

IP68/IP69K PLUG&SOCKET



Design and function in harmony

MADE IN ITALY

High-reliability electrical connections www.techno.it







WHEN DIMENSIONS MAKE THE DIFFERENCE

Compact screw wire connectors meet the most demanding needs of connection in small places.



\emptyset 14 mm





< 90 mm



COMPARISON WITH OTHER PRODUCTS









It's just a matter of time

Reduction in the cost of the product installed

Plug& socket connector with quick push-pull locking system. An intuitive and functional tool suitable for quick connections and ideal to reduce installation and maintenance times compared to the ones needed for fixed wiring solutions (e.g. terminal blocks or cable glands).



QUICK PUSH-PULL CONNECTION AND DISCONNECTION



2 SOLUTIONS FOR THE DISCONNECTION



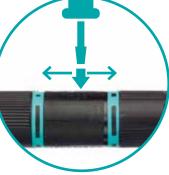




To disconnect the connector you need to use a tool (e.g. a flat-blade screwdriver). This solution guarantees that the connector is not removed accidentally and it is in compliance with the EN 61535 regulation.





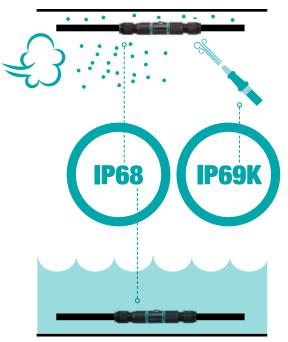


Resistant to water submersion

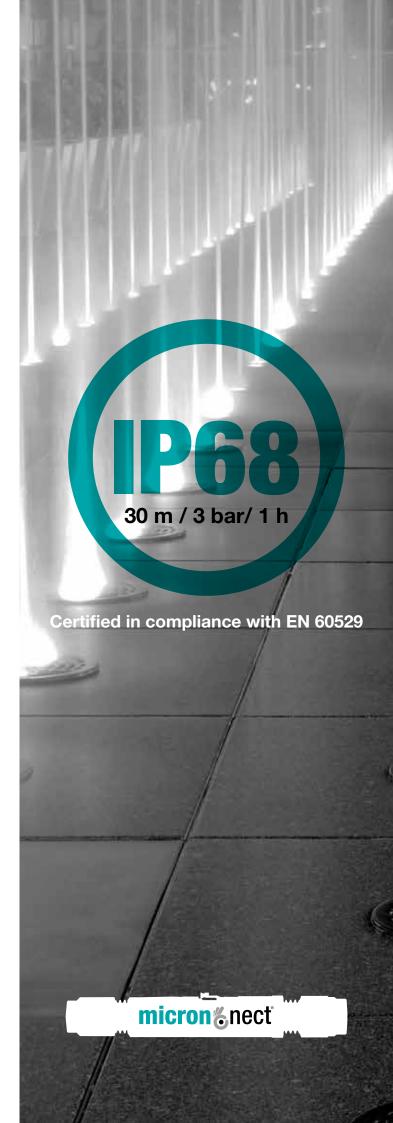
micron.nect is designed to guarantee the highest reliability under severe application conditions and when there is damp, water, dusts and debris.



Total protection AGAINST DUST



Total protection against the effects of PERMANENT SUBMERSION AND PRESSURE WATER



A one-step molding solution?

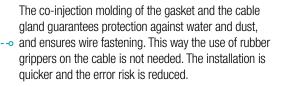
Higher reliability for the plant

CO-INJECTION MOLDING OF GASKETS

The co-injection molding of the rubber and the technopolymer ensures perfect installation unlike ordinary connectors, where the detachment or the wrong position of the gaskets can compromise their reliability.

The rubber sticks chemically and mechanically to the plastic body and it guarantees efficient protection against water, debris and dust (IP68).







QUICK INSTALLATION

Fewer parts to assemble



loosening of the cable gland.

HIGHER RESISTANCE TO EXTERNAL STRESSES

Chemical-mechanical adherence between plastic and rubber



FEWER INSTALLATION MISTAKES

Anti-leakage gaskets



Minimum space, maximum solidity Excellent robustness

performance



phases, and the use of very high-quality materials make sure that our product can pass the laboratory tests and is certified according to the international standards.

The maximum attention to details, during the design

(8 Kg according to EN 61535)



(*) Before testing: the product has been tested in a climatic chamber (aging test) at -40°C for 2 hours.



RESISTANT TO DISCONNECTION

Electrical continuity guarantee.

The special patented coupling system ensures the correct fastening between the plug and the socket. Its innovative design makes sure that the product can resist very high traction strength.



(8 Kg according to EN 61984)





RESISTANT TO CABLE TRACTION

Higher safety guarantee.

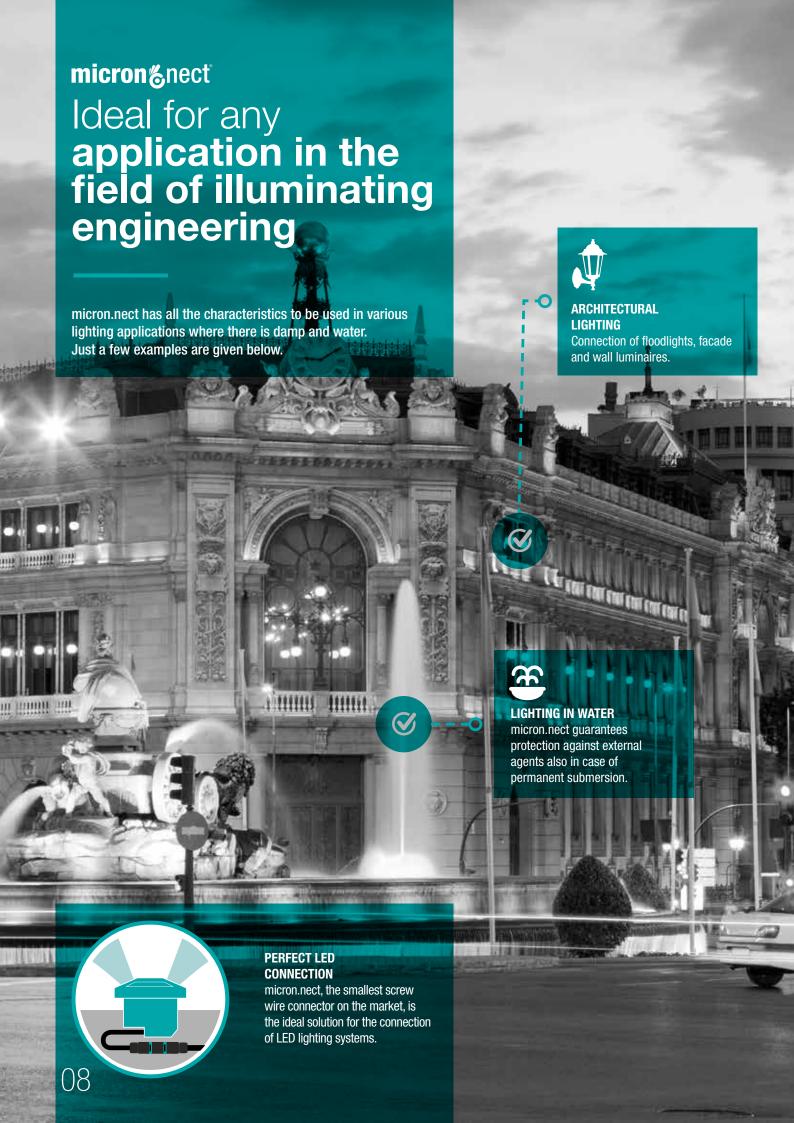
The combined action of the cable gland and the co-molded rubber ensures the fastening of the cable even under conditions in which the product is subject to vibrations or external mechanical stresses.



RESISTANT TO CONNECTOR FLEXURE

micron.nect is robust despite its compact dimensions.

Reliability is an important factor also for compact solutions, which might look apparently weak. Subjected to bending with a weight of 5 kg, the IP68 resistance is guaranteed.









Solutions **High-reliability**

We rely on excellent materials and production technologies.

We perform stress tests on our products according to test parameters which are higher than the ones required by the norm. This procedure allows us to obtain very high mechanical resistance to damp, water, dusts and highly toxic substances.

We use thermoplastic materials PA66 GF UL 94 V0/V2 (f1 - UL 746C). Below an incomplete list of some substances and their relative resistance (at room temperature) of the PA66 GF is given.



	Substance	Resistant	Chemical formula	Applications
	Acetylene	Yes	C_2H_2	Lighting devices, Welding and brazing plants
	Ammonia	Yes	NH ₃	Painting plants, plastic material production plants, paper and rubber industries
	Methyl alcohol	Partially	CH₃OH	Solvents, reagents for industrial chemical processes
	Benzene	Yes	$C_{6}H_{6}$	Drugs and colorants production, chemical compounds synthesis, industrial solvents
Calci	um chloride in water-based solution (salt)	Yes	CaCl ₂	Refrigerating plants, sewage disposal, oil and gas extraction wells
	Chlorine	Partially	CI	Swimming pools. Water purification plants
	Diesel	Yes	-	Diesel engines. Transport. Heating plants
	Fertilizers	Yes	-	Agriculture
	Lubricating oils	Yes	-	Industrial machinery. Water plants
	Petroleum	Yes	-	Fuels, transport, heating and energy production plants
	Phosphate	Yes		Cleansers, fertilizers, food industry
	Sea water	Yes		Marine environment

Contact our customer service to verify the resistance of micron.nect connector to its use under particular conditions according to customers specifications. The characteristics of TPE-S rubber: excellent resistance against UV rays, ozone and weather damage.

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Features and functionality guaranteed over time

PA66 GF materials make the product crushproof also under extreme conditions. - 40 °C +125°C



IP68 OZONE

Resistance to external agents (EN 60529) In addition: ageing test in air with ozone concentrations (ISO 1431-1).

Halogen free.
Realized with the use
of materials which are in
compliance with the most
stringent regulations
Reach/RoHS.





Produced with silicone free materials.

Resistant to corrosion in saline environment.

Corrosion test (EN60068-2-11:2000).

Duration 168 hours.

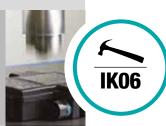




UV resistance testing according to EN60079-0. Method of exposure to laboratory light sources to verify weathering effects. Duration 1000 h. Insulation test at 3,75 KV.

Resistance to flame. Use of PA66 GF thermoplastic materials, fiber-glass reinforced UL94 V0/V2 (f1- UL746C) Glow-wire 850°C/960°C.





Impact resistance (EN 62262:2002). IK06 (1 Joules) and IP68 Tests show positive results even after conditioning in hydrochloric acid (HCl) for 168 hours at 70°C. (pH 4,5 and pH 3,5).

Upon request:

low-smoke materials,
EMC materials,
ammonium resistant materials.
Research of materials and
internal laboratory tests on
customer request.

SUBMIT YOUR NEEDS TO OUR COMPANY

We will give you consultation on specific materials such as low-smoke materials, EMC materials, ammonium resistant materials, etc.

TRUSTWORTHY AND CERTIFIED

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Our products are certified by accredited organizations which operate internationally. You can obtain a reference everywhere in the world.





Special materials resistant to

hydrocarbons and EMC materials.

(I.S. Applications - Intrinsic safety).

Design, Manufacturing and Control in Italy. All that you can expect from Techno



CONTACT US TO GET INFORMATION ABOUT OUR NEW PRODUCTS AND CUSTOMIZATION.

RELIABILITY. -- QUALITY. RESPONSIVENESS.



Thanks to the fact that the development process and the manufacturing of new products are totally carried out in our company, we are able to meet deadlines and guarantee the quality and flexibility needed during the development and

VERTICALIZATION

The internal construction of molds intended for the molding of micro-objects with very low tolerances is our know-how, which gives our company a competitive advantage and allows us to meet the most stringent requests.





COMPETENCE

production phases.

CELERITY

We design our products upon our customers request, putting our deep knowledge of development and production technologies as well as of electrical and mechanical regulations at their disposal, and meeting the expectations of the requested solutions in terms of quality, reliability and cheapness.

• 100% QUALITY

We have our own internal laboratory and we perform tests in critical environments. Our services include electrical, thermal and mechanical tests, dimensional testing, test on plastic materials and rubber, IP6x testing, UV and weathering tests carried out in a climatic room.





FLEXIBILITY

Molding in different colors.
Customized packaging and writings.
Assembly of connectors with
cable and overmolding.
Hot-melt manufacturing.
We want to satisfy your needs with the
highest degree of professionalism.

RELIABILITY GUARANTEE

Customized tests upon customers request. We perform stress tests on our products according to parameters which are higher than the ones requested by the norms.





CUSTOMIZATION

Customization service by means of laser marking systems.

We are able to offer customized productions marked with our customers brand upon their request.

SERVICE AND RESPONSIVENESS

Our customers must not wait. We offer them kindness and expertise, and we are always there to help them and listen to their requests. We provide advanced logistics which guarantees delivery times also within 24 hours.





TECHNICAL DATA SHEET

micron & nect

CERTIFICATIONS















Our materials do not contain sulfur which negatively affects the LED lifespan.

micron.nect - TH381 2-pole screw wire micro-connector

Characteristics and advantages

- Miniaturization a diameter of only 14 mm (2 poles)
- Screw connection for field wiring (M2 screws max 0.2 Nm) and versatility guaranteed during installation
- Available with overmolded cable
- Tested and approved to resist dust and water (IP68 30 m / 1 h) and high pressure water (IP69K)

Electrical characteristics

Voltage

Current

Impulse withstand voltage

Contact resistance

Insulation resistance

Number of poles

Contact symbols

 Cable section min-max compatible with flexible and rigid cable

• Cable diameter min-max

400 V AC/DC

10 A

4 kV <10 mΩ

100 M Ohms

1 - 2

0.25 mm² - 1.5 mm²

5.8 - 8.0 mm

for cables with a diameter < 5.8 mm, use the relative accessories

SUITABLE FOR CLASS 2 APPLICATIONS (double insulated) MAX. 250 V AC.

Materials

- Plug&socket body
- Cable glands
- Gaskets
- Contacts
- Corrosion resistance

PA66 GF UL94 VO (f1) - GWT 960°C (1) PA66 GF UL94 V2 (f1) - GWT 850°C (1)

TPE-S

silver-plated brass (zinc-plated screws) salt mist, 1000 hours, 5% salt solutions, 35°C EN60068-2-11 Test Ka;

IS06988 sulfur dioxide Halogen free - Silicone free

PTI 175

2

Properties

- Tracking index
- Overvoltage category
- Pollution degree

Mechanical characteristics

Operating temperature

Impact resistance (IK)

- Protection degree
- Operating cycles

- -40°/+125°C
- IP68 (30m/1h) / IP69K
- 100 cycles
 - IK 06

Reference regulations EN 61984 / EN 61535

(1) (f1): The material is in compliance with the requirements of UV resistance, installation resistance where there is water and submersion resistance as specified in UL 746C regulation.

Codes



Image	Code	Туре	Cable min - max	Pieces/box	
Connector cable to cable					
	THB.381.A2A.L	Plug	7.0 mm - 8.0 mm ⁽³⁾	200	
	THB.381.A2B.L	Plug (disconnection with a tool acc. EN 61535)	7.0 mm - 8.0 mm ⁽³⁾	200	
	THB.381.A2A	Plug	5.8 mm - 6.9 mm ⁽⁴⁾	200	
	THB.381.A2B	Plug (disconnection with a tool acc. EN 61535)	5.8 mm - 6.9 mm ⁽⁴⁾	200	
OH THE	THB.381.B2A.L	Socket	7.0 mm - 8.0 mm ⁽³⁾	200	
CH I	THB.381.B2A	Socket	5.8 mm - 6.9 mm ⁽⁴⁾	200	
Connector panel-mounted (1)					
	THB.381.N2A	Plug M16	-	200	
	THB.381.N2B	Plug M16 (disconnection with a tool acc. EN 61535)	-	200	

	THB.381.N2B	Plug M16 (disconnection with a tool acc. EN 61535)	-	200
	THB.381.L2A (2)	Plug M11	-	200
=0	THB.381.L2B (2)	Plug M11 (disconnection with a tool acc. EN 61535)	-	200
•	THB.381.P2A	Socket M16	-	200
est p	THB.381.M2A (2)	Socket M11	-	200

Accessories					
0	6000448GT	Closure cap IP68 for socket	-	200	
0	6000447GT	Closure cap IP68 for plug	-	200	
•	6000473GT	Cable reduction	3.0 mm - 5.5 mm	200	
	6000461GT	Cable reduction for 2-single pole cables	1.9 mm - 2.5 mm	200	
~	6000462KC	special spanner for quick installation	-	100	

⁽¹⁾ Supplied with the fixing nut - (2) Only for plastic panels or Class III (SELV) devices - (3) Can be used with cable H07RN-F 2 x 1 mm²

 $^{^{(4)}}$ Can be used with cable H05RN-F 2 x 1 mm 2 and smaller cables.



We provide wired connectors with cable. Contact our Customer Service for more information.

Welcome to a small world

micron 6 nect

GET CONNECTED

Using an App for QR code reader and your smartphone camera. FIND OUT HOW AND WHERE TO BUY.





CONTACT US BY PHONE



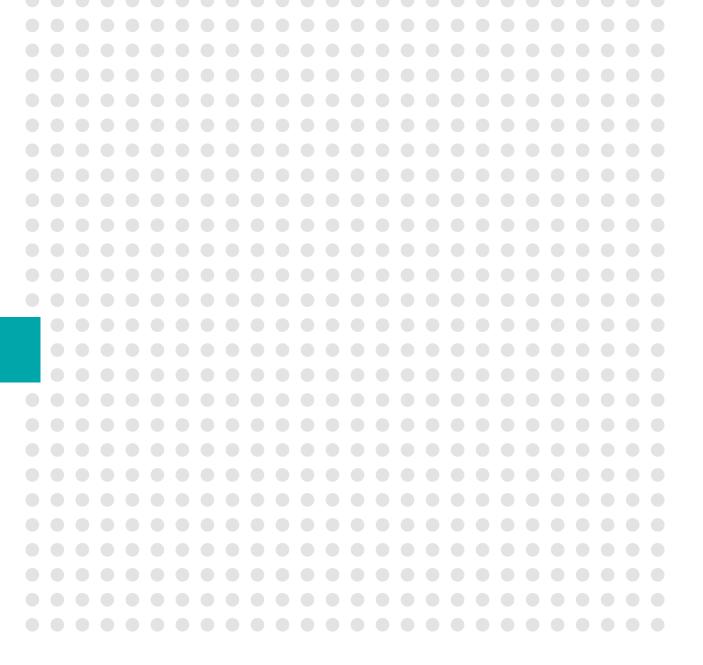
+39 031 97 64 45

CONTACT US BY EMAIL



customercare@techno.it







Techno s.r.l.

Via Bancora e Rimoldi, 27 22070 Guanzate (CO), Italy Ph. +39 031 976445

www.techno.it

CH-8622 Wetzikon Telefon +41-44-931 10 20 Telefax +41-44-931 10 21

Simpex Electronic AG

Binzackerstrasse 33

www.simpex.ch contact@simpex.ch

CHE-108.018.777 MWST



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