75 Watt, 9 – 75VDC Wide Input DC/DC Converters Series DV75Q8

E357872

Features

- 75 Watt Isolated Output
- Regulated Outputs
- 8 : 1 Wide Input Range
- Fixed Switching Frequency
- Remote ON/OFF
- Shock & Vibration: EN50155 (EN61373)
- UL62368 (Reinforced Insulation) Approval
- Meet EN50155 with External Circuits
- Efficiency to 90%
- Continuous Short Circuit Protection
- Over Temperature Protection
- Over Voltage / Current Protection
- Industrial Standard Pin Out
- Fire & Smoke Meet EN45545-2
- Low No Load Power Consumption
- 5000m Operating Altitude

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT [A] MAX.	INPUT CURRENT NO LOAD [mA]	INPUT CURRENT FULL LOAD [A]	EFF. [%] (Note (1)	EFF. [%] (Note (2)	CAP. LOAD Max. [µF]	CASE
DV75Q8-36S12	9 – 75	12	6,25	8	2,3	90	90	14000	Q
DV75Q8-36S15		15	5	8	2,3	90	90	10000	
DV75Q8-36S24		24	3,12	10	2,3	90	90	3900	
DV75Q8-36S28		28	2,67	10	2,3	90	90	3200	
DV75Q8-36S48		48	1,56	10	2,3	90	90	1100	

NOTE:

1. Nominal Input Voltage 36 VDC.
2. Measured at 48Vin

dev-dorsch electronic vertriebs gmbh ● Münchner Str. 123 ● 85774 Unterföhring
Fon +49 / 89 / 95 08 07 – 60 Fax – 77 Mail: contact@dev-electronic.de ● www.dev-electronic.de

INPUT SPECIFICATIONS:

Input Voltage Range	36V	9-75Vdc
Input Surge Voltage (100ms max.)		100Vdc max.
Under Voltage Lockout	Power up	8,4V min / 8,8V typ./ 9,0V max.
	Power down	7,6V min. / 8,0V typ. / 8,2V max.
Positive Logic Remote On/Off (Note 4 & 5)		
Input Filter (Note 7)		PI Type

OUTPUT SPECIFICATION:

Output Current Min.		0 mA
Voltage Accuracy		±1,0%max.
Transient Response: 75%~100% Step Load Change		
Error Band …. ±5% Vout Nominal, Recover Time		250µ sec. max.
External Trim Adj. Range		-20% min, +15% max.
Ripple and Noise (Note 3), (5Hz to 20 MHz BW)	12V & 15V	80mV RMS / 150mV pk-pk max.
	24V & 28V	120mV RMS / 240mV pk-pk max.
	48V	220mV RMS / 480mV pk-pk max.
Temperature Coefficient		±0,02%/°C max.
Short Circuit Protection		Continuous
Line Regulation (Note 1)		±0,2% max.
Load Regulation (Note 2)		±0,2% max.
Over Voltage Protection (Limited Voltage, % Vo nom)		117-140%
Current Current Protection		Hiccup Mode, Auto Recovery, 110%-210%
Start up Time		30ms typ.

GENERAL SPECIFICATIONS:

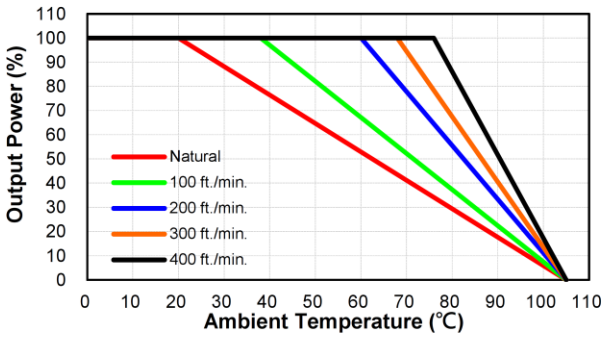
Efficiency		See Table
Isolation Voltage (1 Minute)	Input/Output	3000VAC max. / 4200VDC max.
	Input/Case (Baseplate)	2100VAC max. / 3000 VDC max.
	Output/Case (Baseplate)	1500VAC max. / 2100 VDC max.
Isolation Resistance		10^8 Ohm min.
Isolation Capacitance		1000pF typ.
Switching Frequency		200 KHz typ.
Operating Case Temperature		-40°C to +105°C
Storage Temperature		-55°C to +125°C
Thermal Shutdown, Case Temp.		110°C typ.
Humidity		95% RH max. Non condensing
MTBF 25°C (MIL-HDBK-217F, GB, Full Load)	12V	663 Khours typ.
	15V	759 Khours typ.
	24V	750 Khours typ.
	28V	740 Khours typ.
	48V	780 Khours typ.
Safety		Approved UL62368 (Reinforced Insulation)
EMC (Note 8)		Meets EN50155 (EN50121-3-2) with External Filter
Shock/Vibration		Meet EN50155 (EN61373)
Environmental		Meet EN50155 (EN60068-2-1,2,30)
Fire & Smoke		Meet EN45545-2
Dimensions		2.28×1.45x0.50 inches (57.9x36.8×12.7 mm)
Case Material		Aluminum Baseplate with Plastic Case
Weight		66g

NOTE:

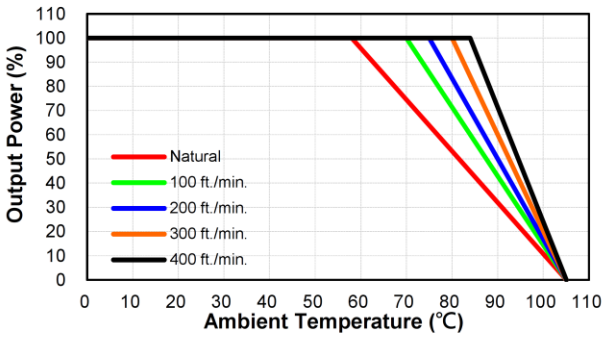
1. Measured from high line to low line.
2. Measured from full load to zero load.
3. Output ripple and noise measured with 22uF aluminum solid capacitor and 1uF ceramic capacitor across output.
4. Logic compatibility ……..... open collector ref to -Input
   - Module on (Von/off at Ion/off=0.0uA)…….. >4.0Vdc to 75Vdc or open circuit
   - Module off (Von/off at Ion/off=1.0mA)……0 to < 1.0Vdc
5. Suffix "N" to the model number with negative logic remote on/off
   - Module on (Von/off at Ion/off=1.0mA)…….0 to < 1.0Vdc
   - Module off (Ion/off at Von/off=0V) ……..... >4.0Vdc to 75Vdc or open circuit
6. Suffix “-C” to the model number with clear mounting insert (3.2mm DIA.).
7. An external input capacitor 220uF for all models are recommended to reduce input ripple voltage.
8. For information about EN50155 and RIA12, refer to application note.
9. All Specifications Typical At Nominal Line, Full Load, and 25°C Unless Otherwise Noted.

dev-dorsch electronic vertriebs gmbh ● Münchner Str. 123 ● 85774 Unterföhring
Fon +49 / 89 / 95 08 07 – 60 Fax – 77 Mail: contact@dev-electronic.de ● www.dev-electronic.de

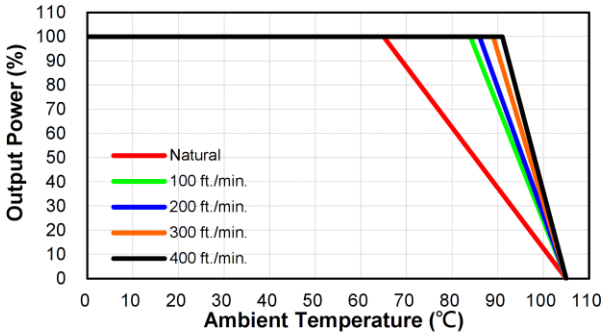
Without Heatsink (Vin=36V)

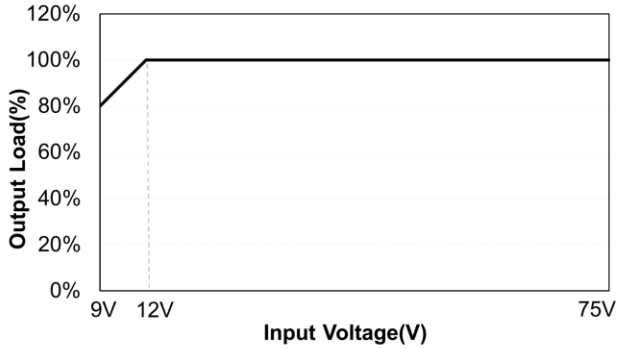


With Heatsink M-C448 (Vin=36V)



With Heatsink M-C421 (Vin=36V)

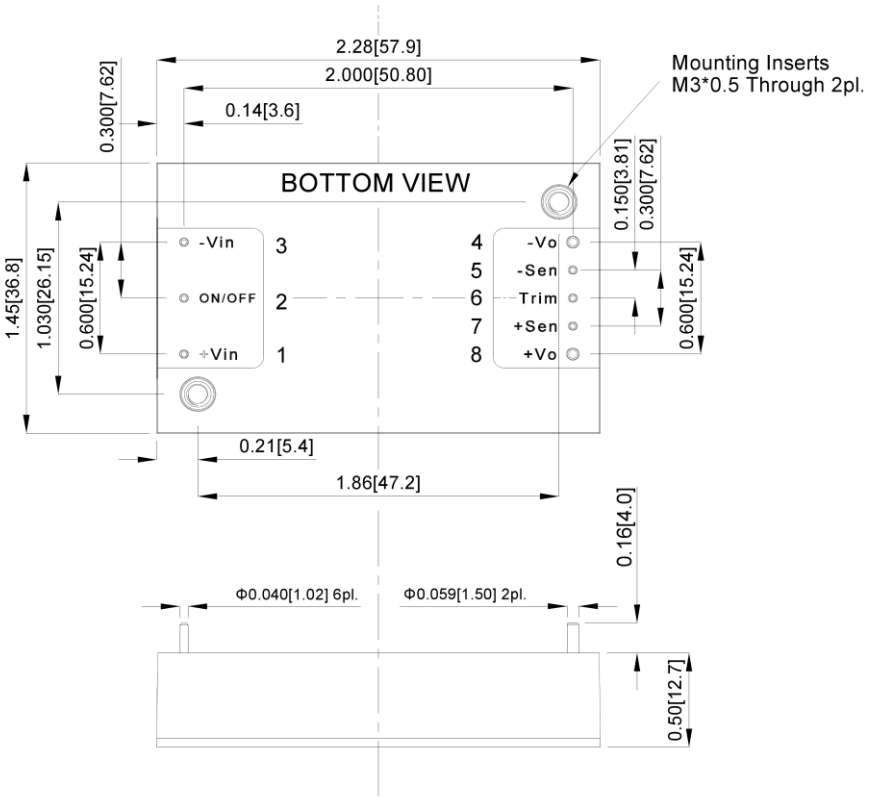




dev-dorsch electronic vertriebs gmbh ● Münchner Str. 123 ● 85774 Unterföhring
Fon +49 / 89 / 95 08 07 – 60 Fax – 77 Mail: contact@dev-electronic.de ● www.dev-electronic.de

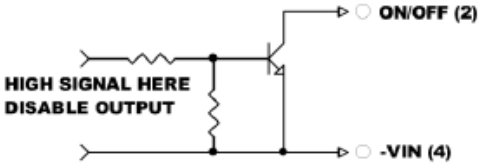
All Dimensions in Inches (mm)

Tolerance Inches	x.xx±0.02	x.xxx±0.010
Millimeters	x.x±0.5	x.xx±0.25

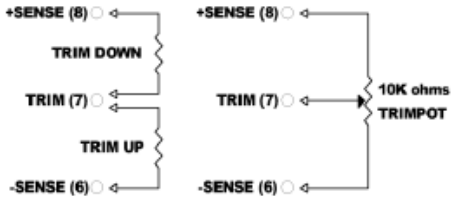


PIN CONNECTION	
Pin	**Function**
1	**+V Input**
2	**On/Off**
3	**-V Input**
4	**-V Output**
5	**-Sense**
6	**Trim**
7	**+Sense**
8	**+V Output**

REMOTE ON/OFF CONTROL



EXTERNAL OUTPUT TRIM

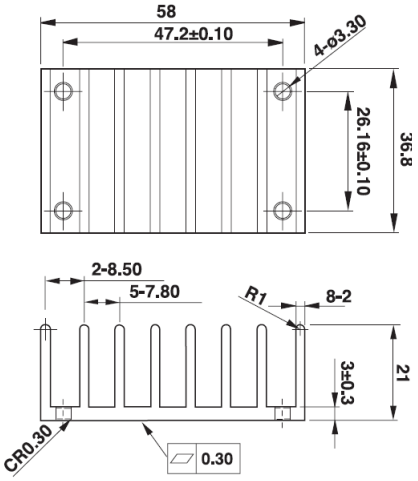


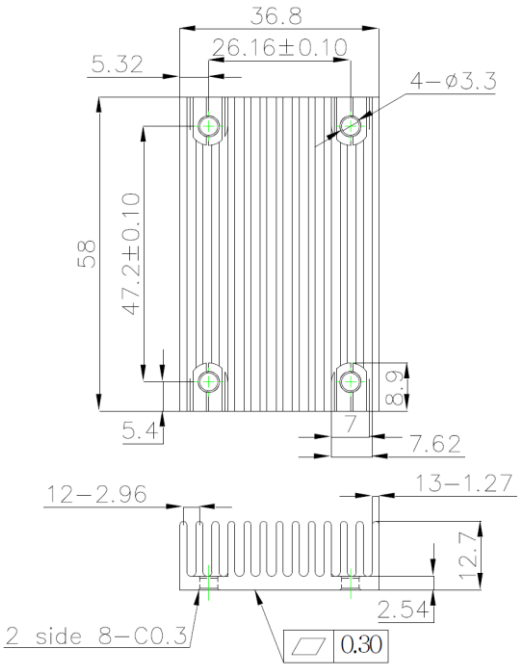
dev-dorsch electronic vertriebs gmbh ● Münchner Str. 123 ● 85774 Unterföhring
Fon +49 / 89 / 95 08 07 – 60 Fax – 77 Mail: contact@dev-electronic.de ● www.dev-electronic.de

CASE Q: HEAT SINK

Transverse Heat Sink	Longitudinal Heat Sink
Order No. 17.079.206	**Order No. 17.079.209**
Model No. M-C421	**Model No. M-C448**

all dimensions in mm

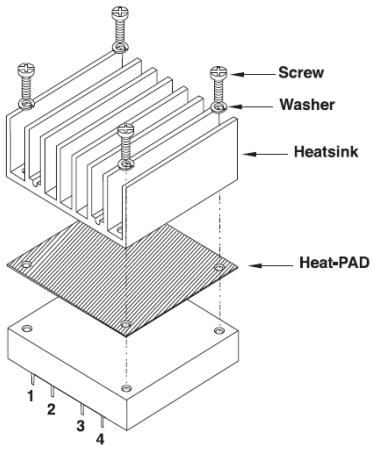




Rca: 4,78°C/W (typ.), At natural convection
2,44°C/W (typ.), At 100LFM
2,06°C/W (typ.), At 200LFM
1,76°C/W (typ.), At 300LFM
1,58°C/W (typ.), At 400LFM

Rca: 5,61°C/W (typ.), At natural convection
4,01°C/W (typ.), At 100LFM
3,39°C/W (typ.), At 200LFM
2,86°C/W (typ.), At 300LFM
2,49°C/W (typ.), At 400LFM

Heat Sink Assembly
example



Screw SMP+SW M3x8L

Thermal pad SZ 35,8x56,9x0,25

dev-dorsch electronic vertriebs gmbh ● Münchner Str. 123 ● 85774 Unterföhring
Fon +49 / 89 / 95 08 07 – 60 Fax – 77 Mail: contact@dev-electronic.de ● www.dev-electronic.de