Vincotech

10-EZ126PB090MR-LS16F48T
target datasheet

***flow*PACK E1 SiC** **1200 V / 90 mΩ**

Topology features

- 3ph Inverter
- Low and high side Kelvin Emitter for improved switching performance
- MOSFET
- Open Emitter configuration
- Temperature sensor

Component features

- Easy paralleling
- Low on-resistance
- Fast switching speed
- Fast recovery body diode

Housing features

- Base isolation: Al_2O_3
- Convex shaped substrate for superior thermal contact
- Compact housing
- CTI600 housing material
- Thermo-mechanical push-and-pull force relief
- Press-fit pin
- Reliable cold welding connection

Target applications

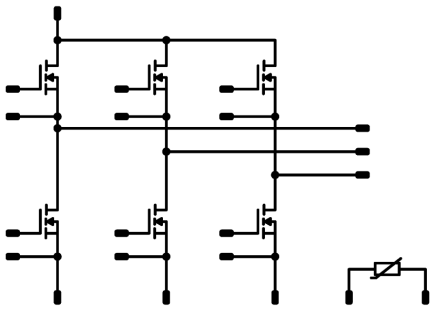
- Elevator Drives
- Embedded Drives
- Servo Drives

Types

- 10-EZ126PB090MR-LS16F48T

flow E1 12 mm housing

Schematic



Maximum Ratings

T_j = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	Value	Unit
Inverter Switch				
Drain-source voltage	V_{DSS}		1200	V
Drain current (DC current)[2]	I_D	T_j = T_{jmax} T_s = 80 °C	15	A
Peak drain current	I_{DM}	t_p limited by T_{jmax}	45	A
Total power dissipation	P_{tot}	T_j = T_{jmax} T_s = 80 °C	42	W
Gate-source voltage	V_{GSS}	static	-4 / 21	V
		dynamic	-4 / 23	V
Maximum Junction Temperature	T_{jmax}		175	°C

[1]Calculation based on chip supplier datasheet at T_j=175°C

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 s	6000	V
Creepage distance			>12,7	mm
Clearance			8,74	mm
Comparative Tracking Index	CTI		≥ 600	

Characteristic Values

Parameter	Symbol	Conditions					Values			Unit
			V_{GE} [V] V_{GS} [V]	V_{CE} [V] V_{DS} [V] V_F [V]	I_C [A] I_D [A] I_F [A]	T_j [°C]	Min	Typ	Max	
Inverter Switch										
Static										
Drain-source on-state resistance	$r_{DS(on)}$		18		8,3	25 150		90 180	113	mΩ
Gate-source threshold voltage	$V_{GS(th)}$				0,00444	25	2,8	3,5	4,8	V
Gate to Source Leakage Current	I_{GSS}		21	0		25			100	nA
Zero Gate Voltage Drain Current	I_{DSS}		0	1200		25		1	80	µA
Internal gate resistance	r_g							4		Ω
Gate charge	Q_g							48		
Gate to source charge	Q_{GS}		0/18	800	8,3	25		11		nC
Gate to drain charge	Q_{GD}							16		
Short-circuit input capacitance	C_{iss}							1026		
Short-circuit output capacitance	C_{oss}	f = 1 Mhz	0	800	0	25		35		pF
Reverse transfer capacitance	C_{rss}							3		
Diode forward voltage	V_{SD}		0		8,3	25		3,3		V
Thermal										
Thermal resistance junction to sink	$R_{th(j-s)}$	λ_{paste} = 3,4 W/mK (PSX)						2,24		K/W

Characteristic Values

Parameter	Symbol	Conditions					Values			Unit
			V_{GE} [V] V_{GS} [V]	V_{CE} [V] V_{DS} [V] V_F [V]	I_C [A] I_D [A] I_F [A]	T_j [°C]	Min	Typ	Max	
Thermistor										
Static										
Rated resistance	R					25		5		kΩ
Deviation of R100	$\Delta_{R/R}$	R_{100} = 499 Ω				100	3,2		3,3	%
Power dissipation	P					25		130		mW
Power dissipation constant	d					25		1,3		mW/K
B-value	$B_{(25/50)}$	Tol. ±1 %						3380		K
Vincotech Thermistor Reference									V	

Ordering Code

Version	Ordering Code
Without thermal paste	10-EZ126PB090MR-LS16F48T
With thermal paste (5,2 W/mK, PTM6000HV)	10-EZ126PB090MR-LS16F48T-/7/

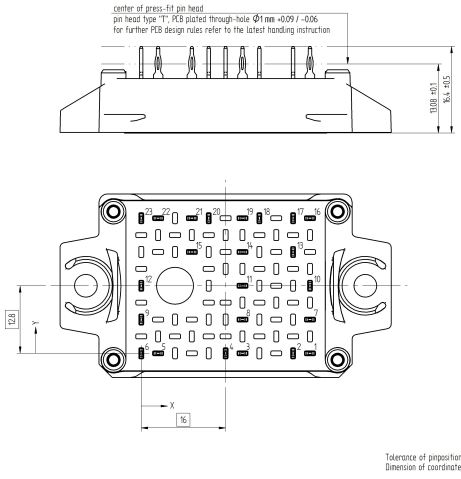
Marking

	Name		Date code	UL & VIN	Lot	Serial
Text	NN-NNNNNNNNNNNNNN-TTTTTTVV		WWYY	UL VIN	LLLLL	SSSS
Datamatrix	**Type&Ver**	**Lot number**	**Serial**	**Date code**		
	TTTTTTVV	LLLLL	SSSS	WWYY		

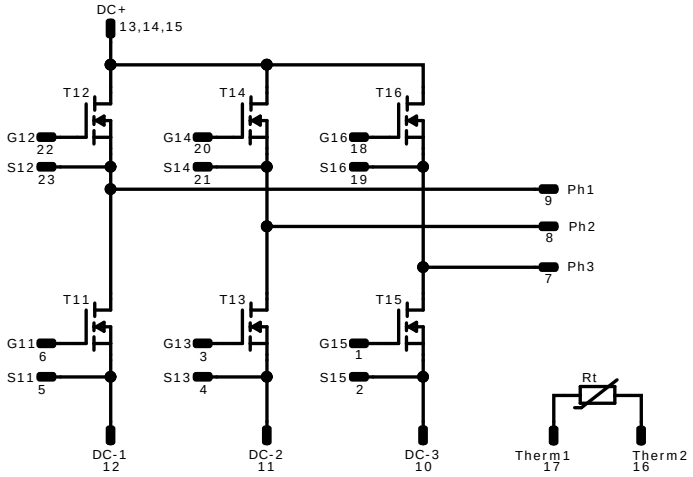
Outline

Pin table [mm]

Pin	X	Y	Function
1	32	0	G15
2	28,8	0	S15
3	19,2	0	G13
4	16	0	S13
5	3,2	0	S11
6	0	0	G11
7	32	6,4	Ph3
8	19,2	6,4	Ph2
9	0	6,4	Ph1
10	32	12,8	DC-3
11	19,2	12,8	DC-2
12	0	12,8	DC-1
13	28,8	19,2	DC+
14	19,2	19,2	DC+
15	9,6	19,2	DC+
16	32	25,6	Therm2
17	28,8	25,6	Therm1
18	22,4	25,6	G16
19	19,2	25,6	S16
20	12,8	25,6	G14
21	9,6	25,6	S14
22	3,2	25,6	G12
23	0	25,6	S12



Pinout



Identification

ID	Component	Voltage	Current	Function	Comment
T11, T12, T13, T14, T15, T16	MOSFET	1200 V	90 mΩ	Inverter Switch	
Rt	Thermistor			Thermistor	

Packaging instruction				
Standard packaging quantity (SPQ) 100	>SPQ	Standard	<SPQ	Sample

Handling instruction
Handling instructions for *flow* E1 packages see vincotech.com website.

Package data
Package data for *flow* E1 packages see vincotech.com website.

Vincotech thermistor reference
See Vincotech thermistor reference table at vincotech.com website.

UL recognition and file number
This device is UL 1557 recognized under E192116 up to a junction temperature under switching condition $T_{j,op}$=175°C and up to 3500VAC/1min isolation voltage. For more information see vincotech.com website.

Document No.:	Date:	Modification:	Pages
10-EZ126PB090MR-LS16F48T-T1-14	19 Sep. 2025	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.