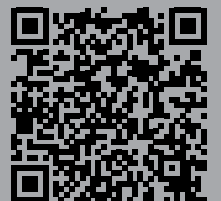




# Circular Connectors



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**NEUTRIK®**, **opticalCON®**, **neutriCON®**, **miniCON®**, **nanoCON®**, **powerCON®**, **Profi®**, **speakON®**, **silentPLUG®**, **crystalCON®**, **etherCON®**, **rearTWIST®**, **XIRIUM®**, **DIWA®** are registered trademarks of Neutrik AG.



## Introduction

The Neutrik® circular connector program is a range of metal, multi-pole connectors specifically designed for industrial applications. These series provide a variety of male and female cable connectors and receptacles that can be terminated by soldering and crimping or to printed circuit boards. An easy to use and reliable quick-lock system ensures a perfect connection and cannot be released accidentally. The circular connectors offer Neutrik® unique chuck type strain relief and reinforced housing for robust dependability.

The Neutrik® industrial connector range also features a unique power connector for single phase applications up to 32 Amps.

Further features are:

- Number of contacts is 1 to 12
- Self-locking system
- Robust all-metal housing
- Front or rear mounting
- Chuck and crimp type strain relief
- Gold plated contacts
- Solder or crimp termination
- Printed circuit board mounting
- Excellent shielding (crimp type strain relief)

The main areas of applications are in the measurement, test and control, automotive and machine tool industry as well as medical technique.



Ergonomic quick lock



Bushing with secure key and sealing



Overmolded ready made cable



Screw terminals



1/4" flat tabs



ENEC certified

powerCON TRUE1 – Lockable 16 A single phase connector

NEW



NAC3FX-W



NAC3MX-W



NAC3FPX



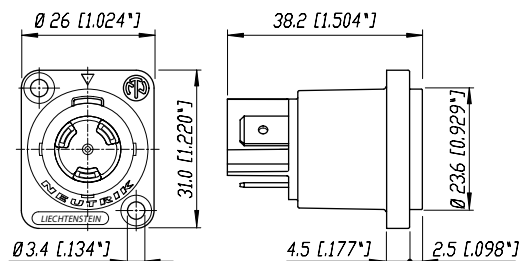
NAC3MPX



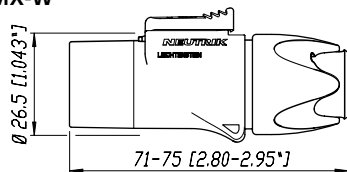
NAC3PX

- True mains connector with breaking capacity (CBC)
- Lockable 16 / 20 A single phase connector
- Complete system with inlet and outlet connectors
- Unique duplex chassis connector – combines inlet and outlet coupler
- IP 65 – water resistant ready-made cord sets
- ENEC certified according to IEC 60320
- Easy and reliable locking system
- UL recognized components

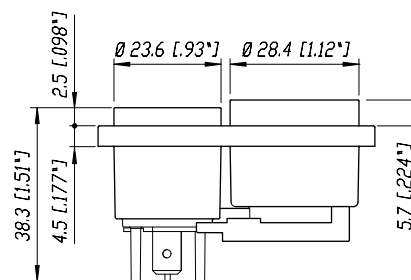
NAC3MPX



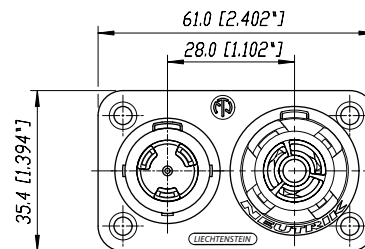
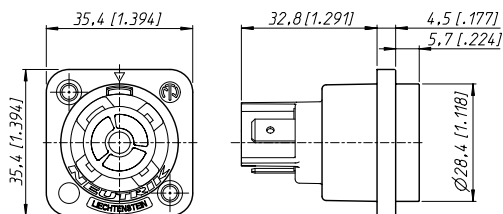
NAC3MX-W



NAC3PX



NAC3FPX



## Ordering Information

### Cable Connector

|          |   |
|----------|---|
| NAC3FX-W | Mains cable connector, female CBC, screw terminals, IP 65 |
| NAC3MX-W | Mains cable connector, male CBC, screw terminals, IP 65   |

### Chassis Connector

|            |   |
|------------|---|
| NAC3FPX    | Mains chassis connector female CBC, 1/4" flat tab terminals, power outlet |
| NAC3FPX-ST | Mains chassis connector female CBC, screw terminals, power outlet         |
| NAC3MPX    | Mains chassis connector male CBC, 1/4" flat tab terminals, power inlet    |
| NAC3PX     | Mains chassis duplex, 1/4" flat tab terminals                             |

## Accessories



SCDP-\*



SCNAC-PX



SCNAC-FPX

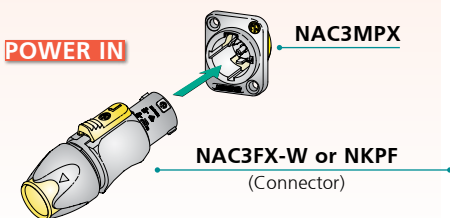


SCNAC-MPX

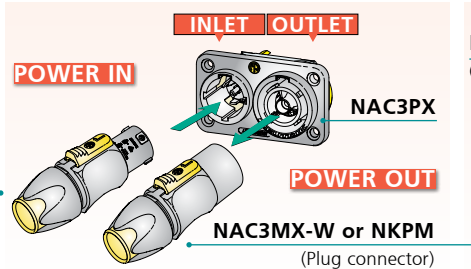
|           |   |
|-----------|---|
| SCDP-*    | D-Size sealing gaskets, colour coding (*: <u>0- black</u> , <u>2- red</u> , <u>4- yellow</u> , <u>5- green</u> , <u>6- blue</u> , <u>9- white</u> ) |
| SCNAC-PX  | Sealing cover duplex IP 65  |
| SCNAC-FPX | Sealing cover for NAC3FPX   |
| SCNAC-MPX | Sealing cover for NAC3MPX   |

## Connector Assignment

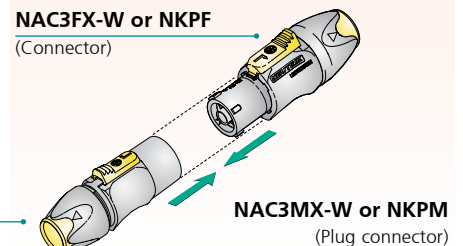
### APPLIANCE INLET



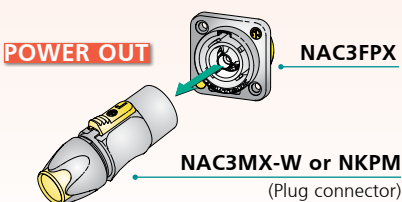
### APPLIANCE COMBINATION



### CABLE EXTENTION



### APPLIANCE OUTLET



**Specification**

**READY-MADE POWER CORDS**

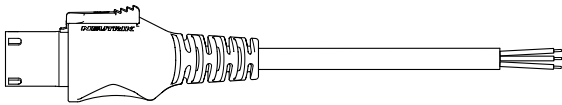
Ready-made overmolded power cord in protection class IP 65. The cable utilizes standard duty cord with 3 conductors with cross section 1.5 mm<sup>2</sup> or 12 AWG.

Cables are equipped with Neutrik TRUE1 powerCON NAC3FXW and NAC3MXW for extension cables or with an

open end for termination of local connectors for "power in" supply cables. Overmolded local connectors on request. Cables are available in different lengths.

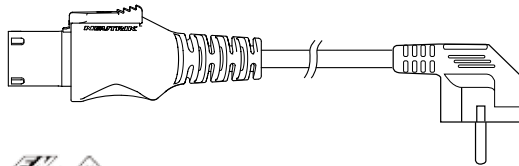
**International Cord**

**International Power Cord 16 A / 250 VAC**



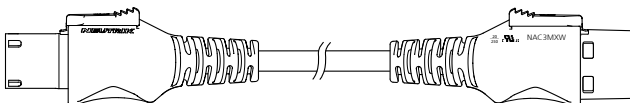
|                                |                                     |
|--------------------------------|-------------------------------------|
| Current rating                 | 16 A                                |
| Voltage rating                 | 250 VAC                             |
| Cable type / color / Nom. O.D. | H07RN-F3G1.5 / black / 9.6 mm       |
| Conductor size                 | 3 x 1.5 mm <sup>2</sup>             |
| Standard length                | 2 m, 3 m, 5 m                       |
| Plug / end termination         | Neutrik NAC3FXW / stripped open end |
| Approvals                      | ENEC, VDE                           |
| Part Number e.g.               | NKPF-NC-A-3                         |

**International Power Cord 16 A / 250 VAC**



|                                |                               |
|--------------------------------|-------------------------------|
| Current rating                 | 16 A                          |
| Voltage rating                 | 250 VAC                       |
| Cable type / color / Nom. O.D. | H07RN-F3G1.5 / black / 9.6 mm |
| Conductor size                 | 3 x 1.5 mm <sup>2</sup>       |
| Standard length                | 2 m, 3 m, 5 m                 |
| Plug / end termination         | Neutrik NAC3FXW / SCHUKO RA   |
| Approvals                      | ENEC, VDE                     |
| Part Number e.g.               | NKPF-SR-A-3                   |

**International Extension Cord 16 A / 250 VAC**



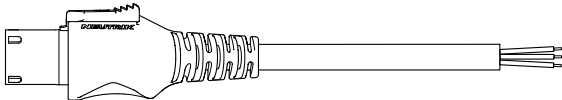
|                                |                                   |
|--------------------------------|-----------------------------------|
| Current rating                 | 16 A                              |
| Voltage rating                 | 250 VAC                           |
| Cable type / color / Nom. O.D. | H07RN-F3G1.5 / black / 9.6 mm     |
| Conductor size                 | 3 x 1.5 mm <sup>2</sup>           |
| Standard length                | 0.5 m, 1 m, 1.5 m                 |
| Plug / end termination         | Neutrik NAC3FXW / Neutrik NAC3MXW |
| Approvals                      | ENEC, VDE                         |
| Part Number e.g.               | NKPF-M-A-0.5                      |

Cable Part Number Breakdown

|   |          |          |          |   |          |   |          |   |          |
|---|----------|----------|----------|---|----------|---|----------|---|----------|
| <b>N</b>  | <b>K</b> | <b>P</b> | <b>F</b> | - | <b>X</b> | - | <b>Y</b> | - | <b>3</b> |
| <p><b>Neutrik Power Cord</b></p> <p>F ..... NAC3FXW<br/>M ..... NAC3MXW</p> <p><b>TERMINATION 2. END</b></p> <p>M ..... NAC3MXW<br/>NC ..... Stripped open end<br/>S ..... Schuko Straight<br/>SR ..... Schuko Right Angle<br/>N1 ..... Nema 5-20</p> |          |          |          |   |          |   |          |   |          |
| <p><b>LENGTH in m</b></p> <p><b>CABLE TYPE</b></p> <p>A ..... H07RN-F3G1.5<br/>B ..... H05VV-F3G1.5<br/>C ..... SJTOW 12AWG<br/>D ..... SJOOW 12AWG</p>   |          |          |          |   |          |   |          |   |          |

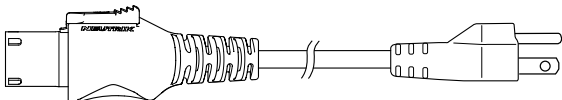
US Cord

US Power Cord 20 A / 250 VAC



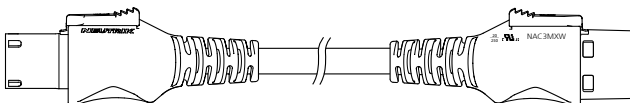
|                                |                                     |
|--------------------------------|-------------------------------------|
| Current rating                 | 20 A                                |
| Voltage rating                 | 250 VAC                             |
| Cable type / color / Nom. O.D. | SJTOW / black / 11.3 mm             |
| Conductor size                 | 3 x 12 AWG                          |
| Standard length                | 2 m, 3 m, 5 m                       |
| Plug / end termination         | Neutrik NAC3FXW / stripped open end |
| Approvals                      | UL, cUL                             |
| Part Number e.g.               | NKPF-NC-C-5                         |

US Power Cord 20 A / 250 VAC



|                                |                             |
|--------------------------------|-----------------------------|
| Current rating                 | 20 A                        |
| Voltage rating                 | 250 VAC                     |
| Cable type / color / Nom. O.D. | SJTOW / black / 11.3 mm     |
| Conductor size                 | 3 x 12 AWG                  |
| Standard length                | 2 m, 3 m, 5 m               |
| Plug / end termination         | Neutrik NAC3FXW / NEMA 5/15 |
| Approvals                      | UL, cUL                     |
| Part Number e.g.               | NKPF-N1-C-3                 |

US Extension Cord 20 A / 250 VAC



|                                |                                   |
|--------------------------------|-----------------------------------|
| Current rating                 | 20 A                              |
| Voltage rating                 | 250 VAC                           |
| Cable type / color / Nom. O.D. | SJTOW / black / 11.3 mm           |
| Conductor size                 | 3 x 12 AWG                        |
| Standard length                | 0.5 m, 1 m, 1.5 m                 |
| Plug / end termination         | Neutrik NAC3FXW / Neutrik NAC3MXW |
| Approvals                      | UL, cUL                           |
| Part Number e.g.               | NKPF-M-C-1                        |



Quick lock



Neutrik hologram



3/16" flat tabs



Locking area on chassis connector



**powerCON – Locking 3 Pole Power Connectors**



NAC3FCA



NAC3MPA-1



NAC3FCB



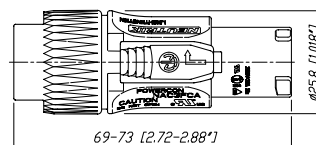
NAC3MPB-1



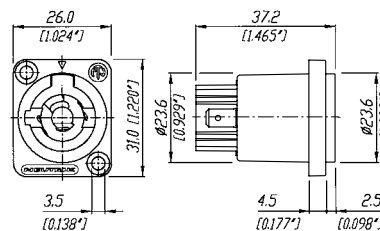
NAC3MM-1

- Lockable 3 pole equipment (AC) connector with contacts for line, neutral and pre-mating safety ground
- High current capacity, rated at 20 A / 250 V ac
- Colour coded for easy identification, powerCON offers power-in (blue) and power-out (grey) versions with different keying to avoid the possibility of intermating
- Fast and easy locking system
- Extremely robust and reliable
- Excellent cable retention
- UL, cUL recognized components (file no. E 135070)  
VDE certified (Reg. No. 6360),  
SEV approved (No. 96.1 10096)
- New latch design for easier handling and secure locking
- Branded with unique hologram – guarantees genuine and authentic Neutrik product
- Coupler for linking cables (couples NAC3FCA to NAC3FCB)

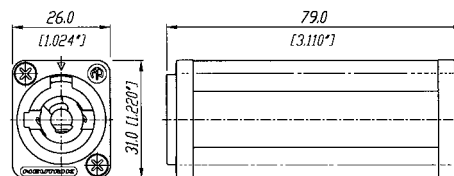
**NAC3FCA(B)**



**NAC3MPA(B)-1**



**NAC3MM-1**

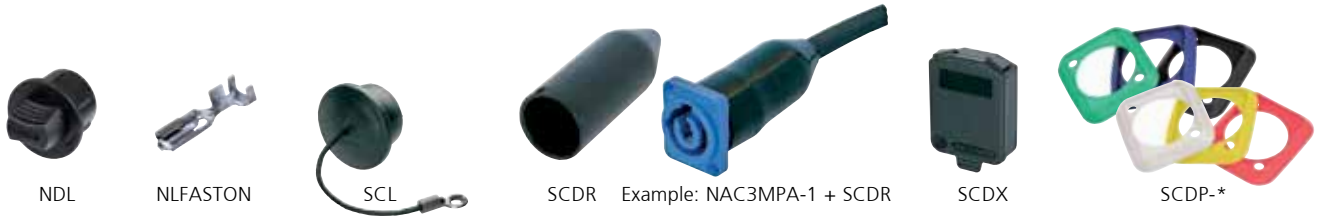




## Ordering Information

|               |   |
|---------------|---|
| NAC3FCA       | Cable connector, quick lock with securing lever, A-type for power inlet, screw terminals  |
| NAC3MPA-1     | Air tight chassis connector, A-type for power inlet, flat tab terminals, blue             |
| NAC3MPA-1-WOT | Chassis connector, power-out, 3/16" flat tab terminals, blue, without insulation divider  |
| NAC3FCB       | Cable connector, quick lock with securing lever, B-type for power outlet, screw terminals |
| NAC3MPB-1     | Air tight chassis connector, B-type for power outlet, flat tab terminals, grey            |
| NAC3MPB-1-WOT | Chassis connector, power-out, 3/16" flat tab terminals, grey, without insulation divider  |
| NAC3MM-1      | Coupler for linking cables (couples NAC3FCA to NAC3FCB)                                   |

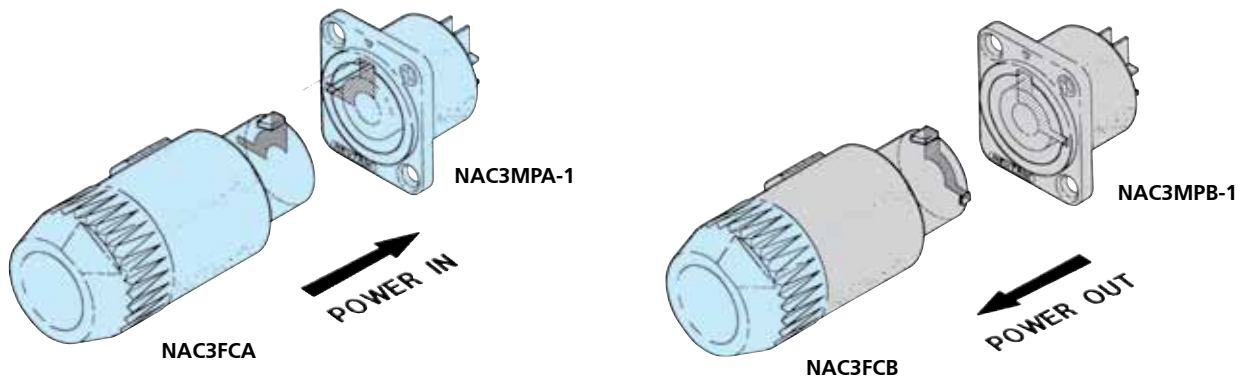
## Accessories



|          |   |
|----------|---|
| NDL      | dummyPLUG for powerCON 20 A chassis connector   |
| NLFASTON | FASTON® receptacle for tabs with "positive lock" for use with NL4MP, NL4MPR, NL8MPR, Pack of 100 pcs. |
| SCL      | Plastic sealing cover to protect the connectors against dust and moisture                             |
| SCDR     | Rear end protection cover for D-size chassis connectors   |
| SCDP-*   | D-Size sealing gaskets, colour coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white)   |
| SCDX     | Hinged cover seals D-size chassis connectors, IP 42 rated   |

### KEYWAYS:

With the two non-interchangeable types of connectors (A type and B type) it is impossible to produce a short circuit. Mating connectors (combination) are identified by mechanical keyways and by color.



### ATTENTION

The technical data of the powerCON connectors refer to connectors without breaking capacity, meaning connecting devices not to be engaged and disengaged in normal use when live or under load.



Robust metal housing



Screw-type terminals

powerCON 32 A Connectors



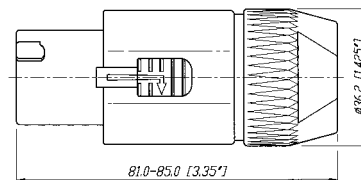
NAC3FC-HC



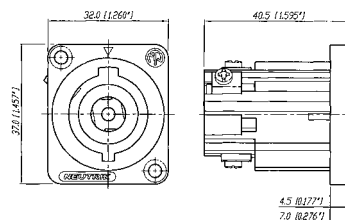
NAC3MP-HC

- Locking single phase AC appliance coupler
- High current capacity (32 A rated)
- Fast and easy locking system
- Excellent cable handling and protection
- Extremely robust and reliable
- 250 V ac, 32 A single-phase (for ambient temperatures up to 35 °C)
- Premating contact for protective earth
- Locking system to prevent unintentional disengagement
- Cable O.D. range: 8 – 20 mm
- Wiring with screw-type terminals for wires 2.5 to 6.0 mm<sup>2</sup> (AWG 14 – 10)

NAC3FC-HC



NAC3MP-HC



Ordering Information

|           |  |
|-----------|--|
| NAC3FC-HC | Cable connector, quick lock with securing lever, screw terminals |
| NAC3MP-HC | Fast and easy locking system, screw-type terminals               |

| Specification   |  | powerCON<br>TRUE1            | powerCON<br>Series           | 32 A powerCON<br>Series           |
|---|--|------------------------------|------------------------------|-----------------------------------|
| <b>Electrical</b>   |  |                              |                              |                                   |
| Number of contacts:   | 2 + PE   | ●                            | ●                            | ●                                 |
| Rated current per contact:  |  | 20 A rms <sup>1)</sup>       | 20 A rms                     | 32 A rms                          |
| Rated voltage:  | 250 V ac   | ●                            | ●                            | ●                                 |
| Dielectric strength:  | 4 kV dc  | ●                            | ●                            | ●                                 |
| Contact resistance:   | ≤ 3 mΩ   | ●                            | ●                            | ●                                 |
| Insulation resistance after<br>damp heat test (IEC 68-2-30):  | > 0.1 GΩ   | ●                            | ●                            | ●                                 |
| <b>Mechanical</b>   |  |                              |                              |                                   |
| Retention method:   | Quick lock   | ●                            | ●                            | ●                                 |
| Cable O.D. range:   |  | 6 – 12 mm                    | 6 – 15 mm                    | 8 – 20 mm                         |
| Wiring:   | Cable: screw type terminals  | ●                            | ●                            | ●                                 |
|   |  | 2.5 mm <sup>2</sup> / 12 AWG | 2.5 mm <sup>2</sup> / 14 AWG | 2.5–6 mm <sup>2</sup> / 14-10 AWG |
|   | or soldering   | ●                            | ●                            | ●                                 |
|   | Chassis: flat tabs for Faston (4.8 x 0.5 mm)<br>(6.35 mm x 0.8 mm) | -                            | ●                            | ●                                 |
|   | or soldering   | ●                            | ●                            | ●                                 |
| Solderability complies with IEC 68-2-20:  |  | ●                            | ●                            | -                                 |
| <b>Material</b>   |  |                              |                              |                                   |
| Housing cable connector:  |  | PA 6 30% GR                  | PA 6 30% GR                  | PA 6 30% GR                       |
| Housing receptacle:   |  | PA 6.6 30% GR                | PA 6.6 30% GR                | PA 6.6 25% GR                     |
| Insert:   |  | PA 6.6 30% GR                | PA 6 30% GR                  | PA 6.6 25% GR                     |
| Contacts:   | Female:  | CuSn0.2                      | CuZn39Pb3                    | CuZn39Pb3                         |
|   | Male:  | CuNi1Si0.2                   | CuNi1Si0.2                   | CuSn0.2                           |
| Contact surface:  | 2 μm Ag plated   | 4 μm / 2 μm Ag plated        | 4 μm Ag                      |                                   |
| Chuck   | POM:   | ●                            | ●                            | ●                                 |
| <b>Environmental</b>  |  |                              |                              |                                   |
| Flammability:   | UL 94 HB   | -                            | ●                            | ● plug housing                    |
|   | UL 94 V-0  | ●                            | ●*                           | ●*                                |
| Temperature range:  | -30 °C to +80 °C   | ●                            | ●                            | ●                                 |
| Protection class (mated):   |  | IP 65                        | IP 20                        | IP 2X unmated                     |
| Safety Requirements EN / IEC61984:  |  | -                            | ●                            | ●                                 |
|   | IEC 60320:   | ●                            | -                            | -                                 |
| <sup>1)</sup> : Appliance coupler acc. IEC 60320 limited to 16 A ac<br>* : Receptacle<br>FASTON® is a trademark of AMP Inc. |  |                              |                              |                                   |



Connector locking



PCB receptacle



Panel mount receptacle

**nanoCON – 3 Pole Subminiature Connectors**



NSC3F



NP3F-H



NP3M-V



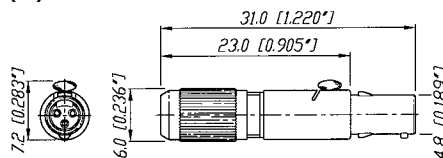
NR3M-S



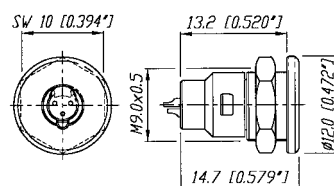
NR3F-S

- World's smallest circular lockable multipole connector
- Robust metal housing with gold plated contacts
- Male and female receptacles for vertical or horizontal PCB mount or solder termination
- Cable connector and receptacle with interchangeable male and female inserts
- Reliable and versatile in applications like medical equipment, control systems, sensors or audio applications such as miniature and wireless microphones and portable mixers
- Pre-mating contact 1

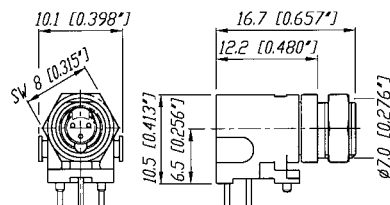
**NSC3F(M)**



**NR3F(M)-S**



**NP3F(M)-H**



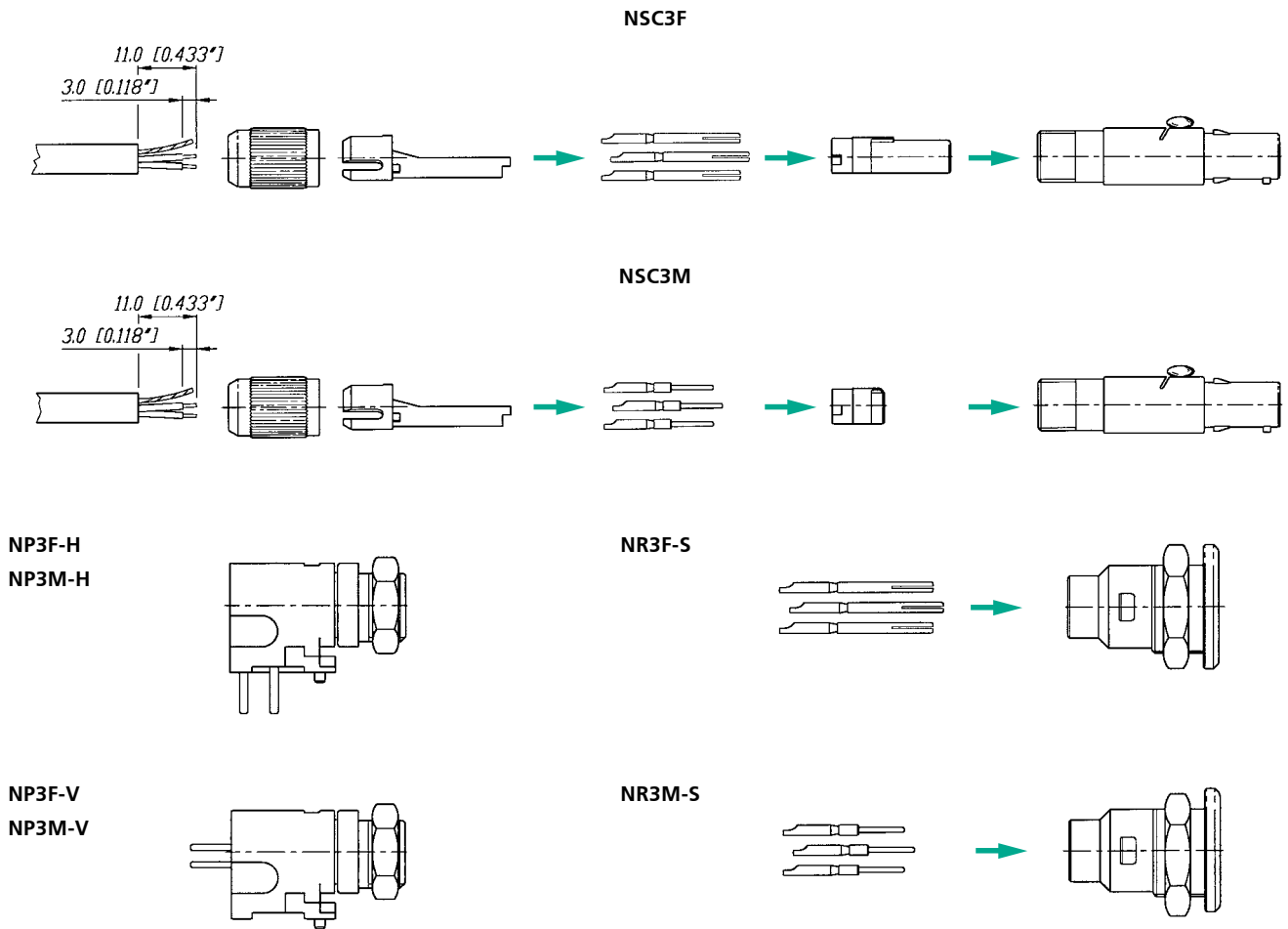
**M 1:1**



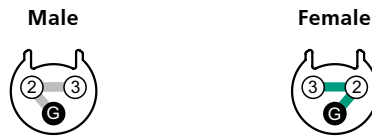
Ordering Information

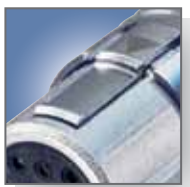
| Female |   | Male   |   |
|--------|---|--------|---|
| NSC3F  | Cable connector, chuck principle, solder contacts | NSC3M  | Cable connector, chuck principle, solder contacts |
| NR3F-S | Chassis connector panel mount, solder contacts    | NR3M-S | Chassis connector panel mount, solder contacts    |
| NP3F-H | Chassis connector horizontal PCB mount            | NP3M-H | Chassis connector horizontal PCB mount            |
| NP3F-V | Chassis connector vertical PCB mount              | NP3M-V | Chassis connector vertical PCB mount              |

Ordering Information for modular nanoCON system



Contact Arrangement





Push Pull locking



Gold solder contacts



Horizontal PCB mount

miniCON – 12 Pole Miniature Connectors



MSCM12



MMC\* (modular system)



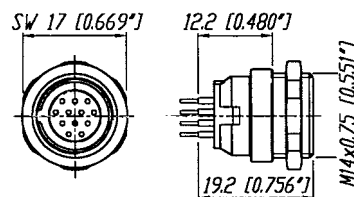
MRF12



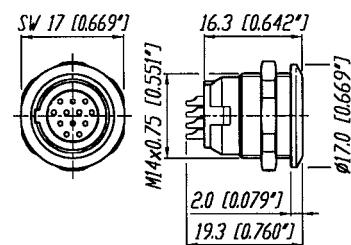
MRF12-H

- Up to 12 pole miniature connector
- Complete set or modular system
- Push-pull self-locking system
- Precisely machined, rugged all metal design
- Fully loaded male and female receptacles for horizontal or vertical PCB mount
- Gold plated contacts, crimp or solder, velour chromium housing
- Special crimp type strain relief establishes an ideal coaxial connection of the cable shield to the connector shell for best EMC shielding
- Easy assembly: contact soldering in disassembled condition avoids awkward wiring of wight density contacts
- Interchangeable insert (male-female)

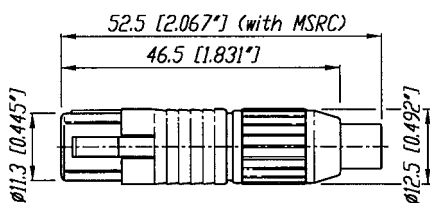
MPF(M)12-V



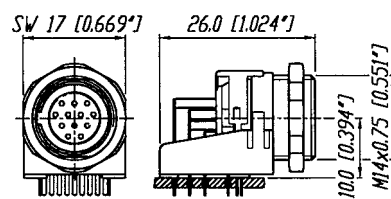
MRF(M)12



MSCF(M)12 (+MSRC)



MPF(M)12-H

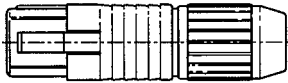


## Ordering Information for complete miniCON set

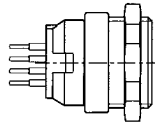
Complete set (consisting of housing, insert, 12 contacts and chuck for cable connector)

| Female  |   | Male    |   |
|---------|---|---------|---|
| MSCF12  | Cable connector, chuck principle, solder contacts | MSCM12  | Cable connector, chuck principle, solder contacts |
| MRF12   | Receptacle panel mount, solder contacts           | MRM12   | Receptacle panel mount, solder contacts           |
| MPF12-H | Receptacle horizontal PCB mount                   | MPM12-H | Receptacle horizontal PCB mount                   |
| MPF12-V | Receptacle vertical PCB mount                     | MPM12-V | Receptacle vertical PCB mount                     |

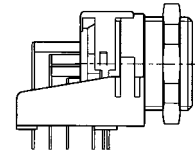
MSCF(M)12



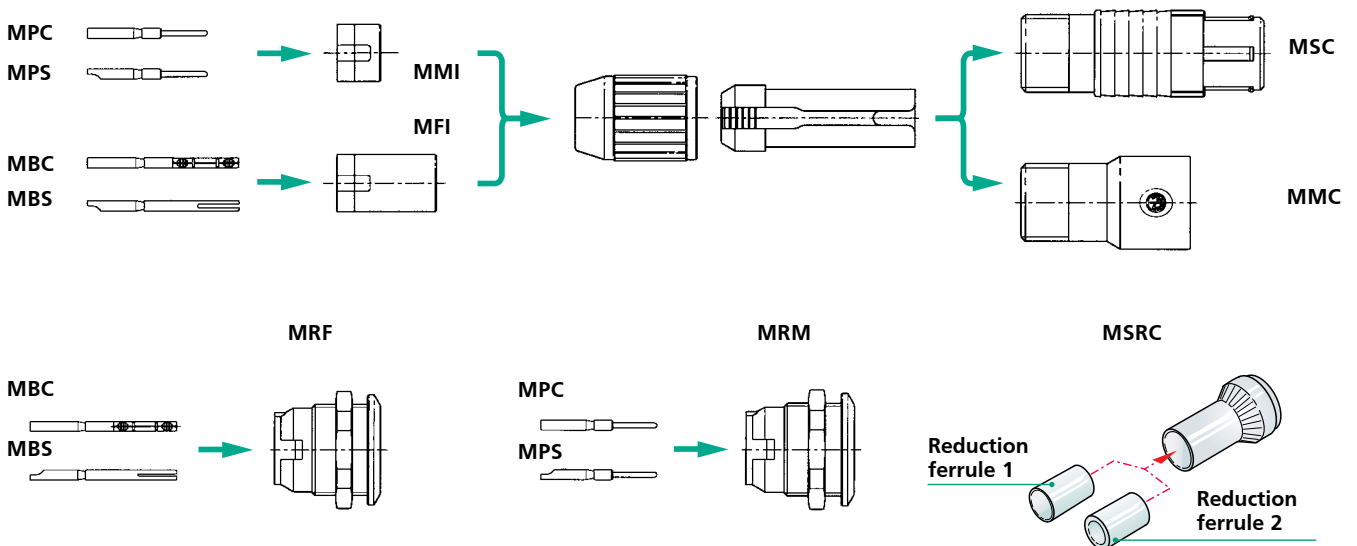
MPF(M)12-V



MPF(M)12-H



## Ordering Information for modular miniCON system



Housing and insert pre-assembled, contacts must be ordered separately.

## Modular system

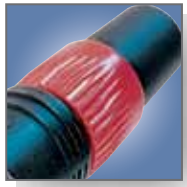
| Female |  | Male |  |
|--------|--|------|--|
| MFI    | Insert for cable connector   | MMI  | Insert for cable connector                         |
| MBC    | Crimp contacts for cable connector and receptacle  | MPC  | Crimp contacts for cable connector and receptacle  |
| MBS    | Solder contacts for cable connector and receptacle   | MPS  | Solder contacts for cable connector and receptacle |
| MRF    | Receptacle housing and insert pre-assembled  | MRM  | Receptacle housing and insert pre-assembled        |
| MMC    | Cable connector extension, incl. chuck (for male and female)   |      |  |
| MSC    | Cable connector housing, incl. chuck (for male and female)   |      |  |
| MSRC   | Set of strain relief crimp version (consisting of crimp ferrule & reduction ferrule 1 + 2, tools see page 130) |      |  |



Push Pull locking



All metal housing



Colored bushing available

## neutriCON – Versatile Circular Connectors



OSC8F



MC8M-Ni



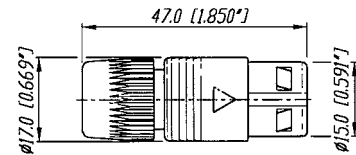
ORP8F-Ni



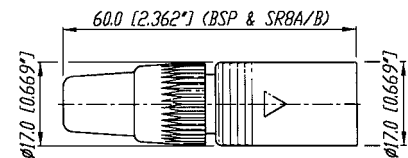
ORP8M

- Complete set or modular system for any desirable configuration
- Contact configuration can be selected from 1 to 8 contacts
- Special crimp type strain relief establishes an ideal circumferential connection of the cable shield to the connector shell as required by best EMC working practice
- Precise and robust all metal housing absorbs vibration forces and protects contact inserts
- Easy, fast and screwless assembly
- Push-pull self-locking system

### OSC8F / OSC8M

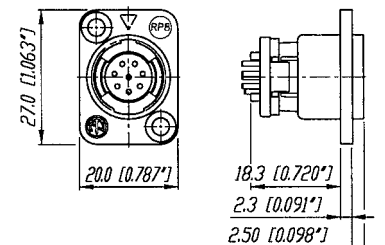


### MODULAR SYSTEM



MC8 + SR8A/B + insert

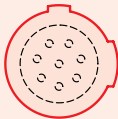
### ORP8F / ORP8M



### Polarization

**Housing:** Two variants of metal polarizing guides (90° and 180°).

**Coding 90°**



**Coding 180°**



**Insert:** The male and female insert can be assembled in all three housings.

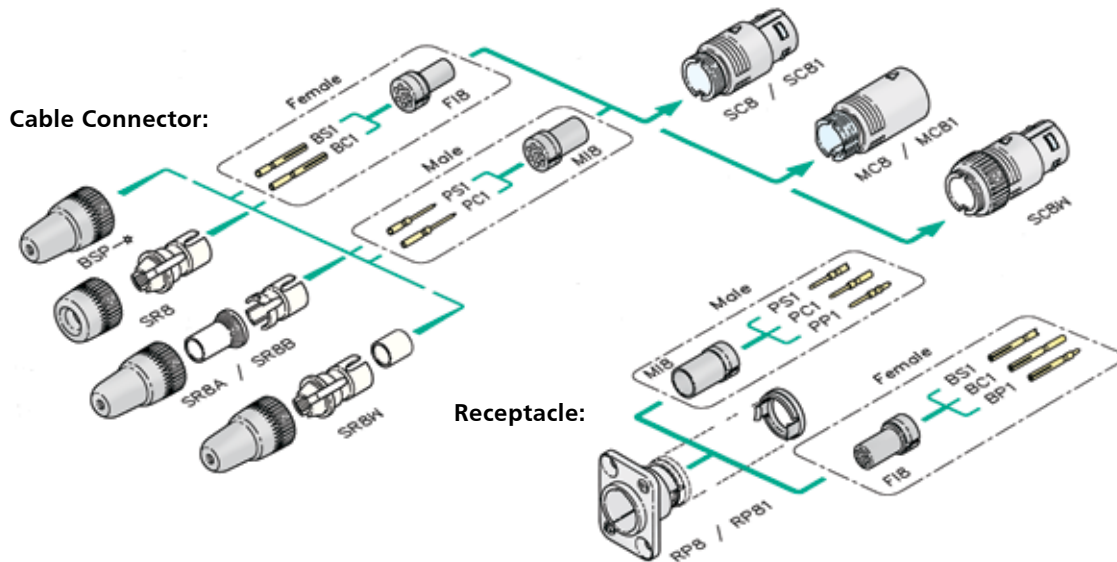


Ordering Information for complete neutriCON set

Complete set (consisting of housing, insert, 8 contacts and chuck for cable connector)

|          |  |
|----------|--|
| OSC8F    | Female cable connector, chuck principle, black housing, solder contacts  |
| OSC8F-Ni | Female cable connector, chuck principle, nickel housing, solder contacts |
| OSC8M    | Male cable connector, chuck principle, black housing, solder contacts    |
| OSC8M-Ni | Male cable connector, chuck principle, nickel housing, solder contacts   |
| ORP8F    | Female panel mount receptacle, black housing, solder contacts            |
| ORP8F-Ni | Female panel mount receptacle, nickel housing, solder contacts           |
| ORP8M    | Male panel mount receptacle, black housing, solder contacts              |
| ORP8M-Ni | Male panel mount receptacle, nickel housing, solder contacts             |

Ordering Information for modular neutriCON system



Modular system

| Female  |  | Male    |  |
|---------|--|---------|--|
| Fi8     | Insert for cable connector and receptacle  | Mi8     | Insert for cable connector and receptacle        |
| BS1     | Solder contact   | PS1     | Solder contact                                   |
| BC1     | Crimp contact  | PC1     | Crimp contact                                    |
| BP1     | PCB contact  | PP1     | PCB contact                                      |
| SC8     | Cable housing, black coated, 180° coding   | MC8     | Mating cable housing, black coated, 180° coding  |
| SC8-Ni  | Cable housing, nickel coated, 180° coding  | MC8-Ni  | Mating cable housing, nickel coated, 180° coding |
| SC81    | Cable housing, black coated, 90° coding  | MC81    | Mating cable housing, black coated, 90° coding   |
| SC81-Ni | Cable housing, nickel coated, 90° coding   | MC81-Ni | Mating cable housing, nickel coated, 90° coding  |
| SC8W    | Cable housing, black coated, 180° coding, waterproof multipin connector according IP54                 |         |  |
| RP8     | Receptacle, black coated, 180° coding  |         |  |
| RP8-Ni  | Receptacle, nickel coated, 180° coding   |         |  |
| RP81    | Receptacle, black coated, 90° coding   |         |  |
| RP81-Ni | Receptacle, nickel coated, 90° coding  |         |  |
| SR8     | Bushing and chuck type strain relief (standard)  |         |  |
| SR8A    | Crimp type strain relief for cable O.D. 3 – 3.8 mm (Hex crimp 5.41 mm acc. IEC 803, see also page 130) |         |  |
| SR8B    | Crimp type strain relief for cable O.D. 6 – 7 mm (Hex crimp 7.01 mm acc. IEC 803, see also page 130)   |         |  |
| SR8W    | Bushing and chuck type strain relief for waterproof solution IP 54                                     |         |  |
| BSP-*   | Coloured boot, available in 10 resistor colours  |         |  |

\* color coding: 0 - Black, 1 - Brown, 2 - Red, 3 - Orange, 4 - Yellow, 5 - Green, 6 - Blue, 7 - Violet, 8 - Grey, 9 - White



## Crimptool



**Crimptool HX-CONTACT** DMC crimping tool AFM8  
acc. M22520/2-01



**MPOS-\*** Modified DMC positioner (K155) Contact positioner holds contact in position when crimping.

## Contact and connector assembly



**Crimptool HX-R-BNC** Neutrik® HEX crimping tool



**DIE-R-BNC-\*** Neutrik® DIE's for various HEX sizes.

## neutriCON - Ordering Information Assembly Tools

|      |                      | Cable O.D. / Wire | Crimptool  | Die/Positioner | HEX-Size/Standard   |
|------|----------------------|-------------------|------------|----------------|---------------------|
| SR8A | Strain relief        | 3 – 3.8 mm        | HX-R-BNC   | DIE-R-BNC-PJ   | 5.41 mm / IEC 803   |
| SR8B | Strain relief        | 6 – 7 mm          | HX-R-BNC   | DIE-R-BNC-PS   | 7.01 mm / IEC 803   |
| BC1  | Female crimp contact | AWG 22 – 26       | HX-CONTACT | MPOS-BC1       | No. 5 / M22520/2-01 |
| PC1  | Male crimp contact   | AWG 22 – 26       | HX-CONTACT | MPOS-PC1       | No. 5 / M22520/2-01 |

## miniCON - Ordering Information Assembly Tools

|      |                                     | Cable O.D. / Wire             | Crimptool  | Die/Positioner | HEX-Size/Standard   |
|------|-------------------------------------|-------------------------------|------------|----------------|---------------------|
| MSRC | Crimp ferrule only                  | 4.5 – 6 mm                    | HX-R-BNC   | DIE-R-BNC-PDC* | 6.47 mm / IEC 803   |
| MSRC | Crimp ferrule & reduction ferrule 1 | 3.3 – 4.4 mm                  | HX-R-BNC   | DIE-R-BNC-PDC* | 6.47 mm / IEC 803   |
| MSRC | Crimp ferrule & reduction ferrule 2 | 2.5 – 3.2 mm                  | HX-R-BNC   | DIE-R-BNC-PDC* | 6.47 mm / IEC 803   |
| MBC  | Female crimp contact                | 24 AWG / 0.22 mm <sup>2</sup> | HX-CONTACT | MPOS-MBC       | No. 5 / M22520/2-01 |
| MPC  | Male crimp contact                  | 24 AWG / 0.22 mm <sup>2</sup> | HX-CONTACT | MPOS-MPC       | No. 5 / M22520/2-01 |

\*: DIE-R-BNC-PJ or PS also possible

| Specification | nanoCON Series | miniCON Series | neutriCON Series |
|---------------|----------------|----------------|------------------|
|---------------|----------------|----------------|------------------|

## Electrical

|   |           |                          |                             |
|---|-----------|--------------------------|-----------------------------|
| Number of contacts:                                       | 3         | 12 (1-12 modular system) | 8 (1-8 modular system)      |
| Rated current per contact:                                | 2 A       | 3 A                      | 7.5 A (solder), 5 A (crimp) |
| Rated voltage:  | 50 V ac   | 50 V ac                  | 50 V ac                     |
| Dielectric strength:                                      | 1000 V dc | 1000 V dc                | 1500 Vdc                    |
| Contact resistance:                                       | ≤ 12 mΩ   | ≤ 8 mΩ                   | ≤ 5 mΩ                      |
| Insulation resistance after damp heat test (IEC 68-2-30): | > 1 GΩ    | > 500 MΩ                 | > 500 MΩ                    |

## Mechanical

|  |   |   |   |
|--|---|---|---|
| Retention method:                        | latch   | Push-pull                                   | Push-pull   |
| Cable O.D. range:                        | 3.4 mm max.   | 3 – 5 mm (grey chuck)                       | 3 – 7 mm  |
|  |   | 5 – 7 mm (white chuck)                      | 3 – 3.8 mm (SR8A)                                       |
|  |   | 2.5 – 6 mm<br>(crimp version MSRC)          | 6 – 7 mm (SR8B)   |
| Wiring:                                  | 0.2 mm <sup>2</sup> / 24 AWG<br>for solid wire      | 0.5 mm <sup>2</sup> / 20 AWG<br>for solder  | 1.0 mm <sup>2</sup> / 18 AWG<br>for solder              |
|  | 0.14 mm <sup>2</sup><br>26 AWG<br>for stranded wire | 0.22 mm <sup>2</sup><br>24 AWG<br>for crimp | 0.14 - 0.34 mm <sup>2</sup><br>22 - 26 AWG<br>for crimp |
| Solderability complies with IEC 68-2-20: | •   | •   | •   |

## Material

|                          |             |                      |                                     |
|--------------------------|-------------|----------------------|-------------------------------------|
| Housing cable connector: | CuSn4Pb4Zn4 | ZnAl4Cu1 / CuZn39Pb3 | ZnAl4Cu1<br>gal Ni or black chrome  |
| Housing receptacle:      | CuZn39Pb2   | ZnAl4Cu1             | ZnAl4Cu1,<br>gal Ni or black chrome |
| Insert:                  | PETP        | PA 6.6               | PBTP 15% GR                         |
| Contacts:                | CuZn35Pb2   | CuZn35Pb2 (solder)   | CuZn35Pb2 (solder)                  |
|                          |             | CuZn39Pb3 (crimp)    | CuZn39Pb3 (crimp)                   |
| Contact surface:         | 0.5 μm Au   | 0.2 μm AuCo          | CuSn6                               |
|                          |             |                      | 0.3 μm Au hard alloy over 2 μm Ni   |
| Chuck POM:               | •           | •                    | •                                   |

## Environmental

|                                 |                  |       |       |   |
|---------------------------------|------------------|-------|-------|---|
| Flammability:                   | UL 94 HB         | -     | -     | • |
| Flammability:                   | UL 94 V-0        | •     | •     | - |
| Temperature range:              | -30 °C to +80 °C | •     | •     | • |
| Protection class (mated):       | IP 40*           | IP 5X | IP 5X |   |
| Safety Requirements EN/IC61984: | -                | -     | -     |   |

\*: Receptacle

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### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9