




NO: RL-137 **PRODUCT:** G3TC Solid State I/O Relay
DATE: July 2013 **TYPE:** Discontinuation Notice

G3TC Solid State I/O Relays Discontinued March 2013; No Omron Replacement, Recommend Opto 22 I/O Modules

Product Discontinuation
Solid State Relay

G3TC-IAC series
G3TC-IDC series
G3TC-OAC series
G3TC-ODC series



Recommended Replacement
OMRON has no recommended replacement; recommend Opto 22 I/O modules

IAC series
IDC series
OAC series
ODC series

Affected Parts

Product discontinuation Model G3TC (OMRON)	Recommended replacement Opto 22	Product discontinuation Model G3TC (OMRON)	Recommended replacement Opto 22
Input Relays		Output Relays	
G3TC-IAC5 AC/DC120V	IAC5	G3TC-OAC5 DC5V	OAC5
G3TC-IAC15 AC/DC120V	IAC15	G3TC-OAC15 DC15V	OAC15
G3TC-IAC24 AC/DC120V	IAC24	G3TC-OAC24 DC24V	OAC24
G3TC-IAC5A AC/DC240V	IAC5A	G3TC-OAC5A DC5V	OAC5A
G3TC-IAC15A AC/DC240V	IAC15A	G3TC-OAC15A DC15V	OAC15A
G3TC-IAC24A AC/DC240V	IAC24A	G3TC-OAC24A DC24V	OAC24A
G3TC-IDC5 DC/AC24V	IDC5	G3TC-ODC5 DC5V	ODC5
G3TC-IDC15 DC/AC24V	IDC15	G3TC-ODC15 DC15V	ODC15
G3TC-IDC24 DC/AC24V	IDC24	G3TC-ODC24 DC24V	ODC24
		G3TC-ODC5A DC5V	ODC5A
		G3TC-ODC15A DC15V	ODC15A
		G3TC-ODC24A DC24V	ODC24A

Reference Documentation

Description	Media	Publication number
G3TC Solid State Relays Data Sheet	PDF	J32I-E-01
Opto 22: IAC, IDC, OAC ODC series		Opto 22 link

Body color (Body colors are fully compatible)

Product discontinuation Model G3TC (OMRON)		Recommended replacement Opto 22	
G3TC-IAC5(A), 15(A), 24(A)	Yellow	IAC5(A), 15(A), 24(A)	Yellow
G3TC-IDC5, 15, 24	White	IDC5, 15, 24	White
G3TC-OAC5(A), 15(A), 24(A)	Black	OAC5(A), 15(A), 24(A)	Black
G3TC-ODC5(A), 15(A), 24(A)	Red	ODC5(A), 15(A), 24(A)	Red

Wiring Diagrams

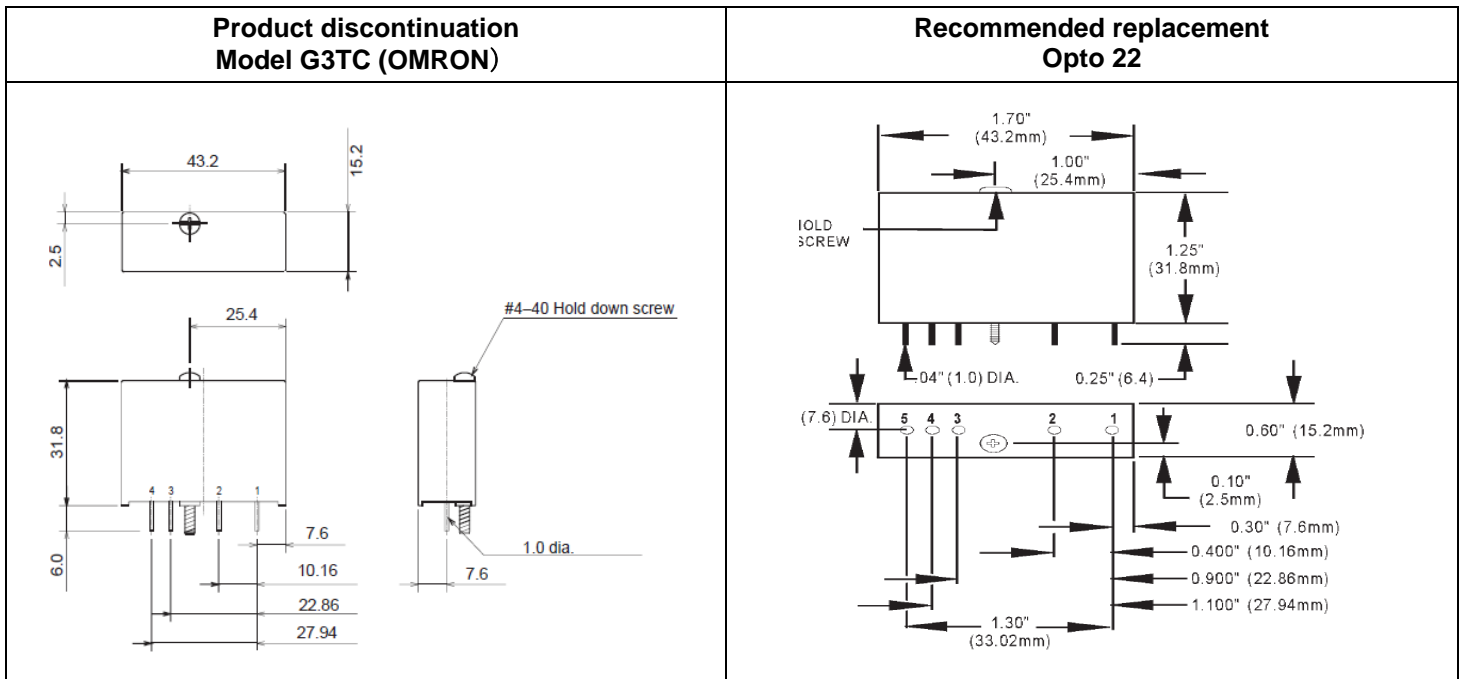
Wire connections are fully compatible.

Product discontinuation Model G3TC (OMRON)	Recommended replacement Opto 22
<p>G3TC-IAC5(A),15(A),24(A) / -IDC5,15,24</p>	<p>IAC5(A),15(A),24(A) / IDC5,15,24</p>
<p>G3TC-OAC5(A),15(A),24(A)</p>	<p>OAC5(A),15(A),24(A)</p>
<p>G3TC-ODC5(A),15(A),24(A)</p>	<p>ODC5(A),15(A),24(A)</p>

Operation Methods

Operation methods are fully compatible.

Dimensions Dimensions are fully compatible.



Characteristics Characteristics are almost compatible.

Item	Product discontinuation Model G3TC (OMRON)	Recommended replacement Opto 22
Operate time	-IDC5,15,24 :5 ms max.	IDC5,15,24 :5 ms
	-IAC5(A),15(A),24(A) :20 ms max.	IAC5(A),15(A),24(A) :20 ms
	-ODC5,15,24 :50 us max.	ODC5,15,24 :100 us
	-ODC5A,15A,24A :100 us max.	ODC5A,15A,24A :100 us
	-OAC5(A),15(A),24(A) : 1/2 of load power source cycle+1ms max.	OAC5(A), 15(A), 24(A) : 1/2 cycle maximum-zero voltage
Release time	-IDC5,15,24 :5 ms max	IDC5,15,24 :5 ms
	-IAC5(A),15(A),24(A) :20 ms max.	IAC5(A),15(A),24(A) :20 msec
	-ODC5,15,24 :50 us max.	ODC5,15,24 :750 us
	-ODC5A,15A,24A :750 us max.	ODC5A,15A,24A :750 us
	-OAC5(A),15(A),24(A) : 1/2 of load power source cycle + 1ms max.	OAC5(A), 15(A), 24(A) : 1/2 cycle maximum-zero current
Output ON voltage drop	-IDC5,15,24 :0.4V max.	IDC5,15,24 :0.4V(at 50 mA)
	-IAC5(A),15(A),24(A) :0.4V max.	IAC5(A),15(A),24(A) :0.4V(at 50 mA)
	-ODC5(A),15(A),24(A) :1.6V max.	ODC5(A),15(A),24(A) :1.6V
	-OAC5(A),15(A),24(A) :1.6V(RMS) max.	OAC5(A), 15(A), 24(A) :1.6V
Leakage current	-IDC5,15,24 :100uA max.	IDC5,15,24 :0.1mA (at 30VDC)
	-IAC5(A),15(A),24(A) :100 uA max.	IAC5(A),15(A),24(A) :0.1mA (at 30VDC)
	-ODC5,15,24 :1 mA max. (at 60 VDC)	ODC5,15,24 :1mA (at max.voltage)
	-ODC5A,15A,24A :1mA max. (at 200 VDC)	ODC5(A),15(A),24(A) :1mA (at max.voltage)
	-OAC5,15,24 : 2.5mA max. (at 120 VAC)	OAC5,15,24 : 5 mA (at Nominal Voltage-60 Hz)
	-OAC5A,15A,24A :5mA max. (at 240 VAC)	OAC5A,15A,24A :2.5 mA (at 120 VAC)
	Insulation resistance	G3TC series :100 MOhms min. (at 500VDC)
Dielectric strength	G3TC series :4000 VAC, 50/60 Hz for 1 min between input and output	All I/O modules :4,000 Vrms between input and output
Vibration resistance	G3TC series :Malfunction: 10 to 55 to 10 Hz, 0.75 mm single amplitude	
Ambient temperature	G3TC series : Operating: -30 to 80 °C * Storage: -30 to 100 °C * *with no icing or condensation	All I/O modules : Operating: -30 to 70 °C
Ambient humidity	G3TC series :Operating: 45 to 85 %	
Certified standard	G3TC series : UL508,UL1950,CSA22.2 NO.14, NO.950, EN60950	

Operation ratings – Input

Operation ratings are almost compatible.

Item	Product discontinuation Model G3TC (OMRON)	Recommended replacement Opto 22
Operating voltage	-IDC5,15,24 :10 to 32 VDC / 15 to 32 VAC	IDC5,15,24 :10 to 32 VDC / 12 to 32 VAC
	-IAC5,15,24 :90 to 140 VAC/VDC	IAC5,15,24 :90 to 140 VAC/VDC
	-IAC5A,15A,24A :180 to 280 VAC/VDC	IAC5A,15A,24A :180 to 280 VAC/VDC
	-ODC5(A) :2.5 to 8 VDC	ODC5(A) :2.5 to 8 VDC
	-ODC15(A) :9 to 16 VDC	ODC15(A) :9 to 16 VDC
	-ODC24(A) :18 to 32 VDC	ODC24(A) :18 to 32 VDC
	-OAC5(A) :2.5 to 8 VDC	OAC5(A) :2.5 to 8 VDC
	-OAC15(A) :9 to 16 VDC	OAC15(A) :9 to 16 VDC
-OAC24(A) :18 to 32 VDC	OAC24(A) :18 to 32 VDC	
Must operate voltage	-IDC5,15,24 :10 VDC / 15 VAC max.	IDC5,15,24 :10 VDC / 12 VAC
	-IAC5,15,24 :90 VAC/VDC max.	IAC5,15,24 :90 VAC/VDC
	-IAC5,15,24 :180 VAC/VDC max.	IAC5A,15A,24A :180 VAC/VDC
	-ODC5(A) :2.5 VDC max.	ODC5(A) :2.5 VDC
	-ODC15(A) :9 VDC max.	ODC15(A) :9 VDC
	-ODC24(A) :18 VDC max.	ODC24(A) :18 VDC
	-OAC5(A) :2.5 VDC max.	OAC5(A) :2.5 VDC
	-OAC15(A) :9 VDC max.	ODC15(A) :9 VDC
-OAC24(A) :18 VDC max.	ODC24(A) :18 VDC	
Must release voltage	-IDC5,15,24 : 3 VDC/VAC min.	IDC5,15,24 : -
	-IAC5,15,24 :25 VAC/VDC min.	IAC5, 15, 24 : -
	-IAC5A,15A,24A :45 VAC/VDC min.	IAC5A,15A,24A : -
	-ODC5(A),15(A),24(A) :1 VDC min.	ODC5(A),15(A),24(A) :1 VDC
	-OAC5(A),15(A),24(A) :1 VDC min.	OAC5(A), 15(A), 24(A) :1 VDC
Input current at rated voltage	-IDC5,15,24 :25 mA max.	IDC5,15,24 :25 mA
	-IAC5,15,24 : 5 mA max.	IAC5,15,24 : 5 mA
	-IAC5A,15A,24A : 5 mA max.	IAC5A,15A,24A : 5mA
	-ODC5(A),15(A),24(A) :18 mA max.	ODC5(A) :12 mA
		ODC15(A) :15 mA
		ODC24(A) :18 mA
	-OAC5(A), 15(A), 24(A) :18 mA max.	OAC5(A) :12 mA
		OAC15(A) :15 mA
OAC24(A) :18 mA		
Input resistance	-IDC5,15,24 :1.5 kOhms	IDC5,15,24 :1.5 kOhms
	-IAC5,15,24 :30 kOhms	IAC5,15,24 :28 kOhms
	-IAC5A,15A,24A :69 kOhms	IAC5A,15A,24A :70 kOhms
Control resistance (RC in circuit configuration)	-ODC5(A) :240 Ohms	ODC5(A) :220 Ohms
	-ODC15(A) :1 kOhms	ODC15(A) :1 kOhms
	-ODC24(A) :2.2 kOhms	ODC24(A) :2.2 kOhms
	-OAC5(A) :240 Ohms	OAC5(A) :220 Ohms
	-OAC15(A) :1 kOhms	OAC15(A) :1 kOhms
	-OAC24(A) :2.2 kOhms	OAC24(A) :2.2 kOhms

Operation ratings – Output

Operation ratings are almost compatible.

Item	Product discontinuation Model G3TC (OMRON)	Recommended replacement Opto 22
Output supply voltage-nominal	-IDC5 :5 VDC	IDC5 :5 VDC
	-IDC15 :12 VDC	IDC15 :12 VDC
	-IDC24 :24 VDC	IDC24 :24 VDC
	-IAC5(A) :5 VDC	IAC5(A) :5VDC
	-IAC15(A) :12 VDC	IAC15(A) :12 VDC
	-IAC24(A) :24 VDC	IAC24(A) :24 VDC
Operating supply voltage-range	-IDC5 :4.5 to 6 VDC	IDC5 :4.5 to 6 VDC
	-IDC15 :12 to 18 VDC	IDC15 :12 to 18 VDC
	-IDC24 :20 to 30 VDC	IDC24 :20 to 30 VDC
	-IAC5(A) :4.5 to 6 VDC	IAC5(A) :4.5 to 6 VDC
	-IAC15(A) :12 to 18 VDC	IAC15(A) :12 to 18 VDC
	-IAC24(A) :20 to 30 VDC	IAC24(A) :20 to 30 VDC
Output supply current at rated input voltage	-IDC5 :18 mA max.	IDC5 :12 mA
	-IDC15 :15 mA max.	IDC15 :15 mA
	-IDC24 :12 mA max.	IDC24 :18 mA
	-IAC5(A) :18 mA max.	IAC5(A) :12 mA
	-IAC15(A) :15 mA max.	IAC15(A) :15 mA
	-IAC24 :12 mA max.	IAC24 :18 mA
	-IAC24A :12 mA max.	IAC24A :15 mA
Control resistance (RC in circuit configuration)	-IDC5 :240 Ohms	IDC5 :220 Ohms
	-IDC15 :1 kOhms	IDC15 :1 kOhms
	-IDC24 :2.2 kOhms	IDC24 :2.2 kOhms
	-IAC5(A) :240 Ohms	IAC5(A) :220 Ohms
	-IAC15(A) :1 kOhms	IAC15(A) :1 kOhms
	-IAC24(A) :2.2 kOhms	IAC24(A) :2.2 kOhms
Output current	-IDC5, 15, 24 :50 mA max.	IDC5, 15, 24 :50 mA
	-IAC5(A),15(A),24(A) :50 mA max.	IAC5(A),15(A),24(A) :50 mA
Rated load voltage	-ODC5,15,24 : 60 VDC	ODC5,15,24 : 60 VDC
	-ODC5A,15A,24A :200 VDC	ODC5A,15A,24A :200 VDC
	-OAC5,15,24 :120 VAC	OAC5,15,24 :120 VAC
	-OAC5A,15A,24A :240 VAC	OAC5A,15A,24A :240 VAC
Load voltage range	-ODC5,15,24 :5 to 60 VDC	ODC5,15,24 :5 to 60 VDC
	-ODC5A,15A,24A :5 to 200 VDC	ODC5A,15A,24A :5 to 200 VDC
	-OAC5,15,24 :75 to 140 VAC	OAC5,15,24 :75 to 140 VAC
	-OAC5A,15A,24A :75 to 280 VAC	OAC5A,15A,24A :75 to 280 VAC
Load current	-ODC5,15,24 :0.01 to 3 A	ODC5,15,24 :3A (at 45°C), 2A (at 70°C)
	-ODC5A,15A,24A :0.01 to 1.0 A	ODC5A,15A,24A :1A (at 45°C), 0.55A (at 70°C)
	-OAC5,15,24 :0.05 to 3 A	OAC5,15,24 :3A(at 45°C), 2A(at 70°C)
	-OAC5A,15A,24A :0.05 to 3 A	OAC5A,15A,24A :3A(at 45°C), 2A(at 70°C)
Inrush current	-ODC5,15,24 :18 A (10 ms)	
	-ODC5A,15A,24A : 9 A (10 ms)	
	-OAC5,15,24 : 45 A (60 Hz, 1 cycle)	
	-OAC5A,15A,24A : 45 A (60 Hz, 1 cycle)	