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.

SLG419AR connector, derived

from the SL series, has been

7 first mate last break earth contacts

- Power supplies of 6 brand-lights for entertainment applications.
- Power supplies with independent grounding.

Circular connectors "SHOW-BIZ"

2x6 contacts are used to provide power and 7 socket first mate last break earth contacts have a grounding function.

SLG 419AR

- 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



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

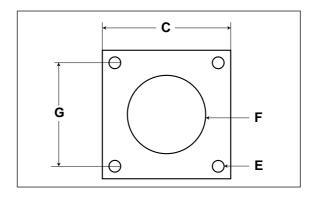
- Test voltage at sea level: 1750 Vrms
- Working voltage in accordance with NF C 20-040, environmental conditions II: 400 Vrms
- Conform to new USITT's specifications (American governmental agency)

Accessories

Please consult the standard SL data-sheet.

Dimensional characteristics

Panel drilling for square flange receptacle

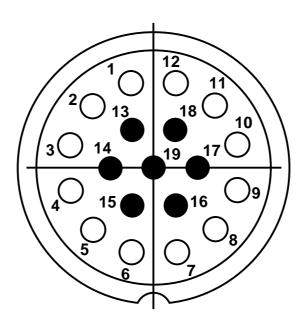


Receptacle size	C	Diam. E	Diam. F	G
	mm	mm	mm	mm
40	56	3.5	47	41

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

Insert arrangement

Mating face view of the female insert



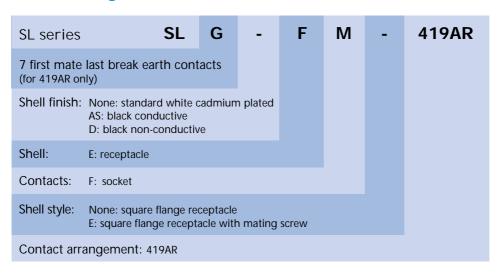
• First mate last break contact

In-line receptacle or plug body

G В 419AR SL series G: 7 first mate last break earth contacts (for 419AR only) Shell finish: None: standard white cadmium plated AS: black conductive D: black non-conductive Shell: B: mobile plug or in-line receptacle Contacts: F: socket Shell style: None: mobile plug R: in-line receptacle Contact arrangement: 419AR

(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

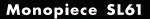


Right angle or straight backshells

Connector	Backshell with cable-clamp P/N										
size	stra black (non conductive)	ight green cadmium (conductive)	right black (non conductive)	angle green cadmium (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	





Amphenol/

Socapex

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

SL61 Monopiece & New Receptacle

New SL61 Monopiece Backshell

Metallic backshell.

Waterproof IP67 rated.

100% compatible with all the Socapex 419AR range.

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

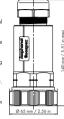
Gland available in Size 29 or 36 according to the outside diameter of the cable.

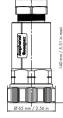
Socapex exclusive thread design to avoid accidental unscrewing of the backshell while mating / unmating

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	Cable diameter 15 mm / 0.59 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 / 0.9									
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 36

Plugs	Cable diameter 24	mm / 0.94 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							
In line	Cable diameter 24 mm / 0.94 in to 34 mm / 1.34 in									
Receptacles	Plug alone	Backshell	Complete Set Plug + Backshell							
Black, Solder	SLD BFRPG 419AR	47036N	SLD FFDR PG36 419AR							
Black, Solder 7 ground Contacts	SLGD BFRPG 419AR	47036N	SLGD FFDR PG36 419AR							
Black, Crimp	SLXD BFRPG 419AR	47036N	SLXD FFDR PG36 419AR							
Black, Crimp	SLXGD BFRPG 419AR	47036N	SLXGD 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)				
Kemoval tool	21745 (Stk contacts)				



SL 61

Industrial Circular Connectors

NEW

Cadmium-free versions

(nickel plating)

- 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 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
- 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

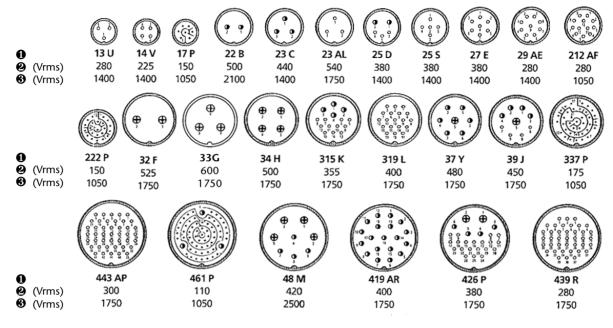
Automation

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

.9 TS



Contact arrangements



Contact arrangement

Working voltage

3 Test voltage at sea level

Nominal current	Contact resistance	Maximum permissible wire dia.
• 7,5 A ○ 10 A • 25 A ⊕ 50 A	$\leq 5 \ m \ \Omega$ $\leq 2 \ m \ \Omega$	0.75 mm² 1.75 mm² 5.1 mm² 13 mm²

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 (non conductive)	straight nickel (conductive)	green cadmium (conductive)	black (non conductive)	right-angle nickel (conductive)	green cadmuim (conductive)						
	(IIOII COIIUUCIIVE)	(contactive)	(conductive)	(IIOII COIIUUCIIVE)	(contactive)	(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						

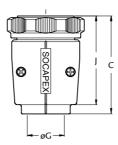
- Straight or right-angle backshells are delivered with different clamping pads.
- Green backshells (conductive finish) are delivered with metallised clamping pads.

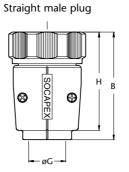
Accessories



Straight plug

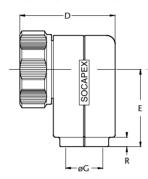
Straight female plug



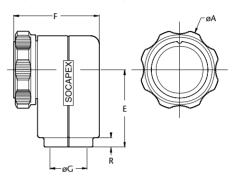


Right angle plug

Right-angle male plug



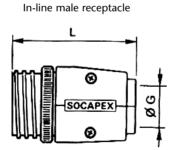
Right-angle female plug



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.

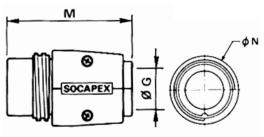
In-line receptacle



In-line female receptacle

Female receptacle

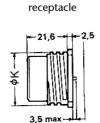
with locking ring



Receptacle

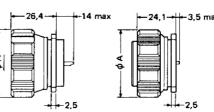
Male

receptacle

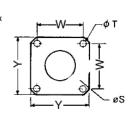


Female





Square flange of receptacle



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

SL series	SL	В	F	R	426 P	-
Plug or line mount recep	tacle					
Type of contact: Male M Female F						
Plug: none Line mount receptacle: R						
Contact arrangement (se	e page 2)					
Add "NI" for cadmium-fre	ee versions	(nickel)				

Plug and backshell set

SL series	SL	F	M	D	426 P	-
F: plug or line mount rece	eptacle					
Type of contact: Male M Female F						
D: plug + straight backsho DR: line mount receptacle C: plug + right angle back	e + backshell					
Contact arrangement	(see page 2)					
Add "NI" for cadmium	-free versions (nickel)				

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

SL series	SL	E	M	-	426 P	-	-
Receptacle or receptac	cle with locking	g ring: E					
Type of contact: Male M Female F							
Receptacle: none Receptacle with locking	ıg ring: E						
Contact arrangement							
Add "MA" for tin plate	d retention rin	ıg (groun	ding)				
Add "NI" for cadmium	-free versions ((nickel)					

Comment: Pannel gasket deliver with the receptacle

<u>Do</u>	not	hesitate	: to contact	t us for	further	informatio	n

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

CHARACTERISTICS

ECHNICAL

- 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 23C-212AF-38J	27E-337P 439R	319L-419AR
	315K	10011	

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 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)

APPLICATI





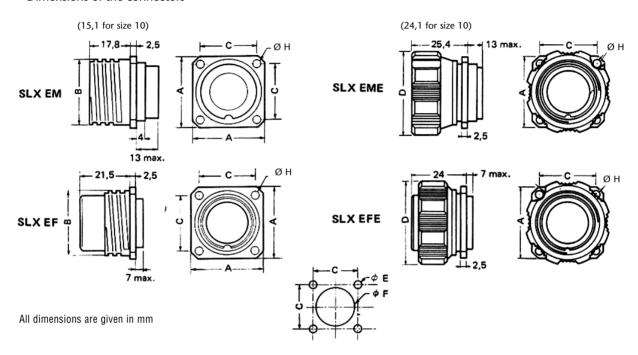
>ZX

Contacts and wires

Contact gauge	Crimp Internal	barrel Depth	Pin diameter	AWG gauge	Section mm² mini maxi		Diameter over conductor (mm)		Maxi diameter
AWG	diameter	in mm	(mm)				mini	maxi	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 mm 2 for # 20 contacts

• Dimensions of the connectors

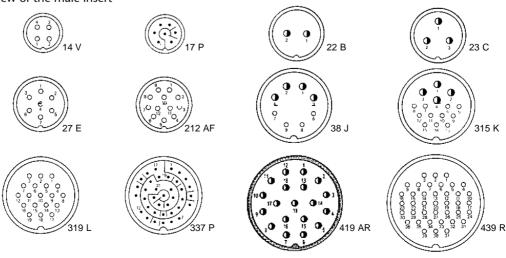


For more details about dimensional characteristics, please refer to standard SL data-sheet. Some dimensions mentioned bellow regarding insulators are specific to SLX series.

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



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		

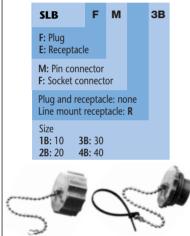
- Straight or right-angle backshells are delivered with different clamping pads.
- Green backshells (conductive finish) are delivered with metallised clamping pads.

Contacts as spare parts

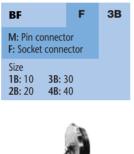
Contact gauge AWG	12	16	20
Part-number for one pin	21713	800660	800650
Part-number for one socket	21728	800664	800654

Accessories





Receptacle with locking | Sealing sleeve: ring protection caps:





Connector	Size	Ref.
Straight	10	43458
Right-angle	10	43473
Straight	ر 20	43456
or	₹ 30	44666
Right-angle	L 40	43457



for plug or line mount receptacle

Adaptator for flexible conduit and PG:

	Connector size	PG thread
SL RF 209N	20	9
SL RF 211N	20	11
SL RF 313N	30	13
SL RF 316N	30	16
SL RF 416N	40	16
SL RF 421N	40	21
SL RF 429N	40	29





Cabling tools

Crimping tools

• Crimping pliers: 809857 (Mil. P/N: M22520/1-01)

Positioner: 21770

Contacts insertion and removal

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

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 wellplaced.

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	M	-	27E	-
Mobile plug or in-line	e receptacle					
Contacts: M: pin F: socket						
Shell style: None: plug R: in-line receptacle						
Insert arrangement (S	See previous page 2	2)				
Add "NI" for cadmiur	m-free versions (nickel)				

Plug and backshell set

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

Square flange receptacle or square flange receptacle with mating screw*

SLX series	SLX	Е	F	-	27E	-	
Receptacle							
Contacts: M: pin F: socket							
Shell style: None: square flange receptace E: square flange receptace	· ·	rew					
Insert arrangement (S	See previous page	2)					
Add "MA" for tin plat	ed retention rir	ng (grour	nding)				
Add "NI" for cadmiur	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							