

QD SERIES

40~50W DC/DC CONVERTERS

Single Output

QDU type

QDS type



H16×W50×L82 (mm)

H16×W50×L82 (mm)

Features

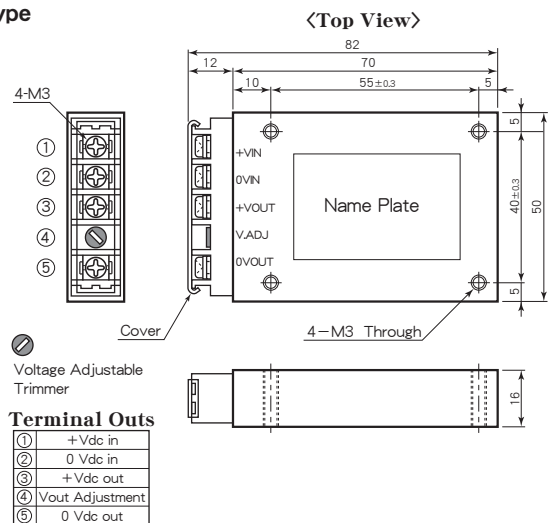
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|---|----------------------------|
| ● Low Profile 16mm | ● 薄型 16mm |
| ● Built-in Input Filter | ● 入力フィルタ内蔵 |
| ● Wide Input Voltage Range | ● 広範囲な入力電圧 |
| ● Input-Output Isolation | ● 入出力間絶縁 |
| ● Adjustable Output Volt. ±5% | ● 出力電圧可変可能 ±5% |
| ● Input Low Voltage Protection | ● 入力低電圧保護回路内蔵 |
| ● Input Over Voltage Protection | ● 入力過電圧保護回路内蔵 |
| ● Output Over Voltage Protection | ● 出力過電圧保護回路内蔵 |
| 115~140% Operation | 115~140%にて動作 |
| ● High Efficiency 86~90% | ● 高効率 86~90% |
| ● Operating Ambient Temperature -40°C~+85°C | ● 動作周囲温度 -40°C~+85°C |
| ● Conformity to RoHS Directive | ● RoHS指令対応 |
| ● Not built-in aluminum and tantalum electrolytic capacitor | ● アルミ電解コンデンサ及びタンタルコンデンサ不使用 |

General Characteristics

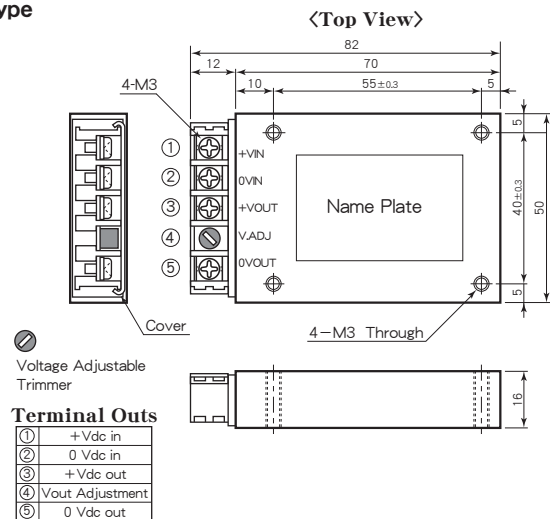
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|---------------------------------|--|
| ● Input Voltage, Range | (at Ta : 25°C, Full Load, Nominal Vin)
DC12, 24, 48, 100V (See Table 1) |
| ● Output Voltage, Current | See Table 1 |
| ● Output Voltage Range | ±5% Adjustable |
| ● Efficiency | See Table 1 |
| ● Line Regulation | ±0.3% max. (at Vin Range) |
| ● Load Regulation | ±0.5% max. (0~100% Load) |
| ● Reflected Input Ripple, Noise | (3% Vin)Vp-p max. |
| ● Output Ripple | 40mVp-p max. |
| ● Output Noise | 100mVp-p max. |
| ● Short Circuit Protection | Built-in, Auto-restart (See Fig. 2) |
| ● Over Voltage Protection | 115~140% Output Voltage |
| ● Temperature Coefficient | 0.02%/°C max. |
| ● Operating Ambient Temp. | -40°C~+85°C (See Fig. 1) |
| ● Storage Temperature | -40°C~+115°C |
| ● Isolation Voltage | AC1500V one minute
(Input-Output-Case) |
| ● Isolation Impedance | 100MΩ min. (at DC1000V)
(Input-Output-Case) |
| ● Weight | 150g max. |
| ● Humidity | 20~95% RH |
| ● Shock | 490m/s ² (11msec 3directions) |
| ● Vibration | 10~55Hz 98m/s ²
(30minutes 3directions) |
| ● Surface Structure | 6 Sided Aluminum Case |
| ● MTBF | 500,000H
(Ta : 25°C, 80% Load, Nominal Vin) |
| ● Warranty | 5 years |

Terminal Outs & Dimensions (±0.5mm)

QDU type



QDS type



Selection Guide

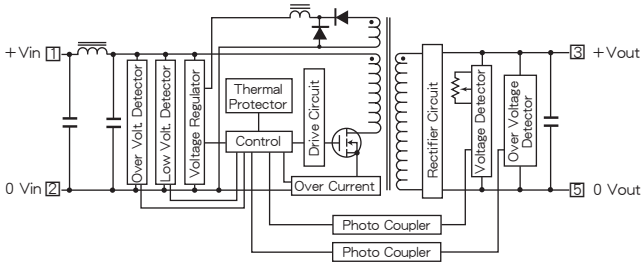
Table 1

Model Number	Input Volt. (Range) (V. DC)	Output Voltage (V. DC)	Output Current (A)	Efficiency (Typical)(%)	
				20% Load	80% Load
QDU(QDS) 12-3.3S 12A	12 (8~18)	3.3	12	81	86
QDU(QDS) 12- 5S 10A		5	10	82	88
QDU(QDS) 12- 6S8.4A		6	8.4	82	88
QDU(QDS) 12- 12S4.2A		12	4.2	83	88
QDU(QDS) 12- 15S3.3A		15	3.3	83	88
QDU(QDS) 12- 24S2.1A		24	2.1	83	88
QDU(QDS) 24-3.3S 12A	24 (16~36)	3.3	12	81	86
QDU(QDS) 24- 5S 10A		5	10	85	88
QDU(QDS) 24- 6S8.4A		6	8.4	85	88
QDU(QDS) 24- 12S4.2A		12	4.2	84	89
QDU(QDS) 24- 15S3.3A		15	3.3	84	89
QDU(QDS) 24- 24S2.1A		24	2.1	84	89
QDU(QDS) 48-3.3S 12A	48 (32~72)	3.3	12	81	86
QDU(QDS) 48- 5S 10A		5	10	83	88
QDU(QDS) 48- 6S8.4A		6	8.4	83	88
QDU(QDS) 48- 12S4.2A		12	4.2	85	90
QDU(QDS) 48- 15S3.3A		15	3.3	85	90
QDU(QDS) 48- 24S2.1A		24	2.1	79	89
QDU(QDS)100-3.3S 12A	100 (64~144)	3.3	12	82	87
QDU(QDS)100- 5S 10A		5	10	84	89
QDU(QDS)100- 6S8.4A		6	8.4	84	89
QDU(QDS)100- 12S4.2A		12	4.2	85	90
QDU(QDS)100- 15S3.3A		15	3.3	85	90
QDU(QDS)100- 24S2.1A		24	2.1	79	89

* 上記仕様以外にも対応可能ですのでお問い合わせ下さい。
Please consult with us about other specification.

QD SERIES DATA SHEET

Block Diagram



Characteristic Curves

Fig. 1 Derating Curve

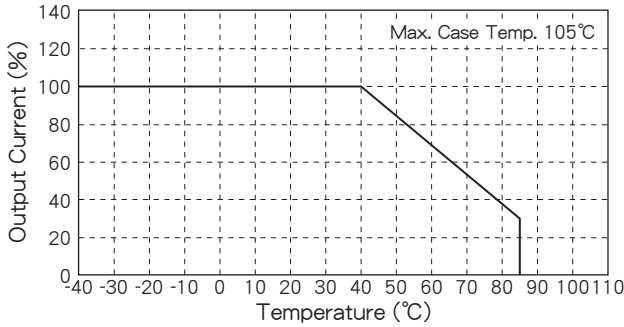


Fig. 2 Short Circuit Operating Area

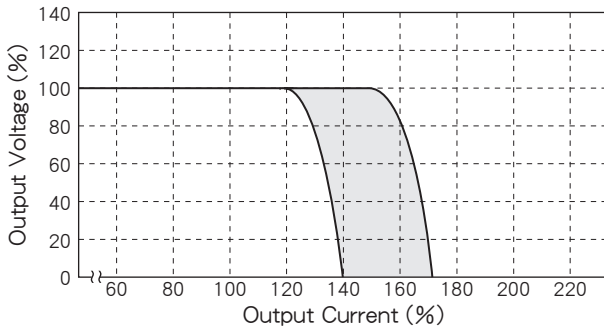


Fig. 3 Temperature Characteristic on Case Surface

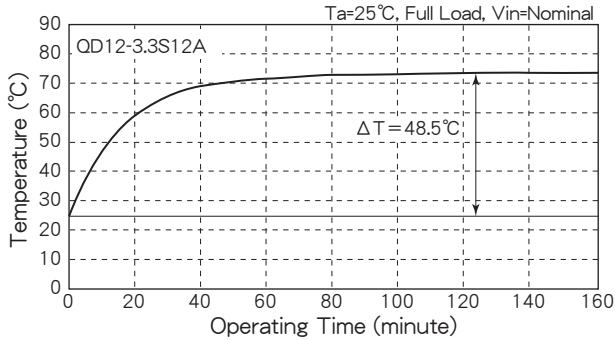


Fig. 4 Efficiency vs. Output Current (Vin=12V)

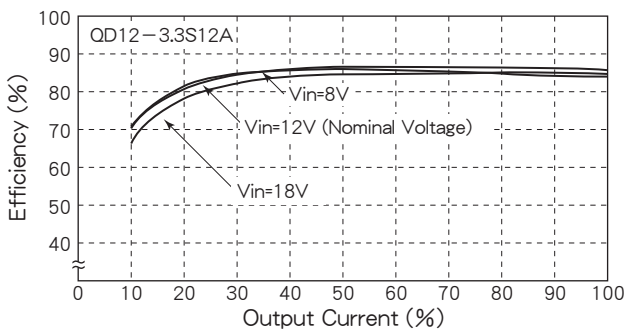


Fig. 5 Efficiency vs. Output Current (Vin=12V)

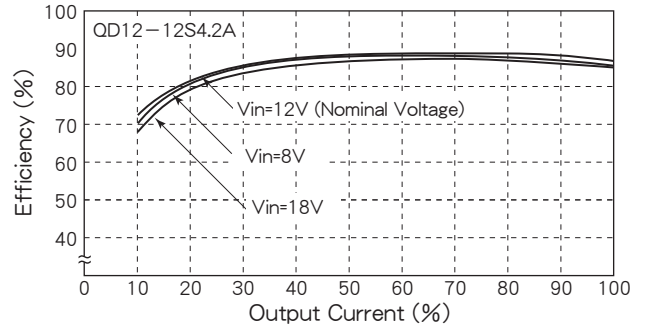


Fig. 6 Efficiency vs. Output Current (Vin=24V)

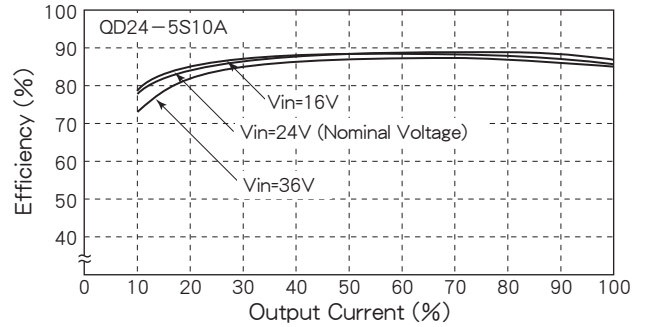


Fig. 7 Efficiency vs. Output Current (Vin=24V)

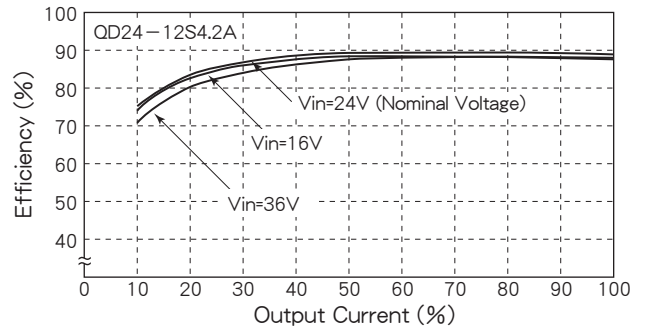


Fig. 8 Efficiency vs. Output Current (Vin=48V)

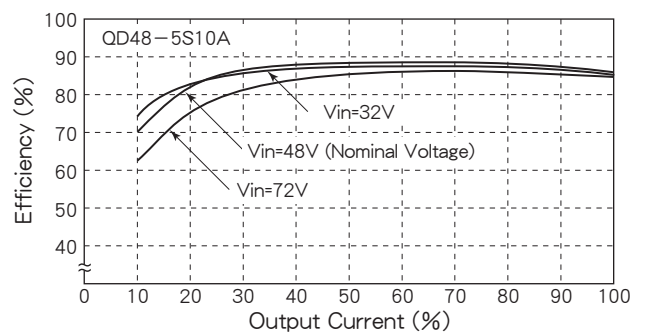


Fig. 9 Efficiency vs. Output Current (Vin=100V)

