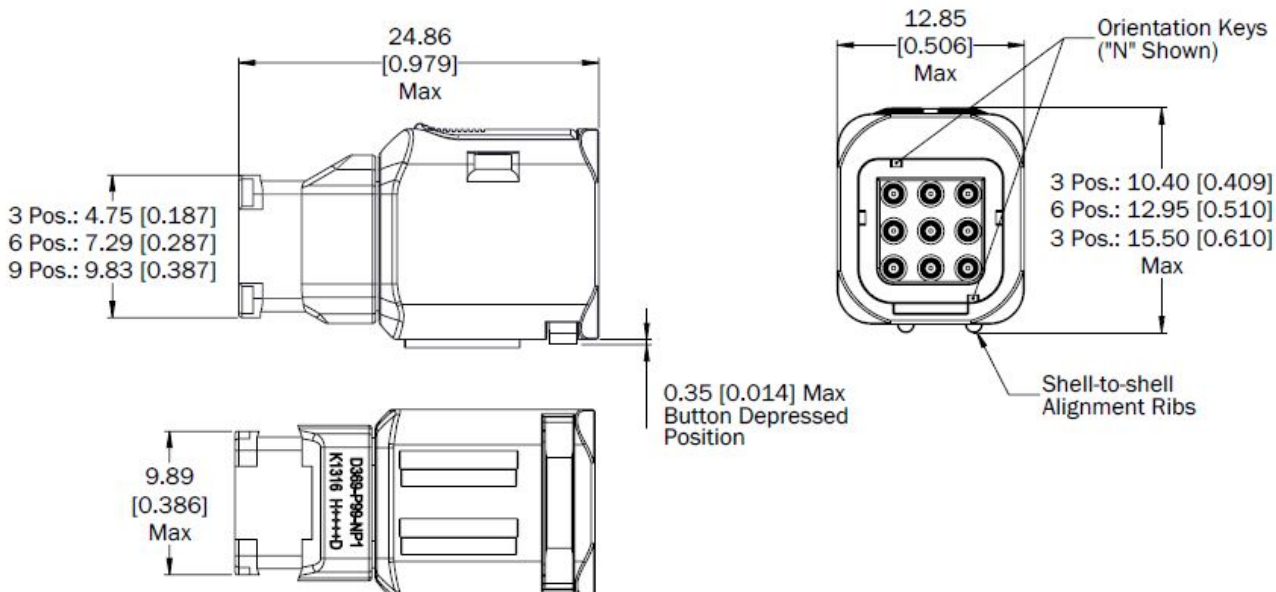
PCB In-Line: 408-163009

Instruction Sheet: 408-32252





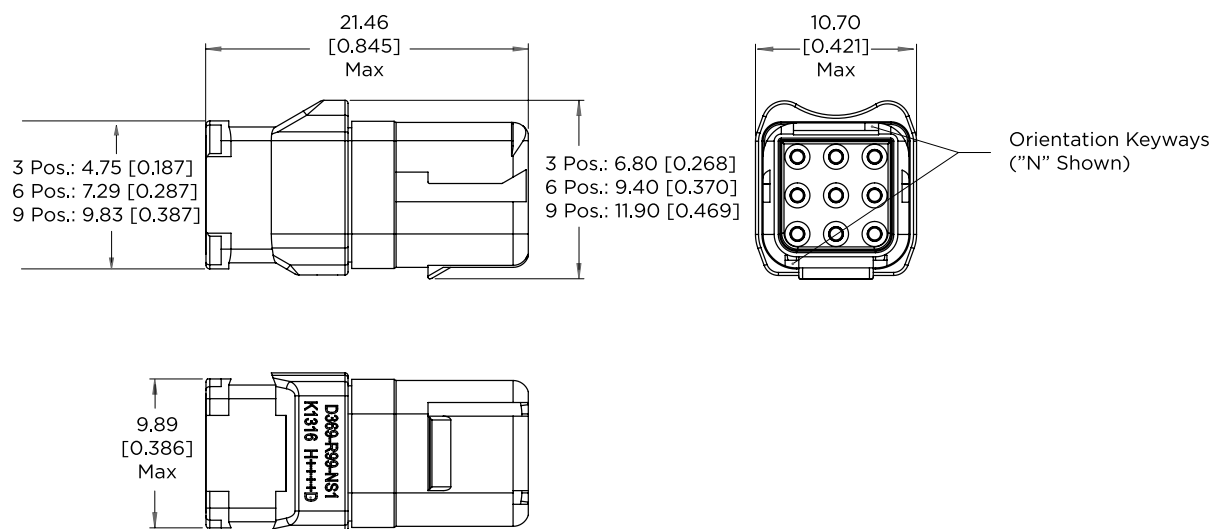
Plug Connector (Standard & Harsh)



Shell Size	Mass*
3	1.9 g [0.067 oz]
6	2.4 g [0.085 oz]
9	3.0 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	1.0 g [0.035 oz]
6	1.5 g [0.053 oz]
9	2.0 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 and repair

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 and galley
- Seat wiring and actuation
- Passenger service units
- In-flight entertainment
- Electronic window shutters



Fast, Easy Tool-less 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. 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.



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:** Composite thermoplastic
- **Contacts:** Copper alloy, gold plated
- **Seals and Panel Gasket:** Fluorosilicone rubber
- Designed to meet the requirements of RoHS

ELECTRICAL CHARACTERISTICS

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

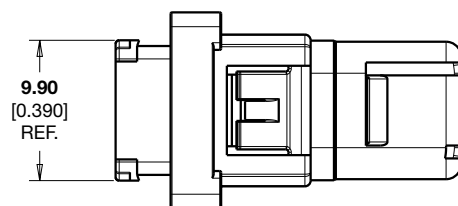
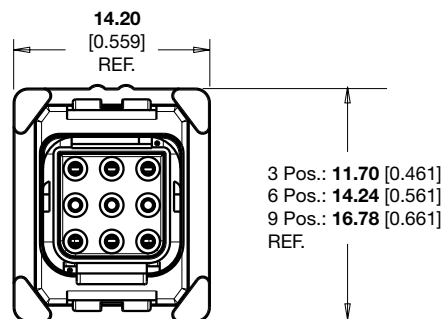
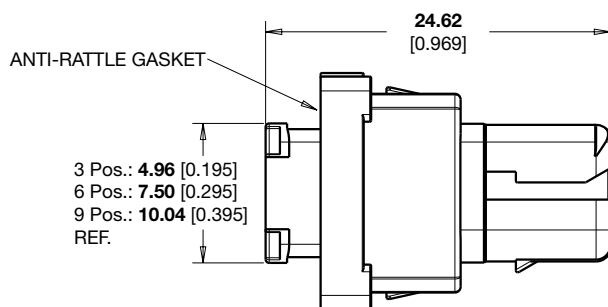
Instruction Documents

Panel: 408-32194

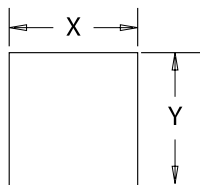
PCB Panel: 408-163008

PCB In-Line: 408-163009

Instruction Sheet: 408-32252



Recommended Panel Cutout		
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)



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

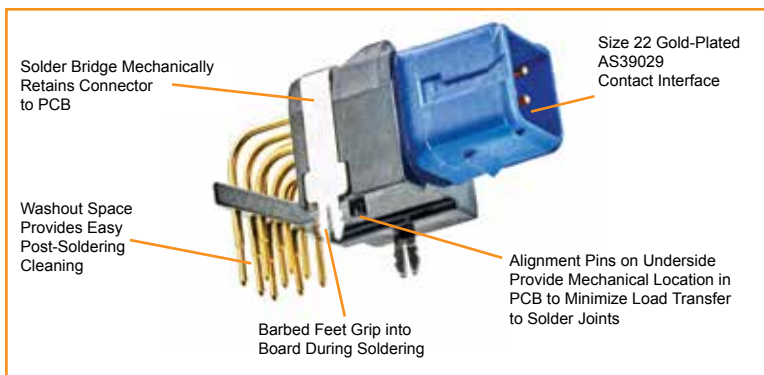
- Mechanically self-retaining during soldering of in-line connectors
- No additional solder fixtures required
- Easy washout for post-soldering cleaning

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



Reliable, Convenient PCB Application

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. Fully compatible with existing 369 shielded and harsh connectors.

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





MECHANICAL CHARACTERISTICS

- **Operating Temperature:** -55°C to +175°C
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- **Flammability:** FAR 25.853 Appendix F; EN2591-317
- **Durability:** 500 Mating Cycles

MATERIALS

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

ELECTRICAL CHARACTERISTICS

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

Instruction Documents

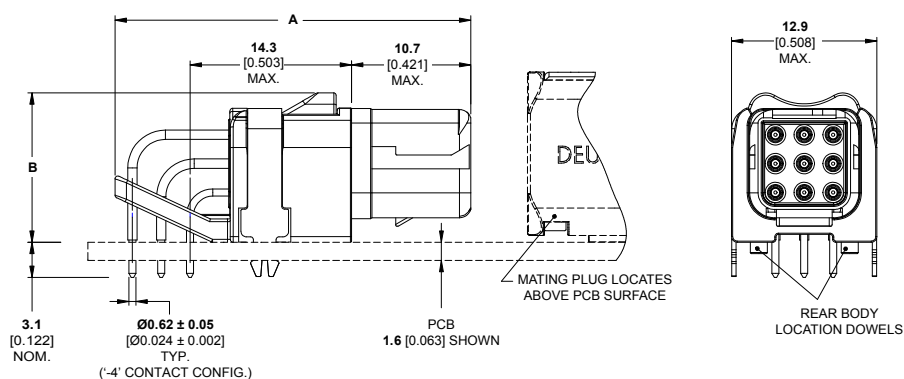
Panel: 408-32194

PCB Panel: 408-163008

PCB In-Line: 408-163009

Instruction Sheet: 408-32252

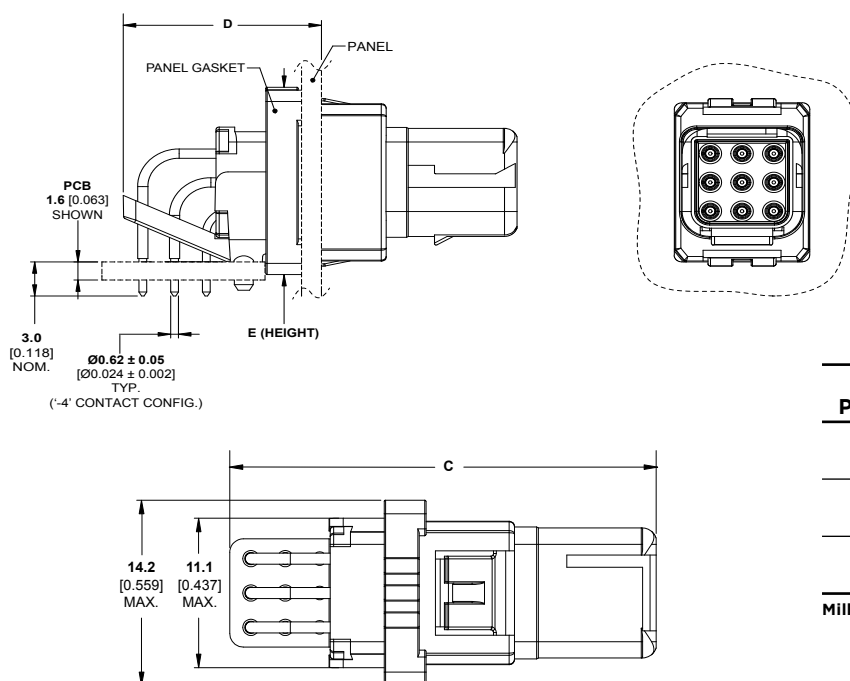
In-Line PCB Connectors



No. of Positions	A Max.	B Max.
3	26.6 1.047	8.4 0.331
6	29.1 1.146	10.9 0.429
9	31.6 1.244	13.4 0.528

Millimeters Inches

Panel-Mount PCB Connectors



No. of Positions	C Max.	D Max.	E Max.
3	26.8 1.055	11.2 0.441	11.7 0.461
6	29.4 1.157	13.7 0.539	14.2 0.559
9	32.0 1.260	16.3 0.642	16.8 0.661

Millimeters Inches



Shielded Connectors

Provides Shielding for Grounding and EMI Protection

EASY TO INSTALL

- No fasteners
- Push/pull mate

VERSATILE

- Compatible with existing 369 connector series
- Easily removed for maintenance
- Meets ARINC 854 ethernet over single twisted pair (100Base-T1)

SPACE SAVING

- Compact design
- Tight mounting pitch of multiple connectors

WEIGHT SAVINGS

- Composite nickel plated shells
- No additional fasteners required

RUGGED

- Triple barrier wire seals
- Cork-in-bottle interface seal
- Performance up to 60K feet
- Uses AS39029 size 22 AWG contacts

RELIABLE

- Designed to MIL-DTL-38999 levels of performance
- EWIS compliant
- Positive blind-mate with audible latching click
- Scoop proof

ENVIRONMENTALLY FRIENDLY

- Low smoke, toxicity and flammability



Description

TE Connectivity (TE)'s new 369 shielded connector brings an enhanced product extension to the current 369 connector family where ambient EMI noise protection is required.

Backward Compatible

- Intermateable with current 369 product offerings.

Proven Shielding Effectiveness

- >60 DB at low frequencies
- >40 db at high frequencies
- Can withstand indirect lightning strike of 3.6ka

Lightweight and RoHs Compliant

- Composite nickel-plated shells

High Speed Capability

- Enables data transmission of 100Mbps (100 Base-T1)
- Up to 75% weight savings

Markets/Applications Served

Markets

- Commercial Aerospace
- Helicopter
- Drones and UAVs
- Military Ground Vehicles
- Mass Transit

Applications

- Lighting
- On-Board Entertainment
- Seat Wiring and Actuators
- Galley

Performance Characteristics

ELECTRICAL

- **Dielectric Withstanding Voltage:** 1500 V_{rms} mated, <2 mA leakage
- **Operating Current:** 5 A
- **Insulation Resistance:** ≥5000 MΩ initial
- **EMI Shielding Effectiveness:**

65dB @ 150MHz	55dB @ 400MHz
60dB @ 200MHz	45dB @ 800MHz
55dB @ 300MHz	43dB @ 1GHz
- Lightning strike
- 3.6kA per EIA-364, Test procedure 75, Type B, Level 1



MECHANICAL

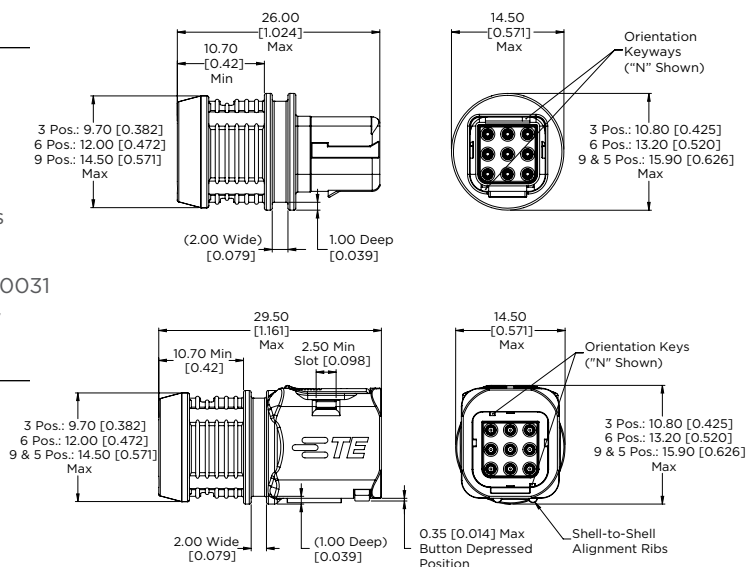
- **Operating Temperature:** -55°C to +175°C
- **Fluid Resistance:** EN2591-315
- **IP Rating:** IP67
- **Altitude/Humidity:** EN2591-314 7.24kPa/60k ft
- **Vibration:** EN2591-403, Method B, Level E, 8 hr/axis
- **Shock:** EN2591-402, Method A, Severity 100
- **Smoke and Toxicity:** FAR 25.853, Appendix F; ABD0031
- **Flammability:** FAR 25.853, Appendix F; EN2591-317

MATERIALS

- **Body and Insert:** Composite thermoplastic
- **Contacts:** Copper alloy, gold plated
- **Seals and Panel Gasket:** Fluorosilicone rubber
- Designed to meet the requirements of RoHS
- **Plating:** RoHS nickel over copper

ADDITIONAL KEY REQUIREMENTS

- **Recommended TE molded boot (size 9) P/N:**
202D972-4/86-0
- **Recommended TE molded boot (size 3 & 6) P/N:**
202D971-4/86-0
- **Recommended TE bandstrap P/N:** BND-0812S



Plug		
Shell Size	Mass	
	Pin Insert	Socket Insert
3	3.40 g [0.120 oz]	3.50 g [0.124 oz]
6	3.90 g [0.138 oz]	4.10 g [0.145 oz]
9	4.50 g [0.159 oz]	4.70 g [0.166 oz]

Receptacle		
Shell Size	Mass	
	Pin Insert	Socket Insert
3	2.50 g [0.089 oz]	2.50 g [0.089 oz]
6	2.90 g [0.103 oz]	2.80 g [0.099 oz]
9	3.50 g [0.124 oz]	3.40 g [0.120 oz]

369 Shielded			With Contacts	No Contacts
3	Plug	Pin	D369-MP33-NP1	D369-MP33-NPO
		Socket	D369-MP33-NS1	D369-MP33-NSO
	Receptacle	Pin	D369-MR33-NP1	D369-MR33-NPO
		Socket	D369-MR33-NS1	D369-MR33-NSO
6	Plug	Pin	D369-MP66-NP1	D369-MP66-NPO
		Socket	D369-MP66-NS1	D369-MP66-NSO
	Receptacle	Pin	D369-MR66-NP1	D369-MR66-NPO
		Socket	D369-MR66-NS1	D369-MR66-NSO
9	Plug	Pin	D369-MP99-NP1	D369-MP99-NPO
		Socket	D369-MP99-NS1	D369-MP99-NSO
	Receptacle	Pin	D369-MR99-NP1	D369-MR99-NPO
		Socket	D369-MR99-NS1	D369-MR99-NSO



Part Numbers

Part Numbering System

D369 - H P 3 3 - N P 1 - MOD

FAMILY

D369

VARIANT

- Blank** Standard (15K Feet)
- H** Outside Cabin (50K Feet)
- M** Metalized (Shielded 60K Feet)

TYPE

- P** Plug
- R** Receptacle
- B** Panel Mount (PCB Options Available in Contact Selection)
- G** PCB Inline 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

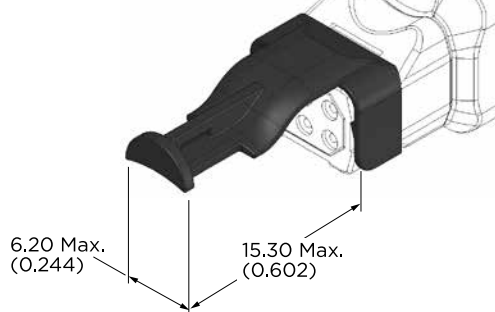
CONTACT CONFIGURATION

- 0** Without Contacts
- 1** With Size 22 Contacts
- 3** With Size 20/22 Contacts
- 4** 90° PCB Contacts (Gold Plated)

MODIFICATION (OPTIONAL)

113L Outgassed

Straight Cable-Tie Backshell



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



Tooling

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



Crimp Contacts



Contact Size	Wire Range	Type	TE	Mil-Spec/EN Spec	BACC	Sealing Plug
22	26 - 22 AWG	Pin	38941-22L	M39029/58-360	BACC47GC	028-0102-22
		Socket	38946-22L	M39029/57-354		
20/22 Enlarged Crimp Barrel	24 - 20 AWG	Pin	182-0860-22	EN3155-070M2220		
		Socket	182-0862-22	EN3155-071F2220		

50 micro inches of gold over a layer of nickel over these copper alloy contacts (material)

Tooling



Insertion/Extraction Tool		Crimp Tool		Crimp Positioners	
M81969/14-01		M22520/2-01 TE Part No. 601966-1		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)





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)			With Contacts	Without Contacts	BACC Equivalent
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			With Contacts	Crimp Contacts	90° PCB Contacts
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
PCB INLINE MOUNT			90° PCB Contacts		
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/369 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		

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Consult TE for the latest dimensions and design specifications.

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