



SERIES 860

MOUSEBUD™

THE SNAP-LOCK, TRIGGER-RELEASE CONNECTOR

ULTRA LOW-PROFILE • SPRING-LOADED CONTACTS • HARSH-ENVIRONMENT

PRE-RELEASE SNEAK PEEK • OCTOBER 2014

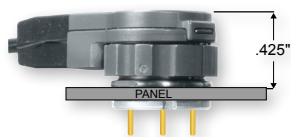
SERIES 860

MouseBud™

The snap-lock, trigger-release connector

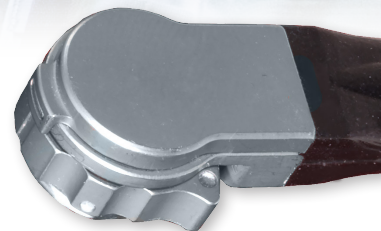
Ultra low-profile MouseBud™ connectors are lightweight, shielded and designed for use in hostile environments. Mating is a snap—simply push to mate and lock. To release, actuate the thumb trigger on the coupling ring. Plugs feature spring-loaded gold plated contacts, stainless steel shells and self-actuating bayonet coupling rings. Cable mount versions are fully assembled, shielded, overmolded and 100% tested. MouseBud is fully protected from sand and dust, moisture ingress, electromagnetic interference and a multitude of other environmental stresses. The spring-loaded contact system is rated for 2000 mating cycles. Series 860 connectors are suitable for high-speed data, power, video and audio.

Panel mount MouseBud receptacles with “hot shoe” type contacts are suitable for hostile environments including soldier wearable electronics and tactical gear. Contacts are easy to clean and damage-resistant. These receptacle connectors meet MIL-STD-810G requirements for reliable performance in hostile environments—both mated and unmated. Connector attaches to panel with a stainless steel jam nut. A fluorosilicone O-ring provides panel sealing. Terminate to flex circuits with PC tail terminals, or choose solder cup terminals for wire attachment.

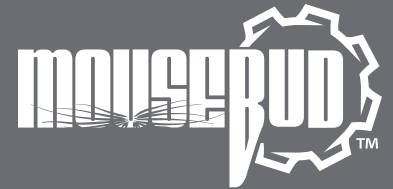


The MouseBud right angle plug features a single piece “cobra style” connector shell and a tightly fitting lid. A rubber gasket is sandwiched between the shell and lid to prevent moisture intrusion. The total height when mated to a rear panel mounted receptacle is well under 1/2 inch.

Overmolded MouseBud cordsets are available in two standard versions. Style 1 cordsets feature thermoplastic polyurethane cable jackets and polyamide overmolding. Style 2 cordsets with thermoplastic rubber (TPV) cable jackets and overmolding offer excellent cold bend performance down to -55° C.



- Self-locking auto-coupling, trigger-release mechanism
- Spring-loaded pins for extended durability and easy cleaning
- One meter, one hour water immersion
- 2000 cycles mechanical life
- High-speed data, power, video, and audio applications
- Meets MIL-STD-810G shock, vibration, immersion
- EMI protected with integral backshell and ground spring
- Ultra low-profile and lightweight



MouseBud™ Plugs



Plug Cordsets

Overmolded cordsets with rugged tactical-grade shielded cable.

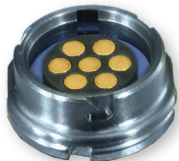
860-006P Overmolded Plug Cordset

860-002P Plug Cordset for USB+BAT (IAW US Army Personal Area Network, PAN protocol)

Plug Connector Construction

- Shell: stainless steel
- Bayonet pins, retainer ring and torsion spring: stainless steel
- Coupling ring: aluminum
- Lid: aluminum
- Contacts: copper alloy, gold plated
- Insert: glass-filled thermoplastic
- Ground spring: gold-plated stainless steel
- Gasket: fluorosilicone
- Potting compound: RTV silicone

MouseBud™ Receptacles



Panel Mount Receptacles

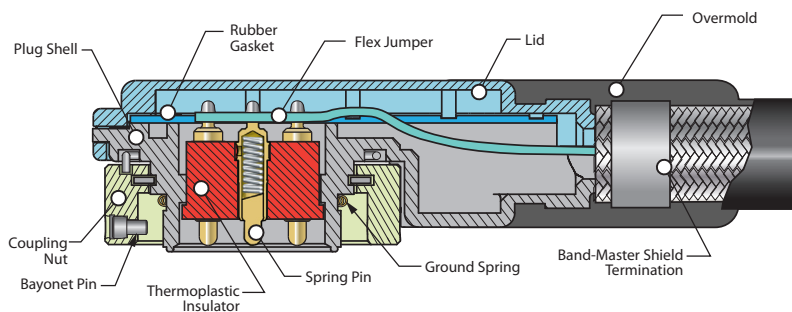
Jam nut mounting. Solder cup or printed circuit tails.

860-004R Panel Receptacle with PC Tails

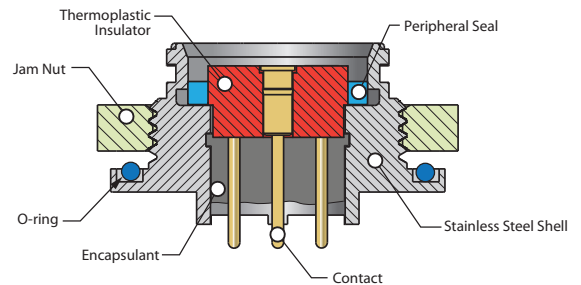
860-005R Panel Receptacle, Solder Cups

Panel Receptacle Construction

- Shell: stainless steel
- Jam nut: stainless steel
- Contacts: copper alloy, gold plated
- Insert: glass-filled thermoplastic
- O-ring: fluorosilicone
- Peripheral seal: fluorosilicone
- Potting compound: RTV silicone



Overmolded Plug Cordset



Panel Receptacle



Glenair MouseBud snap-lock, trigger-release connectors feature a spring-loaded contact system for excellent resistance to damage and debris entrapment. The biased plunger is machined from solid copper alloy for improved strength, durability, and electrical performance compared to plungers drawn from sheet metal.

MouseBud Specifications

MouseBud Specifications	
Voltage rating	500 VAC
Current rating	5 amps
Contact resistance	20 milliohms maximum
Plug-to-receptacle ground resistance	<5 milliohm
Maximum wire size	#24 AWG
Insulation resistance	5000 megohms min.
Water immersion	MIL-STD-810 Method 512, one meter for one hour
Durability	2000 mating cycles
Corrosion resistance	1000 hours
Sine vibration	EIA-364-28 condition IV, 20g peak
Random vibration	EIA-364-28 condition V letter H, 29g rms
Shock	EIA-364-27 condition D, 300g peak
EMI shielding effectiveness	40 dB minimum to 10 GHz



860-006P

860-006P MouseBud™ harsh environment cordsets are overmolded, shielded and 100% tested. High-performance cable is equipped with a braided tinned copper shield with 90% minimum optical coverage. Shield is terminated to connector with a stainless steel Band-Master® ATS strap. Ultra-lightweight, low profile and water-resistant. Auto-coupling mechanism—simply push to mate and lock. To release, actuate thumb trigger on coupling ring. Style 2 cordset with thermoplastic rubber jacket and overmold has excellent cold bend performance to -55° C. Connectors feature spring-loaded gold plated contacts, stainless steel shells and self-actuating bayonet coupling rings. 5A current rating, 500VAC dielectric withstanding voltage rating.

Specifications

- Operating temperature: -30°C to +105°C (cordset style 1) -55°C to +125°C (cordset style 2)
- Dielectric withstanding voltage: 500 VAC
- Current rating: 5 A
- Contact resistance: 20 milliohms
- Water immersion: MIL-STD-810G Meth. 512.5
- Ingress protection: IP67
- Mechanical life: 2500 cycles

Connector Construction

- Shell, lid: aluminum alloy
- Bayonet pins, coupling ring, retainer ring and torsion spring: stainless steel
- Contacts: copper alloy, gold plated
- Insert: ultem or LCP/PPS, black
- Ground spring: stainless steel/gold-plated
- Gasket: fluorosilicone
- Potting compound: EP-38

Cable Construction

- Wires: silver-coated copper, TFE insulation
- Overmold: polyamide or thermoplastic elastomer
- shield: tin-coated copper microfilament, 90% minimum optical coverage
- Jacket: thermoplastic polyurethane (TPU) or thermoplastic elastomer (TPV)

How To Order	
	860-006P- B7 ZR 1 A 2 4 -36
Product	860-006P = overmolded MouseBud cordset
Contact Arrangement (Table 1)	B7 = seven contacts, size B shell
Finish	ME = electroless NI MT = nickel-PTFE ZR = black zinc-nickel
Release Trigger Style (Table 2)	1 = Standard low-profile release trigger (fig. 1) 2 = Extended release trigger (fig. 2)
Key Position (Table 3)	A = position A D = position D B = position B E = position E C = position C F = position F
Cordset Style (Table 4)	1 = polyurethane cable jacket with polyurethane overmold 2 = polyurethane cable jacket with polyamide overmold
Wire Size (AWG)	2 = #22 4 = #24
Length	Cable Length in inches, 12 inch minimum

<p>B7</p>	Contact Arr.	B7
	# of Contacts	7
	Contact Diameter	.038 (0.96)
	Current Rating	5A

<p>Low-profile release trigger</p>	<p>Extended release trigger</p>
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	Code	A°	B°	C°
	A	120°	200°	265°
B	80°	150°	265°	
C	95°	150°	235°	
D	95°	200°	320°	
E	95°	225°	265°	
F	120°	225°	320°	

SERIES 860
MouseBud™
 The snap-lock, trigger-release connector
 860-006P Plug Cordsets

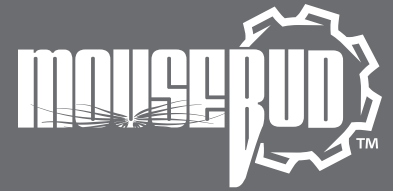
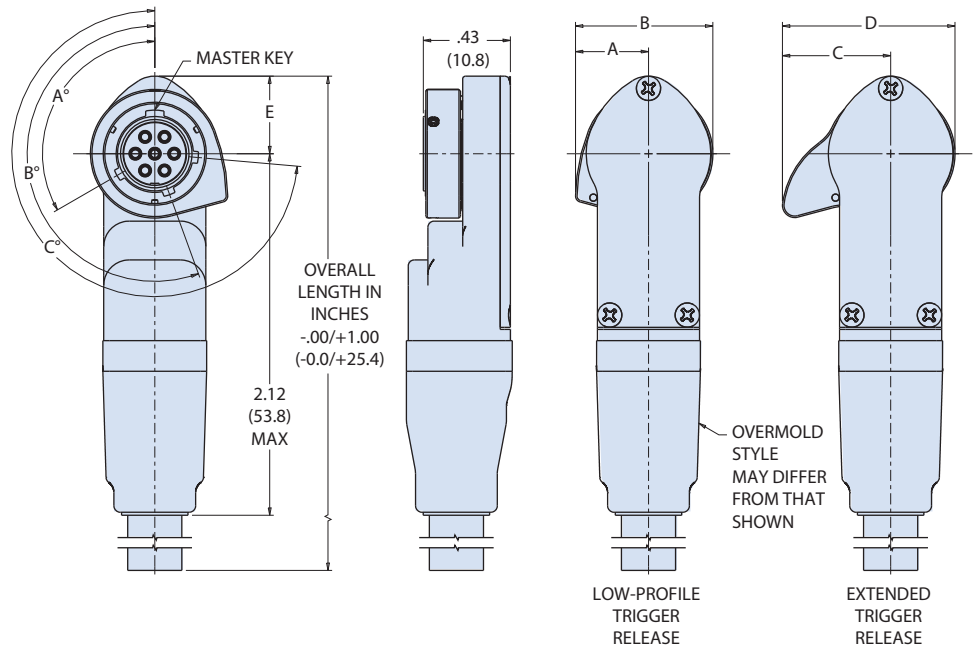
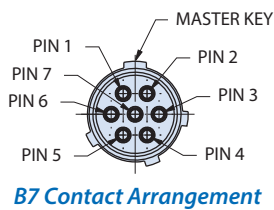


Table 4: Cordset Style

Property	Style 1	Style 2
Cable jacket	Thermoplastic elastomer (TPV)	Thermoplastic polyurethane (TPU)
Overmold	Thermoplastic elastomer (TPV)	Polyamide
Operating temperature	-55° C to +125° C	-30° C to +105° C
Flexibility	Excellent	Good
Water Resistance	Waterproof	Waterproof
Solvent Resistance, Cable Jacket	Good	Excellent
Solvent Resistance, Overmold	Good	Fair
Weatherability	Excellent	Excellent
Abrasion Resistance	Good	Excellent
Flammability	Flame retardant UL 94 HB	Flame retardant UL 94 V-0

Table 5: Wire Color

Contact Number	Color
1	Black
2	Brown
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Violet
9	Grey
10	White



Dimensions

Contact Arr.	A		B		C		D		E	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
B7	.36	9.1	.67	17.1	.53	13.5	.84	21.5	.38	9.6

SERIES 860 MouseBud™



The snap-lock, trigger-release connector

860-007P Plug Cordsets for USB+BAT



860-007P

Lightweight 860-007P MouseBud™ harsh environment cordsets are shielded, overmolded and 100% tested. Wired per standard US Army Personal Area Network (PAN) protocol, these USB+BAT cordsets have dual power wires to handle standard USB power plus up to 5 amp battery power. Cable has an individually shielded 90 ohm data pair plus overall braided tinned copper shield with 90% minimum optical coverage. Shield is terminated to the connector with a stainless steel Band-Master® ATS strap. Water-resistant, meets MIL-STD-810G immersion requirement. Simply push to mate and lock. To release, actuate thumb trigger on coupling ring. Style 2 cordset with thermoplastic rubber jacket and overmold has excellent cold bend performance to -55° C. Connectors feature spring-loaded gold plated contacts, stainless steel shells and self-actuating bayonet coupling rings. 5A current rating, 500VAC dielectric withstanding voltage rating.

Specifications

- Operating temperature:
-30°C to +105°C (cordset style 1)
-55°C to +125°C (cordset style 2)
- Dielectric withstanding voltage: 500 VAC
- Current rating: 5 A
- Contact resistance: 20 milliohms
- Water immersion: MIL-STD-810G Meth. 512.5
- Ingress protection: IP67
- Mechanical life: 2000 cycles

Connector Construction

- Shell: stainless steel
- Bayonet pins, retainer ring and torsion spring: stainless steel
- Coupling ring: aluminum
- Lid: aluminum
- Contacts: copper alloy, gold plated
- Insert: glass-filled thermoplastic
- Ground spring: gold-plated stainless steel
- Gasket: fluorosilicone
- Potting compound: RTV silicone

Cable Construction

- Data pair: 90 ohm shielded twisted pair, #26 (19/38) AWG silver-coated copper, PFA insulation
- Power wires: (2) #22 (19/34) AWG silver-coated copper, TFE insulation
- Overmold: polyamide or thermoplastic elastomer
- shield: tin-coated copper microfilament, 90% minimum optical coverage
- Jacket: thermoplastic polyurethane (TPU) or thermoplastic elastomer (TPV)

How To Order	
	860-007P- B7 ZR 1 A 2- 36
Product	860-007P = MouseBud cordset for USB+BAT
Contact Arrangement (Table 1)	B7 = seven contacts, size B shell
Finish	ME = electroless Ni MT = Nickel-PTFE ZR = Black zinc-nickel
Release Trigger Style (Table 2)	1 = Low-profile release trigger 2 = Extended release trigger
Key Position (Table 3)	A = position A D = position D B = position B E = position E C = position C F = position F
Cordset Style (Table 4)	1 = polyurethane cable jacket with polyurethane overmold 2 = polyurethane cable jacket with polyamide overmold
Length	Overall Length in inches, 12 inch minimum

Table I: Contact Arrangement	
<p>B7</p>	Contact Arr. B7
	# of Contacts 7
	Contact Diameter .038 (0.96)
	Current Rating 5A

Table 2: Release Trigger Style	
Low-profile release trigger	Extended release trigger

Table 3: Key Positions			
Code	A°	B°	C°
A	120°	200°	265°
B	80°	150°	265°
C	95°	150°	235°
D	95°	200°	320°
E	95°	225°	265°
F	120°	225°	320°

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MouseBud™

The snap-lock, trigger-release connector

860-007P Plug Cordsets for USB+BAT

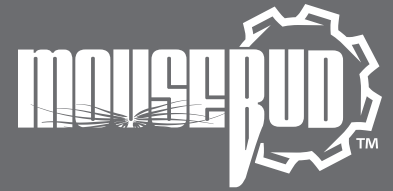
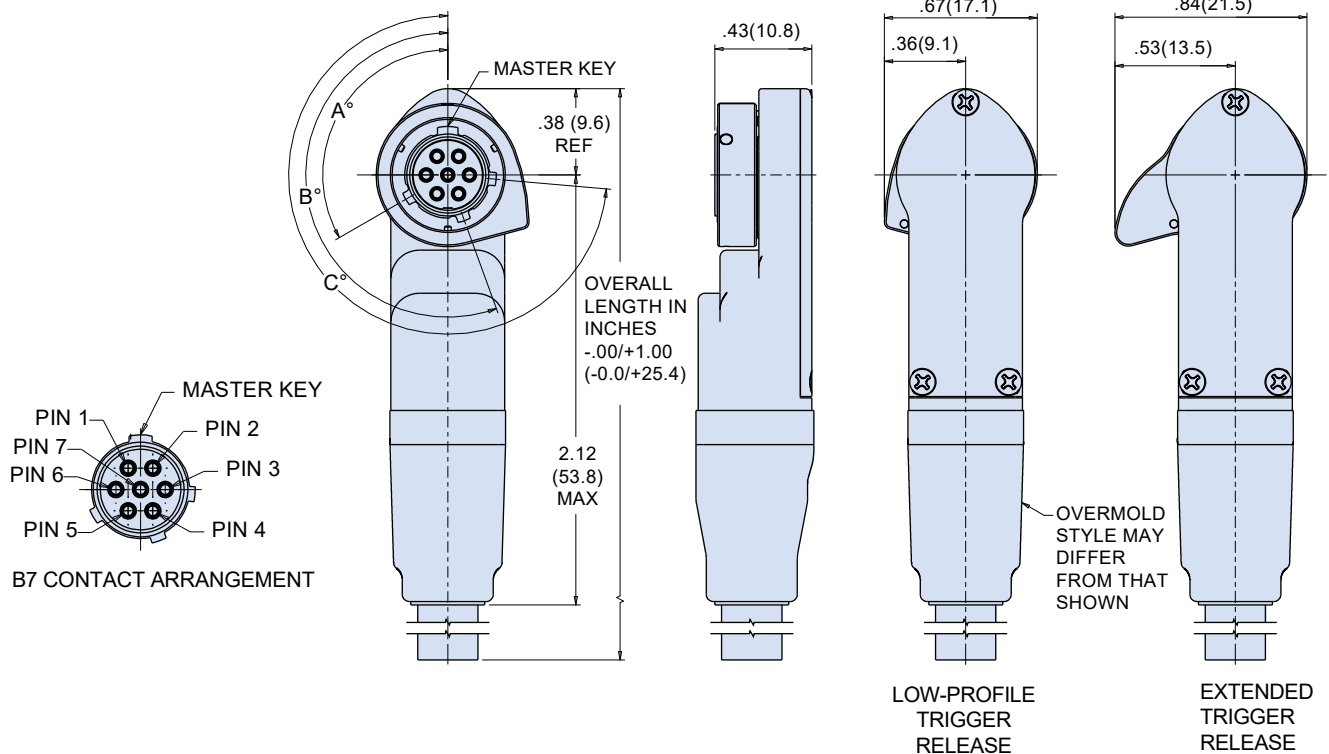
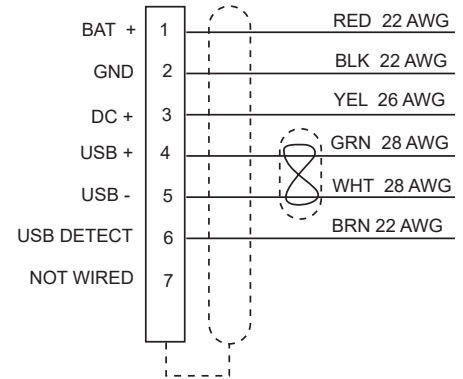


Table 4: Cordset Style

Property	Style 1	Style 2
Cable jacket	Thermoplastic elastomer (TPV)	Thermoplastic polyurethane (TPU)
Overmold	Thermoplastic elastomer (TPV)	Polyamide
Operating temperature	-55° C to +125° C	-30° C to +105° C
Flexibility	Excellent	Good
Water Resistance	Waterproof	Waterproof
Solvent Resistance, Cable Jacket	Good	Excellent
Solvent Resistance, Overmold	Good	Fair
Weatherability	Excellent	Excellent
Abrasion Resistance	Good	Excellent
Flammability	Flame retardant UL 94 HB	Flame retardant UL 94 V-0



The snap-lock, trigger-release connector

860-004R Panel Mounting Receptacles With PC Tails



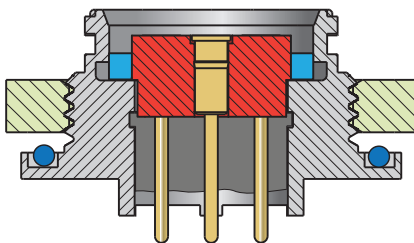
860-004R

Specifications

- Operating temperature: -55°C to +125°C
- Dielectric withstanding voltage: 500 VAC
- Current rating: 5 A
- Contact resistance: 20 milliohms
- Water immersion: MIL-STD-810G Method 512.5, mated or unmated
- Ingress protection: IP67
- Mechanical life: 2000 cycles

Connector Construction

- Shell: stainless steel
- Jam nut: stainless steel
- Contacts: copper alloy, gold plated
- Insert: glass-filled thermoplastic
- O-ring: fluorosilicone
- Peripheral seal: fluorosilicone
- Potting compound: RTV silicone



Mounting Style 07
 for rear panel mounting

860-004R panel mount MouseBud receptacles with “hot shoe” type contacts are lightweight, ultra low profile and are rated for 2000 mating cycles. Suitable for hostile environments including soldier-wearable electronics, these receptacle connectors meet MIL-STD-810G immersion requirements mated or unmated. Contacts are easy to clean and damage resistant. Gold plated contacts, stainless steel shell and thermoplastic insulator. Fluorosilicone O-ring and seal. 5A current rating, 500VAC dielectric withstanding voltage rating. -55° to +125° C operating temperature.

How To Order	
	860-004R- B7 ZR 07 A- 15- 30
Product	860-004R = MouseBud panel mount receptacle with PC tail terminals
Contact Arrangement (Table 1)	B7 = seven contacts, size B shell
Finish	M = electroless NI MT = Nickel-PTFE ZR = Black zinc-nickel
Shell Style	00 = front panel mounting 07 = rear panel mounting
Keyway Position (Table 2)	A = position A D = position D B = position B E = position E C = position C F = position F
Panel Thickness	15 = .062 (1.5) 30 = .125 (3.0)
PC Tail Length	20 = .08 (2.0) 30 = .12 (3.0)

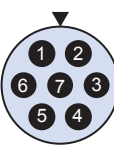
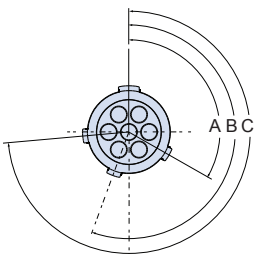
Table 1: Contact Arrangement		
	Contact Arr.	B7
	# of Contacts	7
	Contact Diameter	.038 (0.96)
	Current Rating	5A

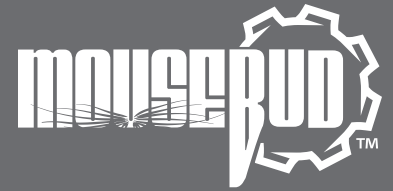
Table 2: Keyway Positions				
	Code	A°	B°	C°
	A	120°	200°	265°
	B	80°	150°	265°
	C	95°	150°	235°
	D	95°	200°	320°
	E	95°	225°	265°
	F	120°	225°	320°

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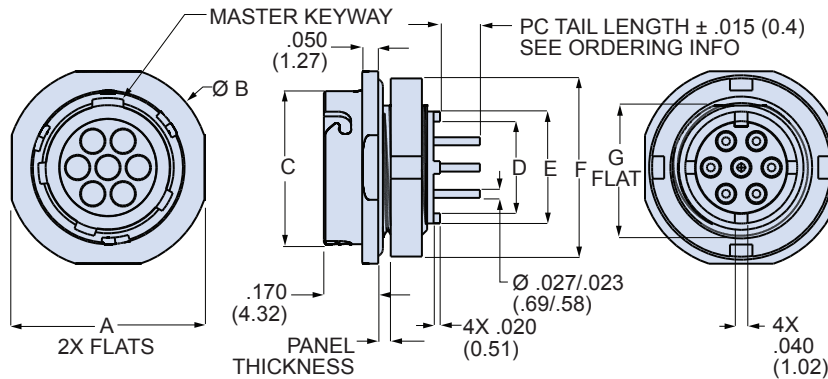
MouseBud™

The snap-lock, trigger-release connector

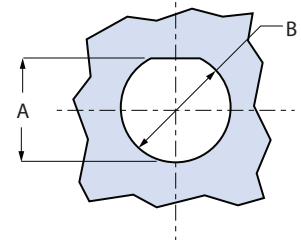
860-004R Panel Mounting Receptacles With PC Tails



Front Panel Mount Style 00 Dimensions														
Contact Arr.	A		B		C		D		E		F		G	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
B7	.602	15.29	.635	16.13	.480	12.19	.290	7.37	.350	8.89	.562	14.27	.410	10.41

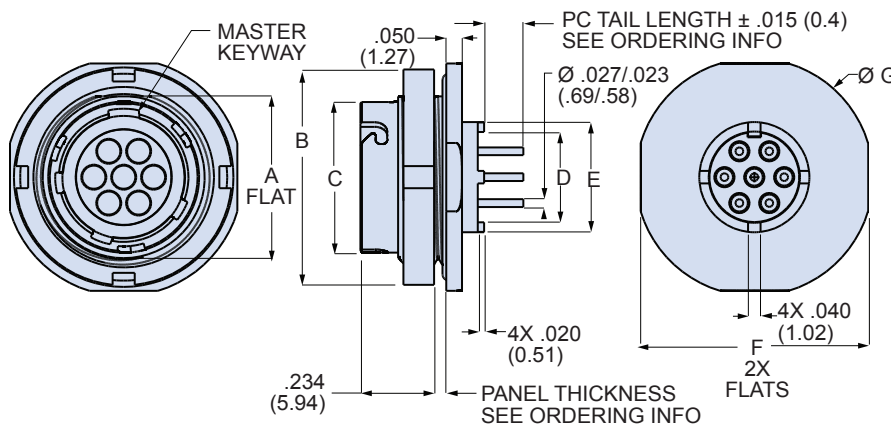


Style 00 Panel Cutout

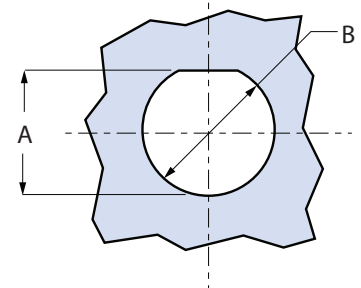


Contact Arr.	Shell Style	A		B	
		± .002 (0.05)	± .002 (0.05)	In.	mm.
B7	00	.416	10.57	.447	11.35

Rear Panel Mount Style 07 Dimensions														
Contact Arr.	A		B		C		D		E		F		G	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
B7	.536	13.60	.688	17.48	.480	12.19	.290	7.37	.350	8.89	.723	18.36	.755	19.18

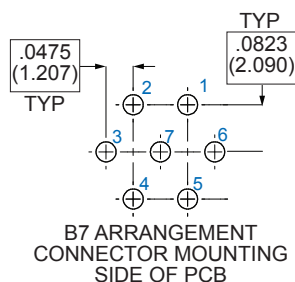


Style 07 Panel Cutout



Contact Arr.	Shell Style	A		B	
		± .002 (0.05)	± .002 (0.05)	In.	mm.
B7	07	.542	13.77	.572	14.53

B7 PCB Layout



Jam Nut Tightening Tools



Use these tools to install spanner-type jam nuts. 1/4 inch square drive. 20-25 in.-lbs. recommended torque. Hardened steel, nickel plated.

Layout	Mounting Style	Tool PN
B7	Style 00 Front Mt	600-146-05
B7	Style 07 Rear Mt	600-147-6

The snap-lock, trigger-release connector

860-005R Panel Mounting Receptacles With Solder Cup Terminals



860-005R

Specifications

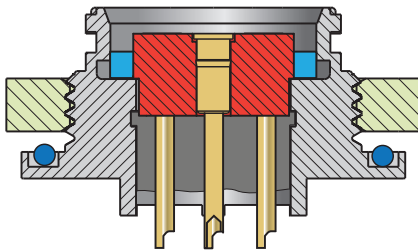
- Operating temperature: -55°C to +125°C
- Dielectric withstanding voltage: 500 VAC
- Current rating: 5 A
- Contact resistance: 20 milliohms
- Wire size: #22 AWG maximum
- Water immersion: MIL-STD-810G Method 512.5
- Ingress protection: IP67
- Mechanical life: 2000 cycles

Connector Construction

- Shell: stainless steel
- Jam nut: stainless steel
- Contacts: copper alloy, gold plated
- Insert: glass-filled thermoplastic
- O-ring: fluorosilicone
- Peripheral seal: fluorosilicone
- Potting compound: RTV silicone

860-005R panel mount MouseBud receptacles with “hot shoe” type contacts are lightweight, ultra low profile and are rated for 2000 mating cycles. Suitable for hostile environments including soldier-wearable electronics, these receptacle connectors meet MIL-STD-810G immersion requirements mated or unmated. Contacts are easy to clean, damage resistant and non-removable. Solder cups accept up to #22 AWG wire. Gold plated contacts, stainless steel shell and thermoplastic insulator. 5A current rating, 500VAC dielectric withstanding voltage rating. -55° to +125° C operating temperature.

How To Order	
	860-005R- B7 ZR 07 A- 12
Product	860-005R = MouseBud panel mount receptacle with solder cup terminals
Contact Arrangement (Table 1)	B7 = seven contacts, size B shell
Finish	M = electroless NI MT = Nickel-PTFE ZR = Black zinc-nickel
Shell Style	00 = front panel mounting 07 = rear panel mounting
Key Position (Table 2)	A = position A D = position D B = position B E = position E C = position C F = position F
Panel Thickness	15 = .062 (1.5) 30 = .125 (3.0)



Mounting Style 07
 for rear panel mounting

Table 1: Contact Arrangement		
<p>B7</p>	Contact Arr.	B7
	# of Contacts	7
	Contact Diameter	.038 (0.96)
	Current Rating	5A

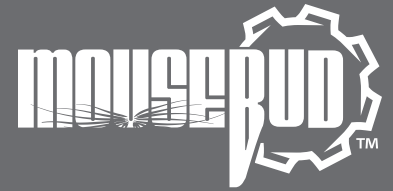
Table 2: Key Positions				
	Code	A°	B°	C°
	A	120°	200°	265°
	B	80°	150°	265°
	C	95°	150°	235°
	D	95°	200°	320°
	E	95°	225°	265°
	F	120°	225°	320°

SERIES 860

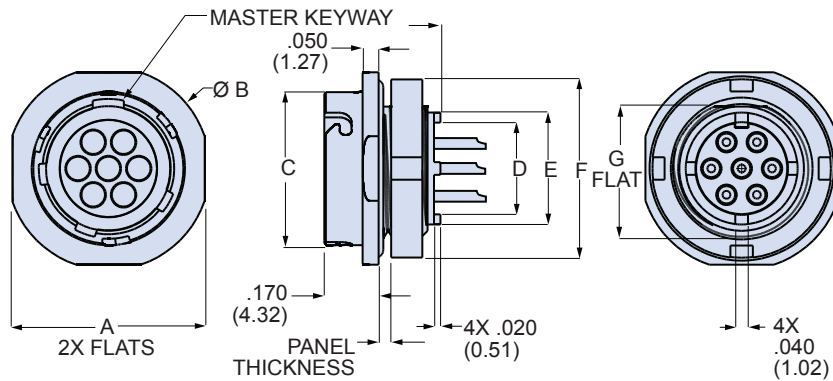
MouseBud™

The snap-lock, trigger-release connector

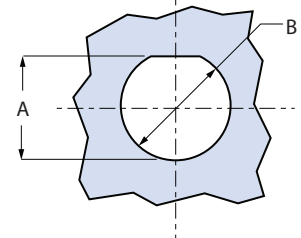
860-005R Panel Mounting Receptacles With Solder Cup Terminals



Front Panel Mount Style 00 Dimensions														
Contact Arr.	A		B		C		D		E		F		G	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
B7	.602	15.29	.635	16.13	.480	12.19	.290	7.37	.350	8.89	.562	14.27	.410	10.41

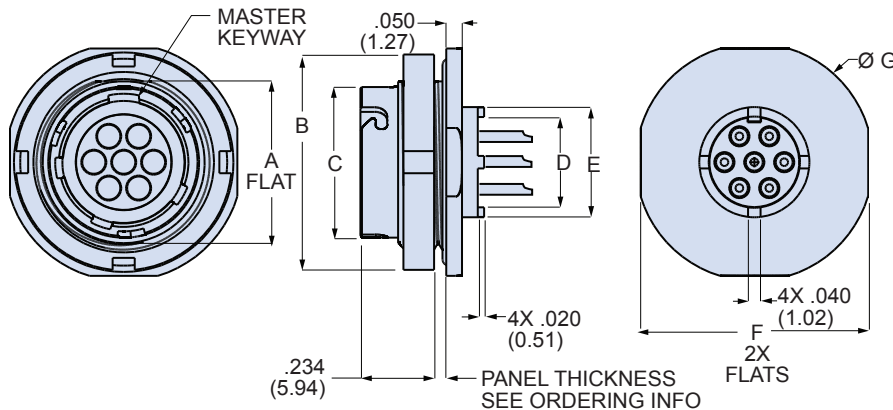


Style 00 Panel Cutout

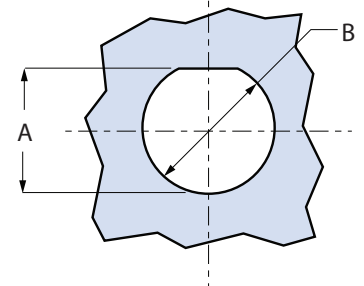


Contact Arr.	Shell Style	A		B	
		± .002 (0.05)	± .002 (0.05)	in.	mm.
B7	00	.416	10.57	.447	11.35

Rear Panel Mount Style 07 Dimensions														
Contact Arr.	A		B		C		D		E		F		G	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.	in.	mm.
B7	.536	13.60	.688	17.48	.480	12.19	.290	7.37	.350	8.89	.723	18.36	.755	19.18



Style 07 Panel Cutout



Contact Arr.	Shell Style	A		B	
		± .002 (0.05)	± .002 (0.05)	in.	mm.
B7	07	.542	13.77	.572	14.53

Jam Nut Tightening Tools



Use these tools to install spanner-type jam nuts. 1/4 inch square drive. 20-25 in.-lbs. recommended torque. Hardened steel, nickel plated.

Layout	Mounting Style	Tool PN
B7	Style 00 Front Mt	600-146-05
B7	Style 07 Rear Mt	600-147-6



Out of This World
**INTERCONNECT
SOLUTIONS**

Glenair, Inc.

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