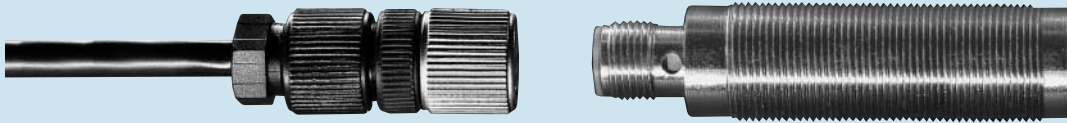




VarioQuick[®]
the new fast connection system
for sensors and actuators

VarioQuick® – the new fast connection system for sensors and actuators



The VarioQuick® system reduces the requirements on instrument connections and cable through-ways in automation technology to a common denominator.

The fast-connect technology with patented CDI® bonding allows a crimp-free, solderless and screwless termination without special tools.

The insulation of the cable is simply stripped and the individual leads are inserted into the chambers of the strand holders which are colour-coded to EN 50044.

VarioQuick® contact pins integrated in the sensors or actuators then penetrate axially into the leads of the cable to be connected when the VarioQuick® system is screwed on.

The appliance connectors with VarioQuick® contact pins allow connection of both the VarioQuick® system as well as Hirschmann E-Series M12 sockets.

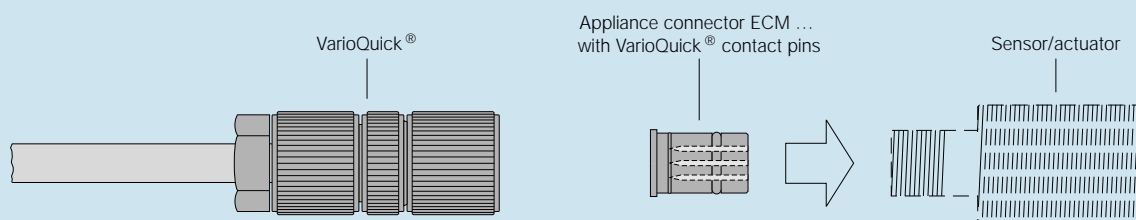
(CDI®: Conductor Displacement Interconnect)

Features

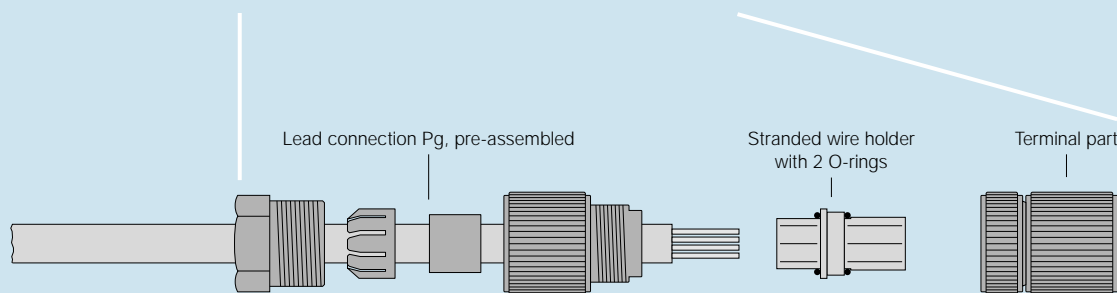
- **no screws, soldering or crimping required**
- **no need to strip insulation from individual leads**
- **no special tools necessary**
- **confusion-free CDI® connection**

Advantages

- **flexible manufacturing of customized cable length**
- **saves time compared to conventional termination**
- **economical alternative to fixed cable connections**
- **easily integrated**



VarioQuick® assembled, appliance connector ECM ... and sensor/actuator



VarioQuick® unassembled

General technical data

- Operating voltage max. UC 60 V
- Operating current max. 4 A
- Ambient temperature -25 ... + 70 °C
- Protection class IP 67
- Poles 4 ¹⁾

1) further numbers of poles on request

Applications

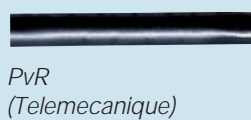
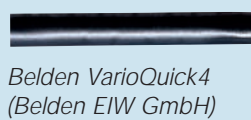
- Instrument connections and cable through-ways
- Proximity switches
- Actuators
- Limit switches
- Distribution-boxes/input and output modules

System components

Cable

VarioQuick®

Appliance connector Type ECM ...



(Source of supply
see following page)



ECF 4012



ECM 400 RD/12



ECM 412



ECM 412 FA



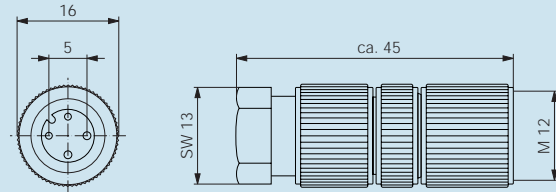
Adapter for connection to
distribution-boxes (in preparation)





Technical Data

| | |
|----------------|-------------|
| Type | ECF 4012 |
| Ord. no. | 934 162-100 |
| Packaging unit | 100 pcs |



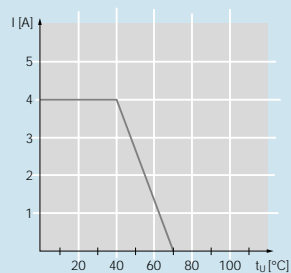
| | |
|---------------|--|
| Poles | 4 |
| Colour-coding | acc. EN 50044 |
| Description | Fast connection system CDI® bonding |

Technical data in accordance with DIN VDE 0627/IEC 61984 (draft)

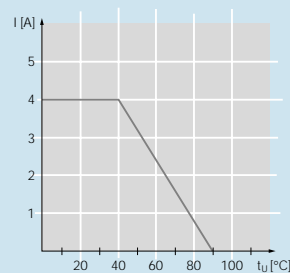
| | | |
|--|---|--|
| Operating voltage | UC 60 V (=) | |
| Operating current max. ¹⁾ | 4 A | |
| Pollution severity | 3 | |
| Protection class (IEC 60529) ²⁾ | IP 67 | |
| Ambient temperature ¹⁾ | - 25 °C ... + 70 °C | |
| Clamp nut | PG 7 | |
| Cables to be connected | Type Belden-VarioQuick4 (4 x 0.5 mm ²) Type PvR (4 x 0.5 mm ²) | Belden-EIW GmbH 78003 Villingen-Schwenningen GERMANY Telemecanique Schneider Electric 40880 Ratingen GERMANY |
| Type of termination | CDI® (Conductor Displacement Interconnect) | |
| Colour | black | |
| Materials | Outer casing: PA Coupling nut: CuZn / Ni Seal: Viton / NBR | |
| Flammability outer casing | UL 94 V-2 | |
| Overvoltage category | II $\hat{=}$ rated surge voltage 2.5 kV | |

¹⁾ see derating curve

²⁾ with associated mating part, correctly locked



Derating ECF 4012



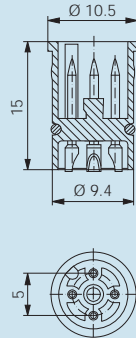
Derating ECM 400 RD/12, ECM 412 and ECM 412 FA

Appliance Connector with VarioQuick® Contact Pins

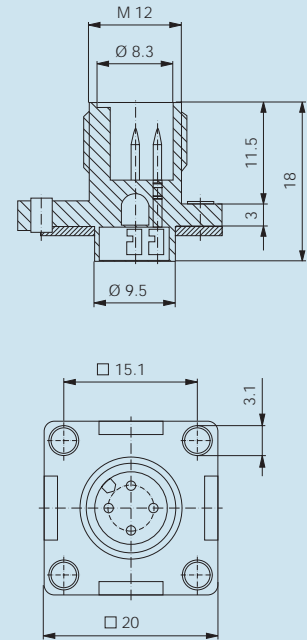
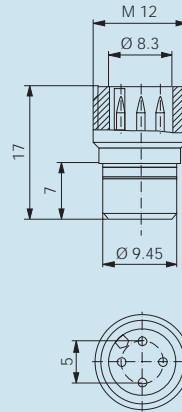


Technical Data

| Type | ECM 400 RD/12 | ECM 412 | ECM 412 FA |
|---|---------------|-------------|-------------|
| Ord. no. / gold-plated contacts ¹⁾ | 934 163-106 | 934 180-106 | 934 164-106 |
| Packaging unit | 100 pcs | 100 pcs | 100 pcs |



with sealable vent hole



| | | | |
|-------------|---|--|--|
| Poles | 4 | 4 | 4 |
| Description | Appliance conn. for M12 sensors with VarioQuick® contact pins, press-in tube mounting, O-ring | Appliance conn. for M12 sensors with VarioQuick® contact pins, (with thread), press-in tube mounting, O-ring | Appliance connector for flange mounting with VarioQuick® contact pins, gasket seal |
| Standard | IEC 60947-5-2/ IEC 61076-2-101 (draft) | IEC 60947-5-2/ IEC 61076-2-101 (draft) | IEC 60947-5-2/ IEC 61076-2-101 (draft) |

Technical data in accordance with DIN VDE 0627/IEC 61984 (draft)

| | | | |
|--------------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Operating voltage | UC 150 V (=) | UC 150 V (=) | UC 150 V (=) |
| Operating current max. ³⁾ | 4 A | 4 A | 4 A |
| Pollution severity | 3 | 3 | 3 |
| Protection class ²⁾ | IP 68 | IP 68 | IP 68 |
| Ambient temperature ³⁾ | -25 °C ... +90 °C | -25 °C ... +90 °C | -25 °C ... +90 °C |
| Type of termination | solder | solder | solder |
| Conductor cross-section | 0.5 mm ² max. (AWG 20) | 0.5 mm ² max. (AWG 20) | 0.5 mm ² max. (AWG 20) |
| Contact elements | Pin (VarioQuick® contact pin) | Pin (VarioQuick® contact pin) | Pin (VarioQuick®- contact pin) |
| Pin dimensions | 1 mm | 1 mm | 1 mm |
| Materials | | | |
| Contact bearer / casing | PA grey | PA grey | PA grey |
| Contacts (pin) | Cu Zn | Cu Zn | Cu Zn |
| Surface finish | Au | Au | Au |
| Seal | NBR | NBR | NBR |
| Flammability | | | |
| Contact bearer /casing | UL 94V-2 | UL 94V-2 | UL 94V-2 |
| Overvoltage category | II ≅ rated surge voltage 1.5 kV | | |

¹⁾ alternatively connection of VarioQuick® (Type ECF 4012) or E-series M12 cable sockets (Type ELKA ..., ELWIKA ...) possible.

²⁾ acc. IEC 60529 with associated mating part, correctly locked; IP 67 with ECF 4012

³⁾ see derating curve

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Today, products from Hirschmann Automation and Networking Solutions are being used in over a third of Germany's top 500 firms.

Close interaction between electrical, assembly and product engineers, and of course with our customers, guarantees a steady flow of market-oriented innovations.

We are well equipped to capitalise even further on existing resources, thus strengthening our leadership position – with considerable

synergies on the development side and real service performance optimisation.



A powerful partnership

Products and systems from Hirschmann Automation and Networking Solutions are meticulously designed in accordance with acknowledged norms and standards for system accessibility, optimal ease of operation and failure security. Low start-up costs, efficient modularisation, upgrade options and comprehensive-compatibility guarantee the highest possible cost-effectiveness – a solid platform for the development of future automation concepts. As an ISO-9001 certified company, Hirschmann is a member of all important stan-

dardization committees (IEEE, Gigabit ETHERNET Alliance, ATM Foundation, AS Interface® Association, PROFIBUS User Organisation, CiA, ODVA, ControlNet, Fieldbus Foundation and CC-Link). In other words, Hirschmann is playing a key role in shaping tomorrow's trends.

With the best connections

Our strategic realignment underlines our technological leadership position and releases new energies that our customers can profit from directly. A sound take-off point for sensible expansion and for the

extension of our product program – paving the way for faster, more cost-effective manufacturing processes. Moreover, training and workshops can be customised more closely to specific requirements, with joint logistics enhancing project work. In consideration of all the additional benefits that our association with the Rheinmetall Elektronik group provides, it is clear that Hirschmann Automation and Networking Solutions is now setting the new competitive standard.

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Our written and verbal advice in respect of applications is intended to assist you in your work. It is not binding, even as regards any thirdparty proprietary rights, and does not discharge you from your obligation to carry out corresponding tests determining the suitability of your products for the intended processes and purposes.

Product descriptions do not give any indication as to liability for any damage that may be caused.

Should liability arise nevertheless, it is limited to no more than the value of the goods supplied and used, regardless of the damage.

Richard Hirschmann GmbH & Co.
Automation and Networking Solutions