

DCDC50W-350W

Module of DC/DC Converter with Output Power from 50W to 350W

Based on DC/DC converters from XP Power with output power in the range from 50W to 350W we can offer a wide assortment of DC/DC power converter modules suitable for direct use as an independently applicable units.

Modules are available in **two construction designs**:

- **Open frame design** (designation DCDC50W-350W / Model Number of the chosen converter)
- **DIN-Rail mounted design** (designation DCDC50W-350W-DIN / Model Number of the chosen converter)

There is possible to choose any DC/DC converter from the following table:

Output Power	Type	Input Voltage Range	Output Voltage (V)	Number of Outputs	Input/Output Isolation	Dimensions (mm)	Protections
25W-50W	ICH50	9-18VDC 18-36VDC 36-75VDC	2.5, 3.3, 5, 12, 15, 24	1	1500VDC	61x57.9x12.7	OVP, SCP, TP
33W-50W	ICH50W	9-36VDC 18-75VDC	3.3, 5, 12, 15, 24	1	1500VDC	61x57.9x12.7	OVP, SCP, TP
37.5W-75W	ICH75	9-18VDC 18-36VDC 36-75VDC	2.5, 3.3, 5, 12, 15, 24	1	1500VDC	61x57.9x12.7	OVP, SCP, TP
49.5W-75W	ICH75W	9-36VDC 18-75VDC	3.3, 5, 12, 15, 24	1	1500VDC	61x57.9x12.7	OVP, SCP, TP
50W-100W	ICH100	18-36VDC 36-75VDC	2.5, 3.3, 5, 12, 15, 24	1	1500VDC	61x57.9x12.7	OVP, SCP, TP
66W-100W	ICH100W	9-36VDC 18-75VDC	3.3, 5, 12, 15, 24	1	1500VDC	61x57.9x12.7	OVP, SCP, TP
75W-150W	ICH150	36-75VDC	2.5, 3.3, 5, 12, 15, 24	1	1500VDC	61x57.9x12.7	OVP, SCP, TP
99W-150W	QSB150	9-36VDC 18-75VDC	3.3, 5, 12, 15, 24	1	1500VDC	61x57.9x13.2	OVP, SCP, TP
150W	RDQ150	66-160VDC	5, 12, 24	1	2250VDC	61x57.9x12.7	OVP, SCP, TP
132W-200W	QSB200	10-36VDC 18-75VDC	3.3, 5, 12, 15, 24	1	1500VDC	61x57.9x13.2	OVP, SCP, TP
231W-350W	QSB350	18-36VDC 36-75VDC	3.3, 5, 12, 24, 28, 48	1	1500VDC	61x57.9x13.2	OVP, SCP, TP

LEGEND:

Protections: OVP=Overvoltage, SCP=Overcurrent, TP=Overtemperature

You will find more details including the full model number of the requested input voltage range and output voltage to the above converters in the corresponding XP Power detailed datasheets.

In both construction designs the chosen DC/DC converter is placed on a PCB (Printed Circuit Board) with input and output screw terminals (for –A version), input fuse, input and output additional filtering capacitors and green LED for the indication of the presence of the output voltage, as standards.

Input RFI choke and TAZ (Transient Absorb Zener) can be add for lower RFI and higher input transients immunity as an option (option –F). There is also possible to use remote ON/OFF and output voltage adjustment for the chosen converter (option –OFF). The converters can be equipped with an appropriate heatsink, if necessary.

In case of need there is possible to use a 5-ways connector WAGO 7.5 mm (version –B) instead of screw input and output terminals.

There is possible to build-in this complete PCB into the powered electronic device directly by the means of 4 mounting holes.

For DIN-Rail mounted applications the PCB is equipped with a back metal board with a mechanism for DIN-Rail mounting (rail width 35 mm).

DC/DC converter module specification:

- q Output Power: see above table
- q Input Voltage Range: see above table
- q Output Voltage (one output only): see above table
- q Protections: see above table
- q For –A version (with screw input and output terminals) there is possible to use sensors S+ and S- for full stabilization of the output voltage in the point of load directly.
- q Remote ON/OFF (option –OFF) with a signal with isolation to both to input and to output of the converter with an optocoupler
- q Output Voltage Adjustment (option –TRIM, standard trim range is $\pm 10\%$ from nominal value of the output voltage)
- q In case of need there is possible to add input RFI choke and TAZ (Transient Absorb Zener) for lowering RFI and higher input transients immunity as an option (option –F).
- q Input/Output Isolation Voltage: 1500VDC
- q Operating case temperature of the converter: -40°C to $+100^{\circ}\text{C}$, maximum allowable environment temperature depends on efficiency of the converter, way of cooling (natural convection or forced cooling including the air flow rate) and on thermal resistance of the heatsink used (see also the detailed datasheets of the chosen type of the converter).
- q Maximum module dimensions:
 - o open frame design: 145 mm x 145 mm, max. height 40 mm
 - o DIN-Rail design: w = 145 mm, h = 145 mm, d = 45 mm

Interface connection:

Version A – screw terminals: input K1, output K2

Pin Number	Designation	Meaning
K1/1	+U1	+ input voltage
K1/2	-U1	- input voltage
K1/3	PE	chassis of the converter
K2/1	S-	- sensor of the output voltage
K2/2	L-	- output
K2/3	L-	- output
K2/4	L+	+ output
K2/5	L+	+ output
K2/6	S+	+ sensor of the output voltage

Version B – connector K3: 5-ways connector WAGO 7.5 mm (type 231-865/001-000 / 51152800, corresponding mating connector type 231-205/026-000 / 51117161)

Pin Number	Designation	Meaning
K3/1	L+	+ output
K3/2	L-	- output
K3/3	-U1	- input
K3/4	+U1	+ input
K3/5	PE	chassis of the converter

Remote On / Off of the converter with a signal (option –OFF) – screw terminal K4, signal isolated via an optocoupler, for switch-off apply voltage in their range from 5VDC to 15VDC between +OFF and –OFF terminal, input resistor 4k7.

Pin Number	Designation	Meaning
K4/1	+OFF	+ signal for switch-off
K4/2	-OFF	- signal for switch-off

