

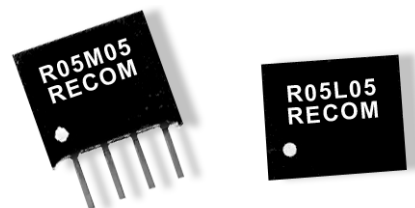
EUROLINE - DC/DC-Converter

RxxL and RxxM Series, 0.25 Watt, DIP8/SIP4, 1kVDC Isolation (Single Output)

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Features

- High Efficiency for Low Power Applications
- Pin Compatible with Industrie Standard
- Single Output Rail
- UL 94V-0 Package Material
- No Heatsink Required
- Toroidal Magnetics
- Fully Encapsulated
- No External Components Required
- Custom Solutions Available



Selection Guide 3.3V, 5V and 12V input types

Part Number	Output Voltage (V)	Output Current (mA)	Package Style
RxxL03	3.3	76	DIP8
RxxL05	5	50	
RxxL09	9	28	
RxxL12	12	21	
RxxL15	15	16	
RxxM03	3.3	76	SIP4
RxxM05	5	50	
RxxM09	9	28	
RxxM12	12	21	
RxxM15	15	16	

Typical Isolation Capacitance (pF)

Part Number	Output Voltage (V)				
	03V	05V	09V	12V	15V
R03L/Mxx	–	25	70	38	38
R05L/Mxx	25	29	37	41	40
R12L/Mxx	–	38	40	43	45

Absolute Maximum Ratings Over Operating Free Air Temperature Range

Input Voltage V_{IN}	3V types	5V
Input Voltage V_{IN}	5V types	7V
Input Voltage V_{IN}	12V types	15V
Output Power Total		250mW
Short Circuit Duration		1s
Isolation Voltage (flash tested for 1 second)		1000VDC
Operating Free Air Temperature Range (requires a minimum of 10 mm air space around the component)		–40°C to 70°C (see derating Curve)
Storage Temperature Range		–55°C to 150°C
Lead Temperature (1.5 mm from case for 10 seconds)		300 °C

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Electrical Specifications (measured at $T_A = 25^\circ\text{C}$, at nominal input voltage and rated output current unless otherwise specified)

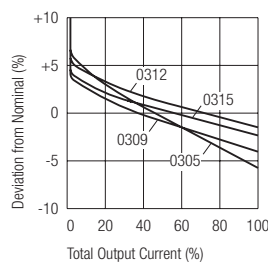
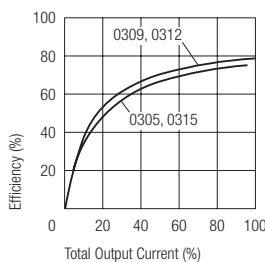
Input Voltage Range V_{IN} (continuous operation)	3V types 5V types 12V types	3.3VDC $\pm 10\%$ 5VDC $\pm 10\%$ 12VDC $\pm 10\%$
Output Voltage Accuracy (depending on the type)		see Tolerance Envelope Graph
Load Voltage Regulation (10% load to 100% full load)	3.3V and 5V output types 9V, 12V and 15V output types	15% max. 10% max.
Line Voltage Regulation (10% load to 100% full load)		1.2% / 1.0% of V_{IN}
Input Reflected Ripple (20MHz band limited)	3V types 5V and 12V types	50mVp-p max. 40mVp-p max.
Output Ripple (20MHz band limited)	3V types 5V and 12V types	75mVp-p max. 100mVp-p max.
Isolation Voltage (flash tested for 1 second)		1000VDC
Insulation Resistance at 500VDC		1000M Ω min.
Switching Frequency at Full Load (typical)		100kHz max.
Package Weight	SIP types DIP types	1.4 g 1.5 g
Efficiency (at full load)	3.3V and 5V output types 9V, 12V and 15V output types	70% typ. / 60% min. 75% typ. / 70% min.
Operating Free Air Temperature Range (requires a minimum of 10 mm air space around the component)		0°C to 70°C (see derating Curve)
Temperature Drift (V_{OUT})		0.03% per $^\circ\text{C}$ max.
Temperature Rise above Ambient (at full load)		10°C max.
No Load Power Consumption (typical)	3V types 5V and 12V types	50mW typ. 30mW typ.
MTTF ¹⁾ (depending on the type)	-25°C $+25^\circ\text{C}$ $+75^\circ\text{C}$	273kHrs min. / 3293kHrs max. 237kHrs min. / 2767kHrs max. 208kHrs min. / 2319kHrs max.

¹⁾ Calculated using MIL-HDBK-217F with nominal input voltage at full load.

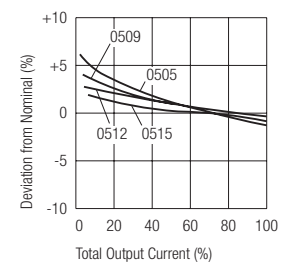
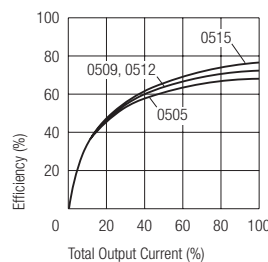
Please contact us, if you need exact parameters for the converter you have selected.

Typical Characteristics, Tolerance Envelope and Temperature Derating Graph

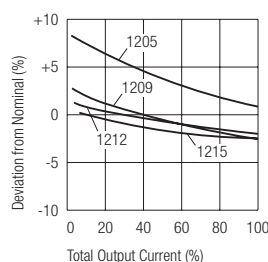
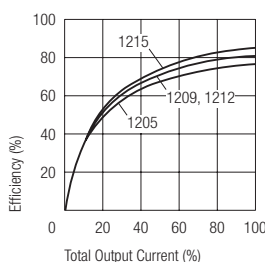
R03L/Mxx



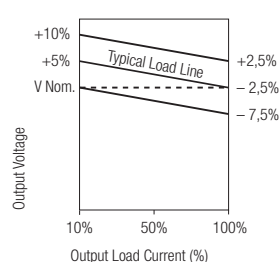
R05L/Mxx



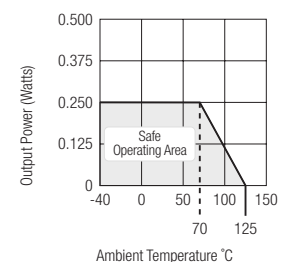
R12L/Mxx



Tolerance Envelope



Temper. Derating Graph



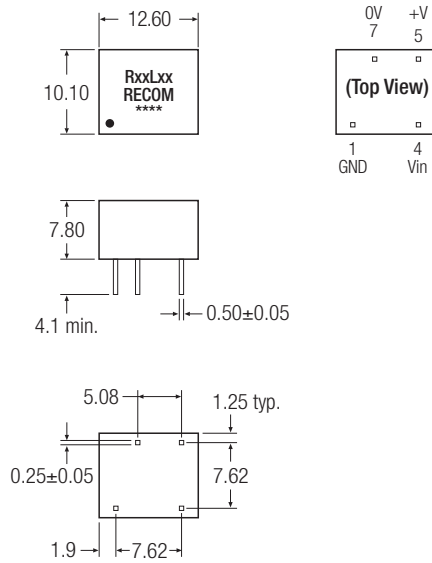
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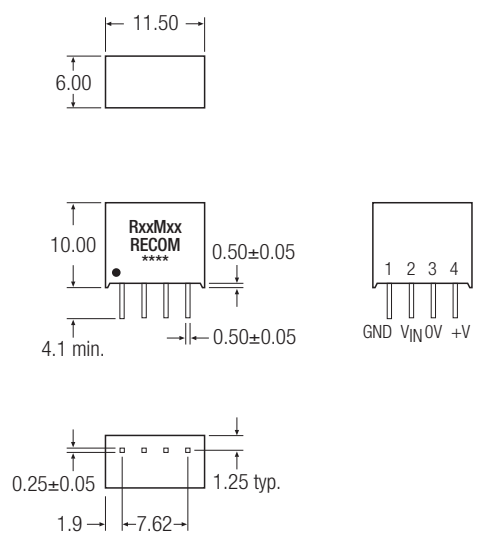
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Package Style and Pinning (mm)

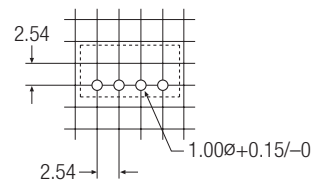
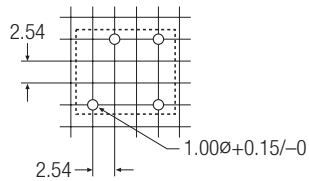
8 Pin DIP Package Style



4Pin SIP Package Style



Recommended Footprint Details



XX.X ± 0.5 mm
XX.XX ± 0.25 mm