



flowCON 0

1200 V / 100 A

Features

- Single-phase Rectifier
- High speed SiC Diodes
- Low inductive design
- Integrated thermistor

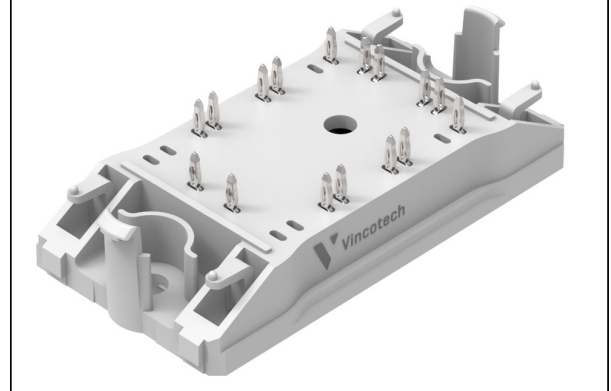
Target applications

- Charging Stations
- Industrial Drives
- Power Supply

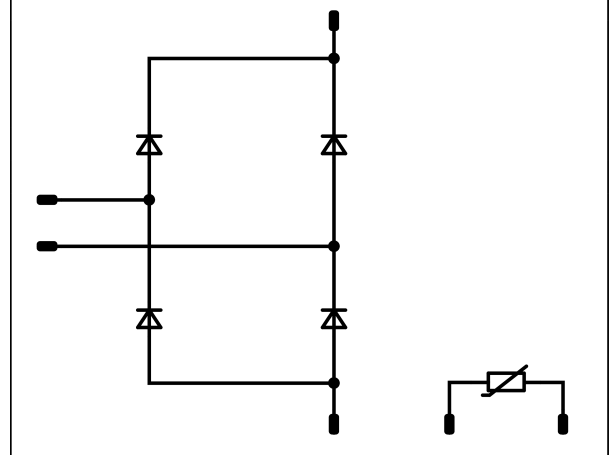
Types

- 10-PZ12ORA100RO-LH00J88Y

flow 0 12 mm housing



Schematic





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10-PZ12ORA100RO-LH00J88Y
target datasheet

Maximum Ratings

$T_j = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Conditions	Value	Unit
Rectifier Diode				
Peak repetitive reverse voltage	V_{RRM}		1200	V
Continuous (direct) forward current	I_F		100	A
Surge (non-repetitive) forward current	I_{FSM}	Single Half Sine Wave, $t_p = 8,3\text{ ms}$ $T_j = 25\text{ °C}$	414	A
Total power dissipation	P_{tot}	$T_j = T_{jmax}$ $T_s = 80\text{ °C}$	141	W
Maximum junction temperature	T_{jmax}		175	°C



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Maximum Ratings

$T_j = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Conditions	Value	Unit
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Module Properties

Thermal Properties

Storage temperature	T_{stg}		-40...+125	°C
Operation temperature under switching condition	T_{jop}		-40...+($T_{jmax} - 25$)	°C

Isolation Properties

Isolation voltage	V_{isol}	DC Test Voltage $t_p = 2\text{ s}$	6000	V
Isolation voltage	V_{isol}	AC Voltage $t_p = 1\text{ min}$	2500	V
Creepage distance			>12,7	mm
Clearance			9,15	mm
Comparative Tracking Index	CTI		$\geq >200$	



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Characteristic Values

Parameter	Symbol	Conditions					Values			Unit
		V_{GS} [V]	V_{GE} [V]	V_{DS} [V]	V_{CE} [V]	T_j [°C]	Min	Typ	Max	

Rectifier Diode

Static

Forward voltage	V_F				100	25 150 175		1,4 1,8 1,9	1,6	V
Reverse leakage current	I_R			1200		25 150 175		100 800 1300	2000	μA

Thermal

Thermal resistance junction to sink	$R_{th(j-s)}$							0,67		K/W
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Thermistor

Static

Rated resistance	R					25		22		kΩ
Deviation of R_{100}	$A_{R/R}$	$R_{100} = 1484 \Omega$				100	-5		5	%
Power dissipation	P							5		mW
Power dissipation constant	d					25		1,5		mW/K
B-value	$B_{(25/50)}$					25		3962		K
B-value	$B_{(25/100)}$					25		4000		K
Vincotech Thermistor Reference									I	

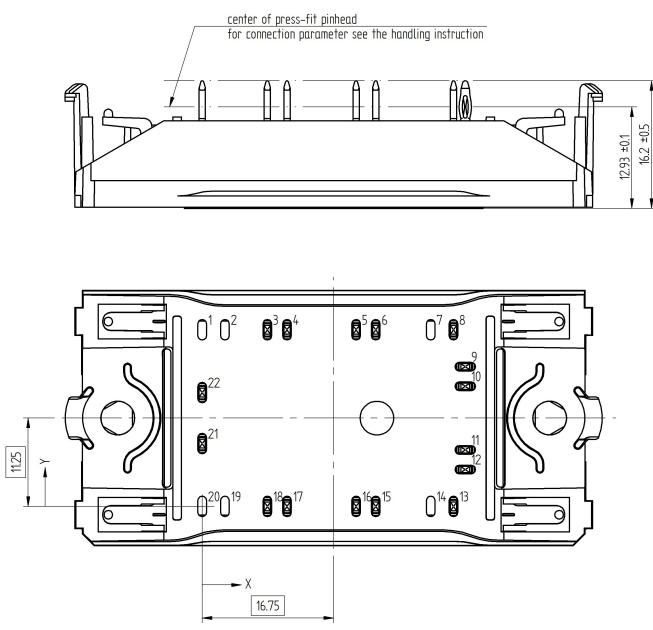


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Ordering Code & Marking								
Version			Ordering Code					
without thermal paste 12mm housing with Press-fit pins			10-PZ12ORA100RO-LH00J88Y					
NN-NNNNNNNNNNNNNN TTTTIVV WWYY UL VIN LLLLL SSSS	 	Text	Name		Date code	UL & VIN	Lot	Serial
			NN-NNNNNNNNNNNNNN-TTTTIVV		WWYY	UL VIN	LLLLL	SSSS
		Datamatrix	Type&Ver	Lot number	Serial	Date code		
		TTTTTIVV	LLLLL	SSSS	WWYY			

Pin table [mm]			
Pin	X	Y	Function
1			not assembled
2			not assembled
3	8,3	22,5	DC+
4	10,8	22,5	DC+
5	19,6	22,5	DC-
6	22,1	22,5	DC-
7			not assembled
8	32	22,5	ACIn1
9	33,5	17,8	ACIn1
10	33,5	15,3	ACIn1
11	33,5	7,2	ACIn2
12	33,5	4,7	ACIn2
13	32	0	ACIn2
14			not assembled
15	22,1	0	DC-
16	19,6	0	DC-
17	10,8	0	DC+
18	8,3	0	DC+
19			not assembled
20			not assembled
21	0	8	Therm1
22	0	14,5	Therm2

Outline

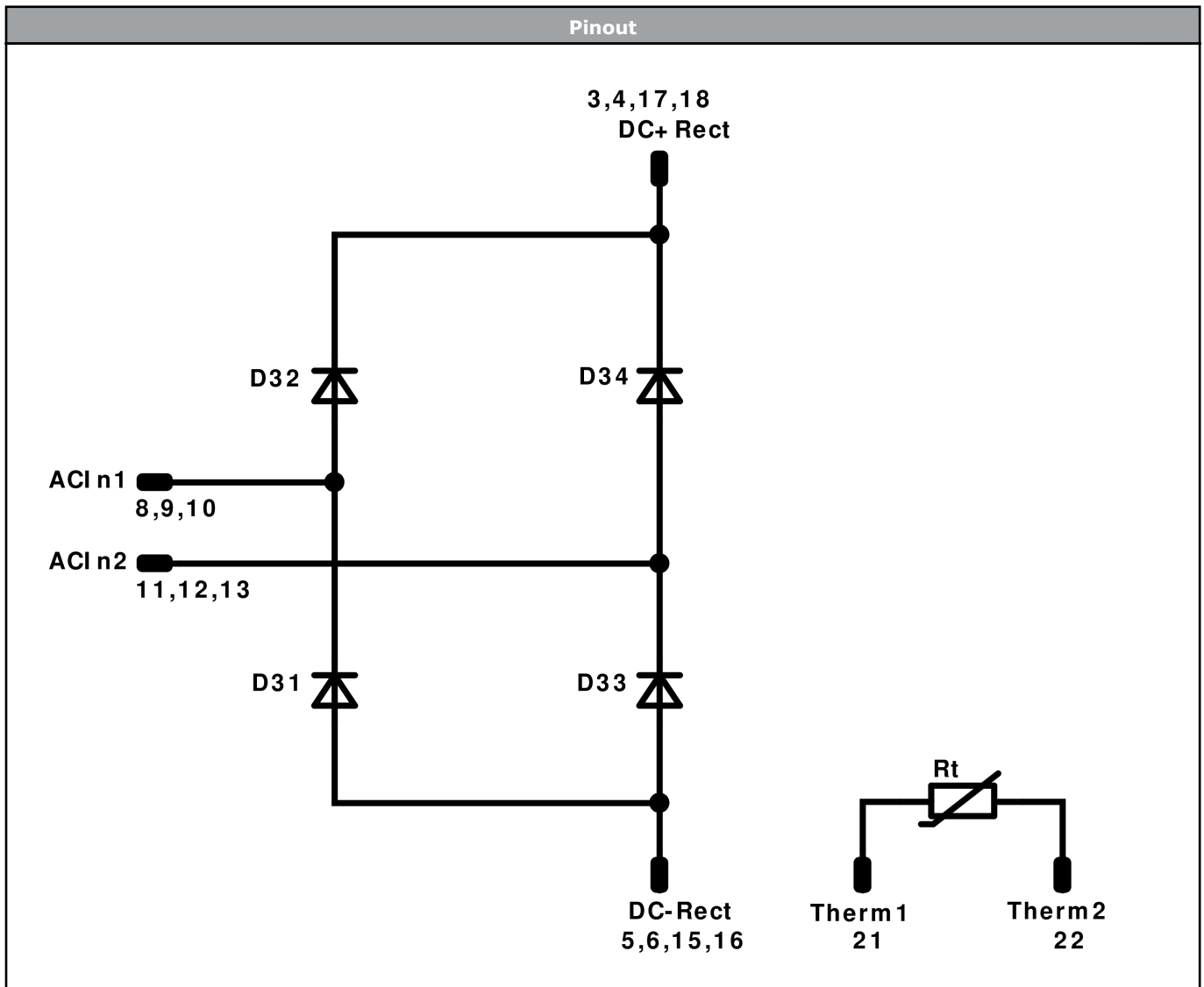


center of press-fit pinhead
for connection parameter see the handling instruction

Tolerance of pinpositions: ±0.5mm at the end of pins
Dimension of coordinate axis is only offset without tolerance



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Identification					
ID	Component	Voltage	Current	Function	Comment
D31, D32, D33, D34	FWD	1200 V	100 A	Rectifier Diode	
Rt	Thermistor			NTC	




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10-PZ12ORA100RO-LH00J88Y
target datasheet

Packaging instruction				
Standard packaging quantity (SPQ) 135	>SPQ	Standard	<SPQ	Sample

Handling instruction
Handling instructions for undefined packages see vincotech.com website.

Package data
Packaging data for undefined packages see vincotech.com website.

UL recognition and file number
This device is certified according to UL 1557 standard, UL file number E192116. For more information see vincotech.com website. 

Document No.:	Date:	Modification:	Pages
10-PZ12ORA100RO-LH00J88Y-T1-14	2 Apr. 2019	Initial Release	

Product status definition		
Datasheet Status	Product Status	Definition
Target	Formative or In Design	This datasheet contains the design specifications for product development. Specifications may change in any manner without notice. The data contained is exclusively intended for technically trained staff.

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