

MABAC Threaded Coupling Series

Description

- **A compact solution**
 - The smallest connector available (shell size 3)
 - Miniaturization of MIL-DTL-38999 Series III
 - Threaded coupling (between 1/2 and 3/4 turn to mate) with ratcheting system (size 5 & 7)
 - Integrated backshell:
 - Easy to wire and handle
 - Compatible with heat shrink boot and braid retention band
 - Compliant with overmolding
 - Triple-start thread
- **A versatile solution**
 - 3 shells sizes: 3, 5, 7
 - Plug; In line, Box and Jam nut receptacle
 - 2 materials, 3 platings
 - Crimp & PC tails
 - Removable contacts #22D & #26
 - 6 keyings
- **Harsh environment-resistant solution**
 - 100% Scoop Proof
 - Cavity to cavity sealed with interfacial seal and grommet
 - EMI ring (for size 5 & 7)
 - Fluid resistant



Technical Features:

Materials

- **Shell:**
Aluminum alloy
Passivated stainless steel (for size 5 & 7)
- **Shell plating:**
Aluminum:
. Zinc nickel (RoHS)
. Nickel (RoHS)
. Olive drab cadmium
Passivated stainless steel (RoHS)
- **Insulator:** Thermoplastic
- **Contact body:** Copper alloy
- **Contacts plating:** Gold over nickel plated
- **Shell endurance:**
Aluminum:
500 mating/unmating cycles
Passivated stainless steel:
1000 mating/unmating cycles
- **Vibration:**
44 grms @125°C, 2 axes during 8 hours
- **Shock:**
300g, 3 ms

Electrical

Wire size

Layout	Wire (AWG)
03-05	24-30
03-35	22-28
05-06	24-30
05-35	22-28
07-09	24-30
07-35	22-28

- **Test voltage (at sea level):**
Size 22D: 1000 Vrms
Size 26: 400 Vrms
- **Contact resistance:**
Size 22D: <14.6 mΩ Size 26: <16 mΩ
- **Contact rating:**
Size 22D: 5A Size 26: 3A
- **Contact retention:**
Size 22D: 45N Size 26: 30N
- **Shell to shell continuity (typical value)**

Shell size	Aluminum version	Stainless steel version
5	10 mΩ	60 mΩ
7		

- **EMI:**
Aluminum: -70dB @ 1GHz
Passivated stainless steel: -55 dB @ 1Ghz

Environmental

- **Temperature range:**
-55°C to +175°C
- **Water immersion:**
IP 67 on mated connector
1 meter for 30 min minimum
> IP68 with appropriate cable termination
- **Salt spray:**
Zinc nickel: 500 hours
Nickel: 48 hours
Olive drab cadmium: 500 hours
Passivated stainless steel: 500 hours

Resistance to fluids

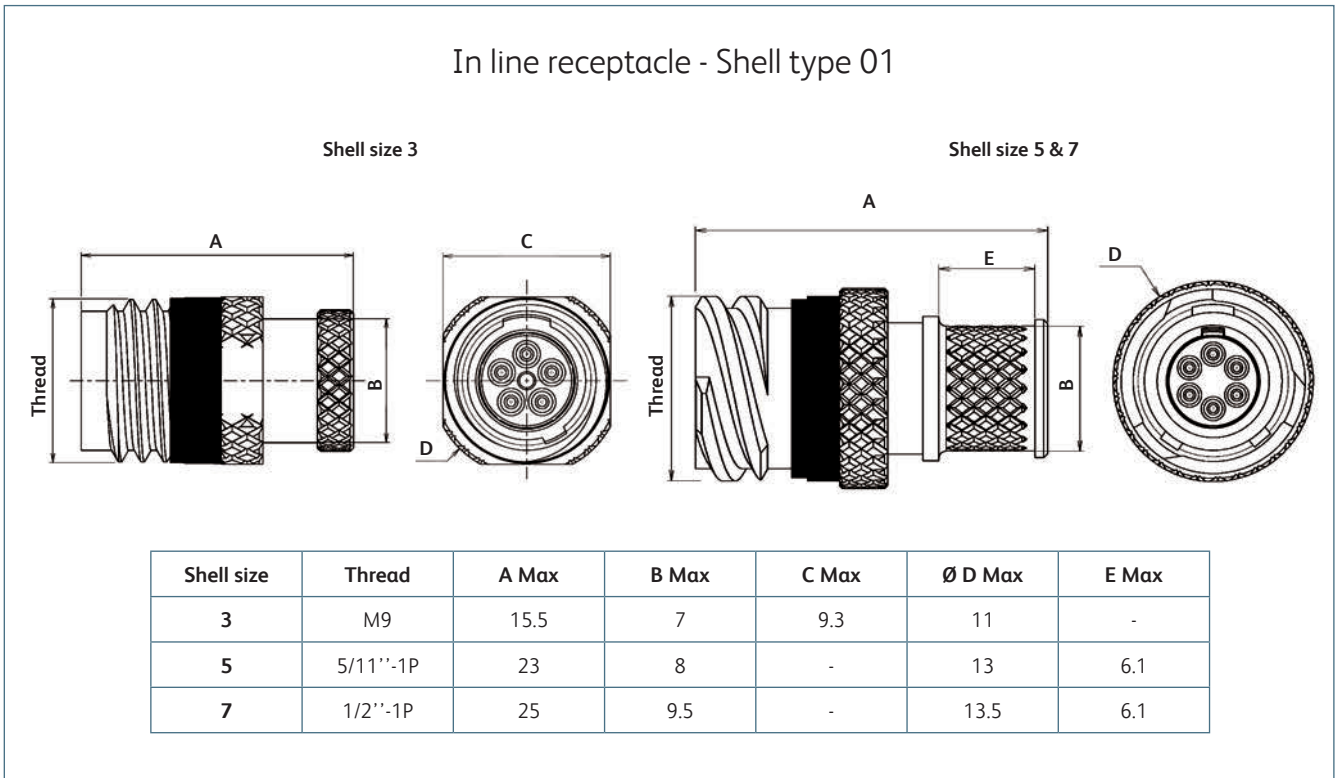
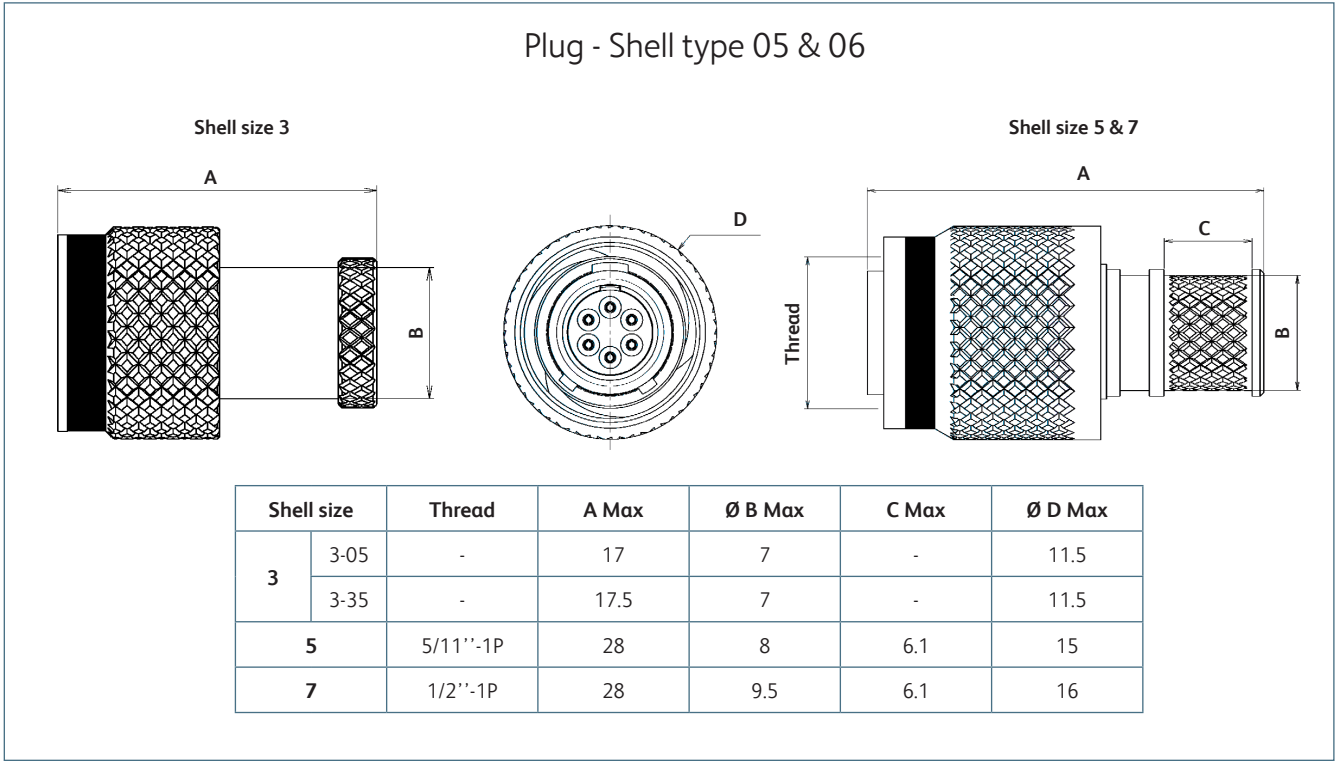
- **According to MIL-DTL-38999 standard**
Gasoline: JP5 (OTAN F44)
Mineral hydraulic fluid: MIL-H-5606 (OTAN H515)
Synthetic hydraulic fluid: Skydrol 500 B4
- **Compatible with de-icing fluids containing potassium acetate**

General Note

TT Electronics reserves the right to make changes in product specification without notice or liability.
All information is subject to TT Electronics' own data and is considered accurate at time of going to print.



Dimensions



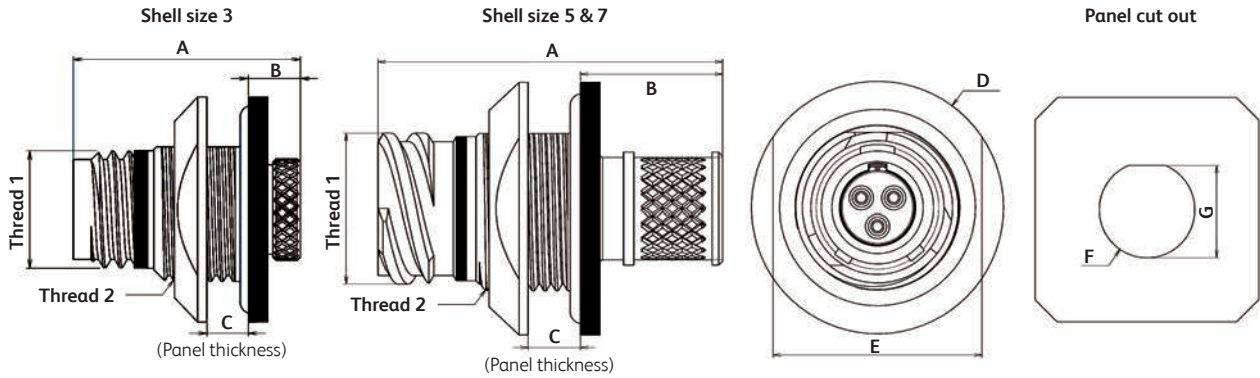
Note: All dimensions are in mm.

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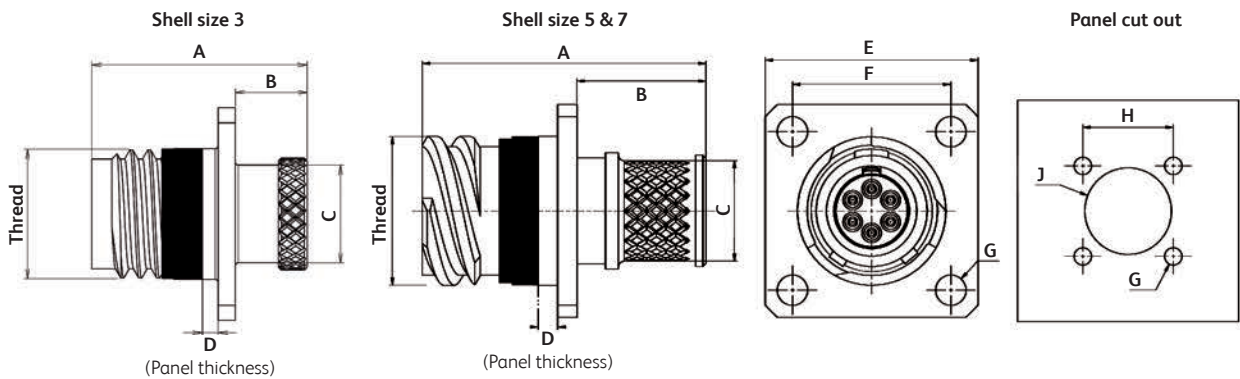
Jam nut receptacle - Shell type 07



Shell size	Thread 1	Thread 2	A Max	B Max	C Max	Ø D Max	E Max	Ø F Max	G Max	
3	3-05	M9	7/16''28 UNEF 2A	18	4.5	3.2	18	14	11.3	10.6
	3-35	M9	7/16''28 UNEF 2A	20	4.5	3.2	17.5	14	11.3	10.6
5	5/11''-1P	1/2''28 UNEF 2A	27	11	3.2	19.5	16	12.8	12.3	
7	1/2''-1P	9/16''24 UNEF 2A	27	11.5	3.2	20.8	17	14.5	13.8	

Note: All dimensions are in mm.

Box receptacle - Shell type 00



Shell size	Thread	A Max	B Max	Ø C Max	D Max	E Max	F Max	Ø G Max	H Max	Ø J Max	
3	3-05	M9	15	5	6.8	2.5	15	10.5	2.35 ^{+0.08}	10.5	9.5
	3-35	M9	18	8	6.8	2.5	15	10.5	2.35 ^{+0.08}	10.5	9.5
5	5/11''-1P	23	10.5	8	2.5	16.6	12.27	2.35 ^{+0.08}	12.27	11.75	
7	1/2''-1P	25	13	10	2.5	18	13.84	2.35 ^{+0.08}	13.8	12.95	

Note: All dimensions are in mm.

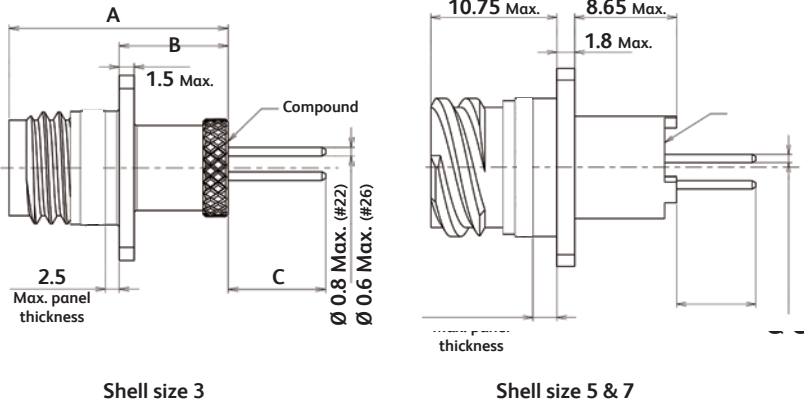
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Orientations

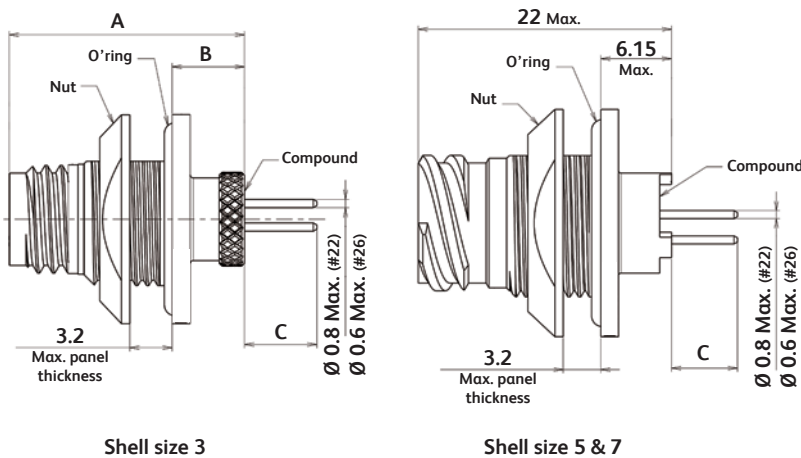
Box receptacle with PC tail contacts - Shell type 90



Layout	A Max.	B Max.	C Min.	C Max.
03-05	15	6.5	8.47	9.47
03-35	18	9	7.39	8.12
05-06	-	-	5.89	7
05-35	-	-	5.87	6.9
07-09	-	-	6.04	7
07-35	-	-	5.82	6.9

Shell design vary according to shell size.
For L contact (long PC tail) please consult us.

Jam nut receptacle with PC tail contacts - Shell type 97



Layout	A Max.	B Max.	C Min.	C Max.
03-05	18.5	4.2	5.87	6.97
03-35	20.5	6.2	5.19	6.02
05-06	-	-	4.86	5.95
05-35	-	-	4.82	5.85
07-09	-	-	4.99	5.95
07-35	-	-	4.77	5.85

Shell design vary according to shell size.
For L contact (long PC tail) please consult us.

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Connector weights

Weight

Aluminum version (in gram $\pm 10\%$)

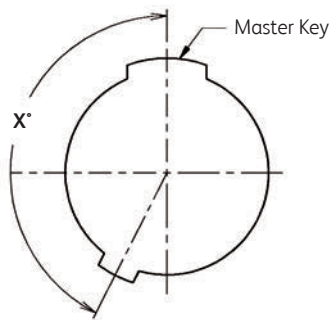
Shell size & layout	Plug		Square flange receptacle	
	Without contacts	With crimp contacts	Without contacts	With crimp contacts
03-05	1.7	1.8	1.9	2.1
05-06	2.8	3	5.4	5.8
07-09	3.6	3.9	6	6.5

Orientations

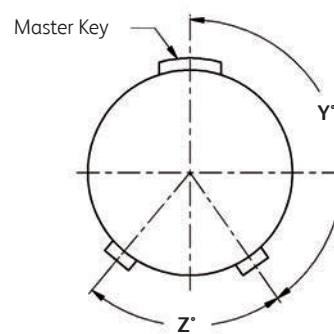
Orientation - All shell types

Plug front face view

Shell size 3



Shell size 5 & 7



Shell size	Angles	N	A	B	C	D	E
3	X°	153	51	102	204	255	306
5 & 7	Y°	145	130	110	155	90	90
	Z°	75	120	120	115	115	180

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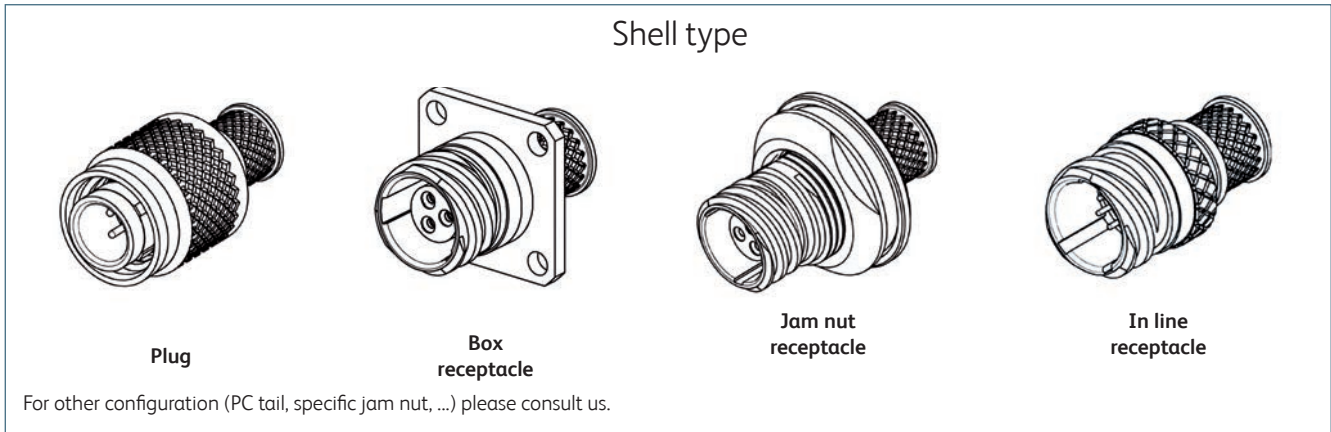
Ordering information

Threaded Series	MABAC T	90	W	05	35	P	N	XXX
Shell type:								
06 = Cable Plug								
01 = In-line Receptacle								
00 = Box Receptacle 4 hole								
07 = Jam Nut Receptacle								
90 = Square flange receptacle PCB contacts								
97 = Jam nut Receptacle PCB contacts								
Material and Finish:								
W = Cad								
F = Electroless Nickel								
Z = Zinc Nickel								
K = Stainless Steel								
Shell size: 03, 05, 07								
Insert Arrangement: See contact layouts								
Contact type:								
P = Pin								
S = Socket								
T1 = PCB Tail Short Pin								
T2 = PCB Tail Long Pin								
Orientation :								
N = Normal								
Alternative A,B,C,D,E								
Modification code								

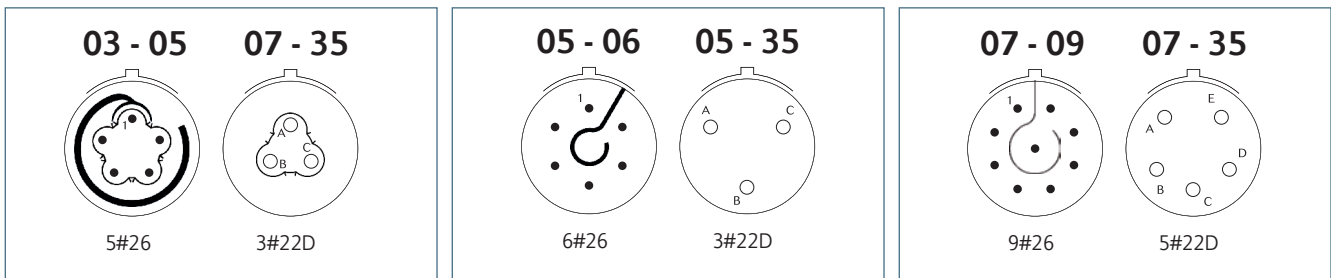
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Contact layouts



Note: For information only.

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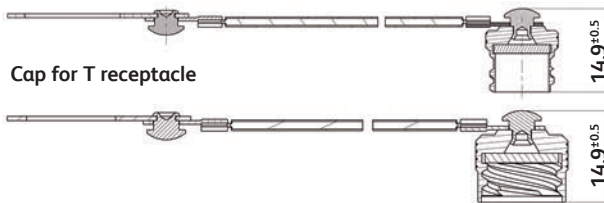


Caps


Basic Series: Cap for T Series	MABACT	32	Z	03	N
Cap type: 32: Cap for plug 33: Cap for receptacle					
Plating: Z: Black zinc nickel F: Nickel W: Olive drab cadmium					
Shell size: 03 - 05 - 07					
Style: N: Ring R: Eyelet					

Dimensions

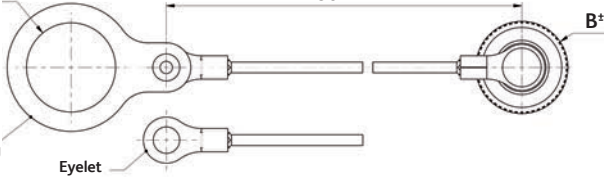
Cap for T plug



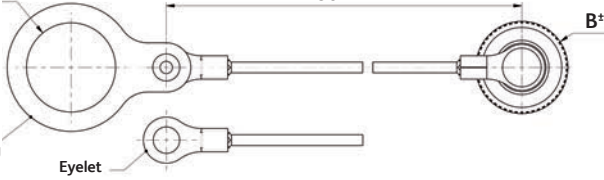
Cap for T receptacle



Ring



Eyelet



Size	A	B	
		Plug	Receptacle
03	11.5	11	12.5
05	13.5	13	15
07	14.5	14	17

Note: for other lanyard length please consult us.

Gaskets

Shell size	Threaded 'T' Box receptacle
3	T0G03
5	T0G05
7	T0G07

Note: All dimensions are in millimeters (mm).

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