

DC/DC Converter for IGBT- or MOSFET Driver Modules
600V IGBT/MOSFET Driver modules with integrated DC/DC converter



PSDM-60
(Data transfer via transformer)



PSDM-6T
(Data transfer via optocoupler)



Description

- Driver module for safe driving of IGBT or MOSFET power transistors
- DC/DC converter included in module
- Diagnostic output VSM permits monitoring of converter output
- Galvanic isolation up to 3500 VAC
- Overcurrent and short circuit protection

Applications

- Inverters
- Converters
- Motor drives

Web Links

- RoHS: <http://www.schurter.com/rohs>

Standards

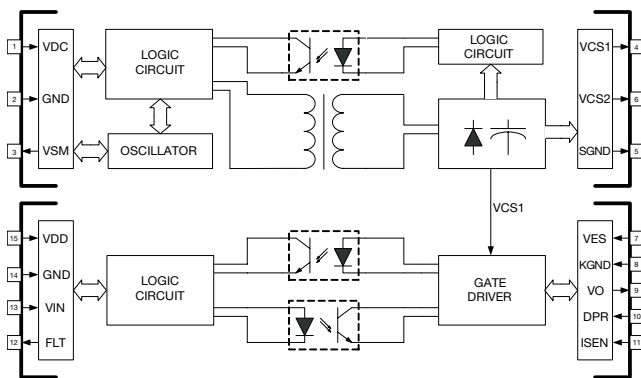
- EN 61248-5
- EN 61558-1

Technical Data

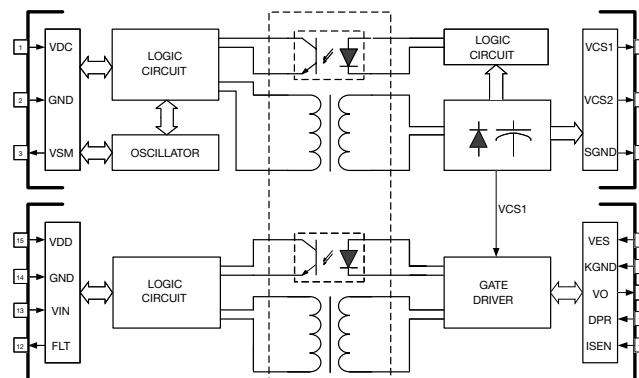
Input voltage	10–15 VDC
Output voltage 1	15 VDC
Output voltage 2	-4 VDC
Output current	120 mA
Isolation voltage	3500 V
Switching frequency DC/DC converter	Up to 500 kHz
Switching frequency driver stage	Up to 100 kHz

Connection method	THT
Weight	25 g
Material (casing)	Plastic, black, UL 94V-0
Sealing compound	UL 94V-0
Ambient temperature	-5 °C bis 85 °C

Block Diagram



PSDM-60 (Optocoupler Version)



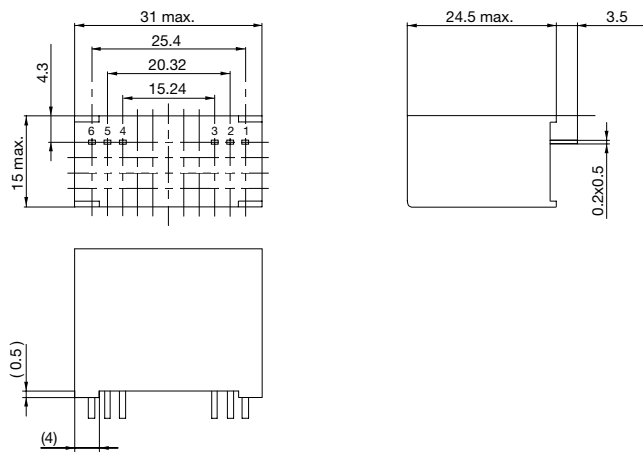
PSDM-6T (Transformer Version)

Elektrical Characteristics

Parameter	Symbol	Test Condition	Min	Type	Max	Unit
Rated voltage	V_{DC}	to GND	10.8		13.2	V
Rated current	I_{DC}				320	mA
Output power	P_o			2.6		W
Output voltage 1	V_{CS1}	to SGND		15		V
Output voltage 2	V_{CS2}	zu SGND		-4		V
Output current 1 and 2	I_o				140	mA
Ripple voltage	$V_{rippk-pk}$	$V_{DC} = 15\text{ V}, I_o = 120\text{ mA}$			240	mV
Efficiency	η			0.75		%
Switching frequency	f_{SW}	$V_{DC} = 15\text{ V}, I_o = 120\text{ mA}$		500		kHz
Isolation capacity	C_{ISO}			12	15	pF
Isolation resistance	R_{ISO}		10			M Ω
Turn-on threshold	V_{tr}			14.8		V_{DC}
Hysteresis on-off	V_h			1.1		V_{DC}
Diagnostic output	V_{SM}		0		VDC	V_{DC}
Isolation voltage	V_{ISO}	50Hz/1s input to outputs			3500	V_{AC}
Short circuit protection		VCS1 to VCS2 VCS1 to SGND VCS2 to SGND		Limited 1 sec. maximum		

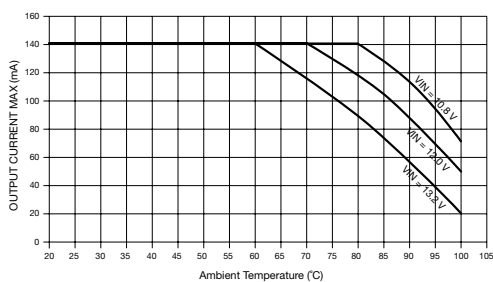
(VDC = 12V, TA = 25°C)

Mechanical Dimensions



Distances between pins: 2,54 mm

Derating



Versions

Description	Order number
DC/DC Converter	PSDM-0DN1-5040

Packing unit 18 pcs.