



**60 Watt, 4:1 Wide Input
DC/DC Converters
Series DV604XL**



Features



- 60 Watt Isolated Output
- Regulated Outputs
- 4 : 1 Wide Input Range
- 1500 VDC Isolation I/O
- Remote On/Off
- No Tantalum Capacitor Inside
- 2,05"x1,2"x0,4" Six-Sided Shield Metal Case
- Efficiency to 92%
- Fixed Switching Frequency
- Over Current Protection
- Input Under Voltage Protection
- Continuous Short Circuit Protection
- CE Mark Meets 2004/108/EC
- Safety Meets UL60950-1, EN60950-1, IEC60950-1

MODEL NUMBER	INPUT VOLTAGE [VDC]	OUTPUT VOLTAGE [VDC]	Iout Min. [mA]	Iout Max. [A]	INPUT CURRENT NO LOAD [mA] typ.	INPUT CURRENT FULL LOAD [mA] typ.	EFF. [%]	CAP. LOAD Max. [µF]	CASE
DV9-36-3,3SA15XL	9 – 36	3,3	0	15	10	2279	90	15000	XL
DV9-36-05SA12XL		5	0	12	10	2717	92	12000	
DV9-36-12SA5XL		12	0	5	10	2717	92	5000	
DV9-36-15SA4XL		15	0	4	10	2717	91	4000	
DV9-36-12DA2,5XL		±12	0	±2,5	10	2747	91	2500	
DV9-36-15DA2XL		±15	0	±2,0	10	2747	91	2000	
DV18-75-3,3SA15XL	18 – 75	3,3	0	15	8	1140	90	15000	XL
DV18-75-05SA12XL		5	0	12	8	1359	92	12000	
DV18-75-12SA5XL		12	0	5	8	1359	92	5000	
DV18-75-15SA4XL		15	0	4	8	1359	91	4000	
DV18-75-12DA2,5XL		±12	0	±2,5	8	1374	91	2500	
DV18-75-15DA2XL		±15	0	±2,0	8	1374	91	2000	

NOTE:

1. Nominal Input Voltage 24 or 48 Vdc
2. Measured at Nominal Input voltage

INPUT SPECIFICATIONS:

Input Voltage Range.....	24V.....	9-36V
	48V.....	18-75V
Input Surge Voltage (100ms max.) .	24V.....	50VDC max.
	48V.....	100VDC max.
Under voltage lockout: 24Vin power up.....	8,5V 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 Control		Note 1

OUTPUT SPECIFICATION:

Output Current Min.	0mA
Voltage Accuracy	±1,5% max.
Voltage Balance (Dual).....	±1,0% max.
Transient Response: 75% - 100% Step Load Change	
Error Band	±5% Vout nominal
Recover Time	<250 µ sec.
Ripple and Noise, 20 MHz BW (Measured with 1µF MLCC):	
3,3V & 5V	100mV pk-pk max.
12V & 15V & ±12V & ±15V	150mV pk-pk max.
Temperature Coefficient	±0,02%/°C
Line Regulation (From High Line to Low Line)	±0,2% max.
Load Regulation (From Full Load to Min. Load)	±0,5% max.
Cross Regulation (Dual) Load Cross Variation 10%/100% ±5% max.	
Over Voltage Protection	Zener or TVS Clamp
Current Limit.....	110 - 160% Nominal Output
Short Circuit Protection.....	Continuous (Hiccup Mode)
External Trim Adj. Range (Single Output Only).....	±10%
Start up time.....	30ms typ.

GENERAL SPECIFICATIONS:

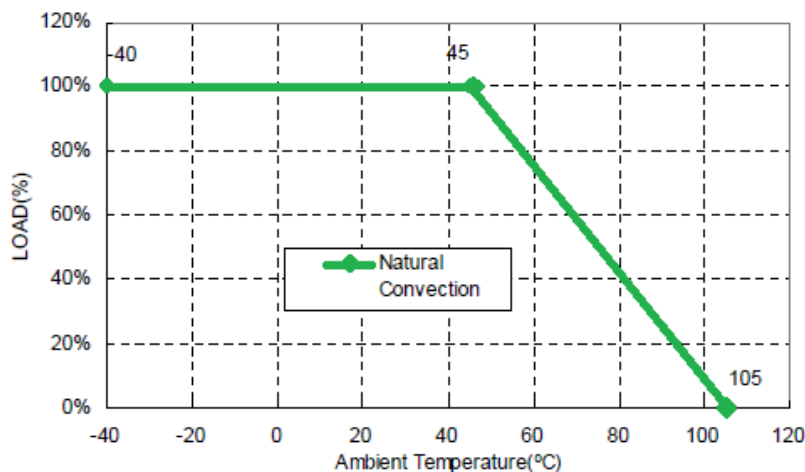
Efficiency.....	See Table
Isolation Voltage.....	Input/Output 1500 VDC min.
	Input/Case 1000 VDC min.
	Output/Case..... 1000 VDC min.
Isolation Capacitance	Input/Output 1500 pF typ.
	Input/Case 1000 pF typ.
	Output/Case..... 1000 pF typ.
Isolation Resistance	10 ⁹ Ohm min.
Switching Frequency	Single 245KHz/Dual 300KHz typ.
EMI/RFI	Six-Sided Continuous Shield
Operating Ambient Temperature Range	-40°C to +85°C
Derating, above 45°C	Linearly to Zero Power at 105°C
Case Temperature (Note2).....	105°C max.
Cooling	Natural Convection
Storage Temperature Range	-55°C to +125°C
Thermal Shutdown Case Temp.	110°C typ.
Humidity	95% RH max. Non condensing
MTBF	Single 872Khrs/Dual 859 Khrs typ.
Dimensions	52 x 30,5 x 10,2 mm
	(2,05 x 1,20 x 0,40 inches)
Case Material	Aluminum with Non-Conductive Base
Weight.....	39g

NOTE:

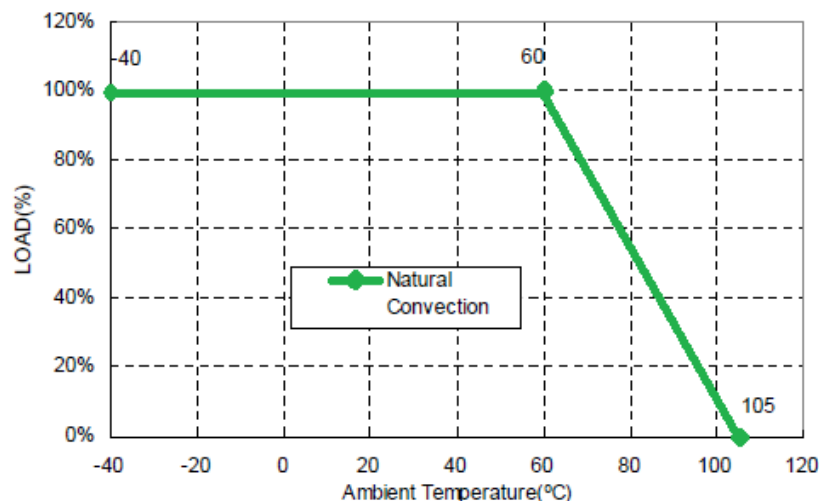
- Logic Compatibility CMOS or Open Collector TTL, ref. to -Vinup
- Module ON >3,5Vdc to 75Vdc or Open Circuit
- Module OFF < 1,2Vdc
- Maximum Case Temperature under any operating condition should not be exceeded 105°C.

All Specifications Typical at Nominal Line, Full Load and 25°C.

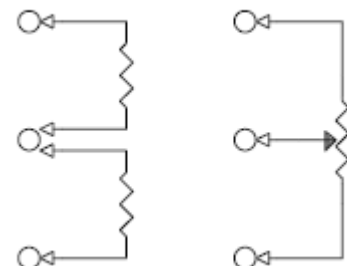
Typical Derating curve for Natural Convection



Typical Derating Curve for Natural Convection with Heatsink M-C655 XL

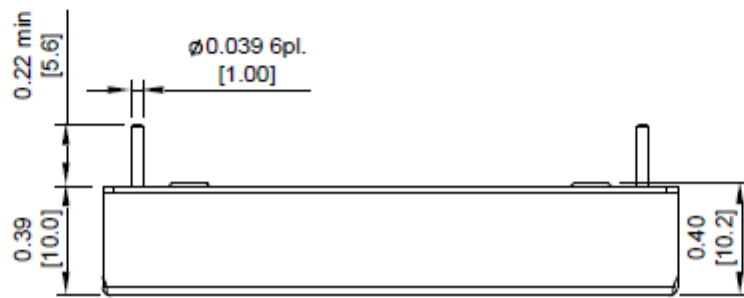
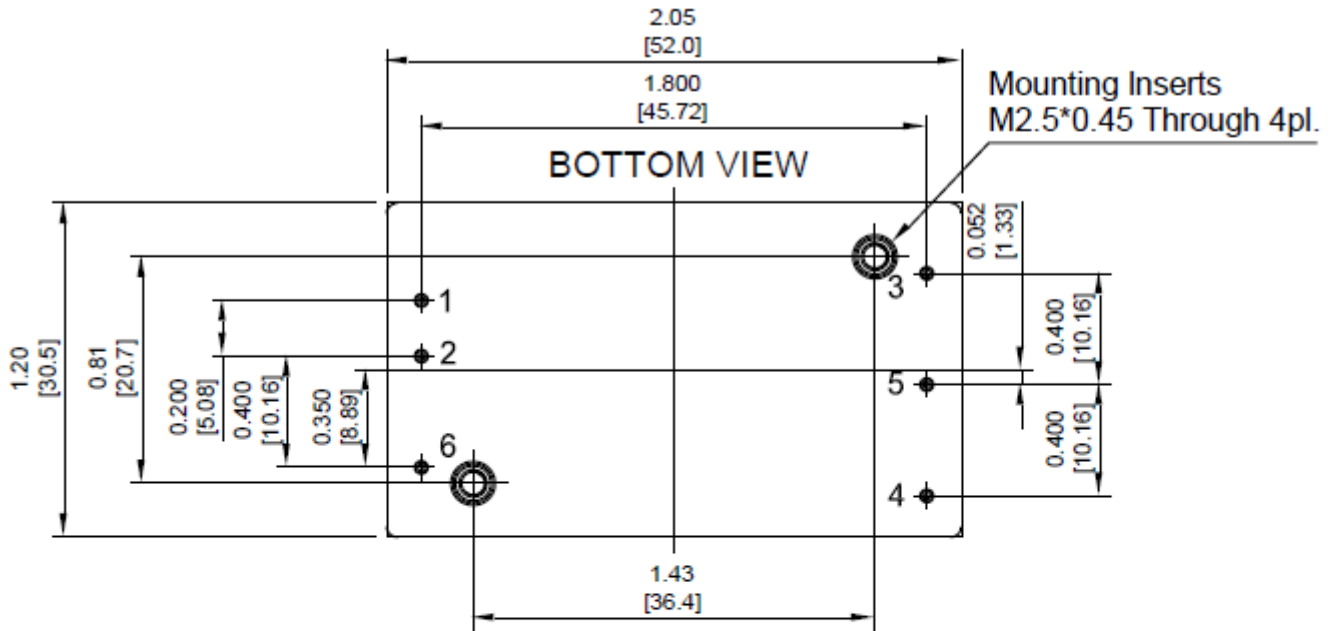


External Output Trimming



Technische Änderungen vorbehalten / Specifications are subject to change without notice

All Dimensions in Inches (mm)
 Pin Size is 0.04±0.004 Inch (1.0±0.1 mm) DIA
 Tolerance x.xx= ±0.02 inches (x.x mm ±0.5mm)
 x.xxx in ±0.010 inches (x.xx mm ±0.25mm)

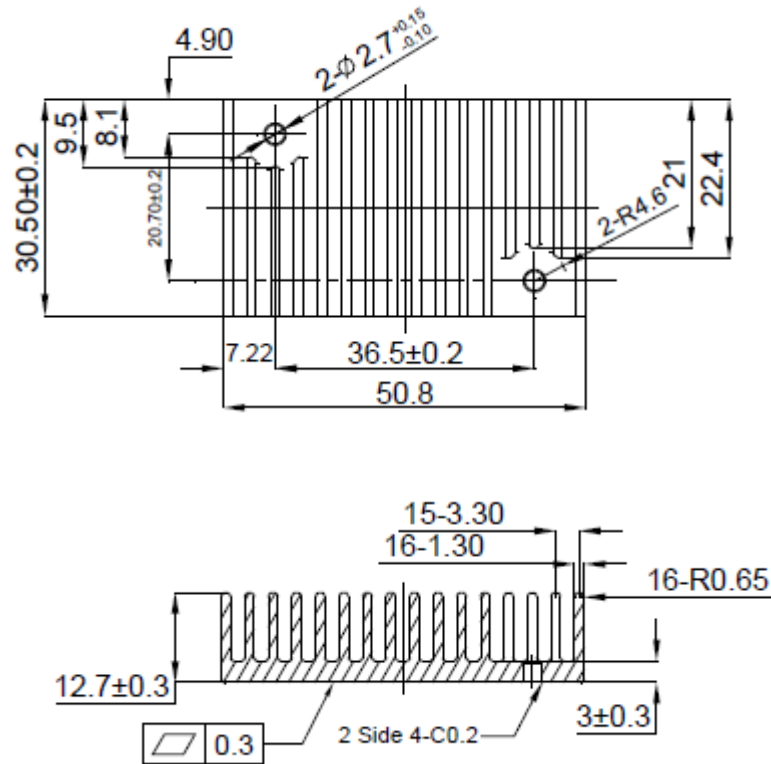


PIN CONNECTION		
Pin	Single Output	Dual Output
1	+Vin	+Vin
2	-Vin	-Vin
3	+Vout	+Vout
4	Trim	-Vout
5	-Vout	Common
6	Remote On/Off	Remote ON/OFF

CASE XL: HEAT SINK

Transverse
 Order No. 17.079.204
 Model No. M-C655 XL

All dimensions in mm



Rca: 8,99°C/W (typ.), At natural convection

