

High Inrush Resistance &
Long Electrical Life Relay
G5Q-EL3

New Relay G5Q-EL3







High inrush & Long e-life type in small size PCB relay G5Q series

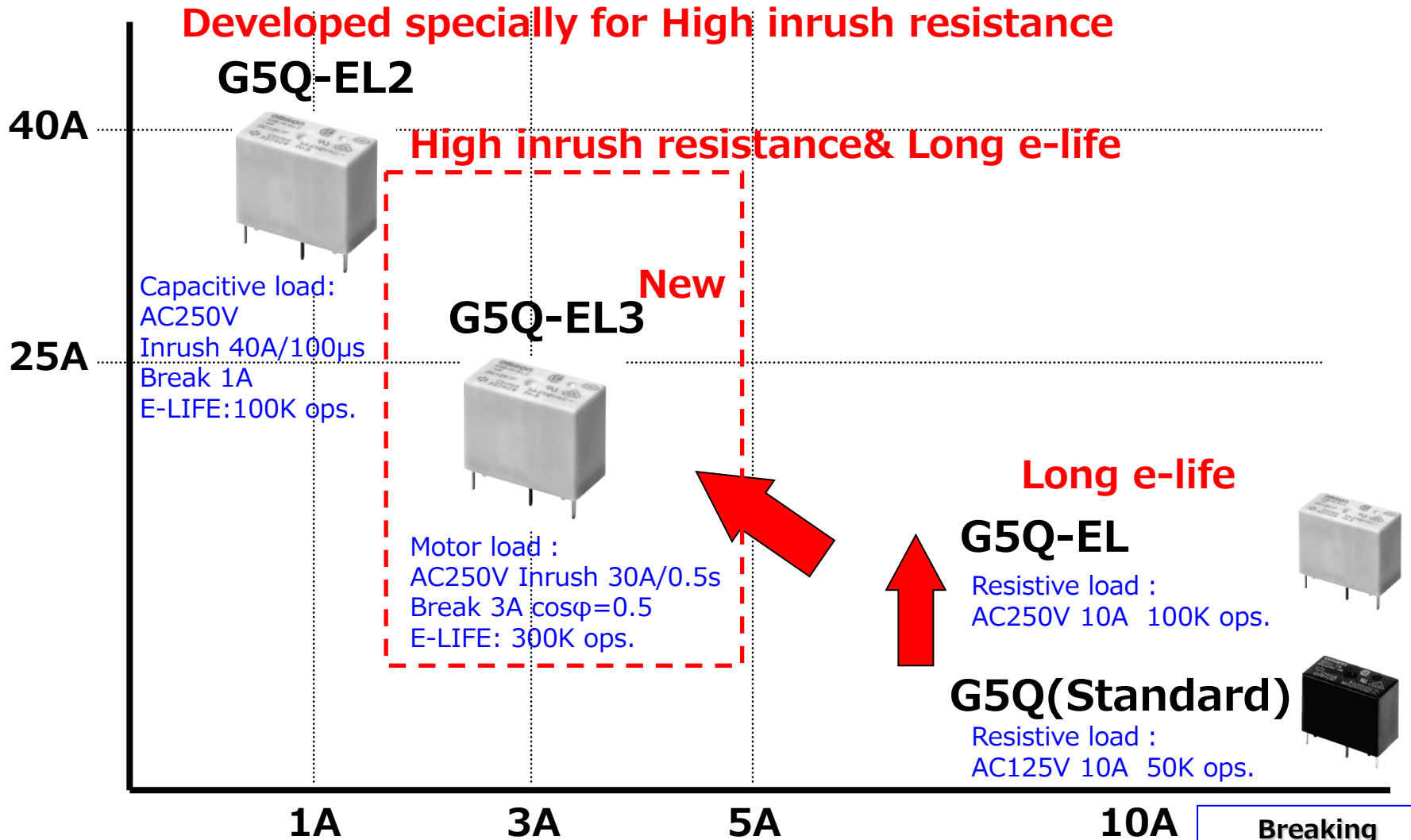
Features

300K ops min at Inrush 30A / 3A break 250VAC

Explosion-proof, Conforms to IEC/EN 60335-1(Glow wire test)

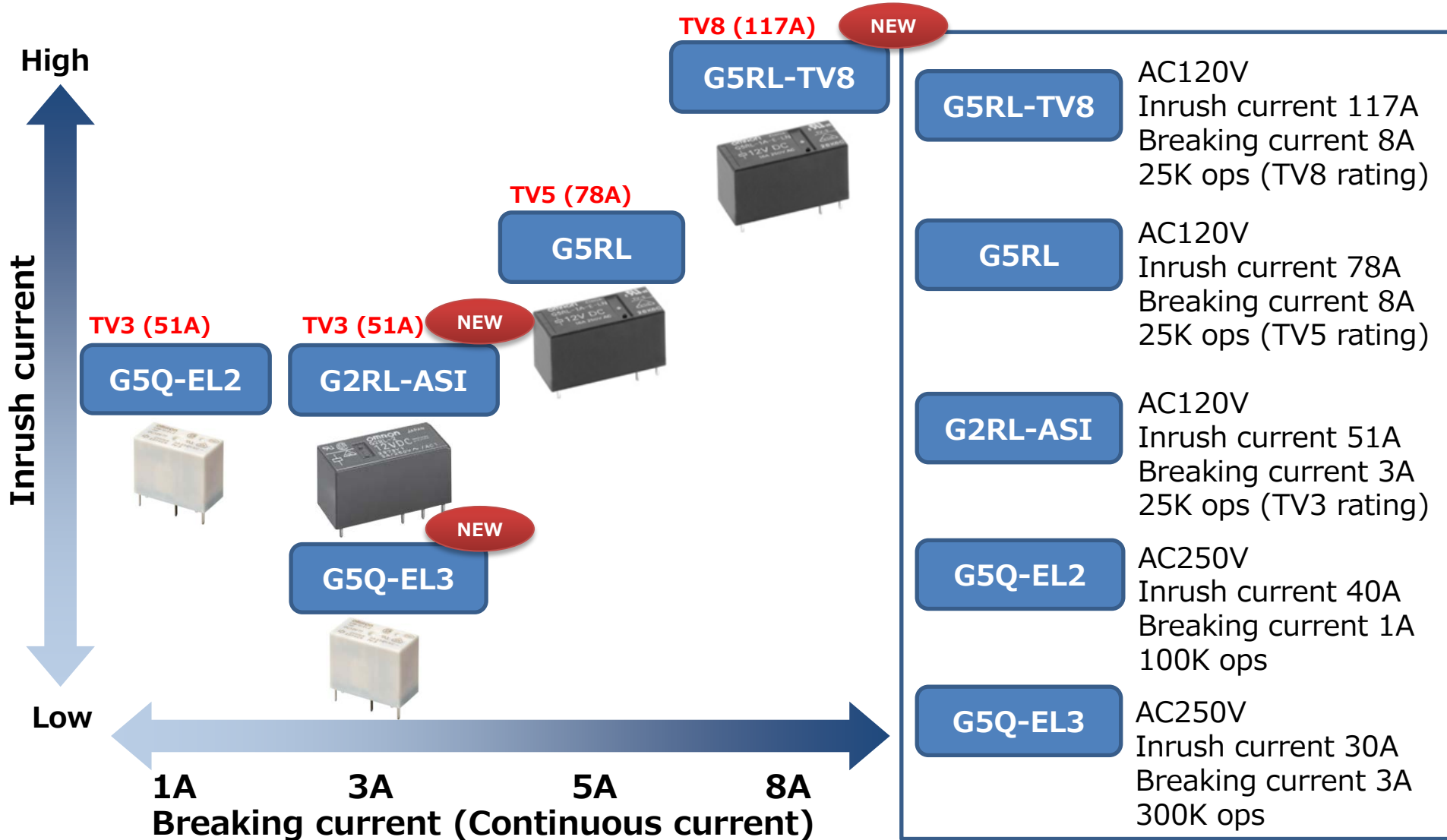
manufacturer		G5Q-1A	G5Q-1A-EL-HA-VH	G5Q-1A4-EL2-HA	G5Q-1A4-EL3-HA	
Appearance						
Enclosure rating		Fully sealed/ Flux protection	Flux protection	Fully sealed	Fully sealed	
Contact	Contact form	1a	1a	1a	1a	
	Rated load	Resistive load	125V, 10A, 50K ops. 125V, 3A, 200K ops. 250VAC, 3A, 100K ops. 30VDC, 3A, 100K ops.	250VAC, 10A, 100K ops.	---	---
		Inductive load	---	---	250VAC, Inrush 40A /Break 1A, 100K ops.	250VAC, Inrush 30A /Break 3A, 300K ops.
	Max. switching current		10A	10A	10A	10A
	Rated coil voltage			12, 24VDC	12, 24VDC	5, 12, 24VDC
Coil	Coil consumption	Approx. 200mW	Approx. 400mW	Approx. 400mW	Approx. 400mW	
Ambient temperature		-40°C~ +85°C	-40°C~ +85°C	-40°C~ +85°C	-40°C~ +85°C	
Glow Wire (IEC / EN 60335-1)		---	EN60335-1	EN60335-1	EN60335-1	
Explosion Proof (IEC / EN60079-15)		---	---	---	EN60079-15	
TV rating		---	---	TV3	---	
Dimensions		20.3*10.3*15.8	20.3*10.3*15.8	20.3*10.3*15.8	20.3*10.3*15.8	

Inrush current



Breaking current

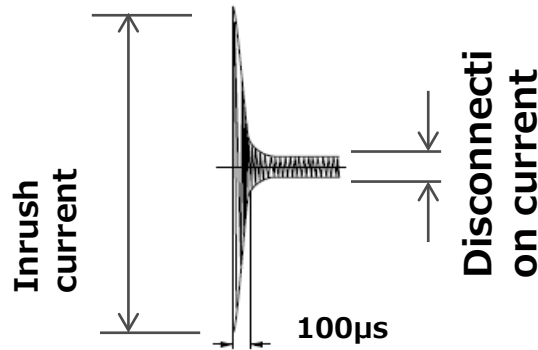
Omron offers several high inrush resistance models, so you can select suitable relay based on the load.





G5Q-EL2

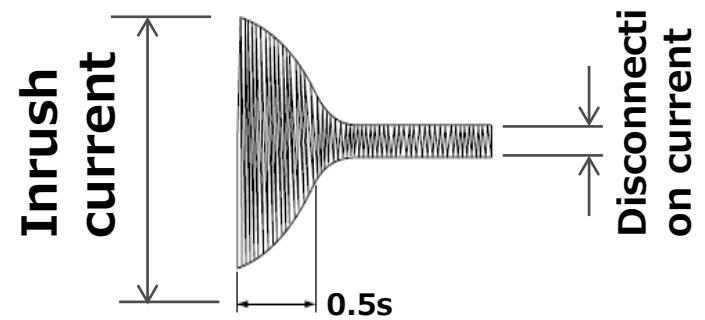
Load Voltage < 277VAC with sine wave
Inrush current < 40A 100 μ s
Disconnection current < 1A with sine wave
Carry current < 10A



AC capacitive load current wave form

G5Q-EL3

Load Voltage < 277VAC with sine wave
Inrush current < 30A 0.5s
Disconnection current < 3A with sine wave
Carry current < 10A



AC motor load current wave form

For Pump, Motor, Fan, Solenoid Valve, Compressor, Capacitor and Contactor load



HVAC control



Lighting Control



Thermostat



Boiler



Power Supply



Robot Control



Temp. Controller



Inverter

Inrush current

G5Q-EL2
(High inrush resistance type)

50A

40A

30A

20A

10A

For Power supply, Inrush current prevention
Coil, Motor, Pump, Lamp
Inrush current 10~50A/ Breaking current 1A



[New]
G5Q-EL3
(High inrush resistance & long e-life type)

For Power supply, Compressor
Coil, Motor, Pump, Lamp
Inrush current **10~30A**/ Breaking current 1~3A

G5Q-EL
(Long e-life type)

For Heater, Coil,
Motor
Breaking current
~10A

1A

3A

10A

Breaking current

Power Supply

Inrush-current limiter circuits * 1pc

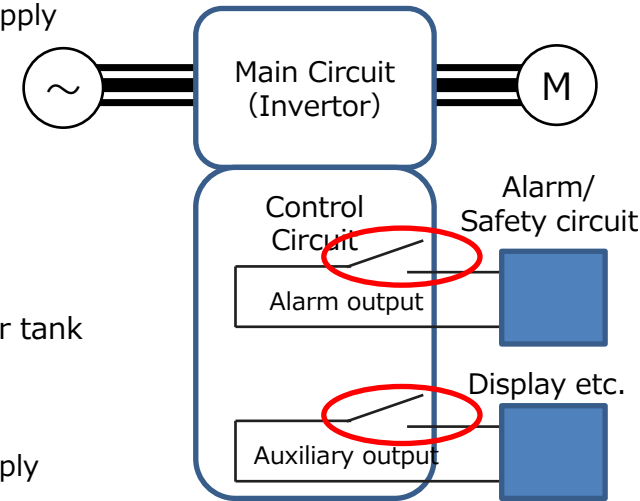
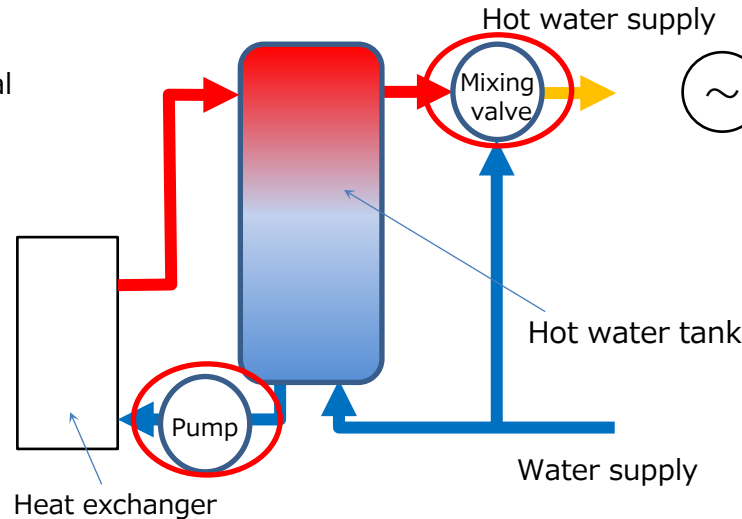
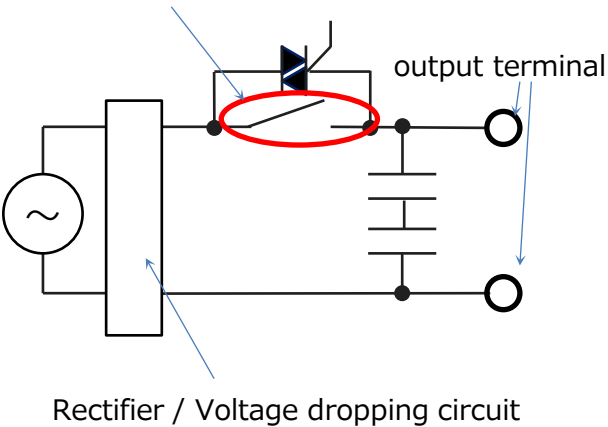
Heat pump type hot water boilers

Valve (G5Q) * 1pc
Pump(G5Q-EL2) * 1pc

Inverter

Alarm output * 1pc
Auxiliary output * 1pc

Inrush-current limiter circuits



Requirement

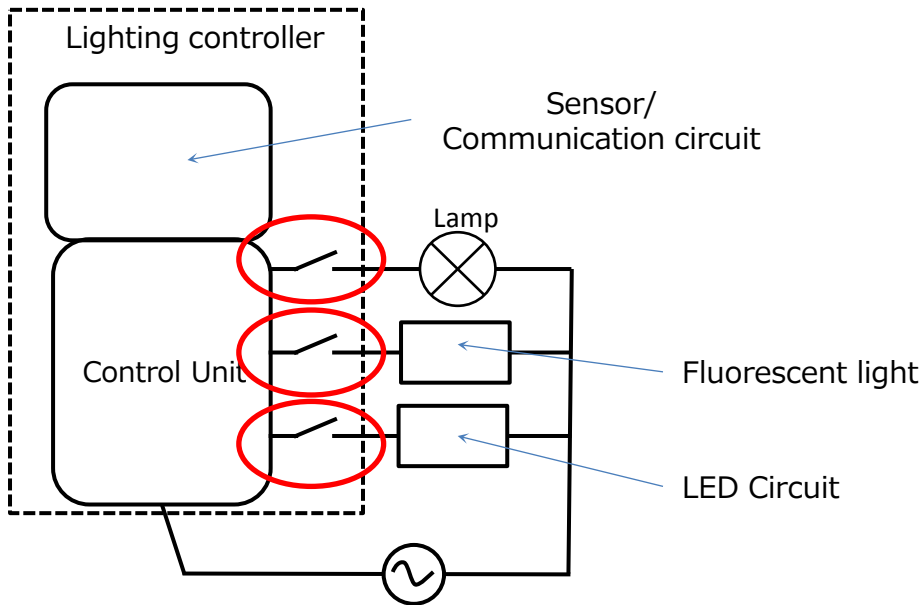
- Longer life
- Conforms to Glow wire
- Better cost performance
- Resistance for High inrush

Recommended Relay

- G5Q-EL(10A 100Kops)
- G5Q-EL, G5Q-EL2, G5Q-HA
- G5Q(10A 50Kops)
- G5Q-EL2 (Inrush 40A, Break 1A 100Kpcs)

Lighting controller

Switching Lights * 1~6pcs

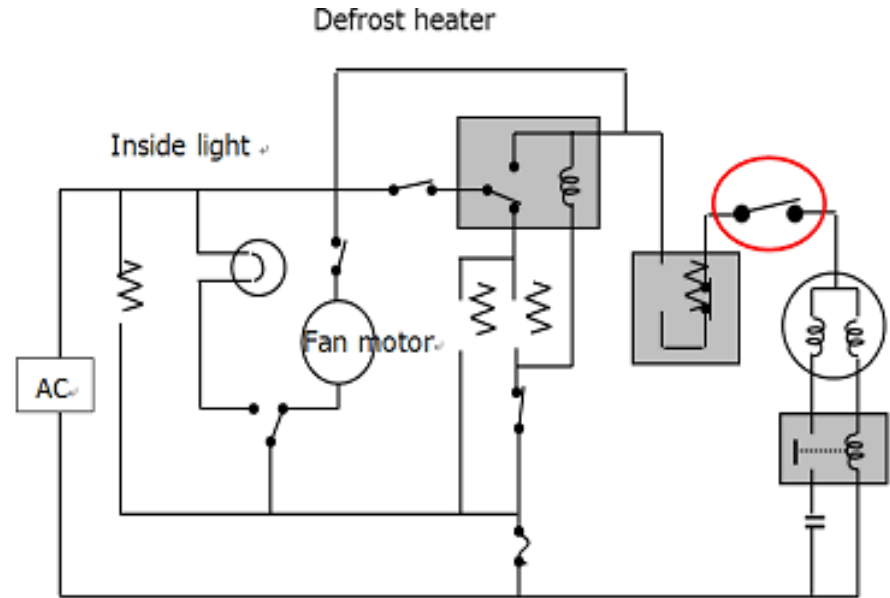


Requirement

Resistance for High inrush

Refrigerator

Switching Power supply * 1pc



Recommended Relay

G5Q-EL2 (Inrush 40A, Break 1A 100Kpcs)

G5Q-EL3 (Inrush 30A, Break 3A 300Kpcs)

THANK YOU!

www.components.omron.com