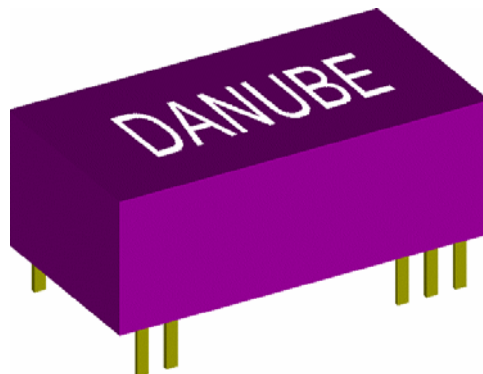


### FEATURES

- 1000VDC ISOLATION
- HIGH EFFICIENCY
- INTERNAL FILTERING
- LOW COST
- NO EXTERNAL COMPONENTS REQUIRED
- UP TO 1.8W REGULATED OUTPUT POWER
- DUAL IN LINE PACKAGE
- 100% BURNED IN
- LOW NOISE
- MTBF > 850,000 HOURS



#### ● OUTPUT SPECIFICATIONS

Voltage Setpoint Accuracy	+/-2% max
Temperature Coefficient	+/-0.03%/°C
Ripple & Noise (20MHz BW)	100mVp-p max
Line Regulation <sup>1</sup>	+/-0.5% max
Load Regulation <sup>2</sup>	+/-0.5% max
Short Circuit Protection	Current Limit Protection
Short Circuit Restart	Automatic

#### ● ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-25°C to +71°C
Storage Temperature	-55°C to +125°C
Cooling	Free-Air Convection

ALL SPECIFICATIONS TYPICAL AT NOMINAL LINE, FULL LOAD , AND 25 °C UNLESS OTHERWISE NOTED.

#### ● INPUT SPECIFICATIONS

Input Voltage Range	+/-10% max
Input Filter	Capacitor Type

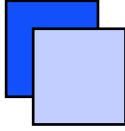
#### ● GENERAL SPECIFICATIONS

Efficiency	50% min
Isolation Voltage <sup>3</sup>	1000 VDC min
Isolation Resistance	10 <sup>9</sup> ohms min
Switching Frequency	25 KHz min
Isolation Capacitance	80pF max
MTBF	850,000 Hours
Weight	10.1g Typ
Case Material	Non-Conductive Plastic
Case Size	32.5mm*17mm*10.2mm

<sup>1</sup> High Line to Low Line.

<sup>2</sup> Load Regulation is for output load current change from 0% to 100%.

<sup>3</sup> For 60 seconds



# DC-DC Converter UNIT

HR Series ( 1.8 W REGULATED DC-DC CONVERTER )

## ● SELECTION GUIDE 1.8W OUTPUT

MODEL NUMBER	INPUT VOLTAGE (VDC)	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (mA)	INPUT CURRENT(mA)		EFF (%)	ISOLATION (VDC)
				FULL LOAD	NO LOAD		
HRS-0505	4.5-5.5	5	360	680	40	53	1000
HRS-0509 <sup>4</sup>	4.5-5.5	9	200	620	40	58	1000
HRS-0512	4.5-5.5	12	150	620	38	58	1000
HRS-0515	4.5-5.5	15	120	600	38	60	1000
HRS-1205	10.8-13.2	5	360	267	18	56	1000
HRS-1209 <sup>5</sup>	10.8-13.2	9	200	250	18	60	1000
HRS-1212	10.8-13.2	12	150	250	16	60	1000
HRS-1215	10.8-13.2	15	120	241	16	62	1000
HRS-2405	21.6-26.4	5	360	129	9	58	1000
HRS-2409	21.6-26.4	9	200	121	9	62	1000
HRS-2412	21.6-26.4	12	150	121	9	62	1000
HRS-2415	21.6-26.4	15	120	117	8	64	1000
HRS-4805	43.2-52.8	5	360	66	5	57	1000
HRS-4809	43.2-52.8	9	200	64	5	59	1000
HRS-4812	43.2-52.8	12	150	63	5	60	1000
HRS-4815	43.2-52.8	15	120	63	5	60	1000

*Note: Other input to output voltages may be available. Please contact factory.*

<sup>4</sup>FOR LAN DC-DC CONVERTER

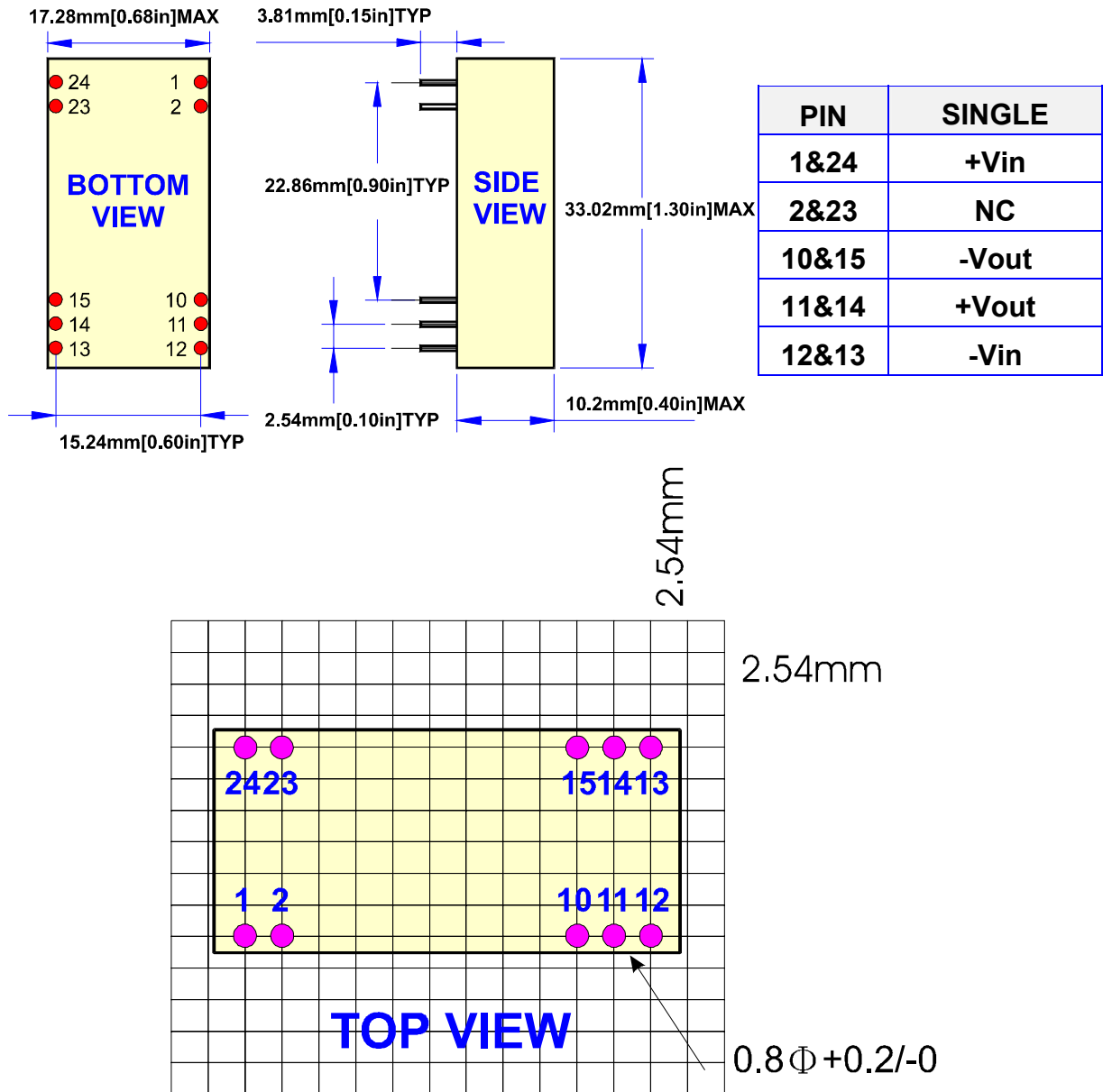
<sup>5</sup>FOR LAN DC-DC CONVERTER



# DC-DC Converter UNIT

HR Series ( 1.8 W REGULATED DC-DC CONVERTER )

## MECHANICAL DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

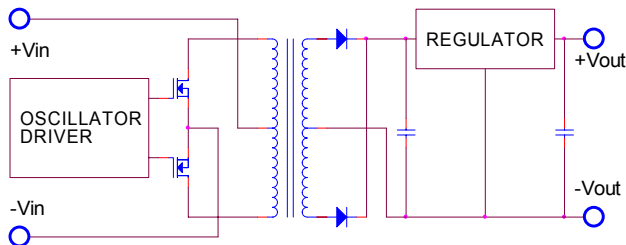




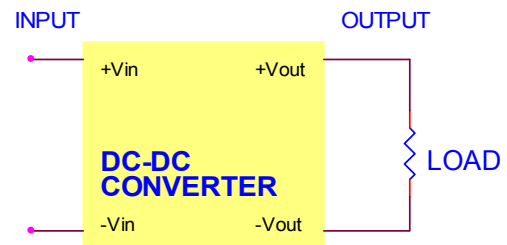
# DC-DC Converter UNIT

HR Series ( 1.8 W REGULATED DC-DC CONVERTER )

## ● SIMPLIFIED SCHEMATIC

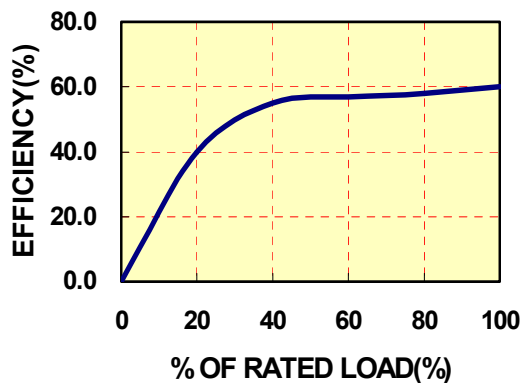


## ● TYPICAL APPLICATIONS

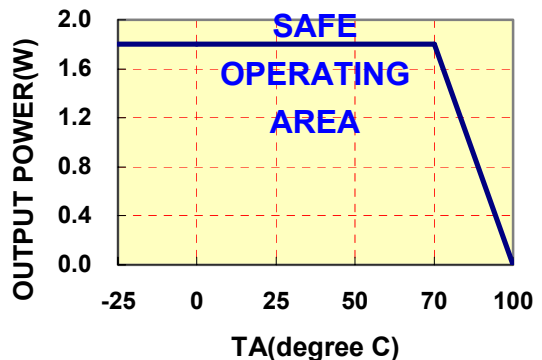


## ● TYPICAL PERFORMANCE CURVES

EFFICIENCY VS LOAD



DERATING CURVE



## HR SERIES APPLICATION NOTES:

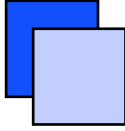
### EXTERNAL CAPACITANCE REQUIREMENTS:

No external capacitance is required for operation of the HR series.

To meet the reflected ripple requirements of the converter, an input impedance of less than 0.5 ohm from DC to 100KHz is required.

External output capacitance is not required for operation, however it is recommended that 10uF tantalum and 0.1uF ceramic capacitance be selected for reduced system noise.

Additional output capacitance may be added for increased filtering, but should not exceed 220uF.



## DC-DC Converter UNIT

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HR Series ( 1.8 W REGULATED DC-DC CONVERTER )

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### **Negative Outputs:**

A negative output voltage may be obtained by connecting the +OUT to circuit ground and connecting –OUT as the negative output.

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### **FOR MORE INFORMATION CALL:**

#### ***Power Systems – The Power Solution***

Ilfeld-Auenstein ( Germany ) Dörnet 8    Tel: + 49 / 70 62 / 67 59 – 6    Fax: + 49 / 70 62 / 67 59 -80

E-mail: [Info@Power-Systems.de](mailto:Info@Power-Systems.de)    Home Page: [www.Power-Systems.de](http://www.Power-Systems.de)

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