

Checking the Input and Output



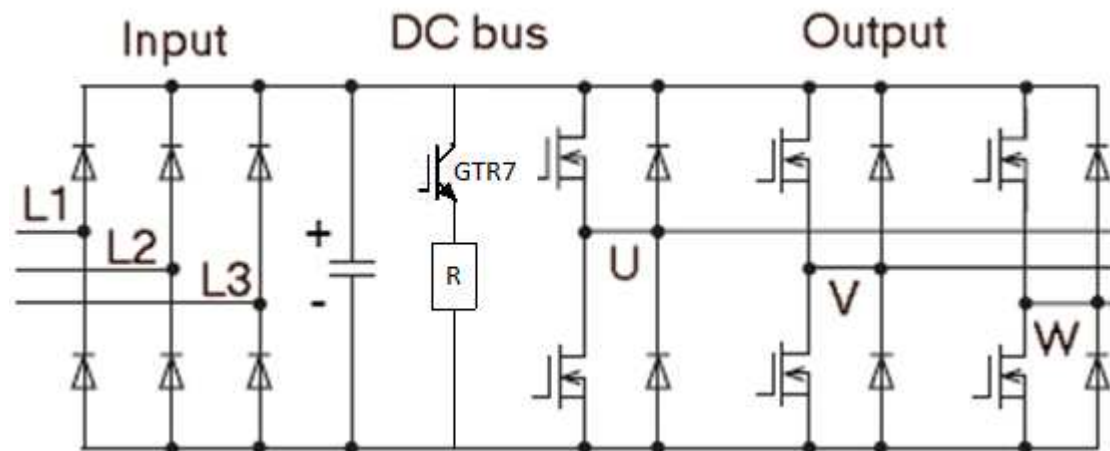
Checking the inverter inputs and outputs for short circuits

The input and output circuits of the inverter can be checked externally with the inverter power off and the motor leads disconnected by use of a multi-meter set to **diode check**.

Reference the examples for ~ measured values per each housing size.

Note: Different drive housings will have different readings.

The inverter power must be de-energized and locked out for these tests!



Input Test

How to test the rectifier ?

Input circuit measurement.

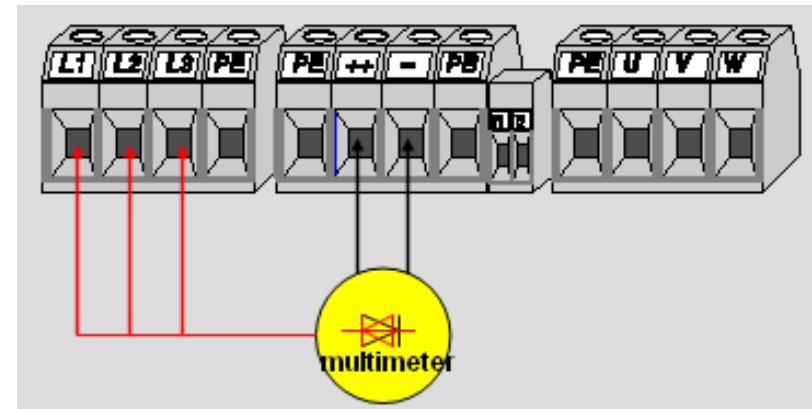
Disconnect the mains wiring from the inverter and take the following measurements:

➤ Positive side

Negative lead of meter to positive DC terminal
Positive lead of meter to L1/L2/L3 terminals

➤ Negative side

Positive lead of meter to negative DC terminal
Negative lead of meter to L1/L2/L3 terminals



Output Test

How to test the IGBTs ?

Output circuit measurement.

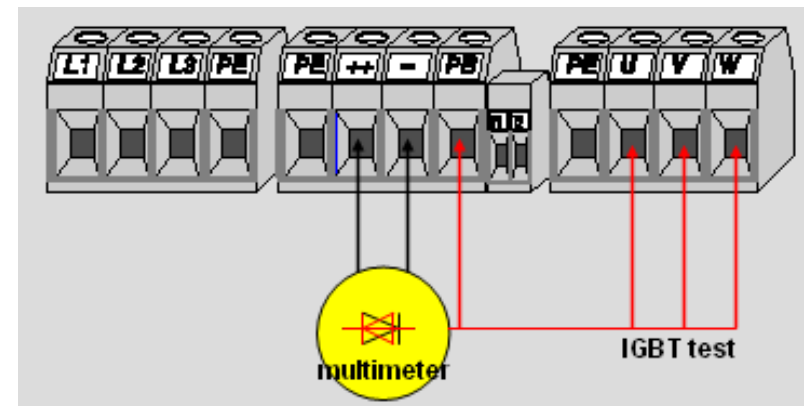
Disconnect the motor wiring from the inverter and take the following measurements:

➤ Positive side

Negative lead of meter to positive DC terminal
Positive lead of meter to U/V/W terminals

➤ Negative side

Positive lead of meter to negative DC terminal
Negative lead of meter to U/V/W terminals



Braking Transistor Test

How to test the GTR7 ?

Braking circuit measurement

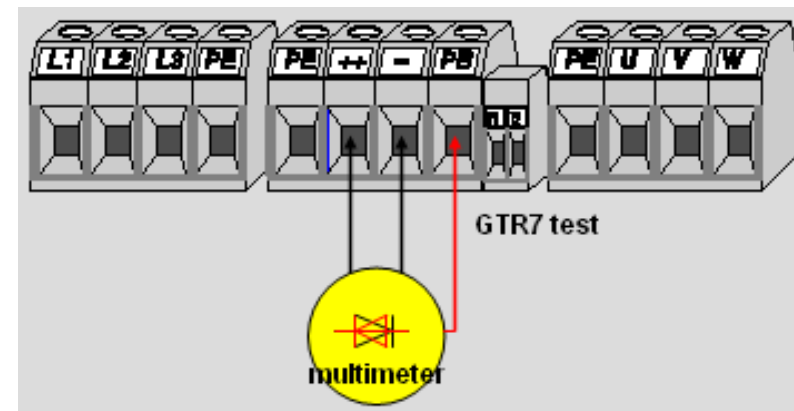
Disconnect the brake resistor from the inverter and take the following measurements:

➤ Positive side

Negative lead of meter to positive DC terminal
Positive lead of meter to PB terminal

➤ Negative side

Positive lead of meter to negative DC terminal
Negative lead of meter to PB terminal



Example Output Test

Positive DC bus to Output Phases U,V,W

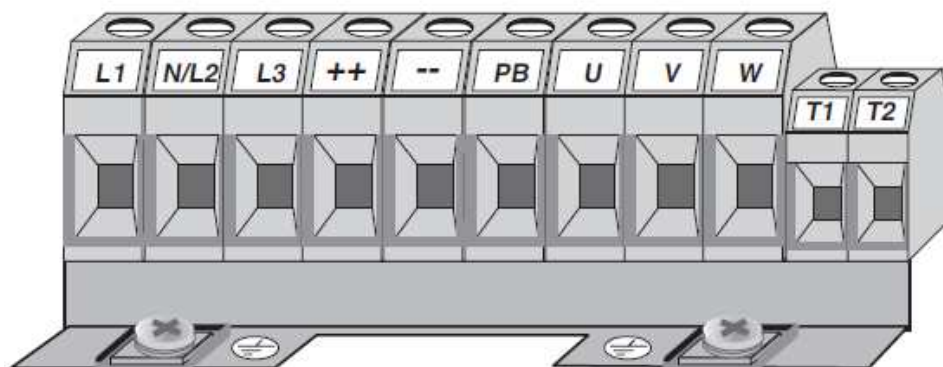


Negative DC bus to Output Phases U,V,W



Power Terminals by Housing

E-Housing



L1, L2, L3

3 phase supply voltage

++, --

Connection for DC supply

++, PB

Connection for braking resistor

U, V, W

Motor connection

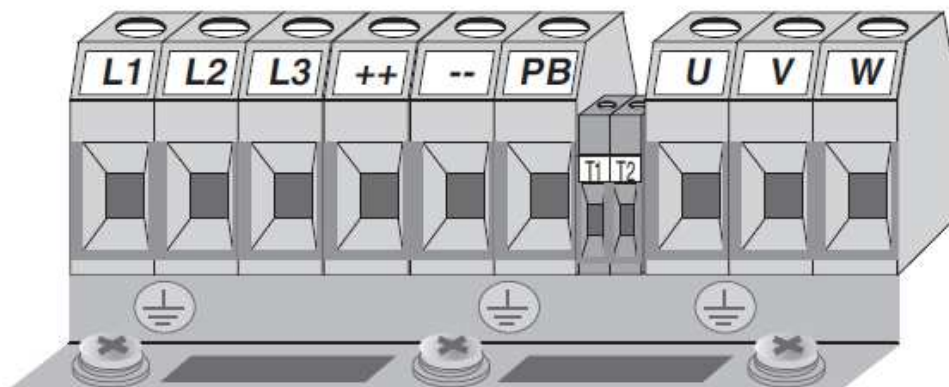
T1, T2

Connection for temperature sensor



Connection for earth ground

G-Housing



L1, L2, L3

3 phase supply voltage

++, --

Connection for DC supply

++, PB

Connection for braking resistor

T1, T2

Connection for temperature sensor

U, V, W

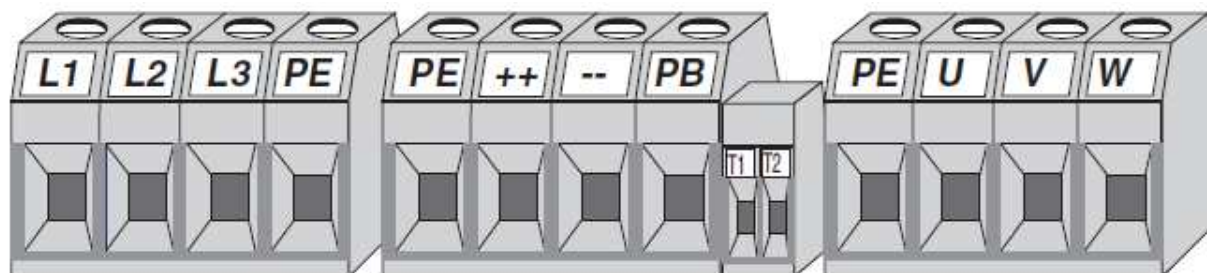
Motor connection



Connection for earth ground

Power Terminals by Housing

H-Housing



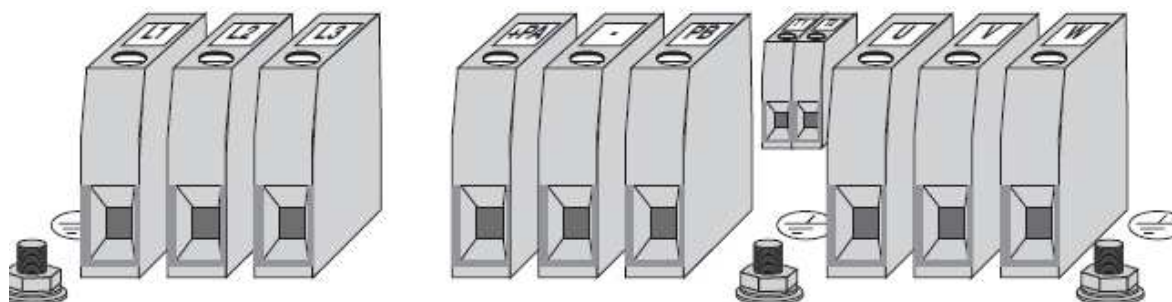
L1, L2, L3
++ , --
++ , PB

3 phase supply voltage
DC supply connection
Connection for braking resistor

T1, T2
U, V, W
PE

Connection for temperature sensor
Motor connection
Connection for earth ground

R/U-Housings



L1, L2, L3
++ , --
++ , PB

3 phase supply voltage
DC supply connection
Connection for braking resistor

T1, T2
U, V, W

Connection for temperature sensor
Motor connection
Connection for earth ground M8 stud.

Measurements: E, G, H housing



Measurement	To	Value	Measurement	To	Value
+ Terminal	L1	.4 to .5	- Terminal	L1	.4 to .5
	L2	.4 to .5		L2	.4 to .5
	L3	.4 to .5		L3	.4 to .5
	U	.3 to .4		U	.3 to .4
	V	.3 to .4		V	.3 to .4
	W	.3 to .4		W	.3 to .4
E Housing	PB	.4		PB	Open
G Housing	PB	.4		PB	1.5
H Housing	PB	.3		PB	.3



Measurements: R, U housing



Measurement	To	Value	Measurement	To	Value
+ Terminal	L1	.4 to .5	- Terminal	L1	.4
	L2	Open		L2	.4
	L3	Open		L3	.4
	U	.2 to .4		U	.2 to .4
	V	.2 to .4		V	.2 to .4
	W	.2 to .4		W	.2 to .4
R Housing	PB	.3		PB	.3
U Housing	PB	.3		PB	.3

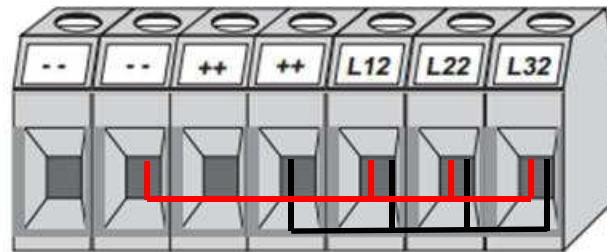
R



U



Measurements: R6 E-Housing



Measurement	To	Value	Measurement	To	Value
+ Terminal	L12	~.4xx	-Terminal	L12	~.4xx
	L22	~.4xx		L22	~.4xx
	L23	~.4xx		L23	~.4xx

