SLG 419AR

Circular connectors "SHOW-BIZ"

- CHARACTERISTICS
- 2x6 contacts are used to provide power and 7 socket first mate last break earth contacts have a grounding function.
- In this way, each equipment has its own ground.
- The 7 grounding contacts are identified from the others by their plating, in order to improve the cabling process and also to allow a quick visual differentiation between standard SL419AR and SLG419AR connectors.
- As for SL Series, all sockets are protected by a closed entry to warranty an outstanding safety in use.
- Available in female receptacle and in line female receptacle.



Female receptacle SLG EF 419 AR



Female in line receptacle SLG FFDR 419 AR

SLG419AR connector, derived from the SL series, has been developed to meet the new requirements of the industrial market as far as safety of the user and of the equipment are concerned. SLG419AR connectors provides 19 solder termination contacts (size 12) which accept each 25 A.

> SLG419AR is different from the standard version by its 7 sockets which are located in the centre of the insert to ensure the « first mate last break » fonction.

7 first mate last break earth contacts



SLG 419AR



Mechanical characteristics

- Aluminium alloy molded shells
- Mating by screwing system
- Alkydes inserts
- Gold plated copper alloy machined contacts (gold plated on nickel underplate for power contacts, electrolitic nickel plated for grounded contacts)
- Closed entry female contacts
- Reinforced mating screw
- Temperature range : -40°C to 85°C

Electrical characteristics

- Contact gauge AWG : 12
- Nominal current: 25 A
- Contact resistance < 0.002 Ohm
- Solder pot internal diameter: 2.5 mm

Contact arrangement electrical characteristics

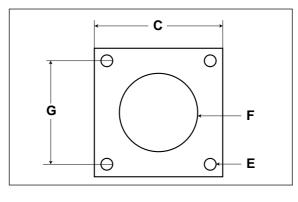
- Test voltage at sea level: 1750 Vrms
- Working voltage in accordance with NF C 20-040, environmental conditions II : 400 Vrms
- Conform to new USITT's specifications (American governmental agency)

Accessories

Please consult the standard SL data-sheet.

Dimensional characteristics

Panel drilling for square flange receptacle

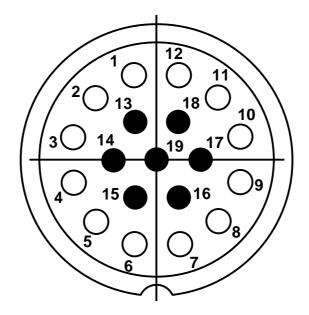


Receptacle size	С	Diam. E	Diam. F	G	
Receptacie size	mm	mm	mm	mm	
40	56	3.5	47	41	

Please see the standard SL data-sheet for other dimensions (E101).

Insert arrangement

Mating face view of the female insert



• First mate last break contact

SLG 419AR

In-line receptacle or plug body

SL series	SL	G	-	В	F	-	419AR
G: 7 first m (for 419AR o	ate last break earth co nly)						
Shell finish:	None: standard white c AS: black conductive D: black non-conductiv						
Shell:	B: mobile plug or in-lin	e recept	acle				
Contacts:	F: socket						
Shell style:	None: mobile plug R: in-line receptacle						
Contact arr							

(Please consult us for mobile plug or in-line receptacle which allows one-part black conductive backshell to screw on mobile plug or receptacle and cable seal PG type).

Square flange receptacle or square flange receptacle with mating screw

SL series	SL	G	-	F	М	-	419AR
7 first mate (for 419AR or							
Shell finish:	None: standard white of AS: black conductive D: black non-conductive						
Shell:	E: receptacle						
Contacts:	F: socket						
Shell style: None: square flange receptacle E: square flange receptacle with mating screw							
Contact arr	angement: 419AR						

Right angle or straight backshells

Connector	Backshell with cable-clamp P/N									
size	stra		right angle							
size	black (non conductive)	green cadmium (conductive)	black green cadmiu (non conductive) (conductive)							
40	47380N	21461N	47384N	21465N						

- Green backshell (conductive finish) are equipped with conductive clamping pads.

Do not hesitate to contact us for further information

Monopiece SL61

Amphenol /

Socapex

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SUCCEPTER

SL 61 Monopiece : New Heavy Duty & Waterproof Socapex 19 pins connector Receptacle with Crimp Grounded Contacts

SL61 Monopiece & New Receptacle

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New SL61 Monopiece Backshell

Metallic backshell.

Waterproof IP67 rated.

100% compatible with all the Socapex 419AR range.

Socapex exclusive gland design to ensure a high mechanical retention of the cable.

Gland available in Size 29 or 36 according to the outside diameter of the cable.

Socapex exclusive thread design to avoid accidental unscrewing of the backshell while mating / unmating.

Built-in double insulation and black non conductive plating for safety.

Solder and crimp contacts available.

Contacts size 12 (AWG14-12, conductor diameter up to 2,45 mm / 0.1 in).

The Socapex split backshell (47380N) can be used with the new plug.





Size 29

Plugs	Cable diameter 15 r		in to 24 mm / 0.94 in						
	Plug alone	Backshell	Complete Set Plug + Backshell						
Black, Solder	SLD BMPG 419AR	47029N	SLD FMD PG29 419AR						
Black, Crimp	SLXD BMPG 419AR	47029N	SLXD FMD PG29 419AR						
In line	Cable diameter 15 mm / 0.59 in to 24 mm / 0.94 in								
Receptacles	Plug alone	Backshell	Complete Set Plug + Backshell						
Black, Solder	SLD BFRPG 419AR	47029N	SLD FFDR PG29 419AR						
Black, Solder 7 ground Contacts	SLGD BFRPG 419AR	47029N	SLGD FFDR PG29 419AR						
Black, Crimp	SLXD BFRPG 419AR	47029N	SLXD FFDR PG29 419AR						
Black, Crimp 7 ground Contacts	SLXGD BFRPG 419AR	47029N	SLXGD FFDR PG29 419AR						

Size 3	6							
Plugs	Cable diameter 24	,	in to 34 mm / 1.34 in					
	Plug alone	Backshell	Complete Set Plug + Backshell					
Black, Solder	SLD BMPG 419AR	47036N	SLD FMD PG36 419AR					
Black, Crimp	SLXD BMPG 419AR	47036N	SLXD FMD PG36 419AR					
	Cable diameter 24 mm / 0.94 in to 34 mm / 1.34 in							
In line	Cable diameter 24		in to 34 mm / 1.34 in					
In line Receptacles	Cable diameter 24 Plug alone	mm / 0.94 Backshell	in to 34 mm / 1.34 in Complete Set Plug + Backshell					
Receptacles	Plug alone	Backshell	Complete Set Plug + Backshell					
Receptacles Black, Solder Black, Solder	Plug alone SLD BFRPG 419AR	Backshell 47036N	Complete Set Plug + Backshell SLD FFDR PG36 419AR					

New Panel Receptacle with crimp contacts (7 First Mate Last Break Contacts for grounding)

SLX GD EF 419AR

Black non conductive plating.
12 female crimp contacts included (Size 12).
7 longer contacts for First

Mate Last Brake mating.



Tooling	for crimp contacts
Crimping plier	809 857 (M22520/1-01)
Positionner	21 770
Controlling jauge	809 907 (M22520/3-1)
Insertion tool	141 900 (Screwdriver type)
Insertion tool	809 735 (Plier type)
Removal tool	21 746 (Pin contacts)
Keliloval lool	21745 (Stk contacts)



Industrial Circular Connectors



- Closed entry female contacts
- Inserts moulded in Alkyde
- Trapezoidal thread screw-locking
- Two parts backshell ensuring simple wiring and maintenance
- Adaptable capacity cable clamp
- Gold plated turned contacts
- Reinforced locking ring
- Solder contacts
- Please contact us for other contact terminations - for crimping - for soldering with earth protection
- Size 40 one piece backshell (please consult us)
- Working temperature: - 40°C / + 85°C
- Current capability: 7.5, 10, 25 and 50 Amps
- Operating voltage: to 600 Volts
- Cadmium-free versions (Ni)
- UL recognition n° E160967(01) for 419AR layout
- Large selection of insert arrangements
- Robust and reliable
- Stock items





- Principally aimed at I/O applications, the SL61 connectors are available
- DESCRIPT in 4 types of housing (10, 20, 30
 - and 40) and 26 arrangements from
 - 2 to 61 mixed solder contacts.
 - They are available in the following configurations:
 - Plugs

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- Receptacles
- Line mount receptacles
- Receptacles with locking ring

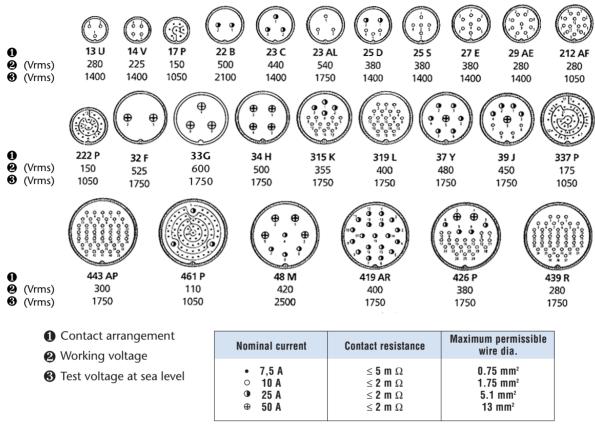
Connectors are made of aluminium alloy which provides them excellent reliability and robustness. When application requires greater performances, the sealing can be improved by the use of a sprayproofing sleeve.

Robustness and reliability

- Automation
- Instrumentation
- Robotics CAT
 - Power distribution
 - Transport
 - Entertainment (brand-lights)



Contact arrangements



REMARK: the second and the third digit of the contact arrangements (if the third exists) indicate the number of contacts in the arrangement. Ex.: 426P = 26 contacts.

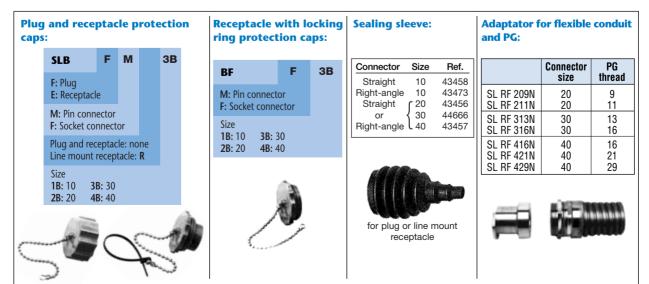
Straight or right-angle backshell

	Backshell reference											
Connector size	black	straight nickel	green cadmium	right-angle black nickel green cadmu								
	(non conductive) (conductive)		(conductive)	(non conductive)	(conductive)	(conductive)						
10	47377N	47377NI	21458N	47381N	47381NI	21462N						
20	47378N	47378NI	21459N	47382N	47382NI	21463N						
30	47379N	47379NI	21460N	47383N	47383NI	21464N						
40	47380N	47380NI	21461N	47384N	47384NI	21465N						

- Straight or right-angle backshells are delivered with different clamping pads.

- Green backshells (conductive finish) are delivered with metallised clamping pads.

Accessories



Amphenol

OVERALL DIMENSIONS

Straight plug

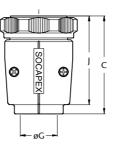
Right angle plug

Straight female plug

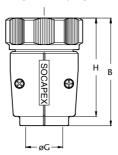
Right-angle male plug

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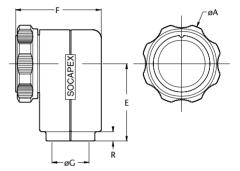
-øG



Straight male plug



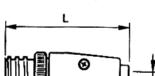
Right-angle female plug



size	0 ø A - 0,2 (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)		G (mm)		H (mm)	J (mm)	K (mm)	L (mm)	M (mm)	N (mm)	R (mm)	S (mm)	T (mm)	W (mm)	Y (mm)
10	27.5	61.9	52.9	47.9	45.5	38.9	5-7	7-9		57.4	48.4	21	53.5	57.9	24	4.5	16.5	3.2	19	25
20	36.5	66.5	59.8	55.5	51.5	48.8	6-8	9-11	12-14	62	55.3	28.1	61	59.8	32	4.5	25.5	3.5	24	31
30	51.5	88.5	80.8	68.5	55.5	60.8	10-12	13-16	17-20	82	74.3	42.2	82	80.8	45	6.5	35.5	3.5	34	46
40	64.5	86.5	78.8	76.5	62.5	68.8	14-18	19-23	24-30	79	71.3	52.2	80	79.6	54	7.5	47	3.5	41	56

G: flanges equipped with different clamping pads delivered with the backshells.

In-line receptacle

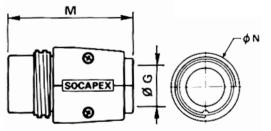


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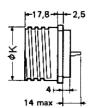
In-line male receptacle

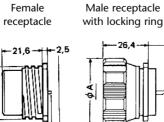
In-line female receptacle



Receptacle

Male receptacle





Female

3,5 max

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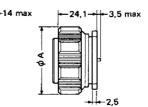
+ 2,5

26.

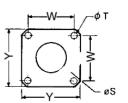
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Square flange of receptacle





Plug and line mount receptacle (Bright cadmium or nickel plated)

SL series	SL	В	F	R	426 P	-
Plug or line mount reco	eptacle					
Type of contact: Male M Female F						
Plug: none Line mount receptacles	: R					
Contact arrangement ((see page 2)					
Add "NI" for cadmium	-free versions	(nickel)				

Plug and backshell set

SL series	SL	F	М	D	426 P	-			
F: plug or line mount recep	tacle								
Type of contact: Male M Female F									
D: plug + straight backshell DR: line mount receptacle + backshell C: plug + right angle backshell									
Contact arrangement (s	ee page 2)								
Add "NI" for cadmium-f	ree versions	(nickel)							

Receptacle and receptacle with locking ring (Bright cadmium or nickel plated)

SL series	SL	Е	М	-	426 P	-	-
Receptacle or recepta	acle with lockin						
Type of contact: Male M Female F							
Receptacle: none Receptacle with locki	ing ring: E						
Contact arrangemen	t (see page 2)						
Add "MA" for tin plat	ed retention rir						
Add "NI" for cadmiur	m-free versions	(nickel)					
C	J. P Pol. d						

Comment: Pannel gasket deliver with the receptacle

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Mechanical characteristics

- 12 insert arrangements which accept contact gauges AWG 20, 16, 12. in the four different shell sizes 10, 20, 30 & 40
- Crimp removable gold plated on nickel underplate machined contacts
- Temperature range -55°C to 125°C
- Bright cadmium plated aluminium molded shells
- Mating by screwing system
- Strain-relief integrated to the backshell
- Neoprene inserts
- Reinforced mating screw
- Cadmium-free versions
- UL recognition n° E160967(01) for 419AR layout

Electrical characteristics

Contacts caracteristics

Contact gauge AWG	20	16	12
Contact diameter (mm)	1	1.5	3
Nominal current (A)	7.5	13	25
Contact resistance (Ohm)	≤ 0.005	≤ 0.002	≤ 0.002
Contact retention in the insert (N)	≥ 30	≥ 40	≥ 45

• Contact arrangements electrical caracteristics

Test voltage at sea level (Vrms)	1500	2300	2800
Contact arrangements	14V-17P-22B	27E-337P	319L-419AR
	23C-212AF-38J	439R	
	315K		



- SLX series are derived from the standard
 - SL series, and have the particularity to
 - use machined contacts with crimp barrels. The one part Neoprene insert
- provides a use in a temperature range
- DESCRIPT from -55°C to 125°C, the possibility
 - to change the contacts for reparation, and an higher test voltage capability. 12 different contacts arrangements are available which include different contact gauges (20, 16, 12) in the four different shell sizes 10, 20, 30 & 40. SLX series panel drilling is the same as for SL series and SLX series connectors are intermatable with SL series connectors (SLX Plug with SL Receptacle and vice versa).

Crimp removable contacts 125°C

- Instrumentation
- Robotics
- Power supplies
- Transportation
- Entertainment (brand-lights)





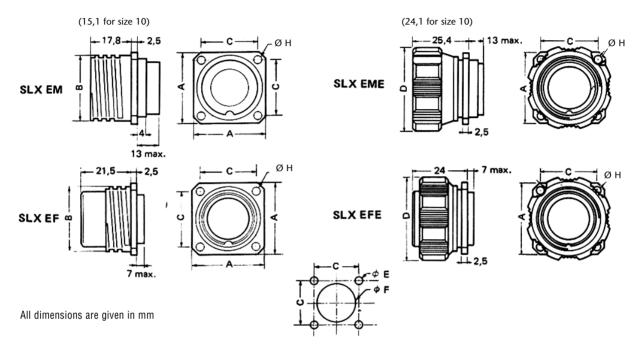
• Contacts and wires

Contact gauge AWG	Crimp Internal diameter	barrel Depth in mm	Pin diameter (mm)	AWG gauge	Sectio mini	n mm² maxi	Diameter over conductor (mm) mini maxi		Maxi diameter over sleeving
	in mm								(mm)
12	2.5	7.5	3	14-12	1.80	3.30	1.7	2.45	4.2
16	1.95	6.4	1.6	20 -> 14	0.60*	1.91	1	1.9	2.8
20	1.35	4	1	24 -> 18	0.22**	0.93	0.6	1.3	2.4

* The use of a 800629 reducing sleeve is necessary for cable section less than 0.60 mm² for # 16 contacts

** The use of a 800612 reducing sleeve is necessary for cable section less than 0.22 mm² for # 20 contacts

• Dimensions of the connectors

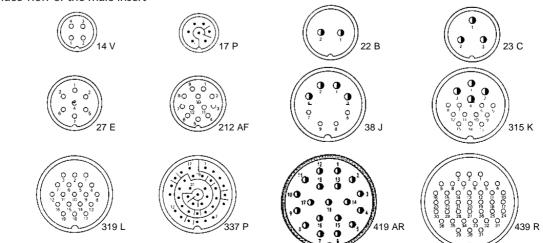


For more details about dimensional characteristics, please refer to standard SL data-sheet. Some dimensions mentioned bellow regarding insulators are specific to SLX series.

Receptacle size	A (mm)	Diam. B (mm)	C (mm)	Diam. D (mm)	Diam. E (mm)	Diam. F (mm)	Diam. H (mm)
10	25	21	19	28	3.2	16.5	3.2
20	31	28.1	24	37	3.5	25.5	3.5
30	46	42.2	34	52	3.5	35.5	3.5
40	56	52.2	41	65	3.5	47	3.5

Contacts insert arrangements

Mating face view of the male insert



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Straight or right-angle backshell

	Backshell reference										
Connector		straight		right-angle							
size	black (non conductive)	nickel (conductive)	green cadmium (conductive)	black (non conductive)	nickel (conductive)	green cadmuim (conductive)					
	, ,	· /	,	, ,	· · ·	,					
10	47377N	47377NI	21458N	47381N	47381NI	21462N					
20	47378N	47378NI	21459N	47382N	47382NI	21463N					
30	47379N	47379NI	21460N	47383N	47383NI	21464N					
40	47380N	47380NI	21461N	47384N	47384NI	21465N					

- Straight or right-angle backshells are delivered with different clamping pads.

- Green backshells (conductive finish) are delivered with metallised clamping pads.

Contacts as spare parts

Contact gauge AWG	12	16	20
Part-number for one pin	21713	800660	800650
Part-number for one socket	21728	800664	800654

Accessories

lug and recept aps:	acl	e pro	tection	Receptacle ring protec			Sealing sleeve:		Adaptator f and PG:	or flexible	conduit
SLB F: Plug	F	м	3B	BF	F	ЗВ	Connector Size Straight 10	Ref. 43458		Connector size	PG thread
E: Receptacle				M: Pin connec F: Socket conr			Right-angle 10 Straight 20	43473 43456	SL RF 209N SL RF 211N	20 20	9 11
M: Pin connect F: Socket conne		r		Size 1B: 10 3B:	20		or { 30 Right-angle { 40	44666 43457	SL RF 313N SL RF 316N	30 30	13 16
Plug and recept Line mount rec				2B : 20 4B :					SL RF 416N SL RF 421N	40 40	16 21
Size 1B: 10 3B: 3 2B: 20 4B: 4		Z		2	ð		for plug or line r receptacle		SL RF 429N	40	29

Cabling tools

- Crimping tools
 - Crimping pliers: 809857 (Mil. P/N: M22520/1-01)
- Positioner: 21770

• Controlling jauge: 809907 (Mil. P/N: M22520/3-1) (Selector number: 4)

Contacts insertion and removal

Contacts	Insertion tool P/N	Removal tool P/N
# 12: Pin	141900	21746
# 12: Socket	141900	21745
# 16: Pin	48680	809731
# 16: Socket	48680	809732
# 20: Pin	39048	809729
# 20: Socket	39048	809730

Cabling process

- Crimping process
 - Place the positioner in the pliers.
 - Choose the selector number on the positioner according to the contact size to crimp.
 - Strip the wire end (7.5mm for size 12 contact / 6mm for size 16 contact / 4mm for size 20 contact).
 - Insert the wire in the crimp barrel of the contact and check through the inspection hole of the contact that wire is well-placed.
- Place the contact with the wire into the pliers until the stop. Completely close the tool and after, let it open itself.

Visually check if crimping is correct and by the inspection hole of the contact if the wire is well-placed in the crimp barrel. Contact insertion

Insert the wired contact in the groove of the tool, taking care that the extremity of the tool touches the shoulder of the contact. Insert the contact in its cavity from wiring side and steadily push the tool along the axis of the cavity until the contact locks home.

Carefully withdraw the tool , applying a forward pressure on the wire.

Pull on the wire to check that the contact is correctly locked.

Contact removal

Insert the tool from the mating side and push it along the contact axis until contact unlocks.

Pull the contact out from the rear of the connector.

Connectors

In-line receptacle or plug body

SLX series	SLX	В	М	-	27E
Mobile plug or in-lir	ne receptacle				
Contacts: M: pin F: socket					
Shell style: None: plug R: in-line receptacle					
Insert arrangement	(See previous page	2)			
Add "NI" for cadmiu	Im-free versions ((nickel)			

Plug and backshell set

SLX series	SLX	F	М	D	27E	-
F: Plug or line mount recep	otacle					
type of contact: M: Male F: Female						
D: Plug + straight backshel DR: Line mount receptacle C: Plug + right angle backs	+ backshell					
Contact arrangement (See page 2)					
Add "NI" for cadmium	free versions (nickel)				

Square flange receptacle or square flange receptacle with mating screw*

SLX series	SLX	E	F	 27E	-	1
Receptacle						
Contacts: M: pin F: socket			-			
Shell style: None: square flange rec E: square flange recepta	· · · ·	rew				
Insert arrangement ((See previous page	2)				
Add "MA" for tin pla	ted retention rir	ng (grou	nding)			
Add "NI" for cadmiu	m-free versions	(nickel)				

* (Receptacle with mating screw mates with in-line receptacle) Connectors are delivered with non-fitted contacts to allow the crimping process. Comment: Panel gasket is delivered with the receptacle.

Do not hesitate to contact us for further information