

# N-Series

## 4 - 6W Isolated DC/DC-Converters

- Wide 2:1 Input Range
- Full SMD Technology
- 1.5 kVDC or 3.5kVDC Isolation
- Regulated 24 Pin DIP Package
- Single and Dual Output
- Continuous Short Circuit Protection

### Selection Guide (See Model Code Information on Page 64)

Ordering Code	Nominal Input Voltage (VDC)	Input Current		Output Voltage (VDC)	Output Current (mA)	Efficiency at Full Load (%)
		No Load (mA)	Full Load (mA)			

#### 4W, 1kVDC, Single Output

N4-123.3S(H)-(M)	9 - 18	24	367	3.3	1000	75
N4-1205S(H)-(M)	9 - 18	24	456	5	800	73
N4-1212S(H)-(M)	9 - 18	24	428	12	333	78
N4-2405S(H)-(M)	18 - 36	20	222	5	800	75
N4-2412S(H)-(M)	18 - 36	20	214	12	333	78
N4-2415S(H)-(M)	18 - 36	20	206	15	267	81
N4-4805S(H)-(M)	36 - 72	18	111	5	800	75

#### 4W, 1kVDC, Dual Output

N4-123.3D(H)-(M)	9 - 18	27	371	±3.3	±500	74
N4-1205D(H)-(M)	9 - 18	27	450	±5	±400	74
N4-2405D(H)-(M)	18 - 36	26	222	±5	±400	75
N4-2412D(H)-(M)	18 - 36	26	211	±12	±167	79
N4-2415D(H)-(M)	18 - 36	26	211	±15	±133	79
N4-4805D(H)-(M)	36 - 72	22	113	±5	±400	74
N4-4815D(H)-(M)	36 - 72	22	105	±15	±133	79

#### 5W, 1kVDC, Single Output

N5-1205S(H)-(M)	9 - 18	27	563	5	1000	74
N5-1215S(H)-(M)	9 - 18	27	520	15	333	80
N5-2405S(H)-(M)	18 - 36	25	282	5	1000	74
N5-2412S(H)-(M)	18 - 36	25	264	12	417	79
N5-2415S(H)-(M)	18 - 36	25	260	15	333	80
N5-4805S(H)-(M)	36 - 72	24	139	5	1000	75
N5-4812S(H)-(M)	36 - 72	24	132	12	417	79

(\* Select on Inquiry Form 3,5 kVDC Isolation ('H' Feature) instead of 1.5 kVDC and Metal Case (Suffix 'M') vs. Plastic Case. See model Code information on page 64.

Continued on next Page.

# N-Series

## 4 - 6W Isolated DC/DC-Converters

### Selection Guide (See Model Code Information on Page 64)

Ordering Code	Nominal Input Voltage (VDC)	Input Current		Output Voltage (VDC)	Output Current (mA)	Efficiency at Full Load (%)
		No Load (mA)	Full Load (mA)			

#### 5W, 1kVDC, Dual Output

N5-1205D(H)-(M)	9 - 18	33	563	±5	±500	74
N5-1212D(H)-(M)	9 - 18	33	534	±12	±208	78
N5-2405D(H)-(M)	18 - 36	31	274	±5	±500	76
N5-4805D(H)-(M)	36 - 72	29	139	±5	±500	75
N5-4812D(H)-(M)	36 - 72	29	132	±12	±208	79

#### 6W, 1kVDC, Single Output

N6-1205S(H)-(M)	9 - 18	30	676	5	1200	74
N6-1212S(H)-(M)	9 - 18	30	641	12	500	78
N6-2405S(H)-(M)	18 - 36	29	333	5	1200	75
N6-2412S(H)-(M)	18 - 36	29	320	12	500	78
N6-2415S(H)-(M)	18 - 36	29	316	15	400	79
N6-4805S(H)-(M)	36 - 72	28	167	5	1200	75
N6-4812S(H)-(M)	36 - 72	26	158	12	500	79

#### 6W, 1kVDC, Dual Output

N6-1205D(H)-(M)	9 - 18	35	676	±5	±600	74
N6-1212D(H)-(M)	9 - 18	35	649	±12	±250	77
N6-2405D(H)-(M)	18 - 36	33	329	±5	±600	76
N6-2412D(H)-(M)	18 - 36	33	316	±12	±250	79
N6-4805D(H)-(M)	36 - 72	30	167	±5	±600	75
N6-4812D(H)-(M)	36 - 72	30	158	±12	±250	79
N6-4815D(H)-(M)	36 - 72	30	158	±15	±200	79

(\* Select on Inquiry Form 3,5 kVDC Isolation ('H' Feature) instead of 1.5 kVDC and Metal Case (Suffix 'M') vs. Plastic Case. See model Code information on page 64.

# N-Series

## 4 - 6W Isolated DC/DC-Converters

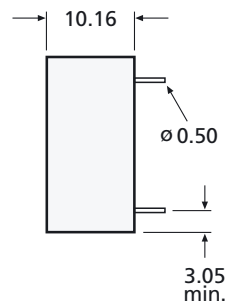
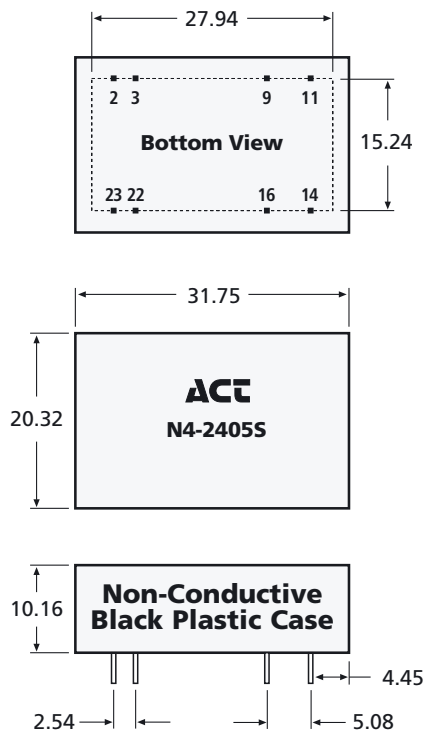
### Specifications – Typical at +25°C, Unless Otherwise Noted

Voltage Range	12Vtypes	9-18 VDC	Temperature Coefficient	±0.02% / °C
	24Vtypes	18-36 VDC		
	48Vtypes	36-72 VDC		
Filter	π (Pi) Network		Switching Frequency	250 KHz, typ.
Rated Voltage	1500 VDC, Standard		Operating Temperature (Ambient)	-40°C to +85°C
	3500 VDC, Feature "H"			
Leakage Current	1 μA		Derating	None Required
Resistance	10 <sup>9</sup> Ω		Humidity	Up to 90%, Non-condensing
Capacitance	120 pF, typ.		Cooling	Free-air Convection
Voltage Accuracy	±1%, max.		Dimensions	31.75 x 20.32 x 10.16 mm 1.25 x 0.80 x 0.40"
Voltage Balance (Dual Outputs)	±1%			
Ripple and Noise ( at 20 MHz BW )	60 mVp-p, max.		Weight	Black Plastic 17 g Metal 19 g
Short Circuit Protection	Continuous		Case Material	Non-conductive Black Plastic Nickel-Coated Copper = Suffix 'M'
Short Circuit Restart	Automatic			
Line Voltage Regulation	±0.5%, max.			
Load Voltage Regulation	±0.5%, max.			

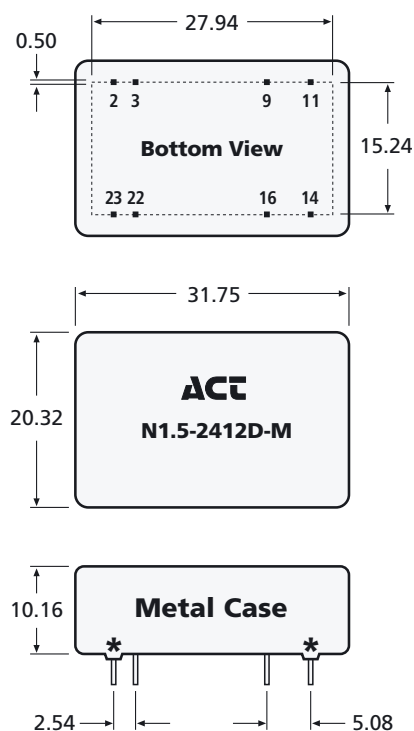
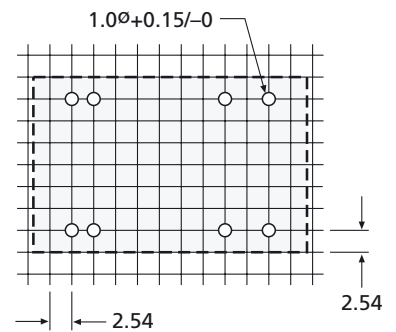
# N-Series

## 4 - 6W Isolated DC/DC-Converters

### DIP24 Package Style and Pinning (mm)



#### Recommended Footprint Details



\* Built-in stand-offs  
to ease PCB cleaning

#### Pin Connections

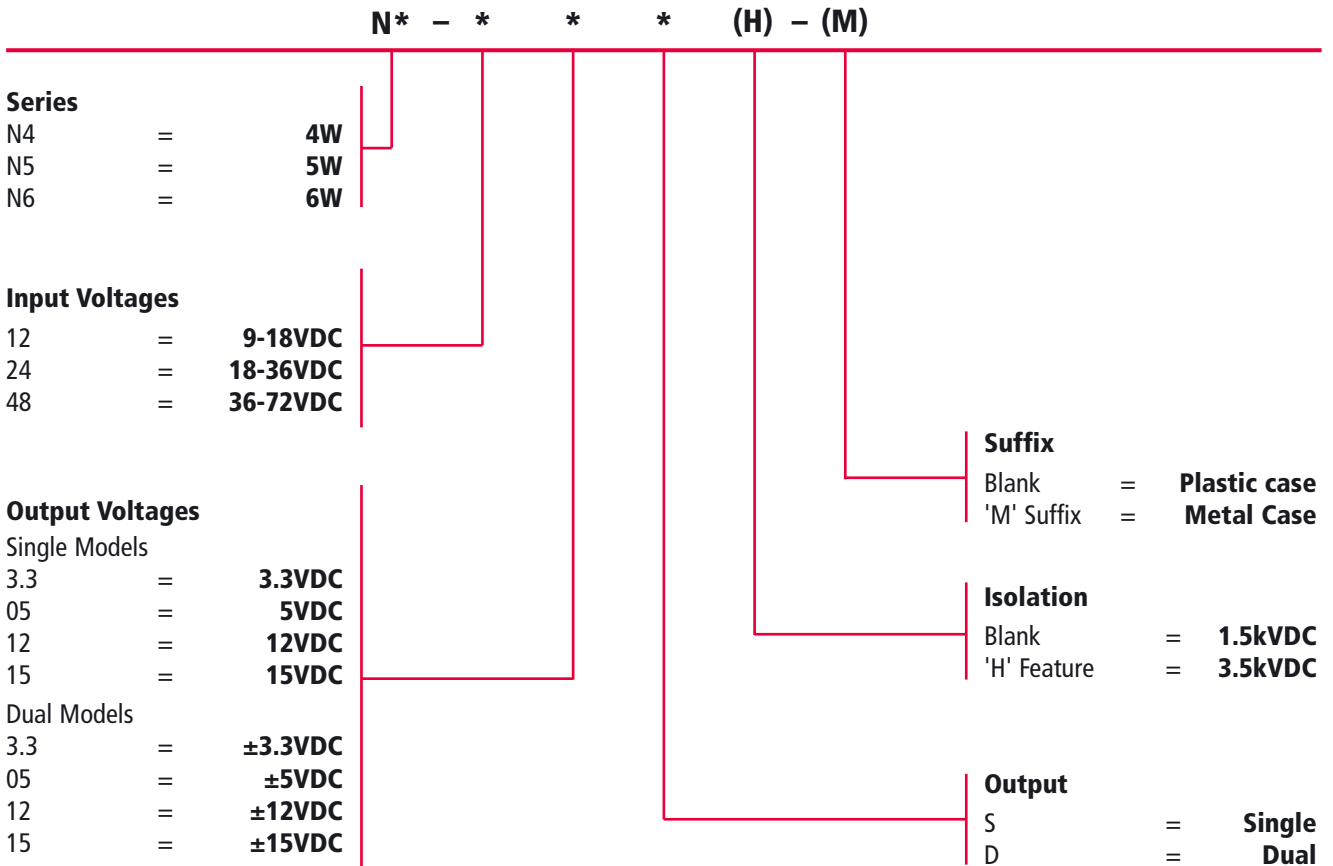
Pin #	Single	Dual
2	-Vin	-Vin
3	-Vin	-Vin
9	NC	Common
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Common
22	+Vin	+Vin
23	+Vin	+Vin

Tolerance:  
x.xx =  $\pm 0.25$ mm

# N-Series

## 4 - 6W Isolated DC/DC-Converters

### Model Code Information



**Ordering Examples:** For availability see Selection Guides on pages 60 and 61

N4-123.3DH-M = N-series 4 watt , 9-18VDC input, ±3.3VDC output, dual output, 3.5kVDC isolation, DIP24 package size, metal case