

DC/DC converter

DC 750V/24V or 28V

DCW50



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Description:

The device DCW50 is a high-voltage DC/DC converter, which generates a low voltage of 24 V DC for control tasks or 28 V DC for battery charging from the contact line system of Un 600 – 750 V DC.

The nominal power Pmax is limited to approx. 50 W, which corresponds to an output current of approx. 2 A in case of 24 V DC and approx. 1.75 A in case of 28 V DC.

The DCW50 is a switching regulator with state-of-the-art IC technology.

The transformer is responsible both for the low-loss transformation and for the galvanic separation between the primary side and the secondary side. The control signals are transferred via a high-voltage optocoupler. In that way the galvanic separation is ensured in the form of clearances and creepage distances.

The DCW50 operates in a voltage range from approx. 400 V DC to 1050 V DC. The device is switched off if the voltage is lower or higher than these values. The output voltage is switched on again automatically when the voltage is within the nominal voltage range.

The DCW50 has a 1.2 kV / 2 A DC fuse in the input circuit.

The low-voltage side is short-circuit proof.

To ensure perfect rising of the switching regulator during the closing operation, the load on the output is switched on with a delay of approx. 2 s.

A green LED indicates that the switching regulator works. The LED has to light up without pulsing or flickering. If it pulses or flickers, the switching regulator does not work correctly. In that case the device is to be disconnected from the power supply immediately.

An independently working temperature sensor has been fitted in the DCW50 for the monitoring of the temperature of the heat sink. This sensor has been laid on the output terminals 1 and 2 and can be used for control/signalling purposes.



Technical data

Dimensions	w/h/d 125/102/102 mm
Housing	FRP Polycarbonate, black
Fastening	top hat rail acc. to DIN EN 50022
Degree of protection	housing: IP 40; terminals: IP 10
Ambient air temp.	-20° C to + 50° C
Connections	2 plugs 3 X 2.5 mm ² solid in acc. with DIN 46288 or 3 x 1.5 mm ² with sleeve, 1 plug 4 X 2.5 mm ² solid in acc. with DIN 46288 or 3 x 1.5 mm ² with sleeve,
Line voltage terminals	plug +, plug -
Output terminals	plug +, plug -
Overtemperature	plug overtemperature (switch)
Supply voltage	DC 750 V -30% to +40%;
Power input	approx. 55W
Output voltage	DC 24V, max. 2A, DC 28V, max. 1,8A Output voltage will time delayed (about 2s) switched on
Overtemperature	contact closed if temperature exceeds 85°C
Contact assignment	AC 250 V / 4 A cos phi > 0.7 DC 120 V / 1 A ohmic load
Indicator	1 green LED for DCW50 works

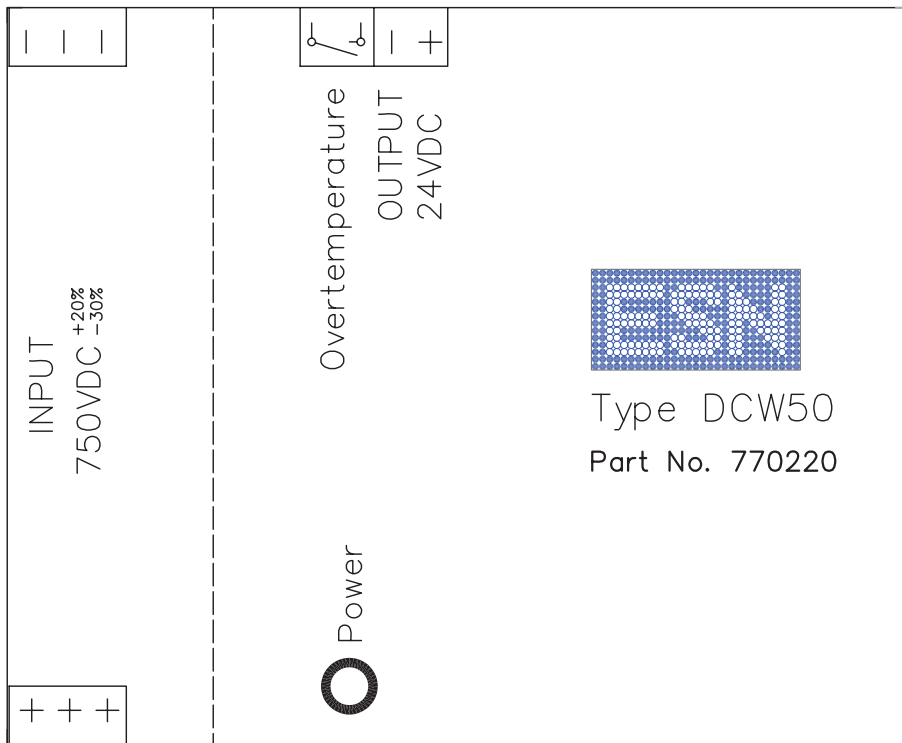
Ordering Information

Type	Article No.
DCW50-24	770220
DCW50-28	770221

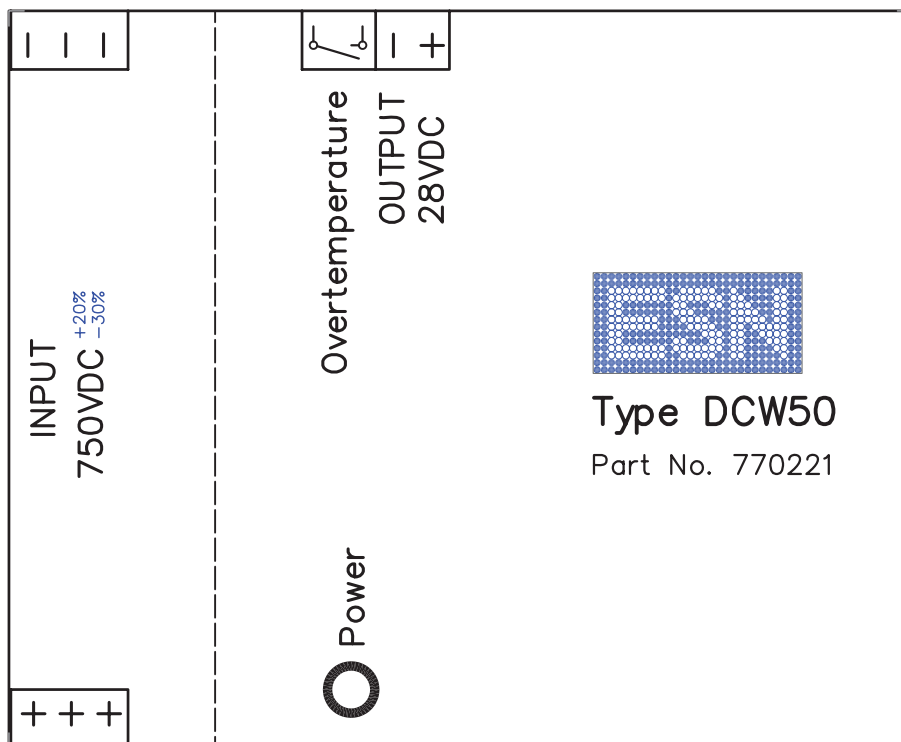
Accessories: Special designs, other functions and measuring ranges, complete systems, protective housings with additional terminals etc. on enquiry.

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DCW50



DC/DC converter for general control applications



DC/DC converter to charge 24V lead accumulators