

IGBT Driver

SEMIKRON IGBT Driver Family

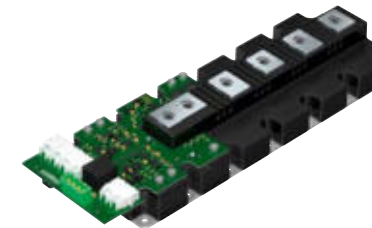
SEMIKRON offers two different IGBT driver families for any application. Driver cores from the SKHI and SKYPER family can be optimized using adapter boards for each module type. Drivers such as the SKYPER Prime offer a fully qualified plug & play solution, saving time and costs in application. The SKYPER family with 1W to 10W output power per channel covers the whole range of inverters from 30kW to 2MW. The high integration level of SEMIKRON's new ASIC chipset ensures safe IGBT gate control throughout the entire lifecycle. Short circuits are managed very fast by separate error channels.

SoftOff and over voltage feedback avoid dangerous over voltages. The mixed signal ASICs guarantee minimum tolerances over the full temperature range. MLI or paralleled IGBT topologies are managed thanks to adjustable error management. With an optimized interface and adjustable filter settings, the SKYPER family operates safely in noisy environments. The SEMIKRON adapter boards enable a wide range of inverter platforms to be built using various types of IGBT modules.

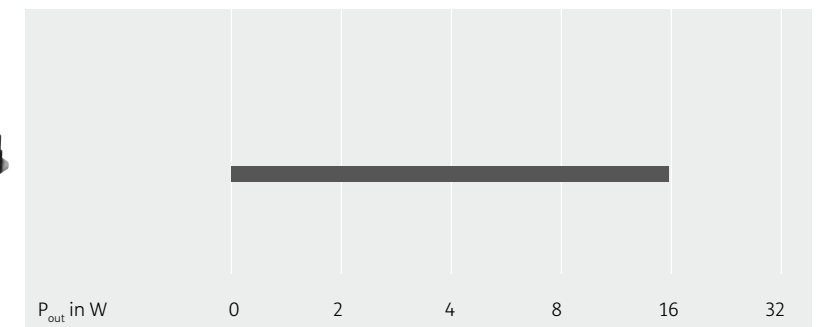
The latest highlights are the SKYPER 12 driver core and the plug & play driver SKYPER Prime that features electrical and optical interfaces. SKYPER 12 is the latest driver core which delivers 20A output but is smaller than a matchbox. Thanks to its features and robustness, this driver is the perfect solution for anything from simple drives to ambitious interleaved applications. The SKYPER Prime offers integrated insulated DC link and temperature measurement and can help the customer reduce system costs significantly.

SKYPER®

Plug & play driver



600V up to 1700V

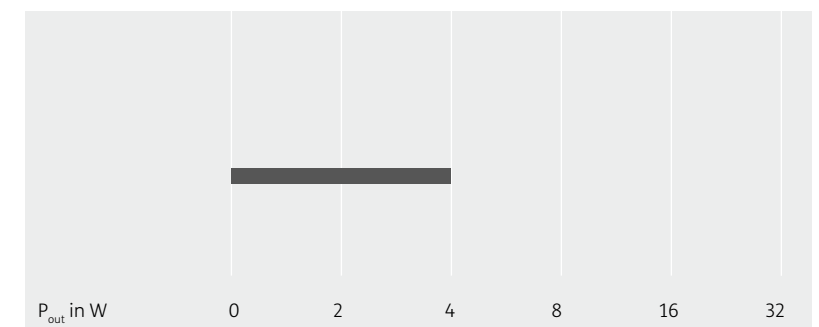


SKYPER® & SKHI

Driver cores



900V up to 1700V

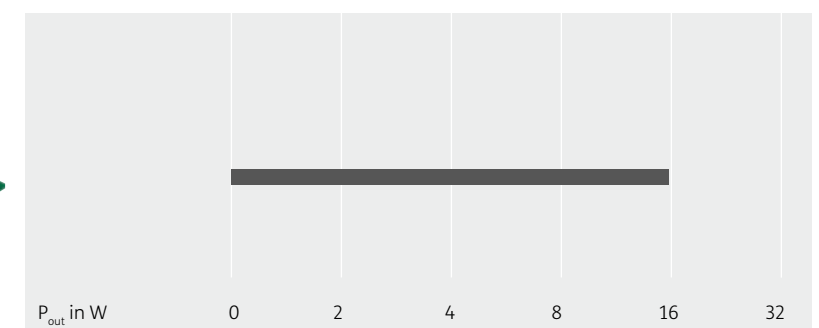


SKYPER® & SKHI

Adapter boards



Up to 1700V



IGBT Driver

Type									
	Channels	V _{CE} V	V _{G(on)} V	V _{G(off)} V	I _{outPEAK} A	Q _{out/pulse} μC	f _{max} kHz	V _{iso} I/O kV	dv/dt kV/μs
Driver									
SKHI 10/12 R	1	1200	15	-8	8	9.6	100	2500	75
SKHI 10/17 R	1	1700	15	-8	8	9.6	100	4000	75
SKHI 23/12 R	2	1200	15	-8	8	4.8	100	2500	75
SKHI 23/17 R	2	1700	15	-8	8	4.8	100	4000	75
SKHIT 01 R ⁷⁾	3	528	-	-	-	-	10	2500	-
SKYPER 12 press-fit 300A	2	1200	15	-8	15	8	20	4000	50
SKYPER 12 press-fit 450A	2	1200	15	-8	15	8	13	4000	50
SKYPER 12 press-fit 600A	2	1200	15	-8	15	8	10	4000	50
SKYPER 12 press-fit C 300A	2	1200	15	-8	15	8	20	4000	50
SKYPER 12 press-fit C 450A	2	1200	15	-8	15	8	13	4000	50
SKYPER 12 press-fit C 600A	2	1200	15	-8	15	8	10	4000	50
SKYPER 12 press-fit 450A 1700V ²⁾	2	1700	15	-8	15	8	9	4000	50
SKYPER 12 press-fit 600A 1700V ²⁾	2	1700	15	-8	15	8	7	4000	50
SKYPER 12 press-fit C 450A 1700V ²⁾	2	1700	15	-8	15	8	9	4000	50
SKYPER 12 press-fit C 600A 1700V ²⁾	2	1700	15	-8	15	8	7	4000	50
SKYPER PRIME 1000A / 1700V PP ²⁾	2	1700	15	-8	15	10	10	5000	50
SKYPER PRIME 1000A / 1700V ST10 ²⁾	2	1700	15	-8	15	7	10	5000	50
SKYPER PRIME 1400A / 1700V PP ²⁾	2	1700	15	-8	15	13.5	7	5000	50
SKYPER PRIME 1400A / 1700V ST10 ²⁾	2	1700	15	-8	15	10	10	5000	50
SKYPER PRIME 1400A / 1200V PP ²⁾	2	1200	15	-8	15	10	10	5000	50
SKYPER PRIME 1400A / 1200V ST10 ²⁾	2	1200	15	-8	15	7.5	10	5000	50
SKYPER PRIME O 1400A / 1200V PP ²⁾	2	1200	15	-8	15	10	10	5000	50
SKYPER PRIME O 1400A / 1200V ST10 ²⁾	2	1200	15	-8	15	7.5	10	5000	50
SKYPER PRIME O 1400A / 1700V PP ²⁾	2	1700	15	-8	15	13.5	7.4	5000	50
SKYPER PRIME O 1400A / 1700V ST10 ²⁾	2	1700	15	-8	15	10	10	5000	50
Driver Core									
SKHI 21A R ⁸⁾	2	1200	15	0	8	4	50	2500	50
SKHI 22 A/B H4 R	2	1700	15	-7	8	4	50	4000	50
SKHI 22 A/B R	2	1200	15	-7	8	4	50	2500	50
SKHI 24 R	2	1700	15	-8	15	5	50	4000	50
SKHI 61 R ⁴⁾	6	900	15	-7	2	1	50	2500	15
SKHI 71 R ⁴⁾	7	900	15	-7	2	1	50	2500	15
SKYPER 12 R ²⁾	2	1700	15	-9	20	20	50	5000	50
SKYPER 12 PV R ¹⁾	2	1700	15	-9	20	20	50	5000	50
SKYPER 32 R	2	1700	15	-7	15	2.5	50	4000	50
SKYPER 32 PRO R	2	1700	15	-7	15	6.3	50	4000	50
SKYPER 42 R	2	1700	15	-8	30	50	100	4000	100
SKYPER 42 No T ₀	2	1700	15	-8	30	50	100	4000	100
SKYPER 42 R/02 (Coated type) ²⁾	2	1700	15	-8	30	50	100	4000	100
SKYPER 42 LJ R	2	1700	15	-8	25	20	100	4000	100
SKYPER 42 LJ R (coated) ²⁾	2	1700	15	-8	25	20	100	4000	100
Adapter Board									
Board 1 SKYPER 32 R	2	1700	15	-7	15	2.5	50	4000	50
Board 1 SKYPER 32PRO R	2	1700	15	-7	15	6.3	50	4000	50
Board 2 // 4S SKYPER 42 R	2	1200	15	-8	30	50	100	4000	100
Board 2 generic SKYPER 42 R	2	1700	15	-8	30	50	100	4000	100
Board 2//3S SKYPER 42 R	2	1700	15	-8	30	50	100	4000	100
Board 2S SKYPER 32 PRO R Gold	2	1700	15	-7	15	6.3	50	4000	50
Board 2S SKYPER 32 R Gold	2	1700	15	-7	15	2.5	50	4000	50
Board 3S SKYPER 32 PRO R Gold ²⁾	2	1700	15	-7	15	6.3	50	4000	50
Board 3S SKYPER 32 R Gold	2	1700	15	-7	15	2.5	50	4000	50
Board 4S SKYPER 32 PRO R Gold	2	1700	15	-7	15	6.3	50	4000	50
Board 4S SKYPER 32 R Gold	2	1700	15	-7	15	2.5	50	4000	50
Board 63 GB SKYPER 42 R	2	1700	15	-8	30	50	100	4000	100
Board 93 GB SKYPER 42 R ²⁾	2	1700	15	-8	30	50	100	4000	100

Footnotes: 1) Sample status / 2) In production new / 4) Discontinued / 7) Thyristor Driver / 8) MOSFET Driver



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