

„All-In-One“ DIIPM+™ Series for Compact Inverter Designs

Mitsubishi Electric has developed a novel family of compact Intelligent Converter-Inverter-Brake modules. This new DIIPM+™ series incorporates optimized IGBT- and FWDi-chips, low voltage and high voltage driver ICs in a compact transfer molded dual-inline package. The new DIIPM+™ series provides smart answers to the two key questions a designer faces when developing a new inverter: How to reduce the system cost? How to reduce the inverter size using compact design?

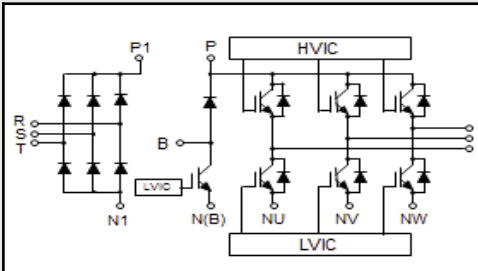
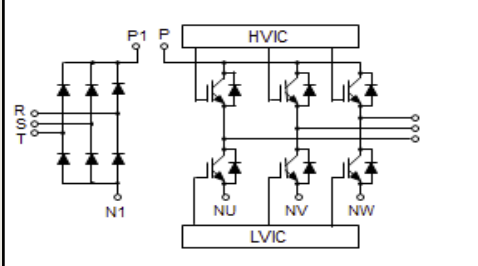
Product Advantages

- ❑ Compact design with integrated Converter, Inverter and Brake
- ❑ Integrated HVIC & LVIC
- ❑ Dedicated protection functions: short circuit and under voltage Operation at $T_{C,Max} = 110^{\circ}C$
- ❑ High Isolation Voltage $V_{iso} = 2500V_{rms}$
- ❑ Same Package size for 6 different power ratings

User Benefits

Achieved by

Inverter Cost Reduction	Manufacturing Cost	- Easy assembly: only one power module to be soldered to the PCB - Reduced assembly cost by lower part count
	Development Cost	- Easy test setup with the DIIPM+™ Evaluation Board - Reduced engineering efforts & shorter dev. Time
	Material Cost	- Reduced PCB-cost - Reduced EMI filter cost - No AC-output current sensors needed
Inverter Size Reduction	- Reduced heat sink size - Reduced EMI Filter size - Very compact PCB design	
Increasing Inverter Performance	- Increased robustness to endure harsh environmental conditions - Accurate analog temperature-output VOT for adaptive inverter control	

Circuit	Circuit Diagram	Package Size	Product Name	600V	1200V
Converter + 7in1		85 mm X 34 mm	PSS05MC1FT	50A	5A
			PSS10MC1FT		10A
			PSS15MC1FT		15A
			PSS25MC1FT		25A
			PSS35MC1FT		35A
			PSS50MC1F6		
Converter + 6in1		85 mm X 34 mm	PSS05NC1FT	50A	5A
			PSS10NC1FT		10A
			PSS15NC1FT		15A
			PSS25NC1FT		25A
			PSS35NC1FT		35A
			PSS50NC1F6		

