

Three-level用IGBT専用ゲートドライバ 4DUCシリーズ

TAMURA

Gate driver for Three-level/IGBT 4DUC series

開発中
Under Development

Three-level用IGBTのゲート駆動に最適なドライバ登場！

T-Primeの端子とほぼ同じ高さの低背型でT-TYPE用とI-TYPE用の2機種を用意しました。

It is an optimum gate driver for 3 Level circuit IGBT (4in1).

We prepared two models for T-TYPE and I-TYPE with a low profile of almost the same height as the T-Prime terminals.

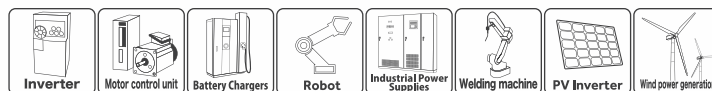


特長 / Features

- 1 .高絶縁耐圧：AC5kV
- 2 .低背型：14mmMax
- 3 .低寄生容量：12pF (TYP)
- 4 .ワイド入力電圧範囲 (DC13~28V)

- 1 .High insulation voltage (AC5kV)
- 2 .Low profile (14mmMax)
- 3 .Low stray capacity (12pF TYP)
- 4 .Wide input voltage range (DC13~28V)

用途 / Applications



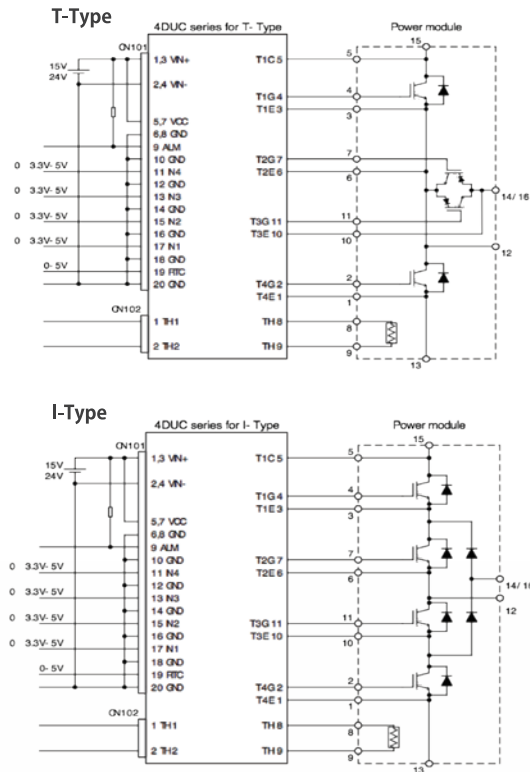
スペック / Specifications (Ta=25°C)

Item		Model	
		4DUC51016CFN1	4DUC51016CFA1
Application		4MBI600VC-120-50 (Fuji Electric)	4MBI900VB-120R1-50 (Fuji Electric)
Input	Input Voltage Range	DC13V~28V	
	Logic Input Voltage	DC3.3~5V	
Output	Number of Output	4	
	Gate Voltage (ON)	+14V~+16V	
	Gate Voltage (OFF)	-9V~-11V	
	Maximum Gate Charge	5700nC	T1,T4: 8500nC, T2,T3: 4300nC
	Maximum Switching Frequency	7.5kHz(Ave), 15kHz(Peak) (T.B.D)	
Insulation	Withstand Voltage	Primary to secondary : AC5000V	
	Delay Time	+105ns/-110ns(TYP)	
	Minimum Clearance Distance	Primary to secondary : 14mm	
		Secondary to secondary : 8mm	
Minimum Creepage Distance	Primary to secondary : 14mm		
	Secondary to secondary : 8mm		
Function	Desaturation Protection	T1,T4 : Yes, T2,T3 : None	
	Soft Turn Off	T1,T4 : Yes, T2,T3 : None	
	Miller Clamp	Yes	
	Protection Release Condition	Auto Recovery, Interval: 110 ms(TYP)	
Environment	Ambient Temperature (Operating)	-40~+85°C (Input Voltage : DC13V~18V)	
		-40~+75°C (Input Voltage : DC18V~28V)	
	Ambient Humidity (Operating)	20~95%RH (No condensation)	
	Ambient Temperature (Storage)	-40~+90°C	
	Ambient Humidity (Storage)	5~95%RH (No condensation)	

*The content of this document is subject to change without prior notice for the purpose of improvements, etc.

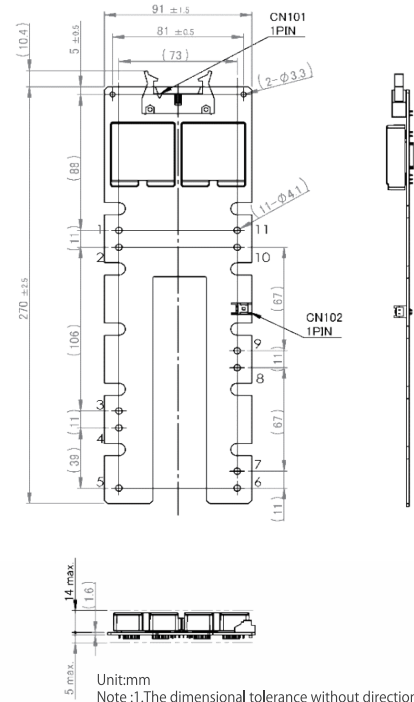
構成図 / Application Image

外形図 / Outline Dimensional Drawing



[CN101]		[Power Module]	
No.	Name	No.	Name
1	VIN(+)	1	T4E
2	VIN(-)	2	T4G
3	VIN(+)	3	T1E
4	VIN(-)	4	T1G
5	VCC	5	T1C
6	GND	6	T2E
7	VCC	7	T2G
8	GND	8	TH
9	ALM	9	TH
10	GND	10	T3E
11	IN4	11	T3G
12	GND		
13	IN3		
14	GND		
15	IN2		
16	GND		
17	IN1		
18	GND		
19	RTC		
20	GND		

[CN102]	
No.	Name
1	TH1
2	TH2



ピンアサイン / Pin Assingment

CN101 : RA-H201SD / JST For power supply · signal

Pin No.	Name	Function
1	VIN(+)	Power supply for DC/DC converter(+)
2	VIN(-)	Power supply for DC/DC converter(-)
3	VIN(+)	Power supply for DC/DC converter(+)
4	VIN(-)	Power supply for DC/DC converter(-)
5	VCC	Power supply for drive circuit
6	GND	Ground for drive circuit
7	VCC	Power supply for drive circuit
8	GND	Ground for drive circuit
9	ALM	Alarm signal output
10	GND	Ground for drive circuit
11	IN4	Control input 4
12	GND	Ground for drive circuit
13	IN3	Control input 3
14	GND	Ground for drive circuit
15	IN2	Control input 2
16	GND	Ground for drive circuit
17	IN1	Control input 1
18	GND	Ground for drive circuit
19	RTC	Recovery time of protection circuit control
20	GND	Ground for drive circuit

Connection on the power module

Pin No.	Name	Function
1	T4E	T4 Emitter connection
2	T4G	T4 Gate connection
3	T1E	T1 Emitter connection
4	T1G	T1 Gate connection
5	T1C	T1 Collector connection
6	T2E	T2 Emitter connection
7	T2G	T2 Gate connection
8	TH	For thermistor
9	TH	For thermistor
10	T3E	T3 Emitter connection
11	T3G	T3 Gate connection

CN102 : S02B-XASS-1 /JST For thermistor

Pin No.	Name	Function
1	TH1	For thermistor
2	TH2	For thermistor