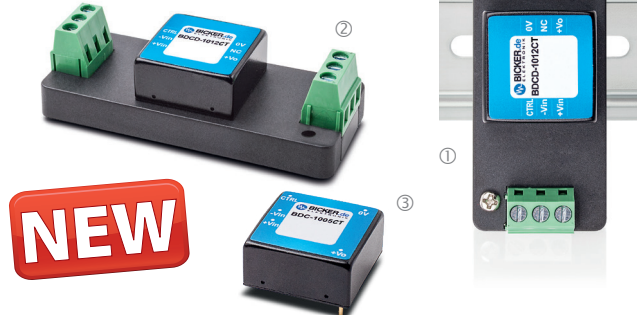


BDC-10CT

10 Watt

- ✓ DC/DC converter modules
- ✓ 4:1 input voltage range
- ✓ Compact fully encapsulated modules in metal case
- ✓ High efficiency up to 88%
- ✓ Extended temperature range -40...+85 °C
- ✓ Insulation voltage 1500 VDC
- ✓ Print-, Chassis-, DIN-Rail-Mounting



- ① BDCD DIN rail mounting
- ② BDCD Chassis mounting (dismounting of DIN rail system necessary)
- ③ BDC Print mounting (industry standard pinning)

Note | BDC models are for **print mounting**, BDCD models are for **chassis** and **DIN Rail mounting**

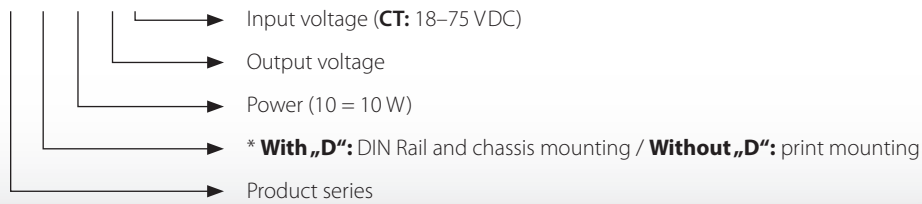
| Article No. | Output power | Input voltage | Output voltage | Output current | | Efficiency (typ) |
|-------------|--------------|----------------------------|----------------|----------------|---------|------------------|
| | | | | min | max | |
| BDC-1005CT | 10 W | 18–75 VDC (48 VDC nom.) | +5 V | 0 mA | 2000 mA | 83 % |
| BDC-1012CT | | | +12 V | 0 mA | 833 mA | 87 % |
| BDC-1024CT | | | +24 V | 0 mA | 416 mA | 88 % |
| BDCD-1005CT | 10 W | 18–75 VDC (48 VDC nom.) | +5 V | 0 mA | 2000 mA | 83 % |
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└─> suffix **D**: DIN Rail model with detachable DIN Rail mounting plate

Further types in different input and output voltages are available on request.

How to read the Article No.

BDC * - XX YY Z



| Technical data | |
|---------------------------------|--|
| Input voltage | 48 VDC (18–75 VDC) |
| Input current | 251 mA typ |
| Starting time | 10 ms typ |
| Input impulse voltage (1s max.) | 100 VDC |
| Output voltage accuracy | 1 % typ, ± 3 % max. |
| Load regulation | ± 0.5 % (typ), ± 1 % max |
| Ripple & Noise* | 40 mV _{pp} (typ), 80 mV _{pp} max |
| Remote on/off control | ON: 3.5–12 V or open circuit OFF: 0–1.2 V or CTRL connector (Pin3) connected to -Vin (Pin2) |
| Protection | Overvoltage protection 110–160 % (switch off output voltage) Short circuit protection Yes, with auto-recovery Input under-voltage protection 15.5 VDC typ Overload protection 110–190 % |
| Insulation voltage | Input-Output: 1500 VDC |
| Insulation resistance | Input-Output: 1000 M Ω (at 500 VDC) |
| Insulation capacity | Input-Output: 1000 pF (100 KHz / 0.1V) |
| Switching frequency | 350 KHz, typ (PWM) |
| MTBF | >1 000 000 h according to MIL-HDBK-217F at 25 °C |
| Chassis material | Aluminium |
| Temperature | Operating: -40...+85 °C / Storage: -55...+125 °C / Soldering: max. 300 °C (10 s) |
| Derating | +65...+85 °C, 2 % / °C |
| Max. operation altitude | 2000 m |
| Humidity | Operating: 10...85 % RH, non-condensing / Storage: 10...90 % RH, non-condensing |
| Vibration | 10-55 Hz, 10 G, 30 min, X, Y, Z |
| Dimensions (W x D x H) | Print: 25.4 x 25.4 x 11.7 mm DIN-Rail: 76.0 x 31.5 x 25.8 mm |
| Weight (net) | Print: 15 g, DIN-Rail: 55 g |

* Ripple & Noise was measured with parallel cables (1 μ F ceramic capacitor + 10 μ F electrolytic capacitor). All data was measured at +25 °C, operating humidity <75 %, nominal input voltage. We recommend to use a cable as short as possible to connect module and load. As a power component this modul is for assembly purposes only and it must not be operated in unassembled condition. For more information and recommended additional circuits to improve the EMC performance, see Application Notes.

Optional Accessories

▷▷▷ For detailed information please visit our website www.bicker.de and refer to the article number.

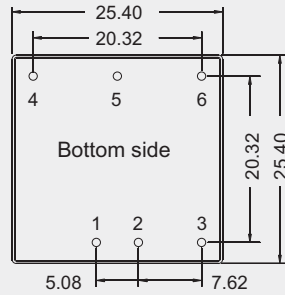
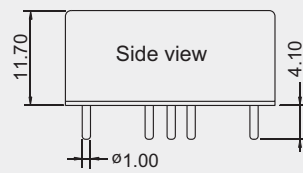
PSZ-1009 | Male adapter

DCplug: 2.5 x 5.5 mm, AWG 26–12

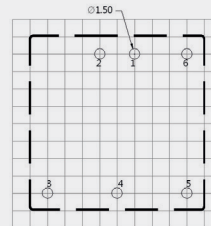


Drawing

BDC-10CT, print mounting



Grid dimensions: 2.54 x 2.54 mm



Pin assignment

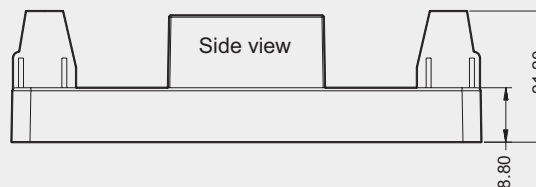
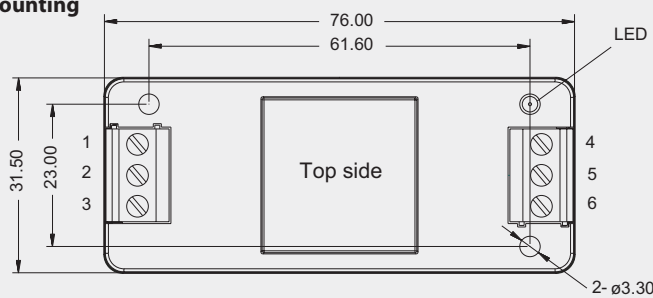
| | |
|---|--------|
| 1 | +Vin |
| 2 | -Vin |
| 3 | CTRL |
| 4 | +Vout |
| 5 | No Pin |
| 6 | 0 V |

Terminal size

Wire Range AWG 24-12

Tolerance ± 0.5 mm

BDCD-10CT, chassis mounting



Pin assignment

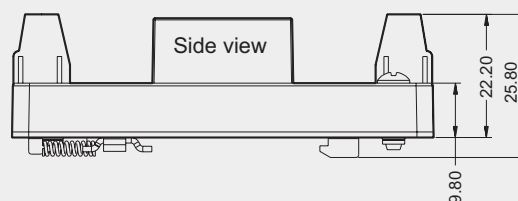
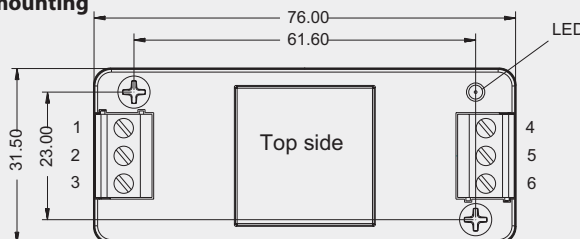
| | |
|---|------|
| 1 | CTRL |
| 2 | -Vin |
| 3 | +Vin |
| 4 | 0V |
| 5 | N.C. |
| 6 | +Vo |

Terminal size

Wire Range AWG 24-12

Tolerance ± 0.5 mm

BDCD-10CT, DIN Rail mounting



Pin assignment

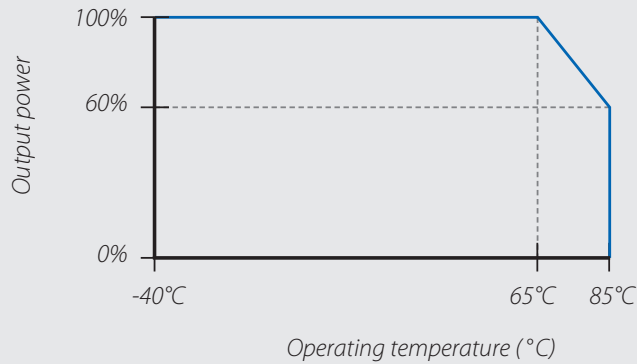
| | |
|---|------|
| 1 | CTRL |
| 2 | -Vin |
| 3 | +Vin |
| 4 | 0V |
| 5 | N.C. |
| 6 | +Vo |

Terminal size

Wire Range AWG 24-12

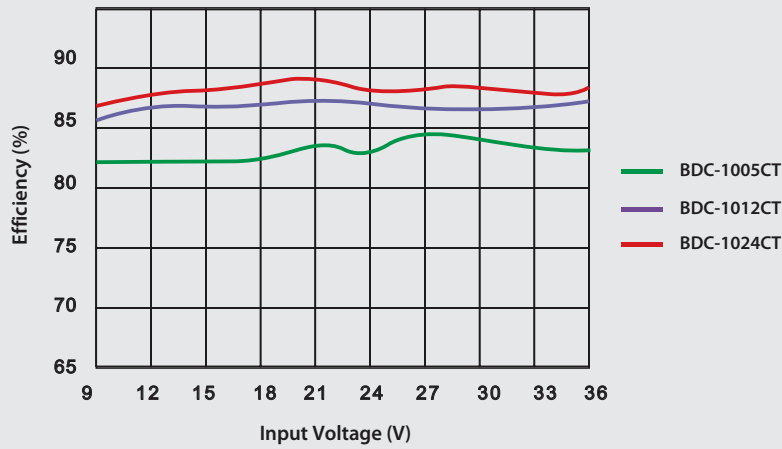
Tolerance ± 0.5 mm

Derating BDC(D)-10CT models



Efficiency curves

Efficiency & Input Voltage (Full load)



Efficiency & Output Load (Vin = 24V)

