

1 W
DC/DC
SIM-SIL
MODUL

SIM 1 - SIL 4

1 Watt Ultra-Miniatur SIL-Modul-Serie



HN-MODUL

Besondere Merkmale Features

Ultraminiatur-SIL4-Gehäuse	Ultra mini SIL4 package
Isolationsspannung max. 1000 VDC	Isolation voltage max. 1000 V
kurzzeitig Kurzschlußfestigkeit	short-time short circuit protection

Technische Daten Specification

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

Eingangsdaten Input Specifications

Eingangsspannung	Input voltages	5 / 12 / 15 / 24 VDC, ±10%
Eingangsfilter	Input filter	Kondensatoren, capacitors

Ausgangsdaten Output Specifications

Leistung	Power	1 Watt
Wirkungsgrad	Efficiency	70% min.
Regelabweichung	Voltage accuracy	Max. ±5% (load 20%-100%)
Restwelligkeit	Ripple and noise	120 mV p-p typ., 200 mV p-p max.
Last	Load	±8%
Eingang	Line	±1.0% von V_{in}

Allgemeine Daten General Specifications

Betriebstemperatur	Operation temperature	-20°C...+71°C
Lagertemperatur	Storage temperature	-25°C...+125°C
Isolationsspannung	Isolation voltage	1 kVDC min.
Gehäusematerial	Casing	Nichtleitender Kunststoff, non conducting plastics

SIM 1 - SIL 4

1 Watt Ultra-Miniatur SIL-Modul-Serie

1 W DC/DC SIM-SIL MODUL

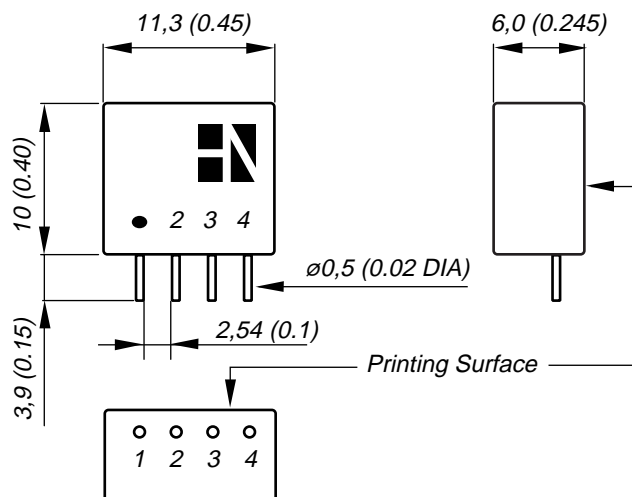
Bestell-Information / Order Information

Modell	Eingang/Input V	Ausgang/Output V /mA
SIM1-0505-SIL4	5	5/200
SIM1-0512-SIL4	5	12/83
SIM1-0515-SIL4	5	15/66
SIM1-0524-SIL4	5	24/42
SIM1-1205-SIL4	12	5/200
SIM1-1212-SIL4	12	12/83
SIM1-1215-SIL4	12	15/66
SIM1-1224-SIL4	12	24/42
SIM1-1505-SIL4	15	5/200
SIM1-1512-SIL4	15	12/83
SIM1-1515-SIL4	15	15/66
SIM1-1524-SIL4	15	24/42
SIM1-2405-SIL4	24	5/200
SIM1-2412-SIL4	24	12/83
SIM1-2415-SIL4	24	15/66
SIM1-2424-SIL4	24	24/42

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

MEMO:

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

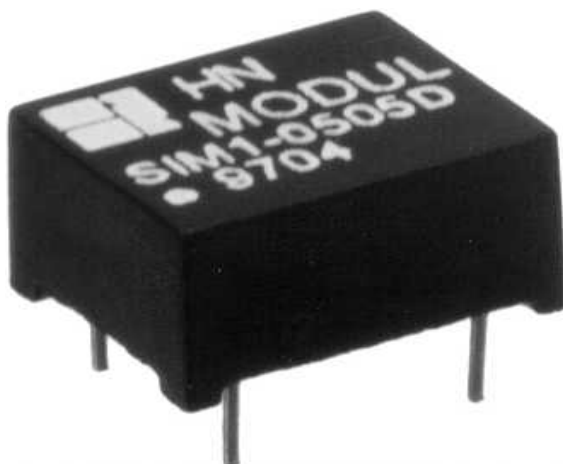


Pin Connection	
Pin	Single Output
1	-V Input
2	+V Input
3	-V Output
4	+V Output

1 W
DC/DC
SIM-DIL
MODUL

SIM 1 - DIL 8

1 Watt Ultra-Miniatur DIL-Modul-Serie



HN-MODUL

Besondere Merkmale Features

Ultraminiatur-DIL8-Gehäuse	Ultra mini DIL8 package
Isolationsspannung max. 1000 VDC	Isolation voltage max. 1000 V
kurzzeitig Kurzschlußfestigkeit	short-time short circuit protection

Technische Daten Specification

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

Eingangsdaten Input Specifications

Eingangsspannung	Input voltages	5 / 12 / 15 / 24 VDC, ±10%
Eingangsfilter	Input filter	Kondensatoren, capacitors

Ausgangsdaten Output Specifications

Leistung	Power	1 Watt
Wirkungsgrad	Efficiency	70% min.
Regelabweichung	Voltage accuracy	Max. ±5% (load 20%-100%)
Restwelligkeit	Ripple and noise	120 mV p-p typ., 200 mV p-p max.
Last	Load	±8%
Eingang	Line	±1.2% von V_{in}

Allgemeine Daten General Specifications

Betriebstemperatur	Operation temperature	-20°C...+71°C
Lagertemperatur	Storage temperature	-25°C...+125°C
Isolationsspannung	Isolation voltage	1000 VDC min.
Gehäusematerial	Casing	Nichtleitender Kunststoff, nonconducting plastics

SIM 1 - DIL 8

1 Watt Ultra-Miniatur DIL-Modul-Serie

1 W DC/DC SIM-DIL MODUL

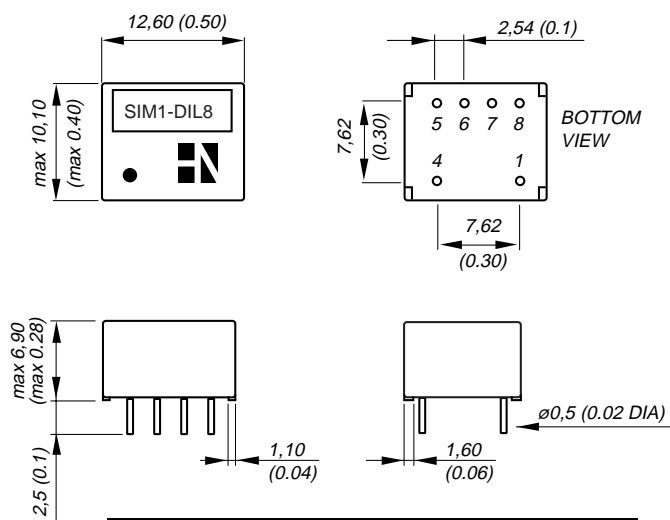
Bestell-Information / Order Information

Modell	Eingang/ Input V	Ausgang 1/ Output 1 V /mA	Ausgang 2/ Output 2 V /mA
SIM1-0505S-DIL8	5	5/200	
SIM1-0512S-DIL8	5	12/100	
SIM1-0515S-DIL8	5	15/85	
SIM1-0524S-DIL8	5	24/50	
SIM1-1205S-DIL8	12	5/200	
SIM1-1212S-DIL8	12	12/100	
SIM1-1215S-DIL8	12	15/85	
SIM1-1224S-DIL8	12	24/50	
SIM1-1505S-DIL8	15	5/200	
SIM1-1512S-DIL8	15	12/100	
SIM1-1515S-DIL8	15	15/85	
SIM1-1524S-DIL8	15	24/50	
SIM1-2405S-DIL8	24	5/200	
SIM1-2412S-DIL8	24	12/100	
SIM1-2415S-DIL8	24	15/85	
SIM1-2424S-DIL8	24	24/50	
SIM1-0505D-DIL8	5	5/100	-5/100
SIM1-0512D-DIL8	5	12/50	-12/50
SIM1-0515D-DIL8	5	15/40	-15/40
SIM1-1205D-DIL8	12	5/100	-5/100
SIM1-1212D-DIL8	12	12/50	-12/50
SIM1-1215D-DIL8	12	15/40	-15/40
SIM1-1505D-DIL8	15	5/100	-5/100
SIM1-1512D-DIL8	15	12/50	-12/50
SIM1-1515D-DIL8	15	15/40	-15/40

MEMO:

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

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



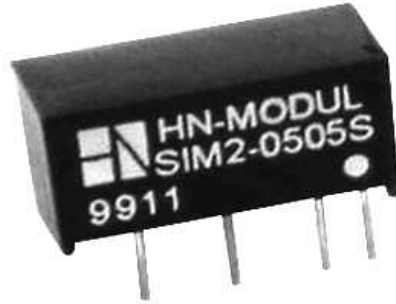
Toleranzen ...,x = 0,5 mm
Tolerances ...,xx = 0,25 mm

Pin Connection		
Pin	Single Output	Dual Output
1	-V Input	-V Input
4	+V Input	+V Input
5	+V Output	+V Output
6	No Pin	No Pin
7	-V Output	Common
8	No Pin	-V Output

**2 W
DC/DC
SIM-SIL
MODUL**

SIM 2 - SIL 7

2 Watt Ultra-Miniatur SIL-Modul-Serie



HN-MODUL

Besondere Merkmale	Features
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Ultraminiatur-SIL7-Gehäuse	Ultra mini SIL7 package
Isolationsspannung max. 1000 VDC	Isolation voltage max. 1000 V
kurzzeitig Kurzschlußfestigkeit	short-time short circuit protection

Technische Daten	Specification
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(bei 25°C Umgebungstemperatur, nominaler Eingangsspannung und Vollast)	(at 25°C ambient temperature, nominal input voltage and full load)
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Eingangsdaten	Input Specifications
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Eingangsspannung	Input voltages	5 / 12 / 15 VDC, ±10%
Eingangsfilter	Input filter	Kondensatoren, capacitors

Ausgangsdaten	Output Specifications
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Leistung	Power	2 Watt
Wirkungsgrad	Efficiency	70% min.
Regelabweichung	Voltage accuracy	Max. ±5%
Restwelligkeit	Ripple and noise	100 mV p-p max.
Last	Load	±10%(Load=20%-100%)
Eingang	Line	±1.2% von V_{in}

Allgemeine Daten	General Specifications
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Schaltfrequenz	Switching frequency	100 KHz min.
Betriebstemperatur	Operation temperature	-20°C...+75°C
Lagertemperatur	Storage temperature	-25°C...+125°C
Isolationsspannung	Isolation voltage	1 kVDC min.
Gehäusematerial	Casing	Nichtleitender Kunststoff, non conducting plastics

SIM 2 - SIL 7

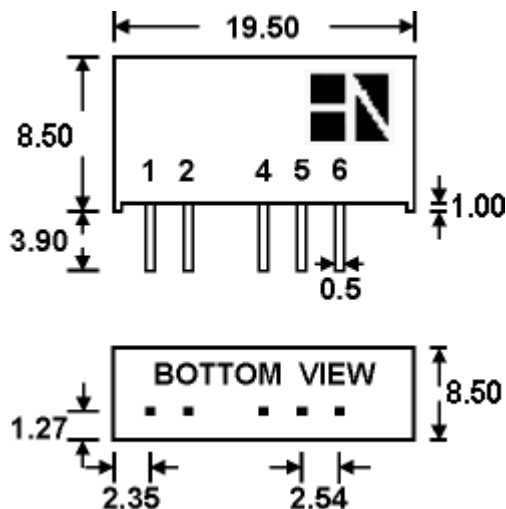
2 Watt Ultra-Miniatur SIL-Modul-Serie

2 W DC/DC SIM-SIL MODUL

Bestell-Information / Order Information

Modell	Eingang/Input V	Ausgang 1/Output 1 V / mA	Ausgang 2/Output 2 V / mA
SIM2-0505S-SIL7	5	5/400	
SIM2-0512S-SIL7	5	12/166	
SIM2-0515S-SIL7	5	15/132	
SIM2-0905S-SIL7	9	5/400	
SIM2-0912S-SIL7	9	12/166	
SIM2-0915S-SIL7	9	15/132	
SIM2-1205S-SIL7	12	5/400	
SIM2-1212S-SIL7	12	12/166	
SIM2-1215S-SIL7	12	15/132	
SIM2-1505S-SIL7	15	5/400	
SIM2-1512S-SIL7	15	12/166	
SIM2-1515S-SIL7	15	15/132	
SIM2-0512D-SIL7	5	12/82	-12/82
SIM2-0515D-SIL7	5	15/66	-15/66
SIM2-0905D-SIL7	9	5/200	-5/200
SIM2-0912D-SIL7	9	12/82	-12/82
SIM2-0915D-SIL7	9	15/66	-15/66
SIM2-1205D-SIL7	12	5/200	-5/200
SIM2-1212D-SIL7	12	12/82	-12/82
SIM2-1215D-SIL7	12	15/66	-15/66
SIM2-1505D-SIL7	15	5/200	-5/200
SIM2-1512D-SIL7	15	12/82	-12/82
SIM2-1515D-SIL7	15	15/66	-15/66

PIN-Belegung und Zeichnung / Pin assignments & drawing, mm (inch)



PIN CONNECTION		
	SINGLE	DUAL
1	Vin +	Vin +
2	Vin -	Vin -
4	Vout-	Vout-
5	OMITTED	COMMON
6	Vout +	Vout +

Tolerance XX.XX +/- 0.25
All Dimensions in m. m.

3 W
DC/DC
HIM
MODUL

HIM 03 DC Power Package

03 Watt Ultra-Wide-Input-Ranging Compact-Serie



HIM-MODUL

Besondere Merkmale Features

Weiter Eingang 4:1	Wide input range 4:1
Geringe Bauhöhe	Low profile
Ein/Aus isoliert, min. 1500V DC	Isolation min. 1500V DC
Hoher Wirkungsgrad	High efficiency
Kurzschlußfest	Short circuit protection

Anwendung Application

Telekommunikation	Telecommunication
Rechnersysteme	Computer applications
MSR	Control equipments
Mikroprozessorsysteme	Microprocessor systems

Technische Daten Specification

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

Eingangsdaten Input Specifications

Eingangsspannung	Input voltages	9...36, 18...72 VDC
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Ausgangsdaten Output Specifications

Leistung	Power	3 Watt
Wirkungsgrad	Efficiency	typ. 75%
Schaltfrequenz	Switching frequency	typ. 100 kHz
Regelabweichung	Voltage accuracy	typ. $\pm 2\%$
Last	Load	$\pm 2\%$ (Dual $\pm 3\%$)
Eingang	Line	$\pm 1\%$
Restwelligkeit	Ripple and noise	$\pm 1\%$ max.

Allgemeine Daten General Specifications

Betriebstemperatur	Operating temp.	-25°C...+71°C, no derating
Lagertemperatur	Storage temperature	-40°C...+100°C
Temperaturkoeffizient	Temp. coefficient	0.02% / K
Kurzschlußfest	Short circuit protection	Fold back
MTBF	MTBF	>200,000 h
Abschaltung	Shutdown	Operating: Pin 20 open or 8...10 VDC Not operating: Pin 20 -0.3...+2 VDC at Go

HIM 03 DC Power Package

03 Watt Ultra-Wide-Input-Ranging Compact-Serie

**3 W
DC/DC
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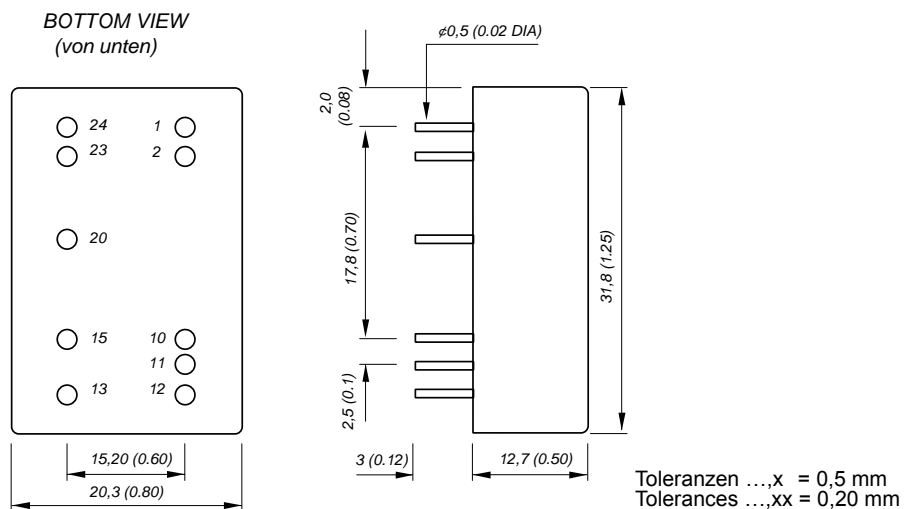
Bestell-Information / Order Information

Modell	Eingang Input VDC	Ausgang1 Output 1 V/mA	Ausgang 2 Output 2 V/mA	Gehäuse Case
HIM032405S	9-36	05/500		A
HIM032412S	9-36	12/250		A
HIM032415S	9-36	15/200		A
HIM034805S	18-72	05/500		A
HIM034812S	18-72	12/250		A
HIM034815S	18-72	15/200		A
HIM032405D	9-36	+05/250	-5/250	A
HIM032412D	9-36	+12/125	-12/125	A
HIM032415D	9-36	+15/100	-15/100	A
HIM034805D	18-72	+05/250	-5/250	A
HIM034812D	18-72	+12/125	-12/125	A
HIM034815D	18-72	+15/100	-15/100	A

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

MEMO:

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



Pin No.	Pin Connection	
	Single Output	Dual Output
1 & 2	+Vi	+Vi
10 & 11	No Pin	Go
12	Go	No Pin
13	+Vo	-Vo
15	No Pin	+Vo
20	Shutdown	Shutdown
23 & 24	Gi	Gi

Alternativ-Pinout auf Anfrage!
Alternative pinout on request!

SIM 5 DC Power Package

3 Watt Small-Input-Ranging Compact-Serie



HN-MODUL

Besondere Merkmale Features

24-Pin DIL Gehäuse	24-pin DIL package
Hoher Wirkungsgrad	High efficiency
PI-Filter	PI filter
Metallgehäuse	Metal case

Anwendung Application

Telekommunikation	Telecommunication
Rechnersysteme	Computer applications
MSR	Control equipments
Mikroprozessorsysteme	Microprocessor systems

Technische Daten Specification

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

Eingangsdaten Input Specifications

Eingangsspannung	Input voltages	5V / 12 / 24 / 48 VDC, ±10%
Eingangsfiler	Input filter	PI-Version

Ausgangsdaten Output Specifications

Leistung	Power	3 Watt
Wirkungsgrad	Efficiency	typ. 65%
Last	Load	±0.5% (±1% Dual)
Eingang	Line	±0.3% (±1% Dual)
Restwelligkeit	Ripple and noise	50mV max.

Allgemeine Daten General Specifications

Betriebstemperatur	Operating temp.	-20°C...+71°C
Lagertemperatur	Storage temperature	-25°C...+125°C
Temperaturkoeffizient	Temp. coefficient	typ. 0,03% / K
Isolationsspannung	Isolation voltage	500 VDC min. (3 kVDC auf Anfrage)
MTBF	MTBF	>200,000h

SIM 5 DC Power Package

3 Watt Small-Input-Ranging Compact-Serie

3 W DC/DC SIM MODUL

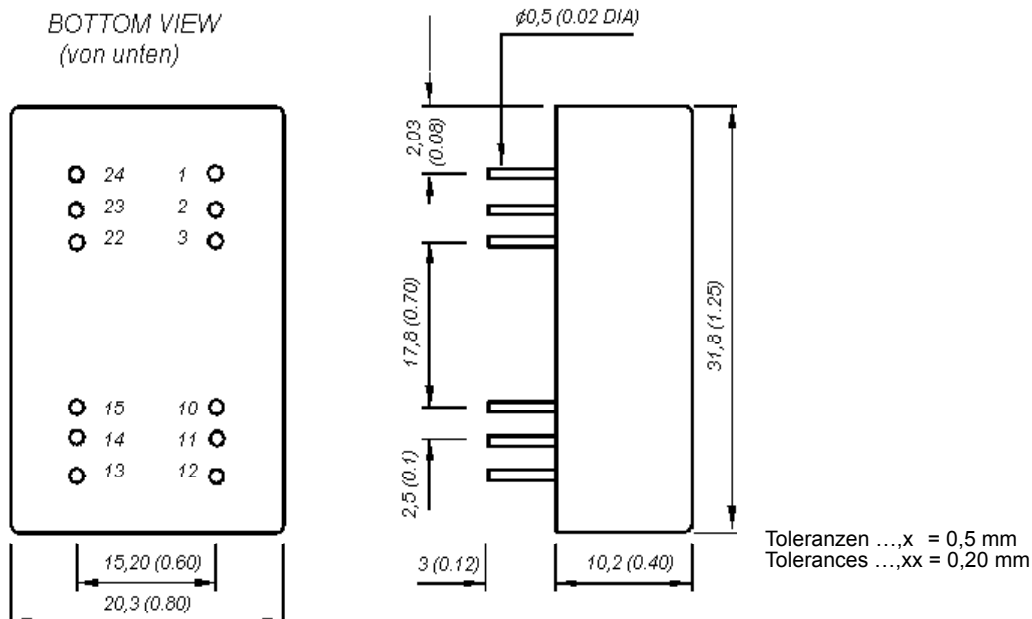
Bestell-Information / Order Information

Modell	Eingang Input VDC	Ausgang1 Output 1 V/mA	Ausgang 2 Output2 V/mA
SIM5-0505S	5	5/600	
SIM5-0512S	5	12/250	
SIM5-0515S	5	15/200	
SIM5-0512D	5	+12/125	-12/125
SIM5-0515D	5	+15/100	-15/100
SIM5-1205S	12	5/600	
SIM5-1212S	12	12/250	
SIM5-1215S	12	15/200	
SIM5-1212D	12	+12/125	-12/125
SIM5-1215D	12	+15/100	-15/100
SIM5-2405S	24	5/600	
SIM5-2412S	24	12/250	
SIM5-2415S	24	15/200	
SIM5-2412D	24	+12/125	-12/125
SIM5-2415D	24	+15/100	-15/100
SIM5-4805S	48	5/600	
SIM5-4812S	48	12/250	
SIM5-4815S	48	15/200	
SIM5-4812D	48	+12/125	-12/125
SIM5-4815D	48	+15/100	-15/100

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

MEMO:

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

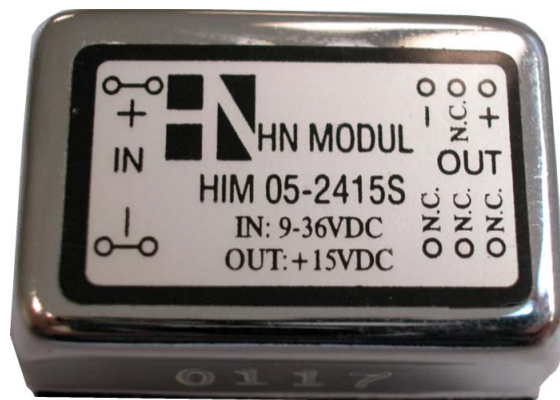


Pin Connection		
Pin	Single Output	Dual Output
1	+V Input	+V Input
2	No Pin	-V Output
3	No Pin	Common
10	-V Output	Common
11	+V Output	+V Output
12	-V Input	-V Input
13	-V Input	-V Input
14	+V Output	+V Output
15	-V Output	Common
22	No Pin	Common
23	No Pin	-V Output
24	+V Input	+V Input

5 W
DC/DC
HIM
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HIM 05 DC Power Package

5 Watt Ultra-Wide-Input DIL24 Compact-Serie



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Besondere Merkmale Features

Weiter Eingang 4:1	Wide input range 4:1
Geringe Bauhöhe	Low profile
Isolationspg. min. 1500V DC (3KV opt.)	Isolation min. 1500V DC (3000 VDC opt.)
Hoher Wirkungsgrad	High efficiency
Kurzschlußfest	Short circuit protection
Überlastschutz	Overload protection

Anwendung Application

Telekommunikation	Telecommunication
Rechnersysteme	Computer applications
MSR	Control equipments
Mikroprozessorsysteme	Microprocessor systems

Technische Daten Specification

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

Eingangsdaten Input Specifications

Eingangsspannung	Input voltages	9...36, 36...72 VDC
Eingangsfiler (integriert)	Build in filter	PI-Type

Ausgangsdaten Output Specifications

Leistung	Power	5 Watt
Wirkungsgrad	Efficiency	typ. 85%
Schaltfrequenz	Switching frequency	typ. 200 kHz
Regelabweichung	Voltage accuracy	typ. ±2%
Last	Load	±0,5% (Dual ±1,5%)
Eingang	Line	±0,5%
Restwelligkeit	Ripple and noise	1% max.

Allgemeine Daten General Specifications

Betriebstemperatur	Operating temp.	-25°C...+71°C, no derating
Betriebstemperatur optional	Operating temp. option	-25°C...+85°C, no derating
Lagertemperatur	Storage temperature	-40°C...+100°C
Temperaturkoeffizient	Temp. coefficient	0.05% / K
Kurzschlußfest	Short circuit protection	Fold back
Gehäusematerial	Case material	Copper with nickel plating

HIM 05 DC Power Package

5 Watt Ultra-Wide-Input DIL24 Compact-Serie

**5 W
DC/DC
HIM
MODUL**

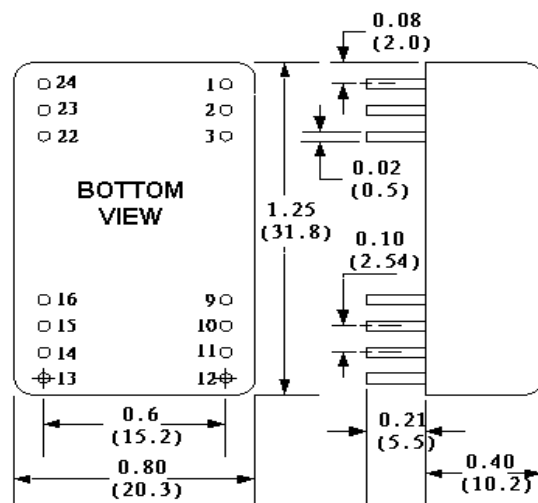
Bestell-Information / Order Information

Modell	Eingang Input VDC	Ausgang1 Output 1 V/mA	Ausgang 2 Output 2 V/mA	Gehäuse Case
HIM052403S	9-36	3,3/1200		DIL24
HIM052405S	9-36	05/1000		DIL24
HIM052412S	9-36	12/500		DIL24
HIM052415S	9-36	15/400		DIL24
HIM052424S	9-36	24/250		DIL24
HIM054803S	36-72	3,3/1200		DIL24
HIM054805S	36-72	05/1000		DIL24
HIM054812S	36-72	12/500		DIL24
HIM054815S	36-72	15/400		DIL24
HIM054824S	36-72	24/250		DIL24
HIM052405D	9-36	+ 5/500	- 5/500	DIL24
HIM052412D	9-36	+12/250	-12/250	DIL24
HIM052415D	9-36	+15/200	-15/200	DIL24
HIM054805D	36-72	+ 5/500	- 5/500	DIL24
HIM054812D	36-72	+12/250	-12/250	DIL24
HIM054815D	36-72	+15/200	-15/200	DIL24

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

MEMO:

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



Toleranzen ...,x = 0,5 mm
Tolerances ...,xx = 0,20 mm

Pin No.	Pin Connection	
	Single Output	Dual Output
2 & 3	-Input (-Vin)	-Input (-Vin)
9	No Connection	Output Common
11	No Connection	-Output (-Vout)
14	+Output (+Vout)	+Output (+Vout)
16	Output Common	Output Common
22 & 23	+Input (+Vin)	+Input (+Vin)
1,12,13,24	No Pin	No Pin
10 & 15	No Connection	No Connection

**5 W
DC/DC
TDD
MODUL**

TDD 05 DC Power Package

5 Watt Ultra-Wide-Input 2" x 1" - Serie



HN-MODUL

Besondere Merkmale Features

Weiter Eingang 4:1	Wide input range 4:1
Geringe Bauhöhe	Low profile
Isolationspg. min. 1500V DC	Isolation min. 1500V DC
Hoher Wirkungsgrad	High efficiency
Kurzschlußfest	Short circuit protection
Eingangs-PI-Filter	Input-PI-Filter

Anwendung Application

Telekommunikation	Telecommunication
Rechnersysteme	Computer applications
MSR	Control equipments
Mikroprozessorsysteme	Microprocessor systems

Technische Daten Specification

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

Eingangsdaten Input Specifications

Eingangsspannung	Input voltages	10...36, 18...72 VDC
Eingangsfilter (integriert)	Build in filter	PI-Type

Ausgangsdaten Output Specifications

Leistung	Power	5/6 Watt
Wirkungsgrad	Efficiency	typ. 76%
Schaltfrequenz	Switching frequency	typ. 200 kHz
Regelabweichung	Voltage accuracy	typ. ±2%
Last	Load	± 2% (Dual ± 5%)
Eingang	Line	± 1%
Restwelligkeit	Ripple and noise	100mV typ.

Allgemeine Daten General Specifications

Betriebstemperatur	Operating temp.	-25°C...+71°C, no derating
Lagertemperatur	Storage temperature	-40°C...+100°C
Temperaturkoeffizient	Temp. coefficient	0.02% / K
Kurzschlußfest	Short circuit protection	Current limited
Gehäusematerial	Case material	Copper with nonconductive plastic
Kühlung	Cooling	Free air convection

TDD 05 DC Power Package

5 Watt Ultra-Wide-Input 2" x 1" Compact-Serie

**5 W
DC/DC
TDD
MODUL**

Bestell-Information / Order Information

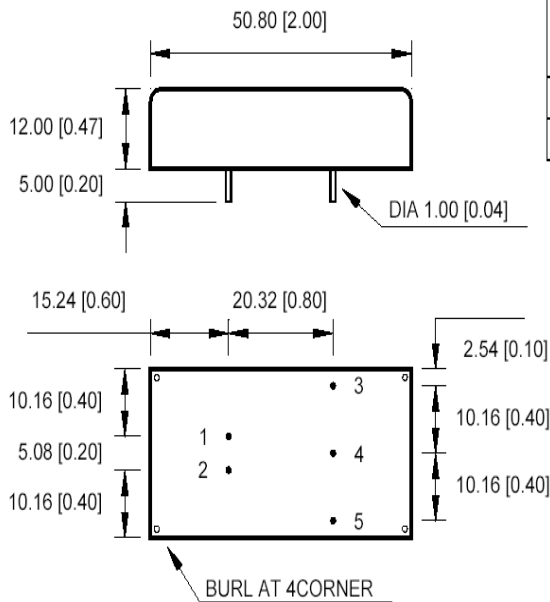
Modell	Eingang Input VDC	Ausgang1 Output 1 V/mA	Ausgang 2 Output 2 V/mA	Modell Label
TDD052403S	10-36	3,3/1500		TDD05-03S4
TDD052405S	10-36	05/1000		TDD05-05S4
TDD052412S	10-36	12/500		TDD05-12S4
TDD052415S	10-36	15/400		TDD05-15S4
TDD054803S	18-72	3,3/1500		TDD05-03S5
TDD054805S	18-72	05/1000		TDD05-05S5
TDD054812S	18-72	12/500		TDD05-12S5
TDD054815S	18-72	15/400		TDD05-15S5
TDD052405D	10-36	+ 5/500	- 5/500	TDD05-05D4
TDD052412D	10-36	+12/250	-12/250	TDD05-12D4
TDD052415D	10-36	+15/200	-15/200	TDD05-15D4
TDD054805D	18-72	+ 5/500	- 5/500	TDD05-05D5
TDD054812D	18-72	+12/250	-12/250	TDD05-12D5
TDD054815D	18-72	+15/200	-12/200	TDD05-15D5

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

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

MECHANISM & PIN CONFIGURATION

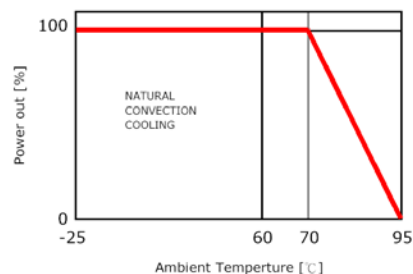
mm [inch]



PHYSICAL CHARACTERISTICS

CASE SIZE	50.8 X 25.4 x 12mm 2 x 1 x 0.47inches
CASE MATERIAL	Metal
WEIGHT	35 g

Derating:



PIN ASSIGMENT

PIN NO.	1	2	3	4	5
SINGLE	Vi+	Vi-	Vo+	NO PIN	Vo-
DUAL	Vi+	Vi-	Vo+	com	Vo-

15 W
DC/DC
TDD
MODUL

TDD 15 DC Power Package

15 Watt Wide-Input 2" x 1" - Serie



HN-MODUL

Besondere Merkmale Features

Weiter Eingang 2:1/3:1	Wide input range 2:1/3:1
Geringe Bauhöhe	Low profile
Isolationspg. min. 1500V DC	Isolation min. 1500V DC
Hoher Wirkungsgrad	High efficiency
Kurzschlußfest	Short circuit protection
Eingangs-PI-Filter	Input-PI-Filter

Anwendung Application

Telekommunikation	Telecommunication
Rechnersysteme	Computer applications
MSR	Control equipments
Mikroprozessorsysteme	Microprocessor systems

Technische Daten Specification

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

Eingangsdaten Input Specifications

Eingangsspannung	Input voltages	18...36, 35...75 VDC
Eingangsfilter (integriert)	Build in filter	PI-Type

Ausgangsdaten Output Specifications

Leistung	Power	15 Watt
Wirkungsgrad	Efficiency	typ. 80%
Schaltfrequenz	Switching frequency	typ. 200 kHz
Regelabweichung	Voltage accuracy	typ. $\pm 2\%$
Last	Load	$\pm 2\%$ (Dual $\pm 5\%$)
Eingang	Line	$\pm 1\%$
Restwelligkeit	Ripple and noise	150mV typ.

Allgemeine Daten General Specifications

Betriebstemperatur	Operating temp.	-25°C...+71°C, no derating
Lagertemperatur	Storage temperature	-40°C...+100°C
Temperaturkoeffizient	Temp. coefficient	0.02% / K
Kurzschlußfest	Short circuit protection	Current foldback
Gehäusematerial	Case material	Copper with black coated
Kühlung	Cooling	Free air convection

TDD 15 DC Power Package

15 Watt Wide-Input 2" x 1" Compact-Serie

**15 W
DC/DC
TDD
MODUL**

Bestell-Information / Order Information

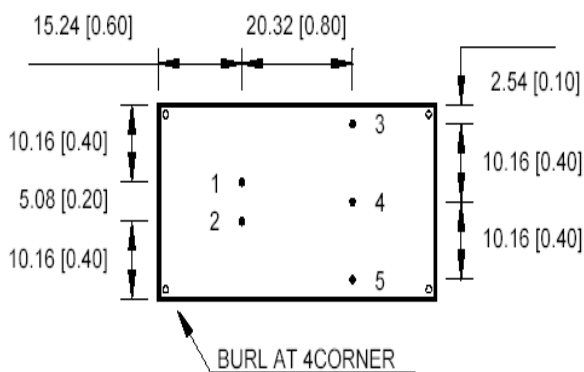
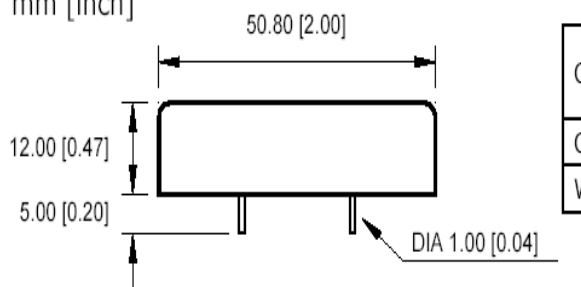
Modell	Eingang Input VDC	Ausgang1 Output 1 V/mA	Ausgang 2 Output 2 V/mA	Model Label
TDD152403S	18-36	3,3/3600		TDD15-03S2
TDD152405S	18-36	05/3000		TDD15-05S2
TDD152412S	18-36	12/1250		TDD15-12S2
TDD152415S	18-36	15/1000		TDD15-15S2
TDD154803S	35-75	3,3/3600		TDD15-03S3
TDD154805S	35-75	05/3000		TDD15-05S3
TDD154812S	35-75	12/1250		TDD15-12S3
TDD154815S	35-75	15/1000		TDD15-15S3
TDD152412D	18-36	+12/630	-12/630	TDD15-12D2
TDD152415D	18-36	+15/500	-15/500	TDD15-15D2
TDD154812D	35-75	+12/630	-12/630	TDD15-12D3
TDD154815D	35-75	+15/500	-12/500	TDD15-15D3

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

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

MECHANISM & PIN CONFIGURATION

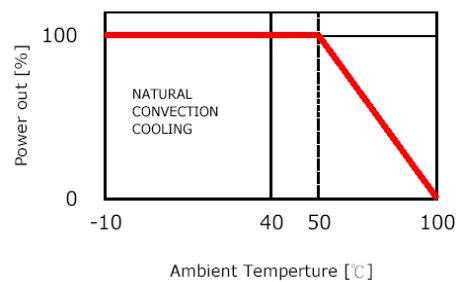
mm [inch]



PHYSICAL CHARACTERISTICS

CASE SIZE	50.8 x 25.4 x 12mm 2 x 1 x 0.47inches
CASE MATERIAL	Metal
WEIGHT	33 g (typ.)

Derating:



PIN ASSIGNMENT

PIN NO.	1	2	3	4	5
SINGLE	Vi+	Vi-	Vo+	NO PIN	Vo-
DUAL	Vi+	Vi-	Vo+	com	Vo-

25 W
DC/DC
TDD
MODUL

TDD 25 DC Power Package

25 Watt Wide-Input 3" x 2" - Serie



HN-MODUL

Besondere Merkmale Features

Weiter Eingang 2:1/3:1	Wide input range 2:1/3:1
Geringe Bauhöhe	Low profile
Isolationspg. min. 1500V DC	Isolation min. 1500V DC
Hoher Wirkungsgrad	High efficiency
Kurzschlußfest	Short circuit protection
Eingangs-PI-Filter	Input-PI-Filter

Anwendung Application

Telekommunikation	Telecommunication
Rechnersysteme	Computer applications
MSR	Control equipments
Mikroprozessorsysteme	Microprocessor systems

Technische Daten Specification

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

Eingangsdaten Input Specifications

Eingangsspannung	Input voltages	18...60, 35...75 VDC
Eingangsfiler (integriert)	Build in filter	PI-Type

Ausgangsdaten Output Specifications

Leistung	Power	25 Watt
Wirkungsgrad	Efficiency	typ. 84%
Schaltfrequenz	Switching frequency	typ. 200 kHz
Regelabweichung	Voltage accuracy	typ. ±2%
Last	Load	± 2% (Dual ± 5%)
Eingang	Line	± 1%
Restwelligkeit	Ripple and noise	150mV typ.

Allgemeine Daten General Specifications

Betriebstemperatur	Operating temp.	-25°C...+71°C, derating (51°-71°C 2%/°C)
Lagertemperatur	Storage temperature	-40°C...+100°C
Temperaturkoeffizient	Temp. coefficient	0.02% / K
Kurzschlußfest	Short circuit protection	Current foldback
Gehäusematerial	Case material	Copper with black coated
Kühlung	Cooling	Free air convection

TDD 25 DC Power Package

25 Watt Wide-Input 3" x 2" Compact-Serie

**25 W
DC/DC
TDD
MODUL**

Bestell-Information / Order Information

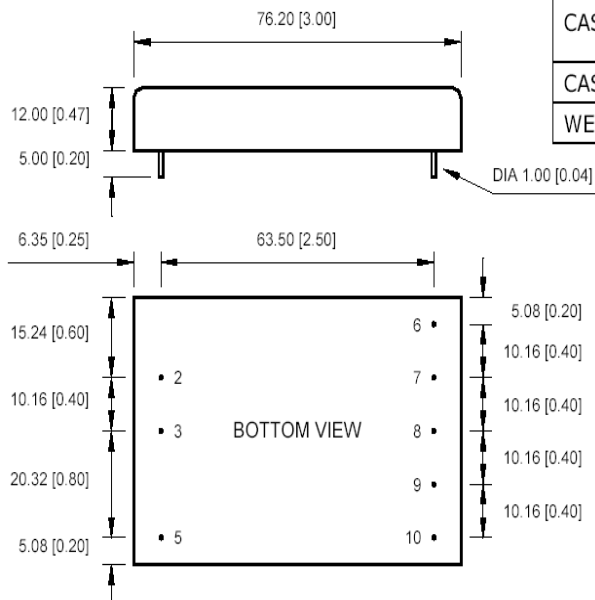
Modell	Eingang Input VDC	Ausgang1 Output 1 V/mA	Ausgang 2 Output 2 V/mA	Modell Label
TDD252403S	18-60	3,3/7000		TDD25-03S2
TDD252405S	18-60	05/5000		TDD25-05S2
TDD252412S	18-60	12/2000		TDD25-12S2
TDD252415S	18-60	15/1700		TDD25-15S2
TDD254803S	35-75	3,3/7000		TDD25-03S3
TDD254805S	35-75	05/5000		TDD25-05S3
TDD254812S	35-75	12/2000		TDD25-12S3
TDD254815S	35-75	15/1700		TDD25-15S3
TDD252412D	18-60	+12/1000	-12/1000	TDD25-12D2
TDD252415D	18-60	+15/850	-15/850	TDD25-15D2
TDD254812D	35-75	+12/1000	-12/1000	TDD25-12D3
TDD254815D	35-75	+15/850	-12/850	TDD25-15D3

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

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

MECHANISM & PIN CONFIGURATION

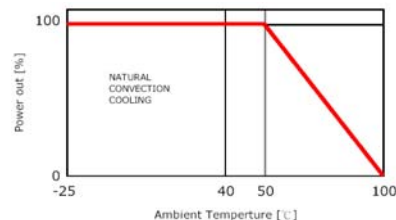
mm [inch]



PHYSICAL CHARACTERISTICS

CASE SIZE	76.2 x 50.8 x 12mm 3 x 2 x 0.47inches
CASE MATERIAL	Metal
WEIGHT	105 g

Derating:



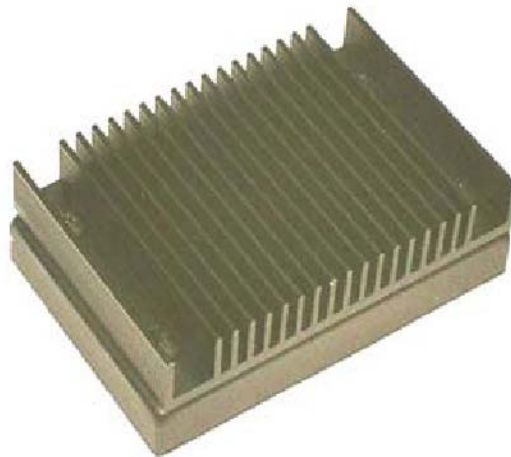
PIN ASSIGMENT

PIN NO.	2	3	5	6	7	8	9	10
SINGLE	Vi-	Vi+	ON/OFF	N.C.	N.C.	Vo-	Vo+	Trim
DUAL	Vi-	Vi+	ON/OFF	Vo-	N.C.	com	Vo+	Trim

40 W
DC/DC
TDD
MODUL

TDD 40 DC Power Package

40 Watt Wide-Input 3" x 2" - Serie



HN-MODUL

Besondere Merkmale Features

Weiter Eingang 2:1/3:1	Wide input range 2:1/3:1
Geringe Bauhöhe	Low profile
Isolationspg. min. 1500V DC	Isolation min. 1500V DC
Hoher Wirkungsgrad	High efficiency
Kurzschlußfest	Short circuit protection
Eingangs-PI-Filter	Input-PI-Filter

Anwendung Application

Telekommunikation	Telecommunication
Rechnersysteme	Computer applications
MSR	Control equipments
Mikroprozessorsysteme	Microprocessor systems

Technische Daten Specification

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

Eingangsdaten Input Specifications

Eingangsspannung	Input voltages	18...60, 35...75 VDC
Eingangsfilter (integriert)	Build in filter	PI-Type

Ausgangsdaten Output Specifications

Leistung	Power	40 Watt
Wirkungsgrad	Efficiency	typ. 84%
Schaltfrequenz	Switching frequency	typ. 200 kHz
Regelabweichung	Voltage accuracy	typ. $\pm 2\%$
Last	Load	$\pm 2\%$ (Dual $\pm 5\%$)
Eingang	Line	$\pm 1\%$
Restwelligkeit	Ripple and noise	150mV typ.

Allgemeine Daten General Specifications

Betriebstemperatur	Operating temp.	-25°C...+71°C, derating (51°-71°C 2%/°C)
Lagertemperatur	Storage temperature	-40°C...+100°C
Temperaturkoeffizient	Temp. coefficient	0.02% / K
Kurzschlußfest	Short circuit protection	Current foldback
Gehäusematerial	Case material	Copper with black coated
Kühlung	Cooling	Free air convection

TDD 40 DC Power Package

40 Watt Wide-Input 3" x 2" Compact-Serie

**40 W
DC/DC
TDD
MODUL**

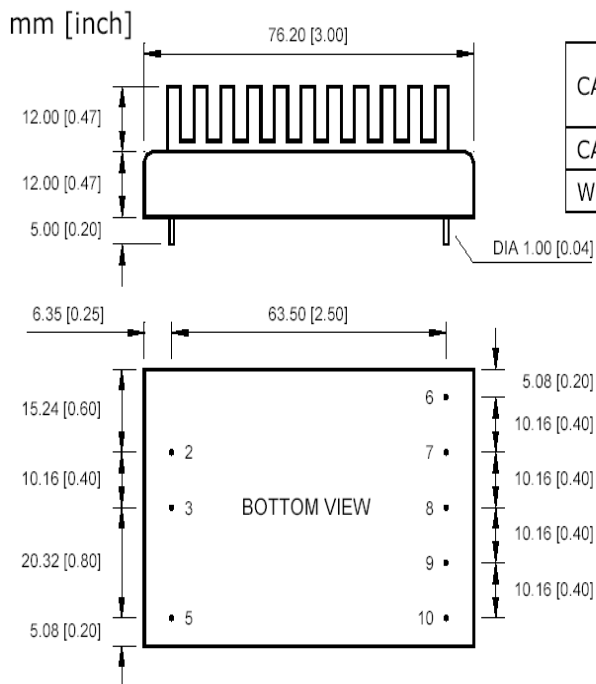
Bestell-Information / Order Information

Modell	Eingang Input VDC	Ausgang1 Output 1 V/mA	Ausgang 2 Output 2 V/mA	Modell Label
TDD402403S	18-60	3,3/10000		TDD40-03S2
TDD402405S	18-60	05/8000		TDD40-05S2
TDD402412S	18-60	12/3500		TDD40-12S2
TDD402415S	18-60	15/2800		TDD40-15S2
TDD404803S	35-75	3,3/10000		TDD40-03S3
TDD404805S	35-75	05/8000		TDD40-05S3
TDD404812S	35-75	12/3500		TDD40-12S3
TDD404815S	35-75	15/2800		TDD40-15S3
TDD402412D	18-60	+12/1700	-12/1700	TDD40-12D2
TDD402415D	18-60	+15/1400	-15/1400	TDD40-15D2
TDD404812D	35-75	+12/1700	-12/1700	TDD40-12D3
TDD404815D	35-75	+15/1400	-12/1400	TDD40-15D3

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

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

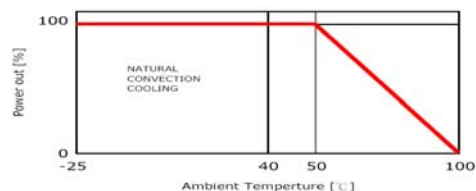
MECHANISM & PIN CONFIGURATION



PHYSICAL CHARACTERISTICS

CASE SIZE	76.2 x 50.8 x 24mm 3 x 2 x 0.94inches
CASE MATERIAL	Metal
WEIGHT	175 g

Derating:



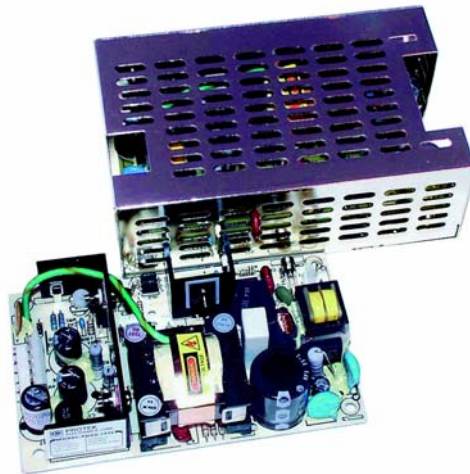
PIN ASSIGNMENT

PIN NO.	2	3	5	6	7	8	9	10
SINGLE	Vi-	Vi+	ON/OFF	N.C.	N.C.	Vo-	Vo+	Trim
DUAL	Vi-	Vi+	ON/OFF	Vo-	N.C.	com	Vo+	Trim

**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
DC/DC
OPEN
FRAME/
CASE**

Bestell-Information / Order Information

Modell	Ausgang 1 Output 1				Ausgang 2 Output 2				Ausgang 3 Output 3				Maximum Output Power Watt
	V _{nom}	I _{min}	I _{max}	Tol	V _{nom}	I _{min}	I _{max}	Tol	V _{nom}	I _{min}	I _{max}	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

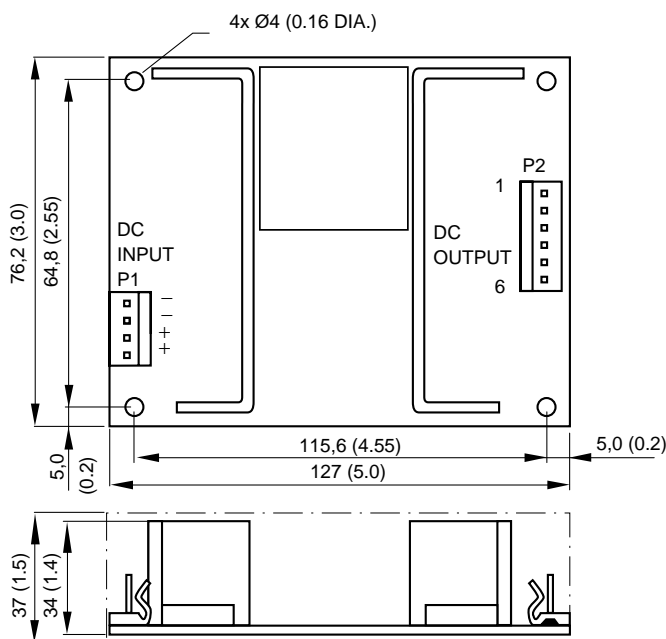
Mechanical

L×B×H	L×W×H	PCB	127 × 76,2 × 34 mm / 5 × 3 × 1.34 in	GEWICHT /WEIGHT
		Case	138 × 87 × 48 mm / 5.43 × 3.43 × 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.

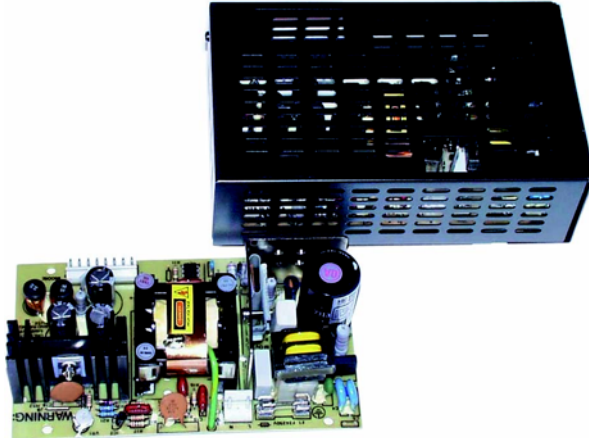
Output connector mates with Molex housing 09-50-3081 and Molex 2878 series crimp terminal.

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

**65 W
DC/DC
OPEN
FRAME/
CASE**

65 Watt DC-Smart Power

PD 65 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	Case 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	65 Watt
Wirkungsgrad	Efficiency	typ. 70%
Schaltfrequenz	Switching frequency	typ. 36 kHz
Regelabweichung	Regulation	
Hauptausgang	Main output	<3%
Kreuzregelung	Cross	<5%
Ausregelzeit ±2%	Recovery time ±2%	max. 1 ms
Restwelligkeit	Ripple and noise	<1% max.

Allgemeine Daten General Specifications

Betriebstemperatur	Operating temperature	0°C...70°C
Lagertemperatur	Storage temperature	-40°C ... +85°C
Temperaturkoeffizient	Temperature coefficient	0.04% / K
Überspannungsschutz	Overvoltage Protection	typ. 110...130% of main outp.
Leistungsbegrenzung	Power limitation	typ.130% total power
MTBF	MTBF	>100,000 h @25°C, MIL HDBK 217E

65 Watt DC-Smart Power

PD 65 Wide-Ranging DC-Compact-Serie

**65 W
DC/DC
OPEN
FRAME/
CASE**

Bestell-Information / Order Information

Modell	Ausgang 1 Output 1				Ausgang 2 Output 2				Ausgang 3 Output 3				Ausgang 4 Output 4				Max. Output Power Watt
	V _{nom}	I _{min}	I _{max}	Tol	V _{nom}	I _{min}	I _{max}	Tol	V _{nom}	I _{min}	I _{max}	Tol	V _{nom}	I _{min}	I _{max}	Tol	
PD65-10	5V	0A	10.0A	2%	(N/A)				(N/A)				(N/A)				50
PD65-12	12V	0A	5.5A	1%	(N/A)				(N/A)				(N/A)				65
PD65-13	15V	0A	4.5A	1%	(N/A)				(N/A)				(N/A)				65
PD65-14	24V	0A	3.0A	1%	(N/A)				(N/A)				(N/A)				65
PD65-23	+5V	1.0A	6.0A	3%	+12V	0.5A	3.0A	5%	(N/A)				(N/A)				65
PD65-24	+5V	1.0A	6.0A	3%	+15V	0.4A	3.0A	5%	(N/A)				(N/A)				65
PD65-25	+5V	1.0A	6.0A	3%	+24V	0.3A	2.0A	5%	(N/A)				(N/A)				65
PD65-30	+5V	1.0A	6.0A	3%	+12V	0.5A	3.0A	5%	-5V	0.1A	0.5A	10%	(N/A)				65
PD65-31	+5V	1.0A	6.0A	3%	+12V	0.5A	3.0A	5%	-12V	0.1A	0.5A	10%	(N/A)				65
PD65-32	+5V	1.0A	6.0A	3%	+15V	0.4A	3.0A	5%	-15V	0.1A	0.5A	10%	(N/A)				65
PD65-33	+5V	1.0A	6.0A	3%	+15V	0.4A	3.0A	5%	-12V	0.1A	0.5A	10%	(N/A)				65
PD65-39	+5V	1.0A	6.0A	3%	+24V	0.3A	2.0A	5%	-12V	0.1A	0.5A	10%	(N/A)				65
PD65-40	+5V	1.0A	6.0A	3%	+12V	0.5A	3.0A	5%	-12V	0.1A	0.5A	10%	-5V	0.1A	0.5A	10%	65

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 65 W ohne Fremdkühlung nicht übersteigen, 45 Watt bei den L-Typen.
- 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: **PD65-10LA** L=Eingangsspannung A=Mechanik

Remarks

- 1-The maximum continuous output power must not exceed 65 W with convection cooling, 45 W for L-types.
- 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 cap. in parallel with a 0.1 µF ceramic cap.

Order example: **PD65-10LA** L=input range A=mechanic version

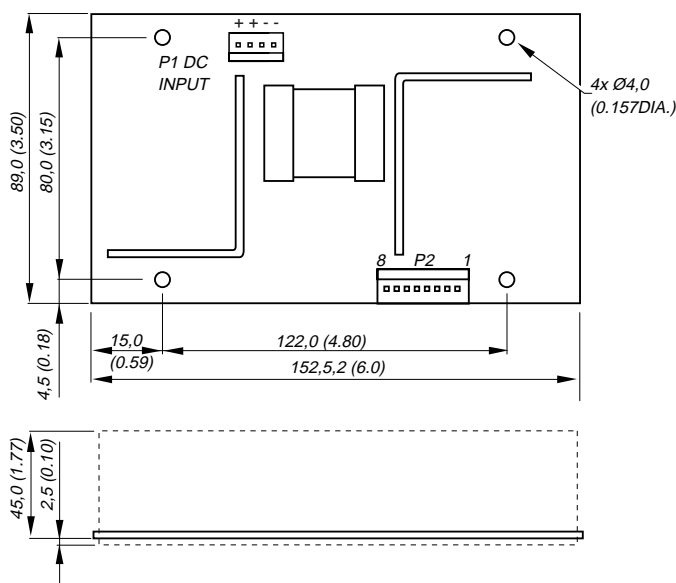
Mechanik

Mechanical

L×B×H	L×W×H	PCB	153 × 89 × 45 mm/ 6 × 3.15 × 1.77 in	GEWICHT /WEIGHT	
		Case	169 x105x 54 mm/ 6.7 × 4.15 × 2.13in	380 g (PCB-Version)	

B Für L-Winkel, **C** Für Gehäuse **B** for L-Bracket, **C** for Case

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



max. Toleranz 0,5 (0.02)

Input connector mates with Molex housing 09-50-3031 and Molex 2878 series crimp terminal.

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

OUTPUT CONNECTIONS

PINS	SINGL E	DUAL	TRIPL E	QUAD
Out 1	1, 2, 3, 4	1, 2	1, 2	1, 2
Out 2		5, 6	5, 6	5, 6
Out 3			7	7
Out 4				8
N.C.		7, 8	8	
RETURN	5, 6, 7, 8	3, 4	3, 4	3, 4

110 W
DC/DC
OPEN
FRAME/
CASE

110 Watt DC-Smart Power

PD 110 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...20 (L), 18...36 (M), 36...72 (H) VDC
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Ausgangsdaten Output Specifications

Leistung	Power	110 Watt
Wirkungsgrad	Efficiency	typ. 70%
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

110 Watt DC-Smart Power

PD 110 Wide-Ranging DC-Compact-Serie

**110 W
DC/DC
OPEN
FRAME/
CASE**

Bestell-Information / Order Information

Modell	Ausgang 1 Output 1				Ausgang 2 Output 2				Ausgang 3 Output 3				Ausgang 4 Output 4				Max. Output Power Watt
	V _{nom}	I _{min}	I _{max}	Tol	V _{nom}	I _{min}	I _{max} (I _{peak})	Tol	V _{nom}	I _{min}	I _{max}	Tol	V _{nom}	I _{min}	I _{max}	Tol	
PD110-10	5V	0A	22A	3%	(N/A)				(N/A)				(N/A)				110
PD110-12	12V	0A	9.0A	2%	(N/A)				(N/A)				(N/A)				110
PD110-13	15V	0A	7.5A	2%	(N/A)				(N/A)				(N/A)				110
PD110-14	24V	0A	4.5A	2%	(N/A)				(N/A)				(N/A)				110
PD110-16	30V	0A	3.6A	2%	(N/A)				(N/A)				(N/A)				110
PD110-23	+5V	0A	10A	3%	+12V	0A	5A (9.0A)	3%	(N/A)				(N/A)				110
PD110-31	+5V	0A	10A	3%	+12V	0A	5A (9.0A)	3%	-12V	0A	1A	4%	(N/A)				110
PD110-32	+5V	0A	10A	3%	+15V	0A	4A (7.5A)	3%	-15V	0A	1A	4%	(N/A)				110
PD110-40	+5V	0A	10A	3%	+12V	0A	5A (9.0A)	3%	-12V	0A	1A	4%	-5V	0A	1A	4%	110
PD110-41	+5V	0A	10A	3%	+15V	0A	4A (7.5A)	3%	-15V	0A	1A	4%	+24V	0A	1A	4%	110
PD110-42	+5V	0A	10A	3%	+12V	0A	5A (9.0A)	3%	-12V	0A	1A	4%	+12V	0A	1A	4%	110
PD110-45-1	+5V	0A	10A	3%	+12V	0A	5A (9.0A)	3%	-12V	0A	1A	4%	+24V	0A	1.5A	10%	110
PD110-45-2	+5V	0A	10A	3%	+24V	0A	3A (5.0A)	3%	-12V	0A	1A	4%	+12V	0A	1A	4%	110
PD110-46	+5V	0A	10A	3%	+15V	0A	4A (7.5A)	3%	-15V	0A	1A	4%	-5V	0A	1A	4%	110

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

Input ranges – Eingangsspannungsserien: **L**=10...20 VDC, **M**=18...36 VDC, **H**=36...72 VDC

Vermerk

- 1-Die Dauerleistung darf 80 W (M&H-Serie) bzw. 75 W (L-Serie) ohne Fremdkühlung und 110 W (M&H-Serie) bzw. 90 W (L-Serie) mit Fremdkühlung nicht übersteigen.
- 2-Peakstrom weniger als 60 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: **PD110-40 HB** H=Eingangsspannung B=Mechanik

Remarks

- 1-The maximum continuous output power must not exceed 80 W (M&H series) resp. 75 W (L series) without convection cooling and 110 W (M&H series) resp. 90 W (L series) with convection cooling.
- 2-Peak current lasting less than 60 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: **PD110-40 HB** H=input range B=mechanic version

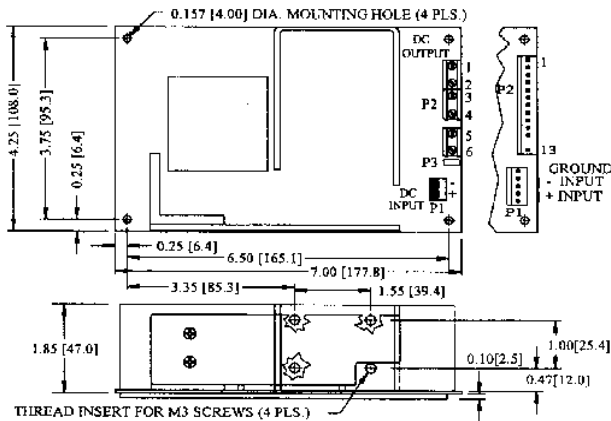
Mechanik

Mechanical

L×B×H L×W×H PCB 178 × 108 × 47 mm / 7 × 4.25 × 1.85 in GEWICHT / WEIGHT
Case 190 × 116 × 60 mm / 7.48 × 4.57 × 2.36 in 640 g (PCB-Version)

A offen, B für L-Winkel, C für Gehäuse A open, B for L-Bracket, C for Case

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



NOTES:

1. Dimensions shown in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. Molex KK type connectors:
Input connector mates with Molex housing 09-50-3051 and Molex 2878 series crimp terminal.
Output connector mates with Molex housing 09-50-3131 and Molex 2878 series crimp terminal.
4. Miniature terminal blocks:
Input terminals allow wires up to 2mm² (AWG #14).
Output terminals allow wires up to 2mm² (AWG #14).
5. Weight: 640 grams (PCB format).
6. See the mechanical details of L-bracket and enclosed formats in page 7-2.

PIN CHART

MODEL	MINI TERMINAL MOLEX CONNECTOR	1	2	3	4	5	6	7	8	9	10	11	12	13
		1, 2, 3	4, 5	6, 7	8, 9	10	11	12	13					
PD110-10 PD110-12 PD110-16	PD110-10 PD110-12 PD110-16	OUTPUT #1	RETURN	RETURN	OUTPUT #1	N.C.	N.C.	KEY	N.C.					
PD110-23	PD110-23	OUTPUT #1	COMMON RETURN	COMMON RETURN	OUTPUT #2	N.C.	N.C.	KEY	N.C.					
PD110-31 PD110-32	PD110-31 PD110-32	OUTPUT #1	COMMON RETURN	COMMON RETURN	OUTPUT #2	N.C.	OUTPUT #3	KEY	N.C.					
PD110-40 PD110-42 PD110-45-2	PD110-40 PD110-42 PD110-45-1 PD110-46	OUTPUT #1	COMMON RETURN	COMMON RETURN	OUTPUT #2	N.C.	OUTPUT #3	KEY	OUTPUT #4					

MEMO: