

Webguide

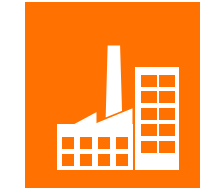
New Products Autumn 2022

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MACHINE AND PLANT ENGINEERING

Cables and accessories for machines and plants:
a perfect match

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ETHERNET DATA TRANSMISSION

Your highway for big data

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MACHINE AND PLANT ENGINEERING

CABLES AND ACCESSORIES
FOR MACHINES AND PLANTS:
A PERFECT MATCH



NEW: Autumn 2022



ÖLFLEX® SERVO FD zeroCM

Electrically symmetrical PUR motor cable with outstanding electromagnetic compatibility and simplified cable connection thanks to innovative cable design, for cable chains.



ÖLFLEX® CLASSIC PN

PVC cable for power supply of PROFINET components, flexible and economic, colour-coded according to PROFINET guideline.



ÖLFLEX® CLASSIC 128 H BK SC

Halogen-free cable, single core, CPR Cca, for building wiring, variants „GN/YE“ with green/yellow core insulation for connection of the protective conductor.



SKINDICHT® Lead-free Series

Cable gland accessories made of lead-free brass to comply with future RoHS regulations (product characteristics identical to lead-containing articles).



CABLES AND ACCESSORIES FOR MACHINES AND PLANTS: A PERFECT MATCH



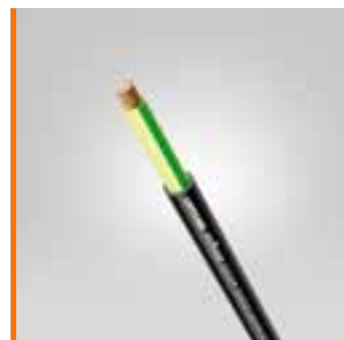
ÖLFLEX® SERVO FD zeroCM

Please do not disturb! With our PUR motor cable with zeroCM® technology, your systems have peace and quiet from common-mode interference currents. Thanks to the innovative and patented cable design, 100% electrical symmetry and thus optimised EMC is achieved. The considerably simplified and time-saving connection of the cable, the North American certification as well as the approval for use in cable chains or even harsh ambient conditions make the cable a real highlight.



ÖLFLEX® CLASSIC PN

Show your colours! Child's play with the PVC connection cable for supplying power to PROFINET components. Thanks to the colour coding in accordance with the PROFINET guideline, cores can be clearly identified - this simplifies the connection. As an economic alternative to our ÖLFLEX® CHAIN PN, the cable is perfect for occasional flexible use.



ÖLFLEX® CLASSIC 128 H BK SC

New articles available: This halogen-free single core power cable with a high CPR classification places particular emphasis on smart material selection. It is more flexible than an installation cable such as N2XH and can be optimally used for building cabling. It is now also available with green-yellow core insulation.



SKINDICHT® Lead-free Series

Whether blind plugs, reducers, extensions, adapters or locknuts - the accessories for cable glands must also be manufactured completely without the addition of lead in the long term. This is what the RoHS directive wants. With our lead-free products, you are already on the safe side. Don't worry, the product properties do not change due to the absence of lead!

Power and control cables

Power chain applications • Servo applications – power drive systems, certified

NEW



Click or Scan – More information available online



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000057
ETIM 5.0/6.0 Class-Description: Low voltage power cable



Core identification code
Power cores: black with marking U/
L1/C/L+; V/L2; W/L3/D /L-; GN/YE
protective conductor



Conductor stranding
Extra-fine wire according to VDE 0295,
class 6/IEC 60228 class 6



Minimum bending radius
Flexing: up from 10 x outer diameter
Fixed installation: 5 x outer diameter



Nominal voltage
IEC U₀/U: 600/1000 V
UL & CSA: 1000 V



Test voltage
Core/Core: 4 kV
Core/Screen: 4 kV



Protective conductor
G = with GN-YE protective conductor
Bending cycles & operation
parameters
See Selection Table A2-1 in the
appendix of our online catalogue



Temperature range
Flexing: -40 °C to +90 °C
(UL/CSA: +80 °C)
Fixed installation: -50 °C to +90 °C
(UL/CSA: +80 °C)

ÖLFLEX® SERVO FD zeroCM

Electrically symmetrical PUR motor cable with outstanding electromagnetic compatibility and simplified cable connection thanks to innovative cable design, for cable chains.

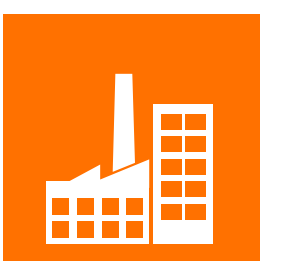
Benefits

- Low-capacitance bundle design with counterrotating protective conductor (zeroCM® technology) enables completely electrically symmetrical cable construction and improves electromagnetic compatibility.
- zeroCM® technology has been proven to reduce leakage currents in protective earth or equipotential bonding cables, thus reducing harmful currents at the motor bearing, electromagnetic interference on data transmission and corrosion on building structures.
- zeroCM® technology reduces transfer currents in frequency converter applications and thus enables almost double cable lengths.
- zeroCM® technology prevents potential voltages at earth connections on the consumer side.
- Long-life cable chain use for medium travel distances or increased accelerations (LAPP performance class „Core Line“).
- Extremely weather-resistant with the possibility of use in a wide temperature range.
- Particularly resistant to oil and drilling fluids, making it ideal for harsh environments.
- UL/CSA certification according to technical data allows use of the product in the North American area.

- Halogen-free and flame-retardant materials reduce the potential hazards in case of fire.
- No splitted protective conductor enables conventional cable connection with only one protective conductor.

Application

- For connecting frequency inverter and motor.
- Especially for environments where electromagnetic compatibility (EMC) is required.
- Cable design allows highly flexible, continuously moving use in moving machine parts and in the cable chain.
- Can be used in dry, damp and especially in rough and oily environments.
- PUR outer jacket withstands high mechanical loads.
- PUR outer jacket is insensitive to mineral oil-based lubricants and chemically resistant in many cases.
- Suitable for outdoor use.
- Flexible use possible at up to -40 °C.



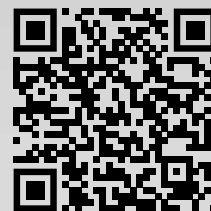
Power and control cables

Various applications • PVC outer sheath and coloured cores

NEW



Click or Scan – More information available online



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC001578
ETIM 5.0/6.0 Class-Description:
Flexible cable



Core identification code
brown (L1), blue (N1), black (L2),
white (N2)
3/5 cores: additionally pink (FE)



Conductor stranding
Fine wire according to VDE 0295,
class 5/IEC 60228 class 5



Torsion movement in WTG
TW-0 & TW-1, refer to Appendix T0



Minimum bending radius
Occasional flexing: 15 x outer diameter
Fixed installation: 4 x outer diameter



Nominal voltage
 U_o/U : 300/500 V



Test voltage
4000 V



Temperature range
Occasional flexing: -5 °C to +70 °C
Fixed installation: -40 °C to +80 °C

ÖLFLEX® CLASSIC PN

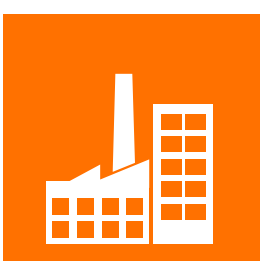
PVC cable for power supply of PROFINET components, flexible and economic, colour-coded according to PROFINET guideline.

Benefits

- Colour code according to PROFINET guideline „PROFINET Cabling and Interconnection Technology“ for clear identification of the wires.
- Space-saving due to reduced wall thicknesses.
- High electrical safety due to 4000 V test voltage.
- Classified fire behaviour according to EU Directive 305/2011 (BauPVO/CPR) with article number selection at www.lappkabel.de/cpr.

Application

- For power supply of PROFINET components.
- For fixed installation and occasional movement without tensile stress.
- Cable design also suitable for torsion applications in wind turbines.
- Suitable for medium mechanical stress.
- Can be used in dry and damp rooms.
- PVC outer sheath is resistant to acids and alkalis and conditionally resistant to oil.



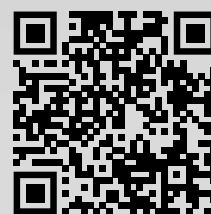
Power and control cables

Various applications • Halogen-free ÖLFLEX®

NEW



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Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000057
ETIM 5.0/6.0 Class-Description: Low voltage power cable



Core identification code
Black or green/yellow



Conductor stranding
Fine wire according to VDE 0295 Class 5/ IEC 60228 Class 5



Torsion movement in WTG
TW-0 & TW-1, refer to Appendix T0



Minimum bending radius
Occasional flexing: 15 x outer diameter
Fixed installation: 4 x outer diameter



Nominal voltage
 U_0/U : 600/1000 V



Test voltage
4000 V



Protective conductor
G = with GN-YE protective conductor
X = without protective conductor



Temperature range
Occasional flexing: -5 °C to +70 °C
Fixed installation: -40 °C to +80 °C

ÖLFLEX® CLASSIC 128 H BK SC

What is new? The halogen-free cable is now also available with green-yellow core insulation for connecting the protective conductor.

Benefits

- Easy handling and installation due to flexible design.
- Halogen-free and highly flame-retardant materials reduce the risk of fire propagation, high smoke density and toxic fumes in case of fire.
- Classified fire behaviour according to EU Directive 305/2011 (BauPVO/CPR) with article number selection at www.lappkabel.de/cpr.
- High electrical safety due to 4000 V test voltage.
- Variants „GN/YE“ with green-yellow core insulation for connection of the protective conductor.

Application

- For building wiring to comply with special fire protection requirements.
- Can be used universally for wiring internal and cross-machine control circuits.
- For fixed installation and occasional movement without tensile stress.
- Can be used in dry and damp rooms.
- Suitable for medium mechanical stress.



Cable glands

SKINDICHT® cable gland accessories metric • Blind plugs

NEW



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SKINDICHT® BL-M

What is new? The blind plug is now available in further sizes made of lead-free brass.

Benefits

- Withstands temperatures up to +200 °C.
- Simple assembly by means of a slotted screwdriver.
- Article numbers ending in „LF“ are lead-free product alternatives with otherwise the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys, but could be banned in the future according to the RoHS Directive.

Application

- For closing an unoccupied metric threaded hole on the housing.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.

Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000032
ETIM 5.0/6.0 Class-Description: Plug
for cable screw gland



Certifications
UL File E79903



On request
Fitted with FKM O-ring (–20 °C to +200 °C)



Material
Body: Nickel-plated brass, leadfree
O-ring: NBR



Protection rating
IP 54
IP 68 (with O-ring)



Temperature range
With O-ring: –20 °C to +100 °C
Without O-ring: –60 °C to +200 °C



Cable glands

SKINDICHT® cable gland accessories metric • Blind plugs

NEW



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information available online



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000032
ETIM 5.0/6.0 Class-Description: Plug
for cable screw gland



Certifications
UL File E79903



On request
Fitted with FKM O-ring (–20 °C to +200 °C)



Material
Body: Nickel-plated brass, leadfree
O-ring: NBR



Protection rating
IP 54
IP 68 (with O-ring)



Temperature range
With O-ring: –20 °C to +100 °C
Without O-ring: –60 °C to +200 °C

SKINDICHT® BL-M with O-ring

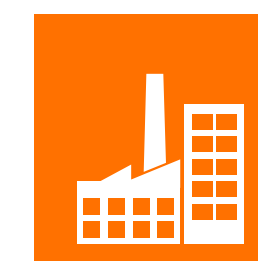
What is new? The blind plug is now available in further sizes made of lead-free brass.

Benefits

- Withstands temperatures up to +100 °C.
- The groove on the thread ensures a secure fit and protection against rotation of the O-ring.
- Mounted O-ring enables liquid-tight sealing of the threaded/through hole and thus a higher degree of protection (up to IP 68).
- Simple assembly by means of a slotted screwdriver.
- Article numbers ending in „LF“ are lead-free product alternatives with otherwise the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys, but could be banned in the future according to the RoHS Directive.

Application

- For closing an unoccupied metric threaded/through hole on the housing.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.



Cable glands

SKINDICHT® cable gland accessories metric • Adapter

NEW



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information available online



SKINDICHT® MA-M/PG

What is new? The adapter is now available in other sizes made of lead-free brass.

Benefits

- Enables easy transition from a metric male thread to a PG female thread.
- Withstands temperatures up to +200 °C.
- Article numbers ending in „LF“ are lead-free product alternatives with otherwise the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys, but could be banned in the future according to the RoHS Directive.

Application

- For applications where different types of threads are used.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.

Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000441
ETIM 5.0/6.0 Class-Description:
Cable screw gland



On request
with O-ring fitted



Material
Nickel-plated brass, leadfree



Temperature range
-60 °C to +200 °C



Cable glands

SKINDICHT® cable gland accessories metric • Adapter

NEW



Click or Scan – More information available online



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000441
ETIM 5.0/6.0 Class-Description: Cable screw gland



On request
with O-ring fitted



Material
Nickel-plated brass, leadfree



Temperature range
-60 °C to +200 °C

SKINDICHT® MA-PG/M

What is new? The adapter is now available in other sizes made of lead-free brass.

Benefits

- Enables easy transition from a PG male thread to a metric female thread.
- Withstands temperatures up to +200 °C.
- Form A in easy-grip knurled design for easy screwing in of the adapter even in oily environments; form B in smooth design.
- Article numbers ending in „LF“ are lead-free product alternatives with otherwise the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys, but could be banned in the future according to the RoHS Directive.

Application

- For applications where different types of threads are used.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.



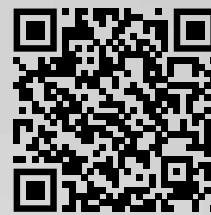
Cable glands

SKINDICHT® cable gland accessories metric • Adapter

NEW



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information available online



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000441
ETIM 5.0/6.0 Class-Description: Cable
screw gland



On request
with O-ring fitted



Material
Nickel-plated brass, leadfree



Temperature range
-60 °C to +200 °C

SKINDICHT® MA-M/NPT

What is new? The adapter is now available in other sizes made of lead-free brass.

Benefits

- Allows easy transition from a metric male thread to an NPT female thread.
- Withstands temperatures up to +200 °C.
- Article numbers ending in „LF“ are lead-free product alternatives with otherwise the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys, but could be banned in the future according to the RoHS Directive.

Application

- For applications where different types of threads are used.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.



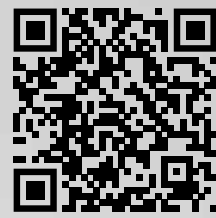
Cable glands

SKINDICHT® cable gland accessories metric • Counter nuts

NEW



Click or Scan – More information available online



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000940
ETIM 5.0/6.0 Class-Description:
Locknut for cable screw gland



Material
Nickel-plated brass, leadfree



Temperature range
-60 °C to +200 °C

SKINDICHT® SM-PE-M

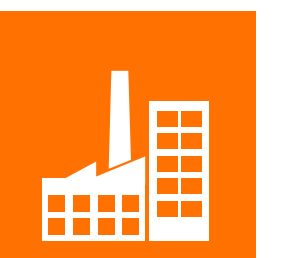
What is new? The locknut is now available in other sizes made of lead-free brass.

Benefits

- Optimum contacting of a coated enclosure for protection against electromagnetic interference and for equipotential bonding.
- Contact is achieved when the locknut is tightened by the cutting edges scratching the coated layer of the housing.
- Withstands temperatures up to +200 °C.
- Article numbers ending in „LF“ are lead-free product alternatives with otherwise the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys, but could be banned in the future according to the RoHS Directive.

Application

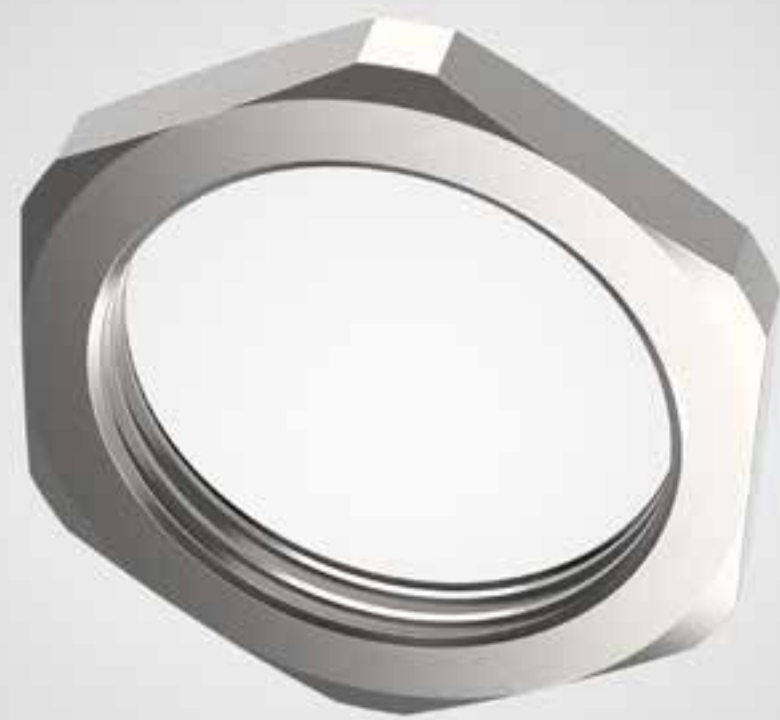
- For use on the inside of painted, anodised or powder-coated enclosures.
- Can be used with metric SKINTOP® and SKINDICHT® cable glands for applications where electromagnetic compatibility (EMC) is required.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.



Cable glands

SKINDICHT® cable gland accessories PG • Counter nuts

NEW



Click or Scan – More
information available online



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000940
ETIM 5.0/6.0 Class-Description:
Locknut for cable screw gland



Material
Nickel-plated brass, leadfree



Temperature range
-60 °C to +200 °C

SKINDICHT® SM

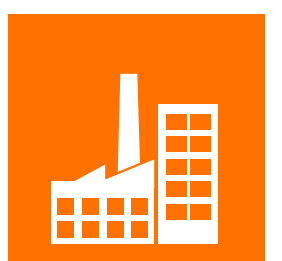
What is new? The locknut is now available in other sizes made of lead-free brass.

Benefits

- Article numbers ending in „LF“ are lead-free product alternatives with otherwise the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys, but could be banned in the future according to the RoHS Directive.

Application

- For countering a SKINTOP®/SKINDICHT® cable gland on the inside of the application (e.g. enclosure).
- For thin-walled housings without thread, which only allow one through hole.
- Withstands high chemical and mechanical stress.



FURTHER HIGHLIGHTS

Cable glands

SKINTOP® cable glands nickel-plated brass metric • Standard



Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000441
ETIM 5.0/6.0 Class-Description: Cable screw gland

Caution
Refer to Appendix T21 for the installation dimensions and torques

Certifications
VDE, UL and DNV approval available up to size M75x1,5

Material
Body: nickel-plated brass
Insert: polyamide
Sealing: CR
O-ring: NBR

IP Protection rating
IP 68 - 10 bar
IP 69 (M12 - M63)
NEMA Type 1, 4x, 6, 12

Temperature range
Dynamic: -25 °C up to +100 °C

SKINTOP® MS-M/SKINTOP® MSR-M

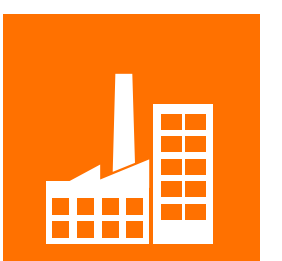
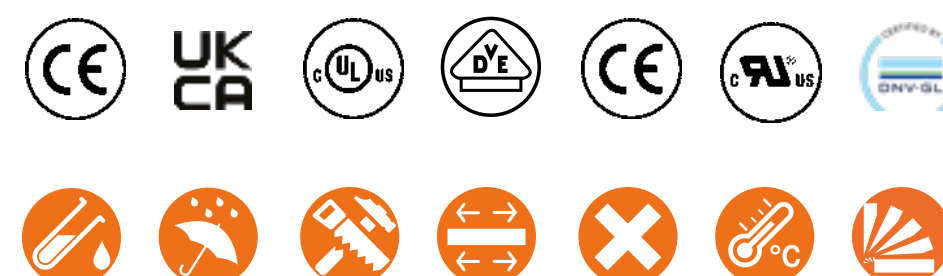
What is new? The cable gland with M32 thread is now also available with an extended clamping range for inserting thicker cables (19–28.0 mm, clamping range M40).

Benefit

- Versatile properties make this a convincing product for a wide range of applications.
- Best possible sealing enables protection class IP 68 (10 bar) and IP 69.
- Optimal strain relief due to flexible slats.
- Large, variable clamping range for different cable outer diameters up to 98 mm.
- Innovative, double slats cage in sizes M 75 x 1.5 to M 110 x 2 simplifies installation and prevents leverage with heavy cables.
- Extensive range of accessories available.
- Article numbers ending in „LF“ are lead-free product alternatives with otherwise the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys, but could be banned in the future according to the RoHS Directive.
- For article names with the suffix „PLUS“, the clamping range corresponds to the next higher thread size. The extended clamping range allows the insertion of cables with a larger diameter while maintaining the same connection thread.

Application

- For sealing and strain-relieving cable entry into an enclosure.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use, taking into account the temperature range.



Cable glands

SKINTOP® cable glands nickel-plated brass metric • EMC



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000441
ETIM 5.0/6.0 Class-Description: Cable screw gland



Caution
Refer to Appendix T21 for the installation dimensions and torques



Material
Body: nickel-plated brass
Insert: polyamide
Sealing: CR
O-ring: NBR
Spiral - springs made of stainless steel



Protection rating
IP 68 - 10 bar
IP 69



Temperature range
Dynamic: -25 °C up to +100 °C
Fixed: -30 °C up to +100 °C

SKINTOP® BS-SC-M METAL/ SKINTOP® BSR-SC-M METAL

Permanent bending protection for EMC applications under high mechanical stress

Benefit

- Bending protection spiral prevents excessive bending as well as kinking of the connected cable.
- Special design of the stainless steel spiral allows high number of bending cycles.
- Optimum EMC protection due to integrated, highly conductive and flexible contact spring, which creates a low-impedance transition between the copper shielding braid and the cable gland.
- Large, variable clamping range for different cable outer diameters.
- Best possible sealing by O-ring and sealing ring enables protection class IP 68 (10 bar) and IP 69.
- Variant „R“ with reduction sealing insert for sealing smaller diameter cables.

Application

- For EMC-compliant insertion of copper-shielded cables.
- Especially on moving machine parts.
- Withstands high mechanical loads.
- Suitable for outdoor use.



Power and control cables

Various applications • Halogen-free ÖLFLEX®



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000104
ETIM 5.0/6.0 Class-Description:
Control cable



Core identification code
Black with white numbers acc. to VDE 0293-334



Conductor stranding
Fine wire according to VDE 0295, class 5/IEC 60228 class 5



Minimum bending radius
Occasional flexing: 15 x outer diameter
Fixed installation: 4 x outer diameter



Nominal voltage
 U_0/U : 300/500 V



Test voltage
4000 V



Protective conductor
G = with GN-YE protective conductor
X = without protective conductor



Temperature range
Occasional flexing: -5 °C to +70 °C
Fixed installation: -40 °C to +80 °C

ÖLFLEX® 127 HSLH

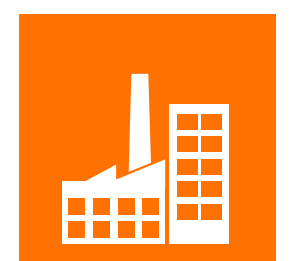
Halogen-free cable, flexible and inexpensive, with CPR Cca, for building wiring.

Benefit

- Easy handling and installation due to flexible design.
- Halogen-free and highly flame-retardant materials reduce the risk of fire propagation, high smoke density and toxic fumes in case of an event of fire.
- Classified fire behavior according to EU Directive 305/2011 (CPR) with article number selection under www.lappkabel.com/cpr.
- High electrical safety due to 4000V test voltage.

Application

- For building wiring to comply with special fire protection requirements.
- Universally applicable for wiring internal machine and plant-wide control circuits.
- For fixed installation and occasional movement without tensile stress.
- Can be used in dry and damp environments.
- Suitable for medium mechanical stress.
- HFFR outer sheath is largely resistant to acids and alkalis.



Power and control cables

Various applications • PVC outer sheath and coloured cores



ÖLFLEX® DC GRID

Flexible, buriable DC cable with colour code according to EN 60445 for DC applications in industrial plants.


Benefit


- Suitable for the installation of energy-saving DC networks in industrial plants.
- Can be laid in the underground thanks to resistant insulating and sheathing material in accordance to DIN VDE 0276-603.
- Good installation properties thanks to the fine-wire, flexible conductor.
- With color code according to EN 60445 for DC systems.


Application


- For DC applications in low-voltage range.
- For industrial installations where power is distributed via a DC network.
- For use on control equipment, motors and frequency converters.
- Can be used in dry, damp and wet environments.
- For open installation on cable trays.
- Can be laid in the underground.
- Withstands high mechanical loads.


Technical Data


 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000057
ETIM 5.0/6.0 Class-Description: Low voltage power cable


 **Core identification code**
According to EN 60445


 **Conductor stranding**
Fine wire according to VDE 0295, class 5/IEC 60228 class 5

 **Minimum bending radius**
Occasional flexing: 15 x outer diameter
Fixed installation: 4 x outer diameter

 **Nominal voltage**
DC (core-ground): max. 0,75 kV
DC (core-core): max. 1,5 kV

 **Test voltage**
4000 V

 **Protective conductor**
G = with GN-YE protective conductor
X = without protective conductor

 **Temperature range**
Occasional flexing: -5 °C to +70 °C
Fixed installation: -40 °C to +80 °C



EPIC® Industrial connectors

Rectangular connectors • EPIC® ULTRA H-A 3



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000437
ETIM 5.0/6.0 Class-Description:
Housing for industrial connectors



Material
Housing: nickel-plated zinc diecasting
Lever: stainless steel
Sealing: CR



VDE-tested:
Certified production control: VDE-REG.
no.: B437
UL-tested:
UL File Number: E75770



Temperature range
-40 °C to +100 °C, short-term up to
+125 °C

EPIC® ULTRA H-A 3 TGV

Portfolio expansion of corrosion-resistant rectangular connector housings with EMC protection; new construction forms, new design. Available as hood, surface-mounted, recessed, base or coupling housing.

Benefit

- The EPIC® ULTRA H-A 3 range comprises the smallest EMC housings in the heavy-duty industrial connector sector and ensures safe plug connections in a small amount of space.
- The hood housing is mateable with many commercially available housings (panel-mount base, surface-mount base or coupler hood housings).
- The integrated SKINTOP® cable gland is used for sealing and strain-relieving cable entry. Compared to enclosures where the cable gland is added separately, the overall size of the enclosure is more space-saving.
- Locking is via stainless steel single lever on the enclosure.
- Corresponds to protection class IP 65 when locked.
- Protection class classified according to NEMA 250 as well as tested according to UL50E.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.

Application

- To protect the connector insert from environmental influences.
- Especially for environments where the product is getting into contact with water, cleaning agents and saline substances.
- Especially for environments where electromagnetic compatibility (EMC) is required.
- For use with many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors.



EPIC® Industrial connectors

Rectangular connectors • EPIC® ULTRA H-A 3



EPIC® ULTRA H-A 3 TGHV

Portfolio expansion of corrosion-resistant rectangular connector housings with EMC protection; new construction forms, new design. Available as hood, surface-mounted, recessed, base or coupling housing.

Benefit


- The EPIC® ULTRA H-A 3 range comprises the smallest EMC housings in the heavy-duty industrial connector sector and ensures safe plug connections in a small amount of space.
- The hood housing is mateable with many commercially available housings (panel-mount base, surface-mount base or coupler hood housings).
- The tall design offers more space and is therefore suitable for larger deployments or applications with more space requirements in the enclosure.
- The integrated SKINTOP® cable gland is used for sealing and strain-relieving cable entry. Compared to enclosures where the cable gland is added separately, the overall size of the enclosure is more space-saving.
- For article names with the addition „BRUSH“, the integrated cable gland is supplemented by our innovative SKINTOP® BRUSH brass brush, which enables 360° contacting of the copper shielding braid and is even more effective dissipation of interference signals. The brush wires enable easier assembly of the connector and maintain the gapless 360° coverage of the copper shielding braid.
- Locking is via stainless steel longitudinal brackets on the mating enclosure.

- Corresponds to protection class IP 65 when locked.
- Protection class classified according to NEMA 250 as well as tested according to UL50E.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.


Application

- To protect the connector insert from environmental influences.
- Especially for environments where the product is getting into contact with water, cleaning agents and saline substances.
- Especially for environments where electromagnetic compatibility (EMC) is required.
- For use with many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors.

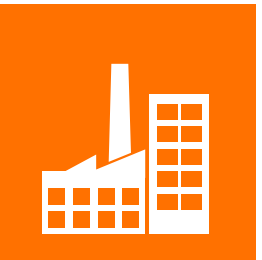
Technical Data

 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000437
ETIM 5.0/6.0 Class-Description:
Housing for industrial connectors

 **Material**
Housing: nickel-plated zinc diecasting
Lever: stainless steel
Sealing: NBR

 **VDE-tested:**
Certified production control: VDE-REG.
no.: B437
UL-tested:
UL File Number: E75770

 **Temperature range**
-40 °C to +100 °C, short-term up to
+125 °C



EPIC® Industrial connectors

Rectangular connectors • EPIC® ULTRA H-A 3



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000437
ETIM 5.0/6.0 Class-Description:
Housing for industrial connectors



Material
Housing: nickel-plated zinc diecasting
Lever: stainless steel
Sealing: NBR



VDE-tested:
in preparation
UL-tested:
UL File Number: E75770



Temperature range
-40 °C to +100 °C, short-term up to
+125 °C

EPIC® ULTRA H-A 3 TSV

Portfolio expansion of corrosion-resistant rectangular connector housings with EMC protection; new construction forms, new design. Available as hood, surface-mounted, recessed, base or coupling housing.

Benefit

- The EPIC® ULTRA H-A 3 range comprises the smallest EMC housings in the heavy-duty industrial connector sector and ensures safe plug connections in a small amount of space.
- The hood housing is mateable with many commercially available housings (panel-mount base, surface-mount base or coupler hood housings)
- With lateral cable entry for orderly cable routing and to prevent excessive bending of the cable.
- The integrated SKINTOP® cable gland is used for sealing and strain-relieving cable entry. Compared to enclosures where the cable gland is added separately, the overall size of the enclosure is more space-saving.
- For article names with the addition „BRUSH“, the integrated cable gland is supplemented by our innovative SKINTOP® BRUSH brass brush, which enables 360° contacting of the copper shielding braid and thus even more effective dissipation of interference signals. The brush wires enable easier assembly of the connector and maintain the gapless 360° coverage of the copper shielding braid.
- Locking is via stainless steel longitudinal brackets on the mating enclosure.
- Corresponds to protection class IP 65 when locked.

- Protection class classified according to NEMA 250 as well as tested according to UL50E.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.

Application

- To protect the connector insert from environmental influences.
- Especially for environments where the product is getting into contact with water, cleaning agents and saline substances.
- Especially for environments where electromagnetic compatibility (EMC) is required.
- Can be used by many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors.



EPIC® Industrial connectors

Rectangular connectors • EPIC® ULTRA H-A 3



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000437
ETIM 5.0/6.0 Class-Description:
Housing for industrial connectors



Material
Housing: nickel-plated zinc diecasting
Lever: stainless steel
Sealing: NBR



Protection rating
IP 66 / IP 68 1 meter / 10 hours
NEMA 250, UL50E: 12, 4, 4X (latched)



VDE-tested:
in preparation
UL-tested:
in preparation



Temperature range
-40 °C to +100 °C, short-term up to
+125 °C

EPIC® ULTRA H-A 3 EGS

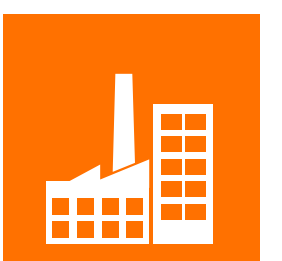
Portfolio expansion of corrosion-resistant rectangular connector housings with EMC protection; new construction forms, new design. Available as hood, surface-mounted, recessed, base or coupling housing.

Benefit

- The EPIC® ULTRA H-A 3 range comprises the smallest EMC housings in the heavy-duty industrial connector sector and ensures safe plug connections in the smallest amount of space.
- The built in housing is mateable by many commercially available hood housings.
- With lateral cable entry for orderly cable routing and to prevent excessive bending of the cable.
- Simple mounting on the enclosure by screwing in and fixing with locknut.
- Contact is achieved when the locknut is tightened by the cutting edges scratching the coated layer of the housing.
- Locking is via a stainless steel longitudinal bracket.
- Corresponds to protection class IP 65 when locked.
- Protection class classified according to NEMA 250 as well as tested according to UL50E.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.

Application

- To protect the connector insert from environmental influences.
- Especially for environments where the product is getting into contact with water, cleaning agents and saline substances.
- Especially for environments where electromagnetic compatibility (EMC) is required.
- Can be used with many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors.





EPIC® Industrial connectors


Rectangular connectors • EPIC® H-A 3 Housings




Technical Data

 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000437
ETIM 5.0/6.0 Class-Description:
Housing for industrial connectors

 **Material**
EPIC® H-A 3 MTG
Housing: powder-coated zinc diecasting,
grey
Lever: zinc-plated steel

 **Protection rating**
IP 65 (latched)
NEMA 250, UL50E: 12, 4 (latched)

 **VDE-tested:**
Certified production control: VDE-REG.
no.: B437
UL-tested:
UL File Number: E75770

 **Temperature range**
-40 °C to +100 °C, short-term up to
+125 °C

EPIC® H-A 3 MTG

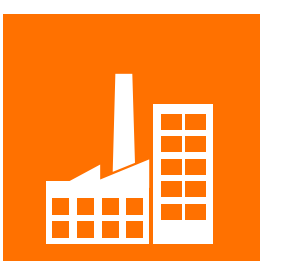
Portfolio expansion of the robust, mechanically resistant rectangular connector housings; new construction forms, new design.

Benefit

- The EPIC® H-A 3 Series comprises the smallest housings in the heavy-duty industrial connector range and ensures secure connections in the smallest of spaces.
- The hood housing is mateable with many commercially available housings (panel-mount base, surface-mount base or coupler hood housings)
- With threaded hole for use with a corresponding cable gland.
- Locking is via longitudinal brackets on the mating enclosure.
- Corresponds to protection class IP 65 when locked.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.

Application

- To protect the connector insert from environmental influences.
- Can be used with many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors.





EPIC® Industrial connectors


Rectangular connectors • EPIC® H-A 3 Housings





Technical Data

 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000437
ETIM 5.0/6.0 Class-Description:
Housing for industrial connectors

 **Material**
EPIC® H-A 3 MTS
Housing: powder-coated zinc diecasting,
grey
Lever: zinc-plated steel

 **Protection rating**
IP 65 (latched)
NEMA 250, UL50E: 12, 4 (latched)

 **VDE-tested:**
Certified production control: VDE-REG.
no.: B437
UL-tested:
UL File Number: E75770

 **Temperature range**
-40 °C to +100 °C, short-term up to +125 °C

EPIC® H-A 3 MTS

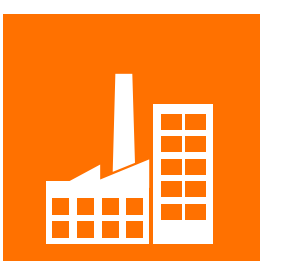
Portfolio expansion of the robust, mechanically resistant rectangular connector housings; new construction forms, new design.

Benefit

- The EPIC® H-A 3 Series comprises the smallest housings in the heavy-duty industrial connector range and ensures secure connections in the smallest amount of space.
- The hood housing is mateable with many commercially available housings (add-on, base or coupling housings).
- With lateral cable entry for orderly cable routing and to prevent excessive bending of the cable.
- With threaded hole for use with a corresponding cable gland.
- Locking is via longitudinal brackets on the mating enclosure.
- Corresponds to protection class IP 65 when locked.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.

Application

- To protect the connector insert from environmental influences.
- Can be used with many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors.

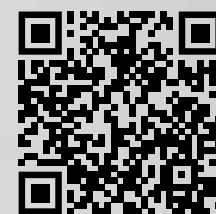


EPIC® Industrial connectors

Rectangular connectors • EPIC® H-A 3 Housings



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Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000437
ETIM 5.0/6.0 Class-Description:
Housing for industrial connectors



Material
EPIC® H-A 3 MAG
Housing: powder-coated zinc diecasting, grey
Lever: zinc-plated steel
Sealing: NBR



Protection rating
IP 65 (latched)
NEMA 250, UL50E: 12, 4 (latched)



VDE-tested:
EPIC® H-A 3 MAG
Certified production control: VDE-REG.
no.: B437
UL-tested:
UL File Number: E75770



Temperature range
–40 °C to +100 °C, short-term up to +125 °C

EPIC® H-A 3 MAG

Portfolio expansion of the robust, mechanically resistant rectangular connector housings; new construction forms, new design.

Benefit

- The EPIC® H-A 3 Series comprises the smallest housings in the heavy-duty industrial connector range and ensures secure connections in a small amount of space.
- The bulkhead mounting housing is mateable with many commercially available hood housings.
- Integrated, internal seal simplifies assembly (no small parts to lose).
- Locking is via longitudinal brackets on the mating enclosure.
- Corresponds to protection class IP 65 when locked.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.

Application

- To protect the connector insert from environmental influences.
- For use with many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors.



EPIC® Industrial connectors

Rectangular connectors • EPIC® H-A 3 Housings



Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000437
ETIM 5.0/6.0 Class-Description:
Housing for industrial connectors

Material
Housing: powder-coated zinc diecasting,
grey
Lever: zinc-plated steel
Sealing: NBR

IP **Protection rating**
IP 65 (latched)
NEMA 250, UL50E: 12, 4 (latched)

DIN VDE **VDE-tested:**
Certified production control: VDE-REG.
no.: B437
UL-tested:
UL File Number: E75770

Temperature range
-40 °C to +100 °C, short-term up to +125 °C

EPIC® H-A 3 MAGS

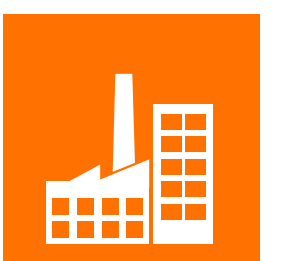
Portfolio expansion of the robust, mechanically resistant rectangular connector housings; new construction forms, new design.

Benefit

- The EPIC® H-A 3 Series comprises the smallest housings in the heavy-duty industrial connector range and ensures secure connections in the smallest of spaces.
- The bulkhead mounting housing is mateable to many commercially available hood housings.
- With lateral cable entry for orderly cable routing and to prevent excessive bending of the cable.
- Integrated, internal seal simplifies assembly (no small parts to lose).
- Locking is via longitudinal brackets on the mating enclosure.
- Corresponds to protection class IP 65 when locked.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.

Application

- To protect the connector insert from environmental influences.
- For use with many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors.



EPIC® Industrial connectors

Rectangular connectors • EPIC® H-A 3 Housings



Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000437
ETIM 5.0/6.0 Class-Description:
Housing for industrial connectors

Material
Housing: powder-coated zinc diecasting,
grey
Lever: zinc-plated steel
Sealing: NBR

IP **Protection rating**
IP 65 (latched)
NEMA 250, UL50E: 12, 4 (latched)

DIN VDE **VDE-tested:**
Certified production control: VDE-REG.
no.: B437
UL-tested:
UL File Number: E75770

Temperature range
-40 °C to +100 °C, short-term up to +125 °C

EPIC® H-A 3 MAGSV

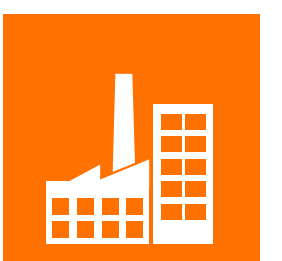
Portfolio expansion of the robust, mechanically resistant rectangular connector housings; new construction forms, new design.

Benefit

- The EPIC® H-A 3 Series comprises the smallest housings in the heavy-duty industrial connector range and ensures secure connections in a small amount of space.
- The bulkhead mounting housing is mateable with many commercially available hood housings.
- With lateral cable entry for orderly cable routing and to prevent excessive bending of the cable.
- The integrated SKINTOP® cable gland made of brass is used for sealing and strain-relieving cable entry. Compared to enclosures where the cable gland is added separately, the overall size of the enclosure is more space-saving.
- Integrated, internal seal simplifies assembly (no small parts to lose).
- Locking is via longitudinal brackets on the mating enclosure.
- Corresponds to protection class IP 65 when locked.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.

Application

- To protect the connector insert from environmental influences.
- Can be used with many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors



EPIC® Industrial connectors

Rectangular connectors • EPIC® H-A 3 Housings



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000437
ETIM 5.0/6.0 Class-Description:
Housing for industrial connectors



Material
Housing: powder-coated zinc diecasting, grey
Lever: zinc-plated steel
Sealing: NBR



Protection rating
IP 65 (latched)
NEMA 250, UL50E: 12, 4 (latched)



VDE-tested:
Certified production control: VDE-REG.
no.: B437
UL-tested:
UL File Number: E75770



Temperature range
-40 °C to +100 °C, short-term up to
+125 °C

EPIC® H-A 3 MTGVB +

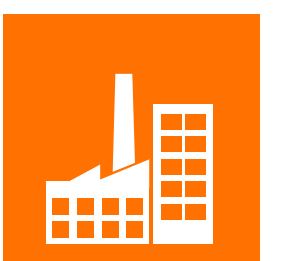
Portfolio expansion of the robust, mechanically resistant rectangular connector housings; new construction forms, new design.

Benefit

- The EPIC® H-A 3 Series comprises the smallest housings in the heavy-duty industrial connector range and ensures secure connections in a small amount of space.
- The coupling housing is mateable with many commercially available hood housings.
- The integrated SKINTOP® cable gland made of brass is used for sealing and strain-relieving cable entry. Compared to enclosures where the cable gland is added separately, the overall size of the enclosure is more space-saving.
- The locking is done via crossbars.
- Corresponds to protection class IP 65 when locked.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.

Application

- To protect the connector insert from environmental influences.
- For use with many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors.



EPIC® Industrial connectors

Rectangular connectors • EPIC® H-A 3 Housings



Technical Data



Material
Housing: powder-coated zinc diecasting, grey
Lever: zinc-plated steel
Sealing: NBR



Protection rating
IP 66 / IP 68 1 meter / 10 hours (locked)
IP 44 (cover locked)



Temperature range
-40 °C to +100 °C, short-term up to +125 °C

EPIC® H-A 3 MAGD

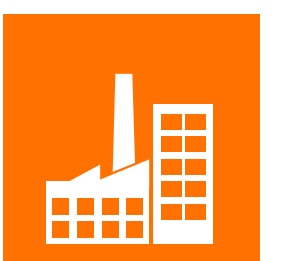
Portfolio expansion of the robust, mechanically resistant rectangular connector housings; new construction forms, new design.

Benefit

- The EPIC® H-A 3 Series comprises the smallest housings in the heavy-duty industrial connector range and ensures secure connections in a small amount of space.
- The panel mount housing is mateable with many commercially available hood housings.
- Protective cover protects against environmental influences when not plugged in.
- Integrated, internal seal simplifies assembly (no small parts to lose).
- Locking is via longitudinal brackets on the mating enclosure.
- Protective cover protects against environmental influences when not plugged in.
- The arrow as a new design element on the surface of the housing is easy to feel and simplifies plugging in spatially confined and possibly poorly visible application areas.

Application

- To protect the connector insert from environmental influences.
- Can be used with many EPIC® rectangular connector inserts.
- For power supply connection of devices and machines in various applications.
- Withstands high environmental and mechanical stresses.
- Suitable for the outdoors.



EPIC® Industrial connectors


Rectangular connectors • EPIC® H-Q 5 Inserts





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Technical Data


 **Rated voltage (V)**
400 V
Rated impulse voltage
6 kV


 **Rated current (A)**
30 A


 **Pollution degree**
3


 **Flammability**
UL94 V-0


Contact resistance
< 2 mOhm

 **Number of contacts**
5 + PE

 **Termination methods**
Crimp termination: 0.14 – 4.0 mm²
Crimp termination PE: 0.25 mm² ...4.0 mm²

 **Material**
Polyamide

 **Cycle of mechanical operation**
500

 **Temperature range**
–40 °C to +120 °C
Article number

EPIC® H-Q 5

Compact, 5-pole rectangular connector insert, powerful up to 30 A, for screw or crimpable PE contact.

Benefit

- Powerful up to 30 A thanks to compact arrangement of the 5 power contacts.
- Crimp connection creates a vibration-proof connection, ensures maximum contacting reliability between contact and cable and is suitable for automated assembly.
- Protective earth (PE) can be connected in two ways: Variant „PE-S“ can be used with a PE screw contact, variant „PE-C“ with a PE crimp contact.
- Special PE crimp contact enables automated assembly of a completely vibration-proof connector.
- Mateable with market standard connectors.
- Suitable for conductor cross-sections from 0.14 – 4.00 mm².

Application

- For power supply connection of devices and machines in various applications.
- Suitable for wiring inside the control cabinet.
- Can be used with many EPIC® rectangular connector housings.



EPIC® Industrial connectors

Rectangular connectors • EPIC® Contacts + tools



EPIC® H-Q 5 PE contacts

Crimpable and thus vibration-proof PE protective conductor contact for rectangular connector inserts EPIC® H-Q and EPIC® H-Q 7

Benefit

- Crimp connection creates a vibration-proof connection, ensures maximum contacting reliability between contact and cable and is suitable for automated assembly.
- Silver coating with tarnish protection for high electrical conductivity and thermal conductivity.
- Suitable for conductor cross-sections up to 4.00 mm².

Application

- • For use with EPIC® H-Q 5 and EPIC® H-Q 7 rectangular connector inserts.

Technical Data

Contact resistance
< 2 mOhm



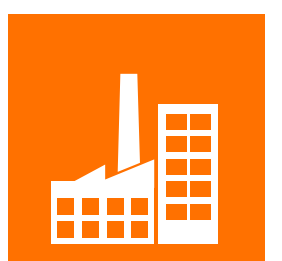
Termination methods
Crimp termination: 0.75 mm² ... 4.0 mm²



Material
brass silver plated



Cycle of mechanical operation
500



EPIC® Industrial connectors

Rectangular connectors • EPIC® H-Q 7 Inserts



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EPIC® H-Q 7

Compact, 7-pole rectangular connector insert, powerful up to 10 A, for screw or crimpable PE contact.

Benefit


- Compact contact arrangement allows 7 contacts + 1 PE contact in a small installation space.
- Crimp connection creates a vibration-proof connection, ensures maximum contacting reliability between contact and cable and is suitable for automated assembly.
- Protective earth (PE) can be connected in two ways: Variant „PE-S“ can be used with a PE screw contact, variant „PE-C“ with a PE crimp contact.
- Special PE crimp contact enables automated assembly of a completely vibration-proof connector.
- Mateable with market standard connectors.
- Suitable for conductor cross-sections from 0.14 - 2.50 mm².


Application


- For power supply connection of devices and machines in various applications.
- Suitable for wiring inside the control cabinet.
- Can be used with many EPIC® rectangular connector housings.

Technical Data


 **Rated voltage (V)**
400 V
Rated impulse voltage
6 kV


 **Rated current (A)**
10 A


 **Pollution degree**
3


 **Flammability**
UL94 V-0


Contact resistance
< 2 mOhm


 **Number of contacts**
7

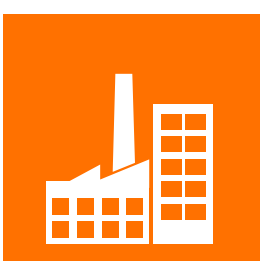
 **Termination methods**
Crimp termination: 0.14 - 2.5 mm²
Crimp termination PE: 0.25 mm² ...4.0 mm²

 **Material**
Polyamide

 **Cycle of mechanical operation**
500

 **VDE-tested:**
UL: in preparation

 **Temperature range**
-40 °C to +120 °C

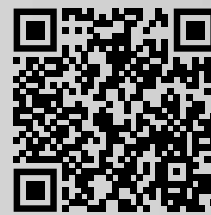


EPIC® Industrial connectors


Circular connectors • EPIC® POWER M12L





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Technical Data


 **Rated voltage (V)**
63 V


 **Rated current (A)**
16 A


 **Pollution degree**
3

 **Number of contacts**
4, 4+PE

 **Termination methods**
0.75mm² – 2.5mm²

 **Material**
Housing: nickel-plated zinc die-casting,
nickel-plated brass
Insert: PA
Seal: FPM

 **Protection rating**
IP65/IP67/IP69

 **Temperature range**
–25 °C up to +125 °C

EPIC® POWER M12L D6

Smallest M 12 power connector available on the market, L-coded, for power supply in the low-voltage range (decentralised I/O modules, DC motors), PROFINET-compliant.

Benefit

- Coupling plug D6 for use with attachment housing G4 or cable plug F6.
- Powerful up to 16 A despite extremely space-saving size for very small devices.
- Mechanical L-coding of the mating face prevents mismating with mating connector.
- Crimp connection creates a vibration-proof connection, ensures maximum contacting reliability between contact and cable and is suitable for automated assembly.
- Suitable for conductor cross-sections from 0.75 – 2.50 mm².
- When plugged in, protection class IP 67 can be achieved.
- VDE-tested quality.
- UL certification according to technical data enables the use of the product in the North American region.
- Available as 4-pole variant with black insulating body and as 4+FE variant with grey insulating body and functional earth contact (FE).

Application

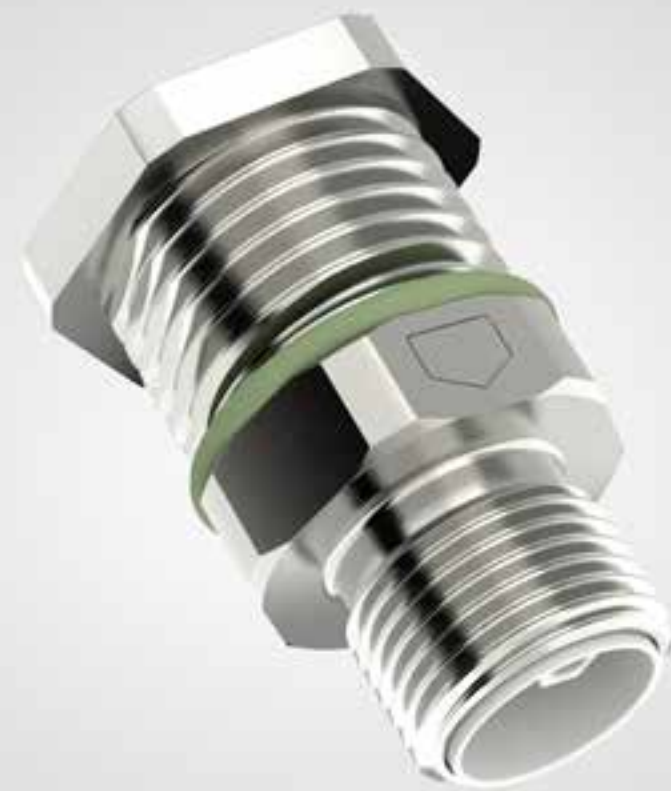
- For DC applications in the low-voltage range.
- For power supply of smaller devices (e.g. decentralised I/O modules, smaller motors).
- Also suitable for power supply in the PROFINET network (M12L is considered the standardised power interface there).

**PROFI
NET**

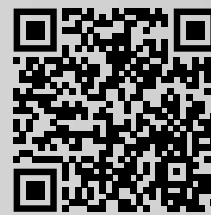


EPIC® Industrial connectors


Circular connectors • EPIC® POWER M12L





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Technical Data


 **Rated voltage (V)**
63 V


 **Rated current (A)**
16 A


 **Pollution degree**
3

 **Number of contacts**
4, 4+PE

 **Termination methods**
0.75mm² – 2.5mm²

 **Material**
Housing: nickel-plated zinc die-casting,
nickel-plated brass
Insert: PA
Seal: FPM

 **Protection rating**
IP65/IP67/IP69

 **Temperature range**
–25 °C up to +125 °C

EPIC® POWER M12L G4

Smallest M 12 power connector available on the market, L-coded, for power supply in the low-voltage range (decentralised I/O modules, DC motors), PROFINET-compliant.

Benefit

- Attachment housing G4 in combination with coupling plug F6.
- Powerful up to 16 A despite extremely space-saving size for very small devices.
- Mechanical L-coding of the mating face prevents mismating with mating connector.
- Crimp connection creates a vibration-proof connection, ensures maximum contacting reliability between contact and cable and is suitable for automated assembly.
- Suitable for conductor cross-sections from 0.75 – 2.50 mm².
- When plugged in, protection class IP 67 can be achieved.
- VDE-tested quality.
- UL certification according to technical data enables using the product in the North American region.
- Available as 4-pole variant with black insulating body and as 4+FE variant with grey insulating body and functional earth contact (FE).

Application

- For DC applications in low-voltage range.
- For power supply of smaller devices (e.g. decentralised I/O modules, smaller motors).
- Also suitable for power supply in the PROFINET network (M12L is considered the standardised power interface there).

**PROFI
NET**



EPIC® Industrial connectors

Circular connectors • EPIC® POWER M12L



Click or Scan – More
information available online



Technical Data



Rated voltage (V)
63 V



Rated current (A)
16 A



Pollution degree
3



Number of contacts
4, 4+PE



Termination methods
0.75mm² – 2.5mm²



Material
Housing: nickel-plated zinc die-casting,
nickel-plated brass
Insert: PA
Seal: FPM



Protection rating
IP65/IP67/IP69



Temperature range
–25 °C up to +125 °C

EPIC® POWER M12L F6

Smallest M 12 power connector available on the market, L-coded, for power supply in the low-voltage range (decentralised I/O modules, DC motors), PROFINET-compliant.

Benefit

- Cable connector F6 can be used with attachment housing A4 or coupling connector D6.
- Powerful up to 16 A despite extremely space-saving size for very small devices.
- Mechanical L-coding of the mating face prevents mismating with mating connector.
- Crimp connection creates a vibration-proof connection, ensures maximum contacting reliability between contact and cable and is suitable for automated assembly.
- Suitable for conductor cross-sections from 0.75 – 2.50 mm².
- When plugged in, protection class IP 67 can be achieved.
- VDE-tested quality.
- UL certification according to technical data enables using the product in the North American region.
- Available as 4-pole variant with black insulating body and as 4+FE variant with grey insulating body and functional earth contact (FE).

Application

- • For DC applications in low-voltage range.
- For power supply of smaller devices (e.g. decentralised I/O modules, smaller motors).
- Also suitable for power supply in the PROFINET network (M12L is considered the standardised power interface there).



EPIC® Industrial connectors

Circular connectors • EPIC® POWER M12L



Click or Scan – More
information available online



Technical Data



Rated voltage (V)
63 V



Rated current (A)
16 A



Pollution degree
3



Number of contacts
4, 4+PE



Termination methods
0.75mm² – 2.5mm²



Material
Housing: nickel-plated zinc die-casting,
nickel-plated brass
Insert: PA,
Seal: FPM



Protection rating
IP65/IP67/IP69



Temperature range
–25 °C up to +125 °C

EPIC® POWER M12L A4

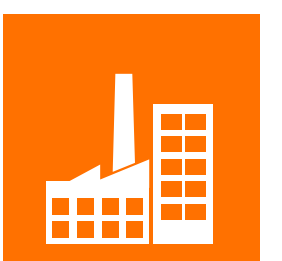
Smallest M 12 power connector available on the market, L-coded, for power supply in the low-voltage range (decentralised I/O modules, DC motors), PROFINET-compliant.

Benefit

- Surface-mount housing A4 for using the cable connector D6.
- Powerful up to 16 A despite extremely space-saving size for very small devices.
- Mechanical L-coding of the mating face prevents mismating with mating connector.
- Crimp connection creates a vibration-proof connection, ensures maximum contacting reliability between contact and cable and is suitable for automated assembly.
- Suitable for conductor cross-sections from 0.75 – 2.50 mm².
- When plugged in, protection class IP 67 can be achieved.
- VDE-tested quality.
- UL certification according to technical data enables using the product in the North American region.
- Available as 4-pole variant with black insulating body and as 4+FE variant with grey insulating body and functional earth contact (FE).

Application

- For DC applications in the low-voltage range.
- For power supply of smaller devices (e.g. decentralised I/O modules, smaller motors).
- Also suitable for power supply in the PROFINET network (M12L is considered the standardised power interface there).





EPIC® Industrial connectors

Circular connectors • EPIC® POWER M12L



Technical Data

 **Termination methods**
0,75mm² – 2,5mm²

 **Material**
brass gold plated CuZn/Au

EPIC® POWER M12L contacts

Contacts with multiple slots and conductor cross-section marking, for EPIC® POWER M12L power connectors.

Benefit

- Crimp contact ensures maximum contacting reliability between contact and cable and establishes a vibration-proof connection.
- With improved contacting due to multiple slots.
- Clear marking of the maximum conductor cross-section prevents incorrect assembly.
- With corrosion-resistant gold coating for low contact resistance and long product life.
- Suitable for conductor cross-sections up to 2.5 mm².

Application

- For use with EPIC® POWER M12L circular connectors.



EPIC® Industrial connectors

Rectangular connectors • EPIC® MH modular system module



Click or Scan – More
information available online



EPIC® MH 2 40A

2-pole rectangular connector insert for modular system EPIC® MH, powerful up to 40 A, also for railway applications.


Benefit


- Module with 2 power contacts for power supply up to 40 A and voltages up to 1000 V.
- Modular assembled connectors are mateable with market standard connectors.
- Crimp connection creates a vibration-proof connection, ensures maximum contacting reliability between contact and cable and is suitable for automated assembly.
- Different crimp contacts available for different conductor cross-sections.
- Snaps effortlessly into the fixed EPIC® MH multi-frame with a clicking sound. Easier to assemble than folding and sliding frames.
- UL certification according to technical data enables use of the product in the North American region.


Application


- For the production of a modular connector insert.
- For power supply connection of devices and machines in various applications.
- Can be used in rail vehicles in compliance with standards (fire behaviour test according to DIN EN 45545-2:2016-02, requirement sets R22 and R23, hazard levels HL1, HL2 and HL3).

Technical Data


 **Rated voltage (V)**
1000 V AC/DC
Rated impulse voltage
8 kV


 **Rated current (A)**
40


 **Pollution degree**
3

 **Flammability**
UL94 V-0


Contact resistance
< 5 mOhm

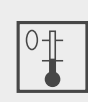
 **Number of contacts**
2

 **Termination methods**
Crimp termination: 1.5 - 10 mm²

 **Material**
Polyamide, glass fibre-reinforced

 **Cycle of mechanical operation**
500

 **VDE-tested:**
UL: in preparation

 **Temperature range**
-40 °C
+125 °C



Cable glands

SKINTOP® cable gland accessories metric • Multiple sealing inserts/dust protection



Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000032
ETIM 5.0/6.0 Class-Description: Plug for cable screw gland

On request
Special shapes
Colour delivered
Black, RAL 9005
Blue, RAL 5017

Material
NBR, FKM, silicone

IP Protection rating
IP 54
IP 68 (at maximum use of all boreholes)

Temperature range
NBR: -40 °C bis +100 °C
FKM: -20 °C bis +200 °C
silicone: -50 °C bis +200 °C

SKINTOP® DIX-M

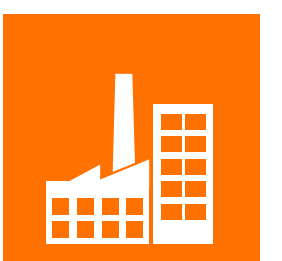
Multiple sealing insert made of NBR (oil resistant), FKM (heat resistant) or silicone (chemical resistant), leads several cables through one cable gland.

Benefit

- Easy insertion of several cables through one cable gland.
- Multiple cable insertion enables higher packing density.
- Gentle clamping of the cables due to the high elasticity of the sealing insert material.
- Protection class IP 68 can be achieved, if all holes are used by cables with nominal diameter and unused openings are closed with SKINTOP® DIX-DV sealing plugs.
- Variety of versions available, depending on the number and diameter of cables. Made of acrylonitrile butadiene rubber (NBR), fluororubber (FKM) or silicone (SI).
- The NBR variants are oil-resistant.
- The FKM variants are resistant to aggressive media such as alkalis, acids, solvents and are also oil-resistant. They are extremely heat-resistant and suitable for use with extreme high temperatures (up to +200 °C).
- The silicone variants are resistant to ECOLAB® cleaning agents and disinfectants and are chemically resistant in many cases. They conform to FDA 21 CFR 177.2600 and are therefore permitted for food and beverage industry. With their blue colour, they can easily distinguish from food. In addition, they are extremely flexible at low temperatures and suitable for use at extreme minus temperatures (down to -50 °C).

Application

- For use with metric SKINTOP®/SKINTOP® CLICK cable glands.
- Suitable for outdoor use.





Cable glands


SKINTOP® cable bushing systems • Cable bushing systems




Technical Data

 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000240
ETIM 5.0/6.0 Class-Description:
Cable entry

 **Note**
Individual hole configuration on request

 **Material**
Frame: Polycarbonat
Sealing: Gel
Pressure compensation unit: PBT,
PTFE, NBR

 **Protection rating**
IP 68

 **Temperature range**
-30 °C to +100 °C

SKINTOP® MULTI VENT

WHAT IS NEW? Multiple entry for up to 29 cables, with breathable pressure compensation element for venting when enclosures are closed.

Benefit

- Multiple insertion of cables enables higher packing density (up to 29 cables depending on the variant).
- Large clamping areas, each variable by 4 mm for different cable diameters as well as clamping areas especially for AS-I bus cables.
- Flexibility in the choice of cable diameters reduces the variety of parts in the warehouse and provides logistical and cost advantages.
- Direct cable entry without pre-piercing the bushings thanks to elastic gel technology with innovative membrane technology.
- Includes breathable pressure compensation element, which provides the necessary pressure compensation in closed enclosures. This completely prevents the ingress of moisture.
- Clear marking of the feed-through points and clamping areas. There is no potential for errors during cable entry.
- Simple mounting of the multiple insertion on the enclosure by means of 4 fastening screws. The adhesive effect of the sealing gel allows an easy positioning of the product during assembly.
- Available in different versions for a wide range of applications.

Application

- For sealing and strain-relieving multiple insertion of non-assembled cables and media hoses through a housing.
- Specialized for closed enclosures to achieve optimum ventilation.
- Can be used in dry, humid and oily environments.
- Suitable for outdoor use.



Cable glands

SKINDICHT® cable gland accessories PG • Adapter



SKINDICHT® MA-PG/M

Cable gland accessories made of lead-free brass to comply with future RoHS regulations (product characteristics identical to lead-containing articles).

Benefit

- Enables easy transition from a PG male thread to a metric female thread.
- Withstands temperatures up to +200 °C.
- Available for thread sizes up to PG36 or up to M40.
- Form A in easy-grip knurled design for easy screwing in of the adapter even in oily environments; form B in smooth design.
- Article numbers ending in „LF“ are lead-free product alternatives with the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys. It could be banned in the future according to the RoHS Directive.

Application

- For applications with different types of threads.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.

Technical Data



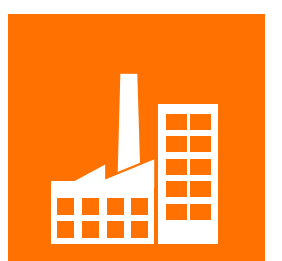
Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000441
ETIM 5.0/6.0 Class-Description: Cable screw gland



Material
Nickel-plated brass



Temperature range
-60 °C to +200 °C



Cable glands

SKINDICHT® cable gland accessories metric • Blind plugs



SKINDICHT® BL-M

Cable gland accessories made of lead-free brass to comply with future RoHS regulations (product characteristics identical to lead-containing articles).


Benefit


- Withstands temperatures up to +200 °C.
- Simple assembly by using a slotted screwdriver.
- Article numbers ending in „LF“ are lead-free product alternatives with the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys. It could be banned in the future according to the RoHS Directive.


Application


- For closing an unoccupied metric threaded hole on the housing.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.


Technical Data


 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000032
ETIM 5.0/6.0 Class-Description: Plug for cable screw gland

 **Certifications**
UL File E79903

 **On request**
Fitted with FKM O-ring (-20 °C to +200 °C)

 **Material**
Body: nickel-plated brass
O-ring: NBR

 **Protection rating**
IP 54
IP 68 (with O-ring)

 **Temperature range**
With O-ring: -20 °C to +100 °C
Without O-ring: -60 °C to +200 °C



Cable glands

SKINDICHT® cable gland accessories metric • Blind plugs



SKINDICHT® BL-M hex.

Cable gland accessories made of lead-free brass to comply with future RoHS regulations (product characteristics identical to lead-containing articles).


Benefit


- Withstands temperatures up to +100 °C.
- Mounted O-ring enables liquid-tight sealing of the threaded/through hole and for that reason a higher degree of protection (up to IP 68).
- Simple assembly by using an open-end spanner.
- Article numbers ending in „LF“ are lead-free product alternatives with the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys. It could be banned in the future according to the RoHS Directive.


Application


- For closing an unoccupied metric threaded hole on the housing.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.

Technical Data

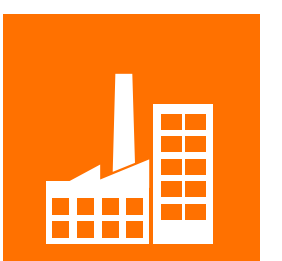
 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000032
ETIM 5.0/6.0 Class-Description: Plug for cable screw gland

 **On request**
Fitted with FKM O-ring (-20 °C to +200 °C)

 **Material**
Body: nickel-plated brass
O-ring: NBR

 **Protection rating**
IP 68 - 5 bar

 **Temperature range**
-20 °C to +100 °C



Cable glands

SKINDICHT® cable gland accessories metric • Reducers



SKINDICHT® MR-M

Cable gland accessories made of lead-free brass to comply with future RoHS regulations (product characteristics identical to lead-containing articles).


Benefit


- Corrects the size difference between the connection thread of a cable gland and the threaded hole in an enclosure.
- Provides flexibility in the selection of a cable gland, as the selection is independent to the threaded hole of the enclosure.
- Article numbers ending in „LF“ are lead-free product alternatives with the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys. It could be banned in the future according to the RoHS Directive.


Application


- For use with a metric cable gland whose connection thread is smaller than the existing threaded hole.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.

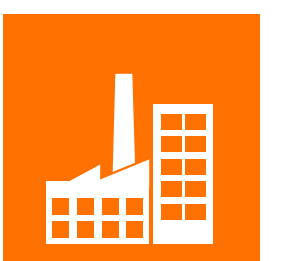
Technical Data

 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000441
ETIM 5.0/6.0 Class-Description: Cable screw gland

 **On request**
Also available with pre-installed O-ring

 **Material**
Nickel-plated brass

 **Temperature range**
-60 °C to +200 °C



Cable glands

SKINDICHT® cable gland accessories metric • Reducers



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000441
ETIM 5.0/6.0 Class-Description: Cable screw gland



On request
Also available with pre-installed O-ring



Material
Nickel-plated brass



Temperature range
-60 °C to +200 °C

SKINDICHT® MR-M hex.

Cable gland accessories made of lead-free brass to comply with future RoHS regulations (product characteristics identical to lead-containing articles).

Benefit

- Corrects the size difference between the connection thread of a cable gland and the threaded hole in an enclosure.
- Provides flexibility in the selection of a cable gland, as the selection is independent to the threaded hole of the enclosure.
- Mounted O-ring enables a higher protection class (IP) for a cable gland due to the secure seal to the enclosure.
- Article numbers ending in „LF“ are lead-free product alternatives with the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys. It could be banned in the future according to the RoHS Directive.

Application

- For use with a metric cable gland whose connection thread is smaller than the existing threaded hole.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.



Cable glands

SKINDICHT® cable gland accessories metric • Enlargers



SKINDICHT® ME-M

Cable gland accessories made of lead-free brass to comply with future RoHS regulations (product characteristics identical to lead-containing articles).


Benefit


- Corrects the size difference between the connection thread of a cable gland and the threaded hole in an enclosure.
- Provides flexibility in the selection of a cable gland, as the selection is independent of the threaded hole of the enclosure.
- Article numbers ending in „LF“ are lead-free product alternatives with the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys. It could be banned in the future according to the RoHS Directive.


Application


- For use with a metric cable gland whose connection thread is larger than the existing threaded hole.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.

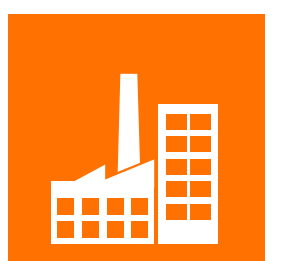
Technical Data

 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000441
ETIM 5.0/6.0 Class-Description: Cable screw gland

 **On request**
with O-ring fitted

 **Material**
Nickel-plated brass

 **Temperature range**
-60 °C to +200 °C



Cable glands

SKINDICHT® cable gland accessories metric • Counter nuts



Technical Data



Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000940
ETIM 5.0/6.0 Class-Description:
Locknut for cable screw gland



Material
Nickel-plated brass



Temperature range
-60 °C to +200 °C

SKINDICHT® SM-PE-M

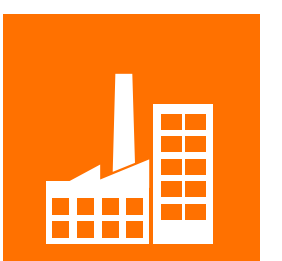
Cable gland accessories made of lead-free brass to comply with future RoHS regulations (product characteristics identical to lead-containing articles).

Benefit

- Optimum contacting of a coated enclosure for protection against electromagnetic interference and for equipotential bonding.
- Contact is achieved when the locknut is tightened by the cutting edges scratching the coated layer of the housing.
- Withstands temperatures up to +200 °C.
- Article numbers ending in „LF“ are lead-free product alternatives with the same product properties. „Lead-free“ articles do not contain lead, which is currently still allowed to make up to four percent in copper alloys. It could be banned in the future according to the RoHS Directive.

Application

- For use on the inside of painted, anodised or powder-coated enclosures.
- Can be used with metric SKINTOP® and SKINDICHT® cable glands for applications where electromagnetic compatibility (EMC) is required.
- Withstands high chemical and mechanical stress.
- Suitable for outdoor use.





ETHERNET DATA TRANSMISSION



YOUR HIGHWAY FOR BIG DATA



ETHERLINE® SERVO DQ Y CAT.5e

Shielded Cat.5e Ethernet cable with PVC outer jacket for servo drive supply, for occasional moving use, compliant with the DRIVE-CLiQ® system interface.



ETHERLINE® ROBOT PN FC Cat.5e

1x4x22AWG

Highly flexible, Cat.5e Ethernet cable for continuously moving use with torsional stress, for PROFINET applications type R, variant „FC“ with Fast Connect connection.



ETHERLINE® ACCESS PN IP67

Industrial Ethernet switch with 8 ports for M12D connectors, protection class IP 67, for decentralised applications in PROFINET networks (CC-B).



ETHERLINE® ACCESS U IP67

Unmanaged industrial Ethernet switch with 8 ports for M12D connectors, protection class IP 67, for decentralised applications.



Coloured Clips for ETHERLINE® Patchcords

Coloured clip for RJ45 connectors to extend the latching lug and improve colour identification on LAPP Ethernet patch cables.



ETHERLINE® Cat. 6_A FD FC

Highly flexible 26 AWG Ethernet cable with Fast-Connect connection for permanently moving use in drag chains and short transmission distances.



SKINTOP® DIX-M AUTOMATION

Multiple sealing insert with longitudinal cut for assembled data cables, IP 68 sealing.





Data communication systems for ETHERNET technology


Industrial Ethernet, Cat.5 / 5e • Cables for flexible applications




Technical Data

 **Peak operating voltage**
max. 100 V (not for power applications)

 **Minimum bending radius**
Fixed installation: 6 x outer diameter
Occasional flexing: 15 x outer diameter

 **Test voltage**
Core/core: 700 V
Core/screen: 700 V

 **Characteristic impedance**
nom. 100 Ω

 **Temperature range**
Fixed installation: -15 °C up to +70 °C
Flexing: -5 °C to +70 °C

ETHERLINE® SERVO DQ Y Cat.5e

Encoder cables for DRIVE-CLiQ® applications

Benefit

- Compliant with the open DRIVE-CLiQ® system interface.
- Reduced cabling effort thanks to additional wire pair for power supply of the encoder.
- Ideal protection against electromagnetic interference due to copper shielding braid with high degree of coverage.
- Cat.5e performance up to 100 Mbit/s.

Application

- For use in SIEMENS® SINAMICS-S120 drive systems for servo drive supply.
- For wiring the control unit and synchronous motor and/or encoder with DRIVE-CLiQ® system interface.
- For fixed installation and occasional movement.
- Can be used in dry and damp rooms.
- PVC outer sheath is resistant to acids and alkalis.



Data communication systems for ETHERNET technology

PROFINET, Cat.5 • Typ R – Cables for robot application



Technical Data

Classification ETIM 5/6
ETIM 5.0/6.0 Class-ID: EC000830
ETIM 5.0/6.0 Class-Description:
Data cable

Peak operating voltage
(not for power applications)
125 V

Minimum bending radius
Fixed installation: 8 x outer diameter
Flexible use: 12 x outer diameter

Test voltage
Core/core: 2000 V
Core/screen: 2000 V

Characteristic impedance
nom. 100 W acc. to IEC 61156-6

Temperature range
Fixed installation: -40 °C to +80 °C
Flexible use: -20 °C to +60 °C

ETHERLINE® ROBOT PN FC Cat.5e 1x4x22AWG

What is new? The highly flexible Cat.5e Ethernet cable for continuous motion applications with torsional stress is now also available with Fast Connect connection.

Benefit

- Variant „FC“ with Fast-Connect construction with inner jacket enables effortless stripping and assembly of the cable.
- Line structure according to PROFINET standard „Type R“ for robot applications.
- Bundles essential drag chain, torsion and alternating bending properties in one cable.
- Compatible with PROFINET-compliant components.
- Special core stranding allows simultaneous bending and twisting (torsion angle up to $\pm 180^\circ/\text{m}$).
- Successfully tested to 5 million bending cycles in drag chain, 5 million torsion cycles and 1 million alternating bending cycles in TicToc bending test.
- Increased resistance to electromagnetic interference thanks to stranding as a star quad as well as double shielding made of aluminium-laminated foil and copper shielding braid with a high degree of coverage (SF/UTP).
- Low-capacity core insulation for long transmission paths.
- UL/CSA certification according to technical data enables use of the product in the North American region.

Application

- Especially for highly flexible, continuously moving use with torsional stress in industrial robots and handling devices in the PROFINET network (type R).
- Also suitable for EtherCAT and EtherNET/IP applications.
- Can be used in dry, damp and especially in rough and oily environments.
- PUR outer jacket withstands high mechanical loads.
- PUR outer jacket is insensitive to mineral oil-based lubricants and chemically resistant in many cases.



Data communication systems for ETHERNET technology

Industrial Ethernet • Active network components



ETHERLINE® ACCESS PN IP67

Industrial Ethernet switch with 8 ports for M12D connectors, protection class IP 67, for decentralised applications in PROFINET networks (CC-B).


Benefit


- With 8 ports (10/100Base-T(X)) for D-coded M12 connectors.
- Particularly suitable for harsh environments thanks to protection class IP 67.
- Prioritisation of PROFINET telegrams with real-time data.
- Easy configuration and diagnostics via PROFINET or web interface.
- Supports MRP (client), LLDP, DCP, SNMP, allows port mirroring, diagnostic alarms and detailed network statistics.


Application


- For use in PROFINET networks in automation technology („Conformance Class B“).
- For decentralised use at field level, outside the control cabinet.
- Can be used in an extended temperature range from –40 °C to +75 °C.

Technical Data

 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000734
ETIM 5.0/6.0 Class-Description:
Network switch

 **Power supply**
DC 24 V (18–30 V DC)

 **Protection rating**
IP 67

 **Temperature range**
–40 °C up to +75 °C



Data communication systems for ETHERNET technology

Industrial Ethernet • Active network components



ETHERLINE® ACCESS U IP67

Unmanaged industrial Ethernet switch with 8 ports for M12D connectors, protection class IP 67, for decentralised applications.


Benefit


- With 8 ports (10/100Base-T(X)) for D-coded M12 connectors.
- Particularly suitable for harsh environments thanks to protection class IP 67.
- Quickly ready for use with little installation effort.
- High performance due to generous 16K MAC address table and extensive 256Kbyte packet buffer.


Application


- For use in Ethernet-based networks in automation technology.
- Also suitable for use in PROFINET networks („Conformance Class A“).
- For decentralised use at field level, outside the control cabinet.
- Can be used in an extended temperature range from –40 °C to +75 °C.

Technical Data

 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000734
ETIM 5.0/6.0 Class-Description:
Network switch

 **Power supply**
DC 24 V (18–30 V DC)

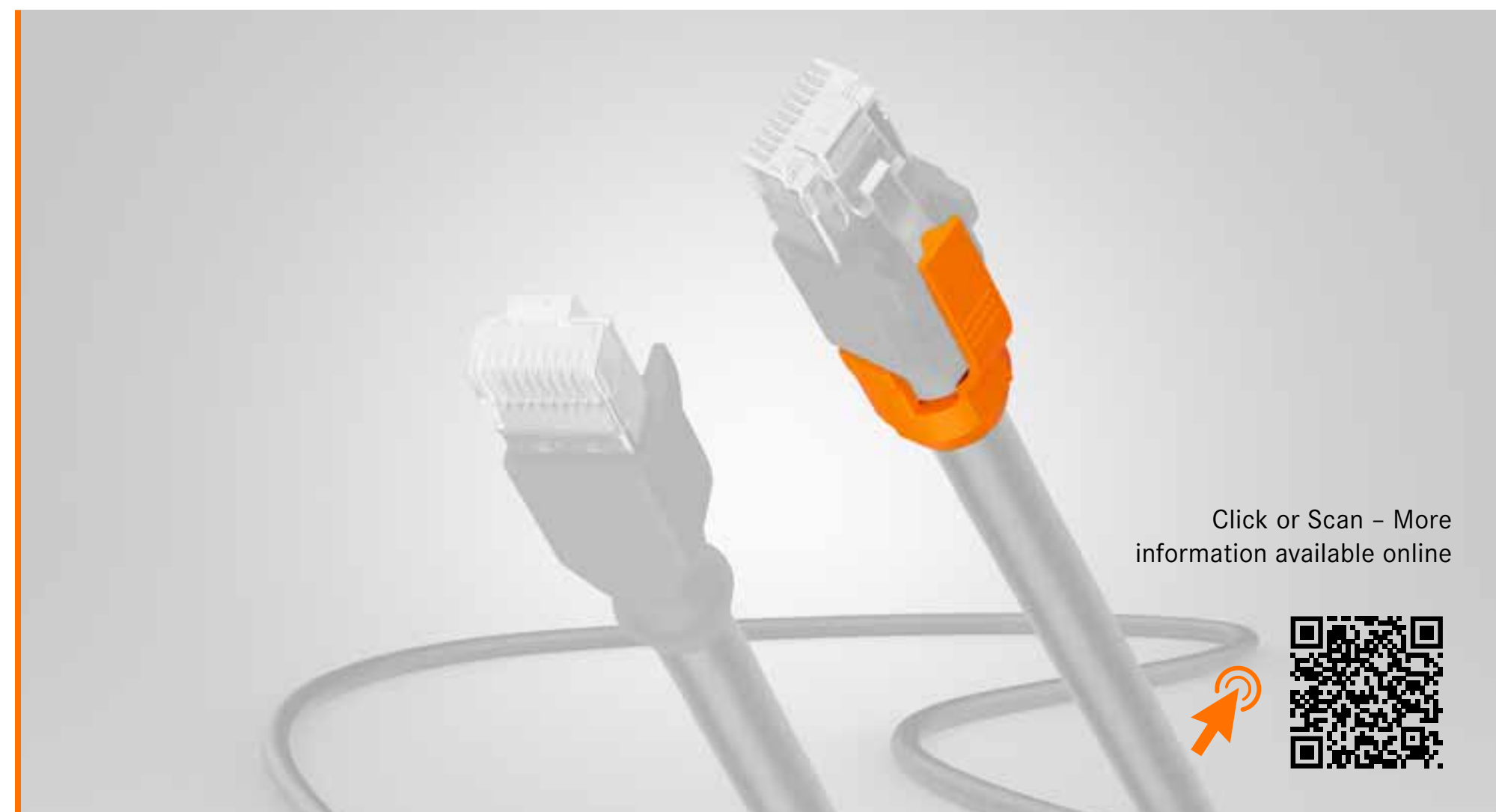
 **Protection rating**
IP 67

 **Temperature range**
–40 °C up to +75 °C





Data communication systems for ETHERNET technology

Industrial Ethernet, Accessories • Accessories Cable assemblies



Technical Data

 **Klassifikation ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC002310

 **Material Kontakt**
Polyoxymethylene (POM)

Coloured Clips for ETHERLINE® Patchcords

Coloured clip for RJ45 connectors to extend the latching lug and improve colour identification on LAPP Ethernet patch cables.

Benefit

- Extends the latching lug of the RJ45 connector and thus ensures a better grip.
- Used for better colour identification on Ethernet patch cables when many cables of the same colour are used (e.g. in the PROFINET network).
- Available in different colours.

Application

- For use in the control cabinet.
- For use with ETHERLINE® RJ45 patch cables from LAPP.
- Especially for devices with very high port density.
- Especially for switches with deep internal sockets.





Data communication systems for ETHERNET technology


Industrial Ethernet, Cat.6_A • Cables for continuous flexing applications




Technical Data

 **Peak operating voltage**
(not for power applications)
125 V

 **Minimum bending radius**
Flexing: 8 x outer diameter
Fixed installation: 4 x outer diameter

 **Characteristic impedance**
nom. 100 W acc. to IEC 61156-6

 **Temperature range**
cable halogenfree compound
Fixed installation: -25 °C to +80 °C
cable with PVC jacket
Fixed installation: -40 °C to +80 °C

ETHERLINE® Cat. 6_A FD FC

Highly flexible 26 AWG Ethernet cable with Fast-Connect connection for permanently moving use in drag chains and short transmission distances.

Benefit

- The „Fast Connect“ construction including inner sheath and separating cross significantly reduces the cable's assembly time, as the time-consuming removal of the pair shielding is no longer necessary. In addition it offers undiminished shielding of the wire pairs from each other.
- Additional protection against electromagnetic interference through double overall shielding made of aluminium-laminated foil and copper shielding braid with a high degree of coverage (SF/UTP).
- UL certification according to technical data enables the use of the product in the North American region.
- Fast information exchange through Ethernet technology.
- Cat.6_A performance up to 10 Gbit/s.
- For transmission of analogue and digital signals in the frequency range up to 500 MHz.
- Available with robust PVC outer sheath or abrasion-resistant PUR outer sheath.
- Successfully tested for over 1 million bending cycles in the drag chain.

Application

- Cable design allows highly flexible, continuously moving use in moving machine parts and in the drag chain.
- Usable in dry, damp and wet environments.
- Usable in a variety of ways depending on the sheath material.



ECOLAB®





Cable glands


SKINTOP® cable gland accessories metric • Multiple sealing inserts/dust protection




Technical Data

 **Classification ETIM 5/6**
ETIM 5.0/6.0 Class-ID: EC000032
ETIM 5.0/6.0 Class-Description: Plug
for cable screw gland

 **On request**
Special shapes
Colour delivered
Black, RAL 9005

 **Material**
NBR

 **Protection rating**
IP 54
IP 66 and IP 68 – 5 bar, 30 min (only
applies to slotted DIX inserts if the
specified clamping range is observed)

 **Temperature range**
–40 °C to +100 °C

SKINTOP® DIX-M AUTOMATION

WHAT IS NEW? Multiple sealing insert with longitudinal cut for assembled data cables, IP 68 sealing.

Benefit

- Special design with a round pilot hole and longitudinal cut for an easy insertion of one or more assembled data cables.
- Protection class IP 68 can be achieved if the holes are optimally covered.
- High functional safety thanks to optimal strain relief.

Application

- For use with metric SKINTOP®/SKINTOP® CLICK cable glands.
- To be used instead of the standard sealing insert in the SKINTOP® cable gland.
- UV and oil resistant material.



LEGEND

NEW PRODUCT



PRODUCT EXTENSION



PRODUCT CHARACTERISTICS

 Suitable for outdoor use	 Maximum vibration protection	 Clean room	 Temperature-resistant
 Good chemical resistance	 Mechanical resistance	 Robust	 Torsion-resistant
 Flame-retardant	 Assembly time	 Acid-resistant	 Torsion load
 Wide clamping range	 Low weight	 Reliability	 UV-resistant
 Halogen-free	 Oil-resistant	 Integrated SKINTOP® cable gland	 Waterproof
 Heat-resistant	 Optimum strain relief	 Voltage	 Variety of approval certifications
 Cold-resistant	 Space requirement	 Connector with standard housing unit	 Submersible use
 Corrosion-resistant	 Cable chain	 Interference signals	

Please note:
The purpose of the icons is to provide you with a quick overview and a rough indication of the product features to which the corresponding information relates. You can find details of product characteristics in the “technical data” sections on the product pages.



Note: A detailed article list is available online or from your contact person.



Click or Scan

Due to the current material shortages, delivery times may be longer.