

Amphenol®



SurLok Plus™ Series

www.amphenol-industrial.com

Company Profile



Amphenol Industrial Operations

Amphenol Industrial Operations (AIO), a division of the Amphenol Corporation, is a prominent manufacturer of cylindrical connectors known around the world. Amphenol Industrial's product lines consist of rectangular, standard miniature, fiber optic, EMI/EMP filter, and a variety of special application connectors.

Amphenol was founded in 1932. It is one of the largest manufacturers of connector in the world. We take pride that Amphenol Industrial Operations is the undisputed leader in interconnect systems for harsh environment applications. Innovations like our RADSOK® contact technology can provide roughly 50% more current through the same size pin. Connectors utilizing this RADSOK® technology will outperform similar products in the market hands down.



Our newly added Endicott, NY facility is 20,000 ft² with 50+ employees. The Sidney, NY facility, nestled at the foothills of the Catskill Mountains, is over 307,000 square feet. This complex houses over 1000+ employees incorporating state-of-the-art manufacturing technologies. The facility is both ISO9001 certified and qualified to MIL-STD-790 requirements.



Amphenol Technology Zhuhai) Co., Ltd

Established in 2007, Amphenol Technology Zhuhai) Co., Ltd. is a manufacturing facility for Amphenol Industrial Operations, which serves a number of industrial markets, included but not limited to Factory Automation, Transportation, Heavy Equipment, Alternative Energy, Energy Storage. Server/Data Comm and Power Distribution.

Amphenol Technology (Zhuhai) Co., Ltd. covers an area of 276,000 ft² and is equipped with CNC, plating, injection molding and assembly workshops. This plant specializes in the design and manufacturing of industrial connectors featuring high power, high density, medium to high voltage electrical properties, and harsh environment applications.

With industry leading engineering, design and manufacturing expertise, Amphenol Technology (Zhuhai) Co., Ltd. has earned more than 60 utility patents on its innovative interconnects. Many of the products produced have been certified by independent standards including UL, IEC/TUV, ATEX, IECEx and MA. The facility is also certified to ISO 9001, ISO 14001 and IATF 16949.

Overview



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What is SurLok Plus™?



The SurLok Plus™ compression lug is a field installable, high reliable alternative to common compression lugs.

Using industry standard crimp, screw, and busbar termination options, thus eliminating the need to purchase special torque tools.

SurLok Plus™ is an environmentally sealed version of our original SurLok® but available in smaller sizes, and features a quick lock and press-to-release design. Incorporating the latest R4 RADSOK® Technology. SurLok Plus™ is a compact, quick mating, and robust product line.

The RADSOK® high amperage contact technology utilizes high tensile strength properties of a stamped and formed, high conductivity alloy grid to produce low insertion forces while maintaining a large conductive surface area. The R4 version of the RADSOK® represents the culmination of three years of research and development in laser welding copper based alloys.

Markets

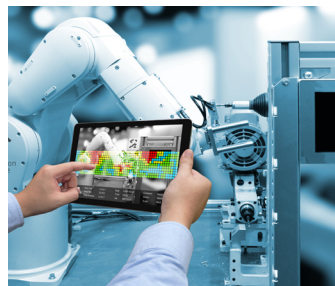
The markets and applications for the SurLok Plus™ Series include but are not limited to the following:



Energy Storage



EV/HEV



Process Control/Automation

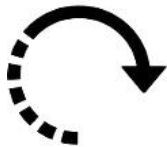


Heavy Equipment

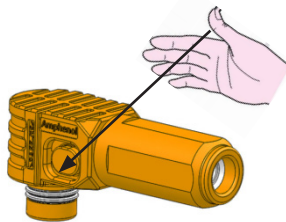
Features and Benefits

Keyway	Multiple keyways
Lock	Quick lock and press-to-release design
Plug	360° rotating plug optional
Receptacle	Various termination options (Thread, Crimp, Busbar)
Voltage	1000V / 1500V optional
Protection	Touch Proof
Design	Compact robust design

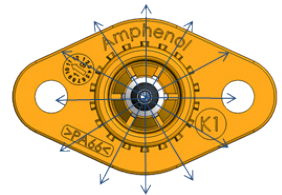
- The connector's design incorporates an integral latching system that ensures a definitive electrical and mechanical connection.
- Connector housings are manufactured with a thermoplastic material that is not only durable, but also with excellent dielectric, mechanical properties and meet environmentally RoHS compliant.
- Contacts are derived from quality copper alloy to ensure an electrically-reliable connection.
- UL and TUV certified.



Rotation

Quick lock and
press-to-release design

1000/1500 VDC

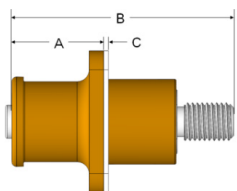
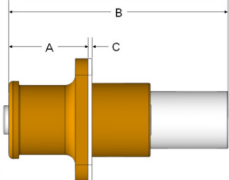
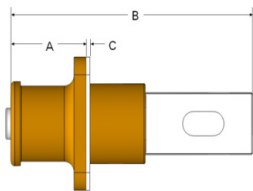
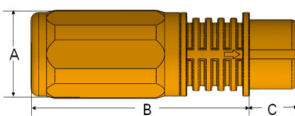


Multi-directional outgoing

Technical Information

Description	RADSOK® Size				
	3.6mm	5.7mm	8.0mm	8.0mm EMI	10.3mm
Current Rating	50A~70A	100A~120A	120A~200A	150A~250A	250A~350A
Operating Temperature	-40°C~125°C	-40°C~105°C	-40°C~105°C	-40°C~105°C	-40°C~105°C
Sealing	IP67(Mated)	IP67(Mated)	IP67(Mated)	IP67(Mated)	IP67(Mated)
Flammability	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0	UL 94 V-0
Locking	Spring Locking	Spring Locking	Spring Locking	Spring Locking with CPA	Spring Locking
RoHS Compliant	Yes	Yes	Yes	Yes	Yes
EMI Shielding	No	No	No	Yes	No
HVIL Function	No	No	No	Yes	No
Durability	>100 cycles	>100 cycles	>100 cycles	>100 cycles	>100 cycles

1000V Product Dimensions - Receptacle

	Screw Termination			Crimp Termination			Busbar Termination			Inline Crimp Termination		
Size												
	A	B	C	A	B	C	A	B	C	A	B	C
5.7mm	16.5	36.7	1.0 Ref.	16.5	40.7	1.0 Ref.	16.5	46.7	1.0 Ref.	20	54.3 Ref	8.9
8.0mm	19.0	46.2	1.0 Ref.	19.0	52.7	1.0 Ref.	19.0	61.2	1.0 Ref.	24.3	56.7 Ref	12
10.3mm	25.8	55.5	0.3 Ref.	25.8	50mm²: 65.8	0.3 Ref.	25.8	68.8	0.3 Ref.	/	/	/
					70mm²: 68.8							
					85mm²: 71.8							

Ordering Information - Receptacle

Product Series	Type		RADSOX® Size		Termination Style		Panel Mount		Sealing		Color		Keyway	
SLP	R	Receptacle W/O Keyway	A	5.7mm 120A	B	Busbar	P	W/ Flange	S	IP67	O	Orange	NO KEYWAY	
					T	Threaded Post							0	90°
					16C	16mm² Crimp								
					25C	25mm² Crimp								
			B	8.0mm 200A	B	Busbar							1	180°
					T	Threaded Post								
					25C	25mm² Crimp								
					35C	35mm² Crimp								
	IR	Receptacle W/ Keyway	C	10.3mm 350A	50C	50mm² Crimp	N	W/O Flange*	N	Non-Sealed	B	Black	2	60°
					B	Busbar								
					T	Threaded Post								
					70C	70mm² Crimp								
	CR	Inline Receptacle	A	5.7mm 120A	85C	85mm² & 95mm²	B	W/ Back shells**	N	Non-Sealed	R	Red	3	120°
					16	16mm²								
			B	8.0mm 200A	25	25mm²							4	150°
					35	35mm²								

* Not available for 10.3mm **Only available for inline type

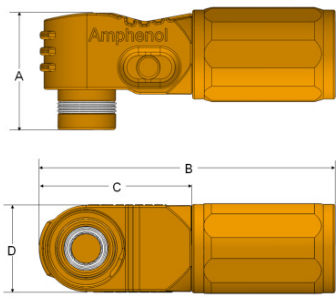
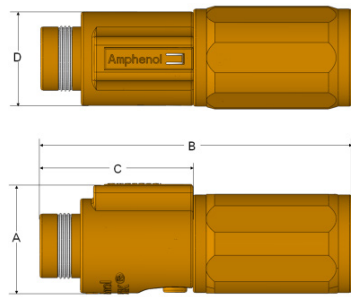
Example:

1	2	3	4	5	6	7	8
Product Series	Type	RADSOX® Size	Cable Size	Back shells	Sealing	Color	Keyway
SLP	IR	A	25	B	S	O	3
SLP	CR	B	50	B	N	B	0

SLPIRA25BSO3: 5.7mm SurLok™ Plus Receptacle without shielding and non HVIL, orange, 25mm² cable crimp, waterproof: IP67, keyway: 120°

SLPCRB50BNB0: 8.0mm SurLok™ Plus Inline receptacle without shielding and non HVIL, black, 50mm² cable crimp, waterproof: non-sealed, keyway: 90°

1000V Product Dimensions - Plug

	Right Angle Plug				Straight Plug			
Size								
	A	B	C	D	A	B	C	D
5.7mm	22.6	55.1 Ref	30	18	22.5	63 Ref	30.5	20
8.0mm	29	74.5 Ref	38.4	21.6	24.45	72.4 Ref	34.8	21.4
10.3mm	41.2	84.5 Ref	42.5	28	/	/	/	/

Ordering Information - Plug

Product Series	Type		RADSOK® Size		Cable Size		Back Shells		Sealing		Color		Keyway			
SLP	P	Right Angle 90°	A	5.7mm 120A	16	16mm²	B	W/ Back Shells	S	IP67	O	Orange		NO KEYWAY		
					25	25mm²										
			B	8.0mm 200A	25	25mm²							0	90°		
					35	35mm²										
					50	50mm²										
					50	50mm²										
			C	10.3mm 350A	70	70mm²					1	180°				
					85	85mm² & 95mm²							2	60°		
	IP	Straight Type	A	5.7mm 120A	16	16mm²			N	Non-Sealed	R	Red			3	120°
					25	25mm²										
			B	8.0mm 200A	25	25mm²							4	150°		
					35	35mm²										
50					50mm²											

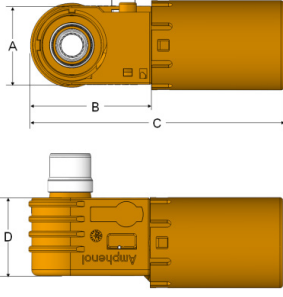
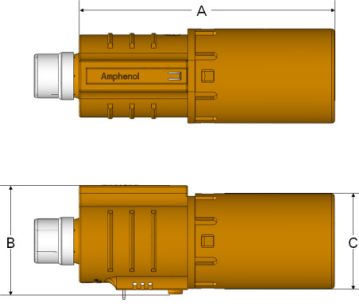
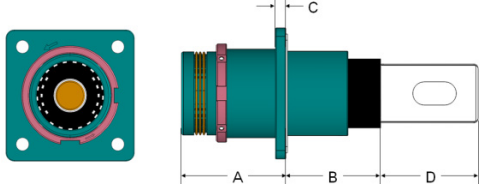
Example:

1	2	3	4	5	6	7	8
Product Series	Type	RADSOK® Size	Cable Size	Back shells	Sealing	Color	Keyway
SLP	P	A	25	B	S	O	
SLP	IP	A	25	B	S	O	3

SLPPA25BSO: 5.7mm SurLok™ Plus Right Angle Plug without shielding and non HVIL, orange, 25mm² cable, waterproof: IP67, keyway: NO KEYWAY

SLPIPA25BSO3: 5.7mm SurLok™ Plus Straight Plug without shielding and non HVIL, orange, 25mm² cable crimp, waterproof: IP67, keyway: 120°

1000V EMI Product Dimensions

	Right Angle Plug				Straight Plug			Press-Fit Termination			
Size											
	A	B	C	D	A	B	C	A	B	C	D
8.0mm	26.2	41.2	86.2	25.8	82.5	34.3	30	25.15	22.85	2.5	23.5

1000V EMI Ordering Information

Product Series	Type		RADSOK® Size		Cable Size		Back Shells		Sealing		Color		Keyway		EMI		HVIL	
SLP	P	Right Angle 90°	B	8.0mm 250A	35	35mm²	B	W/ Back shells	S	IP67	O	Orange	0	90°	E	EMI		NON HVIL
					50	50mm²							1	270°				
	IP	Straight Type			70	70mm²			N	Non-Sealed	B	Black	2	60°			H	HVIL
													3	120°				
										R	Red	4	150°					
Product Series	Type		RADSOK® Size		Termination Style		Panel Mount		Sealing		Color		Keyway		EMI		HVIL	
SLP	IR	Receptacle Keyway can rotate 360°	B	8.0mm	B	Busbar	P	Panel Mount W/ Flange	S	IP67	O	Orange	0	90°	E	EMI		NON HVIL
													1	270°				
									N	Non-Sealed	B	Black	2	60°			H	HVIL
													3	120°				
										R	Red	4	150°					

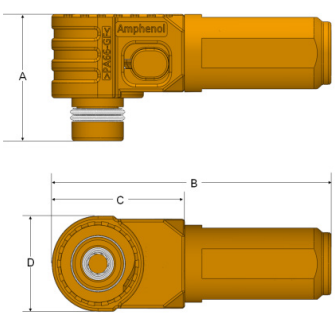
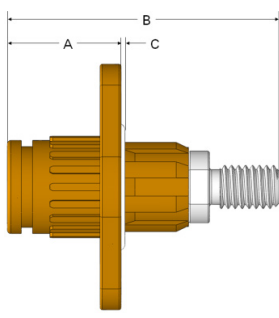
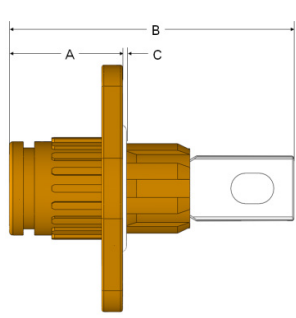
Example:

1	2	3	4	5	6	7	8	9	10
Product Series	Type	RADSOK® Size	Cable Size	Back shells	Sealing	Color	Keyway	EMI	HVIL
SLP	P	B	50	B	S	O	3	E	
Product Series	Type	RADSOK® Size	Termination Style	Panel Mount	Sealing	Color	Keyway	EMI	HVIL
SLP	IR	B	B	P	S	O	1	E	H

SLPPB50BSO3E: 8.0mm SurLok™ Plus Right Angle Plug with shielding and non HVIL, orange, 50mm² cable, waterproof: IP67, keyway: 120°

SLPIRBPSO1EH: 8.0mm SurLok™ Plus Receptacle with EMI and HVIL, orange, busbar panel, keyway: 270°, waterproof: IP67

1500V Product Dimensions

	Right Angle Plug				Screw Termination			Busbar Termination		
Size										
	A	B	C	D	A	B	C	A	B	C
3.6mm	21.2	48.6	23.1	16	16.3	39	0.5 Ref.	16.3	41	0.5 Ref.
8.0mm	34	82.3	37.1	24.3	22	57.1	0.35 Ref.	22	60	0.35 Ref.
10.3mm	43	97.5	40.5	30	27	70	0.25 Ref.	27	69	0.25 Ref.

1500V Ordering Information

Product Series	Type		RADSOK® Size		Cable Size		Back Shells		Sealing		Color		Keyway	
SLP	HP	RA Type	M	3.6mm 70A	6	6mm ²	B	W/ Back shells	S	IP67	O	Orange	1	20°
					10	10mm ²					B	Black		
			B	8.0mm 200A	35	35mm ²			N	Non-Sealed	R	Red	2	30°
					50	50mm ²								
			C	10.3mm 350A	70	70mm ²								
					95	95mm ²								
Product Series	Type		RADSOK® Size		Termination Style		Panel Mount		Sealing		Color		Keyway	
SLP	HIR	Receptacle W/ Keyway	M	3.6mm 70A	B	Busbar	P	Panel Mount W/ Flange	S	IP67	O	Orange	1	20°
			B	8.0mm 200A							B	Black		
			C	10.3mm 350A	T	Threaded Post			N	Non-Sealed	R	Red	2	30°

Example:

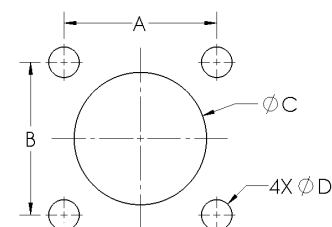
1	2	3	4	5	6	7	8
Product Series	Type	RADSOK® Size	Cable Size	Back shells	Sealing	Color	Keyway
SLP	HP	M	10	B	S	B	1
Product Series	Type	RADSOK® Size	Termination Style	Panel Mount	Sealing	Color	Keyway
SLP	HIR	M	B	P	S	R	2

SLPHPM10BSO1: 3.6mm SurLok™ Plus 1500V Right Angle Plug , without shielding and non HVIL, black, 10mm² cable crimp , waterproof: IP67, keyway: 20°

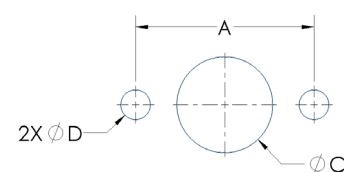
SLPHIRMBPSR2: 3.6mm SurLok™ Plus 1500V Receptacle without shielding and non HVIL, red, busbar, waterproof: IP67, keyway: 30°

Layout Dimensions

RADSOK® Size	A	B	ØC	ØD	Layout Torque	Busbar Torque	Screw Torque
5.7mm	18±0.1	18±0.1	14.4±0.2	4.2+0.2/-0 or M4 Screw	0.4~0.7N.m	M5 Screw 2N.m max	M6 Screw 1.5~2N.m
8.0mm	21±0.1	21±0.1	18.4±0.2	4.2±0.1 or M4 Screw	0.4~0.7N.m	M5 Screw 2N.m max	M8 Screw 2.5~3N.m
10.3mm	24.5±0.1	24.5±0.1	22.5+0.2/-0	4.2+0.2/-0 or M4 Screw	0.4~0.7N.m	M6 Screw 4N.m max	M10 Screw 5.5~6N.m
8.0mm EMI	23±0.1	23±0.1	23.3±0.1	3.2±0.1 or M3 Screw	0.4~0.7N.m	M5 Screw 2N.m max	/



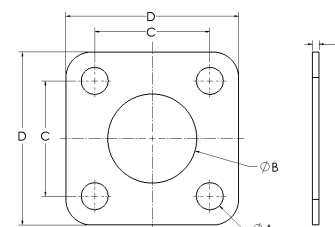
RADSOK® Size	A	ØC	ØD	Layout Torque	Busbar Torque	Screw Torque
3.6mm	24±0.1	12.9±0.2	4.2+0.2/-0 or M4	0.4~0.7N.m	M4 Screw 1.2~1.5N.m	/



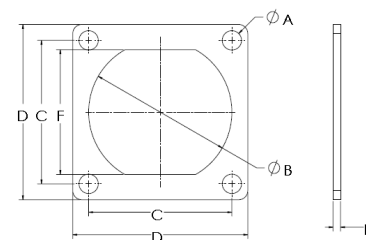
Optional Accessories

Gasket

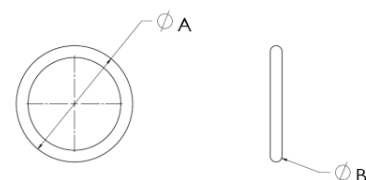
Gasket	P/N	ØA	ØB	C	D	E
SL+ 5.7mm Gasket	C10-730656-000	4.2	13.9	18	27	1
SL+ 8.0mm Gasket	C10-731812-000	4.2	17.9	21	30	1
SL+ 10.3mm Gasket	C10-731012-000	4.2	22.1	24.5	31.6	1.1



Gasket	P/N	ØA	ØB	C	D	E	F
SL+ 8.0mm EMI Gasket	C10-738625-000	3.1	23	23	28.1	1.2	20



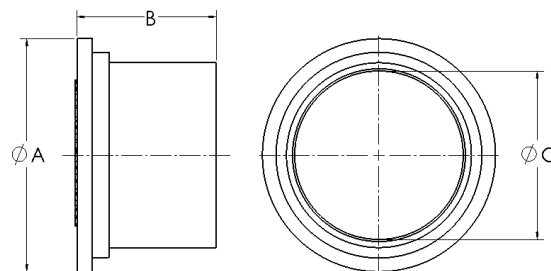
Gasket	P/N	ØA	ØB
SL+ 3.6mm Gasket	C10-753284-000	17.56	1.78



Optional Accessories

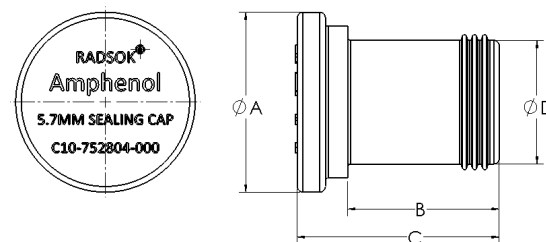
Dust Cap

Dust Cap	P/N	ØA	B	ØC
SL+ 5.7mm Receptacle Dust CAP	C10-070500-010	21.3	12.7	15.4
SL+ 8.0mm Receptacle Dust CAP	C10-070500-012	24.6	13.6	18.3
SL+ 8.0mm EMI Plug Dust CAP	C10-070506-10S	19.2	16.6	15.2
SL+ 8.0mm EMI Receptacle Dust CAP	C10-686511-016	28.7	17.5	23.1
SL+ 10.3mm Receptacle Dust CAP	C10-070500-016	30.95	13.8	26.2
SL+ 3.6mm Receptacle Dust CAP	C10-070500-009	19.8	12.1	14.3



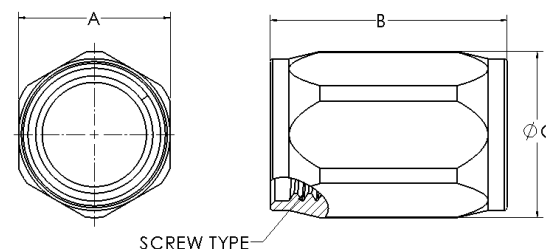
Waterproof Cap

Waterproof Cap	P/N	ØA	B	ØC	ØD
SL+ 5.7mm Sealing CAP	C10-752804-000	16	13.5	18	11
SL+ 8.0mm Sealing CAP	C10-737307-000	20	13.5	16.5	14.1

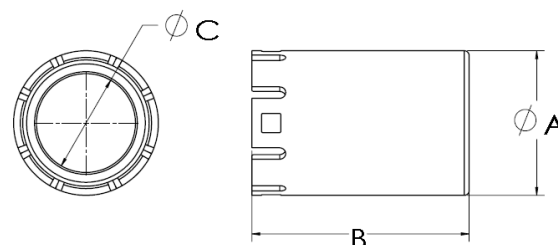


Back Shell

Back Shell	P/N	A	B	ØC	Screw Type
SL+ 5.7mm Back Shell	C10-730651-000 (Orange)	16	25	17.5	M14X1.5
	C10-730651-100 (Black)				
	C10-730651-200 (Red)				
SL+ 8.0mm Back Shell	C10-731820-000 (Orange)	22.5	36	23.5	M20x1.5
	C10-731820-100 (Black)				
	C10-731820-200 (Red)				
SL+ 10.3mm Back Shell	C10-737515-000 (Orange)	29	42	31	M26x1.5
	C10-737515-100 (Black)				
	C10-737515-200 (Red)				
SL+ 3.6mm Back Shell	C10-754740-000 (Orange)	12	22.5	13	M10X1.0
	C10-754740-100 (Black)				
	C10-754740-200 (Red)				



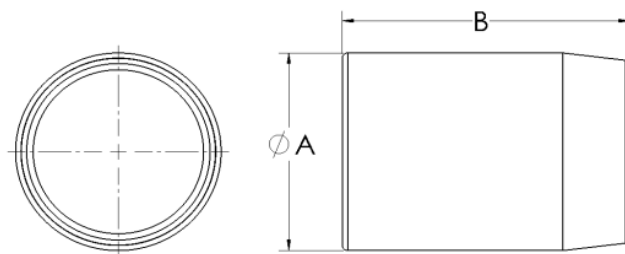
Back Shell	P/N	ØA	B	C
SL+ 8.0mm EMI Back Shell	C10-738618-101 (70mm²)	30	45	20.5
	C10-730653-040 (50mm²)	30	45	18
	C10-738618-103 (35mm²)	30	45	15.5



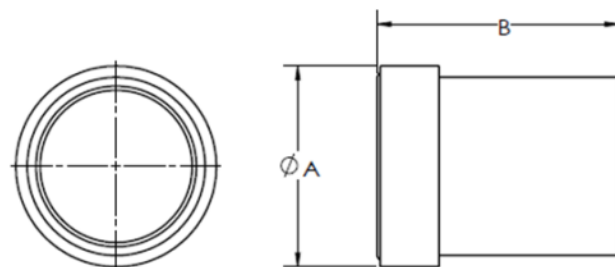
Optional Accessories

Cable Grommet

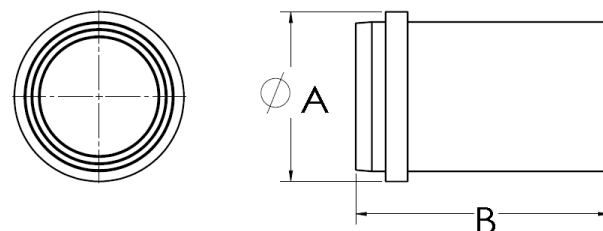
Cable Grommet	P/N	A	B
SL+ 5.7mm Rear Grommet	C10-730653-030 (16mm ²)	12	17.5
	C10-730653-030 (25mm ²)	12.3	17.2
SL+ 8.0mm Rear Grommet	C10-731821-020 (25mm ²)	18.3	26.5
	C10-731821-030 (35mm ²)	18.3	26.5
	C10-731821-050 (50mm ²)	18.3	26.5
SL+ 3.6mm Rear Grommet	C10-754739-006 (6mm ²)	9.6	16.5
	C10-754739-010 (10mm ²)	9.6	16.5



Cable Grommet	P/N	A	B
SL+ 10.3mm Rear Grommet	C10-731006-050 (50mm ²)	24	28.8
	C10-731006-070 (70mm ²)	24	27.8
	C10-731006-080 (85/95mm ²)	24	26.8

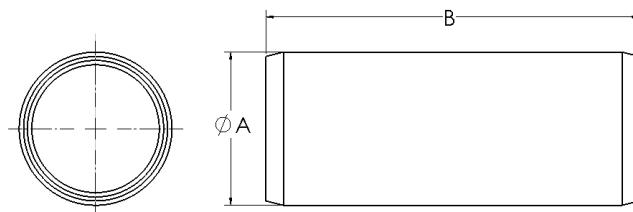


Cable Grommet	P/N	A	B
SL+ 8.0mm EMI Rear Grommet	C10-738617-001 (70mm ²)	18.2	39
	C10-738617-002 (50mm ²)	15.7	39
	C10-738617-003 (35mm ²)	13.2	39

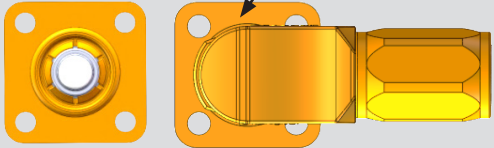
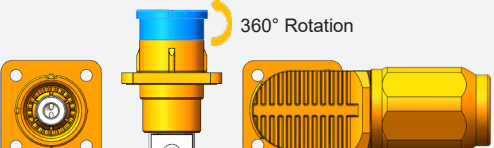
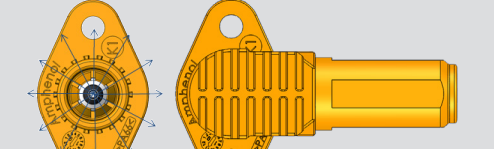


Crimping Barrel

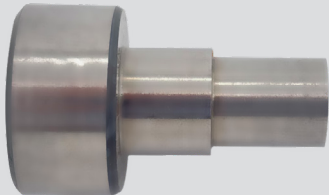
Crimping Barrel	P/N	A	B
SL+ 5.7mm Crimping barrel	C10-737238-003 (16mm ²)	6.95	17
SL+ 8.0mm Crimping barrel	C10-737127-253 (25mm ²)	10.3	24
	C10-737127-003 (35mm ²)	10.3	24
SL+ 8.0mm EMI Crimping barrel	C10-738626-002 (35mm ²)	12.9	15
	C10-738626-001 (50mm ²)	12.9	15
SL+ 10.3mm Crimping barrel	C10-737887-053 (50mm ²)	14.1	19
	C10-737887-073 (70mm ²)	14.1	19
SL+ 3.6mm Crimping barrel	C10-754843-063 (6mm ²)	4.5	7.5



Keyway Reference

RADSOK® Size	P/N				Description
	Type	RA Plug	Straight Plug	Receptacle	
5.7mm W/O Keyway	MFG Number	C10-730186-() () ()	C10-752785-() () ()	C10-730187-() () ()	 360° Rotation
	Code Number	SLPPA()B() ()	SLPIPA()B() ()	SLPRA()P() ()	
5.7mm W/ Keyway	MFG Number	C10-730186-() () ()	C10-752785-() () ()	C10-730187-() () ()	 Master keyway Not Rotation, only single outgoing direction.
	Code Number	SLPPA()B() ()	SLPIPA()B() ()	SLPIRA()P() ()	
8.0mm W/O Keyway	MFG Number	C10-730188-() () ()	/	C10-730189-() () ()	 360° Rotation
	Code Number	SLPPB()B() ()	/	SLPRB()P() ()	
8.0mm W/ Keyway	MFG Number	C10-730188-() () ()	C10-731951-() () ()	C10-731950-() () ()	 Master keyway Not Rotation, only single outgoing direction.
	Code Number	SLPPB()B() ()	SLPIPB()B() ()	SLPIRB()P() ()	
10.3mm Keyway	MFG Number	C10-730190-() () ()	/	C10-730191-() () ()	 360° Rotation 360° Rotation
	Code Number	SLPPC()B() ()	/	SLPIRC()P() ()	
3.6mm Keyway	MFG Number	C10-754726-() () ()	/	C10-754727-() () ()	 Multi-Directional Keyway
	Code Number	SLPHPM()B() ()	/	SLPHIRM()P() ()	

Tools

Product Series	Part Number	Description	Photo
SurLok™ Plus EMI	FX3-0001-001	Shielding assembly	
SurLok™ Plus EMI	FX3-0006-001	Assembly HVIL Contact	
SurLok™ Plus	FX3-0026-001	SL+ 5.7MM screw type receptacle wrench	
SurLok™ Plus	FX3-0036-001	8.0 SL+ REC M6 Wrench	
SurLok™ Plus	FX3-0024-001	10.3mm SL wrench	
SurLok™ Plus	FX3-0042-002	SurLok™ Plus 3.6mm threading cable tool	

Patents



Customized Cable Assemblies





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