

Amphenol SOCAPEX

SL61 & "SOCA"

Circular connectors for Showbiz & Industry



ABOUT AMPHENOL SOCAPEX



Proven excellence in interconnect solutions

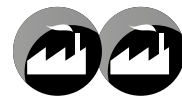
Since **1947**, Amphenol Socapex has prescribed, designed and manufactured reliable and innovative interconnection solutions for **harsh environments**, specializing in standard and customized electrical and fiber optic connectors, contacts, accessories and cabling solutions. Located in the **Mont Blanc** region of France and Pune in India, Amphenol Socapex has a presence in over 100 countries around the world. Amphenol Socapex is part of the international **Amphenol Corporation**.



1000+ employees



Net Sales 2020: **81,9 M€**
72% Export - 28% France



Two facilities :
Thyez (France), **Pune** (India)

OUR HISTORY

1947



- Socapex creation in Suresnes, France
- 1st radio connector

1956-57



- Manufacturing unit in Cluses (74), France
- Thomson-CSF becomes primary shareholder

Early 1960's



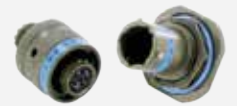
- 1st board level connectors: HE8
- 1st "licence Bendix" manufactured connectors
- SL Series launch

1973



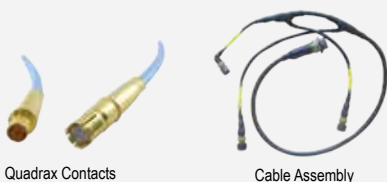
- New factory 13 000 m² in Thyez (74) France with 250 people

1975



- Production of 38999 connectors

2014-2017



- New Cable Assembly workshop
- New Contact Manufacturing workshop

Today and tomorrow | New technologies



Miniaturization High-speed signals
 Rugged Ethernet
 Fiber optics
 Power Rugged Ethernet
 ROHS solutions
 Power
 Fiber optics
 ROHS solutions
 Advanced Materials (composite)
 Power
 Miniaturization
 ROHS solutions

INTERNATIONAL EXPERTISE



Our expertise has no boundaries

Integrated Production in France & India

- **24 000 m²** manufacturing capacity on 2 sites
- Design centers in **France** and **India**
- State-of-the-art manufacturing technology



Our markets



Military

Communication Systems - Radios - C4ISR /
Ground vehicles - Vetronics / Marine / Missiles



Aviation

Commercial & military / Avionics /
Engines / Landing gear / Actuators

1986

Amphenol
Socapex

- Amphenol becomes primary shareholder

1995-96



- Expanded Beam connector CTOS launch
- Headquarters transferred to Thyex

2004



- RJ Field launch, "Award Electronica"

2005



- Opening of manufacturing site in Pune, India

2010's



- LuxBeam™ and HDAS launch

Today and tomorrow | Sustainable development



Respect for nature and the environment

Optimization of natural resources
Recycling
Waste Management
Goodwill
Optimization of natural resources
Respect for nature and the environment
Recycling

PRODUCING FASTER, SMALLER, STRONGER CONNECTORS...



Technologies & innovation

Technological Center



Engineering Laboratory for product testing and qualification, product expertise and metrology

- Mechanical and electrical skills
- RF and fiber optics expertise

High-Speed Expertise



Strong expertise in high-speed signals

- 3D EM simulation software & EM models
- Time Domain and frequency domain (VNA 20GHz, TDR and eye diagram)

Materials Expertise



Focus on materials expertise and manufacturing techniques to produce faster, smaller and stronger products

- 3D CAD mechanical software, simulation & analysis
- Disruptive metal alloys, additive manufacturing

Eco-responsibility



Sustainable environment approach, with pro-active management of regulations (REACH / RoHS / Conflict minerals...)

- New materials development, plating, and suitable processes
- Recycling and rational resources consumption

Our workshops

Our workshops located in France & India provide consistent quality adapted to your volume requirements.

Tooling : Tools for our different activities : molding, machining, assembly

Molding : Solid expertise in thermoplastic elastomer and thermoset molding

Machining : Manufacturing of cylindrical shells from 10 to 90 mm in diameter and rectangular shells

Screw Machining : Cylindrical production parts up to 10 mm in diameter

Plating : Plating with cadmium, nickel, electroless nickel, silver, black zinc nickel, gold

Assembly : Connector and harness assembly (electrical & optical)

Our certifications



Certified Management System



Certified Management System



Certified Management System



Certified Management System

Product certifications : MIL-DTL38999, EN3645, EN3155, VG

Our memberships



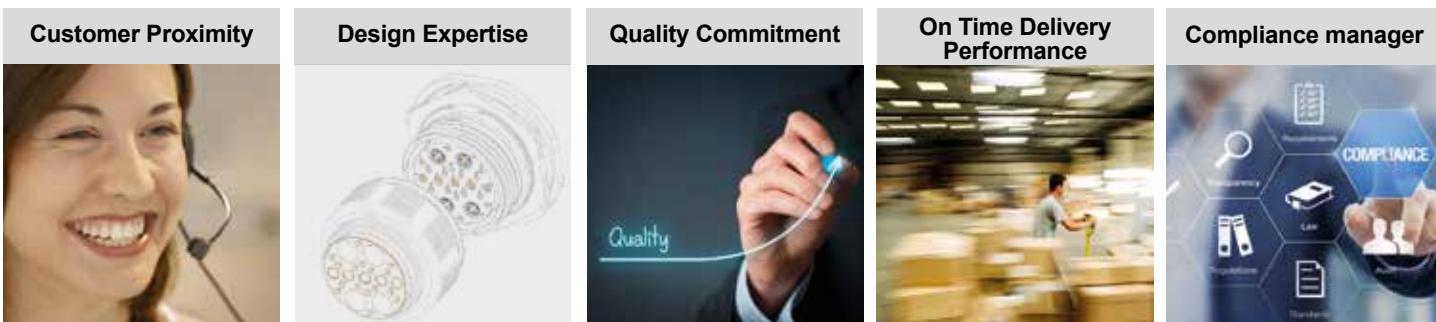
Member of CMG (Connecting Manufacturing Group) Consortium

DELIVERING GREAT CUSTOMER EXPERIENCE



► We have a strong reputation for helping customers solve their toughest challenges. This approach of serving your needs is ingrained in our company – from our sales team to our product development engineers.

A partner you can trust



Buy our solutions

You can access our solutions through our global network of sales offices or through our distributors.

Field Sales Team :

- 12 in France
- 15 in Europe
- 100+ in North America and rest of the world.
- 5 Business Development Managers supporting local sales force Europe, North America and the rest of the world

- Technical Support & Multilingual Customer Service :**
15 people

Worldwide Distribution Network :

Including qualified distributors (QPL approved) for assembling : MIL-DTL-38999, PT/451/VG95328 & Fiber Optics connectors



SL61 & SLG419AR “SOCAPEX”

Circular Connectors for Showbiz & Industry



Description

Connectors made of aluminum alloy, with excellent reliability and robustness for In/Out applications & power supply

Main features

ROBUSTNESS AND RELIABILITY

HIGH STRENGTH-WEIGHT RATIO

UL RECOGNIZED (419AR & 37Y)

CONNECTOR BODY VERSIONS

- Plug
- Receptacle
- Receptacle with locking ring
- Inline receptacle

SPLIT BACKSHELL & MONOPIECE BACKSHELL AVAILABLE

BACKSHELL OPTIONS

- **Two-part backshells**
 - Efficient cable clamp
 - Simple wiring and maintenance
 - Straight or right angle, all sizes
- **IP67 monopiece backshell for 419AR**
 - Outdoor application

ORIGINAL MANUFACTURER OF “SOCAPEX” CONNECTORS

STAGE LIGHTNING / ENTERTAINMENT : THE “SOCA”

- 19 pins SLG 419AR for stage lightning and dimmers
- 7 pins SL 37Y (particulary for hoist motor applications)

INDUSTRIAL ARRANGEMENTS

- 4 shell sizes (#10, #20, #30, #40)
- 14 arrangements available including grounding version of 419AR (SLG 419AR)

NON CONDUCTIVE AND CONDUCTIVE SHELLS

- **ROHS versions**
 - Black non conductive coating
 - Nickel conductive plating
- **Non ROHS**
 - White conductive cadmium for connector body

Product range

| | | | | |
|--|--|------------|--|---------------------------------------|
| Receptacle | | mates with | | Plug* Right angle backshell |
| | | | | Plug* Straight backshell |
| Inline receptacle* Straight backshell | | mates with | | Receptacle Locking ring |
| | | | | Plug* Right angle backshell |
| | | | | Plug* Straight backshell |

*connector body or kit (connector body + 2 parts backshell)

SL61 & SLG419AR “SOCAPEX” SERVE VARIOUS APPLICATIONS, INCLUDING:



TECHNICAL CHARACTERISTICS - SL

Circular Connectors for Showbiz & Industry

Material and platings

SHELL:

- Light aluminum alloy, molded

INSERTS:

- Molded in thermoplastic

SOLDER CUP CONTACTS

- Standard contacts with gold plated size 08, 12, 16, 20
- Socket contact:
 - Protected by a closed entry
 - To ensure an outstanding safety in use

ACCESSORIES:

- Caps: thermoplastic
- Sealing sleeve: neoprene



Technical characteristics

Working temperature: - 40°C / + 85°C

Current capability: 7,5 A, 10 A, 25 A and 50 A

Working voltage: Up to 500 V_{RMS}

UL recognition n° E160967(01) for 37Y & 419AR arrangement only

Monopiece backshell available with IP67 rating

Solder cup contacts

| Contact size (AWG) | Nominal current (A) | Contact resistance | Contact cross sectional area |
|--------------------|---------------------|--------------------|------------------------------|
| 20 | 7,5 | ≤ 5mΩ | 0,75mm ² |
| 16 | 10 | ≤ 2mΩ | 1,75mm ² |
| 12 | 25 | ≤ 2mΩ | 5,1mm ² |
| 8 | 50 | ≤ 2mΩ | 13mm ² |

Platings



Black coating

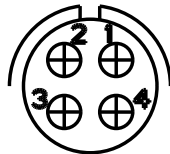
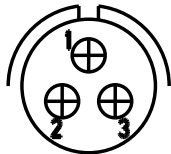
Nickel

SL61 - INSERT ARRANGEMENTS

Front face of pin insert shown

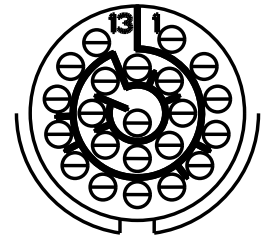
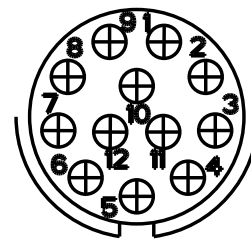
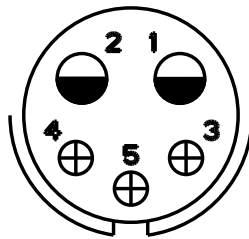
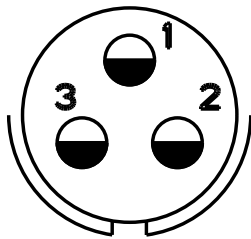
| | | | | |
|--------------------|----|----|----|---|
| Contact size (AWG) | ⊖ | ⊕ | ⊖ | ● |
| Caption | 20 | 16 | 12 | 8 |

Size 10



| SL61 | 13 U | 14 V | 17 P |
|----------------------------------|------|------|------|
| Contact size | 16 | 16 | 20 |
| Working voltage (Vrms) | 280 | 225 | 150 |
| Test voltage at sea level (Vrms) | 1400 | 1400 | 1050 |

Size 20

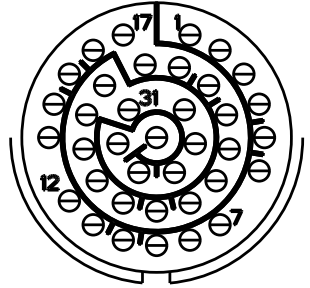
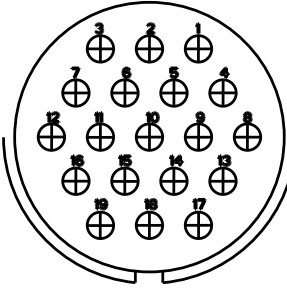
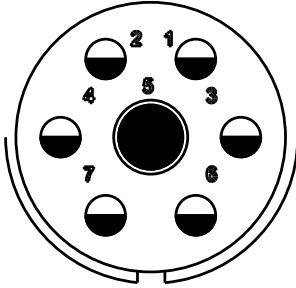
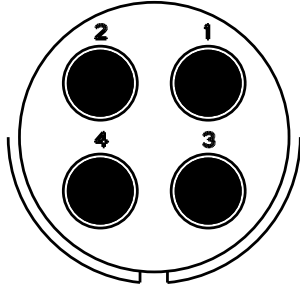


| SL61 | 23 C | 25 D | 212 AF | 222 P |
|----------------------------------|------|---------|--------|-------|
| Contact size | 12 | 16 & 12 | 16 | 20 |
| Working voltage (Vrms) | 440 | 380 | 280 | 150 |
| Test voltage at sea level (Vrms) | 1400 | 1400 | 1050 | 1050 |

SL61 - INSERT ARRANGEMENTS

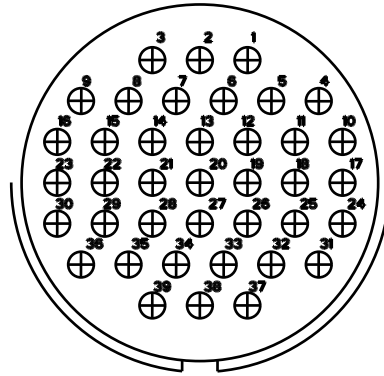
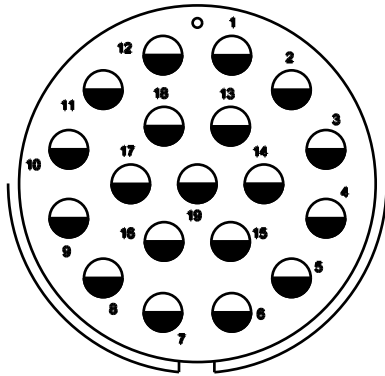
Front face of pin insert shown

| | | | | |
|--------------------|----|----|----|---|
| Contact size (AWG) | ⊖ | ⊕ | ◐ | ● |
| Caption | 20 | 16 | 12 | 8 |



Size 30

| SL61 | 34 H | 37 Y | 319 L | 337 P |
|----------------------------------|------|--------|-------|-------|
| Contact size | 8 | 8 & 12 | 16 | 20 |
| Working voltage (Vrms) | 500 | 480 | 400 | 175 |
| Test voltage at sea level (Vrms) | 1750 | 1750 | 1750 | 1050 |



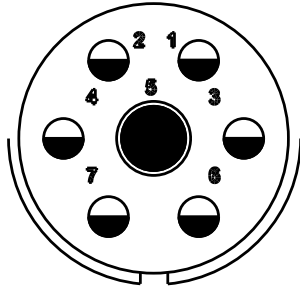
Size 40

| SL61 | 419 AR | 439 R |
|----------------------------------|--------|-------|
| Contact size | 12 | 16 |
| Working voltage (Vrms) | 400 | 280 |
| Test voltage at sea level (Vrms) | 1750 | 1750 |

SL SHOWBIZ “SOCA” - INSERT ARRANGEMENTS

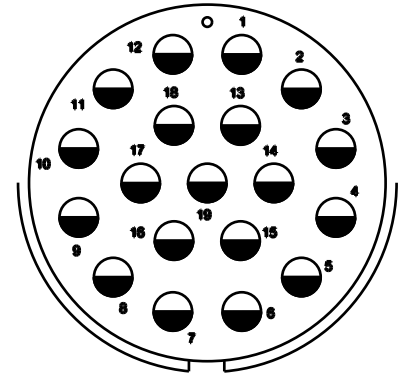
Front face of pin insert shown

| | | | | |
|--------------------|----|----|----|---|
| Contact size (AWG) | ⊖ | ⊕ | ● | ● |
| Caption | 20 | 16 | 12 | 8 |



Size 30

| | |
|----------------------------------|--------|
| SL61 | 37 Y |
| Contact size | 8 & 12 |
| Working voltage (Vrms) | 480 |
| Test voltage at sea level (Vrms) | 1750 |

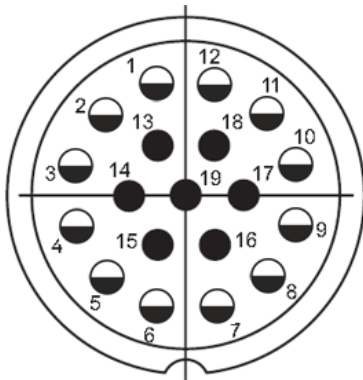


Size 40

| | |
|----------------------------------|--------|
| SL61 | 419 AR |
| Contact size | 12 |
| Working voltage (Vrms) | 400 |
| Test voltage at sea level (Vrms) | 1750 |

SLG 419AR grounding receptacle

- Derived from SL series
- Safety of the user and the equipment (ground)
- 7 socket first mate last break earth contacts (grounding function)
 - Identified by their plating
 - Improved cabling process
 - Quick visual differentiation from regular SL419AR
- 2x6 sockets, nominal current 25A each (power supplies of 6 brand-lights with independent grounding)
- Mating by reinforced screwing system
- Nominal current: 25 A
- Contact resistance < 0,002 Ohm
- Solder pot internal diameter: 2,5 mm



Size 40

Front face of socket insert shown

| | |
|----------------------------------|-------|
| SLG | 419AR |
| Contact size | 12 |
| Working voltage (Vrms) | 400 |
| Test voltage at sea level (Vrms) | 1750 |

First mate last break earth contacts ●

SL61 & «SOCA»

Straight plug

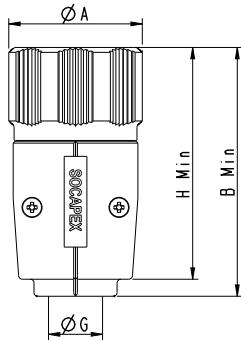


Pin

Socket

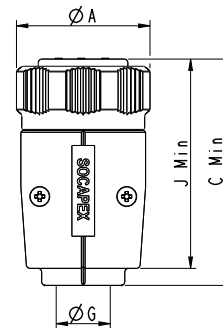
How to order page 17

SL*FMD**



How to order page 17

SL*FFD**



| Size | B _{MIN} | C _{MIN} | ØG* | | | H _{MIN} | J _{MIN} | ØA ⁺⁰ _{-0.2} |
|------|------------------|------------------|-------|-------|-------|------------------|------------------|----------------------------------|
| 10 | 62,20 | 52,85 | 5-7 | 7-9 | - | 54,70 | 48,45 | 27,50 |
| 20 | 65,90 | 59,70 | 6-8 | 9-11 | 12-14 | 58,40 | 55,20 | 36,50 |
| 30 | 87,70 | 80,50 | 10-12 | 13-16 | 17-20 | 81,20 | 74,00 | 51,50 |
| 40 | 85,90 | 78,70 | 14-18 | 19-23 | 24-30 | 76,40 | 71,20 | 64,50 |

*G: flanges equipped with different clamping pads delivered with the backshell.

Right angle plug

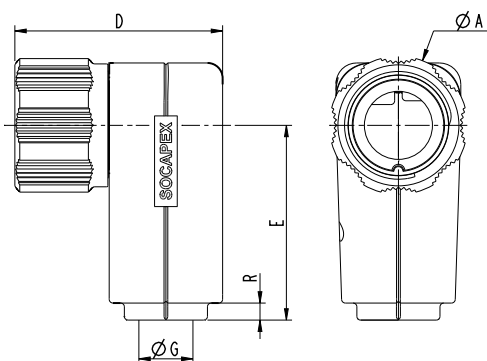


Pin

Socket

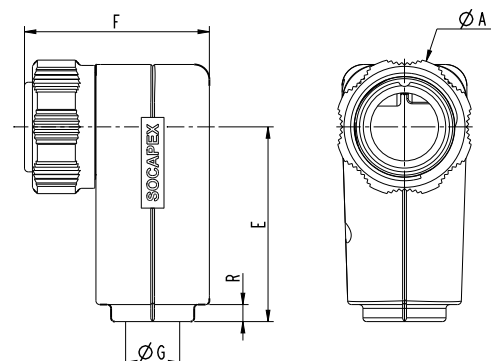
How to order page 17

SL*FMC**



How to order page 17

SL*FFC**



| Size | D _{MIN} | E _{MIN} | ØG* | | | F _{MIN} | R _{MIN} | ØA ⁺⁰ _{-0.2} |
|------|------------------|------------------|-------|-------|-------|------------------|------------------|----------------------------------|
| 10 | 48,10 | 45,50 | 5-7 | 7-9 | - | 38,55 | 4,30 | 27,50 |
| 20 | 54,90 | 51,50 | 6-8 | 9-11 | 12-14 | 48,70 | 4,30 | 36,50 |
| 30 | 67,90 | 55,50 | 10-12 | 13-16 | 17-20 | 60,70 | 6,30 | 51,50 |
| 40 | 76,00 | 62,50 | 14-18 | 19-23 | 24-30 | 68,70 | 7,30 | 64,50 |

*G: flanges equipped with different clamping pads delivered with the backshell.

All the dimensions are in mm except as otherwise specified

SL61 & "SOCA"

Receptacle

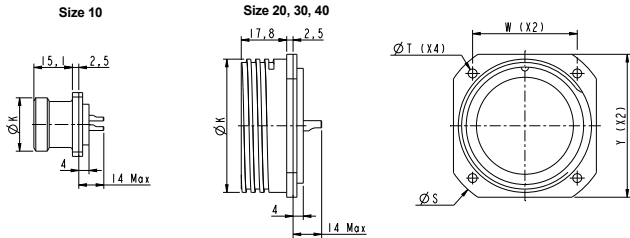


Pin

Socket

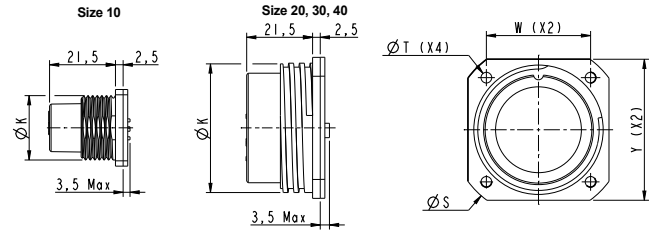
How to order page 16

SL*EM**



How to order page 16

SL*EF**



| Size | ØK _{MIN} | W | Y | ØT | ØS |
|------|-------------------|-------|-------|------|-------|
| 10 | 21,00 | 19,00 | 25,00 | 3,20 | 33,00 |
| 20 | 28,10 | 24,00 | 31,00 | 3,50 | 40,00 |
| 30 | 42,20 | 34,00 | 46,00 | 3,50 | 57,00 |
| 40 | 52,20 | 41,00 | 56,00 | 3,50 | 67,00 |

Receptacle with locking ring

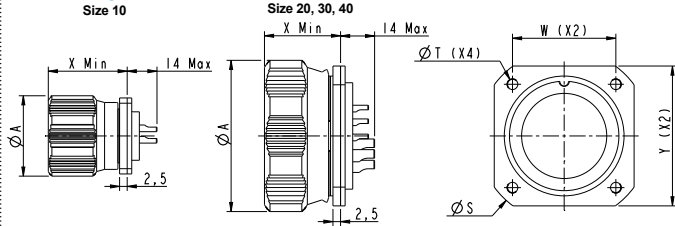


Pin

Socket

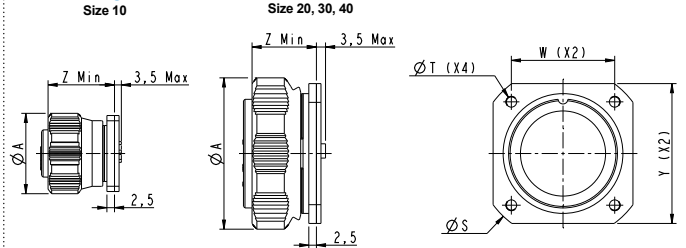
How to order page 16

SL*EME**



How to order page 16

SL*EFE**



| Size | ØA | W | Y | ØT | ØS | X _{Min} | Z _{Min} |
|------|-------|-------|-------|------|-------|------------------|------------------|
| 10 | 27,50 | 19,00 | 25,00 | 3,20 | 33,00 | 25,90 | 21,20 |
| 20 | 36,50 | 24,00 | 31,00 | 3,50 | 40,00 | 24,20 | 20,20 |
| 30 | 51,50 | 34,00 | 46,00 | 3,50 | 57,00 | 24,40 | 20,20 |
| 40 | 64,50 | 41,00 | 56,00 | 3,50 | 67,00 | 29,15 | 22,43 |

Inline receptacle

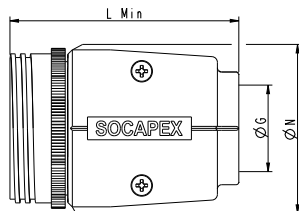


Pin

Socket

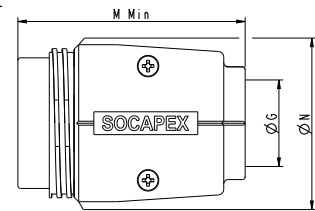
How to order page 17

SL*FMDR**



How to order page 17

SL*FFDR**



| Size | L _{MIN} | M _{MIN} | ØN _{MIN} | ØG* |
|------|------------------|------------------|-------------------|-------|
| 10 | 53,50 | 57,75 | 25,00 | 5-7 |
| 20 | 61,15 | 59,70 | 33,00 | 7-9 |
| 30 | 81,95 | 80,50 | 46,00 | 8-11 |
| 40 | 80,15 | 79,50 | 55,00 | 12-14 |
| | | | | 10-12 |
| | | | | 13-16 |
| | | | | 17-20 |
| | | | | 14-18 |
| | | | | 19-23 |
| | | | | 24-30 |

*G: flanges equipped with different clamping pads delivered with the backshell.
All the dimensions are in mm except as otherwise specified

SL61 & «SOCA» - ACCESSORIES

Two-Parts backshell



| Size | Straight backshell | | Right angle backshell | |
|------|--------------------|------------|-----------------------|------------|
| | Non conductive | Conductive | Non conductive | Conductive |
| | Black ✓ | Nickel ✓ | Black ✓ | Nickel ✓ |
| 10 | 47377N | 47377NI | 47381N | 47381NI |
| 20 | 47378N | 47378NI | 47382N | 47382NI |
| 30 | 47379N | 47379NI | 47383N | 47383NI |
| 40 | 47380N | 47380NI | 47384N | 47384NI |

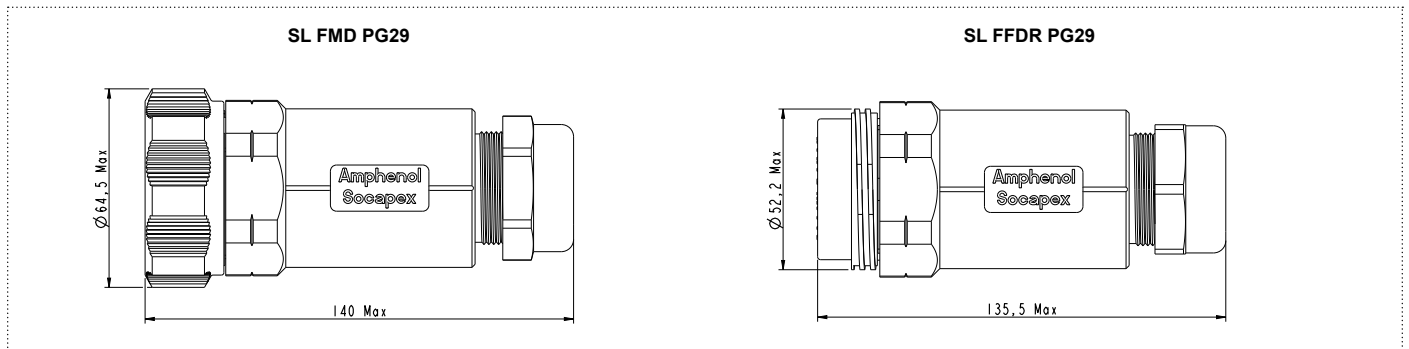
✓ : RoHS compliant
 - Straight or right-angle backshells are delivered with different clamping pads

419AR monopiece backshell

- IP67, compatible with 419AR receptacle
- Exclusive gland design
 - to ensure a high mechanical retention of the cable
 - available in size 29 or 36 according to the outside diameter of the cable
- Exclusive thread design
 - to avoid accidental unscrewing of the backshell while mating / unmating
- Built-in double insulation and black non conductive plating for safety
- Contacts size 12 (AWG14-12, conductor diameter up to 2,45 mm)
- Socapex split backshell (47380N) can be used with the new plug

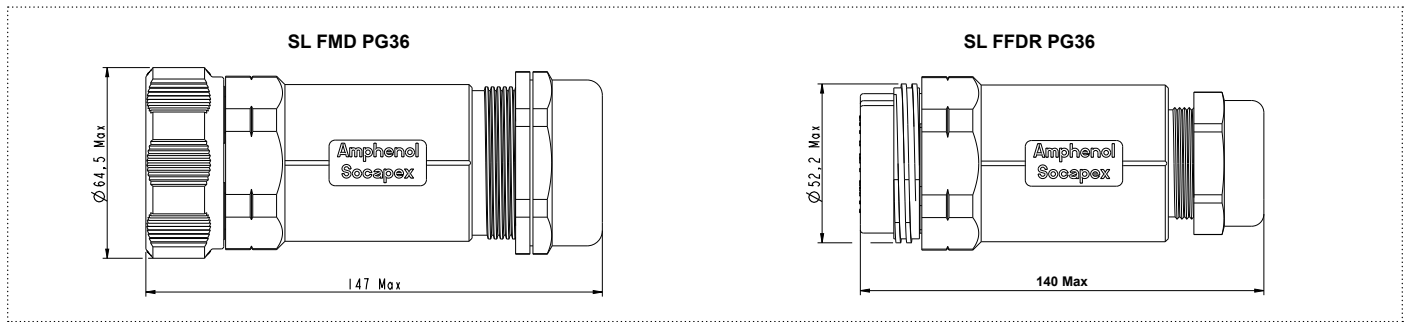


PG size 29



| | Size 29 (cable diameter 15mm to 24mm) | | |
|-----------------------------------|---------------------------------------|-----------|---------------------------|
| | Connector | Backshell | Set connector + backshell |
| Male plug | SLD BMPG 419AR | | SLD FMD PG29 419AR |
| Female inline receptacle | SLD BFRPG 419AR | 47029N | SLD FFDR PG29 419AR |
| Female grounded inline receptacle | SLGD BFRPG 419AR | | SLGD FFDR PG29 419AR |

PG size 36



| | Size 36 (cable diameter 24mm to 34mm) | | |
|-----------------------------------|---------------------------------------|-----------|---------------------------|
| | Connector | Backshell | Set connector + backshell |
| Male plug | SLD BMPG 419AR | | SLD FMD PG36 419AR |
| Female inline receptacle | SLD BFRPG 419AR | 47036N | SLD FFDR PG36 419AR |
| Female grounded inline receptacle | SLGD BFRPG 419AR | | SLGD FFDR PG36 419AR |

All the dimensions are in mm except as otherwise specified

Due to technical progress, all information provided is subject to change without prior notice
 Designed by Amphenol Socapex

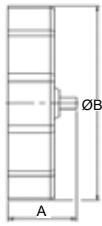
SL61 & “SOCA” - ACCESSORIES

All the protection caps are RoHS compliant (plastic material).

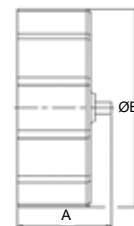
Protection cap for receptacle and inline receptacle



Pin



Socket



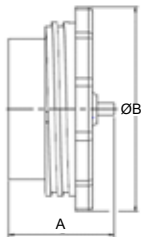
| Receptacle | Inline receptacle | Size | A _{MAX} | ØB _{MAX} |
|------------|-------------------|------|------------------|-------------------|
| SLBEM1B | SLBFMR1B | 10 | 18,40 | 27,10 |
| SLBEM2B | SLBFMR2B | 20 | 20,20 | 38,00 |
| SLBEM3B | SLBFMR3B | 30 | 20,20 | 52,00 |
| SLBEM4B | SLBFMR4B | 40 | 20,20 | 63,00 |

| Receptacle | Inline receptacle | Size | A _{MAX} | ØB _{MAX} |
|------------|-------------------|------|------------------|-------------------|
| SLBEF1B | - | 10 | 26,90 | 27,10 |
| SLBEF2B | SLBFFR2B | 20 | 29,20 | 38,00 |
| SLBEF3B | SLBFFR3B | 30 | 29,20 | 52,00 |
| SLBEF4B | SLBFFR4B | 40 | 29,20 | 63,00 |

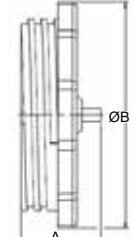
Protection cap for plug and locking ring receptacle



Pin



Socket



| Plug | Locking ring receptacle | Size | A _{MAX} | ØB _{MAX} |
|---------|-------------------------|------|------------------|-------------------|
| SLBFM1B | - | 10 | 30,90 | 21,10 |
| SLBFM2B | - | 20 | 31,70 | 38,00 |
| SLBFM3B | BFM3B | 30 | 31,70 | 52,00 |
| SLBFM4B | BFM4B | 40 | 31,70 | 63,00 |

| Plug | Locking ring receptacle | Size | A _{MAX} | ØB _{MAX} |
|---------|-------------------------|------|------------------|-------------------|
| SLBFF1B | - | 10 | 18,90 | 27,10 |
| SLBFF2B | - | 20 | 21,20 | 38,00 |
| SLBFF3B | BFF3B | 30 | 21,20 | 52,00 |
| SLBFF4B | BFF4B | 40 | 21,70 | 63,00 |

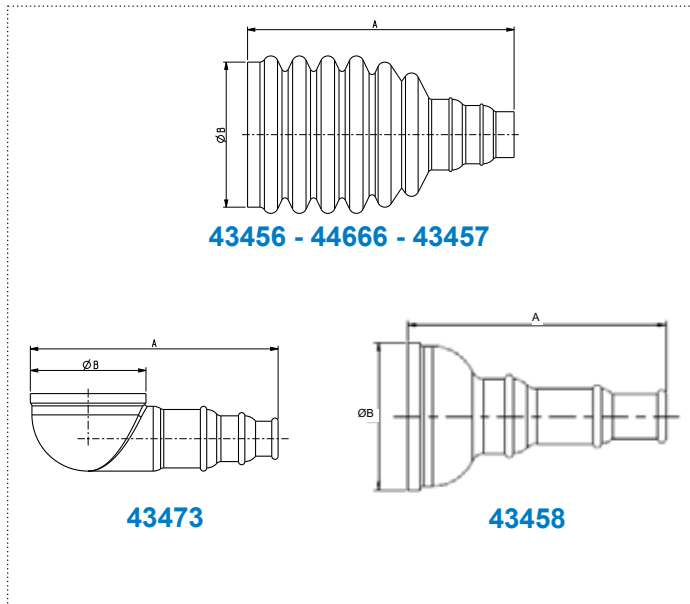
All the dimensions are in mm except as otherwise specified

SL61 & «SOCA» - ACCESSORIES

Sealing sleeve

Spray proofing sleeves, made of neoprene, are mounted on the rear of the plug body.

SL61



43456 - 44666 - 43457

43473

43458

| Connector | Size | A _{MAX} | ØB _{MAX} | Designation |
|-------------------------|------|------------------|-------------------|-------------|
| Straight | 10 | 32,00 | 18,20 | 43458 |
| Right angle | 10 | 39,00 | 18,20 | 43473 |
| Straight or right angle | 20 | 56,00 | 26,00 | 43456 |
| | 30 | 71,00 | 37,90 | 44666 |
| | 40 | 86,00 | 47,30 | 43457 |

Sealing sleeve assembly instructions

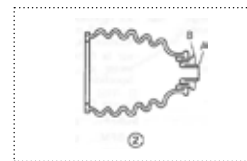
Straight



Right angled



If necessary, adjust the end of the sleeve to the diameter of the cable in use.
 Size 10 connectors: cut off part A for cables using the large diameter cable clamp.
 Size 20-30-40: cut off part A for cables using the middle sized clamp, and parts A and B for cables using the largest diameter cable clamp.
 The sleeve must not be gripped by the cable clamp. For small diameter cables, parts A and B should be folded back, as shown:



Grounding discs for 419 AR arrangement

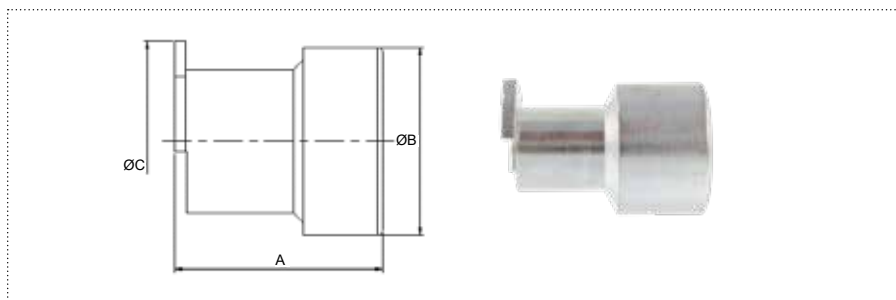
Pin insert: 140654-91 (front mounting)

Socket insert: 140653-00 (rear mounting)



Not available for SLG 419AR series

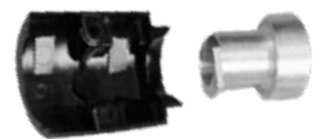
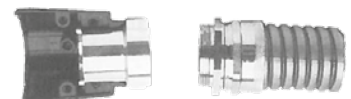
Adaptator for flexible conduit and PG thread



| Connector size | PG size | A _{MAX} | ØB _{MAX} | ØC _{MAX} | Designation |
|----------------|---------|------------------|-------------------|-------------------|-------------|
| 20 | 9 | 33,50 | 22,20 | 24,00 | SL RF 2 09N |
| | 11 | 33,50 | 22,20 | 24,00 | SL RF 2 11N |
| | 13 | 38,70 | 30,70 | 32,00 | SL RF 3 13N |
| 30 | 16 | 38,70 | 30,70 | 32,00 | SL RF 3 16N |
| | 21 | 38,70 | 39,50 | 32,00 | SL RF 3 21N |
| 40 | 16 | 44,00 | 39,50 | 42,00 | SL RF 4 16N |
| | 21 | 44,00 | 39,50 | 42,00 | SL RF 4 21N |
| | 29 | 43,00 | 39,70 | 39,70 | SL RF 4 29N |

All the dimensions are in mm except as otherwise specified

Adaptator for flexible conduit



SL61 - HOW TO ORDER

Connector (without backshell)

| | | | | |
|----|----|----|-----|----|
| 1. | 2. | 3. | 4. | 5. |
| SL | D | EM | 37Y | |

1. Connector type

SL

2. Shell plating

| | |
|-------|---------------------------|
| D | Black coating ✓ |
| Blank | Nickel ✓ Clear cadmium |

3. Shell style & contact gender

| | Pin (M) | Socket (F) |
|-------------------------|---------|------------|
| Receptacle | EM | EF |
| Locking ring receptacle | EME | EFE |
| Inline receptacle | BMR | BFR * |
| Plug | BM | BF |

* not available for 13U, 14V & 17P
 ✓ : RoHS compliant

4. Insert arrangement

See part "Insert arrangement" page 8-10

5. Shell plating

| | |
|-------|----------------------------------|
| NI | Nickel ✓ |
| Blank | Black coating ✓ Clear cadmium |

“SOCA” SLG 419AR - SHOWBIZ - HOW TO ORDER

Grounding version

| | | | |
|-----|----|----|-------|
| 1. | 2. | 3. | 4. |
| SLG | D | EF | 419AR |

1. Connector type

SLG
 7 first mate last break earth contacts

2. Shell plating

| | |
|-------|-----------------|
| D | Black coating ✓ |
| Blank | Clear cadmium |

✓ : RoHS compliant

3. Shell style & contact gender

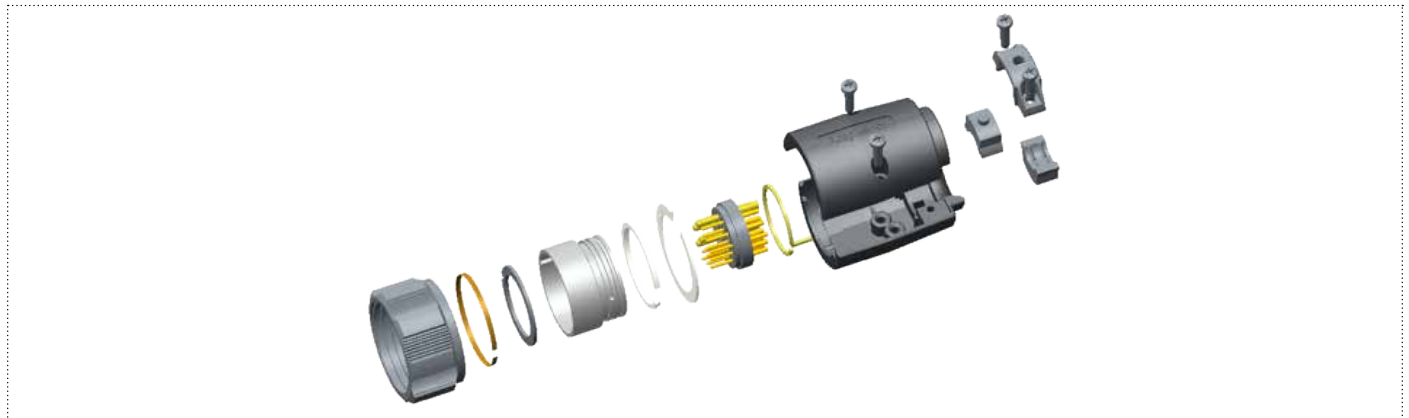
| | |
|------|-------------------------------|
| EF | Socket panel mount receptacle |
| FFDR | Socket inline receptacle |

4. Insert arrangement

419AR

SL61 - HOW TO ORDER

Connector + 2-parts backshell



| | | | | | | |
|----|----|----|----|----|------|----|
| 1. | 2. | 3. | 4. | 5. | 6. | 7. |
| SL | | F | M | D | 319L | NI |

1. Connector type

SL

2. Shell plating

| | |
|-------|-----------------------------|
| D | Black coating ✓ |
| Blank | Nickel ✓ Clear cadmium** |

3. Kit, mandatory digit

F

4. Contact gender

| | |
|---|--------|
| M | Pin |
| F | Socket |

* not available in female version for 13U, 14V and 17P arrangement

** delivered with black backshell

✓ : RoHS compliant

5. Kit composition

| | |
|----|--|
| D | Plug + straight backshell |
| DR | Inline receptacle + straight backshell * |
| C | Plug + right angle backshell |

6. Insert arrangement

See part "insert arrangement" page 8-10

7. Shell plating

| | |
|-------|------------------------------------|
| NI | Nickel ✓ |
| Blank | Black coating ✓ Clear cadmium** |

Kit details



A kit is made of :

- SL connector
- 2-parts backshell (upper backshell & lower backshell) + 2 fixing screws
- 2 or 3 plastic cable clamps (2 for size 10, 3 for sizes 20, 30, 40)
- 1 cable fixing bridge + 2 bridge fixing screws

SL61 & «SOCA» - WEIGHTS

| In grams | Plug: body + backshell | | | | Plug: body | | Receptacle | | Inline receptacle : body + backshell | | Inline receptacle: body | | Locking ring receptacle | |
|----------|---------------------------|---------|---------|---------|---------------|--------|------------|-------|---|----------|----------------------------|---------|----------------------------|--------|
| | Insert | SL F FD | SL F MD | SL F FC | SL F MC | SL B F | SL B M | SLE F | SLE M | SL FF DR | SL FM DR | SL BF R | SL BM R | SLE FE |
| 13U | 30 | 33 | 42 | 45 | 15 | 23 | 15 | 12 | - | 28 | 12 | 12 | 22 | 22 |
| 14V | 30 | 34 | 42 | 46 | 16 | 24 | 15 | 12 | - | 29 | 12 | 12 | 22 | 22 |
| 17P | 32 | 35 | 44 | 47 | 18 | 25 | 17 | 13 | 31 | 30 | 14 | 13 | 24 | 23 |
| 23C | 62 | 65 | 80 | 83 | 35 | 41 | 26 | 24 | 57 | 58 | 24 | 15 | 37 | 36 |
| 25D | 32 | 35 | 80 | 83 | 35 | 41 | 26 | 24 | 57 | 58 | 24 | 15 | 37 | 36 |
| 212AF | 62 | 65 | 80 | 83 | 36 | 42 | 27 | 24 | 57 | 58 | 24 | 16 | 38 | 36 |
| 222P | 67 | 68 | 85 | 86 | 41 | 46 | 32 | 27 | 62 | 61 | 29 | 20 | 43 | 39 |
| 34H | 136 | 145 | 165 | 174 | 74 | 87 | 67 | 63 | 122 | 125 | 56 | 41 | 81 | 78 |
| 37Y | 135 | 142 | 164 | 171 | 72 | 82 | 65 | 58 | 121 | 122 | 54 | 36 | 79 | 73 |
| 319L | 133 | 135 | 162 | 164 | 69 | 77 | 64 | 53 | 119 | 115 | 52 | 31 | 78 | 68 |
| 337P | 143 | 143 | 172 | 172 | 78 | 84 | 74 | 60 | 129 | 123 | 61 | 38 | 88 | 75 |
| 419AR | 209 | 212 | 238 | 241 | 113 | 133 | 101 | 85 | 191 | 194 | 92 | 87 | 124 | 116 |
| 439R | 202 | 203 | 231 | 232 | 106 | 123 | 96 | 77 | 183 | 185 | 85 | 78 | 119 | 108 |
| G419AR | | | | | | | 99 | | 186 | | 88 | | | |

| In grams | Protection cap | | | |
|----------|----------------|------------------|------------------|-------------------|
| | Size | SLB FF B FF * | SLB FM B FM * | SLB EF SLB FFR |
| 10 | 11 | 12 | 14 | 11 |
| 20 | 14 | 18 | 22 | 15 |
| 30 | 19 | 27 | 31 | 21 |
| 40 | 23 | 34 | 39 | 26 |

* B FF & B FM caps in size 10 & 20 are not available

ABOUT AMPHENOL

Founded in 1932, **Amphenol** is one of the largest manufacturers of interconnect products in the world. The company designs, manufactures, and markets electrical, electronic, and fiber optic connectors, interconnect systems, and coaxial and specialty cables.

Amphenol has a diversified presence as a leader in high growth areas of the interconnect industry and provides solutions for customers in the automotive, broadband, industrial, information technology and data communications, military and aerospace, mobile devices, and mobile networks markets.

More info on www.amphenol.com

Amphenol
ENABLING THE ELECTRONICS REVOLUTION

Amphenol Military & Aerospace Operations (AMAO) has the largest and broadest selection of interconnect products in the military and aerospace markets.

More info on www.amphenolmao.com

Amphenol
MILITARY & AEROSPACE

Europe

| | | | |
|----------------|------------------------------------|--|-------------------|
| FRANCE | Amphenol AIR LB | 2 rue Clément Ader, ZAC de Wé - 08110 Carignan | +33 3 24 22 78 49 |
| FRANCE | Amphenol SEFEE | Z.I. des Cazes – BP243 - 12402 Saint-Affrique Cedex | +33 5 65 98 11 00 |
| GERMANY | Amphenol AIR LB GMBH | Am Kleinbahnhof 4 - 66740 Saarlouis | +49 6831 981 00 |
| ITALY | Amphenol EUROPEAN SALES OPERATIONS | Via Barbaiana n.5 - 20020 Lainate - Milano | +39 293 254 214 |
| UNITED KINGDOM | Amphenol INVOTEC | Unit 1-3, Hedging Lane Industrial Estate, Dosthill - Tamworth, B77 5HH | +44 1827 263 000 |
| UNITED KINGDOM | Amphenol IONIX SYSTEMS | Prospect House, Taylor Business Park, Risley, Warrington, WA3 6HP | +44 1 942 685 200 |
| UNITED KINGDOM | Amphenol LTD | Thanet Way, Whitstable - KENT, CT53JF | +44 1227 773 200 |
| UNITED KINGDOM | Amphenol MARTEC | St Augustines Business Park, Swalecliffe Whitstable - Kent CT5 2QJ | +44 1227 793 733 |

North America

| | | | |
|--------|-------------------------------|--|-----------------|
| CANADA | Amphenol CANADA | 605 Milner avenue - Toronto, Ontario | +1 416 291 0647 |
| USA | Amphenol AEROSPACE OPERATIONS | 40-60 Delaware street - Sidney, NY 13838 | +1 800 678 0141 |
| USA | Amphenol BORISH TECHNOLOGIES | 4511 East Paris AVE - Grand Rapids, MI 49512 | +1 616 554 9820 |
| USA | Amphenol FSI | 1300 Central Expwy N, Suite 100 - Allen, TX 75013 | +1 214 547 2400 |
| USA | Amphenol GRIFFITH ENTERPRISES | 6000 East Coury Drive - Cottonwood, AZ 86326 | +1 928 634 3685 |
| USA | Amphenol NEXUS TECHNOLOGIES | 50 Sunnyside Avenue - Stamford, CT 06902 | +1 203 327 7300 |
| USA | Amphenol PCD | 72 Cherry Hill Drive - Beverly, MA. 01915 | +1 978 624 3400 |
| USA | Amphenol PRINTED CIRCUIT | Board Technology, 91 Northeastern Boulevard - Nashua, NH 03062 | +1 603 324 4500 |
| USA | Amphenol SV MICROWAVE | 2400 Centrepark West Drive - West Palm Beach, FL | +1 561 840 1800 |
| USA | Amphenol TIMES MICROWAVE | 358 Hall Avenue - Wallingford, CT 06492 | +1 800 867 2629 |

Asia

| | | | |
|-----------|-----------------------------|--|------------------------|
| CHINA | Amphenol PCD CO. | Building 21, 1 st Liao Keng Industrial Zone, Shi Yan Street - Bao An District - Shenzhen 518108 | +86 755 8173 8000/8286 |
| INDIA | Amphenol INTERCONNECT INDIA | 105 Bhosari Industrial Area - Pune 411 026 | +91 20 27120363 |
| JAPAN | Amphenol JAPAN | 471-1, Deba, Ritto-City - Shiga 520 3041 | +81 77 553 8501 |
| KOREA | Amphenol DAESHIN | 558 SongNae-Dong SoSa-Gu, Bucheon-city, Kyunggi-Do - 420-130 | +81 32 610 3830/3845 |
| SINGAPORE | Amphenol EAST ASIA | 26/F, Railway Plaza, 39 Chatham Road South, Tsim Sha Tsui, Kowloon, Hong Kong | +65 6294 2128 |

Other Areas

| | | | |
|-------------|------------------------|---|-------------------|
| AFRICA | Amphenol AFRICA | 30 Impala Rd - Sandton 2146 | +27 82 410 5179 |
| ARGENTINA | Amphenol ARGENTINA | Av. Callao 930 2do piso Oficina B "Plaza" C1023 - AAP Buenos Aires | +54 11 4815 6886 |
| AUSTRALIA | Amphenol AUSTRALIA PTY | 2 Fiveways Blvd., Keysborough - Melbourne - Victoria 3173 | +61 3 8796 8888 |
| BRAZIL | Amphenol DO BRAZIL | Rua Diogo Moreira, 132, 20 andar, rooms 2001-2-3 | +55 11 3815 1003 |
| ISRAEL | Amphenol BAR-TEC | 3 Hagavish Street, K fir-Barkan Bldg. East Industrial Zone - Kfar-Sava, 44102 | +972 9 764 4100 |
| MEXICO | Amphenol OPTIMIZE | Carretera Internacional Km 6.5, Col. Parque Industrial, Nogales, Sonora, C.P. 84094 | +52 631 311 160 |
| NEW ZEALAND | Amphenol PHITEK | Level 4, 2 Kingdon Street, Newmarket, Auckland 1023 | +64 9 524 2984 |
| RUSSIA | Amphenol RUSSIA | Yaroslavskaja Street 8 - 129164 Moscow | +7 495 937 6341 |
| TURKEY | Amphenol TURKEY | Sun Plaza 15 Kat: 15 Maslak Hah. Bilim Sok. No.5 - Sisli/Istanbul, 34398 | +90 212 367 92 19 |

Amphenol SOCAPEX



Amphenol Socapex

948, promenade de l'Arve BP29
74311 Thyez Cedex - France
Phone: +33 (0)4 50 89 28 00
contact@amphenol-socapex.fr
www.amphenol-socapex.com



For Technical Support

+33 (0)4 50 89 28 49
technicalsupport@amphenol-socapex.fr
www.amphenol-socapex.com/technical_support



To buy our products

+33 (0)4 50 90 28 00
contact@amphenol-socapex.fr
www.amphenol-socapex.com/amphenol/sales
Request a quote online at www.amphenol-socapex.com/quotation_request



Documentation

www.amphenol-socapex.com/documentation
To order a paper version of our catalogs, send an e-mail to communication@amphenol-socapex.fr



www.amphenol-socapex.com

Follow Amphenol Socapex on social media :



This catalog uses paper from managed forests, PEFC & FSC labels, and is printed by a printer certified "Imprim'Vert®"

*We reserve the right to modify our products in any way we deem necessary.
Any duplication is prohibited, unless approved in writing.*

Designed by **Amphenol Socapex**
DOC-001018-ANG - February 2021

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [Standard Circular Connector](#) category:

Click to view products by [Amphenol](#) manufacturer:

Other Similar products are found below :

[5M2530B10P](#) [600259N006](#) [600273N007](#) [6134-336-13149](#) [6134-337-11149](#) [6134-337-2390](#) [6134-341-17149](#) [6280-4SG-516](#) [6280-7SG-3DC](#)
[6290](#) [6291A](#) [66200A-10](#) [680-SMG](#) [681-PMG](#) [CXS3102A14S2P](#) [CXS3102A181S](#) [7251-6SG-300](#) [7271-6SG-300](#) [7282-3PG-300-CH3](#) [75-](#)
[474014-05S](#) [75-474618-01S](#) [75-474618-04P](#) [75-474618-04S](#) [799539-000](#) [MI8-SE](#) [805-005-07NF11-19PC](#) [805-005-07NF15-7PA](#) [8280-4PG-](#)
[516](#) [8280-7PG-519](#) [8282-5PG-519](#) [836783-1](#) [MP-4102-25P-C](#) [862256-1](#) [864019-2](#) [866857-1](#) [867865-1](#) [PT01SP-14-18P](#) [PT08P-14-5S](#)
[PTSF06SE-14-12S](#) [120-1833-000](#) [QCM019PC2DC012B](#) [1-2069279-1](#) [121583-0217](#) [121667-0020](#) [129591AU](#) [1000B BULK](#) [RD10A16-19-](#)
[P6CS051/1](#) [RD10A20-31-P8CS051/1](#) [RD16A14-12-S6CS051/2](#) [1301240290](#) [1301240347](#)