



Type	FRA1	FRA1B
Appearance		
Dimensions: L x W x H (mm)	Open: 30.2 x 24.6 x 17 Dust : 32.2 x 27 x 20.1	32.5 x 27.6 x 20.5
International Security Certificates	us: E139468 : R50128328	us: E139468
Coil Voltage (V)	DC5, 6, 9, 12, 18, 24, 48, 110/120 AC12, 24, 110, 120, 220/240	DC5, 6, 9, 12, 18, 24, 48, 110
Coil Power	0.9W, 2VA	1.5W
Contact Material	AgCdO, AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
Contact Arrangement	1A, 1B, 1C	1A, 1C
Contact transfer current (A)	80A 70A 50A 40A 30A 20A 15A 10A 5A 1A	40A
Contact rating	N.O. : 40A 240VAC N.C. : 30A 240VAC Motor: 2HP 250VAC	N.O. : 50A 240VAC N.C. : 35A 240VAC Motor: 2HP 250VAC
Max. Switching Power	1,200W 7,200VA(10,000VA)	1,500W 12,000VA
Max. Switching Voltage	110VDC 300VAC	110VDC 300VAC
Ambient temperature	-55°C ~ +125°C	-55°C ~ +125°C
Dielectric Strength	Between Contacts	50Hz 1,500VAC
	Between Contact and Coil	50Hz 1,500VAC (with pin 6) 50Hz 3,000VAC (without pin 6)
Insulation Resistance	1,000MΩ	1,000MΩ
Initial Contact Resistance	≤30mΩ	≤30mΩ
Electrical Life (Operations)	1 x 10 <sup>5</sup>	3 x 10 <sup>4</sup>
Mechanical Life (Operations)	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
Weight (Approx.)	Open: 27g; Sealed: 30g	Open: 27g; Sealed: 30g
Mounting Layout (Bottom View) (mm)		
Wiring Diagram (Bottom View)	 1A 1B 1C	 1A 1C
Cross Reference	Matsushita: JT Omron : G8P TYCO : T90	Matsushita: JT Omron : G8P TYCO : T90

FRA1T	FRA1TB
FRA1T : 32.4 x 27.5 x 28.2 FRA1T-1: 32.4 x 27.5 x 20	FRA1BT : 32.4 x 27.5 x 28.2 FRA1BT-1: 32.4 x 27.5 x 20
us: E139468 : R50128328	us: E139468
DC5, 6, 9, 12, 18, 24, 48, 110/120 AC12, 24, 110, 120, 220/240	DC5, 6, 9, 12, 18, 24, 48, 110
0.9W, 2VA	1.5W
AgCdO, AgSnO <sub>2</sub>	AgSnO <sub>2</sub>
1A, 1B, 1C	1A, 1C
40A	50A
1A : 40A 240VAC 1B : 30A 240VAC 1C : 40A/30A 240VAC Motor: 2HP 250VAC	N.O. : 50A 240VAC N.C. : 35A 240VAC Motor: 2HP 250VAC
1,200W 7,200VA (10,000VA)	1,500W 12,000VA
110VDC 300VAC	110VDC 300VAC
-55°C ~ +125°C	-55°C ~ +125°C
50Hz 1,500VAC	50Hz 1,500VAC
50Hz 2,500VAC	50Hz 2,500VAC
1,000MΩ	1,000MΩ
≤30mΩ	≤30mΩ
1 x 10 <sup>5</sup>	3 x 10 <sup>4</sup>
1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
33g(low profile type); 35g	33g(low profile type); 35g
 1A 1B 1C	 1A 1C
Matsushita: JT Omron : G8P TYCO : T90	Matsushita: JT Omron : G8P TYCO : T90



Type	FRA1TP	FRA1TPB	
Appearance			
Dimensions: L x W x H (mm)	FRA1TP : 50.2 x 27.5 x 28.2 FRA1TP-1: 50.2 x 27.5 x 20	50.2 x 27.5 x 28.2	
International Security Certificates	ULus: E139468 CE : R50128328	PENDING	
Coil Voltage (V)	DC5, 6, 9, 12, 18, 24, 48, 110/120 AC12, 24, 110, 120, 220/240	DC5, 6, 9, 12, 18, 24, 48, 110	
Coil Power	0.9W, 2VA	1.5W	
Contact Material	AgCdO, AgSnO <sub>2</sub>	AgSnO <sub>2</sub>	
Contact Arrangement	1A, 1B, 1C	1A, 1C	
Contact transfer current (A)	40A	50A	
Contact rating	1A : 40A 240VAC 1B : 30A 240VAC 1C : 40A/30A 240VAC Motor: 2HP 250VAC	N.O. : 50A 240VAC N.C. : 35A 240VAC Motor: 2HP 250VAC	
Max. Switching Power	1,200W 7,200VA (10,000VA)	1,500W 12,000VA	
Max. Switching Voltage	110VDC 300VAC	110VDC 300VAC	
Ambient temperature	-55°C ~ +125°C	-55°C ~ +125°C	
Dielectric Strength	Between Contacts	50Hz 1,500VAC	50Hz 1,500VAC
	Between Contact and Coil	50Hz 2,500VAC	50Hz 2,500VAC
Insulation Resistance	1,000MΩ	1,000MΩ	
Initial Contact Resistance	≤30mΩ	≤30mΩ	
Electrical Life (Operations)	1 x 10 <sup>6</sup>	3 x 10 <sup>4</sup>	
Mechanical Life (Operations)	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>	
Weight (Approx.)	35g(low profile type); 37g	37g	
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			
Cross Reference	Matsushita: JT Omron : G8P TYCO : T90	Matsushita: JT Omron : G8P TYCO : T90	

FRA4	FRA6V	FRA6VN
50 x 32.2 x 24	30.2 x 16.2 x 26.5	30.2 x 16.2 x 26.5
ULus: E139468	ULus: E139468	ULus: E139468
DC5, 6, 9, 12, 18, 24, 48	DC12, 24, 48	DC12, 24, 48
1.2W	0.9W	0.9W
AgCdO, AgSnO <sub>2</sub>	AgCdO, AgSnO <sub>2</sub>	AgCdO, AgSnO <sub>2</sub>
1A	1A	1A
30A	25A	25A
30A 250VAC 2HP 250VAC	25A 250VAC 20A 277VAC 1½HP 250VAC	25A 250VAC 20A 277VAC 1½HP 250VAC
7,500VA	6,380VA	6,380VA
277VAC	300VAC	300VAC
-40°C ~ +70°C	-30°C ~ +85°C	-30°C ~ +85°C
50Hz 1,200VAC	50Hz 1,000VAC	50Hz 1,000VAC
50Hz 4,000VAC	50Hz 5,000VAC	50Hz 5,000VAC
1,000MΩ	1,000MΩ	1,000MΩ
≤100mΩ	≤50mΩ	≤50mΩ
1 x 10 <sup>6</sup>	1 x 10 <sup>6</sup>	1 x 10 <sup>6</sup>
1 x 10 <sup>6</sup>	1 x 10 <sup>7</sup>	5 x 10 <sup>6</sup>
55g	28g	28g
Matsushita: JH	Matsushita: JM OEG : PCF Omron : G4F	Matsushita: JM OEG : PCF Omron : G4F



Type	FRA7	FRA7T
Appearance		
Dimensions: L x W x H (mm)	30.5 x 16 x 26.5	30.5 x 16 x 23.5
International Security Certificates	ULus: E139468	ULus: E139468
Coil Voltage (V)	DC5, 12, 24, 48	DC5, 12, 24
Coil Power	0.9W	0.9W
Contact Material	AgCdO, AgSnO <sub>2</sub>	AgCdO, AgSnO <sub>2</sub>
Contact Arrangement	1A	1A
Contact transfer current (A)	20A	20A
Contact rating	20A 250VAC 1HP 120VAC 2HP 240VAC	20A 250VAC 1HP 120VAC 2HP 240VAC
Max. Switching Power	6,250VA	6,250VA
Max. Switching Voltage	300VAC	300VAC
Ambient temperature	-25°C ~ +70°C	-25°C ~ +70°C
Dielectric Strength	Between Contacts	50Hz 1,000VAC
	Between Contact and Coil	50Hz 4,500VAC
Insulation Resistance	1,000MΩ	1,000MΩ
Initial Contact Resistance	≤30mΩ	≤30mΩ
Electrical Life (Operations)	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
Mechanical Life (Operations)	2 x 10 <sup>6</sup>	2 x 10 <sup>6</sup>
Weight (Approx.)	23g	23g
Mounting Layout (Bottom View) (mm)		
Wiring Diagram (Bottom View)		
Cross Reference	Matsushita: LF Omron : G4A	Matsushita: LF Omron : G4A

FRA8	FRM1	FRM1H
52 x 33.7 x 26.7	29 x 13 x 26	29 x 13 x 26.5
ULus: E139468	ULus: E141516	ULus: E141516
DC6, 12, 24, 48, 110 AC24, 120, 208, 220, 240, 277	DC5, 6, 9, 12, 24, 48, 60, 110	DC5, 6, 9, 12, 24, 48, 60
1.7W 4.0VA	0.56W	0.53W
AgCdO, AgSnO <sub>2</sub>	AgCdO, AgSnO <sub>2</sub>	AgNi, AgSnO <sub>2</sub>
2A, 2C	1A, 1B, 1C, 2A, 2C	1A, 1B, 1C
30A	10A	20A
NO: 30A 277VAC 1HP 120VAC 2½HP 240VAC NC: 3A 277VAC	1C: 10A 277VAC/30VDC 1/3HP 250VAC 2C: 10A 250VAC/30VDC 1/4HP 240VAC 1/8HP 120VAC	20A 277VAC/24VDC 1HP 240VAC TV-8 125VAC
8,310VA 277VAC	300W 2,770VA 30VDC 277VAC	480W 5,540VA 30VDC 277VAC
AC: -40°C ~ +65°C; DC: -40°C ~ +85°C	-40°C ~ +85°C	-40°C ~ +85°C
50Hz 1,500VAC	50Hz 1,000VAC	50Hz 1,000VAC
50Hz 4,000VAC	50Hz 5,000VAC	50Hz 4,000VAC
1,000MΩ	1,000MΩ	1,000MΩ
≤50mΩ	≤50mΩ	≤50mΩ
1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
5 x 10 <sup>6</sup>	1 x 10 <sup>7</sup>	5 x 10 <sup>6</sup>
86g	18g	18.5g
TYCO: T92	Matsushita: JR Omron : G2R TYCO : RKA	Matsushita: JR Omron : G2RE TYCO : 23056



Type	FRM2	FRM2H	
Appearance			
Dimensions: L x W x H (mm)	29.2 x 12.8 x 20.6	29.2 x 12.8 x 20.6	
International Security Certificates	CE us: E141516 R50084297	CE us: E141516 R50007462	
Coil Voltage (V)	DC5, 6, 9, 12, 24, 48	DC5, 6, 9, 12, 24, 48	
Coil Power	0.54W, 0.72W	0.54W, 0.72W	
Contact Material	AgCdO, AgSnO <sub>2</sub>	AgCdO, AgSnO <sub>2</sub>	
Contact Arrangement	1A, 1C, 2A, 2C	1A, 1B, 1C	
Contact transfer current (A)	10A	16A	
Contact rating	1C: 10A 250VAC/30VDC 2C: 5A 250VAC/30VDC	16A 240VAC/30VDC	
Max. Switching Power	300W 2,500VA	480W 4,000VA	
Max. Switching Voltage	125VDC 250VAC	125VDC 250VAC	
Ambient temperature	-40°C ~ +70°C	-30°C ~ +70°C	
Dielectric Strength	Between Contacts	50Hz 1,000VAC	50Hz 1,000VAC
	Between Contact and Coil	50Hz 5,000VAC	50Hz 5,000VAC
Insulation Resistance	1,000MΩ	1,000MΩ	
Initial Contact Resistance	≤50mΩ	≤100mΩ	
Electrical Life (Operations)	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	
Mechanical Life (Operations)	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>	
Weight (Approx.)	13g	13g	
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			
Cross Reference	Matsushita: JW Omron : G2R TYCO : 23077	Matsushita: JW Omron : G2RE TYCO : 23056	

FRM2HT	FRM8	FRM10LH
29 x 12.6 x 24.2	20.5 x 10.2 x 15.3	28.5 x 10.1 x 12.5
DC5, 6, 9, 12, 18, 24, 48	DC3, 5, 6, 9, 12, 18, 24, 48	DC5, 6, 9, 12, 18, 24, 48, 60
0.53W	0.2W, 0.45W	1 pole: 0.25W; 2 poles: 0.36W
AgCdO, AgSnO <sub>2</sub>	AgCdO, AgNi	AgNi, AgSnO <sub>2</sub>
1A	1A, 1C	1A, 1B, 1C, 2A, 2B, 2C
16A	10A	10A
16A 250VAC/30VDC	NO: 10A 125VAC 5A 250VAC/30VDC NC: 3A 250VAC/30VDC	1C: 10A 250VAC/30VDC 2C: 5A 250VAC/30VDC
480W 4,000VA	150W 1,250VA	1pole: 300W 2,500VA; 2 poles: 150W 1,250VA
30VDC 277VAC	30VDC 277VAC	125VDC 440VAC
-40°C ~ +70°C	-40°C ~ +70°C	-40°C ~ +85°C
50Hz 1,000VAC	50Hz 1,000VAC	50Hz 1,000VAC
50Hz 5,000VAC	50Hz 4,000VAC	50Hz 5,000VAC
1,000MΩ	1,000MΩ	1,000MΩ
≤50mΩ	≤100mΩ	≤100mΩ
1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
15g	7g	8g
Matsushita: JR Omron : G5J P&B : RHS	Matsushita: JQ/PQ Omron : G5Q/G5SB TYCO : RE/PCH	Omron : G6RN TYCO : RYII



Type	FRM10N	FRM10NI	
Appearance			
Dimensions: L x W x H (mm)	29 x 12.7 x 15.7	29 x 12.7 x 15.7	
International Security Certificates	us: E141516	us: E141516	
Coil Voltage (V)	DC5, 6, 9, 12, 24, 48, 60, 110 AC24, 115, 230	DC5, 6, 9, 12, 24, 48, 60	
Coil Power	0.41W 0.75VA	0.25W	
Contact Material	AgCdO, AgNi, AgSnO <sub>2</sub>	AgCdO, AgNi, AgSnO <sub>2</sub>	
Contact Arrangement	1A, 1C, 2A, 2C	1A, 1C	
Contact transfer current (A)	80A 70A 50A 40A 30A 20A 15A 10A 5A 1A	80A 70A 50A 40A 30A 20A 15A 10A 5A 1A	
Contact rating	1C: 12A 250VAC 2C: 8A 250VAC/30VDC	10A 250VAC	
Max. Switching Power	1 pole: 3,000VA; 2 poles: 2,000VA	2,500VA	
Max. Switching Voltage	125VDC 440VAC	125VDC 440VAC	
Ambient temperature		-40°C ~ +105°C	
Dielectric Strength	Between Contacts	50Hz 1,000VAC	50Hz 1,000VAC
	Between Contact and Coil	50Hz 5,000VAC	50Hz 5,000VAC
Insulation Resistance	1,000MΩ	1,000MΩ	
Initial Contact Resistance	≤100mΩ	≤100mΩ	
Electrical Life (Operations)	DC: 1 x 10 <sup>5</sup> AC: 5 x 10 <sup>4</sup>	1 x 10 <sup>5</sup>	
Mechanical Life (Operations)	DC: 1 x 10 <sup>7</sup> ; AC: 1 x 10 <sup>6</sup>	1 x 10 <sup>7</sup>	
Weight (Approx.)	13.5g	13.5g	
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			
Cross Reference	Matsushita: ALZ Omron : G2RL TYCO : RT	Matsushita: ALZ Omron : G2RL TYCO : RT	

FRM10NH	FRM10NB	FRM10NT
29 x 12.7 x 15.7	29 x 12.7 x 15.7	Vertical : 41 x 12.7 x 15.7 Horizontal: 45 x 12.7 x 15.7
us: E141516	PENDING	
DC5, 6, 9, 12, 18, 24, 48, 60, 110 AC24, 115, 230	DC5, 6, 9, 12, 18, 24, 48, 60, 110	DC5, 6, 12, 24, 48, 60, 110
0.41W 0.75VA	0.41W	0.41W
AgCdO, AgNi, AgSnO <sub>2</sub>	AgCdO, AgNi, AgSnO <sub>2</sub>	AgCdO, AgNi, AgSnO <sub>2</sub>
1A, 1C	1A, 1C	1A, 1B
80A 70A 50A 40A 30A 20A 15A 10A 5A 1A	80A 70A 50A 40A 30A 20A 15A 10A 5A 1A	80A 70A 50A 40A 30A 20A 15A 10A 5A 1A
16A	20A	20A
16A 250VAC	N.O.: 20A 277VAC N.C.: 16A 277VAC	20A 250VAC
4,000VA	5,600VA	5,000VA
125VDC 440VAC	440VAC	125VDC 440VAC
-40°C ~ +105°C	-40°C ~ +105°C	-40°C ~ +125°C
50Hz 1,000VAC	50Hz 1,000VAC	50Hz 1,000VAC
50Hz 5,000VAC	50Hz 5,000VAC	50Hz 5,000VAC
1,000MΩ	1,000MΩ	1,000MΩ
≤100mΩ	≤100mΩ	≤100mΩ
DC: 1 x 10 <sup>5</sup> AC: 5 x 10 <sup>4</sup>	20A: 5 x 10 <sup>4</sup> 16A: 1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
DC: 1 x 10 <sup>7</sup> ; AC: 1 x 10 <sup>6</sup>	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
13.5g	13.5g	16g
Matsushita: ALZ Omron : G5RL TYCO : RT	Matsushita: ALZ Omron : G5RL TYCO : RT	TYCO: V23077



Type	FRM11	FRM15	
Appearance			
Dimensions: L x W x H (mm)	1 pole : 24.5 x 10.5 x 24.5 2 poles: 24.5 x 12.8 x 24.8	20.4 x 7 x 15	
International Security Certificates	ULus: E141516	ULus: E141516	
Coil Voltage (V)	DC5, 6, 9, 12, 18, 24, 48	DC4.5, 5, 6, 9, 12, 18, 24	
Coil Power	0.25W, 0.53W	0.2W	
Contact Material	AgCdO, AgSnO <sub>2</sub>	AgCdO, AgNi, AgSnO <sub>2</sub>	
Contact Arrangement	1A, 1B, 1C, 2A	1A	
Contact transfer current (A)	80A 70A 50A 40A 30A 20A 15A 10A 5A 1A	10A	
Contact rating	1 pole : 10A 250VAC/30VDC 2 poles: 5A 250VAC/30VDC	3A 250VAC/30VDC	
Max. Switching Power	1 pole: 300W 2,500VA; 2 poles: 150W 1,250VA	90W 831VA	
Max. Switching Voltage	30VDC 250VAC	30VDC 277VAC	
Ambient temperature	-40°C ~ +70°C	-40°C ~ +85°C	
Dielectric Strength	Between Contacts	50Hz 1,000VAC	50Hz 750VAC
	Between Contact and Coil	50Hz 4,000VAC	50Hz 4,000VAC
Insulation Resistance	100MΩ	1,000MΩ	
Initial Contact Resistance	≤100mΩ	≤100mΩ	
Electrical Life (Operations)	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	
Mechanical Life (Operations)	1 pole: 1 x 10 <sup>7</sup> ; 2 poles: 1 x 10 <sup>6</sup>	1 x 10 <sup>7</sup>	
Weight (Approx.)	1 pole: 12g; 2 poles: 14.5g	4g	
Mounting Layout (Bottom View) (mm)			
Wiring Diagram (Bottom View)			
Cross Reference	Matsushita: LK-S Omron : G5PA	Matsushita: LD Omron : G5NB TYCO : PCT	



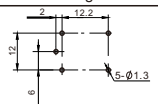
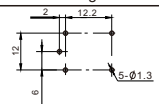
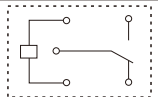
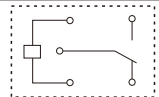
FRM15N	FRM16	FRM17
20.5 x 7.2 x 15.3	17.5 x 6.5 x 12.5	28 x 5 x 15
ULus: E141516	ULus: E141516	PENDING
DC4.5, 5, 6, 9, 12, 18, 24	DC5, 12, 24	DC5, 6, 9, 12, 18, 24, 48, 60
0.2W	0.2W	0.17W, 0.22W
AgCdO, AgNi, AgSnO <sub>2</sub>	Silver alloy	AgNi, AgSnO <sub>2</sub>
1A	1A	1A, 1C
10A	5A	6A
10A 277VAC/30VDC	5A 250VAC/30VDC	6A 250VAC/30VDC
300W 2,770VA	150W 1,250VA	180W 1,500VA
30VDC 277VAC	30VDC 250VAC	125VDC 400VAC
-40°C ~ +85°C	-25°C ~ +70°C	-40°C ~ +85°C
50Hz 750VAC	50Hz 750VAC	50Hz 1,000VAC
50Hz 4,000VAC	50Hz 3,000VAC	50Hz 4,000VAC
1,000MΩ	1,000MΩ	1,000MΩ
≤100mΩ	≤100mΩ	≤100mΩ
1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1A: 6 x 10 <sup>4</sup> 1C: 3 x 10 <sup>4</sup> (N.O.) 1 x 10 <sup>4</sup> (N.C.)
1 x 10 <sup>7</sup>	2 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
3g	3g	5g
Matsushita: LD Omron : G5NB TYCO : PCT	Omron: G6D	Matsushita: PE TYCO : V23092/SNR Fujitsu : FTR-LY




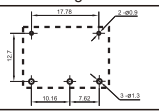
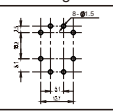
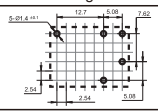
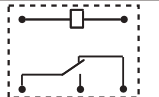
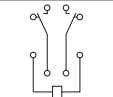
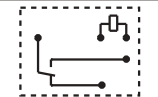


Type	FRM18	FRM18N
Appearance		
Dimensions: L x W x H (mm)	20 x 5 x 12.5	20 x 5 x 12.5
International Security Certificates	us: E141516 : 40008356	us: E141516 : 40008356
Coil Voltage (V)	DC5, 6, 9, 12, 18, 24	DC5, 6, 9, 12, 18, 24
Coil Power	0.12W, 0.18W	0.12W, 0.18W
Contact Material	AgNi, AgSnO <sub>2</sub>	AgNi, AgSnO <sub>2</sub>
Contact Arrangement	1A	1A
Contact transfer current (A)	80A 70A 50A 40A 30A 20A 15A 10A 5A 1A	80A 70A 50A 40A 30A 20A 15A 10A 5A 1A
Contact rating	5A 250VAC/30VDC	5A 250VAC/30VDC
Max. Switching Power	150W 1,250VA	150W 1,250VA
Max. Switching Voltage	30VDC 250VAC	30VDC 250VAC
Ambient temperature	-40°C ~ +85°C	-40°C ~ +85°C
Dielectric Strength	Between Contacts	50Hz 1,000VAC
	Between Contact and Coil	50Hz 2,000VAC
Insulation Resistance	1,000MΩ	1,000MΩ
Initial Contact Resistance	≤100mΩ	≤100mΩ
Electrical Life (Operations)	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
Mechanical Life (Operations)	2 x 10 <sup>7</sup>	2 x 10 <sup>7</sup>
Weight (Approx.)	3g	3g
Mounting Layout (Bottom View) (mm)		
Wiring Diagram (Bottom View)		
Cross Reference	Matsushita: PA Omron : G6DS TYCO : PCN	Matsushita: PA Omron : G6DS TYCO : PCN

FRS1	FRS1K	FRS4H
15.7 x 11 x 12	15.7 x 11 x 12	20.2 x 16.5 x 20.2
us: E141516	us: E141516	us: E141516
DC3, 5, 6, 9, 12, 24	DC3, 5, 6, 9, 12, 24	DC3, 6, 9, 12, 24, 48
0.2W, 0.36W, 0.45W	0.2W, 0.36W, 0.45W	0.36W, 0.45W
Ag, AgNi	Ag, AgNi	AgCdO, AgSnO <sub>2</sub>
1A, 1C	1A, 1C	1A, 1B, 1C
80A 70A 50A 40A 30A 20A 15A 10A 5A 1A	80A 70A 50A 40A 30A 20A 15A 10A 5A 1A	80A 70A 50A 40A 30A 20A 15A 10A 5A 1A
5A	5A	15A
5A 125VAC/30VDC	5A 125VAC/30VDC	15A 125VAC/28VDC
150W 625VA	150W 625VA	420W 2,200VA
60VDC 220VAC	60VDC 220VAC	125VDC 250VAC
-25°C ~ +75°C	-25°C ~ +75°C	-40°C ~ +85°C
50Hz 500VAC	50Hz 500VAC	50Hz 750VAC
50Hz 1,000VAC	50Hz 1,000VAC	50Hz 1,500VAC
100MΩ	100MΩ	100MΩ
≤50mΩ	≤50mΩ	≤100mΩ
1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
4g	4g	15g
Omron: G2E TYCO: 23101/T81	Omron: G2E TYCO: 23101/T81	Omron: G5L TYCO: 23074







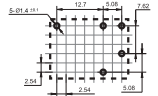
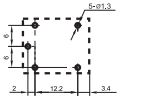
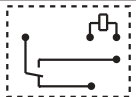
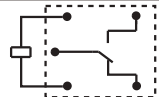










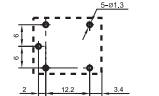
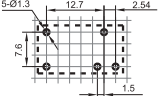
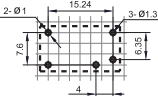
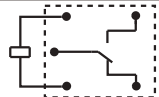
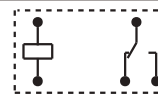
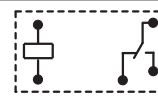
Type	FRS4L	FRS4N
Appearance		
Dimensions: L x W x H (mm)	21 x 16 x 20.6	22.5 x 16.8 x 20.2
International Security Certificates	ULus: E139468	ULus: E141516 CE : 40025435
Coil Voltage (V)	DC3, 5, 6, 9, 12, 24, 48	DC3, 5, 6, 9, 12, 18, 24, 48
Coil Power	0.36W, 0.45W	0.36W, 0.45W
Contact Material	AgCdO, AgSnO <sub>2</sub>	AgCdO, AgSnO <sub>2</sub>
Contact Arrangement	1A, 1B, 1C	1A, 1B, 1C
Contact transfer current (A)	20A	20A
Contact rating	20A 125VAC/28VDC 16A 277VAC/28VDC 10A 250VAC TV-8 1HP 125VAC/250VAC	20A 125VAC/28VDC 10A 250VAC ½HP 120VAC
Max. Switching Power	560W 4,450VA	560W 2,500VA
Max. Switching Voltage	110VDC 380VAC	110VDC 380VAC
Ambient temperature	-40°C ~ +85°C	-40°C ~ +70°C
Dielectric Strength	Between Contacts	50Hz 1,000VAC
	Between Contact and Coil	50Hz 4,000VAC
Insulation Resistance	100MΩ	100MΩ
Initial Contact Resistance	≤100mΩ	≤100mΩ
Electrical Life (Operations)	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
Mechanical Life (Operations)	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
Weight (Approx.)	16g	16g
Mounting Layout (Bottom View) (mm)		
Wiring Diagram (Bottom View)		
Cross Reference	Omron: G5LE TYCO: LNH	Omron: G5LE TYCO: SRUT

FRS5	FRS6	FRS8
		
22 x 16 x 10.5	22 x 17 x 16.5	22.1 x 17 x 15
ULus: E141516 CE : R2034463	ULus: E141516	ULus: E141516 CE : R9858273 / R50149969
DC5, 6, 9, 12, 24, 48, 110	DC3, 6, 9, 12, 24, 48	DC3, 5, 6, 9, 12, 24, 48
0.2W, 0.45W	0.5W	0.32W, 0.45W
AgCdO, AgNi, AgSnO <sub>2</sub>	AgCdO, AgSnO <sub>2</sub>	AgCdO, AgSnO <sub>2</sub>
1A, 1C	2C	1A, 1C
16A	5A	12A
16A 250VAC 10A 30VDC	5A 227VAC/30VDC	12A 125VAC/28VDC 10A 240VAC/28VDC 6A 300VAC/28VDC
480W 4,000VA	150W 1,250VA	336W 2,400VA
110VDC 380VAC	50VDC 380VAC	110VDC 380VAC
-40°C ~ +85°C	-40°C ~ +70°C	-40°C ~ +85°C
50Hz 750VAC	50Hz 750VAC	50Hz 1,000VAC
50Hz 1,500VAC	50Hz 1,000VAC	50Hz 2,000VAC
100MΩ	100MΩ	500MΩ
≤50mΩ	≤50mΩ	≤50mΩ
1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
5 x 10 <sup>5</sup>	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
9g	12g	11g
		
		
Matsushita: JV Omron : G5C TYCO : PCD	AZ: 946	Omron : G4K TYCO : 23148/T73 Takamisawa: LZ





Type	FRS8N	FRS11
Appearance		
Dimensions: L x W x H (mm)	21.4 x 16.5 x 15	19 x 15.6 x 15.5
International Security Certificates	 us: E141516  : R9858273 / R50149969	 us: E141516  : R50136658 / R50149970
Coil Voltage (V)	DC3, 5, 6, 9, 12, 24, 48	DC3, 5, 6, 9, 12, 24, 48
Coil Power	0.32W, 0.45W	0.36W
Contact Material	AgCdO, AgSnO <sub>2</sub>	AgCdO, AgSnO <sub>2</sub>
Contact Arrangement	1A, 1C	1A, 1C
Contact transfer current (A)	<div style="border: 1px solid black; padding: 2px; display: inline-block;">12A</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">20A</div>
Contact rating	12A 125VAC/28VDC 10A 240VAC/28VDC 6A 300VAC/28VDC	20A 125VAC/16VDC 15A 28VDC 10A 250VAC 6A 277VAC 1/3HP 125/277VAC
Max. Switching Power	336W 2,400VA	420W 2,500VA
Max. Switching Voltage	110VDC 380VAC	110VDC 380VAC
Ambient temperature	-40°C ~ +85°C	-40°C ~ +85°C
Dielectric Strength	Between Contacts	50Hz 1,000VAC
	Between Contact and Coil	50Hz 4,000VAC
Insulation Resistance	500MΩ	250MΩ
Initial Contact Resistance	≤50mΩ	≤100mΩ
Electrical Life (Operations)	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
Mechanical Life (Operations)	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
Weight (Approx.)	11g	10g
Mounting Layout (Bottom View) (mm)		
Wiring Diagram (Bottom View)		
Cross Reference	Omron :G4K TYCO : 23148/T73 Takamisawa: LZ	Matsushita: JS Omron : G5L/G5X TYCO : 23082

FRS11L	FRS16	FRS16N
		
19.5 x 16 x 17.1	18.4 x 10.2 x 15.3	17.6 x 10.1 x 12.3
 us: E139468  : 40014769	 us: E141516  : R50019143	 us: E141516
DC3, 5, 6, 9, 12, 18, 24, 48	DC3, 5, 6, 9, 12, 24, 48	DC3, 5, 6, 9, 12, 24, 48
0.36W, 0.45W	0.2W, 0.45W	0.2W, 0.45W
AgCdO, AgSnO <sub>2</sub>	AgCdO, AgNi	AgNi
1A, 1B, 1C	1A, 1C	1A, 1C
<div style="border: 1px solid black; padding: 2px; display: inline-block;">16A</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">10A</div>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">5A</div>
16A 277VAC 10A 250VAC ½HP 125VAC/250VAC TV-8 125VAC	10A 120VAC 5A 250VAC/28VDC	1A: 5A 250VAC/30VDC 1C: 3A 250VAC/30VDC
3,840VA	150W 1,250VA	150W 1,250VA
277VAC	30VDC 250VAC	30VDC 250VAC
-40°C ~ +85°C	-40°C ~ +70°C	-40°C ~ +85°C
50Hz 1,000VAC	50Hz 1,000VAC	50Hz 1,000VAC
50Hz 2,500VAC	50Hz 2,500VAC	50Hz 5,000VAC
250MΩ	100MΩ	100MΩ
≤100mΩ	≤100mΩ	≤100mΩ
1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>	1 x 10 <sup>5</sup>
1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>	1 x 10 <sup>7</sup>
10g	6g	5g
		
		
Matsushita: LS Omron : G5LB P&B : T7S	TYCO : T77V Takamisawa: JV	TYCO : T77 Takamisawa: JV