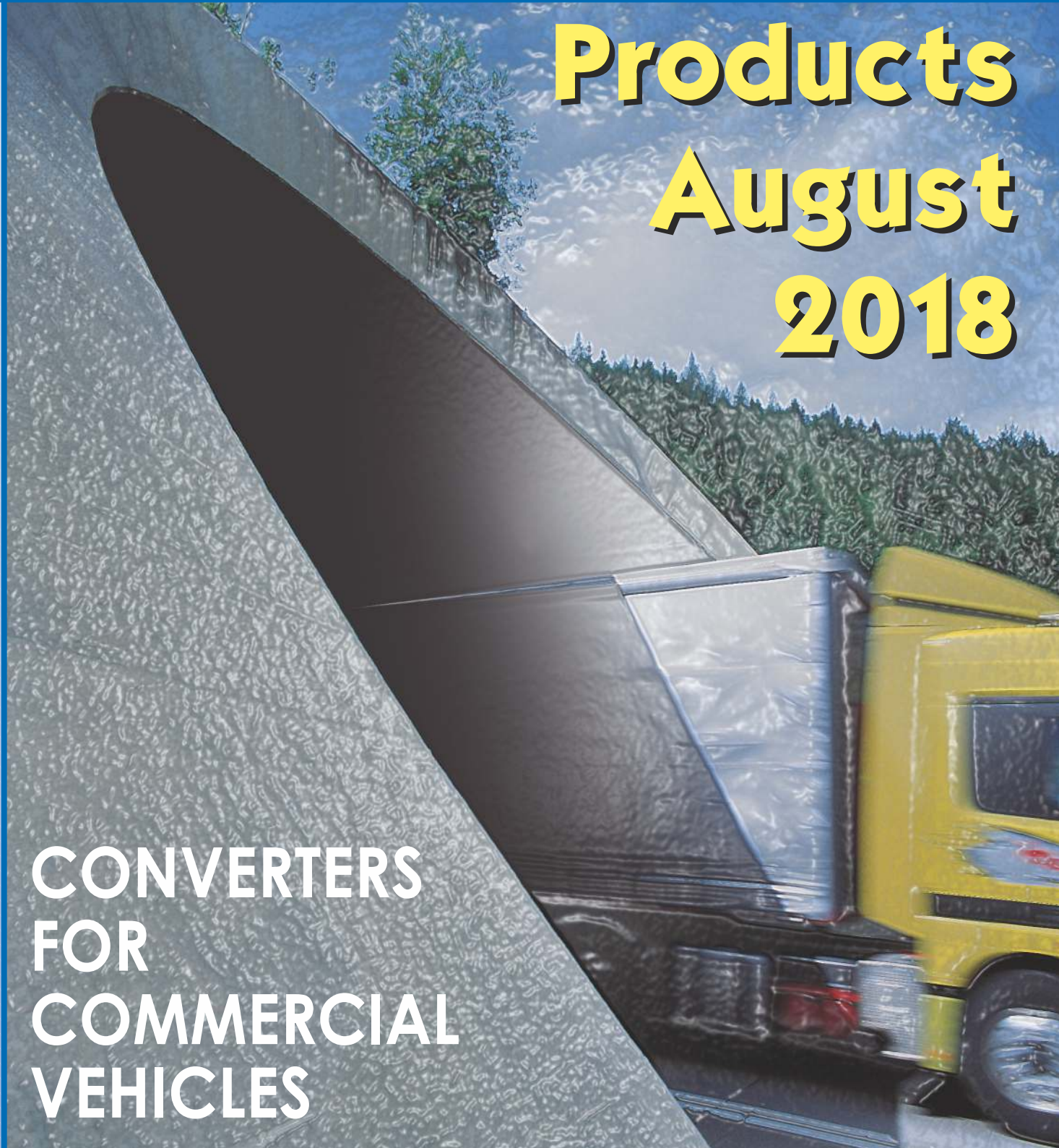


Products August 2018

CONVERTERS
FOR
COMMERCIAL
VEHICLES



Voltage converters for commercial vehicles

The company Briechle elektronik was founded in the year 1983 and is engaged in voltage converters from the beginning. This way, in the year 1984, we placed the first voltage converter for trailer supplying using the low frequency root mean square conversion principle with success.

Many enhanced developments followed and today we are able to cover the whole range of light converters, ABS and EBS converters and specialised DC converters for the 12V - 24V interface with high development standards. We are also developing complement products and power supplies for industrial applications.

We are also leading in the development and manufacturing of matching circuits for the replacement of bulbs with LEDs.

To cover the high standards of vehicle construction, we make hazard analysis as a principle, adequate to the application task, and we are giving our products to a automotive approbated laboratory for certification.

Primarily we are regarding us as a manufacturing enterprise with distribution partners. In addition, we are networking with workshops because only this way we are able to react quickly and properly to modifications of the vehicle manufacturers. With this strategy we fulfill the requirements of every user at the best. For stock product orders, we dispose shipment within 24 hours usually. Also support in application questions is provided within a short time. We are ISO9001:2015 certified.

Over the years we put together many problem-solving approaches in the form of basic information. If required, we gladly send you this information by e-mail in PDF format.

Here we take the chance to thank all our customers, technicians and engineers for their "feedbacks from the spot" who contributed with suggestions and with trade information to products being in the line with the market.

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Product overview

2018



Name	Configuration	Order number	S
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! New in this catalogue

np = no picture

Trailer light converter 24V to 12V

Trailer light converter	2x21W+4x60W	ABW 24-12-6H	6
Trailer light converter	2x21W+5x60W	ABW 24-12-7H	7
! Trailer light converter	2x21W+5x60W 15 ->13pol	ABW 24-12-7HPS	8
! Trailer light converter	2x21W+5x60W 13 ->13pol	ABW 24-12-7HPS13	9
Trail Con 15 Adapter light converter	7x70(250)W 15 ->13pol	ABW 24-12A7	10
Trail Con 15-7 Adapter light converter	6x70(250)W 15 ->7pol	ABW 24-12B6	11
Trail Con 7-13 Adapter light converter	6x70(220)W 7 ->13pol	ABW 24-12C6	12
Trail Con 7 Adapter light converter	6x70(220)W 7 ->7pol	ABW 24-12D6	13

Trailer voltage doubler 12V to 24V

Trailer voltage doubler	6 x 130W	ASV 12-24-6H	14
Trailer voltage doubler	7 x 130W	ASV 12-24-7H	15

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! LED-ADAPT intelligent resistor replacement load, 2x17W (indicator), 12V	LA 12-2EK	18
LED-ADAPT intelligent resistor replacement load, 7lines, 24V	LA 24-7	19
! LED-ADAPT intelligent resistor replacement load, 2x17W (indicator), 24V	LA 24-2EK	20
! LED-ADAPT (Bypass) intelligent resistor replacement load, 12V	LAB 12-7	21
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Product overview

2018



Name	Configuration	Order number	S
! New in this catalogue		np = no picture	
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DUAL VOLT ABS 12V ... 24V auf / to 24V		ABS 12-24PSM	33
Input socket 12V, output plug 24V, parking socket, in rack			
DUAL VOLT ABS 12V ... 24V auf / to 24V		ABS 12-24SC	34
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Trailer converter unit: lamps + ABS12V-24V for farming tractors			
! TRAILER CONVERTER UNIT		TCU-FT-DD	42
Trailer converter unit: lamps + ABS12V-24V for farming tractors			
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! Cable 12V 7-wire plug to 12V 7-wire plug, 3,1m		KN-BELFTL	45
! ABS/EBS coil both sides ABS/EBS Stecker 12V ISO 7638-2		KN-EBS12WL	46
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Product overview

2018



Name	Configuration	Order number	S
! New in this catalogue		np = no picture	
High-end voltage converter 24V to 12V, standby 0,7mA "SEMI VOLT"			
SEMI VOLT 4S 24V to 12V 4(6)A		W 24-12-4S	48
SEMI VOLT 4 Plus, 4(6)A, switches also ignition plus		W 24-12-4P	49
SEMI VOLT 4 Plus, 4(6)A, switches also ignition plus, 13,6V		W 24-12-4PK	50
SEMI VOLT 10S 24V to 12V 10(15)A		W 24-12-10S	51
! SEMI VOLT 10 SL 24V to 12V, 10(15)A		W 24-12-10SL	52
SEMI VOLT 10 Plus, 10(15)A, switches also ignition plus		W 24-12-10P	53
SEMI VOLT 10 Plus, 10(15)A, switches also ignition plus, 13,6V		W 24-12-10PK	54
SEMI VOLT 16S 24V to 12V 16(24)A		W 24-12-16S	55
SEMI VOLT 16 Plus, 16(24)A, switches also ignition plus		W 24-12-16P	56
SEMI VOLT 26S 24V to 12V 26(35)A		W 24-12-26S	57
SEMI VOLT 26 Plus, 26(35)A, switches also ignition plus		W 24-12-26P	58
High-End voltage converter 6V auf 12V, standby 0,7mA "BOOST-TO-12"			
! SEMI VOLT 5 6V...12V auf / to 12V, 5A, swiches also ignition plus		W 6-12-5P	59
Step-up converter 12V to 24V, standby 0.7mA "DOUBLE VOLT"			
DOUBLE VOLT 5S 12V to 24V 5(8)A		W 12-24-5S	60
DOUBLE VOLT 5P, 5(8)A, switches also ignition plus		W 12-24-5P	61
Step-up converter 12V to 24V "DOUBLE VOLT"			
DOUBLE VOLT 10 12V to 24V, 10(15)A		W 12-24-10	62
! SEMI VOLT 20 12V to 24V, 20(22)A		W 12-24-20	63
Charging converter 24V to 12V			
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Charging converter 12V to 24V, 10(15)A, turn on via Clp15		W 12-24-10LSC	65
For parallel 12V batteries in special vehicles			
Battery disconnection relay control		TRS 12	66
Disconnection relay 12V 70A		TR 12-70	oA
AC inverter 12V/24V to 230V,standby 5mA, water proof "MOBIL NETZ"			
Converter MOBIL-NETZ 12V to 230V/600VA		SW 600A-12	67
Converter MOBIL-NETZ 24V to 230V/600VA		SW 600A-24	68
Compact safety power-supply for workshops			
Safety-power-supply 230V to 24V 6(15)A		SPSR 230-24.15-24.2	69

ABW 24-12-6H

Trailer light converter



Converter to supply the lights of 12V trailers at 24V car line. Incandescent lamps and suitable RMS compatible LEDs can be operated. Please ask the LED lamp manufacturer for RMS compatibility. For further details please see our handout "LED lamps in RMS operation".

- * **quick and simple to connect:**
 - at rear lamps of car-like equipment
 - parallel to 24V socket
 - instead of 24V socket
- * **function of C2-indicator-lamps of all flasher units is guaranteed**
- * **works well with lamp-control-units**
- * **solid casting - waterproof and shockproof**
- * **correct function of ABS-info-module is guaranteed**
- * **internal short circuit and overload protection**
- * **power reserves in case of additional lamps at the trailer**

input voltage:

24V DC nominal (18 ... 33V)

output voltage:

RMS power equation for 12V
(9 ... 15.5V)

output power:

2 x 21W + 4 x 60W

current without load:

0mA with open output
(no current)

connections:

input and output cables are
solidly sealed, open endings

cable length:

input: 100cm

output: 120cm

dimension:

200 x 70 x 25mm without
cable outlet

mechanical protection:

solid casting

electrical protection:

overload current (self-
resetting) overtemperature
(self-resetting)

temperature range:

-40 ... +75°C

efficiency:

flasher unit c. 90%, other units
c. 95%

mass:

c. 950g

Attention!

for bulbs and RMS - LEDs
only!

Order Info:

ABW 24-12-6H

ABW 24-12-7H

Trailer light converter with reversing lamp



Converter to supply the lights of 12V trailers at 24V car line, including reversing lamp. Incandescent lamps and suitable RMS compatible LEDs can be operated. Please ask the LED lamp manufacturer for RMS compatibility. For further details please see our handout "LED lamps in RMS operation".

- * **quick and simple to connect:**
 - at rear lamps of car-like equipment
 - parallel to 24V socket
 - instead of 24V socket
- * **function of C2-indicator-lamps of all flasher units is guaranteed**
- * **works well with lamp-control-units**
- * **correct function of ABS-info-module is guaranteed**
- * **entirely sealed - waterproof and vibration resistant**
- * **internal short circuit and overload protection**
- * **power reserves in case of additional lamps at the trailer**

input voltage:

24V DC nominal (18 ... 33V)

output voltage:

RMS power equation for 12V
(9 ... 15.5V)

output power:

2 x 21W + 5 x 60W

current without load:

0mA with open output
(no current)

connections:

input and output cables are
solidly sealed

cable length:

input: 100cm
output: 120cm

dimensions:

200 x 65 x 25mm without
cable outlet

mechanical protection:

solid casting

electrical protection:

overload current (self-
resetting) overtemperature
(self-resetting)

temperature range:

-40 ... +75°C

efficiency:

flasher unit c. 90%, other
parts c. 95%

mass:

c. 960g

Attention!

for bulbs and RMS - LEDs
only!

Order Info:

ABW 24-12-7H

ABW 24-12-7HPS

Trailer light converter with 24V/15
contact plug and 12V/13 contact socket



Converter to supply the lights of 12V trailers at 24V car line, including reversing lamp. Incandescent lamps and suitable RMS compatible LEDs can be operated. Please ask the LED lamp manufacturer for RMS compatibility. For further details please see our handout "LED lamps in RMS operation". Input 15 contact plug, output 13 contact socket.

- * **for suitable lamp control device (LF-PWM suitable)**
- * **entirely sealed - waterproof and vibration resistant**
- * **internal short circuit and overload protection**
- * **power reserves in case of additional lamps on the trailer**
- * **ready for mounting with input plug and socket**

input voltage:

24V DC nominal (18 ... 33V)

output voltage:

RMS power equation for 12V
(9 ... 15.5V)

output power:

2 x 21W + 5 x 60W

connection input:

Seathed cable, plug 24V/15
contacts ISO'4091

connection output:

Corrugated tube, socket
12V/13 contacts ISO'11446

cable length input:

about 1300mm

cable length output:

about 1300mm

current without load:

0mA with open output
(no current)

efficiency:

flasher unit c. 90%, other
parts c. 95%

temperature range:

-40 ... +75°C

electrical protection:

overload current (self-
resetting) overtemperature
(self-resetting)

mechanical protection:

entirely sealed

dimensions:

200 x 70 x 25mm without
cable outlet

mass:

about 1640g

Attention!

for bulbs and RMS - LEDs
only!

Order Info:

ABW 24-12-7HPS

ABW 24-12-7HPS13

Trailer light converter with 24V/13
contact plug and 12V/13 contact socket



Converter to supply the lights of 12V trailers at 24V car line, including reversing lamp. Incandescent lamps and suitable RMS compatible LEDs can be operated. Please ask the LED lamp manufacturer for RMS compatibility. For further details please see our handout "LED lamps in RMS operation". Input 13 contact plug, output 13 contact socket.

- * **for suitable lamp control device (LF-PWM suitable)**
- * **entirely sealed - waterproof and vibration resistant**
- * **internal short circuit and overload protection**
- * **power reserves in case of additional lamps on the trailer**
- * **ready for mounting with input plug and socket**
- * ***** Attention: 24V/13 contacts no suitable to ISO11446/12V configuration*****

input voltage:

24V DC nominal (18 ... 33V)

output voltage:

RMS power equation for 12V
(9 ... 15.5V)

output power:

2 x 21W + 5 x 60W

connection input:

Seathed cable,
plug 24V/13 contacts
ISO11446

observe 24V configuration !

connection output:

Seathed cable,
socket 12V/13 contacts
ISO11446

cable length input:

about 1300mm

cable length output:

about 1300mm

current without load:

0mA with open output
(no current)

efficiency:

flasher unit c. 90%, other
parts c. 95%

temperature range:

-40 ... +75°C

electrical protection:

overload current (self-
resetting) overtemperature
(self-resetting)

mechanical protection:

entirely sealed (IP69K)

dimensions:

200 x 70 x 25mm without
cable outlet

mass:

about 1640g

Attention!

for bulbs and RMS - LEDs
only!

Order Info:

ABW 24-12-7HPS13

ABW 24-12A7

Trail Con 15 adapter light converter 24V
/ 15 contacts to 12V / 13 contacts



Converter to supply a 12V trailer from a 24V vehicle system as short adapter 15 pin to 13 pin, including reversing lamp. Incandescent lamps and suitable RMS compatible LEDs can be operated. Please ask the LED lamp manufacturer for RMS compatibility. For further details please see our handout "LED lamps in RMS operation".

- * simply plug in between
- * fulfills the law requirement for fail-safe by 100% separated lines
- * compatible with lamp control circuits
- * correct function of ABS-info-module is guaranteed
- * internal short circuit and overload protection, one each line
- * power reserve in case of additional lamps at the trailer
- * European approval E1 10R-046957

input voltage:

24V DC nominal (18...33V)

output voltage:

RMS power equation for 12V
(9 ... 15.5V)

output power:

7 x 70W total max 250W lamp
power

self consumption:

0mA when output is open
(no current path)

input config.:

Plug with clamp 15 contacts
24V ISO'4091

output config.:

flanged socket with flap cover
13 contacts 12V ISO-11446

dimensions:

D x L ca 75mm x 200mm with
closed cover

mechanical protection:

electronic sealed

electronical protection:

over current (auto reset), over
temperature (auto reset)

temperatur range:

-40 ... +75°C

efficiency:

about 97%

mass:

about 500g

attention!

for bulbs and RMS - LEDs
only!

restriction:

the control lamp of ancient
mechanical flashing units is
not indicating.

Use ABW 24-12-7H

Order Info:

ABW 24-12A7

ABW 24-12B6

Trail Con 15-7 adapter light converter
24V / 15 contacts to 12V / 7 contacts



Converter to supply a 12V trailer from a 24V vehicle system as short adapter 15 pin to 7 pin, the reversing lights are not connected. Incandescent lamps and suitable RMS compatible LEDs can be operated. Please ask the LED lamp manufacturer for RMS compatibility. For further details please see our handout "LED lamps in RMS operation".

- * simply plug in between
- * fulfills the law requirement for fail-safe by 100% separated lines
- * compatible with lamp control circuits
- * correct function of ABS-info-module is guaranteed
- * internal short circuit and overload protection, one each line
- * power reserves in case of additional lamps at the trailer
- * European approval E1 10R-046957

input voltage:

24V DC nominal (18...33V)

output voltage:

RMS power equation for 12V
(9 ... 15.5V)

output power:

6 x 70W total max 250W lamp
power

self consumption:

0mA when output is open
(no current path)

input config.:

plug with clamp 15 contacts
24V ISO'4091

output config.:

flanged socket with flap cover
7 contacts 12V DIN72577

dimensions:

D x L approx. 75mm x
200mm with closed cover

mechanical protection:

electronic sealed

electronical protection:

over current (auto reset), over
temperature (auto reset)

temperatur range:

-40 ... +75°C

efficiency:

about 97%

mass:

about 500g

attention!

for bulbs and RMS - LEDs
only!

restriction:

the control lamp of ancient
mechanical flashing units is
not indicating.
Use ABW 24-12-6H

Order Info:

ABW 24-12B6

ABW 24-12C6

Trail Con 7-13 adapter light converter
24V / 7 contacts to 12V / 13 contacts



Converter to supply a 12V trailer from a 24V vehicle system as short adapter 7 pin to 13 pin, the reversing lights are not connected. Incandescent lamps and suitable RMS compatible LEDs can be operated. Please ask the LED lamp manufacturer for RMS compatibility. For further details please see our handout "LED lamps in RMS operation".

- * simply plug in between
- * fulfills the law requirement for fail-safe by 100% separated lines
- * compatible with lamp control circuits
- * correct function of ABS-info-module is guaranteed
- * internal short circuit and overload protection, one each line
- * power reserves in case of additional lamps at the trailer
- * European approval E1 10R-046957

input voltage:

24V DC nominal (18...33V)

output voltage:

RMS power equation for 12V
(9 ... 15.5V)

output power:

6 x 70W total max 220W lamp
power

self consumption:

0mA when output is open (no
current path)

input config.:

Plug with 7 contacts 24V
ISO'1185

output config.:

flanged socket with flap cover
13 contacts 12V ISO'11446

dimensions:

D x L ca 75mm x 190mm with
closed cover

mechanical protection:

electronic sealed

electronical protection:

over current (auto reset), over
temperature (auto reset)

temperatur range:

-40 ... +75°C

efficiency:

about 97%

mass:

about 320g

attention!

for bulbs and RMS - LEDs
only!

restriction:

the control lamp of ancient
mechanical flashing units is
not indicating.
Use ABW 24-12-6H

Order Info:

ABW 24-12C6

ABW 24-12D6

Trail Con 7 adapter light converter 24V /
7 contacts to 12V / 7 contacts



Converter to supply a 12V trailer from a 24V vehicle system as short adapter 7 pin to 7 pin. Incandescent lamps and suitable RMS compatible LEDs can be operated. Please ask the LED lamp manufacturer for RMS compatibility. For further details please see our handout "LED lamps in RMS operation".

- * simply plug in between
- * fulfills the law requirement for fail-safe by 100% separated lines
- * compatible with lamp control circuits
- * correct function of ABS-info-module is guaranteed
- * internal short circuit and overload protection, one each line
- * power reserves in case of additional lamps at the trailer
- * european approval E1 10R-046957

input voltage:

24V DC nominal (18...33V)

output voltage:

RMS power equation for 12V
(9 ... 15.5V)

output power:

6 x 70W total max 220W lamp
power

self consumption:

0mA when output is open
(no current path)

input config.:

Plug with clamp 7 contacts
24V ISO'1185

output config.:

flanged socket with flap cover
7 contacts 12V ISO'1724

dimensions:

D x L ca 75mm x 190mm with
closed cover

mechanical protection:

electronic sealed

electronical protection:

over current (auto reset), over
temperature (auto reset)

temperatur range:

-40 ... +75°C

efficiency:

about 97%

mass:

about 320g

attention!

for bulbs and RMS - LEDs
only!

restriction:

the control lamp of ancient
mechanical flashing units is
not indicating.

Use ABW 24-12-6H

Order Info:

ABW24-12D6

ASV 12-24-6H

Trailer voltage doubler
high performance



Converter for the supply of a 24V trailer from a 12V or a 24V vehicle line, high-performance, also for LEDs. For Mercedes Sprinter and Volkswagen Crafter the adaption module EC-ASV1 is required. Important: In case of high loads and long cables on the input side the current consumption could increase enormously determined by the system. Please contact us, we provide planning aid and adaption solutions.

- * **extremely high performance in a small design**
- * **also supplies LEDs**
- * **quick and simple to connect:**
 - at rear lamps of car-like equipment
 - parallel to 12V-socket
 - instead of 12V-socket
- * **function of C2-indicator-lamps of the flasher unit remains active**
- * **works well with lamp-control-units**
- * **correct function of ABS-info-module**
- * **solid casting - waterproof and shockproof**
- * **wide range input 12V and 24V**

input voltage:

12V...24V DC nominal (8 ... 30V)

output voltage:

26V + -5%

output power:

6 x 130W, total max. 500W

current without load:

0,5mA at open output

connections:

input and output cables are
solidly sealed, open endings

cable length:

input: 100cm

output: 120cm

dimension:

280 x 75 x 25mm without
cable outlet

mechanical protection:

solid casting

electrical protection:

overload current (self-
resetting) overtemperature
(self-resetting)

temperature range:

-40 ... +75°C (load derating
above 50° about 10°/W)

efficiency:

about 92%

mass:

about 1,500g

electrical device

for bulbs and LEDs

Order Info:

ASV 12-24-6H

ASV 12-24-7H

**Trailer voltage doubler
with reversing lamp, high-performance**



Converter for the supply of 24V trailers from a 12V or a 24V vehicle line, with reversing lamp, high-performance, also for LEDs. For Mercedes Sprinter and Volkswagen Crafter the adaption module EC-ASV1 is required. Important: In case of high loads and long cables on the input side the current consumption could increase enormously determined by the system. Please contact us, we provide planning aid and adaption solutions.

- * **also supplies LEDs**
- * **extremely high-performance in a small design**
- * **quick and simple to connect:**
 - at rear lamps of car-like equipment
 - parallel to 12V-socket
 - instead of 12V-socket
- * **function of C2-indicator-lamps of the flasher unit remains active**
- * **works well with lamp-control-units**
- * **correct function of ABS-info-module**
- * **solid casting - waterproof and shockproof**
- * **wide range input 12V and 24V**

input voltage:

12V...24V DC nominal (8 ... 30V)

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26V + -5%

output power:

7 x 130W, total max. 500W

current without load:

0,5mA at open output

connections:

input and output cables are
solidly sealed, open endings

cable length:

input: 100cm
output: 120cm

dimension:

280 x 75 x 25mm without
cable outlet

mechanical protection:

solid casting

electrical protection:

overload current (self-
resetting) overtemperature
(self-resetting)

temperature range:

-40 ... +75°C (load derating
above 50° about 10°/W)

efficiency:

about 92%

mass:

about 1,500g

electrical device

for bulbs and LEDs

Order Info:

ASV 12-24-7H

LA 12-7



LED-ADAPT

12V-resistor replacement load for LED-lights in a trailer



12 Volt resistor replacement load for the adaptation of light emitting diode (LED) trailer lamps at vehicles with incandescent lamp monitoring. The failure of a LED unit is indicated and the replacement load is turned off. LED-ADAPT must be mounted on a metal surface.

CAUTION The connection of any bulb on the output is prohibited. The over current protection may cut off not until after several minutes!

- * simply connect ahead of LED lamps
- * LED-failure is indicated
- * short circuit is indicated
- * Serves all lines with replacement resistors
- * Input cable 3,5m can be connected directly to the plug

Operating voltage:

12V nominal

Load limitation:

2x17 W (direction),
2x4W (rear lamp),
1x34W (stop light)
1x17W (fog lamp),
1x17W (reversing lamp)

Failure monitor LEDs:

20mA (direction)
3mA (rear lamp)
8mA (stop light)
8mA (fog lamp)
20mA (reversing lamp)

Maximum output current:

0.8A (Over current protection
time delay 1...2000s !)

Input :

Sheathed cable 8 x 1mm²,
length 3,5m, bare endings

Output:

Sheathed cable 8 x 1mm²,
length 1,2m, bare endings

Dimensions:

280 x 70 x 25mm

Mechanical protection:

Moulded

Electrical protection:

Overcurrent, overtemperature,
reverse polarity

Temperature range:

-40...+75°C

Weight:

about 1680g

Mounting rule:

cooling plate 8dm² (aluminium
sheet 1.5mm thickness) or on
chassis frame

Order Info:

LA 12-7

LA 12-5B13



LED-ADAPT

12V resistor replacement load for 5 LED lines in the trailer



12 Volt resistor replacement load for the adaptation of light emitting diode (LED) trailer lamps at vehicles with incandescent lamp monitoring. The direction indicator lamps and the contacts 9 to 13 are looped. LED-ADAPT must be mounted on a metal surface. Important: The direction indicators must be incandescent lamps or LEDs with own monitoring. Other lines may have additional load of 10W maximum, in this case monitoring is disabled.

- * **Ready for use solution with 13 pin standard connectors**
- * **Configuration: "2 incandescent lamps + 5 LED + contacts 9 to 13"**
- * **No cable work needed**
- * **The additional pins 9 to 13 are looped**
- * **Retrofitting for a factory finished trailer in case of incompatibility with a new vehicle**
- * **Failure of an LED is detected (if no incandescent lamp is connected in parallel)**

Operating voltage:

12V nominal

Load limitation:

2x4W (rear lamps),
1x34W (stop light)
1x17W (fog lamp),
1x17W (reversing lamp)

Failure monitor LEDs:

3mA (rear lamp)
8mA (stop light)
8mA (fog lamp)
20mA (reversing lamp)

Maximum output current:

0.8A (Over current protection
time delay 1...2000s !)

Input :

Male connector 13 pin 12V
ISO'11446, 3300mm length

Output:

Female socket with flap cover
13 pin 12V ISO'11446,
600mm length

Dimensions:

280 x 70 x 25mm

Mechanical protection:

Moulded IP6K7K

Electrical protection:

Overcurrent, overtemperature,
reverse polarity

Temperature range:

-40...+75°C

Weight:

about 2850g

Mounting rule:

cooling plate 8dm² (aluminium
sheet 1.5mm thickness) or on
chassis frame,
lamp configuration only 2 x
incandescent lamps +
5xLED(+0...10W)

Order Info:

LA12-5B13

LA 12-2EK



LED-ADAPT

12V-Resistor Replacement Load for LED lights in a trailer, Single Cable Solution



12 Volt resistor replacement load for the adaptation of light emitting diode (LED) trailer lamps at vehicles with incandescent lamp monitoring. The failure of a direction LED unit is indicated and the replacement load is turned off. LED-ADAPT must be mounted on a metal surface.

CAUTION The connection of any bulb on the output is prohibited. The over current protection may cut off not until after several minutes!

- * **single cable version**
- * **LED-direction indicator monitoring**
- * **serves the direction indicators with replacement resistors**
- * **conditionally short circuit proof (about 100 cycles)**

Operating voltage:

12V nominal

Load limitation:

2x17 W (direction)

Failure monitor LEDs:

20mA (direction)

Connection cable: :

hose line 5 x 1mm²,
length 0,25m,
ins. 6,3mm blade receptacle

Maximum output current:

direction: 0.4A (Over current
protection time delay
1...2000s !)

Dimensions:

120 x 70 x 25mm

Mechanical protection:

entirely sealed (IP69K)

Electrical protection:

overcurrent, overtemperature,
reverse polarity

Temperature range:

-40...+75°C

Weight:

about 350g

Mounting rule:

cooling plate 8dm² (aluminium
sheet 1.5mm thickness) or on
chassis frame

Order Info:

LA 12-2EK

LA 24-7



LED-ADAPT

24V-resistor replacement load for LED-lights in a trailer



24 Volt resistor replacement load for the adaptation of light emitting diode (LED) trailer lamps at vehicles with incandescent lamp monitoring. The failure of a LED unit is indicated and the replacement load is turned off. LED-ADAPT must be mounted on a metal surface.

CAUTION The connection of any bulb on the output is prohibited. The over current protection may cut off not until after several minutes!

- * simply connect ahead of LED lamps
- * LED-failure is indicated
- * short circuit is indicated
- * Serves all lines with replacement resistors
- * Input cable 3,5m can be connected directly to the plug

Operating voltage:

24V nominal

Load limitation:

2x17 W (direction),
2x4W (rear lamp),
1x34W (stop light)
1x17W (fog lamp),
1x17W (reversing lamp)

Failure monitor LEDs:

20mA (direction)
3mA (rear lamp)
8mA (stop light)
8mA (fog lamp)
20mA (reversing lamp)

Maximum output current:

0.4A (Over current protection
time delay 1...2000s !)

Input :

Sheathed cable 8 x 1mm²,
length 3,5m, bare endings

Output:

Sheathed cable 8 x 1mm²,
length 1,2m, bare endings

Dimensions:

280 x 70 x 25mm

Mechanical protection:

Moulded

Electrical protection:

Overcurrent, overtemperature,
reverse polarity

Temperature range:

-40...+75°C

Weight:

about 1680g

Mounting rule:

cooling plate 8dm² (aluminium
sheet 1.5mm thickness) or on
chassis frame

Order Info:

LA 24-7

LA 24-2EK



LED-ADAPT

24V-Resistor Replacement Load for LED lights in a trailer, Single Cable Solution



24 Volt resistor replacement load for the adaptation of light emitting diode (LED) trailer lamps at vehicles with incandescent lamp monitoring. The failure of a direction LED unit is indicated and the replacement load is turned off. LED-ADAPT must be mounted on a metal surface.

CAUTION The connection of any bulb on the output is prohibited. The over current protection may cut off not until after several minutes!

- * **singe cable version**
- * **LED- direction indicator monitoring**
- * **serves the direction indicators with replacement resistors**
- * **conditionally short circuit proof (about 100 cycles)**

Operating voltage:

24V nominal

Load imitation:

2x17 W (direction)

Failure monitor LEDs:

20mA (direction)

Connection cable: :

hose line 5 x 1mm²,
length 0,25m,
ins. 6,3mm blade receptacle

Maximum output current:

direction 0.4 A (Over current
protection time delay
1...2000s !)

Dimensions:

120 x 70 x 25mm

Mechanical protection:

entirely sealed (IP69K)

Electrical protection:

overcurrent, overtemperature,
reverse polarity

Temperature range:

-40...+75°C

Weight:

about 350g

Mounting rule:

cooling plate 8dm² (aluminium
sheet 1.5mm thickness) or on
chassis frame

Order Info:

LA 24-2EK

LAB 12-7

LED-adapt (Bypass)

12V-resistor replacement load for LED-lights in a trailer



12 Volt resistor replacement load for the adaptation of light emitting diode (LED) trailer lamps at vehicles with incandescent lamp monitoring. The failure of a LED unit is indicated and the replacement load is turned off. To cool the system a metal surface is needed. The Bypass-function enables subsequent mounting of bulbs up to 95W.

- * simply connect ahead of LED lamps
- * LED-failure is indicated
- * the input will be connected to the output in a bulb connection
- * serves all lines with replacement resistors
- * short circuit proof
- * input cable 3,5m can be connected directly to the plug

Operating voltage:

12V nominal

Output current:

max. 8A each line (bypass on)

Configuration input:

sheathed cable 7 x 1 + 1 x
2,5mm², bare endings

Cable lenght input:

ca. 3,5m

Configuration output:

sheathed cable 7 x 1 + 1 x
2,5mm², bare endings

Cable lenght output:

ca. 1,2m

Load imitation:

2x17 W (direction)
2x4W (rear lamp)
1x34W (stop light)
1x17W (fog lamp)
1x17W (reversing lamp)

Failure monitor LEDs:

24mA (direction)
860mA bypass
6,5mA (rear lamps)
600mA bypass
9mA (stop light)
1510mA bypass
9,5mA (rear fog lamp)
860mA bypass
24mA (reversing light)
860mA bypass

Temperature range:

-40...+75°C

Electrical protection:

overcurrent, overtemperature,
reverse polarity

Mechanical protection:

entirely sealed (IP69K)

Dimensions:

280 x 70 x 25mm

Weight:

ca. 1680g

Mounting rule:

cooling plate 8dm² (aluminium
sheet 1.5mm thickness) or on
chassis frame

Order Info:

LAB 12-7

LAB 24-7



LED-adapt (Bypass) 24V-resistor replacement load for LED- lights in a trailer



24 Volt resistor replacement load for the adaptation of light emitting diode (LED) trailer lamps at vehicles with incandescent lamp monitoring. The failure of a LED unit is indicated and the replacement load is turned off. To cool the system a metal surface is needed. The Bypass-function enables subsequent mounting of bulbs up to 180W.

- * simply connect ahead of LED lamps
- * LED-failure is indicated
- * the input will be connected to the output in a bulb connection
- * serves all lines with replacement resistors
- * short circuit proof
- * input cable 3,5m can be connected directly to the plug

Operating voltage:

24V nominal

Output current:

max. 8A each line (bypass on)

Configuration input:

sheathed cable 7 x 1 + 1 x
2,5mm², bare endings

Cable length input:

ca. 3,5m

Configuration output:

sheathed cable 7 x 1 + 1 x
2,5mm², bare endings

Cable length output:

ca. 1,2m

Load imitation:

2x17 W (direction)

2x4W (rear lamp)

1x34W (stop light)

1x17W (fog lamp)

1x17W (reversing lamp)

Failure monitor LEDs:

24mA (direction)

860mA bypass

6,5mA (rear lamps)

330mA bypass

9mA (stop light)

1510mA bypass

9,5mA (rear fog lamp)

860mA bypass

24mA (reversing light)

860mA bypass

Temperature range:

-40...+75°C

Electrical protection:

overcurrent, overtemperature,
reverse polarity

Mechanical protection:

entirely sealed (IP69K)

Dimensions:

280 x 70 x 25mm

Weight:

ca. 1680g

Mounting rule:

cooling plate 8dm² (aluminium
sheet 1.5mm thickness) or on
chassis frame

Order Info:

LAB 24-7

FP 12-2

Flash-Prevent

Prevents effectively the flashing of LED lamps.



Flash-Prevent prevents effectively the inadmissible flashing of LED lamps caused by the vehicles pulsed cold scan. ("hard" and short pulse ab. 10ms). The failure of an LED will be monitored. Attention! Flash-Prevent does not replace LED-ADAPT. Please ask for details.

- * Effectively prevents flashing of LED lamps
- * The failure detection stays in function
- * Easy installation due to compact dimensions
- * Easy installation ahead of the LED lamps
- * Completes LED-ADAPT in combined monitoring

Operation voltage	12V nominal
Output current	LED (max 0,4A)
Connection input	strand with bare wire ends
Connection output	strand with bare wire ends
Load imitation	within 0-50ms cold filament
Cable length input	0.30 m
Cable length output	0.30 m
Temperature range	-40 ... +75°C
Mechanical protection	entirely sealed (IP69K)
Dimensions	40 x 18 x 15 mm without cable outlet
Mass	approx. 27g
Failure monitor LEDs	integrated

Order Info:

FP 12-2

FP 24-2

Flash-Prevent

Prevents effectively the flashing of LED lamps.



Flash-Prevent prevents effectively the inadmissible flashing of LED lamps caused by the vehicles pulsed cold scan. ("hard" and short pulse ab. 10ms). The failure of an LED will be monitored. Attention! Flash-Prevent does not replace LED-ADAPT. Please ask for details.

- * Effectively prevents flashing of LED lamps
- * The failure detection stays in function
- * Easy installation due to compact dimensions
- * Easy installation ahead of the LED lamps
- * Completes LED-ADAPT in combined monitoring

Operation voltage	24V nominal
Output current	1A (equals 21 Watts)
Connection input	strand with bare wire ends
Connection output	strand with bare wire ends
Load limitation	5 ... 21 Watts
Cable length input	0.30 m
Cable length output	0.30 m
Temperature range	-40 ... +75°C
Mechanical protection	solid casting (IP69K)
Dimensions	40 x 18 x 15 mm without cable outlet
Mass	approx. 27g
Failure monitor LEDs	integrated

Bestellinfo:

FP 24-2

ABS 24-12

Semi Volt ABS

ABS 12V ... 24V to 12V



Special converter for the supply of a 12V anti lock system out of 12V or 24V.

The converter is suitable for truck or trailer mounting.

- * **input voltage 24V and 12V**
- * **compact size by high efficiency in the power line**
- * **simple mounting by inserting into cable line (5-pole cable)**

Input voltage:

9 ... 33V DC both lines

output voltage:

8,5 ... 12V +-5%

Output current trm. 15:

0 ... 300mA

Output current trm. 30:

0 ... 6A (10A /20% on time cycle)

Connection input

open cable ends

Connection output:

open cable ends

Dimensions:

170 x 70 x 25mm without cables

Mechanical protection:

Casted

Electrical protection:

Overload protection

Mounting:

2 screws M4

Efficiency trm. 15:

about 92 ... 38%

Efficiency trm. 30:

about. 96 ... 85%

Total efficiency:

about. 90% at 28V and nominal loads

Weight:

about. 800g

Order Info:

ABS 24-12

ABS 24-12PS



SEMI-VOLT ABS

ABS 12V ... 24V to 12V

with 24V socket and 12V plug



Special converter for the supply of a 12V anti lock system ABS/EBS out of 12V or 24V.

The converter input is equipped with a 24V ABS/EBS socket and the output with a 12V ABS/EBS plug.

For trailer side mounting only. The contacts 6 and 7 ("CAN-Bus") are unequipped.

- * **input voltage 12V and 24V**
- * **compact size because of a high efficiency**
- * **simply plug in on the (semi) trailer side**
- * **the function of the info modul remains effective**
- * **protection against overload**
- * **ABS-socket divisible for mounting the converter from behind**

input voltage:

9 ... 33V DC both lines

output voltage:

13,2V $\pm 5\%$ (at $U < 13,2V$
8,5...13,2V)

output current line (term. 15):

0 ... 300mA (600mA)

output current line (term. 30):

0 ... 8A (10A)

input connection:

ABS / EBS socket 24V
ISO'7638

output connection:

ABS / EBS plug 12V ISO'7638

cable length:

app. 500mm, input and output

dimensions:

170 x 70 x 25mm without
cabel outlet

mechanical protection:

solid casting

total efficiency:

app. 80%

mass:

app. 1600g

Order Info:

ABS 12-24PS

ABS 24-12SC



SEMI-VOLT ABS

ABS 12V ... 24V to 12V

with 24V plug and 12V socket



Special converter for the supply of a 12V anti lock system ABS/EBS out of 12V or 24V.

The converter input is equipped with a 24V ABS/EBS plug and the output with a 12V ABS/EBS socket.

For towing vehicle side mounting only. The contacts 6 and 7 ("CAN-Bus") are unequipped.

- * **input voltage 12V and 24V**
- * **compact size because of a high efficiency**
- * **simply plug in on the towing vehicle side**
- * **the function of the info modul remains effective**
- * **protection against overload**
- * **ABS-socket divisible for mounting the converter from behind**

input voltage:

9 ... 33V DC both lines

output voltage:

13,2V +5% (at $U < 13,2V$
8,5...13,2V)

output current line (term. 15):

0 ... 300mA (600mA)

output current line (term. 30):

0 ... 8A (10A)

input connection:

ABS / EBS plug 24V ISO'7638

output connection:

ABS / EBS socket 12V
ISO'7638

cable length:

app. 500mm, input and output

dimensions:

170 x 70 x 25mm without
cabel outlet

mechanical protection:

solid casting

total efficiency:

app. 80%

mass:

app. 1600g

Order Info:

ABS 24-12SC

ABS 12-24

DUAL-VOLT ABS
ABS 12 ... 24V to 24V



Special converter for the supply of 24V anti block system out of 12V or 24V

- * **input voltage 12V and 24V**
- * **high power for additional functions like EBS and level control**
- * **compact size by high efficiency**
- * **simple mounting by inserting into cable line (5-pole cable)**
- * **info-module works properly**
- * **electronical protection against reverse polarity without short circuit**
- * **protection against overload**
- * **reverse voltage proof independent from polarity**

input voltage:

9 ... 33V DC both lines

output voltage:

27V $\pm 5\%$ (27 ... 32V if input above 27V)

output current line (term. 15):

0 ... 500mA

output current line (term. 30):

0 ... 10A (15A /20% on time cycle)

connection:

input and output cables are sealed in, open endings

cable length:

c. 350mm, input and output

dimensions:

200 x 70 x 40mm without cable outlet

mechanical protection:

solid casting

total efficiency:

c. 80%

mass:

c. 950g

Order Info:

ABS 12-24

ABS 12-24H

DUAL-VOLT ABS

ABS 12 ... 24V to 24V 15/20A



Special converter for the supply of 24V anti lock system out of 12V or 24V. High output power 15/20A

- * **input voltage 12V and 24V**
- * **high power for additional functions like EBS, level control and multi systems**
- * **compact size by high efficiency**
- * **simple mounting by inserting into cable line (5-pole cable)**
- * **info-module works properly**
- * **electronical protection against reverse polarity without short circuit**
- * **protection against overload**
- * **reverse voltage proof independent from polarity**

Input voltage:

9 ... 33V DC both lines

Output voltage:

27V $\pm 5\%$ (27 ... 32V if input above 27V)

Output current line (term. 15):

0 ... 500mA

Output current line (term. 30):

0 ... 15A (20A /20% on time cycle)

Connection:

input and output cables (4mm²/1.5mm²) are sealed in, open endings

Cable length:

about 350mm, input and

Dimensions:

200 x 70 x 25mm without cabel outlet

Mechanical protection:

solid casting

Total efficiency:

> 92%

Mass:

850g

Order Info:

ABS 12-24H

ABS 12-24BCD



DUAL-VOLT ABS

ABS 12V ... 24V to 24V

In: female bayonet, out: male bayonet



Special converter for the supply of a 24V anti lock system ABS/EBS out of 12V or 24V. The converter is equipped with ABS/EBS bayonet connectors. For inserting into the trailer cable. The contacts 6 and 7 ("CAN-Bus") are connected through. Attention! The can bus lines require a separate level shifter. Without a level shifter the brake operates correctly on the ABS level.

- * **protection against overload**
- * **reverse voltage proof independent from polarity**
- * **very fast done and water protected mounting without additional measures**
- * **the function of the info module remains active**
- * **compact size by high efficiency**
- * **input voltage 12V and 24V**
- * **high power for additional functions like EBS and level control**
- * **only insert into the ABS/EBS cable at the bayonet connection**
- * **electronical protection against reverse polarity without short circuit**

input voltage:

9 ... 33V DC both lines

output voltage:

27V $\pm 5\%$ (27 ... 32V if input above 27V)

output current line (term. 15):

0 ... 500mA

output current line (term. 30):

0 ... 10A (15A /20% on time cycle)

input connection:

Bayonet female connector with lock shell, 7 pins automotive standard

output connection:

Bayonet male connector, 7 pins automotive standard

cable length:

app. 330mm, input and output

dimensions:

200 x 70 x 40mm without cable outlet

mechanical protection:

solid casting

total efficiency:

app. 80%

mass:

app. 1200g

Order Info:

ABS 12-24BC

ABS 12-24BRD



DUAL-VOLT ABS

ABS 12V ... 24V to 24V,

In: male bayonet, out: female bayonet



Special converter for the supply of a 24V anti lock system ABS/EBS out of 12V or 24V. The converter is equipped with ABS/EBS bayonet connectors. For inserting into the trailer cable. Male input / female output (Reverse configuration). The contacts 6 and 7 ("CAN-Bus") are connected through. Attention! The can bus lines require a separate level shifter. Without a level shifter the brake operates correctly on the ABS level.

- * **very fast done and water protected mounting without additional measures**
- * **simply insert into the ABS/EBS cable at the bayonet connection (Reverse configuration)**
- * **input voltage 12V and 24V**
- * **high power for additional functions like EBS and level control**
- * **the function of the info module remains active**
- * **electronical protection against reverse polarity without short circuit**
- * **protection against overload**
- * **reverse voltage proof independent from polarity**
- * **compact size by high efficiency**

input voltage:

9 ... 33V DC both lines

output voltage:

27V \pm 5% (27 ... 32V if input above 27V)

output current line (term. 15):

0 ... 500mA

output current line (term. 30):

0 ... 10A (15A /20% on time cycle)

input connection:

Bayonet male connector, 7 pins automotive standard

output connection:

Bayonet female connector with lock shell, 7 pins automotive standard

cable length:

app. 330mm, input and output

dimensions:

200 x 70 x 40mm without cable outlet

mechanical protection:

solid casting

total efficiency:

app. 80%

mass:

app. 1200g

Order Info:

ABS 12-24BR

ABS 12-24PS



DUAL-VOLT ABS

ABS 12V ... 24V to 24V

with socket and plug



Special converter for the supply of a 24V anti lock system ABS/EBS out of 12V or 24V.

The converter input is equipped with a 12V ABS/EBS socket and the output with a 24V ABS/EBS plug.

Normal case: Trailer side mounting. The contacts 6 and 7 ("CAN-Bus") are unequipped.

- * **input voltage 12V and 24V**
- * **high power for additional functions like EBS and level control**
- * **simply plug in on the (semi) trailer side**
- * **electronical protection against reverse polarity without short circuit**
- * **protection against overload**
- * **reverse voltage proof independent from polarity**
- * **high efficiency**
- * **Up to 40km/h the cable KN-ABSFT for the input is also legal (follow regulations)**

input voltage:

9 ... 33V DC both lines

output voltage:

27V $\pm 5\%$ (27 ... 32V if input above 27V)

output current line (term. 15):

0 ... 500mA

output current line (term. 30):

0 ... 10A (15A /20% on time cycle)

input connection:

ABS / EBS socket 12V
ISO'7638

output connection:

ABS / EBS plug 24V ISO'7638

cable length:

app. 500mm, input and output

dimensions:

200 x 70 x 40mm without
cable outlets

mechanical protection:

solid casting

total efficiency:

app. 80%

mass:

app.1850g

Order Info:

ABS12-24PS

ABS 12-24PSM



DUAL-VOLT ABS

ABS 12V ... 24V auf 24V

in rack, trailer side



Special converter for the supply of a 24V anti lock system ABS/EBS out of 12V or 24V. The converter input is equipped with a 12V ABS/EBS socket and the output with a 24V ABS/EBS plug. The converter is mounted in a stainless steel rack with a parking socket and is ready for use. Normal case: trailer side mounting. The contacts 6 and 7 ("CAN-Bus") are unequipped.

- * **input voltage 12V and 24V**
- * **high power for additional functions like EBS and level control**
- * **compact size by high efficiency**
- * **unit ready for use with parking socket, fast to mount on the (semi) trailer side**
- * **electronical protection against reverse polarity without short circuit**
- * **protection against overload**
- * **reverse voltage proof independent from polarity**
- * **high efficiency**
- * **Up to 40km/h the cable KN-ABSFT for the input is also legal (follow regulations)**

input voltage:

9 ... 33V DC both lines

output voltage:

27V +5% (27 ... 32V if input above 27V)

output current line (term. 15):

0 ... 500mA

output current line (term. 30):

0 ... 10A (15A /20% on time cycle)

input connection:

ABS / EBS socket 12V
ISO'7638

output connection:

ABS / EBS plug 24V ISO'7638

cable length:

c. 350mm, input and output

dimensions:

300 x 150 x 87mm + socket
45mm

mechanical protection:

solid casting and stainless
steel

total efficiency:

app. 80%

mass:

app. 3300g

Order Info:

ABS 12-24PSM

ABS 12-24SC



DUAL-VOLT ABS

ABS 12V ... 24V to 24V

with plug and socket



Special converter for the supply of a 24V anti lock system ABS/EBS out of 12V or 24V.

The converter input is equipped with a 12V ABS/EBS plug and the output with a 24V ABS/EBS socket.

Normal case: truck side mounting. The contacts 6 and 7 ("CAN-Bus") are unequipped.

- * **input voltage 12V and 24V**
- * **high power for additional functions like EBS and level control**
- * **compact size by high efficiency**
- * **simply plug in on the truck side**
- * **electronical protection against reverse polarity without short circuit**
- * **protection against overload**
- * **reverse voltage proof independent from polarity**
- * **ABS-socket divisible for mounting the converter from behind**

input voltage:

9 ... 33V DC both lines

output voltage:

27V $\pm 5\%$ (27 ... 32V if input above 27V)

output current line (term. 15):

0 ... 500mA

output current line (term. 30):

0 ... 10A (15A /20% on time cycle)

input connection:

ABS / EBS plug 12V ISO'7638

output connection:

ABS / EBS socket 24V ISO'7638

cable length:

app. 500mm, input and output

dimensions:

200 x 70 x 40mm without cable outlet

mechanical protection:

solid casting

total efficiency:

app. 80%

mass:

app. 1850g

Order Info:

ABS 12-24SC

ABS 12-24SCL



DUAL-VOLT ABS

ABS 12V ... 24V to 24V

input bare cable, output socket



Special converter for the supply of a 24V anti lock system ABS/EBS out of 12V or 24V.

The converter input is equipped with bare sheathed cable ending and the output with a 24V ABS/EBS socket.

General case: Installation of the converter at the distribution box of the farming tractor. The contacts 6 and 7 ("CAN-Bus") are unequipped.

- * **input voltage 12V and 24V**
- * **high power for additional functions like EBS and level control**
- * **compact size by high efficiency**
- * **input bare cable ending, output ABS-EBS-Socket**
- * **electronical protection against reverse polarity without short circuit**
- * **protection against overload**
- * **reverse voltage proof independent from polarity**
- * **ABS-socket divisible for mounting the converter from behind**
- * **function of the info module remains unaffected**

input voltage:

9 ... 33V DC both lines

output voltage:

27V $\pm 5\%$ (27 ... 32V if input above 27V)

output current line (term. 15):

0 ... 500mA

output current line (term. 30):

0 ... 10A (15A /20% duty cycle)

input connection:

bare sheathed cable

output connection:

ABS / EBS socket 24V
ISO7638

cable length input:

approx. 4500mm

cable length output:

approx. 500mm

dimensions:

200 x 70 x 40mm without
cabel outlet

mechanical protection:

entirely sealed (IP69K)

total efficiency:

approx. 80%

mass:

approx. 1900g

Order Info:

ABS 12-24SCL

ABS 12-24SCM



DUAL-VOLT ABS

ABS 12V ... 24V auf 24V

in rack, truck side



Special converter for the supply of a 24V anti lock system ABS/EBS out of 12V or 24V. The converter input is equipped with a 12V ABS/EBS plug and the output with a 24V ABS/EBS socket. The converter is mounted in a stainless steel rack with a parking socket and is ready for use. Normal case: truck side mounting. The contacts 6 and 7 ("CAN-Bus") are unequipped.

- * input voltage 12V and 24V
- * high power for additional functions like EBS and level control
- * unit ready for use with parking socket, fast to mount on the truck side
- * electrical protection against reverse polarity without short circuit
- * protection against overload
- * reverse voltage proof independent from polarity
- * high efficiency

input voltage:

9 ... 33V DC both lines

output voltage:

27V \pm 5% (27 ... 32V if input above 27V)

output current line (term. 15):

0 ... 500mA

output current line (term. 30):

0 ... 10A (15A /20% on time cycle)

input connection:

ABS / EBS plug 12V ISO'7638

output connection:

ABS / EBS socket 24V ISO'7638

cable length:

ab. 370mm, plug

dimensions:

300 x 150 x 87mm + socket 45mm

mechanical protection:

solid casting and stainless steel

total efficiency:

app. 80%

mass:

app. 3300g

Order Info:

ABS 12-24SCM

ABS 12-24DT



DUAL-VOLT ABS

ABS 12V ... 24V to 24V

Input 12V socket / Output 24V socket



Special converter for the supply of a 24V anti lock system ABS/EBS out of 12V or 24V. The converter input is equipped with a 12V ABS/EBS socket and the output with a 24V ABS/EBS socket. Preferential for trailer side mounting. Connection with the truck by the use of a 12V plug-plug-cable. The 24V trailer plug will be plugged in the converter. The contacts 6 and 7 ("CAN-Bus") are unequipped.

- * **input voltage 12V and 24V**
- * **high power for additional functions like EBS and level control**
- * **simply plug in on the (drawbar) trailer side**
- * **electronical protection against reverse polarity without short circuit**
- * **protection against overload**
- * **reverse voltage proof independent from polarity**
- * **high efficiency**
- * **Up to 40km/h the cable KN-ABSFT for the input is also legal (follow regulations)**

input voltage:

9 ... 33V DC both lines

output voltage:

27V \pm 5% (27 ... 32V if input above 27V)

output current line (term. 15):

0 ... 500mA

output current line (term. 30):

0 ... 10A (15A /20% on time cycle)

input connection:

ABS / EBS socket 12V
ISO'7638

output connection:

ABS / EBS socket 24V
ISO'7638

cable length:

app. 500mm, input and output

dimensions:

200 x 70 x 40mm without
cable outlets

mechanical protection:

solid casting

total efficiency:

app. 80%

mass:

app.1850g

Order Info:

ABS 12-24DT

ABS 12-24DTM



DUAL-VOLT ABS

ABS 12V ... 24V auf 24V

in rack, trailer side, 2 sockets



Special converter for the supply of a 24V anti lock system ABS/EBS out of 12V or 24V. The converter input is equipped with a 12V ABS/EBS socket and the output with a 24V ABS/EBS socket. The converter is mounted in a stainless steel rack and is ready for use. Preferential for trailer side mounting. Connection with the truck by the use of a 12V plug-plug-cable. The 24V trailer plug will be plugged in the converter. The contacts 6 and 7 ("CAN-Bus") are unequipped.

- * **input voltage 12V and 24V**
- * **high power for additional functions like EBS and level control**
- * **compact size by high efficiency**
- * **unit ready for use, fast to mount on the (drawbar) trailer**
- * **electronical protection against reverse polarity without short circuit**
- * **protection against overload**
- * **reverse voltage proof independent from polarity**
- * **Up to 40km/h the cable KN-ABSFT for the input is also legal (follow regulations)**

input voltage:

9 ... 33V DC both lines

output voltage:

27V $\pm 5\%$ (27 ... 32V if input above 27V)

output current line (term. 15):

0 ... 500mA

output current line (term. 30):

0 ... 10A (15A /20% on time cycle)

input connection:

ABS / EBS socket 12V
ISO'7638

output connection:

ABS / EBS socket 24V
ISO'7638

dimensions:

300 x 150 x 87mm + socket
45mm

mechanical protection:

solid casting and stainless
steel

total efficiency:

app. 80%

mass:

app. 3300g

Order Info:

ABS 12-24DTM

TCU 12-24US

Trailer Converter Unit
12V to 24V with PLC
ISO 7638 and 7N plug



Complete trailer converter system to operate a European trailer with 24Volt at an American or Canadian towing vehicle. PLC signal conversion for the failure status from the trailer to the truck is implemented.

- * contains all components for "plug and run"
- * input socket 7 pin "N" Standard is allocated according to NATO-coiled cable for US-Canada trucks
- * output 1: 7pin "N" 24V for lights
- * output 2: 7 pin ABS / EBS connector ISO 7638
- * assembled with our converters ASV 12-24-7H and ABS12-24
- * stainless steel modul rack

input voltage:

9 ... 18V DC

output voltage:

27V \pm 5%

output power lights:

2x260W + 3x130W, maximum
500W nominal

output current ABS / EBS:

10A / max 15A modulator, 0,5
/ max 1A control unit

input connection:

socket "7N" ISO'1185, NATO-
allocation

output 1 connection:

plug "7N" ISO'1185 with ISO-
allocation

output 2 connection:

ABS / EBS plug 24V ISO'7638

cable length outputs:

app. 1000mm

dimensions:

440 x 144 x 65mm rack
without cable outlet and socket

mechanical protection:

solid casting of each
component

weight:

app. 6350g

Order Info:

TCU12-24US

TCU12-24US-15



Trailer Converter Unit
12V to 24V with PLC
ISO 7638 and 15 pin plug



Complete trailer converter system to operate a European trailer with 24Volt at an American or Canadian towing vehicle. PLC signal conversion for the failure status from the trailer to the truck is implemented.

- * contains all components for "plug and run"
- * input socket 7 pin "N" Standard is allocated according to NATO-coiled cable for US-Canada trucks
- * output 1: 15 pin connector 24V for lights
- * output 2: 7 pin ABS / EBS connector ISO 7638
- * assembled with our converters ASV 12-24-7H and ABS 12-24 and ABS12-24
- * stainless steel modul rack

input voltage:

9 ... 18V DC

output voltage:

27V +5%

output power lights:

2x260W + 3x130W, maximum
500W nominal

output current ABS / EBS:

10A / max 15A modulator, 0,5
/ max 1A control unit

input connection:

socket "7N" ISO'1185, NATO-
allocation

output 1 connection:

plug 15 pin ISO'4091 with ISO
light line allocation

cable length outputs:

app. 1000mm

output 2 connection:

ABS / EBS plug 24V ISO'7638

dimensions:

440 x 144 x 65mm rack
without cable outlet and socket

mechanical protection:

solid casting of each
component

weight:

app. 6370g

Order Info:

TCU12-24US-15

TCU-FT

Trailer converter unit
12V to 24V for lights and ABS



Complete Trailer unit for farming tractors 12V to 24V for lights and ABS. At the input are plugs and at the outlet are sockets. Park sockets are available when the converter is not in use to take the free plugs. The unit is mounted in a stainless steel metal rack. The converters inside are ABS 12-24 and ASV 12-24-6H.

- * Includes all components for "plug and go"
- * Input 1 with a 7-contact plug for the lights
- * Input 2 with a ABS/EBS standard plug, 5 contacts connected
- * Output 1 with a 7 contact 24V "7N" socket and a 15 contact 24V lights socket
- * Output 2 with a 7 contact 24V ABS/EBS socket, 5 contacts connected
- * Park sockets for both plugs when not in use
- * Stainless steel metal rack is removable without detaching the screws

Input voltage:

12V nominal

Output voltage:

24V nominal

Output power 1:

Lamps/LEDs: 6 x130W,
maximum 500W nominal

Output power 2:

ABS/EBS maximum 2 units

Connection input 1:

Lights, Plug 12V, 7 contacts
ISO'1724

Connection input 2:

ABS, Plug 12V ISO'7638,
5 contacts

Connection output 1:

Lights, Socket 24V 7 contacts
ISO'1724 and 15 contacts
ISO'4091

Connection output 2:

ABS/EBS, 24V Socket
ISO'7638, 5 contacts

Cable length input:

Input1 / Input 2: about
700mm each

Mechanical protection:

Each component is casted

Dimensions:

412 x 196 x 100mm Metal
body sockets excluded

Mass:

6,4 kg

Order Info:

TCU-FT

TCU-FT-DD



**Trailer converter unit
12V to 24V for lights and ABS
compact version**



Complete Trailer unit 12V to 24V for agricultural and forestry vehicles, for lights and ABS. At the input and the output sockets are mounted. The connection to the towing vehicle and the trailer is made by intermediate cables. The converters inside are ABS 12-24 and ASV 12-24-6H and are mounted in a stainless steel metal rack together with the sockets.

- * **Applicable at the towing vehicle or at the trailer**
- * **Input 1 with a 7-contact socket for the lights**
- * **Input 2 with an ABS/EBS standard socket, 5 contacts connected**
- * **Output 1 with a 15 contact 24V lights socket**
- * **Output 2 with a 7 contact 24V ABS/EBS socket, 5 contacts connected**
- * **For the lights output a slim adapter from 15 contacts to 7 contacts is available as an option**
- * **The entire converter unit is removable without detaching the screws**
- * **Connection cables are available separately**

Input voltage:

12V nominal

Output voltage:

24V nominal

Output power 1:

Lamps/LEDs: 6 x 130W, total
max. 500W nominal

Output power 2:

ABS/EBS maximum 2 units

Connection input 1:

Lights, socket 12V, 7
contacts ISO'1724

Connection input 2:

ABS, Plug 12V ISO'7638,
5 contacts

Connection output 1:

Lights, Socket 24V, 15
contacts ISO'4091

Connection output 2:

ABS/EBS, 24V Socket
ISO'7638, 5 contacts

Mechanical protection:

Each component is entirely
sealed (IP69K)

Dimensions:

440 x 146 x 100mm Metal
body, sockets excluded

Mass:

5.3kg

Order Info:

TCU-FT-DD

KN-ABSFT

Cable 12V-3-pin to 12V ABS plug, 4m,
max. 40km/h!



Input connector:

Plug 3 pin DIN 9680

Output connector:

Plug ABS 5 pin ISO 7638-2

Cable length:

4m

Cable style:

2x4+3x1,5mm² PUR
(1x 1,5mm² not in use)

Mass:

1,05 kg

Accessory for:

ABS12-24DT, -DTM
ABS12-24PS, -PSM
TCU-FT-DD

Cable for the connection of the converters ABS 12-24DT, -DTM, -PS, -PSM with a 3 pin tractor universal socket according to DIN 9680.

Attention! Legal maximum speed 40km/h! Please follow the regulations of your country.

- * Supplies the EBS of a trailer when subsequently limited to 40km/h
- * For the supply of any ABS 12-24xx converter with a 12V ISO 7638-2 input socket
- * No ABS upgrade of 40km/h tractors required

Order Info:

KN-ABSFT

KN-ABSUEFT

Cable 12V-3-pin to 12V ABS socket,
2m, max. 40km/h!



Input connector:

Plug 3 pin DIN 9680

Output connector:

Socket ABS 5 pin ISO 7638-2

Cable length:

2m

Cable style:

2x4+3x1,5mm² PUR
(1x 1,5mm² not in use)

Mass:

0,65 kg

Accessory for:

ABS12-24SC, -SCM
TCU-FT

Cable for the connection of the ABS part of the unit TCU-FT as well as the converters ABS 12-24SC and ABS 12-24SCM with a 3 pin tractor universal socket according to DIN 9680. Version with ABS socket.

Attention! Legal maximum speed 40km/h! Please follow the regulations of your country.

- * Supplies the EBS of a trailer when subsequently limited to 40km/h
- * For the supply of any ABS 12-24xx converter with a 12V ISO 7638-2 input plug
- * No ABS upgrade of 40km/h tractors required

Order Info:

KN-ABSUEFT

KN-BELFTL

Cable 12V 7-pin plug ot 12V 7-pin plug,
3,1m



Connection input:

Plug 7 pin DIN/ISO 1724

Connection output:

Plug 7 pin DIN/ISO 1724

Cable length:

3,1m (cable style
6x1,5+1x2,5mm² PUR)

Mass:

0,70 kg

Accessory for:

TCU-FT-DD

Cable for the connection of the lights converter mounted in the
TCU-FT-DD unit.

- * **connection between 12V light socket and TCU-FT-DD unit**
- * **higher cross section prevents high voltage drops**
- * **long cable ideal for using the TCU-FT-DD unit mounted at
the tractor or at the trailer**

Order Info:

KN-BELFTL

KN-EBS12WL

ABS/EBS coil both sides with ABS/EBS plug
12V ISO 7638-2



ABS/EBS coil with ISO 7638-2 plug.

- * ADR certified according to ISO 4141 and ISO 4091
- * High pull-out forces by strain relief inside

Connection input:

Plug ABS/EBS 7-pin 12V
ISO 7638-2

Connection output:

Plug ABS/EBS 7-pin 12V
ISO 7638-2

Cable length:

3m working length

Cable style:

2x4+3x1,5+1x(2x1,5)mm²
PUR

Mass:

1,55 kg

Accessory for:

ABS12-24DT, -DTM
ABS12-24PS, -PSM
ABS24-12SC
TCU-FT-DD

Order Info:

KN-EBS12WL

KN-EBS24WL

ABS/EBS coil both sides with ABS/EBS
plug 24V ISO 7638-1



ABS/EBS coil with ISO 7638-1 plug.

* ADR certified according to ISO 4141 and ISO 4091

* High pull-out forces by strain relief inside

Connection input:

Plug ABS/EBS 7-pin 24V
ISO 7638-1

Connection output:

Plug ABS/EBS 7-pin 24V
ISO 7638-1

Cable length:

3m working length

Cable style:

2x4+3x1,5+1x(2x1,5)mm²
PUR

Mass:

1,55 kg

Accessory for:

ABS12-24SC, -SCM
ABS24-12PS
TCU-FT, -DD

Order Info:

KN-EBS24WL

W 24-12-4S

SEMI-VOLT 4S
24 to 12V 4(6)A



High-end voltage converter with low power for 12V devices at 24V car line. Ideal solution for point of device supply like telematic and GPS wireless alarm systems.

- * **concept of high development standard:**
 - real voltage division, discharge protection of 12V device is effective
 - significant low self current consumption of 0,7mA
 - very high efficiency of about 94%
- * **overload capacity up to 6A for about 5 min.**
- * **small dimensions**
- * **compact plug, sealing option**
- * **5kW-peak-safety-diode to prevent overvoltage from car line**
- * **electronical protection against reverse polarity without need of a fuse**

input voltage:

16 ... 30V DC

output voltage:

8 ... 15V DC input voltage gets halved

output current:

4A permanent, 6A for about 5 min.

current without load:

0,7mA at 24V

connections:

3-poles connector, Mate Lock with sealing option

dimensions:

80 x 70 x 25mm incl. Plug

mechanical protection:

solid casting

electrical protection:

overcurrent, overtemperature, input transients

temperature range:

-40 ... +75°C, derating T>45°C

efficiency:

about 94%

mass:

about 190g

Order Info:

W 24-12-4S

W 24-12-4P

SEMI-VOLT 4 plus
24V to 12V 4(6)A, two lines



High-end voltage converter with low power for 12V devices at 24V car line. For the simultaneous supply of permanent plus and ignition plus. Ideal solution for point of device supply like telematic and GPS wireless alarm systems.

- * **concept of high development standard:**
 - real voltage division, discharge protection of 12V device is effective
 - significant low self current consumption of 0,7mA
 - very high efficiency of about 94%
- * **overload capacity up to 6A for about 5 min.**
- * **small dimensions**
- * **compact plug, sealing option**
- * **5kW-peak-safety-diode to prevent overvoltage from car line**
- * **electronical protection against reverse polarity without need of a fuse**

input voltage:

16 ... 30V DC

output voltage:

8 ... 15V DC input voltage gets halved

switch line:

ignition plus (term 15)
connects second output

output current:

4A permanent, 6A for about 5 min.

connection:

5-poles connector, Mate Lock
with sealing option

dimensions:

80 x 70 x 25mm incl. Plug

mechanical protection:

solid casting

electrical protection:

overcurrent, overtemperature,
input transients, polarity

temperature range:

-40 ... +75°C, derating T>45°C

efficiency:

about 94%

current without load:

0,7mA at 24V

mass:

about 190g

Order Info:

W 24-12-4P

W 24-12-4PK

SEMI-VOLT 4 Plus

24V to 12V 4(6)A 13,6V



High-end voltage converter with low power for 12V devices at 24V car line. For the simultaneous supply of permanent plus and ignition plus. Ideal solution for decentralised supply of telematic, navigation and tracking systems. Fixed voltage at 13.6V.

- * **concept of high development standard:**
 - fixed voltage 13.6V
 - significant low self current consumption of 0.7mA
 - very high efficiency of about 94%
- * **overload capacity up to 6A for about 5 min.**
- * **small dimensions**
- * **compact plug, sealing option**
- * **5kW-peak-safety-diode to prevent overvoltage from car line**
- * **electronical protection against reverse polarity without blowing a fuse**

input voltage:

16 ... 30V DC

output voltage:

13.6V \pm 5%

switch line:

ignition plus (term. 15)
activates second output

output current:

4A permanent, 6A for about 5 min.

connection:

Plug 5 contacts Mate Lock
with sealing option

dimensions:

80 x 70 x 25mm incl. Plug

mechanical protection:

solid casting

electrical protection:

overcurrent, overtemperature,
voltage transients, polarity

temperature range:

-40 ... +75°C, derating T>45°C

efficiency:

about 94%

current without load:

0,7mA at 24V

mass:

about 190g

Order Info:

W 24-12-4PK

W 24-12-10S

SEMI-VOLT 10 S
24V to 12V 10(15)A



High-end voltage converter with medium power for 12V devices at 24V car line.

- * provides permanent plus (term. 30) or ignition plus (term. 15) up to the maximum load
- * concept of high development standard:
 - real voltage division, discharge protection of 12V device is effective
 - significant low self current consumption of 0,7 mA
 - very high efficiency of about 94%
- * overload capacity up to 15A for about 5 min.
- * small dimensions
- * compact plug (AMP Mate Lock)
- * 5kW-peak-safety-diode to prevent overvoltage from car line

input voltage:

16 ... 30V DC

output voltage:

8 ... 15V DC input voltage gets halved

output current:

10A permanent, 15A for about 5 min.

dimensions:

129 x 70 x 25mm incl. Plug

connection:

3-poles connector, round contacts (AMP Mate Lock)

temperature range:

-40 ... +75°C, derating T>45°C

electrical protection:

overcurrent, overtemperature, input transients

mechanical protection:

solid casting

efficiency:

about 94%

current without load:

0,7mA at 24V

mass:

about 385g

Order Info:

W 24-12-10S

W 24-12-10SL

SEMI-VOLT 10 SL
24V to 12V 10(15)A



High-end voltage converter with medium power for 12V devices at 24V car line.

- * provides permanent plus (term. 30) or ignition plus (term. 15) up to the maximum load
- * concept of high development standard:
 - real voltage division, discharge protection of 12V device is effective
 - significant low self current consumption of 0,7 mA
 - very high efficiency of about 94%
- * overload capacity up to 15A for about 5 min.
- * small dimensions
- * connected with 3-pol. Sheathed cable
- * 5kW-peak-safety-diode to prevent overvoltage from car line

input voltage:

16 ... 30V DC

output voltage:

8 ... 15V DC input voltage gets halved

output current:

10A permanent, 15A for about 5 min.

current without load:

0,7mA at 24V

connection:

cable with open ends

cable length:

about 1000mm 3x1,5mm²

electrical protection:

overcurrent, overtemperature, input transients

dimensions:

120 x 70 x 25mm

mechanical protection:

entirely sealed (IP69K)

temperature range:

-40 ... +75°C, derating T>45°C

efficiency:

about 94%

mass:

about 385g

Order Info:

W 24-12-10SL

W 24-12-10P

SEMI-VOLT 10 Plus
24V to 12V 10(15)A, two lines



High-end voltage converter with medium power for 12V devices at 24V car line. For the simultaneous supply of permanent plus and ignition plus.

- * provides permanent plus (term. 30) and ignition plus (term. 15) up to the maximum load
- * concept of high development standard:
 - real voltage division, discharge protection of 12V device is effective
 - significant low self current consumption of 0,7 mA
 - very high efficiency of about 94%
- * overload capacity up to 15A for about 5 min.
- * small dimensions
- * compact plug (AMP Mate Lock)
- * 5kW-peak-safety-diode to prevent overvoltage from car line

input voltage:

16 ... 30V DC

switch line:

ignition plus (term 15)
connects second output

output voltage:

8 ... 15V DC input voltage gets
halved

output current:

10A permanent, 15A for about
5 min.

dimensions:

129 x 70 x 25mm incl. Plug

connection:

5-poles connector, round
contacts (AMP Mate Lock)

temperature range:

-40 ... +75°C, derating T>45°C

electrical protection:

overcurrent, overtemperature,
input transients

mechanical protection:

entirely sealed

current without load:

0,7mA at 24V

efficiency:

about 94%

mass:

about 385g

Order Info:

W 24-12-10P

W 24-12-10PK

SEMI-VOLT 10 Plus

24V to 12V 10(15)A, 13.6V, two lines



High-end voltage converter with medium power for 12V devices at 24V car line. For the simultaneous supply of permanent plus and ignition plus. Fixed voltage 13.6V.

- * provides permanent plus (term. 30) and ignition plus (term. 15) up to the maximum load
- * concept of high development standard:
 - fixed voltage 13.6V
 - significant low self current consumption of 0.7 mA
 - very high efficiency of about 94%
- * overload capacity up to 15A for about 5 min.
- * small dimensions
- * compact plug (AMP Mate Lock)
- * 5kW-peak-safety-diode to prevent overvoltage from car line

input voltage:

16 ... 30V DC

output voltage:

13.6V \pm 5%

output current:

10A permanent, 15A for about 5 min.

switch line:

ignition plus (term 15)
activates second output

connection:

5-poles connector, round
contacts (AMP Mate Lock)

temperature range:

-40 ... +75°C, derating $T > 45^\circ\text{C}$

electrical protection:

overcurrent, overtemperature,
voltage transients

mechanical protection:

solid casting

current without load:

0,7mA at 24V

efficiency:

about 94%

dimensions:

129 x 70 x 25mm incl. Plug

mass:

about 385g

Order Info:

W 24-12-10PK

W 24-12-16S

SEMI-VOLT 16
24V to 12V 16(24)A



High-end voltage converter of higher power for 12V consumers at a 24V car line.

- * provides permanent plus (term.30) or ignition plus (term.15)
- * concept of high development standard:
 - real voltage division, discharge protection of 12V device is effective
 - significant low self current consumption of 0,7mA
 - very high efficiency of about 92%
- * overload capacity up to 24A for about 5 min.
- * small dimensions
- * high quality high-power-plug, water proof, counterpart is included
- * 5kW-peak-protection-diode to prevent overvoltage coming from the car line

input voltage :	16 ... 30V DC
output voltage:	8 ... 15V DC input voltage is halved
output current:	16A permanent, 24A for about 5 min.
current without load:	0,7mA at 24V
connections:	3 contacts in a 5-pole plug "Delphi Metri-Pack Series 150 Sealed" IP67K
dimensions:	200 x 70 x 25mm
mechanical protection:	solid casting IP67K
electrical protection:	overcurrent, overtemperature, input transients
temperature range:	-40 ... +75°C, derating T>45°C
efficiency:	about 92%
mass:	about 710g

Order Info:

W24-12-16S

W 24-12-16P



SEMI-VOLT 16 Plus

24V to 12V 16(24)A

supplies permanent and ignition plus line



High-end voltage converter of higher power for 12V consumers at a 24V car line. For the simultaneous supply of permanent plus line and ignition plus line.

- * provides permanent plus (term. 30) and ignition plus (term. 15) up to the maximum load
- * concept of high development standard:
 - real voltage division, discharge protection of 12V device is effective
 - significant low self current consumption of 0,7mA
 - very high efficiency of about 92%
- * overload capacity up to 24A for about 5 min.
- * small dimensions
- * high quality high-power-plug, water proof, counterpart is included
- * 5kW-peak-protection-diode to prevent overvoltage coming from the car line

input voltage :

16 ... 30V DC

output voltage:

8 ... 15V DC input voltage is halved

output current:

16A permanent, 24A for about 5 min.

current without load:

0,7mA at 24V

connections:

5-pole plug "Delphi Metri-Pack Series 150 Sealed" IP67K

dimensions:

200 x 70 x 25mm

mechanical protection:

solid casting IP67K

electrical protection:

overcurrent, overtemperature, input transients

switching line:

ignition plus (term. 15) switches 2nd outlet

temperature range:

-40 ... +75°C, derating T>45°C

efficiency:

about 92%

mass:

about 710g

Order Info:

W 24-12-16P

W 24-12-26S

SEMI-VOLT 26S
24V auf 12V 26(35)A



High-end voltage converter of higher power for 12V consumers at 24V car line.

- * **concept of high development standard:**
 - real voltage division, discharge protection of 12V device is effective
 - significant low self current consumption of 0,7mA
 - very high efficiency of about 94%
- * **overload capacity up to 35A for about 5 min.**
- * **small dimensions**
- * **high-power-plug of high quality**
- * **5kW-peak-safety-diode to prevent overvoltage from car line**

input voltage:	16 ... 30V DC
output voltage:	8 ... 15V DC input voltage gets halved
output current:	26A permanent, 35A for about 5 min.
current without load:	0,7mA at 24V
connections:	3-pole plug "Anderson Powerpole Modular"
dimensions:	200 x 70 x 40mm
mechanical protection:	solid sealing
electrical protection:	overcurrent, overtemperature, input transients
temperature range:	-40 ... +75°C, derating T>45°C
efficiency:	c. 92%
mass:	c. 930g

Order Info:

W 24-12-26S

W 24-12-26P

SEMI-VOLT 26 Plus
24V to 12V 26(35)A, two lines



High-end voltage converter of higher power for 12V consumers at 24V car line. For the simultaneous supply of permanent plus and ignition plus

- * **provides permanent plus (term. 30) and ignition plus (term. 15) up to the maximum load**
- * **concept of high development standard:**
 - real voltage division, discharge protection of 12V device is effective
 - significant low self current consumption of 0,7mA
 - very high efficiency of about 94%
- * **overload capacity up to 35A for about 5 min.**
- * **small dimensions**
- * **high-power-plug of high quality**
- * **5kW-peak-safety-diode to prevent overvoltage from car line**

input voltage :	16 ... 30V DC
output voltage:	8 ... 15V DC input voltage gets halved
output current:	26A permanent, 35A for about 5 min.
current without load:	0,7mA at 24V
connections:	5-pole plug "Anderson Powerpole Modular"
dimensions:	200 x 70 x 40mm
mechanical protection:	solid casting
electrical protection:	overcurrent, overtemperature, input transients
switching line:	ignition plus (term. 15) switches 2nd outlet
temperature range:	-40 ... +75°C, derating T>45°C
efficiency:	c. 92%
mass:	c. 960g

Order Info:

W 24-12-26P

W 6-12-5P



BOOST-TO-12 5

6V...12V auf 24V, 5A

Permanent positive and ignition positive



Step up voltage converter with medium power from 6V until 12V (wide range) to 12V car line. For the simultaneous supply of permanent positive and ignition positive. The total current can be shared in any relation between the both outputs.

- * Converts the input voltage of 6V until 12V (wide range) to 13V constant
- * Converts permanent positive (clmp 30) and switched positive (clmp 15)
- * Active reverse polarity protection, fuse is not blown
- * Case water proof
- * Overload protection by electronic fuse
- * Very low quiescent current (self consumption) of 0.7mA only, no creeping discharge of the battery

input voltage:

4 ... 15V DC

output voltage:

13V DC +5%

switch on function:

ignition positive (clmp 15)
switches on second output

output current:

5A permanent, 7A peak

input current:

11A at 6,0V at output current
5A

current without load:

0.7mA at 6,0V

connection:

connection cable is sealed in
the device, open ending

cable elngth:

about 200mm

dimensions:

70 x 65 x 25mm

mechanical protection:

entirely sealed (IP69K)

electrical protection:

overtemperature, overcurrent,
reverse polarity

temperature range:

-40°C ... +75°C

efficiency:

about 93% at 5A

mass:

about 220g

Order Info:

W 6-12-5P

W 12-24-5S

Double Volt 5P
12V...24V auf 24V, 5A



Step up voltage converter with medium power from 12V until 24V (wide range) to 24V car line.

- * **Converts the input voltage of 12V until 24V (wide range) to 26V constant**
- * **Active reverse polarity protection, fuse is not blown**
- * **Case and connector water proof**
- * **Overload protection by electronic fuse**
- * **Very low quiescent current (self consumption) of 0.7mA only, no creeping discharge of the battery**

input voltage:

8 ... 30V DC

output voltage:

26V DC $\pm 5\%$

output current:

5A permanent, 8A peak

input current:

11A at 13,0V (18A at 8,0V) at
output current 5A

current without load:

0.7mA at 12V

connection:

Connector Tyco Super Seal
1.5, 5-pol / 3 allocated, water
protected IP67K

cable elngth:

about 100mm

dimensions:

70 x 65 x 25mm

mechanical protection:

solid casting

electrical protection:

overcurrent, overtemperature,
input transients, polarity

temperature range:

-40 ... +75°C, derating $T > 45^\circ\text{C}$

efficiency:

about 93% at 5A

mass:

about 220g

Order Info:

W 12-24-5S

W 12-24-5P



Double Volt 5P

12V...24V auf 24V, 5A

Permanent positive and ignition positive



Step up voltage converter with medium power from 12V until 24V (wide range) to 24V car line. For the simultaneous supply of permanent positive and ignition positive. The total current can be shared in any relation between the both outputs.

- * Converts the input voltage of 12V until 24V (wide range) to 26V constant
- * Converts permanent positive (clmp 30) and switched positive (clmp 15)
- * Active reverse polarity protection, fuse is not blown
- * Case and connector water proof
- * Overload protection by electronic fuse
- * Very low quiescent current (self consumption) of 0.7mA only, no creeping discharge of the battery

input voltage:

8 ... 30V DC

output voltage:

26V DC $\pm 5\%$

switch on function:

ignition positive (clmp 15)
switches on second output

output current:

5A permanent, 8A peak

input current:

11A at 13,0V (18A at 8,0V) at
output current 5A

current without load:

0.7mA at 12V

connection:

Connector Tyco Super Seal
1.5, 5-pol, water protected
IP67K

cable length:

about 100mm

dimensions:

70 x 65 x 25mm

mechanical protection:

solid casting

electrical protection:

overcurrent, overtemperature,
input transients, polarity

temperature range:

-40 ... +75°C, derating $T > 45^\circ\text{C}$

efficiency:

about 93% at 5A

mass:

about 220g

Order Info:

W 12-24-5P

W 12-24-10

Double Volt 10
12V to 24V 10(15)A



Step-up converter of higher power for 24V devices at 12V car line.

- * converts input voltage from 12V to 26V regulated
- * electrical protection against reverse polarity and missconnection without short circuit
- * suitable for voltage boosting (wide range input)

input voltage:

10 ... 33V DC

input current:

max. 35A (12V)

output voltage:

26V DC $\pm 2\%$

output current:

0 ... 10A (15A /20% duty cycle
ED)

current without load:

8mA (12V)

connection:

connection cable is sealed in,
open ending

cable length:

app. 550mm

dimensions:

200 x 70 x 40mm without
cable outlet

mechanical protection:

entirely sealed (IP69K)

electrical protection:

overtemperature, overcurrent,
reverse polarity

temperature range:

$-40^{\circ}\text{C} \dots +75^{\circ}\text{C}$

efficiency:

app. 80%

mass:

app. 920g

Order Info:

W 12-24-10

W 12-24-20

Double Volt 20
12V to 24V 20(22)A



Step-up converter of higher power for 24V devices at 12V car line.

- * converts input voltage from 12V to constant 27V
- * electrical protection against reverse polarity and missconnection without short circuit impact
- * suitable for 24V voltage boosting (wide range input)
- * protection against overload
- * reverse voltage proof independent from polarity

input voltage:

9 ... 33V DC

input current:

max. 60A (12V)

output voltage:

27V DC $\pm 5\%$ (27 ... 32V if
input above 27V)

output current:

0 ... 20A (22A /20% on time
cycle)

current without load:

<4mA (12V)

connection:

connection cable is sealed in
the device, open ending

cable length:

app. 550mm

dimensions:

200 x 70 x 40mm without
cable outlet

mechanical protection:

entirely sealed (IP69K)

electrical protection:

overtemperature, overcurrent,
reverse polarity

temperature range:

-40°C ... +75°C

efficiency:

app. 92%

mass:

app. 1.1kg

Order Info:

W 12-24-20

LW 24-12-26

Charging converter
24V to 12V 26(35)A



Converter for charging a 12V lead-accumulator within a 24V car line 26(35)A

- * in case of charging the 24V battery has priority
- * the charging process starts at a voltage of more than 26.4V and stops at less than 25.0V
- * to avoid a fluttering of the circuit, the on/off hysteresis is time-delayed
- * Attention: at input voltages less than 26.4V the converter is out of work as directed!

input voltage:

16 ... 30V DC

output voltage:

half input voltage at input
>26.4V

power-on-voltage:

26.4V

power-off-voltage:

25.0V

time-delay

c. 5 sec.

output current:

26A permanent, 35A for
about 5 min.

current without load:

0.7mA at 24V

connection:

3-pole plug "Anderson
Powerpole Modular"

dimensions:

200 x 70 x 40mm

mechanical protection:

solid casting

electrical protection:

overcurrent, overtemperature,
input transients

temperature range:

-40 ... +75°C, derating T>45°C

efficiency:

c. 92%

mass:

c. 930 g

Order Info:

LW 24-12-26

W 12-24-10LSC

DOUBLE-VOLT 10 Charge
12V to 28,8V 10(15)A



Step-up converter for charging a 24V lead-accumulator out of a 12V car line.

The charging procedure is controlled by the ignition switch.

- * **converts input voltage from 12V to 28,8V regulated**
- * **electronical protection against reverse polarity and missconnection without short circuit**
- * **suitable for 24V voltage boosting (wide range input)**

control input:

on at 8 ... 33V (max. 7mA)

input voltage:

10 ... 33V DC

input current:

max. 35A (12V)

output voltage:

28,8V DC + - 2%

output current:

0 ... 10A (15A /20% load period)

current without load:

8mA (12V)

connection:

connection cable is sealed in,
open ending

cable length:

about 550mm

dimensions:

200 x 70 x 40mm without
cable outlet

mechanical protection:

solid casting

electrical protection:

overtemperature, overcurrent,
reverse polarity

temperature range:

-40°C ... +75°C

efficiency:

about 80%

mass:

about 920g

Order Info:

W 12-24-10LSC

TRS 12

Battery Cut-Off Relais Control 12V



12V battery cut-off controller for driving a power relay for cutting off the secondary battery from the main battery.

- * in case of charging the 12V main battery has priority
- * the charging process starts at a voltage of more than 13.2V and stops at less than 12.5V
- * to avoid a "flattering" of the circuit, the on/off hysteresis is time-delayed
- * operates voltage dependent: the battery cut-off circuit can also be installed in the trailer

Operating voltage:	12V DC
Power-on-voltage:	13.2V
Power-off-voltage:	12.5V
Time-delay	about 5 sec.
Output current:	0.5A (Relay coil)
Current without load:	0.6mA at 12V
Connection:	3 flat male connectors 6.3mm
Dimensions:	28 x 28 x 40mm
Mechanical protection:	entirely sealed
Electrical protection:	Overcurrent, reverse polarity
Temperature range:	-40 ... +75°C
Mass:	about 40 g

Order Info:

TRS 12

SW 600A-12

Converter "MOBIL-NETZ"
12V to 230V AC



Professional inverter 12V to 230V AC for rough environmental conditions

- * **waterproof**
- * **starts automatically, 5mA standby**
- * **perfectly suitable for fixed installation in service vehicles, separate socket**
- * **100% overload possible**
- * **Attention: no sinus, but almost all consumers can be connected**

input voltage:

10 ... 15V DC

output voltage:

225V +3% / -5%, 50Hz quartz-generated (115V/ 60Hz optional)

output power :

600VA permanent, 1,200VA 10min, 12A (24A at 115V) 4sec

start-automatic:

standby current 5mA RMS at 12V, start at 1W load

signalform:

stepweave with fast PWM-modulation (to cos phi 0.2 at 50% load)

undervoltage:

off at 10V, on at 11V

overvoltage:

>16V, self resetting

current at 1W load:

1A at 12V

connection:

input: cable with open endings 2 x 16mm², output: cable 3 x 1mm²

dimensions:

260 x 160 x 90mm (without screwings)

mechanical protection:

aluminium casting case IP66

electrical protection:

against reverse polarity, overtemperature, short circuit

safety:

potential division with potential compensation (protective conductor)

efficiency:

c. 95% at 100% load / c. 80% at 10% load / c. 80% at 200% load

mass:

c. 8,000g incl. Cables

Order Info:

SW 600A-12

SW 600A-24

Converter "MOBIL-NETZ"
24V auf 230V AC



Professional inverter 12V to 230V AC for rough environmental conditions.

- * **waterproof**
- * **starts automatically, 5mA standby**
- * **perfectly suitable for fixed installation in service vehicle, separate socket**
- * **100% overload possible**
- * **Attention: no sinus, but almost all consumers can be connected**

input voltage:

20 ... 30V DC

output voltage:

225V +3% / -5%, 50Hz
quarzgenerated (115V/ 60Hz
optional)

output power:

600VA permanent, 1200VA
10min, 12A (24A at 115V)
4sec

start-automatic:

standby-current 5mA RMS at
12V, start at 1W load

signalform:

stepweave with fast PWM-
modulation (to cos phi 0.2 at
50% load)

undervoltage:

off at 20V, on at 22V

overvoltage:

>33V, selfresetting

current at 1W load:

0.6A at 26V

connections:

input: cables with open
endings 2x 16mm², output:
cables 3 x 1mm²

dimensions:

260 x 160 x 90mm (without
screwings)

safety:

potential division with potential
compensation (protective
conductor)

electrical protection:

against reverse polarity,
overttemperature, short circuit

mechanical protection:

aluminium casting case

efficiency:

c. 95% at 100% load / c. 80%
at 10% load / c. 50% at 200%
load

mass:

c. 8,000g incl. Cables

Order Info:

SW 600A-24

SPSR 230-24.15-24.2 **briechle** elektronik

Safety-power-supply
230V to 24V 6(20)A



"Safety-Power-Supply-Regulator", a compact security power-supply for commercial vehicle workshops

- * **perfect power profile for ABS and EBS tests:**
 - 20A for 30 sec load period
 - 11A for 9min load period
 - 6A for 1h load period
- * **small and light**
- * **internal two-chamber construction, highest safety**
- * **no ventilation slots, so there can be no damage caused by falling-in metal parts**
- * **no problems with simultaneous welding because of safety class 2 system**
- * **additional, current limited outlet prevents damages**
- * **every outlet with LED "voltage ok"**

input voltage:

230V (180...260V, 45...65Hz)

output 1:

24V DC, 20A/30sec,
11A/9min, 6A/1h

output 2:

current limited output 1,
limited to 2A (24V)

displays:

yellow LED's are off at
voltages below 18V

dimensions:

200 x 163 x 65mm

mechanical protection:

IP 5(4) dustprotected, single
waterdrops without moistening

electrical protection:

safety class II (double
isolation)

efficiency:

c. 85% at nominal load 6A

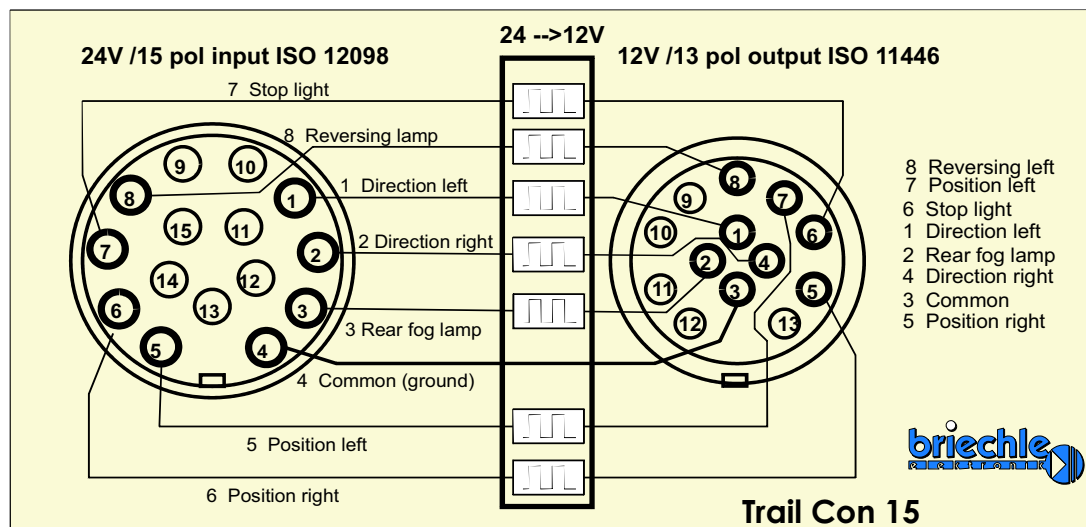
mass:

c. 1,100g

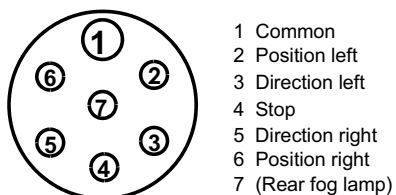
Order Info:

SPSR 230-24.6-24.2

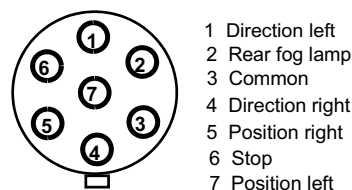
Trailer connector allocation



24V- 7pol "N" ISO 1185



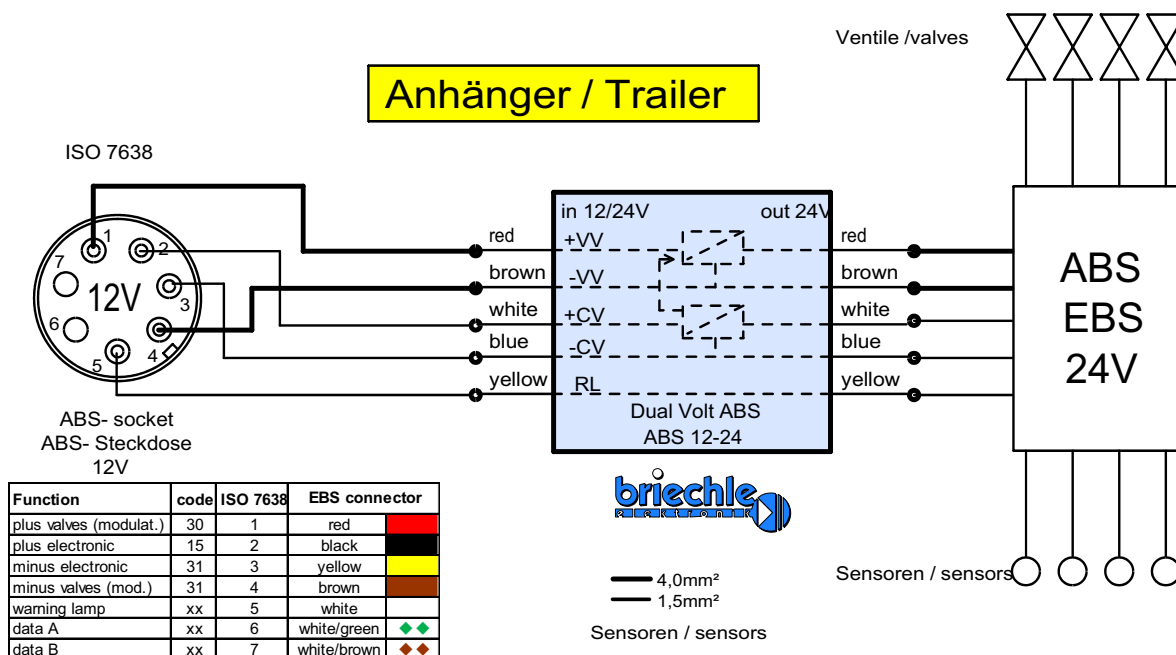
12V- 7pol ISO 1724



ABS- connector allocation

ABS 12-24 "Dual Volt ABS"

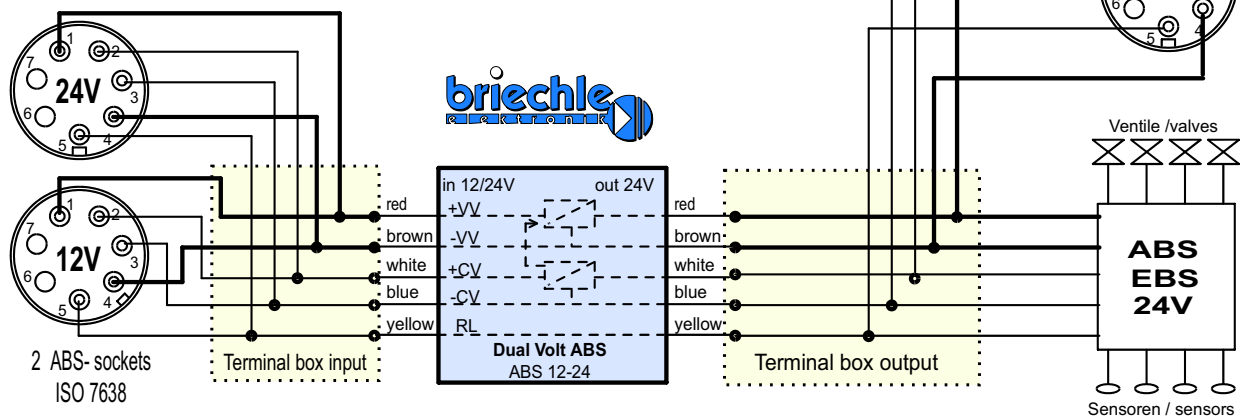
Installation in Anhänger, Eingang mit 12V - Dose
Installation a trailer, input with 12V - socket



ABS 12-24 "Dual Volt ABS"

Installation in the trailer, Input 12V- and 24V Socket
Output to ABS local and socket to a second trailer

- If a shared terminal box is applied take care of separation of input and output areas.
- If the converter is mounted inside the terminal box minimum 6 dm³ interior space is required for air circulation.
- If the trailer is operated only on 12V the 24V input socket is not required.



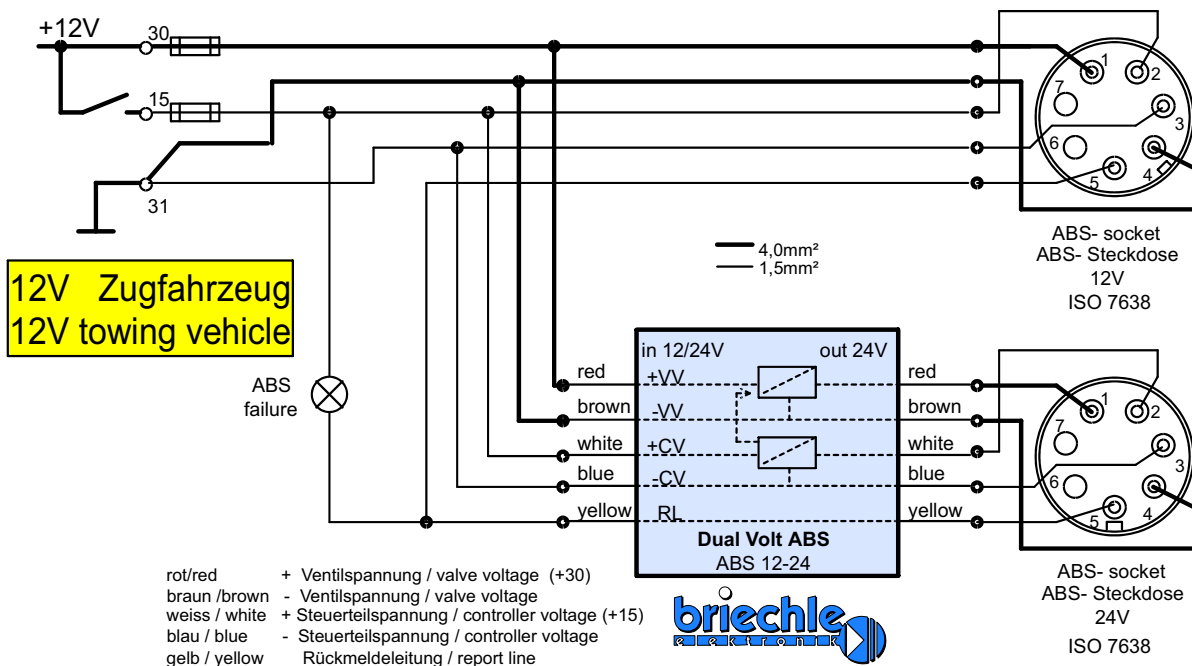
rot/red + Ventilspannung / valve voltage (+30)
braun / brown - Ventilspannung / valve voltage
weiss / white + Steuerteilspannung / controller voltage (+15)
blau / blue - Steuerteilspannung / controller voltage
gelb / yellow Rückmeldeleitung / status line

— 4,0mm²
— 1,5mm²

ABS trailer 1

ABS 12-24 "Dual Volt ABS"

Installation Zugfahrzeug ohne Infomodul
Installation towing vehicle without Info Modul



rot/red + Ventilspannung / valve voltage (+30)
braun / brown - Ventilspannung / valve voltage
weiss / white + Steuerteilspannung / controller voltage (+15)
blau / blue - Steuerteilspannung / controller voltage
gelb / yellow Rückmeldeleitung / report line

briechele
elektronik



Voltage converters for commercial vehicles

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