



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

# **DEUTSCH 369 Series Inline Connectors**

High-Reliability, Lightweight, Compact Connectors



## **BACC QUALIFIED**

• Qualified BACC65CP and BACC65CR

### **RUGGED**

- 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

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



## Versatile and Compact

DEUTSCH 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 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.

## Ideal for Cabin Applications

The 369 series connectors are suitable for commercial aerospace cabin applications, such as:

- Cabin lighting
- Oxygen mask systems
- Galley systems
- Seat actuation systems

The connectors also provide a solution for harsh environment applications, such as UAVs and commercial and military helicopter wiring systems.

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Empower Engineers to Solve Problems, Moving the World Forward.



### **MECHANICAL CHARACTERISTICS**

• Operating Temperature: -55°C to +175°C

• Fluid Resistance: EN2591-315

• IP Rating: IP67

• **Sealing:** 12.1 kPa (1.75 psi) @ 15 km (50,000 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

• Durability: 500 mating cycles

## **Keying Color Codes**





#### **MATERIALS**

- Shells, Insulators and Backshells: PEI/PEEK
- Contacts: Copper alloy, gold plated
- Seals: Fluorosilicone rubber
- Designed to meet the requirements of RoHS

## **ELECTRICAL CHARACTERISTICS**

- **Dielectric Withstanding Voltage:** 1500 V<sub>rms</sub> mated, <2 mA leakage
- Operating Current: 5 A

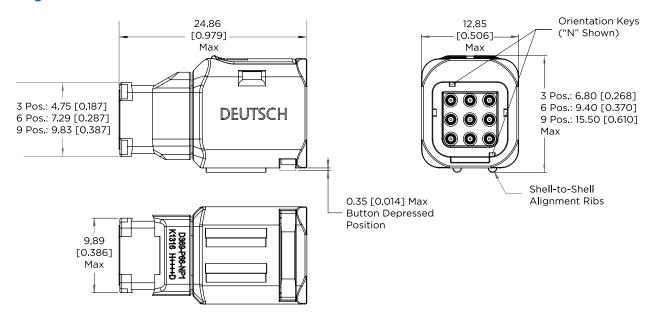
#### **Instruction Documents**

• 408-163008, 408-163009, 408-32194





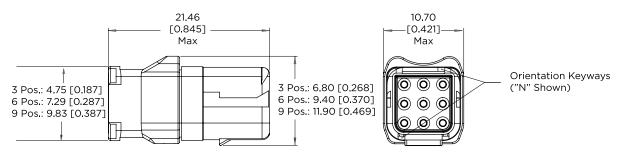
## **Plug Connector**

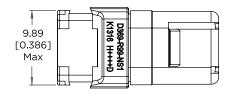


Shell Size	Mass*		
3	1.90 g [0.067 oz]		
6	2.40 g [0.085 oz]		
9	3.00 g [0.105 oz]		

\*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

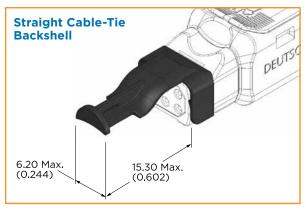




Shell Size	Mass*
3	1.00 g [0.035 oz]
6	1.50 g [0.053 oz]
9	2.00 g [0.070 oz]

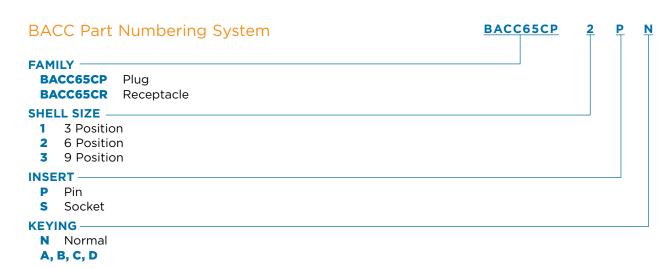
\*Mass based on receptacle less female contact configuration Mass for 1 female contact = 0.112 g [0.004 oz]





Shell Size	Part No.	Mass
3	D369-STB-3	0.24 g [0.85 oz]
6	D369-STB-6	0.25 g [0.88 oz]
9	D369-STB-9	0.28 g [0.99 oz]

## TE Part Numbering System D369 - P 6 6 - N FAMILY -**D369** SHELL TYPE -Plug R Receptacle SHELL SIZE -3, 6, 9 **NUMBER OF CONTACTS -**3, 6, 9 **KEYING-**N Normal A, B, C, D INSERT -P Pin Socket **CONTACTS**



Without ContactsWith Size 22 ContactsWith Size 20/22 Contacts

6-Position Plug for Pin (Male) Contacts, Normal Keying, Supplied without Contacts

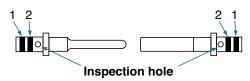


## **ELECTRICAL CONTACTS**

Color Coding Pin: AS39029/58









Contact	Contact	Wire F	Range	Time		Part N	lo.		Color Ba	nds
Option	Size	AWG	mm²	Type	TE	EN	MIL	BACC	MIL	EN
1	26 - 27	26 - 22	0.15 -	Pin	38941-22L EN3155-07	EN3155-070M2222	.071F2222 M39029/57-354 _ Orange-	BACC47GC	Orange- Blue-Black	
	22	AWG	0.40	Socket	38946-22L	EN3155-071F2222		Orange- Green-Yellow	Green /	
3 20/22	20/22 24 - 20 0.25 - Pin 182-0860-22 EN3155-070M2220	20/22	24 - 20 0.25 -	24 - 20 0.25 - Pin 182-0860-22 EN3155	_	_	_	Red-		
	20/22	AWG	0.60	Socket	182-0862-22	EN3155-071F2220	_	_	_	Green

## **Tooling**



## **Cavity Identification**

(Plug or Receptacle. Viewed from Rear of Connector)













Using Pin (Male) Contacts

Using Socket (Female) Contacts



## **Part Numbers**

No. of	Housing Type	Insert	Part No.			
Positions			Without Contacts		With Contacts	
			TE	BACC	TE	
N-Key (Black	ck Color Code)					
	Dluc	Pin	D369-P33-NP0	BACC65 CP 1PN	D369-P33-NP*	
3	Plug	Socket	D369-P33-NS0	BACC65 CP 1SN	D369-P33-NS*	
3	Dooptoolo	Pin	D369-R33-NP0	BACC65 CR 1PN	D369-R33-NP*	
	Receptacle	Socket	D369-R33-NS0	BACC65 CR 1SN	D369-R33-NS*	
	Dluc	Pin	D369-P66-NP0	BACC65 CP 2PN	D369-P66-NP*	
C	Plug	Socket	D369-P66-NS0	BACC65 CP 2SN	D369-P66-NS*	
6	December	Pin	D369-R66-NP0	BACC65 CR 2PN	D369-R66-NP*	
	Receptacle	Socket	D369-R66-NS0	BACC65 CR 2SN	D369-R66-NS*	
	Dlue	Pin	D369-P99-NP0	BACC65 CP 3PN	D369-P99-NP*	
9	Plug	Socket	D369-P99-NS0	BACC65 CP 3SN	D369-P99-NS*	
9		Pin	D369-R99-NP0	BACC65 CR 3PN	D369-R99-NP*	
	Receptacle	Socket	D369-R99-NS0	BACC65 CR 3SN	D369-R99-NS*	
A-Key (Red	l Color Code)					
	Dlug	Pin	D369-P33-AP0	BACC65 CP 1PA	D369-P33-AP*	
3	Plug	Socket	D369-P33-AS0	BACC65 CP 1SA	D369-P33-AS*	
3	Dooptoolo	Pin	D369-R33-AP0	BACC65 CR 1PA	D369-R33-AP*	
	Receptacle	Socket	D369-R33-AS0	BACC65 CR 1SA	D369-R33-AS*	
	Dluc	Pin	D369-P66-AP0	BACC65 CP 2PA	D369-P66-AP*	
c	Plug	Socket	D369-P66-ASO	BACC65 CP 2SA	D369-P66-AS*	
6	Decembrale	Pin	D369-R66-AP0	BACC65 CR 2PA	D369-R66-AP*	
	Receptacle	Socket	D369-R66-AS0	BACC65 CR 2SA	D369-R66-AS*	
	Dlug	Pin	D369-P99-AP0	BACC65 CP 3PA	D369-P99-AP*	
9	Plug	Socket	D369-P99-AS0	BACC65 CP 3SA	D369-P99-AS*	
J	Pocontacle	Pin	D369-R99-AP0	BACC65 CR 3PA	D369-R99-AP*	
	Receptacle	Socket	D369-R99-AS0	BACC65 CR 3SA	D369-R99-AS*	

<sup>\*</sup> Replace \* with 1 for Size 22 contacts and 3 for Size 20/22 contacts



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



## **Part Numbers**

No. of	Housing Type	Insert	Part No.		
<b>Positions</b>			Without Contacts		With Contacts
			TE	BACC	TE
B-Key (Blue	Color Code)				
		Pin	D369-P33-BP0	BACC65 CP 1PB	D369-P33-BP*
_	Plug	Socket	D369-P33-BS0	BACC65 CP 1SB	D369-P33-BS*
3		Pin	D369-R33-BP0	BACC65 CR 1PB	D369-R33-BP*
	Receptacle	Socket	D369-R33-BS0	BACC65 CR 1SB	D369-R33-BS*
		Pin	D369-P66-BP0	BACC65 CP 2PB	D369-P66-BP*
_	Plug	Socket	D369-P66-BS0	BACC65 CP 2SB	D369-P66-BS*
6 —		Pin	D369-R66-BP0	BACC65 CR 2PB	D369-R66-BP*
	Receptacle	Socket	D369-R66-BS0	BACC65 CR 2SB	D369-R66-BS*
	- DI	Pin	D369-P99-BP0	BACC65 CP 3PB	D369-P99-BP*
0	Plug	Socket	D369-P99-BS0	BACC65 CP 3SB	D369-P99-BS*
9	Descrite	Pin	D369-R99-BP0	BACC65 CR 3PB	D369-R99-BP*
	Receptacle	Socket	D369-R99-BS0	BACC65 CR 3SB	D369-R99-BS*
C-Key (Gre	en Color Code)				
		Pin	D369-P33-CP0	BACC65 CP 1PC	D369-P33-CP*
3	Plug	Socket	D369-P33-CS0	BACC65 CP 1SC	D369-P33-CS*
	December	Pin	D369-R33-CP0	BACC65 CR 1PC	D369-R33-CP*
	Receptacle	Socket	D369-R33-CS0	BACC65 CR 1SC	D369-R33-CS*
Dlug	Pin	D369-P66-CP0	BACC65 CP 2PC	D369-P66-CP*	
<b>^</b>	Plug	Socket	D369-P66-CS0	BACC65 CP 2SC	D369-P66-CS*
6	Describedo	Pin	D369-R66-CP0	BACC65 CR 2PC	D369-R66-CP*
	Receptacle	Socket	D369-R66-CS0	BACC65 CR 2SC	D369-R66-CS*
	Dlue	Pin	D369-P99-CP0	BACC65 CP 3PC	D369-P99-CP*
0	Plug	Socket	D369-P99-CS0	BACC65 CP 3SC	D369-P99-CS*
9	Describedo	Pin	D369-R99-CP0	BACC65 CR 3PC	D369-R99-CP*
	Receptacle	Socket	D369-R99-CS0	BACC65 CR 3SC	D369-R99-CS*
D-Key (Yell	ow Color Code)		'		
	Dlug	Pin	D369-P33-DP0	BACC65 CP 1PD	D369-P33-DP*
7	Plug	Socket	D369-P33-DS0	BACC65 CP 1SD	D369-P33-DS*
3	Docontacle	Pin	D369-R33-DP0	BACC65 CR 1PD	D369-R33-DP*
	Receptacle	Socket	D369-R33-DS0	BACC65 CR 1SD	D369-R33-DS*
	Dlug	Pin	D369-P66-DP0	BACC65 CP 2PD	D369-P66-DP*
e	Plug	Socket	D369-P66-DS0	BACC65 CP 2SD	D369-P66-DS*
5	Docontacle	Pin	D369-R66-DP0	BACC65 CR 2PD	D369-R66-DP*
	Receptacle	Socket	D369-R66-DS0	BACC65 CR 2SD	D369-R66-DS*
	Dlug	Pin	D369-P99-DP0	BACC65 CP 3PD	D369-P99-DP*
0	Plug	Socket	D369-P99-DS0	BACC65 CP 3SD	D369-P99-DS*
9	Doontests	Pin	D369-R99-DP0	BACC65 CR 3PD	D369-R99-DP*
	Receptacle	Socket	D369-R99-DS0	BACC65 CR 3SD	D369-R99-DS*

<sup>\*</sup> Replace \* with 1 for Size 22 contacts and 3 for Size 20/22 contacts

## **DEUTSCH 369 Series Panel-Mount Connectors**

High-Reliability, Lightweight, Compact Connectors

#### **EASY TO INSTALL**

- Integrated panel latches for mounting
- 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 strainrelief backshell
- Uses AS39029 Size 22 contacts

#### **RELIABLE**

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



## Fast, Easy Panel Mounting

DEUTSCH 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.

## Ideal for Cabin Applications

369 series connectors are particularly suitable for commercial aerospace cabin applications, such as:

- Lighting
- Seat wiring and actuation
- Passenger service units
- IFE (in-flight entertainment)
- Electronic window shutters
- Gallev



#### **MATERIALS**

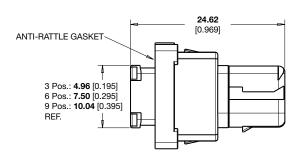
- Seals and Panel Gasket: Fluorosilicone
- Body and Insert: PEI
- Contacts: Copper alloy, gold plated

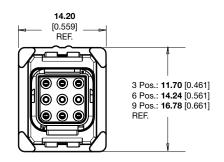
#### **ELECTRICAL**

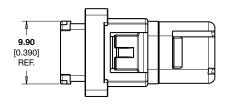
- Insulation Resistance: ≥5000 MΩ
- Dielectric Withstand: 1500 Vrms, <2mA leakage
- Operating Current: 5 A

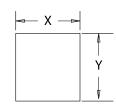
#### MECHANICAL/ENVIRONMENTAL

- Temperature Range: -55°C to +175°C
- IP Rating: IP67
- Sealing: 12.1 kPa (1.75 psi) @ 15 km (50,000 ft)
- 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









## **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)

## D369 - A 3 3 - N **FAMILY D369** PANEL THICKNESS, mm (inch) **A** 1.27 (0.050) В 1.60 (0.063) C 2.03 (0.080) SHELL SIZE -3, 6, 9 **NUMBER OF CONTACTS** 3, 6, 9 **KEYING** N Normal

A, B, C, D

### **INSERT** -

- Pin
- S Socket

## CONTACTS

- Without Contacts
- With Crimp Contacts
- With Size 20/22 Contacts



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

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

## **DEUTSCH 369 Series PCB-Mount Connectors**

High-Reliability, Lightweight, Compact Connectors

#### **COMPATIBLE**

- Fully compatible with 369 connector family
- Choice of in-line or panelmount versions
- Compatible with other connectors meeting Boeing BACC65CP/CR

#### **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 postsoldering 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
- Gallev
- Helicopter Lighting
- Military Land and Aerospace
- Mass Transit Lighting



DEUTSCH 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.





## **Specifications**

## **MATERIALS**

• Seals and Panel Gasket: Fluorosilicone

• Body and Insert: PEI

• Contacts: Copper alloy, gold plated

#### **ELECTRICAL**

• Insulation Resistance: ≥5000 MΩ

• Dielectric Withstand: 1500 V<sub>rms</sub>, <2mA leakage

• Operating Current: 5 A

## **MECHANICAL/ENVIRONMENTAL**

• Temperature Range: -55°C to +175°C

• IP Rating: IP67

• **Sealing:** 12.1 kPa (1.75 psi) @ 15 km (50,000 ft)

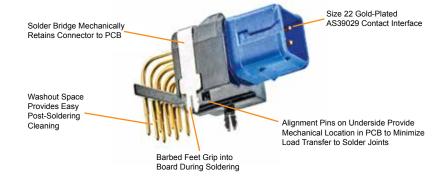
• Vibration: EN2591-403, Method B, Level E, 8 hr/axis

• Shock: EN2591-402, Method A, Severity 100

• Durability: 500 mating cycles min.

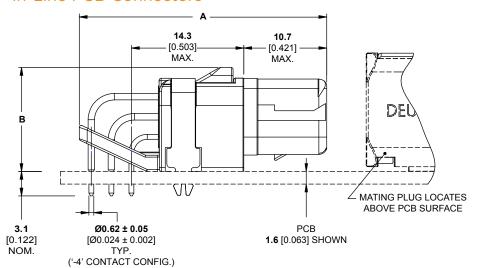
• Fluid Resistance: EN2591-315

• Flammability, Smoke, Toxicity: FAR 25.853 Appendix F



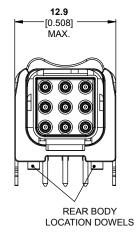


## In-Line PCB Connectors



	7
	9
1	

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

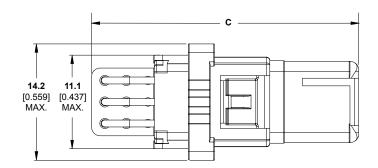


Millimeters Inches



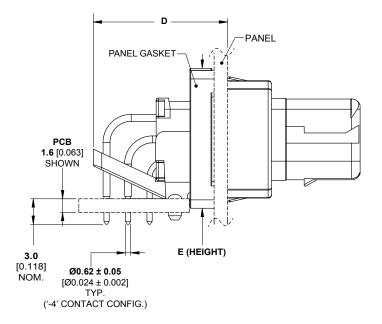


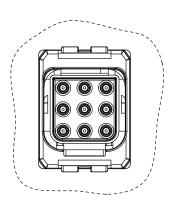
## Panel-Mount PCB Connectors



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

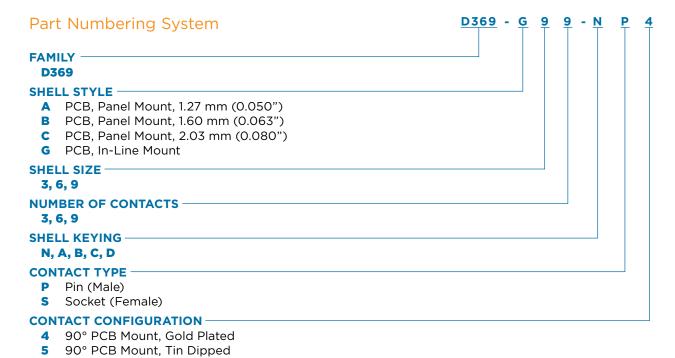
Millimeters Inches











## **KEYING COLOR CODES**

Connectors are available with five keying options. They are color coded by option:

N Black, A Red, B Blue, C Green, D Yellow

## 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

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Consult TE for the latest dimensions and design specifications.

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1-1773704-7 06/17



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M55302/57A36X M55302/58-A70Y 65002-062 65008-D08 CY4602-000 732-8020-01 732-8021-02 B 77058-22-55PN 81542-20

86.030.0053.0 1241346-1 RM252-020-311-2900 DMC-M 08-16 SNE 1589051-4 BACC65CAMA BACC65CAMN BACC65CP1PN

BACI10BC1220PN 18023-9 HSB-D4S03DM222X 2217548-1 891-009-15SA2-BRT1T SIM2S100A 1604996-2 SMD25PN90L-4055

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