

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**

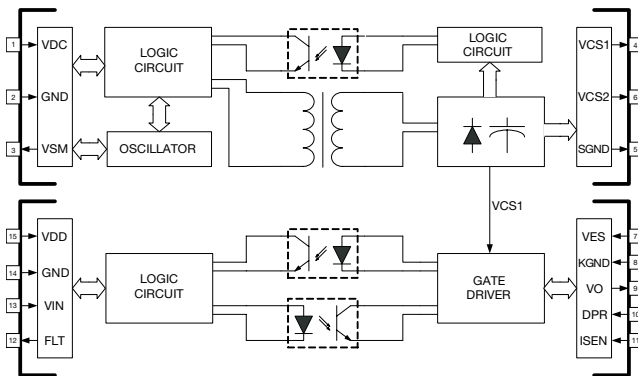
- EN 61248-5
- EN 61558-1

**Technical Data**

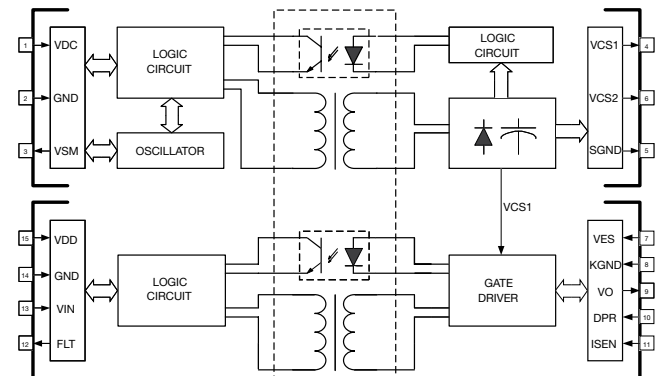
Input voltage	10–15 VDC
Output voltage 1	15 VDC
Output voltage 2	-4 VDC
Output current	120 mA
Isolation voltage	3500 V
Switching frequency DC/DC converter	Up to 500 kHz
Switching frequency driver stage	Up to 100 kHz

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)



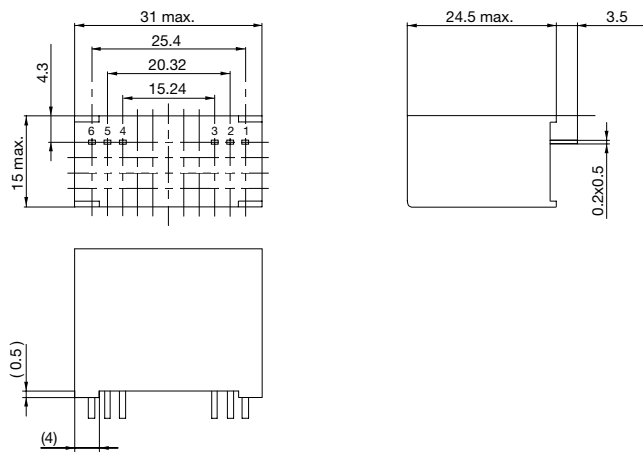
PSDM-6T (Transformer Version)

## 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	$\eta$			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 $\Omega$
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		

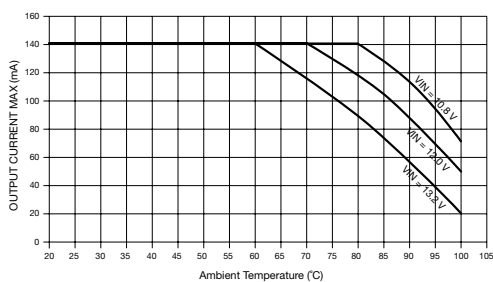
(VDC = 12V, TA = 25°C)

## Mechanical Dimensions



Distances between pins: 2,54 mm

## Derating



## Versions

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

Packing unit 18 pcs.