

# **Circular Connectors**



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# 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 the Neutrik® unique chuck type strain relief and a reinforced housing for robust dependability.

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

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

# powerCON TRUE1



Ergonomic quick lock



Bushing with securing key and sealing



Overmolded ready made cable



Screw terminals



1/4" flat tabs

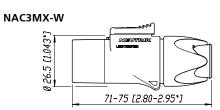


**ENEC** certified

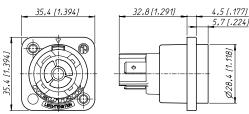
# powerCON TRUE1 - Lockable 16 A single phase connector



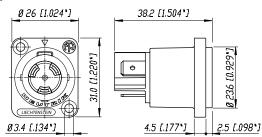
- True mains connector with breaking capacity (CBC)
- Lockable 16 A (acc. ENEC, VDE) / 20 A (acc. single phase connector
- Complete system with inlet and outlet connectors
- Unique duplex chassis connector combines inlet and outlet coupler
- IP 65 water resistant ready-made cord sets
- ENEC certified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



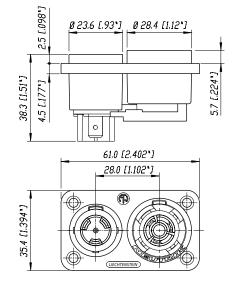
#### **NAC3FPX**



#### **NAC3MPX**



# NAC3PX



# 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

NAC3MPX-WOT Mains chassis connector male CBC, 1/4" flat tab terminals, without insulation divider, power inlet

NAC3PX Mains chassis duplex, 1/4" flat tab terminals

#### Accessories











HTAC SCDP-\* SCNAC-PX SCNAC-FPX SCNAC-FPX SCNAC-MPX

HTAC Hand tool to tighten the powerCON TRUE1 bushing

SCDP-\* D-Size sealing gaskets, colour coding (\*: <u>0- black, 2- red, 4- vellow, 5- green, 6- blue, 9- white)</u>

SCNAC-PX Sealing cover NAC3PX, IP 65 SCNAC-FPX Sealing cover for NAC3FPX, IP 65 SCNAC-MPX Sealing cover for NAC3MPX, IP 65

# Connector Assignment

#### 

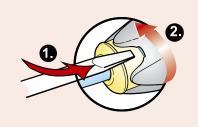
#### **APPLIANCE OUTLET**



# FOR DISASSEMBLY - OPEN TWIST LOCK!



- 1) Press with screw driver to unlock
- 2 Turn bushing while still press the locking.



# Specification

#### **READY-MADE POWER CORDS**

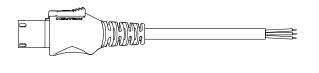
Ready-made overmolded power cord in protection class IP65. The cable utilizes standard duty cord with 3 conductors with cross section 1.5 mm<sup>2</sup> or AWG 12.

Cables are equipped with Neutrik powerCON TRUE1 NAC3FX-W and NAC3MX-W for extention cables, with an open end for termination of local connectors for "power in" supply cables or a right-angled Schuko plug. Other local connectors on request.

Cables are available in different lengths.

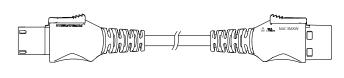
# International Cord

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



Plug / end termination	Neutrik NAC3FX-W / stripped open end
Approvals	ENEC, VDE
Standard length	1 m, 1.5 m, 2 m, 3 m, 5 m
Conductor size	3 x 1.5 mm <sup>2</sup>
Cable type / color / Nom. O.D.	H07RN-F3G1.5 / black / 9.6 mm
Part Number e.g.	NKPF-NC-A-3
Cable type / color / Nom. O.D.	H05VV-F3G1.5 / black / 8.3 mm
Part Number e.g.	NKPF-NC-B-1

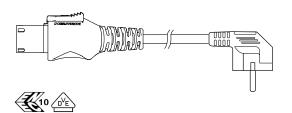
#### International Extension Cord 16 A / 250 VAC





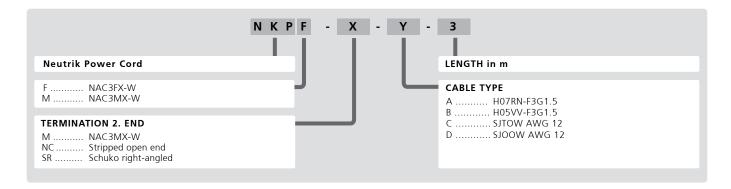
Plug / end termination	Neutrik NAC3FX-W / Neutrik NAC3MX-W
Approvals	ENEC, VDE
Standard length	0.5 m, 1 m, 1.5 m
Conductor size	3 x 1.5 mm <sup>2</sup>
Cable type / color / Nom. O.D.	H07RN-F3G1.5 / black / 9.6 mm
Part Number e.g.	NKPF-M-A-0.5
Cable type / color / Nom. O.D.	H05VV-F3G1.5 / black / 8.3 mm
Part Number e.g.	NKPF-M-B-1

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



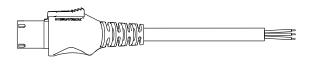
Plug / end termination	Neutrik NAC3FXW / SCHUKO RA Plug
Approvals	ENEC, VDE
Standard length	1 m, 1.5 m, 2 m, 3 m, 5 m, 10 m
Conductor size	3 x 1.5 mm <sup>2</sup>
Cable type / color / Nom. O.D.	H07RN-F3G1.5 / black / 9.6 mm
Part Number e.g.	NKPF-SR-A-1
Cable type / color / Nom. O.D.	H05VV-F3G1.5 / black / 8.3 mm
Part Number e.g.	NKPF-SR-B-1

# Cable Part Number Breakdown



# **US** Cord

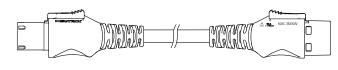
#### US Power Cord 20 A / 250 VAC





Plug / end termination	Neutrik NAC3FXW / stripped open end
Approvals	UL, cUL
Standard length	1 m, 1.5 m, 2 m, 3 m, 5 m
Conductor size	3 x 12 AWG
Cable type / color / Nom. O.D.	SJTOW / black / 11.3 mm
Part Number e.g.	NKPF-NC-C-5
Cable type / color / Nom. O.D.	SJOOW / black / 11.3 mm
Part Number e.g.	NKPF-NC-D-3

#### US Extension Cord 20 A / 250 VAC





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









Neutrik bushing



3/16" flat tabs



Locking area on chassis connector



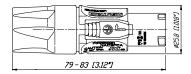


# powerCON - Locking 3 Pole Power Connectors

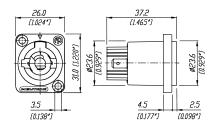


- Lockable 3 pole single phase equipment (AC) connector
- High current capacity, rated at 20 A / 250 V ac
- Colour coded for easy identification, powerCON offers power-in (blue) and power-out (grey) versions with different keying to avoid the possibility of intermating
- Fast and easy locking system
- Extremely robust and reliable
- Excellent cable retention
- UL, cUL recognized components (file no. E 135070) VDE certified (Reg. No. 6360),
- New latch design for easier handling and secure locking
- Coupler for linking cables (couples NAC3FCA to NAC3FCB)

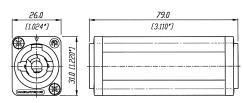
# NAC3FCA(B)



#### 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-WO	T 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-WO	T Chassis connector, power-out, 3/16" flat tab terminals, grey, without insulation divider
NAC3MM-1	Coupler for linking cables (couples NAC3FCA to NAC3FCB)

# Accessories



HTFAC	Hand tool to tighten the powerCON bushing
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 connector
SCDX	Hinged cover seals D-size chassis connectors, IP 42 rated
SCCD-W	Spring-loaded cover to seals D-size chassis connectors, IP65 rated
SCD-W	D-Size sealing cap, IP65 rated
SCDP-*	D-Size sealing gaskets, colour coding (*: 0- black, 2- red, 4- yellow, 5- green, 6- blue, 9- white)

#### **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.







Screw-type terminals

powerCON

# powerCON 32 A Connectors



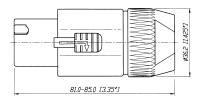
NAC3FC-HC

- 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  $\text{mm}^2$  (AWG 14 10)

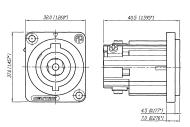


NAC3MP-HC

#### 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

# Technical Data powerCON

Specification		powerCON TRUE1	powerCON 3 Series	2 A powerCON Series
Electrical				
Number of contacts	2 + PE	•	•	•
Rated current per contact	2 TIL	20 A rms <sup>1)</sup>	20 A rms	32 A rms
Rated voltage	250 V ac	20 A 11113 7	E A IIIIS	92 A 11113
Dielectric strength	4 kV ac	•	•	•
Contact resistance	≤ 3 mΩ	•	•	•
Insulation resistance after	> 0.1 GΩ	•	•	•
damp heat test (IEC 68-2-30)	5 <u>5.1.</u>			
Mechanical				
Retention method	Quick lock	•	•	•
Cable O.D. range	<b>~</b>	6 – 12 mm	6 – 15 mm <sup>2)</sup>	8 – 20 mm
Wiring	Cable: screw type termin		•	•
9	υ	1.0 - 2.5 mm <sup>2</sup> / AWG 12	2.5 mm <sup>2</sup> / AWG 14	2.5 – 6 mm <sup>2</sup> / AWG 14-10
	or soldering	•	•	•
	Chassis:			
	flat tabs for Faston (4.8 x 0.	5 mm) -	•	-
	(6.35 mm x 0.8 mm)	•	-	-
	or soldering	•	•	•
	screw type terminals	-	•	•
Material				
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		•	•	•
Environmental				
Flammability	UL 94 HB	-	•	<ul><li>plug housing</li></ul>
	UL 94 V-0	•	•*	•*
Temperature range:	-30 °C to +80 °C	•	•	70 °C
Protection class (mated)		IP 65	IP 20	IP 2X unmated
Safety Requirements	EN / IEC61984	-	•	•
	IEC 60320	•	-	-
Solderability complies with	IEC 68-2-20	•	•	-
1) : Appliance coupler acc. IEC 6032	0 limited to 16 A ac			
<sup>2)</sup> : Cable O.D. range limited to 6 - '				
* : Receptacle				

FASTON® is a trademark of AMP Inc.







PCB receptacle



Panel mount receptacle

# nanoCON

# nanoCON - 3 Pole Subminiature Connectors

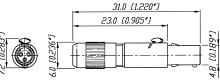


- World's smallest circular lockable multipole connector
- Robust metal housing with gold plated contacts
- Male and female receptacles for vertical or horizontal PCB mount or solder termination
- Cable connector and receptacle with interchangeable male and female inserts
- Reliable and versatile in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

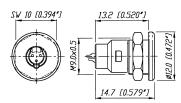
# M 1:1



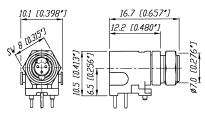
# NSC3F(M)



#### NR3F(M)-S



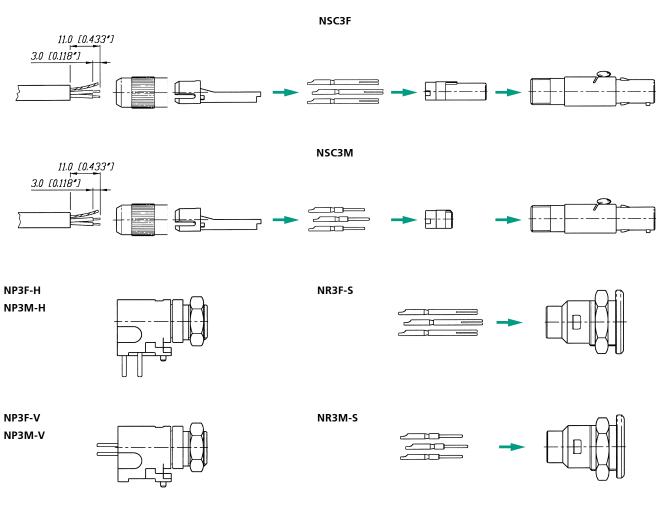
# NP3F(M)-H



# Ordering Information

Female		Male	
NSC3F	Cable connector, chuck principle, solder contacts	NSC3M	Cable connector, chuck principle, solder contacts
	Chassis connector panel mount, solder contacts		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



# **Contact Arrangement**

Male Female







Gold solder contacts



Horizontal PCB mount

miniCON

# miniCON - 12 Pole Miniature Connectors



MSCM12



MMC\* (modulares System)



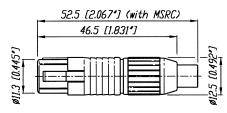
MRF12



MPF12-H

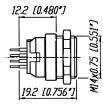
- Up to 12 pole miniature connector
- Complete set or modular system
- Push-pull self-locking system
- Precisely machined, rugged all metal design
- Fully loaded male and female receptacles for horizontal or vertical PCB mount
- Gold plated contacts, crimp or solder, velour chromium housing
- Special 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 high density contacts
- Interchangeable insert (male-female)

#### MSCF(M)12 (+MSRC)

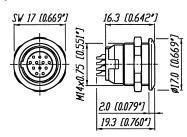


# MPF(M)12-V



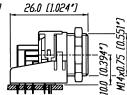


#### MRF(M)12



#### MPF(M)12-H



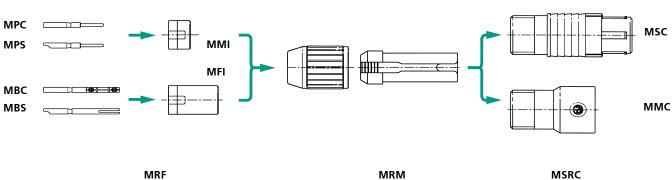


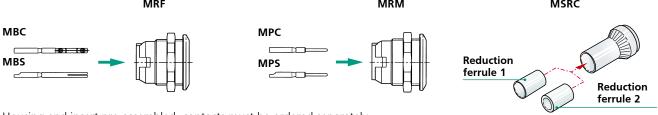
# Ordering Information for complete miniCON set

omplete 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.

Modula	r 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 fe	emale)	
MSRC	Set of strain relief crimp version (consisting of crimp f	ferrule & re	eduction ferrule 1 + 2, tools see page 130)







All metal housing



Colored bushing available

# neutriCON

# neutriCON - Versatile Circular Connectors





OSC8F OSC8M-Ni



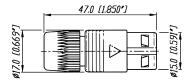


ORP8F-Ni

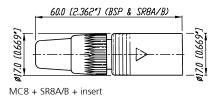
ORP8M

- 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 coaxial connection of the cable shield to the connector shell for best EMC shielding
- 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**



# Polarization

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

Coding 90°



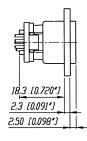


Coding 180°

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

#### ORP8F / ORP8M



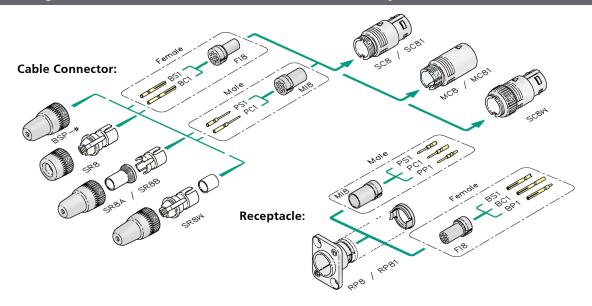


# Ordering Information for complete neutriCON set

# 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			Mating cable housing, nickel coated, 90° coding
SC8W	Cable housing, black coated, 180° coding, waterpro-	of 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 (H		
SR8B	Crimp type strain relief for cable O.D. 6 – 7 mm (Hex	crimp 7.01	mm acc. IEC 803, see also page 132)
SR8W	Bushing and chuck type strain relief for waterproof s	olution IP 5	54
BSP-*	Coloured boot, available in 10 resistor colours		
	* color coding: 0 - Black, 1- Brown, 2 - Red, 3 - Orange, 4 - Yellow,	5 - Green, 6 - B	llue, 7 - Violet, 8 - Grey, 9 - White

# Assembly Tools

# Crimptool

Crimptool HX-R-BNC







MPOS-\*



Modified DMC positioner (K155) Contact positioner helds contact in position while crimping.

# Contact and connector assembly



Neutrik® HEX crimptool



**DIE-R-BNC-\*** Neutrik® dies 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	AWG 24/0.22 mm <sup>2</sup>	HX-CONTACT	MPOS-MBC	No. 5 / M22520/2-01
MPC	Male crimp contact	AWG 24/0.22 mm <sup>2</sup>	HX-CONTACT	MPOS-MPC	No. 5 / M22520/2-01

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

# Technical Data

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		max. 3.4 mm	3 – 5 mm (grey chuck)	3 – 7 mm
			5 – 7 mm (white chuck)	3 – 3.8 mm (SR8A)
			2.5 – 6 mm	6 – 7 mm (SR8B)
			(crimp version MSRC)	0 7 mm (SNOD)
Wiring		0.2 mm <sup>2</sup> / 24 AWG	0.5 mm <sup>2</sup> / 20 AWG	1.0 mm <sup>2</sup> / 18 AWG
***************************************		for solid wire	for solder	for solder
		Tor solid wire	TOT Solder	ioi soidei
		0.14 mm <sup>2</sup>	0.22 mm <sup>2</sup>	0.14 - 0.34 mm <sup>2</sup>
		26 AWG	24 AWG	22 - 26 AWG
		for stranded wire	for crimp	for crimp
Solderability complies with IEC 68-2-20		•	•	•
Solderability complies with IEC 68-2-20  Material		·	•	•
		● CuSn4Pb4Zn4	• ZnAl4Cu1 / CuZn39Pb3	▼ ZnAl4Cu1
<b>M a t e r i a l</b> Housing cable connector			•	ZnAl4Cu1 gal Ni or black chrome
Material			•	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1,
<b>M a t e r i a l</b> Housing cable connector  Housing receptacle		CuSn4Pb4Zn4 CuZn39Pb2	ZnAl4Cu1 / CuZn39Pb3 ZnAl4Cu1	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome
Material  Housing cable connector  Housing receptacle  Insert		CuSn4Pb4Zn4 CuZn39Pb2 PETP	ZnAl4Cu1 / CuZn39Pb3 ZnAl4Cu1 PA 6.6	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR
Material  Housing cable connector  Housing receptacle  Insert		CuSn4Pb4Zn4 CuZn39Pb2	ZnAl4Cu1 / CuZn39Pb3 ZnAl4Cu1	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder)
<b>M a t e r i a l</b> Housing cable connector  Housing receptacle		CuSn4Pb4Zn4 CuZn39Pb2 PETP	ZnAl4Cu1 / CuZn39Pb3 ZnAl4Cu1 PA 6.6	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR
Material  Housing cable connector  Housing receptacle  Insert		CuSn4Pb4Zn4 CuZn39Pb2 PETP	ZnAl4Cu1 / CuZn39Pb3  ZnAl4Cu1  PA 6.6  CuZn35Pb2 (solder)  CuZn39Pb3 (crimp)	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)  0.3 µm Au hard
Material  Housing cable connector  Housing receptacle  Insert Contacts  Contact surface		CuSn4Pb4Zn4 CuZn39Pb2 PETP CuZn35Pb2 0.5 µm Au	ZnAl4Cu1 / CuZn39Pb3 ZnAl4Cu1  PA 6.6 CuZn35Pb2 (solder) CuZn39Pb3 (crimp) CuSn6 0.2 μm AuCo	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)
Material  Housing cable connector  Housing receptacle  Insert  Contacts		CuSn4Pb4Zn4  CuZn39Pb2  PETP  CuZn35Pb2	ZnAl4Cu1 / CuZn39Pb3  ZnAl4Cu1  PA 6.6  CuZn35Pb2 (solder)  CuZn39Pb3 (crimp)  CuSn6	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)  0.3 µm Au hard
Material  Housing cable connector  Housing receptacle  Insert Contacts  Contact surface		CuSn4Pb4Zn4 CuZn39Pb2 PETP CuZn35Pb2 0.5 µm Au	ZnAl4Cu1 / CuZn39Pb3 ZnAl4Cu1  PA 6.6 CuZn35Pb2 (solder) CuZn39Pb3 (crimp) CuSn6 0.2 μm AuCo	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)  0.3 µm Au hard
Material  Housing cable connector  Housing receptacle  Insert Contacts  Contact surface  Chuck POM  Environmental	UL 94 HB	CuSn4Pb4Zn4 CuZn39Pb2 PETP CuZn35Pb2 0.5 µm Au	ZnAl4Cu1 / CuZn39Pb3 ZnAl4Cu1  PA 6.6 CuZn35Pb2 (solder) CuZn39Pb3 (crimp) CuSn6 0.2 μm AuCo	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)  0.3 µm Au hard
Material  Housing cable connector  Housing receptacle  Insert Contacts  Contact surface  Chuck POM  Environmental  Flammability	UL 94 HB UI 94 V-0	CuSn4Pb4Zn4 CuZn39Pb2 PETP CuZn35Pb2  0.5 µm Au	ZnAl4Cu1 / CuZn39Pb3  ZnAl4Cu1  PA 6.6  CuZn35Pb2 (solder)  CuZn39Pb3 (crimp)  CuSn6  0.2 µm AuCo	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)  0.3 µm Au hard alloy over 2 µm Ni
Material  Housing cable connector  Housing receptacle  Insert Contacts  Contact surface  Chuck POM  Environmental  Flammability Flammability	UL 94 V-0	CuSn4Pb4Zn4 CuZn39Pb2 PETP CuZn35Pb2  0.5 µm Au  •	ZnAl4Cu1 / CuZn39Pb3  ZnAl4Cu1  PA 6.6  CuZn35Pb2 (solder)  CuZn39Pb3 (crimp)  CuSn6  0.2 µm AuCo	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)  0.3 µm Au hard alloy over 2 µm Ni  •
Material  Housing cable connector  Housing receptacle  Insert Contacts  Contact surface  Chuck POM  Environmental  Flammability Flammability Temperature range		CuSn4Pb4Zn4 CuZn39Pb2 PETP CuZn35Pb2  0.5 µm Au  •	ZnAl4Cu1 / CuZn39Pb3  ZnAl4Cu1  PA 6.6  CuZn35Pb2 (solder)  CuZn39Pb3 (crimp)  CuSn6  0.2 µm AuCo	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)  0.3 µm Au hard alloy over 2 µm Ni  •
Material  Housing cable connector  Housing receptacle  Insert Contacts  Contact surface  Chuck POM  Environmental  Flammability Flammability Temperature range Protection class (mated)	UL 94 V-0	CuSn4Pb4Zn4 CuZn39Pb2  PETP CuZn35Pb2  0.5 µm Au  • IP 40*	ZnAl4Cu1 / CuZn39Pb3  ZnAl4Cu1  PA 6.6  CuZn35Pb2 (solder)  CuZn39Pb3 (crimp)  CuSn6  0.2 µm AuCo  -  -  -  -  -  IP 5X	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)  0.3 µm Au hard alloy over 2 µm Ni  • - • IP 5X
Material  Housing cable connector  Housing receptacle  Insert Contacts  Contact surface  Chuck POM  Environmental  Flammability Flammability	UL 94 V-0	CuSn4Pb4Zn4 CuZn39Pb2 PETP CuZn35Pb2  0.5 µm Au  •	ZnAl4Cu1 / CuZn39Pb3  ZnAl4Cu1  PA 6.6  CuZn35Pb2 (solder)  CuZn39Pb3 (crimp)  CuSn6  0.2 µm AuCo	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)  0.3 µm Au hard alloy over 2 µm Ni  •
Material  Housing cable connector  Housing receptacle  Insert Contacts  Contact surface  Chuck POM  Environmental  Flammability Flammability Temperature range Protection class (mated)	UL 94 V-0	CuSn4Pb4Zn4 CuZn39Pb2  PETP CuZn35Pb2  0.5 µm Au  • IP 40*	ZnAl4Cu1 / CuZn39Pb3  ZnAl4Cu1  PA 6.6  CuZn35Pb2 (solder)  CuZn39Pb3 (crimp)  CuSn6  0.2 µm AuCo  -  -  -  -  -  IP 5X	ZnAl4Cu1 gal Ni or black chrome ZnAl4Cu1, gal Ni or black chrome PBTP 15% GR CuZn35Pb2 (solder) CuZn39Pb3 (crimp)  0.3 µm Au hard alloy over 2 µm Ni  • - • IP 5X





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