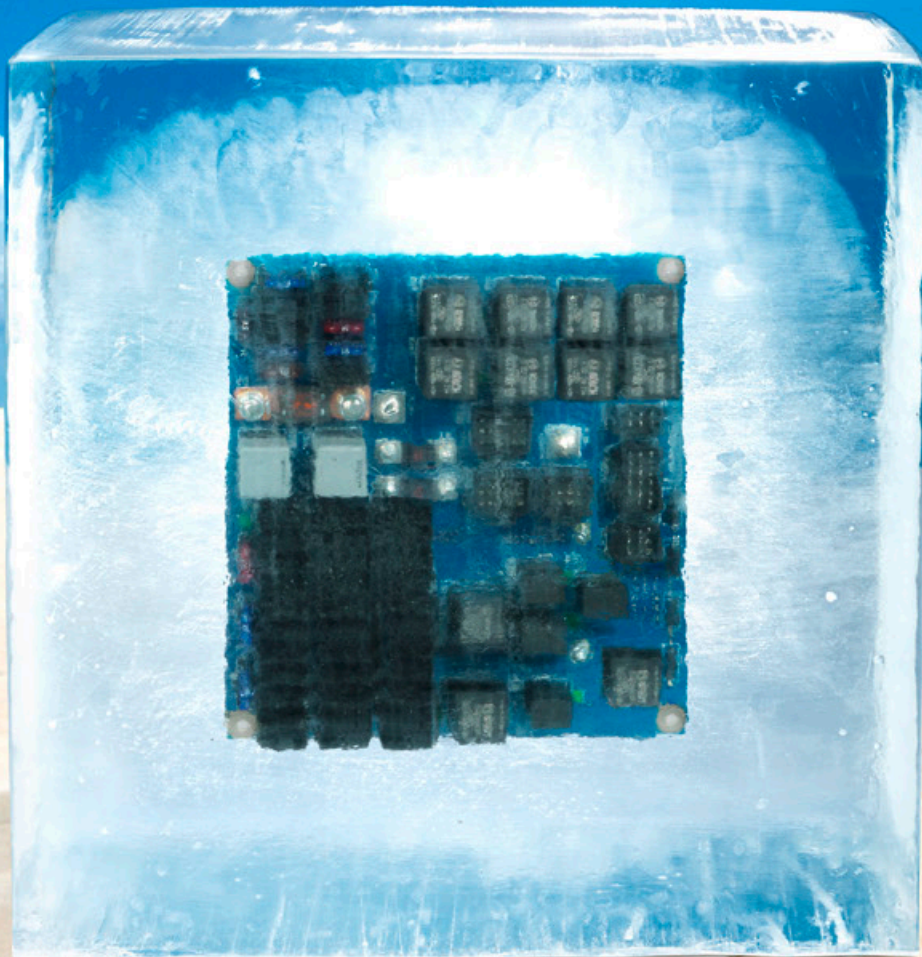


ACT.
CONNECT.
PERFECT.



COOL.
CUSTOMIZED.
RELIABLE.



BLUEcontact™ Solutions



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The most reliable Power Connection for automotive electronics.
Engineered and manufactured by ERNI Germany.



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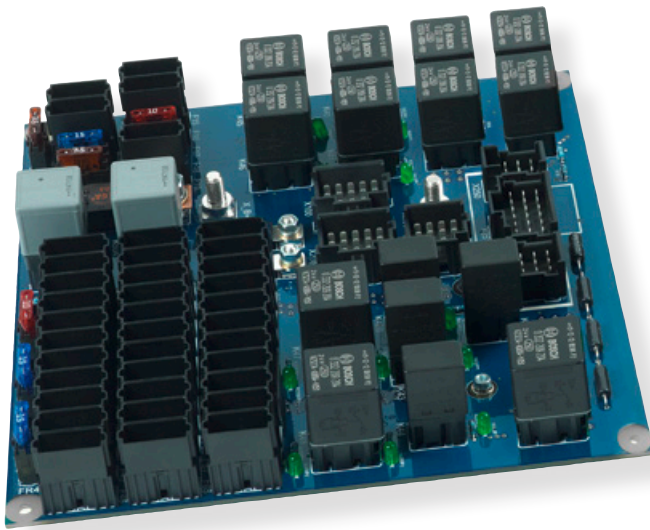
The reliability of the central electrical systems, fuse and powerboards is top priority for utility vehicles.

That is why ERNI developed BLUEcontact™ technology for the harsh requirements in the automotive sector: printed circuit boards and its connections do not thermally overload with high current. They are also very secure, durable and robust.

ERNI takes it one step further with BLUEcontact™ Solutions: we offer you the entire workflow from project management, customer specific secure electronic development to series production in Germany.

Stay cool and benefit from our decades of experience – Please feel free to get to know us at www.erni.com

— BLUEcontact™ Solutions



Example central electrical system

**COOL.
CUSTOMIZED.
RELIABLE.**

ERNI provides widespread services and key components for utility vehicles. Development services and compact, reliable components for central electrical systems, security systems and power supply.

Based on their extensive expertise in the field of connectors and board-design, ERNI is expanding their services and the portfolio on key components for automotive customers. The company is focussing on the areas driver's cab, exterior and motor periphery of buses, construction equipment, trucks, tractors or towing vehicles, etc. ERNI offers its wide-spread expertise in pressfit systems, in pcb assembly and as an EMS service provider to ensure secure connection also at high currents.

Experienced and highly qualified electronic designers have already successfully implemented numerous projects. The service portfolio offered under the slogan BLUEcontact™ Solutions comprises of the entire project management from the initial sample all the way to the final product, the unbundling of pcb's, development and supply of mechanical components as well as the pcb assembly integration. Serial production occurs at ERNI Germany and includes assembly, soldering, pressfit and pcb assembly as well as pcb integration into its corresponding housing.

More security with flexible pressfit system

In working closely with the customer in making the optimised BLUEcontact™ Solutions available, the main issues raised have already been clarified: How much space is allocated for the device? Is the installation limited? Is any housing required? Can devices be located in the passenger cabin or does it need to be placed in harsh environment? Is there danger of condensation? How high is shock and vibration stress?

Within the scope of BLUEcontact™ Solutions, ERNI also provides various power components with combined elastic and massive pressfit zones. While the massive pressfit zone guarantees torque support and secure fixture, the flexible pressfit zone provides optimal power transmission. In addition a comprehensive range of fuse bases, relay sockets, as well as pcb connectors for automotive and industrial applications is available with elastic pressfit zones. The company utilises its across-the-board internal tailor made tool designs and manufacturing resources for this in-house development. These robust components are characterized by a modular construction, high number of contact points and reliable pressfit contacts.

The soft pressfit prevents damage to the pcb thanks to the

elastic pressfit zone. Moreover, a shock and vibration free connection with higher current is achieved. ERNI provides the use of modern components in superior quality with numerous processing advantages:

- no tearing of the circuit paths caused by the “jet effect” during pressfit
- minimal swarf formation during pressfit
- less danger of delamination and therefore undesired shorts due to moisture trapped in the pcb
- greater reliability during temperature change and vibration
- improved process safety of the press in/out process
- greater hole tolerance with lower cost for the pcb
- improved pressfit force adjustment application
- less pressfit force for high number of poles, less stress on the pcb
- general stress minimisation of pcb

Extract from the performance portfolio

BLUEcontact™ components

PowerElements



Connectors



Relay Sockets



Fuse Sockets



Customer Specific Connectors



The new generation electronic central unit for commercial vehicles is tougher, securer and more powerful. BLUEcontact™ incorporates the advantages of ERNI Electronics flexible press fit technology.

Almost all general vehicle functions from A to Z are controlled by central electrics. The advantages of PCB based central electronic units as opposed to cable harnesses pays off indeed - for example, the minimisation of cabling and circuit faults, cost efficiency and less space required. This also applies to the commercial vehicle segment where secure connection and simultaneously high current is especially important. BLUEcontact™ Solutions developed central electronic units specifically for the high demands of this segment. Representing a new level of shock and vibration resistance and a significantly securer connection with higher current carrying capability. In this new generation of central electronics, ERNI combines efficient modular design with flexible pressfit tech-

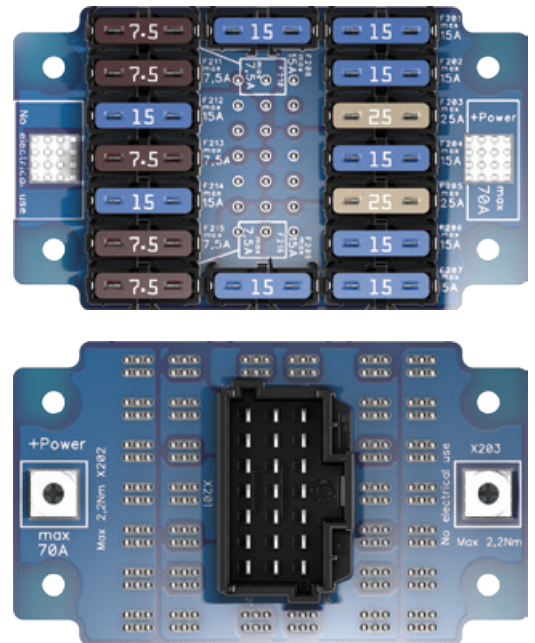
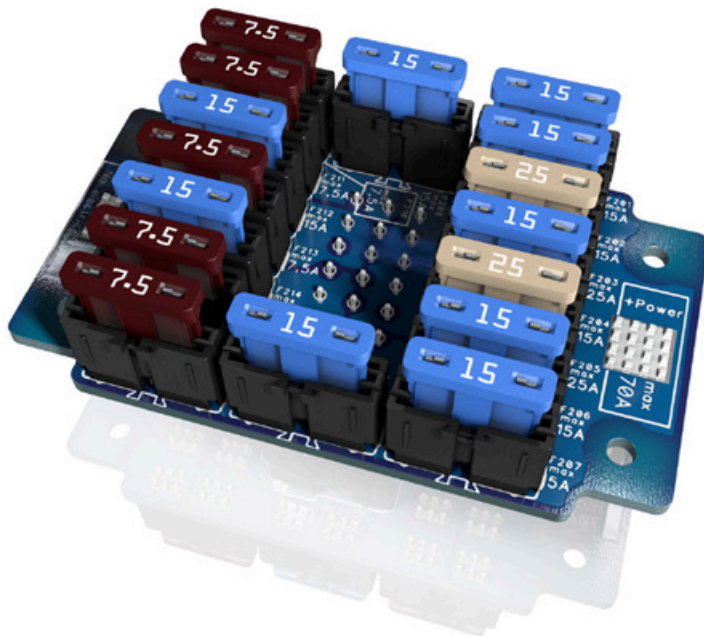
nology. A technical principle with clear advantages compared to conventional methods, beginning with low power loss and ending with high resistance to thermal and mechanical stress. Over 30 years of know-how and experience in pressfit technology backs the high performance of BLUEcontact™ central electronics. Upheld by the comprehensive quality service concept of ERNI Electronics. For you, this means obtaining everything from one source; consultation on selecting the correct interface connectors, placement recommendations, 3D integration of central electrics in the vehicle, connection of remaining cable harness connector and dummy samples, to central electric series production. This you can expect from the technological leader of pressfit technology.

Examples of application



Standard module with 16 ATO fuses

Part Number 175261



Technical Data

Operational temperature	-40° C to +85° C
Max. power supply	Max. 80 A at 65° C ambient temperature Max. 70 A at 80° C ambient temperature
Output	Connector 3 row, 21 pin, JPT/MCP compatible
Input	Power element socket M5, max. torque: 2.2 Nm (other designs on request)
Recommended cable crosssection for connector	Current $I \leq 15$ A: 7.5 A per mm ² Current $I > 15$ A: 5 A per mm ² (Note derating of connector)
Dimensions	102 x 60 x 36.8 mm (unequipped)

Characteristics

- Suitable for 12 V and 24 V applications
- Power supply via M5 power elements up to max. 80 A
- 16 fuse sockets for ATO fuses up to max. 25 A
- Rear connector 21 pin, 3 rows – JPT and MCP compatible
- High thermal load
- Shock and vibration resistant
- Also available with populated board (relays, fuses resp. automatic circuit breakers)

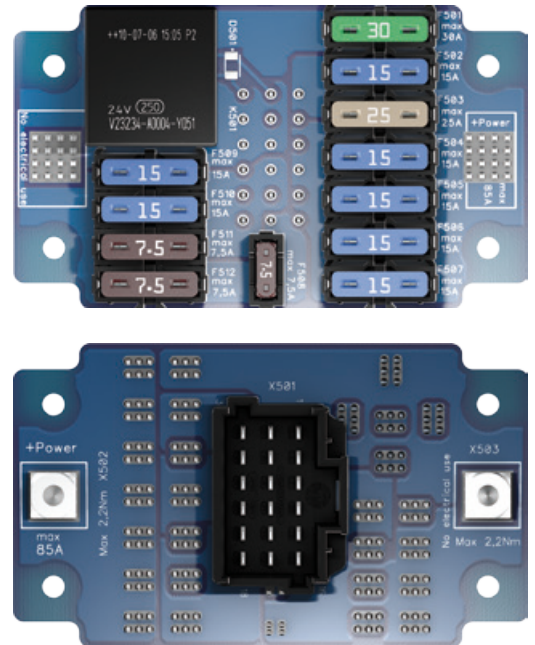
Applications

Power distribution within the automotive segment, such as alternators, control and indication devices, radio, accessories etc.

Applicable individually or modular

Standard module with 11 ATO fuses, 1 mini fuse, 1 mini relay

Part Number 175263



Technical Data

Operational temperature	-40° C to +85° C
Max. power supply	Max. 70 A at 65° C ambient temperature Max. 65 A at 80° C ambient temperature
Output	Connector 3 row, 18 pin, JPT/MCP compatible
Input	Power element socket M5, max. torque: 2.2 Nm (other designs on request)
Recommended cable crosssection for connector	Current $I \leq 15$ A: 7.5 A per mm ² Current $I > 15$ A: 5 A per mm ² (Note derating of connector)
Dimensions	102 x 60 x 36.8 mm (unequipped)

Characteristics

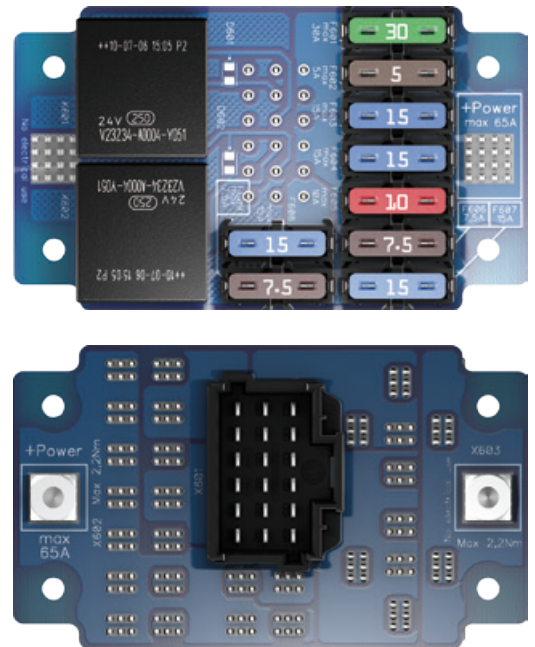
- Suitable for 12 V and 24 V applications
- Power supply via M5 power elements up to max. 100 A
- 10 fuse sockets for ATO fuses up to max. 25 A
- 1 additional socket for ATO fuse up to max. 30 A for relay protection
- 1 fuse socket for mini fuse up to max. 7.5 A
- 1 mini relay socket 5 pin
- Rear connector 18 pin, 3 rows – JPT and MCP compatible
- High thermal load
- Shock and vibration resistant
- Also available with populated board (relays, fuses resp. automatic circuit breakers supressor diodes)

Applications

Power distribution within the automotive segment, such as alternators, control and indication devices, radio, accessories etc.
Applicable individually or modular

Standard module with 9 ATO fuses, 2 mini relays

Part Number 175259



Technical Data

Operational temperature	-40° C to +85° C
Max. power supply	Max. 70 A at 65° C ambient temperature Max. 65 A at 80° C ambient temperature
Output	Connector 3 row, 18 pin, JPT/MCP compatible
Input	Power element socket M5, max. torque: 2.2 Nm (other designs on request)
Recommended cable crosssection for connector	Current $I \leq 15$ A: 7.5 A per mm ² Current $I > 15$ A: 5 A per mm ² (Note derating of connector)
Dimensions	102 x 60 x 36.8 mm (unequipped)

Characteristics

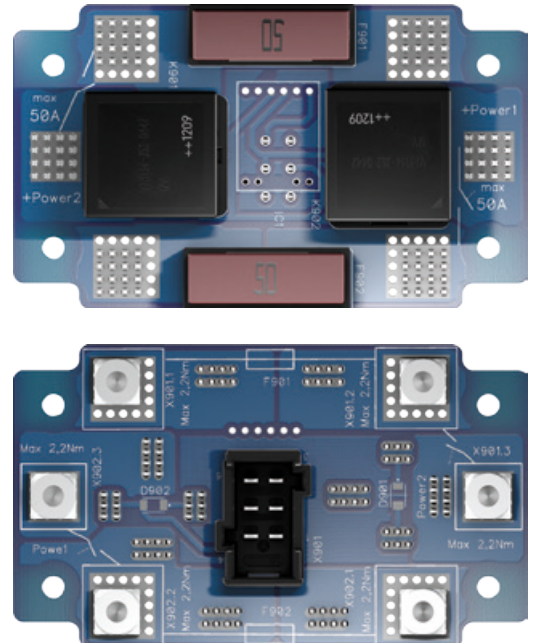
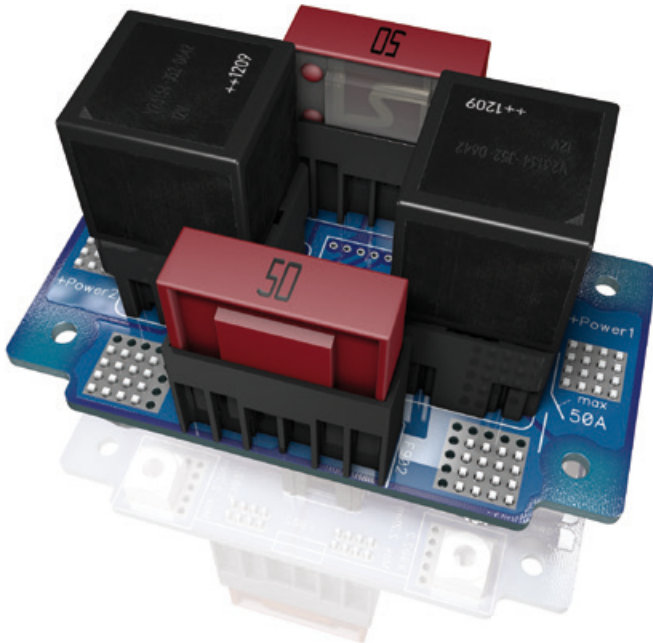
Suitable for 12 V and 24 V applications
Power supply via power elements up to max. 70 A
7 fuse sockets for ATO fuses up to max. 15 A
2 additional sockets for ATO fuses up to max. 30 A for relay protection
2 mini relay sockets 5 pin
Rear connector 18 pin, 3 rows – JPT and MCP compatible
High thermal load
Shock and vibration resistant
Also available with populated board (relays, fuses resp. automatic circuit breakers supressor diodes)

Applications

Power distribution within the automotive segment, such as alternators, control and indication devices, radio, accessories etc.
Applicable individually or modular

Standard module with 2 maxi fuses, 2 maxi relays

Part Number 175265



Technical Data

Operational temperature	-40° C to +85° C
Max. power supply	Max. 2 x 70 A at 30° C ambient temperature Max. 2 x 50 A at 60° C ambient temperature
Output	Connector 3 row, 6 pin, JPT/MCP compatible
Input	Power element M5, max. torque: 2.2 Nm (other designs on request)
Recommended cable crosssection for connector	Current I ≤ 15 A: 7.5 A per mm ² Current I > 15 A: 5 A per mm ² (Note derating of connector)
Dimensions	102 x 60 x 44.6 mm (unequipped)

Characteristics

- Suitable for 12 V and 24 V applications
- 2 isolated electrical circuits, therefore dual usage of 12 V and 24 V possible
- Power supply via power elements up to max. 70 A
- Outputs via power elements
- 2 fuse sockets for maxi fuses
- 2 maxi relay sockets 4 pin
- Rear connector 6 pin, 3 rows – JPT and MCP compatible
- Also available with populated board (relays, fuses, supressor diodes)

Applications

- Power distribution within the automotive segment, such as alternators, control and indication devices, radio, accessories etc.
- Applicable individually or modular



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