



# SL 61

## Industrial Circular Connectors

### ROHS VERSIONS

- Black coating
- Nickel plating



### MAIN CHARACTERISTICS

- Closed entry female contacts
- Two parts backshell ensuring simple wiring and maintenance
- Adaptable capacity cable clamp
- Gold plated turned contacts
- Reinforced locking ring
- Trapezoidal thread screw-locking
- 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
- ROHS versions available
  - black coating (non conductive)
  - nickel plating (conductive)
- UL recognition n° E160967(01)

- Large selection of insert arrangements
- Robust and reliable
- Stock items



### DESCRIPTION

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*

### APPLICATIONS

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



**Amphenol**

SL 61

## Contact arrangements

|          |        |       |      |        |       |       |      |      |       |       |        |
|----------|--------|-------|------|--------|-------|-------|------|------|-------|-------|--------|
| ①        | 13 U   | 14 V  | 17 P | 22 B   | 23 C  | 23 AL | 25 D | 25 S | 27 E  | 29 AE | 212 AF |
| ② (Vrms) | 280    | 225   | 150  | 500    | 440   | 540   | 380  | 380  | 380   | 280   | 280    |
| ③ (Vrms) | 1400   | 1400  | 1050 | 2100   | 1400  | 1750  | 1400 | 1400 | 1400  | 1400  | 1050   |
| ①        | 222 P  | 32 F  | 33 G | 34 H   | 315 K | 319 L | 37 Y | 39 J | 337 P |       |        |
| ② (Vrms) | 150    | 525   | 600  | 500    | 355   | 400   | 480  | 450  | 175   |       |        |
| ③ (Vrms) | 1050   | 1750  | 1750 | 1750   | 1750  | 1750  | 1750 | 1750 | 1050  |       |        |
| ①        | 443 AP | 461 P | 48 M | 419 AR | 426 P | 439 R |      |      |       |       |        |
| ② (Vrms) | 300    | 110   | 420  | 400    | 380   | 280   |      |      |       |       |        |
| ③ (Vrms) | 1750   | 1050  | 2500 | 1750   | 1750  | 1750  |      |      |       |       |        |

- ① Contact arrangement  
② Working voltage  
③ Test voltage at sea level

| Nominal current | Contact resistance | Maximum permissible wire dia. |
|-----------------|--------------------|-------------------------------|
| • 7,5 A         | ≤ 5 m Ω            | 0.75 mm <sup>2</sup>          |
| ○ 10 A          | ≤ 2 m Ω            | 1.75 mm <sup>2</sup>          |
| ● 25 A          | ≤ 2 m Ω            | 5.1 mm <sup>2</sup>           |
| ⊕ 50 A          | ≤ 2 m Ω            | 13 mm <sup>2</sup>            |

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

| Connector size | Backshell reference        |                                  |                               |                            |                                     |                               |
|----------------|----------------------------|----------------------------------|-------------------------------|----------------------------|-------------------------------------|-------------------------------|
|                | black*<br>(non conductive) | straight nickel*<br>(conductive) | green cadmium<br>(conductive) | black*<br>(non conductive) | right-angle nickel*<br>(conductive) | green cadmium<br>(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                        |

\* Black and Nickel backshells are ROHS compliant

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

## Accessories

### Plug and receptacle protection caps:

| SLB                       | F      | M | 3B |
|---------------------------|--------|---|----|
| F: Plug                   |        |   |    |
| E: Receptacle             |        |   |    |
| M: Pin connector          |        |   |    |
| F: Socket connector       |        |   |    |
| Plug and receptacle: none |        |   |    |
| Line mount receptacle: R  |        |   |    |
| Size                      |        |   |    |
| 1B: 10                    | 3B: 30 |   |    |
| 2B: 20                    | 4B: 40 |   |    |



### Receptacle with locking ring protection caps:

| BF                  | F      | 3B |
|---------------------|--------|----|
| M: Pin connector    |        |    |
| F: Socket connector |        |    |
| Size                |        |    |
| 1B: 10              | 3B: 30 |    |
| 2B: 20              | 4B: 40 |    |



### Sealing sleeve:

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



for plug or line mount receptacle

### Adaptator for flexible conduit and PG:

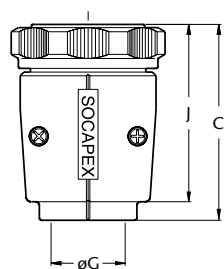
|            | Connector size | PG thread |
|------------|----------------|-----------|
| SL RF 209N | 20             | 9         |
| SL RF 211N | 20             | 11        |
| SL RF 313N | 30             | 13        |
| SL RF 316N | 30             | 16        |
| SL RF 416N | 40             | 16  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



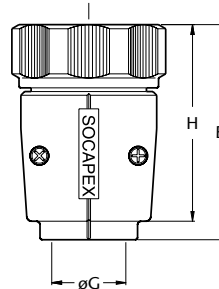
- Caps and sealing sleeves are ROHS compliant

## Straight plug

Straight female plug

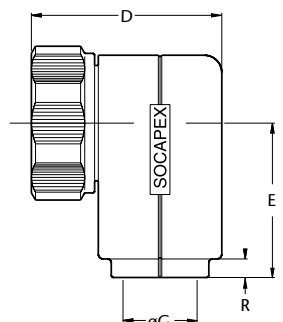


Straight male plug

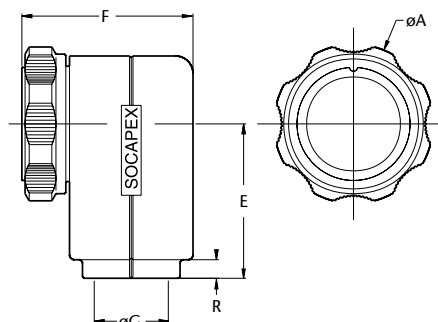


## Right angle plug

Right-angle male plug



Right-angle female plug

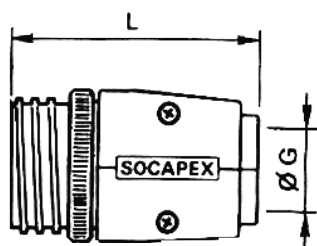


| size | Ø A - 0,2 (mm) | B (mm) | C (mm) | D (mm) | E (mm) | F (mm) | G (mm) |       |       | H (mm) | J (mm) | K (mm) | L (mm) | M (mm) | N (mm) | R (mm) | S (mm) | T (mm) | W (mm) | Y (mm) |
|------|----------------|--------|--------|--------|--------|--------|--------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 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     |

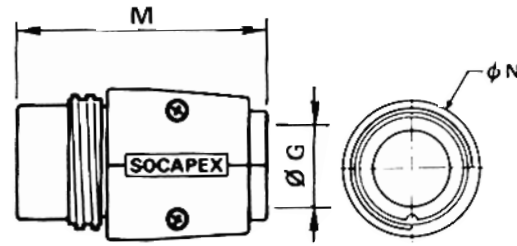
G: flanges equipped with different clamping pads delivered with the backshells.

## In-line receptacle

In-line male receptacle

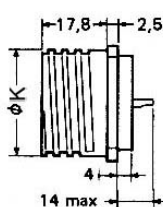


In-line female receptacle

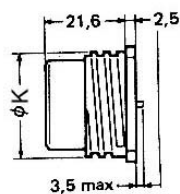


## Receptacle

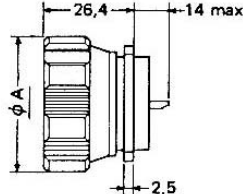
Male receptacle



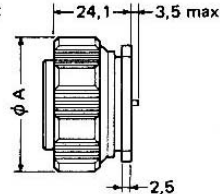
Female receptacle



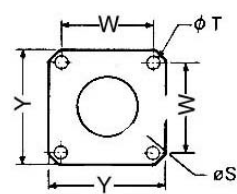
Male receptacle with locking ring



Female receptacle with locking ring



Square flange of receptacle





## Plug and Inline receptacle (backshell sets included)

ROHS Part Numbers : nickel plated or black coated

| SL series                                  | SL | D | F | M | D | 319L |
|--------------------------------------------|----|---|---|---|---|------|
| D: Black coating                           |    |   |   |   |   |      |
| Blank: Nickel plating                      |    |   |   |   |   |      |
| F: plug or inline receptacle               |    |   |   |   |   |      |
| Type of contact:                           |    |   |   |   |   |      |
| M: Male                                    |    |   |   |   |   |      |
| F: Female                                  |    |   |   |   |   |      |
| D: plug + straight backshell               |    |   |   |   |   |      |
| DR: inline receptacle + straight backshell |    |   |   |   |   |      |
| C: plug + right angle backshell            |    |   |   |   |   |      |
| Contact Arrangement (see page 2)           |    |   |   |   |   |      |
| Blank: Black coating                       |    |   |   |   |   |      |
| NI: Nickel plating                         |    |   |   |   |   |      |

Non ROHS Part Numbers : clear cadmium plated

| SL series                                  | SL | F | M | D | 319L |
|--------------------------------------------|----|---|---|---|------|
| F : plug or inline receptacle              |    |   |   |   |      |
| Type of contact:                           |    |   |   |   |      |
| M: Male                                    |    |   |   |   |      |
| F: Female                                  |    |   |   |   |      |
| D: plug + straight backshell               |    |   |   |   |      |
| DR: inline receptacle + straight backshell |    |   |   |   |      |
| C: plug + right angle backshell            |    |   |   |   |      |
| Contact Arrangement (see page 2)           |    |   |   |   |      |

## Panel mount receptacle and receptacle with locking ring

ROHS Part Numbers : nickel plated or black coated

| SL series                                          | SL | D | E | F | 319L |
|----------------------------------------------------|----|---|---|---|------|
| D: Black coating                                   |    |   |   |   |      |
| Blank: Nickel plating                              |    |   |   |   |      |
| E: receptacle or receptacle with locking ring      |    |   |   |   |      |
| Type of contact:                                   |    |   |   |   |      |
| M: Male                                            |    |   |   |   |      |
| F: Female                                          |    |   |   |   |      |
| Blank: Receptacle                                  |    |   |   |   |      |
| E: Receptacle with locking ring                    |    |   |   |   |      |
| Contact Arrangement (see page 2)                   |    |   |   |   |      |
| Blank: Black coating                               |    |   |   |   |      |
| NI: Nickel plating                                 |    |   |   |   |      |
| Add "MA" for tin plated retention ring (grounding) |    |   |   |   |      |

Comment : Panel gasket is delivered with the receptacle

Non ROHS Part Numbers : clear cadmium plated

| SL series                                          | SL | E | F | 319L |
|----------------------------------------------------|----|---|---|------|
| E: receptacle or receptacle with locking ring      |    |   |   |      |
| Type of contact:                                   |    |   |   |      |
| M: Male                                            |    |   |   |      |
| F: Female                                          |    |   |   |      |
| Blank: Receptacle                                  |    |   |   |      |
| E: Receptacle with locking ring                    |    |   |   |      |
| Contact Arrangement (see page 2)                   |    |   |   |      |
| Add "MA" for tin plated retention ring (grounding) |    |   |   |      |

Comment : Panel gasket is delivered with the receptacle

## Body of plug and inline receptacle

**With those part numbers the straight and right angle backshells are not included.  
To define part numbers of backshells, please to consult page 2.**

ROHS Part Numbers : nickel plated or black coated

| SL series                         | SL | D | B | M | 319L |
|-----------------------------------|----|---|---|---|------|
| D: Black coating                  |    |   |   |   |      |
| Blank: Nickel plating             |    |   |   |   |      |
| Body of plug or inline receptacle |    |   |   |   |      |
| Type of contact:                  |    |   |   |   |      |
| M: Male                           |    |   |   |   |      |
| F: Female                         |    |   |   |   |      |
| Blank: Body of plug               |    |   |   |   |      |
| R: Body of inline receptacle      |    |   |   |   |      |
| Contact Arrangement (see page 2)  |    |   |   |   |      |
| Blank: Black coating              |    |   |   |   |      |
| NI: Nickel plating                |    |   |   |   |      |

Non ROHS Part Numbers : clear cadmium plated

| SL series                         | SL | B | M | 319L |
|-----------------------------------|----|---|---|------|
| Body of plug or inline receptacle |    |   |   |      |
| Type of contact:                  |    |   |   |      |
| M: Male                           |    |   |   |      |
| F: Female                         |    |   |   |      |
| Blank: Plug                       |    |   |   |      |
| R: inline receptacle              |    |   |   |      |
| Contact Arrangement (see page 2)  |    |   |   |      |

**Do not hesitate to contact us for further information**

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