Rosenberger

One Interface. Various Operating Modes and Assembly Variants.

EDC® – Expanded Daisy Chain

AUTOMOTIVE DATA CONNECTORS

EDC® – One interface, various operating modes and assembly variants

Daisy-chain systems are a widely used interconnection concept in electronics, industrial applications and automation technology. They enable multiple devices or modules to be easily connected in series.

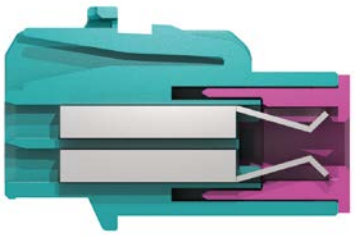
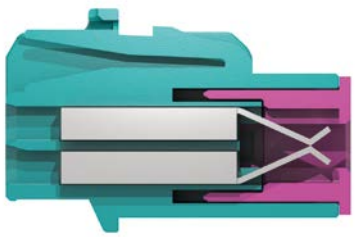
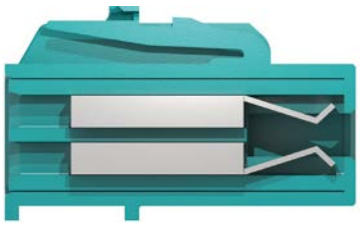
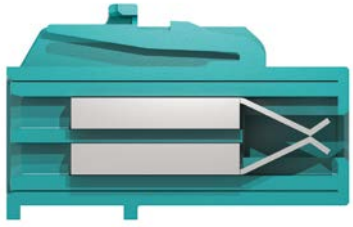
As the number of links in conventional systems increases, assembly can only be partially automated – or may not be automated at all. In addition, signal transmission is interrupted when individual connectors are not mated with their corresponding counterparts.

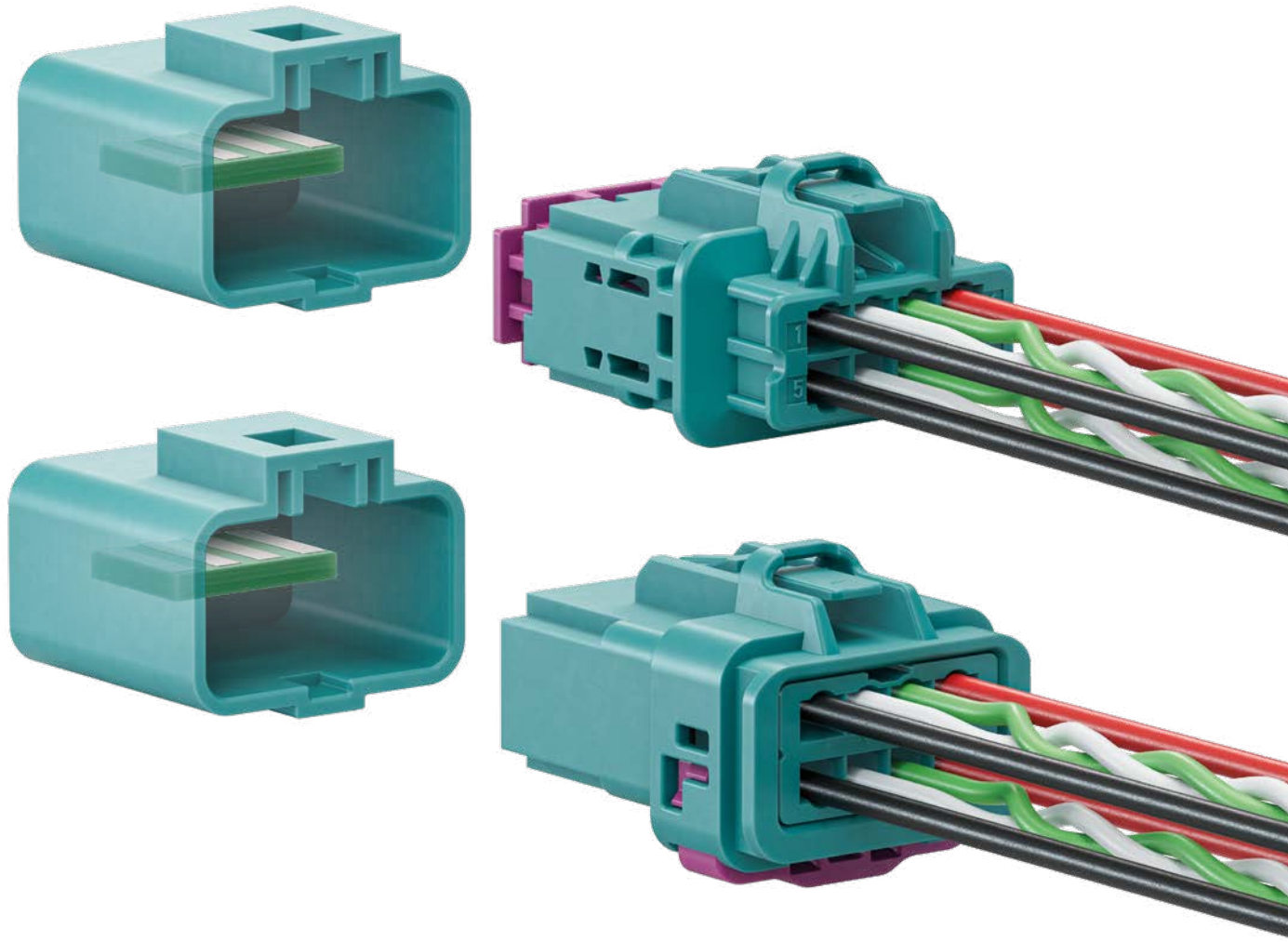
Thanks to its modular design, the EDC® connector series offers the following advantages over conventional daisy-chain connectors:

1. Depending on the freely selectable inner conductor configuration, the system can be operated in either conventional mode or loop-through mode. The latter ensures uninterrupted signal transmission to downstream units, even if individual connectors are not connected to their corresponding counterparts. At the same time, additional units can be installed independently, and individual units can be replaced or removed without affecting the rest of the system.

2. A choice of different assembly options is available. For example, the use of half-shell technology enables pre-assembled subassemblies to be prepared and stored for later use.

3. Reduced costs and space requirements by eliminating a separate PCB connector and establishing direct contact with the circuit board instead.

	Contact Mode „Conventional“ **Signal Not Looped Through**	**Contact Mode „Looped through“** **Signal Looped Through**
Assembly Variant „Classic“		
Assembly Variant „Half-Shell“		



Interface

- Patent-free open interface
- Plug-compatible with all operating and assembly variants
- Contact surfaces (PCB landing pads, standard tin finish)
- Cost and space reduction due direct contact with the PCB pads
- Standard PCB tolerances
- Color and mechanical coding of analog components in accordance with DIN 70214

Benefits

- Connection of the individual Daisy Chain devices (e.g. PCB) with or without (depending on the selected contact version) impact on the subsequent slots
- Compact and efficient signal distribution
- Reduction of installation space due to direct PCB contact
- Cost savings through direct PCB contact, no separate PCB connector required
- High frequency stability and low transmission loss
- Storable standardized subassemblies
- Fully automated assembly possible
- Designed acc. DIN 70214

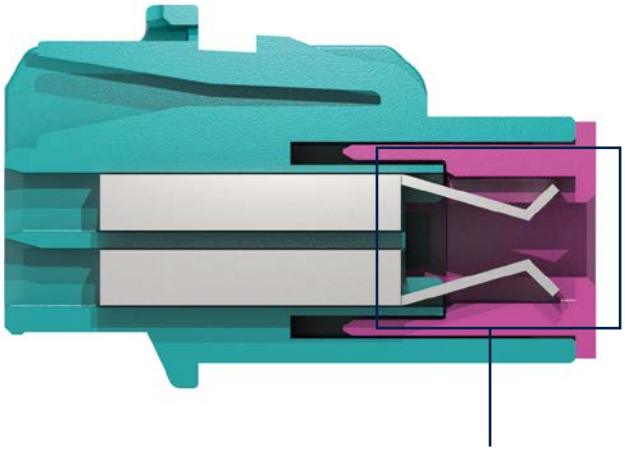
Applications

- Signal transmission in Bus or Ethernet systems (100Base-T1)
- Power supply for LED lighting or sensors (up to 5 A)
- Plugged-in devices can be operated directly without having to wait until the last device is connected
- Audio and video technology: monitors, speakers, etc. can be retrofitted thanks to the “looped through” function

EDC® Contact Mode „Conventional“
Signal not looped through when unmated

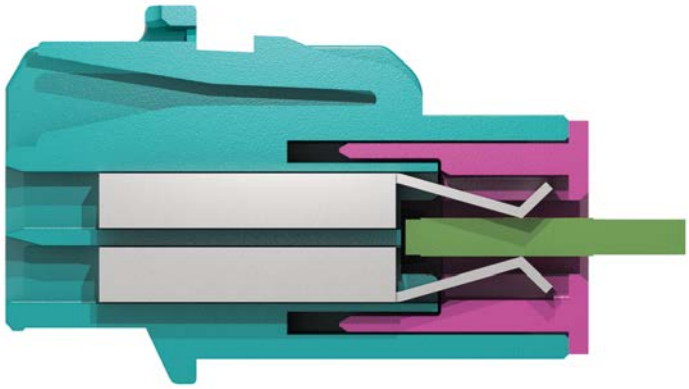
In this mode, signal transmission to downstream units is interrupted when individual connectors are not mated with their corresponding counterparts.

Unmated

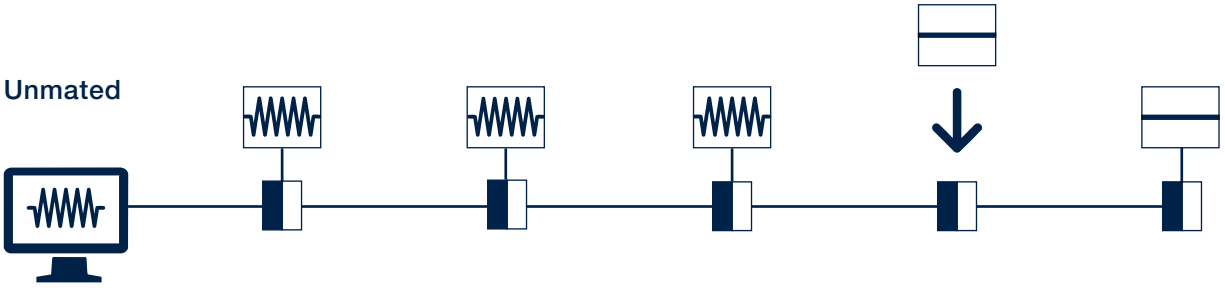


unmated, not looped through

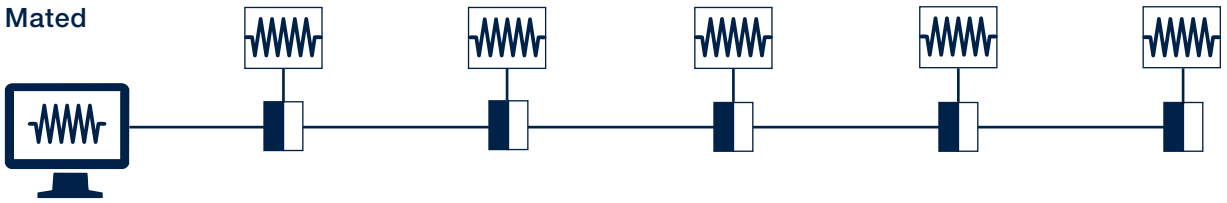
Mated



Unmated



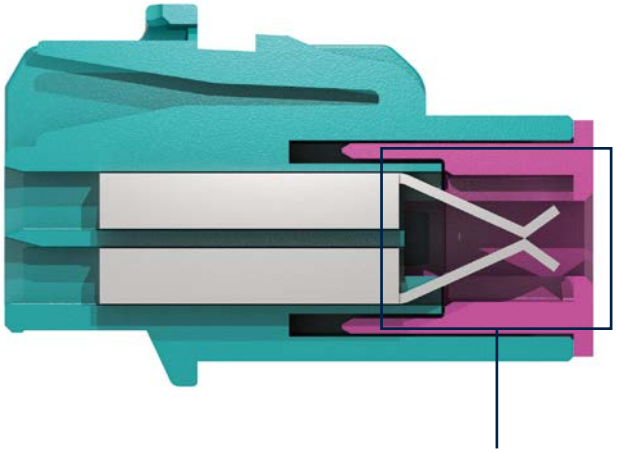
Mated



EDC® Contact Mode „Looped Through“
Signal looped through when unmated

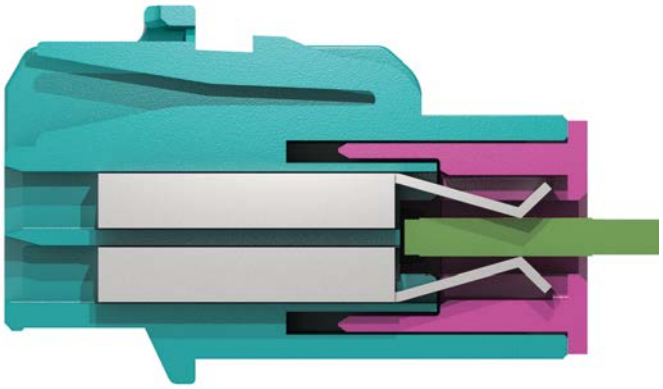
This mode enables uninterrupted signal transmission to downstream units, even when individual connectors are not mated with their corresponding counterparts.

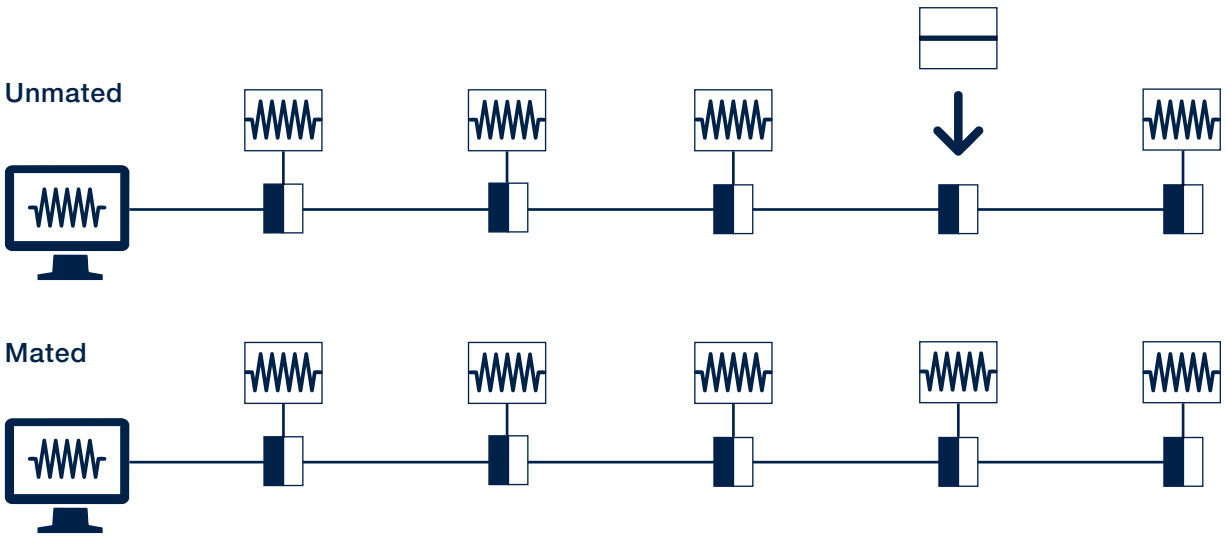
Unmated



unmated, looped through

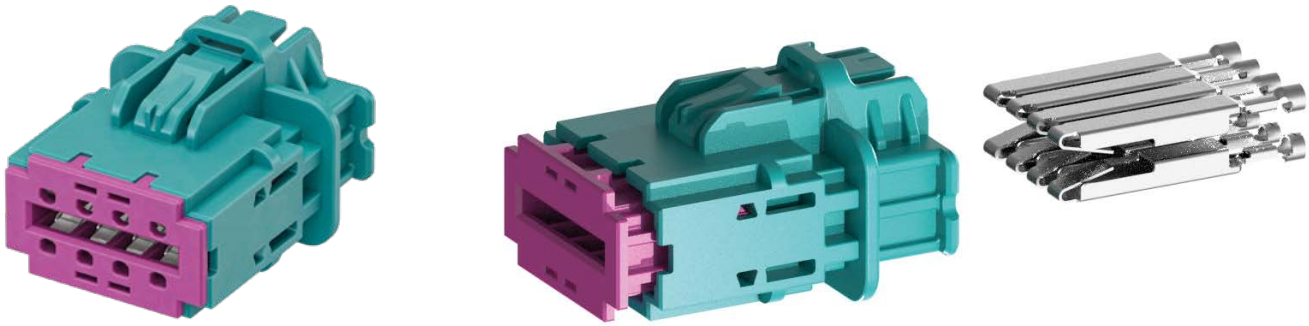
Mated

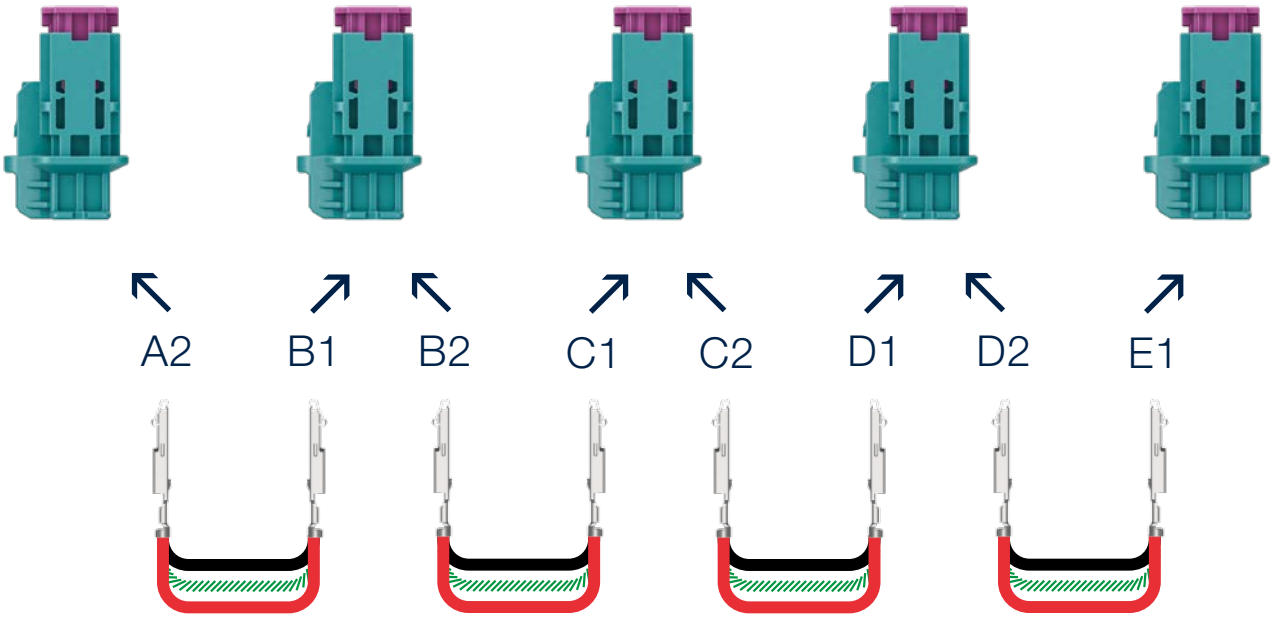




EDC® Assembly Variant „Classic“

Classic individual mounting, similar to established standard power pins, without additional half-shells



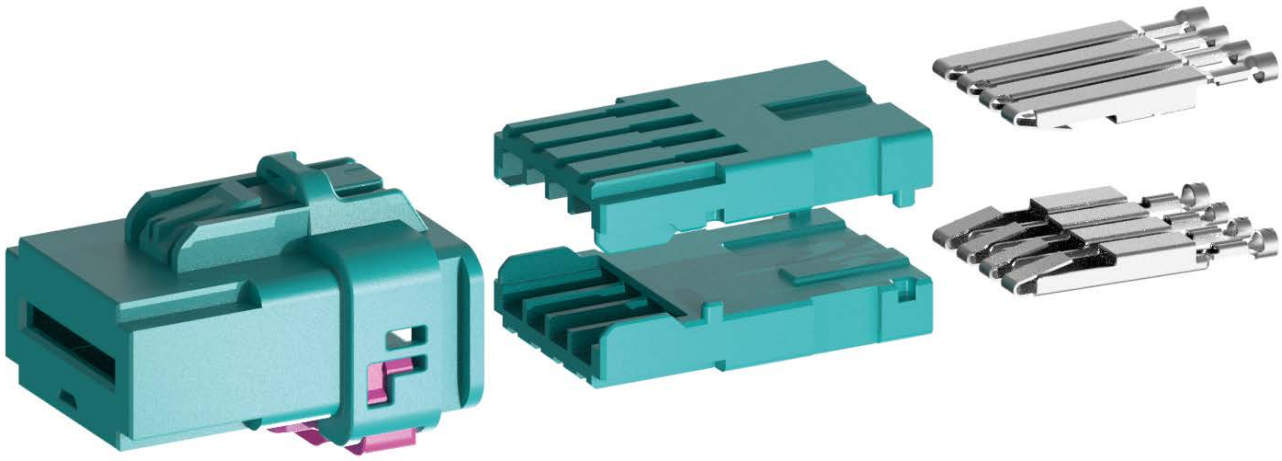


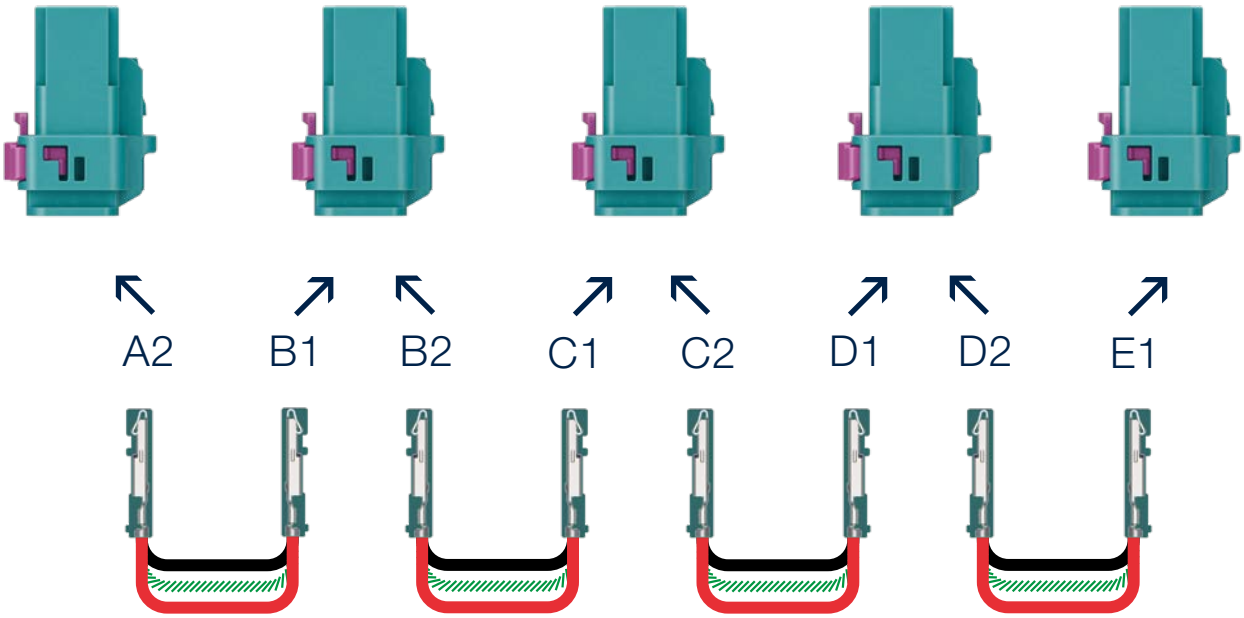
PWR/GND and UTP pair

- The inner conductors are mounted individually into the backside of the housing – similar to today’s standard power pins – and secured by a common secondary locking mechanism
- Simplified subassemblies are not possible
- The inner conductors are not protected until installation in the final housing is complete and are therefore only suitable for limited intermediate storage

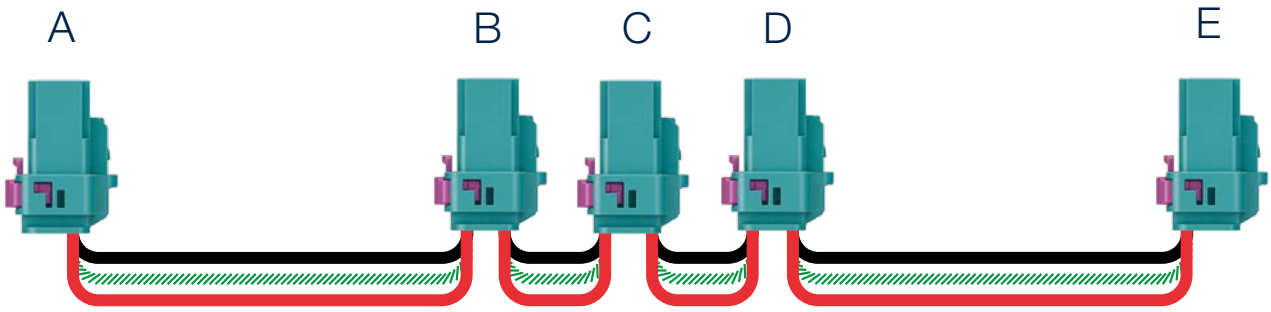
EDC® Assembly Variant „Half-Shell“

Half-shell solution with a standardized subassembly





PWR/GND and UTP pair



- Partially assembled subassemblies A2B1, B2C1, C2D1, D2E1, etc., can be pre-assembled and stored
- The total length and arrangement of the chain links can be configured as required

Website

For more information refer to our website:
www.rosenberger.com/daisychain

Rosenberger

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Certified by IATF 16949 · DIN EN 9100 · ISO 9001 · ISO 14001 · ISO 45001 · ISO 50001

Order No.
10242092 · Info2DaisyChainFly
1000/2026

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