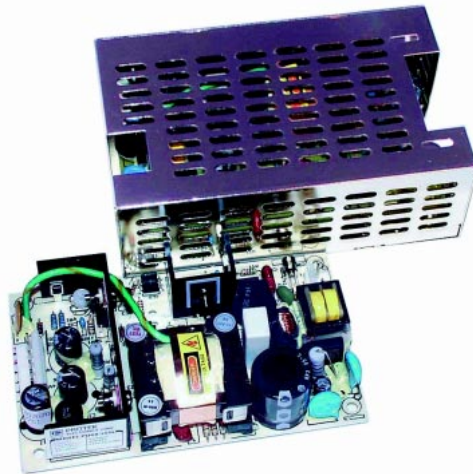


40 W  
DC/DC  
OPEN  
FRAME/  
CASE

# 40 Watt DC-Smart Power

PD 40 Wide-Ranging Compact-Serie



## Besondere Merkmale Features

|                              |                                    |
|------------------------------|------------------------------------|
| Mehrfachausgänge             | Multiple output                    |
| Weiter Eingang               | Wide input                         |
| Hoher Wirkungsgrad           | High efficiency                    |
| 100% Burn-in                 | 100% burn in                       |
| Kompakter Aufbau             | Low profile package                |
| Überlast- und kurzschlußfest | Overload, short circuit protection |
| Gehäuseversion               | Boxed type                         |

## Anwendung Application

|                       |                        |
|-----------------------|------------------------|
| Rechnersysteme        | Computer applications  |
| MSR                   | Control equipments     |
| Mikroprozessorsysteme | Microprocessor systems |
| KFZ / Boote           | Cars / boats           |

## Technische Daten Specification

(bei 25°C Umgebungstemperatur) (at 25°C ambient temperature)

## Eingangsdaten Input Specifications

|                  |                |   |
|------------------|----------------|---|
| Eingangsspannung | Input voltages | 10...30 (L), 20...60 (M), 30...90 (H) VDC |
|------------------|----------------|---|

## Ausgangsdaten Output Specifications

|                  |                     |                         |
|------------------|---------------------|-------------------------|
| Leistung         | Power               | 40 Watt                 |
| Wirkungsgrad     | Efficiency          | typ. 75%                |
| Schaltfrequenz   | Switching frequency | 36 kHz                  |
| Regelabweichung  | Regulation          |                         |
| Eingang          | Line                | ±0.5% max. at full load |
| Hauptausgang     | Main output         | <3%                     |
| Kreuzregelung    | Cross               | <5%                     |
| Ausregelzeit ±1% | Recovery time ±1%   | 500µs/25% load step     |
| Restwelligkeit   | Ripple and noise    | <1% max. P-P            |

## Allgemeine Daten General Specifications

|                       |                         |                                 |
|-----------------------|-------------------------|---------------------------------|
| Betriebstemperatur    | Operating temperature   | 0°C...70°C                      |
| Lagertemperatur       | Storage temperature     | -40°C ... +85°C                 |
| Temperaturkoeffizient | Temperature coefficient | 0.04% / K                       |
| Leistungsrücknahme    | Derating                | ab 50°C: 2.5%/°C                |
| Isolationsspannung    | Withstand voltage       | 1000 V DC input/output          |
| Überspannungsschutz   | Overvoltage Protection  | typ. 112...132% of main outp.   |
| Leistungsbegrenzung   | Power limitation        | 120...150% total power          |
| MTBF                  | MTBF                    | >100,000 h @25°C, MIL HDBK 217E |

# 40 Watt DC-Smart Power

## PD 40 Wide-Ranging DC-Compact-Serie

**40 W  
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### Bestell-Information / Order Information

| Modell  | Ausgang 1<br>Output 1 |                  |                  |     | Ausgang 2<br>Output 2 |                  |                  |     | Ausgang 3<br>Output 3 |                  |                  |     | Maximum<br>Output Power<br>Watt |
|---------|-----------------------|------------------|------------------|-----|-----------------------|------------------|------------------|-----|-----------------------|------------------|------------------|-----|---------------------------------|
|         | V <sub>nom</sub>      | I <sub>min</sub> | I <sub>max</sub> | Tol | V <sub>nom</sub>      | I <sub>min</sub> | I <sub>max</sub> | Tol | V <sub>nom</sub>      | I <sub>min</sub> | I <sub>max</sub> | Tol |                                 |
| PD40-10 | 5V                    | 0A               | 8.0A             | 2%  | (N/A)                 |                  |                  |     | (N/A)                 |                  |                  |     | 40                              |
| PD40-12 | 12V                   | 0A               | 3.5A             | 1%  | (N/A)                 |                  |                  |     | (N/A)                 |                  |                  |     | 40                              |
| PD40-13 | 15V                   | 0A               | 3.0A             | 1%  | (N/A)                 |                  |                  |     | (N/A)                 |                  |                  |     | 40                              |
| PD40-14 | 24V                   | 0A               | 2.0A             | 1%  | (N/A)                 |                  |                  |     | (N/A)                 |                  |                  |     | 40                              |
| PD40-23 | +5V                   | 0.5A             | 3.0A             | 3%  | +12V                  | 0.2A             | 2A               | 5%  | (N/A)                 |                  |                  |     | 40                              |
| PD40-24 | +5V                   | 0.5A             | 3.0A             | 3%  | +15V                  | 0.2A             | 2A               | 5%  | (N/A)                 |                  |                  |     | 40                              |
| PD40-25 | +5V                   | 0.5A             | 3.0A             | 3%  | +24V                  | 0.1A             | 1A               | 5%  | (N/A)                 |                  |                  |     | 40                              |
| PD40-30 | +5V                   | 0.5A             | 3.0A             | 3%  | +12V                  | 0.2A             | 2A               | 5%  | -5V                   | 0A               | 0.8A             | 5%  | 40                              |
| PD40-31 | +5V                   | 0.5A             | 3.0A             | 3%  | +12V                  | 0.2A             | 2A               | 5%  | -12V                  | 0A               | 0.8A             | 5%  | 40                              |
| PD40-32 | +5V                   | 0.5A             | 3.0A             | 3%  | +15V                  | 0.2A             | 2A               | 5%  | -15V                  | 0A               | 0.8A             | 5%  | 40                              |
| PD40-33 | +5V                   | 0.5A             | 3.0A             | 3%  | +15V                  | 0.2A             | 2A               | 5%  | -12V                  | 0A               | 0.8A             | 5%  | 40                              |
| PD40-39 | +5V                   | 0.5A             | 3.0A             | 3%  | +24V                  | 0.1A             | 1A               | 5%  | -12V                  | 0A               | 0.8A             | 5%  | 40                              |

Andere Typen und Spannungen auf Anfrage • Other models and configurations on request.

Input ranges – Eingangsspannungsserien: **L**=10...30 VDC, **M**=20...60 VDC, **H**=30...90 VDC

#### Vermerk

- 1-Die Dauerleistung darf 40 W ohne Fremdkühlung nicht übersteigen, bei der L-Serie 30 W.
- 2-Peakstrom weniger als 30 s, mit einer relativen Dauer von weniger als 10%.
- 3-Restwelligkeit, bei 20 MHz Bandbreite unter Verwendung einer 10 µF Kapazität parallel zu einem 0,1 µF Keramik Kondensator sowie einer Spule mit 10 Windungen gemessen.

Bestellbeispiel: **PD40-31 MC** M=Eingangsspannung C=Mechanik

#### Remarks

- 1-The maximum continuous output power must not exceed 40 W with convection cooling, the L series not 30 W.
- 2-Peak current lasting less than 30 s, with duty cycle less than 10%.
- 3-Ripple and noise is measured at 20 MHz bandwidth limited by using a 10 in twisted wire terminated with a 10 µF capacitor in parallel with a 0.1 µF ceramic cap.

Order example: **PD40-31 MC** M=input range C=mechanic version

#### Mechanik

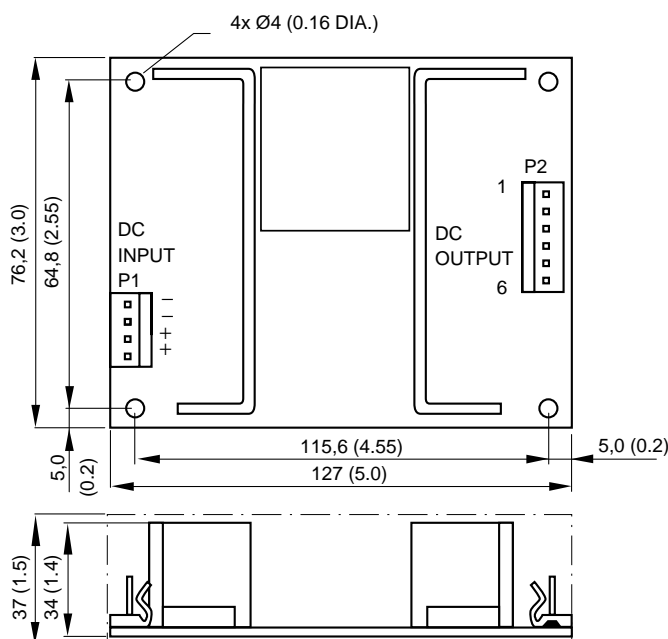
#### Mechanical

| LxBxH | LxWxH | PCB  | 127 x 76,2 x 34 mm / 5 x 3 x 1.34 in     | GEWICHT /WEIGHT     |
|-------|-------|------|--|---------------------|
|       |       | Case | 138 x 87 x 48 mm / 5.43 x 3.43 x 1.89 in | 300 g (PCB-Version) |

A offen, B für L-Winkel, C für Gehäuse, siehe Seite 82

A open, B for L-Bracket, C for Case, see page 82

### PIN-Belegung und Zeichnung / Pin Assignments & Drawing, mm (inch)



max. Toleranz 0,5 (0.02)

Input connector mates with Molex housing 09-50-3041 and Molex 2878 series crimp terminal.

Output connector mates with Molex housing 09-50-3081 and Molex 2878 series crimp terminal.

| Output Connection |        |
|-------------------|--------|
| Pin No.           | SINGLE |
| 1, 2, 3           | Out 1  |
| 4, 5, 6           | Return |
| Pin No.           | DUAL   |
| 2, 3              | Out 1  |
| 1                 | Out 2  |
| 4, 5              | Return |
| 6                 | N.C.   |
| Pin No.           | TRIPLE |
| 2, 3              | Out 1  |
| 1                 | Out 2  |
| 6                 | Out 3  |
| 4, 5              | Return |