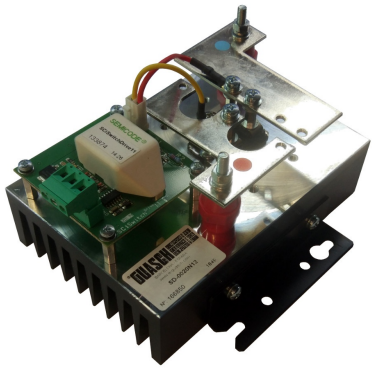
SD-0020N12

DC SSR IGBT

PRELIMINARY TECHNICAL INFORMATION

HIGHLIGHTS

- Wide range
- Reliability
- Short delivery time
- Ready to use
- ON state LED indicator
- Insulation 2500 V_{RMS}



non-contractual image

OUTPUT SPECIFICATIONS

Description	Symbol	Notes / test conditions	Min.	Typ.	Max.	Unit
Collector-to-Emitter Voltage	V_{CE}	T_J= 25°C to 150°C			1200	V
Output current	I_{CC}	T_{amb}= 40°C, T_{HS} ≤ 90°C		20	24	A
Maximum working output current	I_{CCmax}	T_{amb}= 40°C, T_J ≤ 150°C			36	A
Pulsed Collector Current	I_{CM}	T_C = 90°C, t_p = 1 ms			124	A

INPUT SPECIFICATIONS

Description	Symbol	Notes / test conditions	Min.	Typ.	Max.	Unit
Input supply / triggering signal	V_{CC}		7	12	20	V
Input current supply	I_{CC}				120	mA
Inhibit input high logic state	V_{INH_HIGH}				5	V
Inhibit input low logic state	V_{INH_LOW}		0			V
Input-to-output isolation	V_{ISO}	1 min @ 50 Hz		3		kV_{AC}
Module insulation	V_{ISO}	50/60 Hz, I_{ISOL}≤ 1 mA		2.5		kV_{AC}
Maximum turn-on time	t_{ON}				40	µs
Maximum turn-off time	t_{OFF}				290	µs

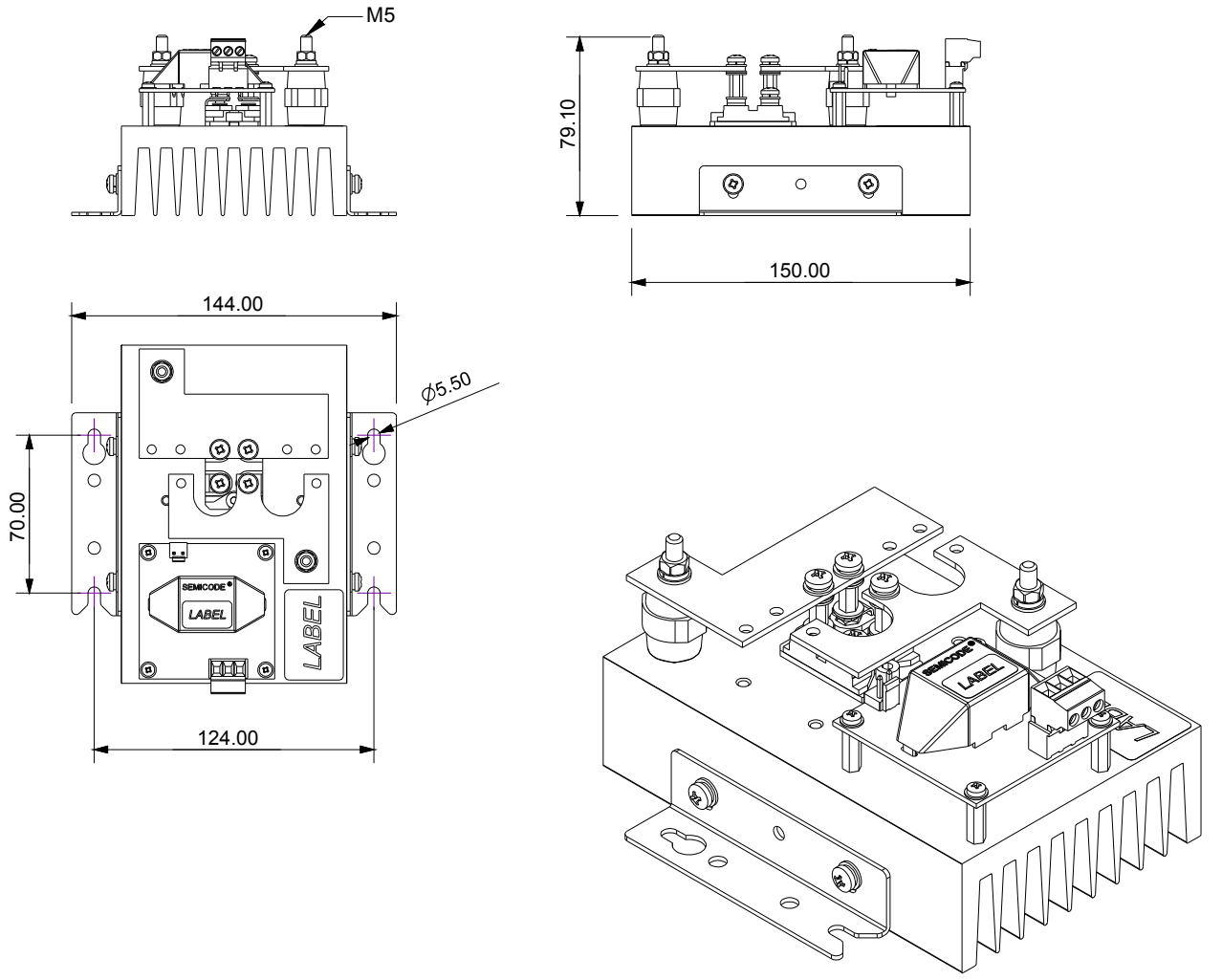
ENVIRONMENTAL SPECIFICATIONS

Description	Symbol	Notes / test conditions	Min.	Typ.	Max.	Unit
Protection grade	IP	UNE-EN 60529		IP 00		
Humidity		50% RH @ 35ºC / 90% RH @ 20ºC			90	%
Pollution degree				III		
Storage temperature	T_{STG}		0		80	ºC
Operating temperature	T_{OP}		0		45	ºC

181205 Rev.:1

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MECHANICAL DIMENSIONS



All units in mm

MECHANICAL SPECIFICATIONS

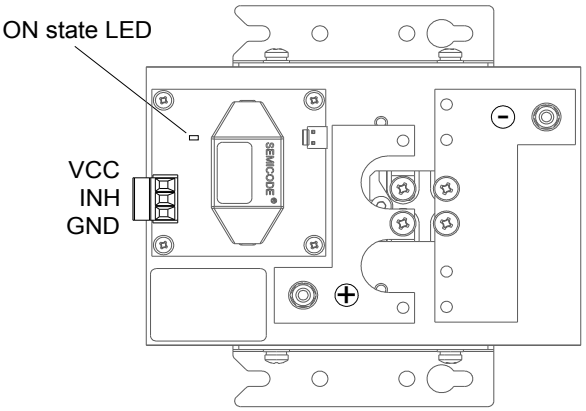
Description	*Symbol*	*Notes / test conditions*	*Min.*	*Typ.*	*Max.*	*Unit*
Dimensions	dim	*W x D x H*		144 x 80 x 150		mm
Weight	w			1100		g
Mounting position		*Vertical (fins perpendicular to the base)*				
Input terminals		*Plugged connector with screw tightening*				
Output power terminals		*M5x10 mm threaded stud*				
Output power terminals torque	т			2.5	3.7	Nm

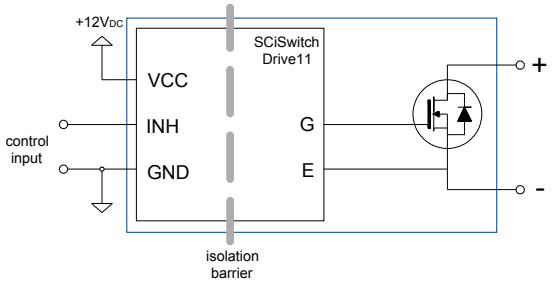
Reserves the right to change limits, test conditions and dimensions given in this data sheet at any time without previous notice.

APPLICATION AND TRIGGER MODE

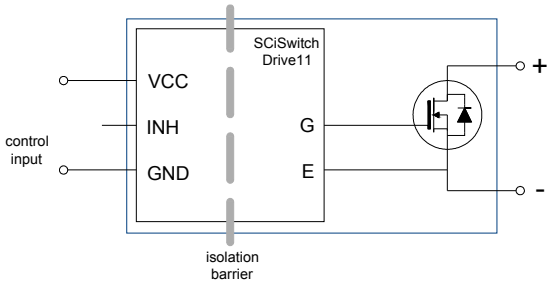
There are 2 ways to switch the output voltage: supply mode control and inhibition mode control. In the supply mode control, only 1 signal (VCC) is required to control the entire SSR. This signal supplies the circuit board and turns the output to high state while the voltage level (VCC) is over 7 V, otherwise the output remains to low state. In this mode the INH input must remain unconnected. In the inhibition mode control, a permanent supply is required (VCC > 7 V) and the INH signal (TTL compatible and low sinked current) controls the output. In this mode some SSRs could be controlled directly by digital master system. In each mode the output state is monitorized by the on state LED.

VCC	INH	LED	V_{GE}
L	X	OFF	L
H	NC	ON	H
H	L	OFF	L
H	H	ON	H





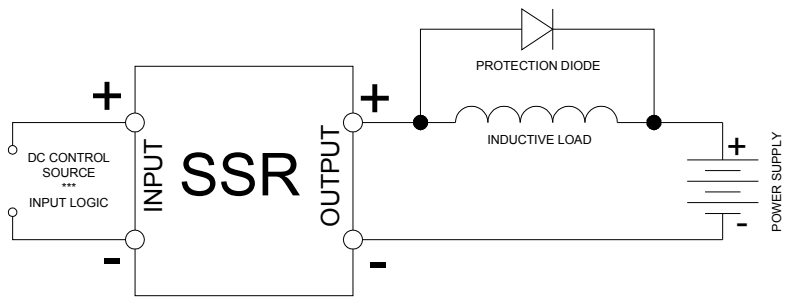
supply mode controlled SSR



inhibition mode controlled SSR

GENERAL APPLICATION

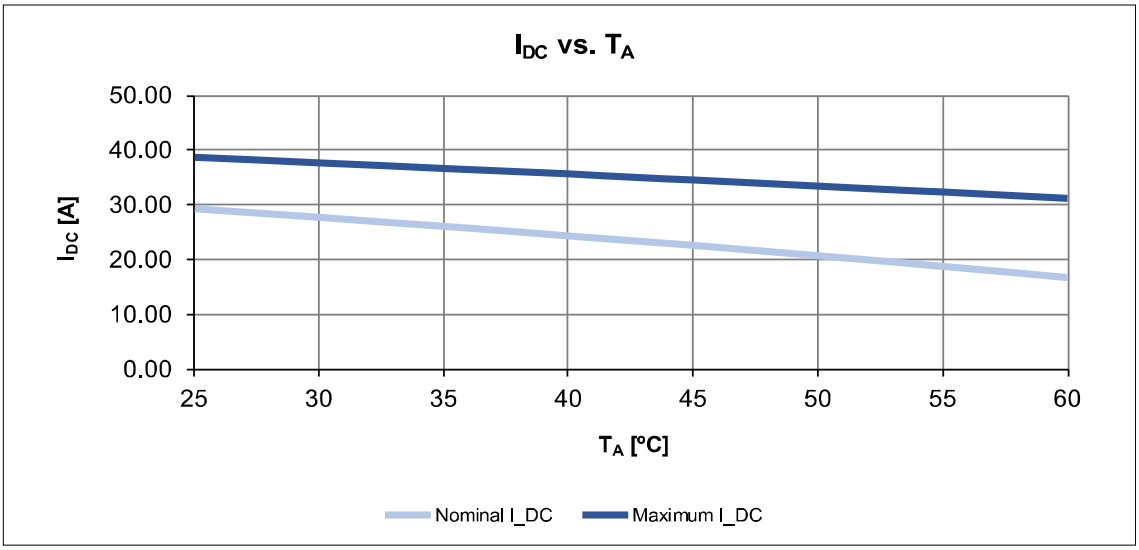
Input and output polarity must be observed. Exceding the maximum voltage may destroy the SSR, consider a safe voltage margin. We recommend maximum current peak double of load current peak. When switching inductive load use a parallel diode with load for inverse voltage transient protection.

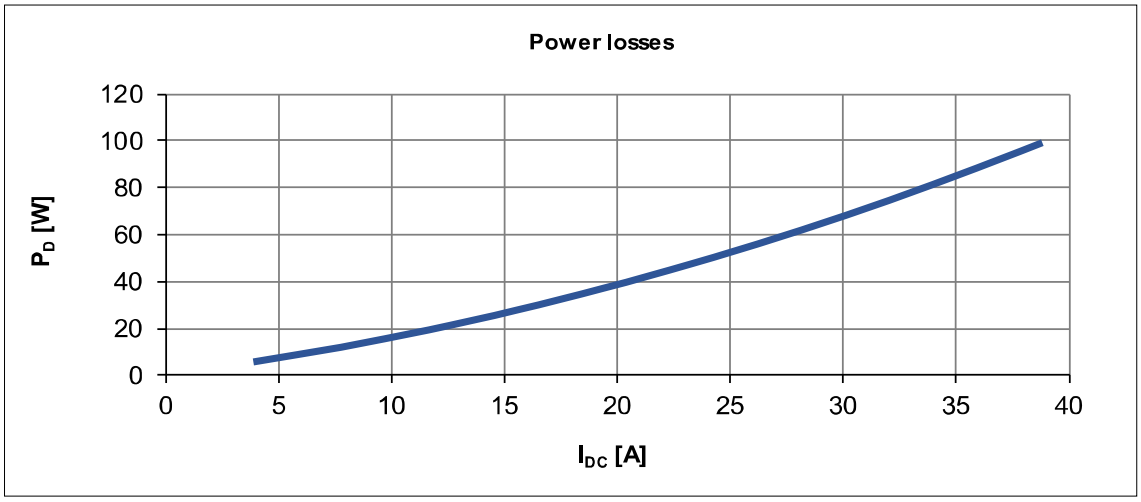


TRANSIENT PROTECTION
An inductive load will produce harmful transient voltages when it turned off. Diodes should be fast recovery type with V_{RRM} rated greater than operation supply voltage.

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POWER AND CHARACTERISTIC CURVES





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