



**100 Watt Wide Input
DC/DC Converters
Series DV1004HCH (Chassis Mount)
DV1004HDR (Din-Rail)**



Features

- 66-100 Watt Isolated Output
- Regulated Output
- 4 : 1 Wide Input Range
- Input Over Voltage Protection
- Safety Meets UL62368-1 / IEC62368-1
- Efficiency to 89%
- Continuous Short Circuit Protection
- Five-Sided Shield Metal Case
- Chassis Mount / Din Rail Mount
- Safety Meets UL60950-1, EN60950-1 & IEC60950-1

MODEL NUMBER	HEAT SINK (Note 8)	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	OUTPUT CURRENT MAX. [A]	INPUT CURRENT FULL LOAD [mA]	EFF. [%]	CAP. LOAD MAX. [μ F]	CASE
DV9-36-3,3S20000HCH	+M-C308 +M-C091 +M-C092	9 – 36	3,3	20	3333	82	20000	Chassis
DV9-36-05S20000HCH			5	20	4931	84	20000	
DV9-36-12S8300HCH			12	8,3	4854	85	8300	
DV9-36-15S6700HCH			15	6,7	4813	87	6700	
DV9-36-24S4170HCH			24	4,17	4766	87	1800	
DV9-36-28S3570HCH			28	3,57	4845	86	2200	
DV9-36-48S2080HCH			48	2,08	5042	82	470	
DV18-75-3,3S20000HCH	+M-C308 +M-C091 +M-C092	18 – 75	3,3	20	1667	82	20000	
DV18-75-05S20000HCH			5	20	2422	86	20000	
DV18-75-12S8300HCH			12	8,3	2371	87	8300	
DV18-75-15S6700HCH			15	6,7	2379	88	6700	
DV18-75-24S4170HCH			28	4,17	2343	89	2200	
DV18-75-28S3570HCH			24	3,57	2422	86	2200	
DV18-75-48S2080HCH			48	2,08	2462	84	470	
DV9-36-3,3S20000HDR	+M-C308 +M-C091 +M-C092	9 – 36	3,3	20	3333	82	20000	Din-Rail
DV9-36-05S20000HDR			5	20	4931	84	20000	
DV9-36-12S8300HDR			12	8,3	4854	85	8300	
DV9-36-15S6700HDR			15	6,7	4813	87	6700	
DV9-36-24S4170HDR			28	4,17	4766	87	1800	
DV9-36-28S3570HDR			24	3,57	4845	86	2200	
DV9-36-48S2080HDR			48	2,08	5042	82	470	
DV18-75-3,3S20000HDR	+M-C308 +M-C091 +M-C092	18 – 75	3,3	20	1667	82	20000	
DV18-75-05S20000HDR			5	20	2422	86	20000	
DV18-75-12S8300HDR			12	8,3	2371	87	8300	
DV18-75-15S6700HDR			15	6,7	2379	88	6700	
DV18-75-24S4170HDR			28	4,17	2343	89	2200	
DV18-75-28S3570HDR			24	3,57	2422	86	2200	
DV18-75-48S2080HDR			48	2,08	2462	84	470	

Please add a heat sink to the model number, for example DV18-75-15S6700HCH+M-C091

NOTE: 1. Nominal Input Voltage 24V & 48 Vdc.

Technical change reserved without notice / Technische Änderungen vorbehalten

INPUT SPECIFICATION:

Input Voltage Range.....	Vin 24V.....	9-36V
	Vin 48V.....	18-75V
Input Surge Voltage (100ms max.).....	Vin 24V.....	50Vdc max.
	Vin 48V.....	100Vdc max.
Input Current No Load (Vin 9-36).....	Vo 3,3V/5V/12V/15V/24V/48V.....	35mA
	Vo 28V.....	50mA
Input Current No Load (Vin 18-75).....	Vo 3,3V/5V/12V/15V/24V/48V.....	30mA
	Vo 28V.....	50mA
Under Voltage lockout:.....	24Vin power up.....	8,8V typ.
	24Vin power down.....	8,0V typ.
	48Vin power up.....	17V typ.
	48Vin power down.....	16V typ.
Input Filter.....		Pi Type
Positive Logic Remote ON/OFF.....		Note 1 & 2

OUTPUT SPECIFICATION:

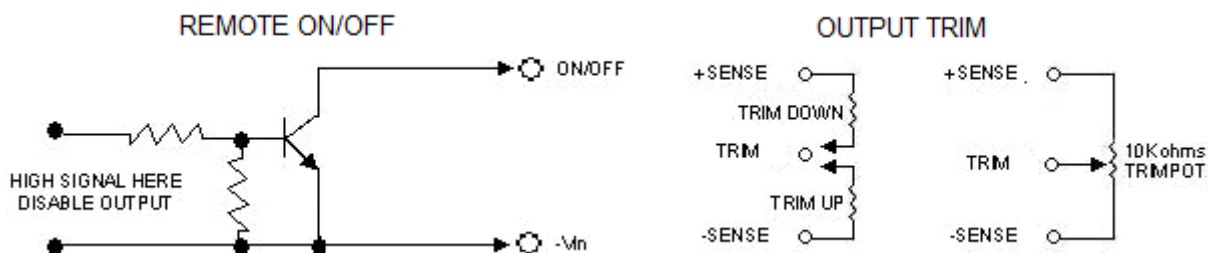
Voltage Accuracy.....		±1,0% max.
	Vo 3,3V & 48V (Note 8).....	±1,5% max.
Transient Response: 25% Step Load Change.....		<500µ sec.
External Trim Adj. Range.....		±10%
Ripple and Noise, 20 MHz BW.....	Vo 3,3V & 5V.....	40mV RMS / 100mV pk-pk max
	Vo 12V & 15V.....	60mV RMS / 150mV pk-pk max
	Vo 24V.....	100mV RMS / 240mV pk-pk max
	Vo 28V.....	100mV RMS / 280mV pk-pk max
	Vo 48V.....	200mV RMS / 480mV pk-pk max
Temperature Coefficient.....		±0,03%/°C
Short Circuit Protection.....		Continuous
Line Regulation (From High Line to Low Line).....		±0,2% max.
Load Regulation (From Full Load to Zero Load).....		±0,2% max.
Over Voltage Protection trip Range, % Vo nom.....		115-140%
Current Limit.....		110-140% Nominal Output
Start-up Time.....		25ms typ.

GENERAL SPECIFICATIONS:

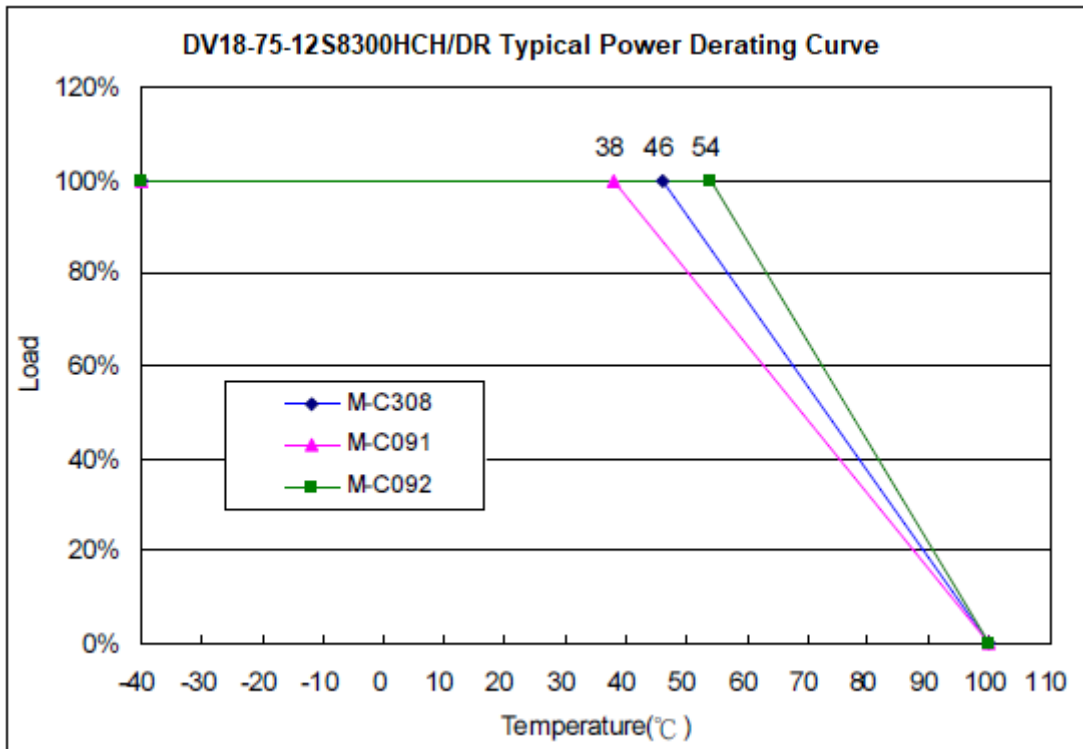
Efficiency.....		See Table
Isolation Voltage.....	Input/Output, Input/Case, Output/Case.....	1500 VDC min.
Isolation Resistance.....		10 ⁷ Ohm min.
Isolation Capacitance.....		1500pF typ.
Switching Frequency.....		250 KHz typ.
Operating Case Temperature Range.....		-40°C to +100°C
Storage Temperature Range.....		-55°C to +105°C
Thermal Shutdown, Case Temp.....		105°C typ.
Humidity.....		95% RH max. Non condensing
Dimensions.....		see drawing
Case Material DC Module.....		Aluminum

NOTE:

- Logic Compatibility..... Open Collector Ref. to -Input Module ON..... >3.5Vdc or Open Circuit Module OFF..... 0 to < 1.8Vdc
- Negative Logic on request.
- Short JP1 to connect +S and +Vo, JP2 to connect -S and -Vo with local sense.
- Remove jumper (JP1 & JP2), terminal block port +S, -S & Trim can be used to Output Remote Sensing or Output Voltage Adjustment functional (see application note).
- Thermal resistance is referenced to the application note.
- Include TVS for input surge voltage protection.
- Recommend external fuse for input reverse polarity protection (Include shunt diode inside).
- Require input and output aluminum capacitor connected for Input 100µF/100V for 24Vin Models and 47µF/100V for 48Vin Models and Output 47µF/100V for 48Vout Models Only.
- For Heat Sinks Models please see page 5.
- All Specifications Typical at Nominal Line, Full Load and 25°C.



Derating Curve

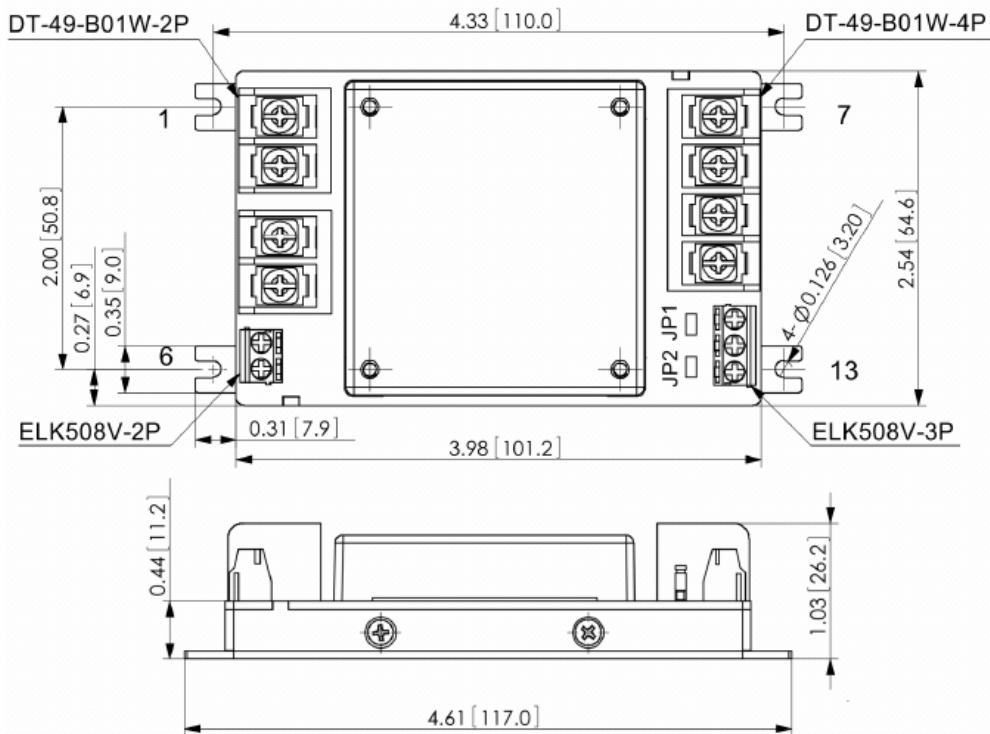


Case CH

Series DV1004HCH & DV1004HDR

All Dimensions in Inches (mm)

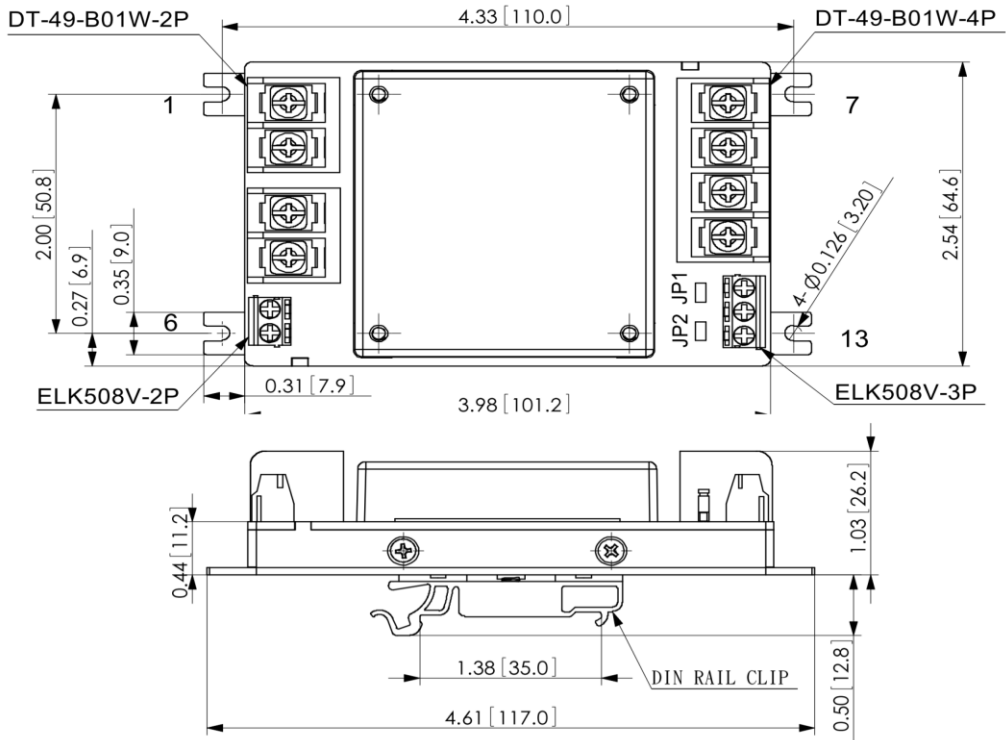
Tolerance Inches x.xx±0.02 x.xxx±0.010
 Millimeters x.x±0.5 x.xx±0.25



PIN CONNECTION	
Pin	Function
1,2	+V Input
3,4	-V Input
5	On/Off
6	Case
7,8	+V Output
9,10	-V Output
11	+Sense
12	Trim
13	-Sense
JP1	Short +S& +Vo
JP2	Short -S& -Vo

All Dimensions in Inches (mm)

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



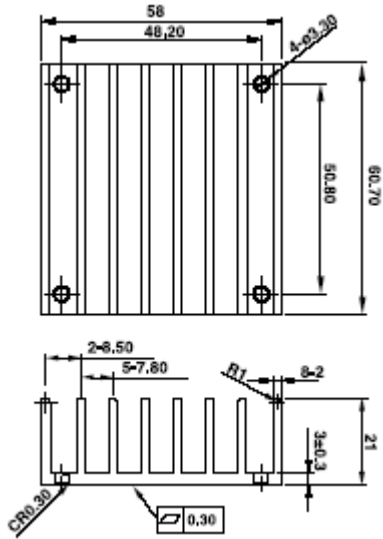
PIN CONNECTION	
Pin	Function
1,2	+V Input
3,4	-V Input
5	On/Off
6	Case
7,8	+V Output
9,10	-V Output
11	+Sense
12	Trim
13	-Sense
JP1	Short +S& +Vo
JP2	Short -S& -Vo

CASE H: HALF BRICK HEATSINK

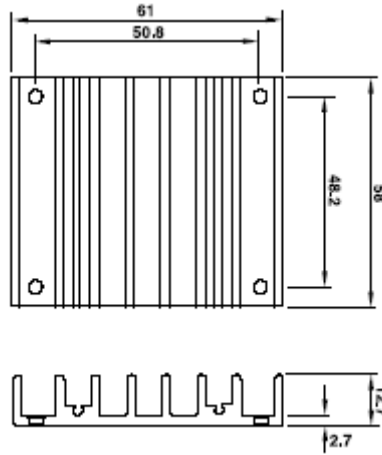
Longitudinal Fins
Model No. M-C308

Transverse Fins
Model No. M-C091

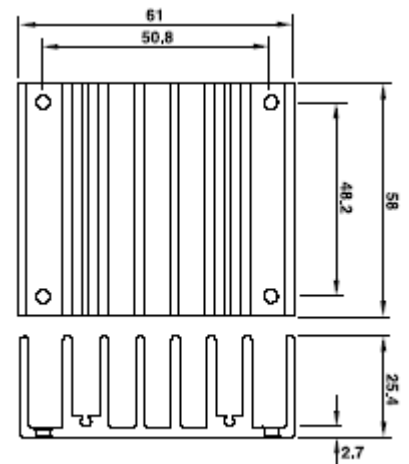
Transverse Fins
Model No. M-C092



Rca: 3,9°C/W (typ.), At natural convection
1,74°C/W (typ.), At 100LF
1,33°C/W (typ.), At 200LF
1,12°C/W (typ.), At 300LF
0,97°C/W (typ.), At 400LF



Rca: 4,7°C/W (typ.), At natural convection
2,89°C/W (typ.), At 100LF
2,30°C/W (typ.), At 200LF
1,88°C/W (typ.), At 300LF
1,59°C/W (typ.), At 400LF



Rca: 3°C/W (typ.), At natural convection
1,44°C/W (typ.), At 100LF
1,17°C/W (typ.), At 200LF
1,04°C/W (typ.), At 300LF
0,95°C/W (typ.), At 400LF

HALF BRICK HEATSINK ASSEMBLY / M-C308 / M-C091 / M-C092

Thermal Pad: SZ 56,9x60x0,25mm
Screw: SMP+SW M3x8L

similar image

