

Application Note

QuickPort Surface Mount Housing Guidance

Leviton surface mount products are designed to support voice and data applications in office, retrofit, or other surface-mount environments.

It is essential that good planning and installation practices are followed. Cabling installations shall comply with the authority having jurisdiction (AHJ) and/or applicable regulations as per regional requirements. The following guidance is provided to assist specifiers and installers in selecting the best surface mount product for their application.

All Leviton connectivity products are designed to meet the relevant ANSI/TIA & ISO/IEC standards (standards are referenced on product data sheets).

The following page displays our general surface mount product recommendations based on cable diameter. We recommend standard depth housings (part 41089-xxx) for multi-port applications with cables that are up to 0.25" or 6.3mm in diameter. We recommend our extended depth housings (part 4S089-xxx) and our Multi-Media Outlet System (MOS) housing (41296-MMx) for multi-port applications utilizing cables with larger diameters. Page 3 provides a table with in-depth information on each housing product.

For additional information please contact Leviton Technical Services at appeng@leviton.com or by phone at 1-800-824-3005 (opt. 1).



Application Note ID:
NS-AN-21-0001-02-10-21

Date:
02/24/2021

Product Line:
Surface Mount Boxes

Part Numbers Affected:
41089-xxP
4S089-xxP
41296-MMx & 41291-2Qx

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41089-xxx housings are our preferred solution for multi-port Category 5e, 6, or 6A with a cable OD of 0.25" (6.3mm) or less and a bend radius of 1" (25.4 mm) or less.



4S089-xxx and 41296-MMx housings are our preferred solutions for multi-port applications utilizing larger OD cables such as 6A & Shielded. For single-port applications the 41089-1xP is recommended.



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Surface Mount Housing Capacity Guidance																					
Use cable diameter & bend radius specifications below to determine maximum number of ports/cables supported per housing at right.		Part no.		41089-1xP		41089-2xP		41089-4xP		41089-6xP		41089-12x		4S089-2xP		4S089-4xP		41296-MMx +3ea 41291-2Qx			
		Port count:		1-Port		2-Port		4-Port		6-Port		12-Port		2-Port		4-Port		6-Port			
Cable OD	Typical Minimum Bend Radius	Entry point:		Back		Back		Back		Side		Side		Side		Side		Side or Back		Side or Back	
		Up to 0.25" (6.3 mm)	Up to 1" (25.4 mm)	1	2	4	4	6	6	12 ^A	2	4	6								
Up to 0.325" (8.2 mm)	From 1-1.3" (25.4 - 33.1 mm)	1	2	4 ^B	3	5 ^B	3	6	2	4	6										
Up to 0.354" (9 mm)	From 1.3 to 1.4" (33.1 to 35.6 mm)	1	2	2 ^C	0	3 ^C	0	5 ^C	2	4	6 ^A										
Shielded or specialty cables	Greater than 2" (50 mm)	1	2	2 ^C	0	3 ^C	0	0	2	4	6 ^A										

A.) Fully populating surface mount box may require using multiple entry points.
 B.) Cable rigidity may prevent use of outside ports (for example port 1 on the 4 or 6-port housings)
 C.) Evaluate cables with bend radius larger than 1.3" (33.1 mm) for application feasibility. For the 41089-4xP and 41089-6xP housings only back entry will be acceptable. Depending on cable rigidity, outside ports may not be accessible without deforming cable and violating bend radius. For the 12-Port (41089-12x) housing side entry is permissible; supported port count will depend on cable outer diameter and bend radius.

Additional considerations:

- Shielded cables may require a larger bend radius (up to 8x the OD of the cable). The manufacturers listed minimum bend radius takes precedence.
- Cables should be routed in such a way that they do not violate manufacturer bend radius and do not impact cover mounting & removal. Evaluate entry points and choose the best entry point(s) for your application. Multiple entry points may be used as needed.
- Some jack connectors may allow side termination which may allow higher jack density without violating bend radius.
- 6 & 12-port 41089 boxes can be mounted over NEMA boxes or low voltage brackets. The base knockout used for these applications is not recommended for large OD cables or high cable counts. For this application the 4S089-4xP is our recommended solution.

4, 6, & 12-Port Cover Knockouts

•Two types of cover knockouts—2.26" by 0.57" (57.4 mm by 14.5 mm) and 1.54" by 0.83" (39 mm by 21.1 mm)—matching common surface raceway sizes are provided. Each type has inner knockouts so that entry points can be sized to match raceway type or cable bundle size.

•Base (not pictured) also has a removable cutaway feature so that appropriately sized raceway can extend (slightly into box) to provide a finished appearance.

