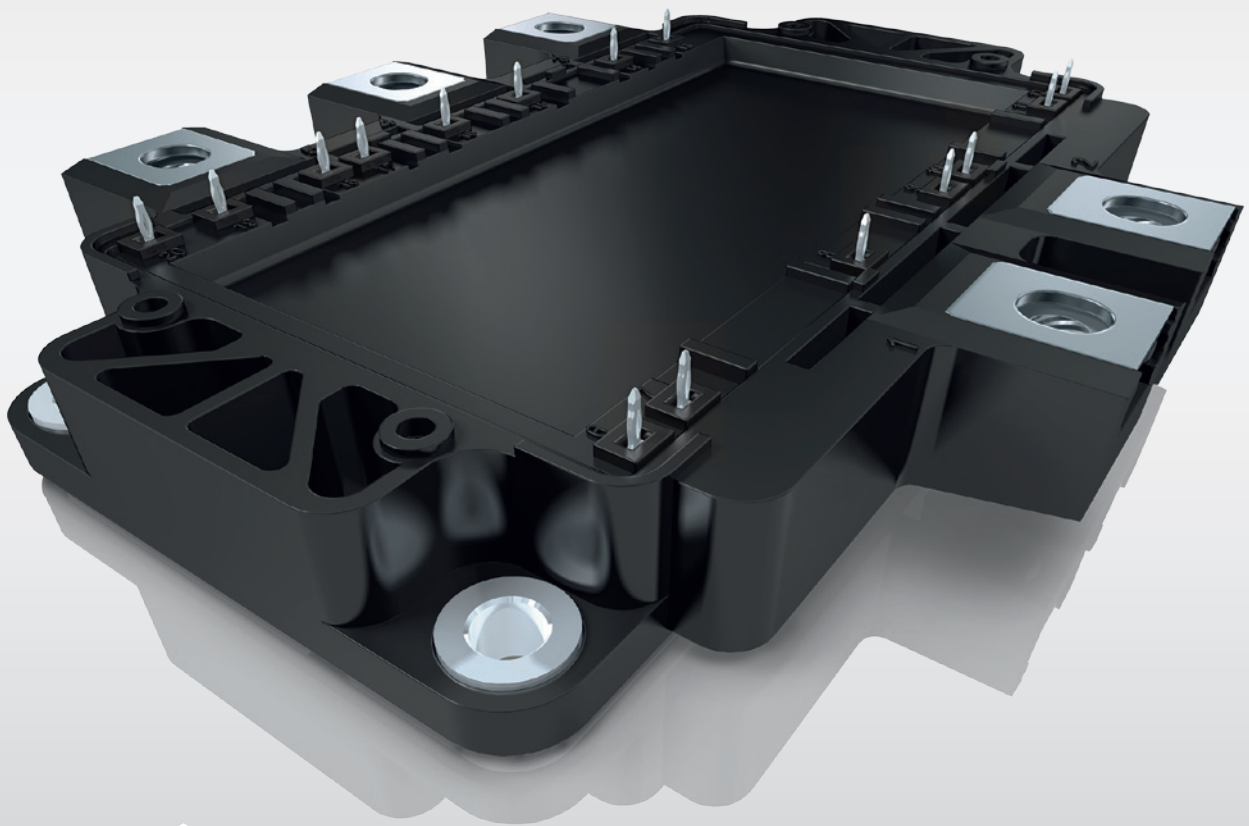


Extended Standard for Superior Thermal and Dynamic Performance



SEMI[®]X 5

Up to 350kVA



SEMiX[®] 5

SEMiX 5 is a compact baseplate module with optimised AC and DC screw connections. A gate driver can be assembled on the 17mm high module without solder thanks to the press-fit signal connections. With an enhanced internal layout and housing material that is suitable for high-temperature operation, the SEMiX 5 is the perfect match for challenging applications.

Benefits

With its comprehensive portfolio and its optimised design, the SEMiX 5 is ideal for competitive and high-performance inverter architectures. The press-fit contacts ensure fast and solder-free driver board assembly, increased reliability and reduced assembly costs. A special adapter board for easy gate drive integration is also available.

The internal chip layout is optimised for enhanced thermal performance, reducing operating temperatures and thus boosting reliability. The housing features rugged moulded power terminals for superior mechanical stability.

High-performance copper bond connections from the power terminals to the DBC provide enhanced power cycling capability. Besides standard configurations, the SEMiX 5 is open to customer-specific topologies, addressing the market needs for innovation and differentiation. The combination of optimised module footprint, flexible architecture and excellent mechanical stability makes the SEMiX 5 ideal for robust and compact inverters at optimised system costs.

Applications

- General purpose and servo drives
- UPS and solar in 2 and 3-level topologies
- Power supplies
- Air conditioning

Product range

The SEMiX 5 range includes a host of configurations:

- 3-level (NPC) and T-type 3-level (TNPC) up to 400A
- 3-phase inverter configuration up to 300A
- Buck-boost converter configuration up to 400A
- Half-controlled bridge rectifier up to 360A
- Custom configurations on request

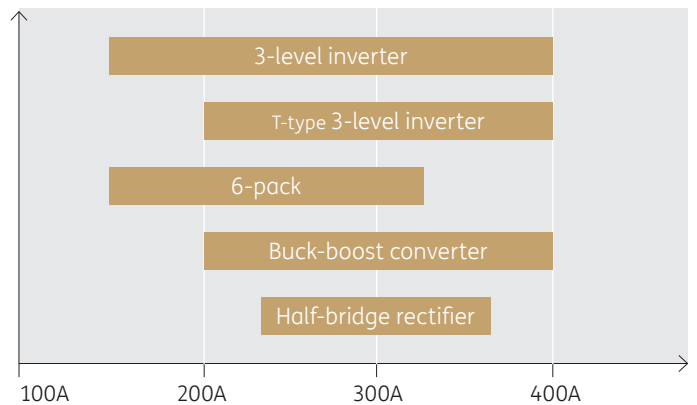
Key features

- Low stray inductance case
- Superior dynamic performance
- Solder-free assembly
- Press-fit signal pins and screw-connect power terminals
- 17mm height
- Baseplate design
- Reliable mechanical design
- Robust housing for high temperatures
- Optimised thermal performance
- Competitive and wide product range
- Common-collector horizontal leg (TNPC)
- Flexible platform for custom designs

Comprehensive 6-pack and 3-Level Module Family with Enhanced Performance

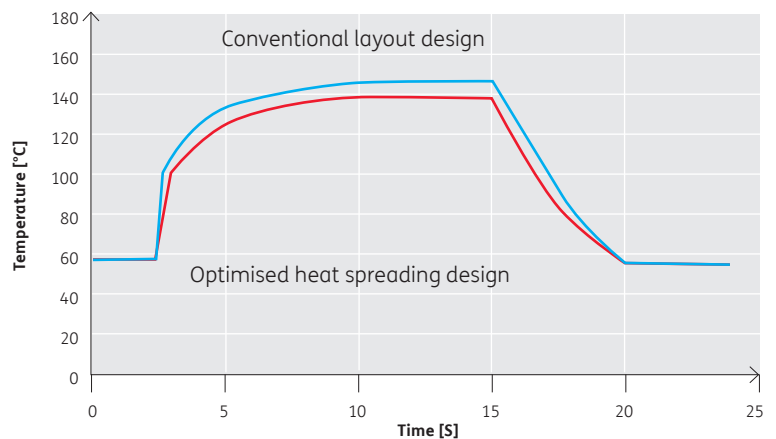
Extensive portfolio for 2- and 3-level applications

- 6-pack configurations 650V, 1200V, 1700V
- 3-level configurations for up to 400A at 650V or up to 300A at 1200V, ready for use in 1500V_{DC} solar applications
- T-type 3-level configurations both 1200V/650V, 1200V/1200V, 1700V/1200V
- Buck-boost converters
- Double boost solutions possible for UPS and solar applications
- Half-controlled bridge rectifier



Exceeding the standard

- Optimised heat spread architecture for maximum heat transfer
- Enhanced thermal and electrical diode performance
- Optimised thermal performance for longer lifetime



Product portfolio


Type designation	Topology	V _{CES} in V (H/NP*)	I _{NOM} in A
SEMiX305 MLI 12E4	3-level	1200	300
SEMiX 205 MLI 12E4	3-level	1200	200
SEMiX155 MLI 12E4	3-level	1200	150
SEMiX 405 MLI 07E4	3-level	650	400
SEMiX 305 MLI 07E4	3-level	650	300
SEMiX 205 MLI 07E4	3-level	650	200
SEMiX 155 MLI 07E4	3-level	650	150
SEMiX 405 TMLI 12E4B	T-type 3-level	1200/650	400
SEMiX 305 TMLI 12E4B	T-type 3-level	1200/650	300
SEMiX 205 TMLI 12E4B	T-type 3-level	1200/650	200
SEMiX 305 TMLI 12E4C	T-type 3-level	1200/1200	300
SEMiX 205 TMLI 12E4C	T-type 3-level	1200/1200	200
SEMiX 305 TMLI 17E4C	T-type 3-level	1700/1200	300
SEMiX 205 TMLI 17E4C	T-type 3-level	1700/1200	300
SEMiX 405 GARL 07E3	Buck-boost converter	650	400
SEMiX 305 GARL 07E3	Buck-boost converter	650	300
SEMiX 205 GARL 07E3	Buck-boost converter	650	200
SEMiX 305 GD 07E4	6-pack	650	300
SEMiX 205 GD 12E4	6-pack	1200	200
SEMiX 155 GD 12T4	6-pack	1200	150
SEMiX 105 GD 12T4	6-pack	1200	100
SEMiX 155 GD 17E4	6-pack	1700	150
SEMiX 245 DH 16	Half-controlled bridge rectifier	1600	240
SEMiX 365 DH 16	Half-controlled bridge rectifier	1600	360


* Half-bridge/neutral point leg : for T-Type 3-level only



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