



# Circular Connectors



## HUMMEL AG





## Online Catalog

- Product Pictures and Product Information
- Product and Assembly Videos
- Assembly and Operations Manual
- Technical drawings
- 3D data
- Certificates



## Download-Center

- Catalog and Flyer
- Assembly instructions and installation instructions
- Press releases
- Certificates and approvals
- ...



## Searching Products

- Part Number search
- Searching Details



## Enclosure-Configurator

- Individual Enclosures
- Enclosure Solutions
- Online configuration, requesting and ordering



## Technology Center

- Technical Information (Protection, thread, material, ...)
- Diagrams and evaluation
- Product description
- Assembly Video and Operations Manual



## NEWS News of the HUMMEL AG

- Trade fairs and exhibitions
- Press releases
- New Products
- Job vacancies
- Studies, training and vocational practical training



## Solutions all from one source



Touch



Cable Glands,  
Circular Connectors



Solutions



Industrial Enclosures



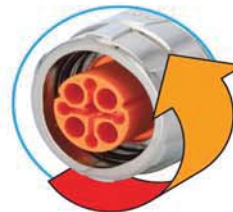
Electronic

## TWILOCK

- + Quick Connect with patented Polygon Lock
- + Easy handling
- + Exceptional functionality
- + Multi functional: Ideal with Twilock and screw connection



Clearly defined Positioning



Can be locked with a slight rotation from OPEN to CLOSE



Multi functional: Special thread allows use of Twilock and screw connection

## TWINTUS

The new Low-Cost-Standard for Drives

- + Minimized Size
- + Free choice of Signal and Power Inserts
- + Flange 20 x 20 and 25 x 25



Connector  
4 small drives

# TWINTUS



Colour coded inserts  
(DESINA colour code)



IP 67 (NEMA 4x) self sealing,  
even for threaded holes



Optional EMC-sheet for separating  
signal and power areas



Version M 16 / M 12 available

## M 23 Fast Ethernet PoE

- + Data transfer up to Gigabit rate, Multibus II capability
- + Hybrid connectors for combined data and power transmission
- + Five separate shield potentials available
- + Rugged, safe, compact: ideal for use in rough industrial environments



## M 23 RJ 45: Robust – simple & small!



Design allows for terminated patch cable



Integrated coupler accomodates off-the-shelf RJ 45 patch cables.



Integrated cable strain relief warrant an IP 67 / IP 69 K rating making the M 23 based RJ 45 Connector an ideal solution for robust applications.

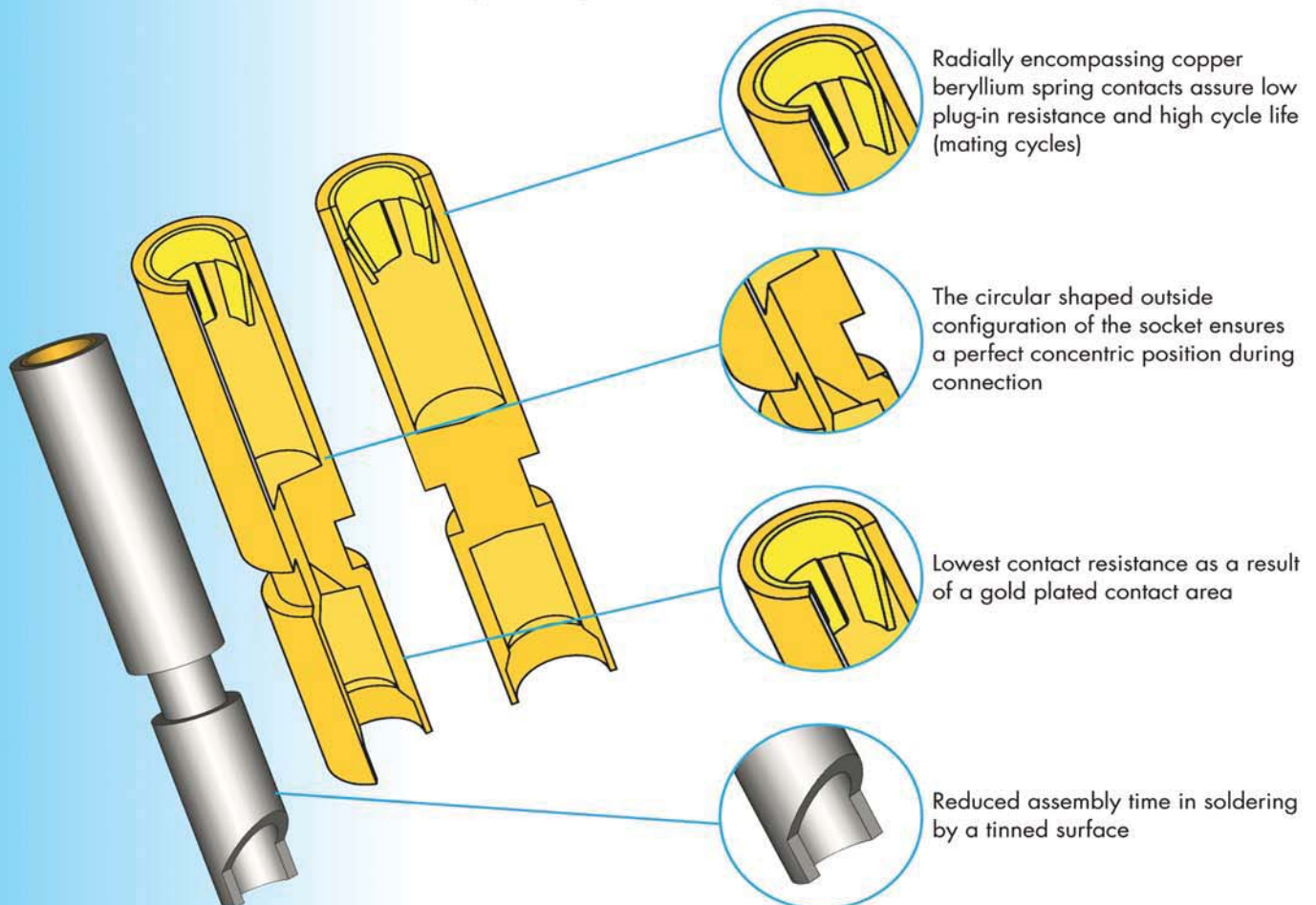


A standard RJ 45 connection is suitable as service and programmable interface.

## SLS-Technology

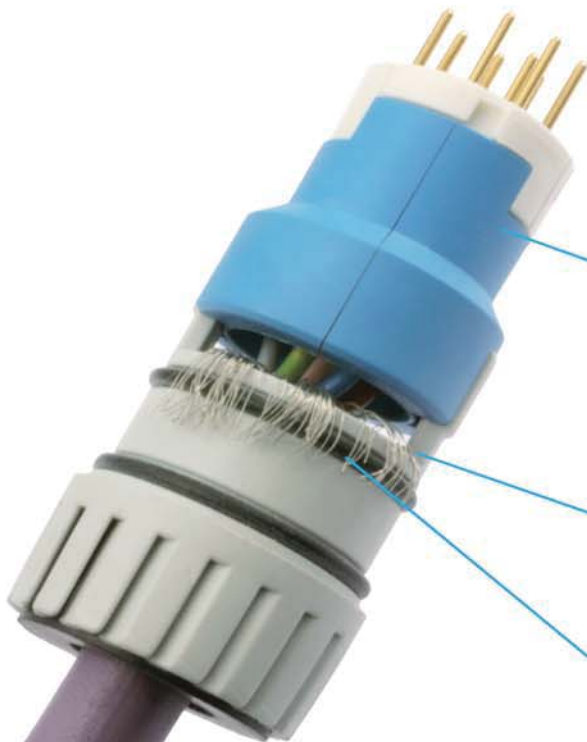
The new, high performance type of contacts – HUMMEL SLS-Technology (Spring Loaded Socket)

- + Integrated spring mates with the pin contact and encompasses it radially
- + Exceptional electrical performance with ultimate contact reliability
- + Tinned solder contacts assure easy and quick assembly



## User friendly assembly

- + Clear and modular structure of all connector series
- + Patented modular strain relief insert and contact insert
- + One step cable assembly and shielding
- + Simple, quick and reliable assembly into the connector housing



Colour coding of spacers for male and female inserts



Cable assembly and shielding is possible in a single operation.



Strain relief insert with four fingers, secured in a recess, prevents cable rotation.

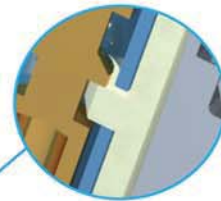
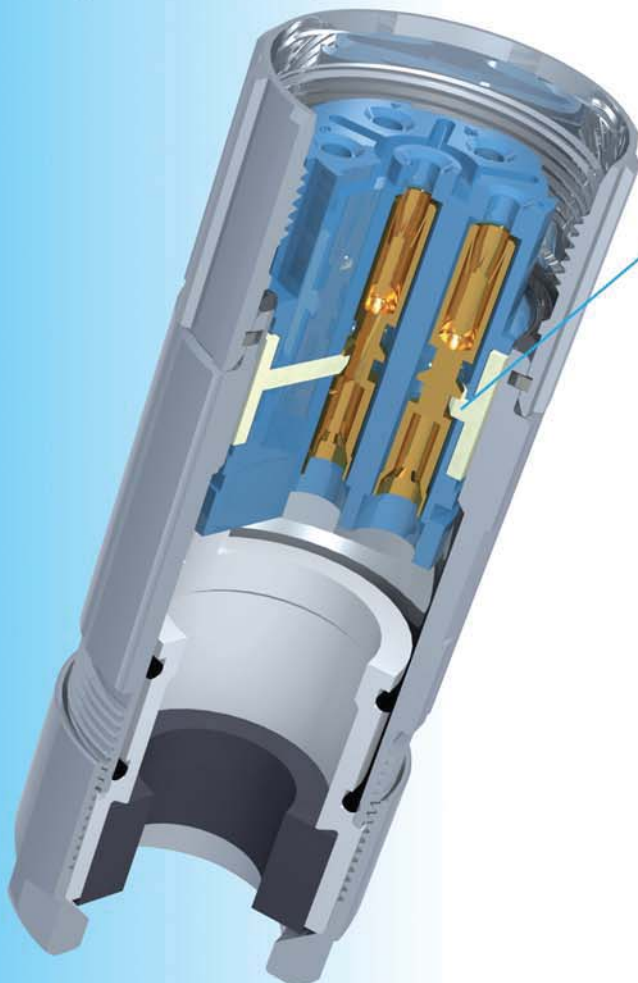


Flexible EMC-O-ring guarantees reliable EMC-protection for light and heavy braided shields.

## Euro-Lock-System<sup>®</sup>

Euro-Lock-System<sup>®</sup> – the patented locking system

- + The integrated locking clip secures the contacts in the insert
- + Easy assembly and disassembly of the contacts
- + No special tools required



Secure contact lock



Quick assembly



Simple contact unlocking and disassembly



Complete assembly and disassembly without special tools

## Unique Benefits

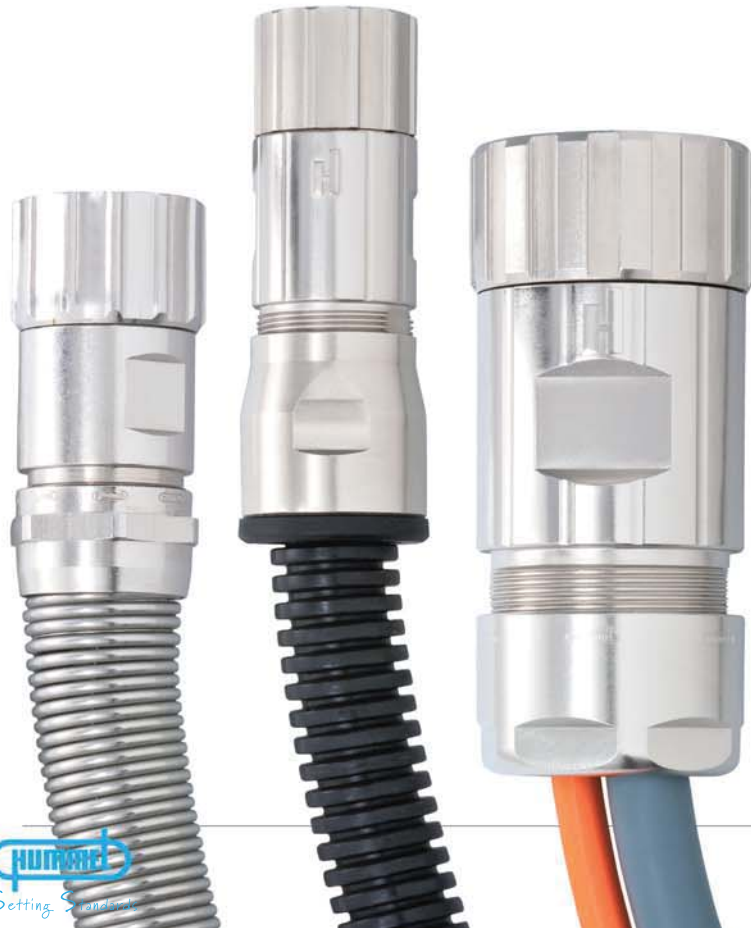
- + Interchangeability of pin or socket inserts in every style connector housing
- + integrated Liquid Tight Strain Relief Fitting
- + Internationally certified exceptional quality



File-No. E 213337



Germanischer Lloyd



Strain Relief Fitting with flex protection for cable



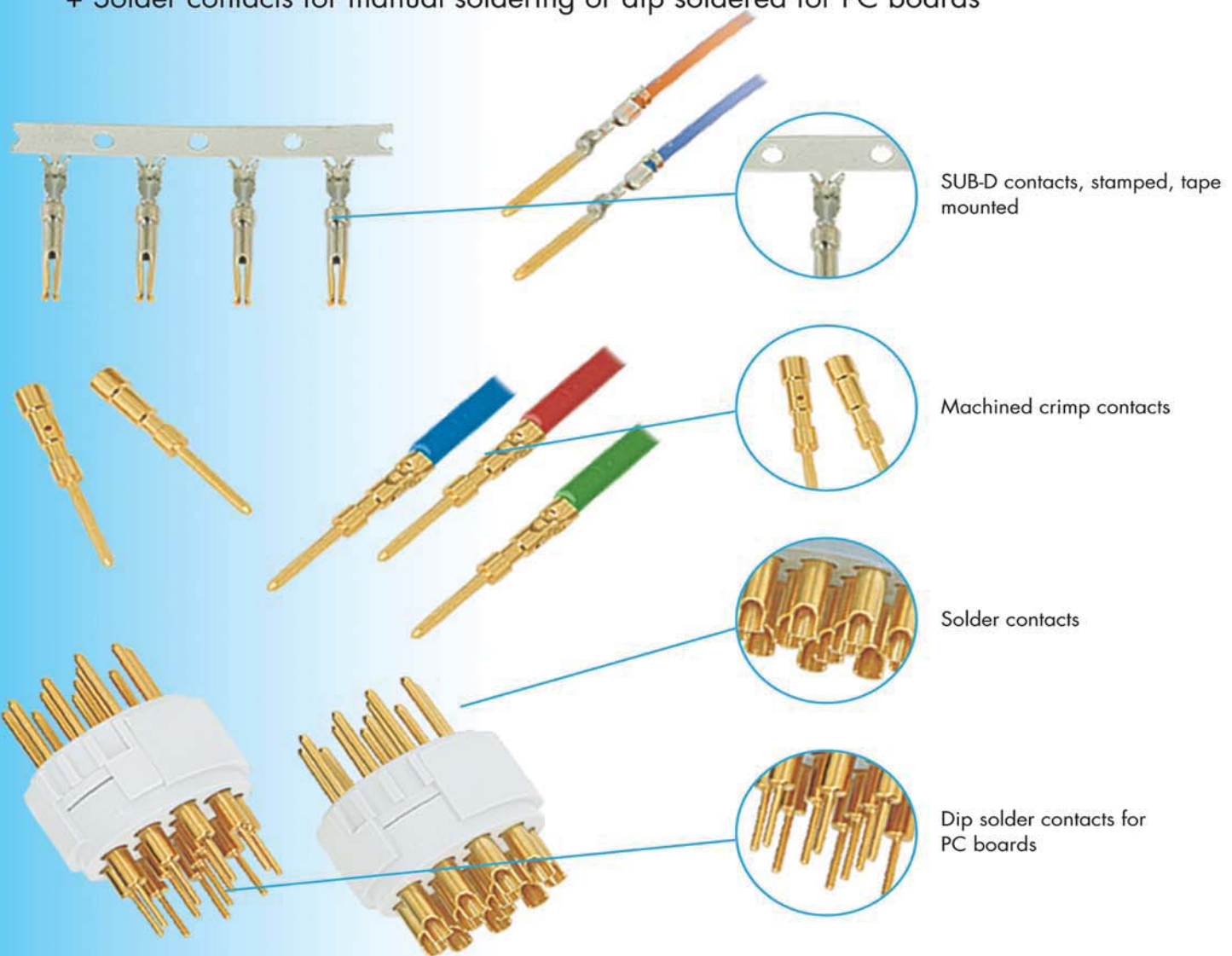
Flexible conduit connector



MULTI Seal Connector

## The Insert – One for all

- + Insert can be used for all types of contacts
- + Crimp contacts machined or on tape
- + Solder contacts for manual soldering or dip soldered for PC boards



SUB-D contacts, stamped, tape mounted

Machined crimp contacts

Solder contacts

Dip solder contacts for PC boards

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## Technical Information

### Nominal Current

Allowable current (Amp), that can be transmitted by each contact continuously and simultaneously.

### Nominal Voltage

Allowable voltage (Volt), that can be applied to each contact continuously and simultaneously.

### Test Voltage

Voltage which, under certain conditions, a connector can be exposed to without breakdown.

### Degree of Protection

Potential dirt accumulation of a disconnected connector in a certain environment.

### Degree of Protection 2

No permanent conductive dirt accumulation will occur. Temporary conductive dirt accumulation, such as condensation, is possible. Typical for households, offices, laboratories and test labs.

### Degree of Protection 3

Conductive, as well as dry non-conductive dirt accumulation can occur. It can be temporarily conductive due to condensation. Typical for industrial and factory environments.

### Additional remarks (pollution level)

If connectors being defined for pollution degree 1 and overvoltage category 1 are applied for other conditions (higher pollution degree and higher overvoltage category) voltages level reduce correspondingly. But the connectors can be used without any problems at reduced maximum voltages.

### Mating cycles

Mating cycles are the number of insertion and extraction cycles a connector can withstand before the electrical or mechanical failure in relationship to the connector's design specification.

### Air gap

The minimum gap of air between two conducting surfaces permissible at given voltage.

### Creep distance

The minimum dimension along the surface of an insulating material between two conducting surfaces.

### PE

The PE-Contact is a ground contact for security reasons.

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### Safety Guidelines

When HUMMEL connectors are used for voltages greater than 50 Volts with conductive shell components they must be used in accordance with the safety regulations DIN VDE Part 410; IEC 60364-4-41. This regulation basically dictates that the power source should be turned off before mating and unmating connector. This regulation does not provide protection against electrical shock when mating and unmating connectors in the field.

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Don't connect or disconnect HUMMEL Connectors under load.