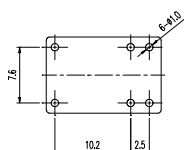
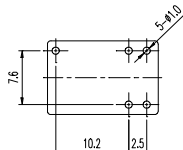
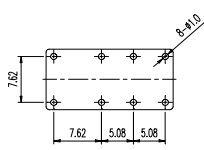
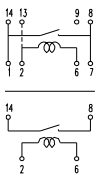
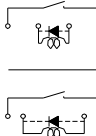
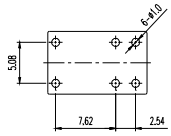
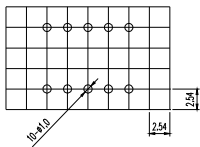
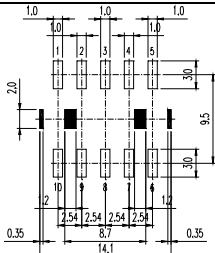


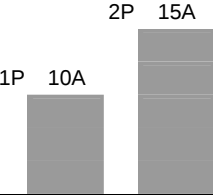
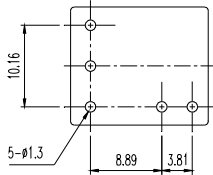
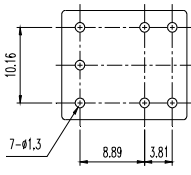
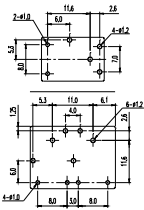
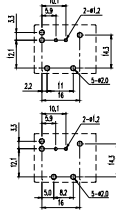
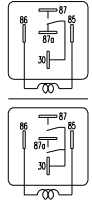
Appearance	UA	AZ	GS	
				
Outline (L x W x H) mm	15.4 x 10.4 x 11.7	15.4 x 10.4 x 11.7	20.5 x 10 x 11.5	
Weight	3.5g	3.5g	4.8g	
Features	● Small size with SPDT contact form. ● SS and SH type are available.	● Small size with SPDT contact form. ● Two power consumption 0.2W and 0.45W are available.	● 2 Poles in small package. ● Dual in Line terminal arrangement. ● Two Power consumption.	
Contact Specification				
Contact Form	SPST/SPDT	SPST/SPDT	DPDT	
Maximum Allowable Contact Current (A)	25A 20A 15A 10A 5A 4A 3A 2A 1A 0.5A 3A	1A	2A	
Contact Capacity (Resistive Load)	3A/120VAC 3A/24VDC	1A/120VAC 1A/24VDC	1A/120VAC 2A/24VDC	
Reference Minimum Switching Load	10mA, DC 5V	1mA, DC 1V	1mA, DC 1V	
Coil Specification				
Nominal Coil Voltage (V)	DC	3,5,6,9,12,24	3,5,6,9,12,24	3,5,6,9,12,24
	AC	-	-	-
Coil Power Consumption	0.36W	D Type : 0.45W L Type : 0.20W	D Type: 0.36W T Type: 0.20W L Type: 0.15W	
Dielectric Strength				
Between Coil & Contact (50/60 Hz for 1 minute)	AC 500V	AC 500V	AC 1,000V	
Between Contact (50/60 Hz for 1 minute)	AC 500V	AC 500V	AC 500V	
Life Expectancy (Operations)				
Electrical	1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵	
Mechanical	1 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷	
Safety Standard Certificate	UL, C-UL	UL , C-UL, CQC	C-UL, TÜV, CQC	
P.C.B. Layout				
Mounting Method				
Page	38-39	40-41	42-43	

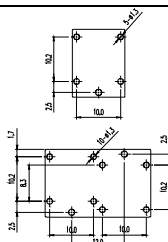
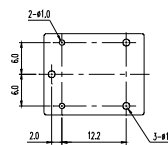
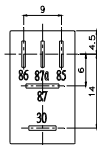
Note : Meaning of symbol marks  : PC board terminal

DIR	SIR	ST
		
19.5 x 7.0 x 5.5	19.2 x 5.1 x 7.7	12.6 x 7.8 x 10.0
1.8g	1.6g	2g
● Epoxy molded Dual-in Line package. ● Low Profile, mounting space compatible with DIP IC.	● Epoxy molded Single-in Line package. ● Mounting space less by half compared to Dual-in-line package.	● Very Small size with Light Weight. ● Various Coil Sensitivity Types are available. ● Wide operation Coil Voltage Range.
SPST/DPST/SPDT	SPST	SPDT/SDST
		
1A Carrying ; 0.5A Switching	1A Carrying ; 0.5A Switching	2A/120VAC 2A/24VDC
1mA, DC 1V	1mA, DC 1V	1mA , DC 5V
5,12,24	5,12,24	3,5,6,9,12,24
-	-	-
0.05-0.28W	0.05-0.28W	D Type : 0.36W T Type : 0.2 W L Type :0.15W
AC 1,000V	AC 1,000V	AC 1,000V
AC 150V	AC 150V	AC 400V
(ref.10mA/10VDC)1 x 10 ⁸	(ref.10mA/10VDC)1 x 10 ⁸	1 x 10 ⁵
1 x 10 ⁸	1 x 10 ⁸	1 x 10 ⁷
UL, C-UL	UL, C-UL	UL, C-UL
		
		
44-47	48-49	50-51

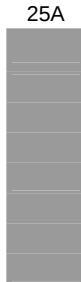
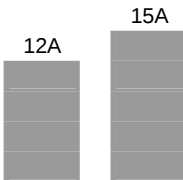
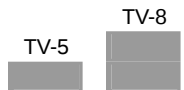
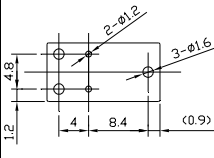
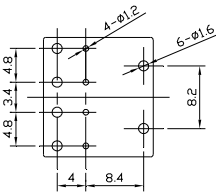
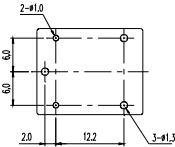
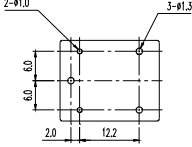
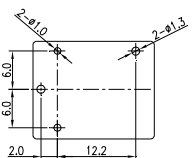
Appearance	GP/GPS	
		
Outline (L x W x H) mm	GP : 14.1 x 10.1 x 5.0 GPS : 14.1 x 11.5 x 6.0	
Weight	1.5g	
Features	● Double-In-Line Pitch Terminals High Sensitivity: 0.14W or 0.10W Nominal Power. ● Conforms to FCC Part 68 1.5kV Surge and Dielectric 1,000VAC. ● Monostable or Bistable relays of Single Coil magnet latching Type available.	
Contact Specification		
Contact Form	DPDT	
Maximum Allowable Contact Current (A)	50A 40A 30A 25A 20A 15A 12A 10A 5A 1A	1A
Contact Capacity (Resistive Load)	1A at 30VDC 0.5A at 125VAC	1A at 30VDC 0.5A at 125VAC
Reference Minimum Switching Load	1mA, DC 10mV	
Coil Specification		
Nominal Coil Voltage (V)	DC	3,4.5,5,6,9,12,24
	AC	
Coil Power Consumption	0.1W ~ 0.2W	
Dielectric Strength		
Between Coil & Contact (50/60 Hz for 1 minute)	AC 1,000V	
Between Contact (50/60 Hz for 1 minute)	AC 1,000V	
Life Expectancy (Operations)		
Electrical	1A/30 VDC : 2 x 10 ⁵ ; 0.5A/125 VAC : 1 x 10 ⁵	
Mechanical	1 x 10 ⁷	
Safety Standard Certificate	C-UL	
P.C.B. Layout		
Mounting Method		
Page	52-53	

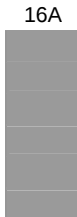
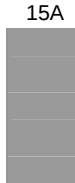
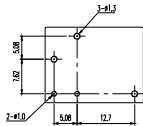
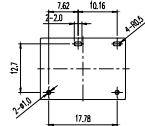
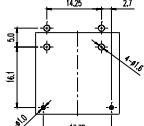
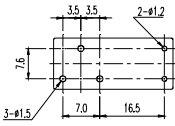
Note: Meaning of symbol marks  : PC board terminal ;  : SMD terminal ;  : Plug-in

AR/ARW		SAM	CAR	GRL
				
17.2 x 14.8 x 20.2		23.1 x 17.2 x 16.2	26 x 21 x 20.2	28.0 x 28.0 x 25.0
10g		15.2g	20.2g	36.5g
- Automotive Relay in small size with one or two Transfer contacts. - Both open and sealed type are available.		- Car use 20A Relay with one and two transfer contacts. - SS and SH are available	- Car use 20A Relay with one and two transfer contacts. - SS and SH are available.	- European and U.S.A footprints for different market needs. - Special contact material FE-130 is applied.
SPST/SPDT		SPST/SPDT/DPDT/DPST	SPST/SPDT	SPDT/SPST/DPST
				
AR 3A/120VAC 10A/12VDC	ARW 5A/120VAC 15A/12VDC	1P N.O. 10A at 24VDC N.C. 7A at 24VDC 2P N.O. 15A at 15VDC N.C. 10A at 15VDC	30A/12VDC	1C N.O.: 40A N.C.: 30A at 12VDC 2A 40A (20Ax2) at 12VDC
6,9,12,15,18,24		5,6,9,12,18,24	6,12,24,36,48	12,24
-		-		
Standard : 0.93W European : 1.1W		0.45W	D Type: 1.59~1.89W L Type: 0.6W	1.8W
AC 500V		AC 500V	AC 750V	AC 500V
AC 1,000V		AC 1,000V	AC 1,200V	AC 1,000V
1×10^5		1×10^5	1×10^5	1×10^5
1×10^7		1×10^7	1×10^7	1×10^7
UL, C-UL		NIL	NIL	NIL
				
				
54-55	56-57	58-59	60-63	64-65

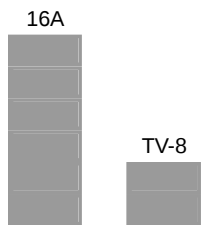
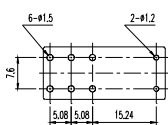
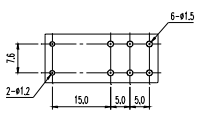
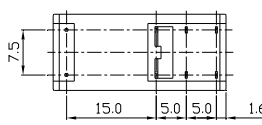
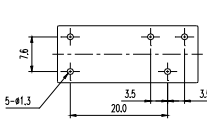
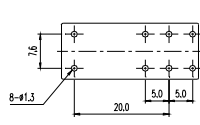
Appearance	JM	JMW	RWM	ZEM
				
Outline (L x W x H) mm	1P: 15.7 x 12.2 x 13.7 / 2P : 24.2 x 15.7 x 13.7		19.0 x 15.4 x 15	21.4x 15.5 x 23.5
Weight	1P: 5.2g / 2p :10.2g		9.0g	20g
Features	● Application for automotive electrical systems. ● JM/JMW-2P is consisted of 2 pieces of JM/JMW-1P and capsulated by one cover and the location of terminals are distributed for easy pattern design on N.O. and N.C. Contact terminal.		● Suitable to application of high temperature and various chemical solutions.	● Switching current by 20A to comply industrial use. ● Compatible fasten terminal arrangement with this kind of power relay. ● DC Coil.
Contact Specification				
Contact Form	SPST/SPDT/DPST/DPDT	SPST/DPST	SPST/SPDT	SPST/SPDT
Maximum Allowable Contact Current (A)	20A	12A	15A	20A
Contact Capacity (Resistive Load)	1P 10A/14VDC 20A/14VDC	1P 2 x 6A/14VDC	15A/15VDC	1A : 30A/12VDC 15A/24VDC
	2P 10A/14VDC 20A/14VDC	2P 2 x 6A/14VDC		1C : 20A/12VDC 10A/24VDC
Reference Minimum Switching Load				
Coil Specification				
Nominal Coil Voltage (V)	DC	6,,9,10,12	9,12,24	12,24
	AC	-	-	-
Coil Power Consumption	D Type : 0.8W L Type : 0.6W		0.8W	D Type : 1.6W L Type : 1.2W
Dielectric Strength				
Between Coil & Contact (50/60 Hz for 1 minute)	AC 500V		AC 1,000V	AC 500V
Between Contact (50/60 Hz for 1 minute)	AC 500V		AC 500V	AC 500V
Life Expectancy (Operations)				
Electrical	1 x 10 ⁵		1 x 10 ⁵	1 x 10 ⁵
Mechanical	1 x 10 ⁷		1 x 10 ⁷	1 x 10 ⁷
Safety Standard Certificate	NIL		NIL	NIL
P.C.B. Layout				
Mounting Method				
Page	66-67	68-69	70-71	72-73

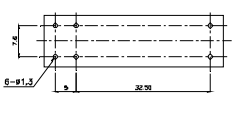
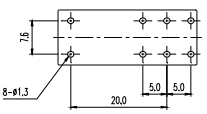
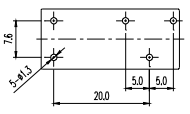
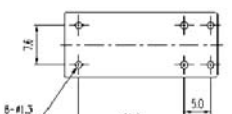
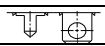
Note: Meaning of symbol marks  : PC board terminal;  : Plug-in

GIN		RW/RWH	RUDH/RUUh	RUT
				
14.2 x 7.3 x 13.6	19 x 15.4 x 15.5	19 x 15.4 x 15	20.5 x 16.7 x 20.3	20.5 x 16.7 x 20.3
4g	9g	9g	12.2g	11.4g
● 25A motor lock load. ● Small size with high rating. ● Single and dual version available.		● Small size with 12A and 15A contact capacity. ● SS & SH type available.	● Small size with 12A and 15A contact capacity. ● SS & SH type available.	● UL TV-5 rating recognized. ● Low cost design. ● SS and SH type available.
SPST/SPDT	DPST/DPDT	SPST/SPDT	SPST/SPDT	SPST
				
25A /16VDC		RW 12A/120VAC 10A/24VDC RWH 15A/120VAC TV-5, 1800W 120VAC	RUDH 12A/120VAC 12A/24VDC RUUH 15A/120VAC 15A/24VDC	TV-5/120VAC TV-8/120VAC 1800W, 1/2HP 15A/120VAC 5A/24VDC , 10/250VAC
9,12,24,48		3,5,6,9,12,18,24,48	3,6,9,12,24,48	3,6,9,12,24,48
-		-	-	-
9~24V :0.64W 48V :0.8W		0.36W	0.45W	0.36W
AC 500V	AC 500V	AC 1,000V	AC 1,500V	AC 1,500V
AC 500V	AC 500V	AC 500V	AC 750V (2,000VAC)	AC 750V
1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵	2.5 x 10 ⁴
1 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷
NIL	NIL	RW : UL , C-UL, CQC RWH : UL, C-UL, TÜV, CQC	RUDH: UL, C-UL, TÜV, CQC	UL , C-UL, TÜV, CQC
				
				
74-75		76-77	78-79	80-81

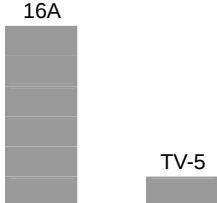
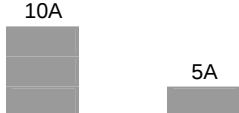
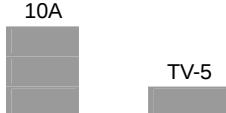
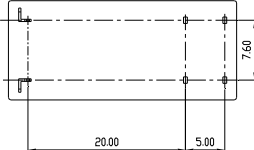
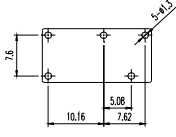
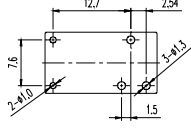
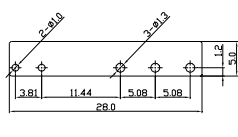
Appearance	UDH	SF/SFG		MI/MIT/MIH-1P
				
Outline (L x W x H) mm	22.0 x 16.8 x 14.5	SF : 22.2 x 16.2 x 11	SFG : 22.2 x 25 x 11.5	29.1 x 13.0 x 20.6
Weight	9.5g	SF : 8.5g	SFG : 9g	12.2g
Features	● Insulation distance 4mm. ● 12A switching capacity. ● SS and SH type available.	● Small Size with 16A and 15A capacity. ● SS and SH type are available.		● Conforms to various safety standards. ● TV-5, 600W for MIT.
Contact Specification				
Contact Form	SPST/SPDT	SPST		SPST/SPDT
Maximum Allowable Contact Current (A)				
Contact Capacity (Resistive Load)	12A/120VAC 12A/24VDC	SF C-UL 15A/125VAC 10A/277VAC TV-5/120VAC SF TÜV 10A/277VAC 16A/250VAC 15A/125VAC	SFG UL 15A/125VAC 10A/250VAC 10A/30VDC	MI 10A/250VAC 10A/30VDC MIT 10A/240VAC 5A/24VDC MIH 16A/240VAC 16A/24VDC
Reference Minimum Switching Load				
Coil Specification				
Nominal Coil Voltage (V)	DC	3,5,6,9,12,24,48	5,6,9,12,18,24,48,100	3,5,6,9,12,24,48
	AC	-	-	-
Coil Power Consumption	0.45W	0.20W		D Type : 0.72 W L Type : 0.54W
Dielectric Strength				
Between Coil & Contact (50/60 Hz for 1 minute)	AC 1,500V	AC 1,500V		AC 5,000V
Between Contact (50/60 Hz for 1 minute)	AC 750V	AC 1,000V		AC 1,000V
Life Expectancy (Operations)				
Electrical	1 x 10 ⁵	5 x 10 ⁴		1 x 10 ⁵
Mechanical	1 x 10 ⁷	1 x 10 ⁷		1 x 10 ⁷
Safety Standard Certificate	UL , C-UL	SF: C-UL, TÜV, CQC	SFG: UL, CQC	MI: UL , C-UL , TÜV , VDE MIT/MIH: UL, TÜV, CQC
P.C.B. Layout				
Mounting Method				
Page	82-83	84-85		86-89

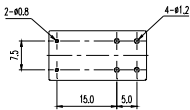
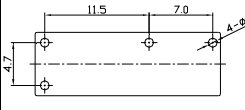
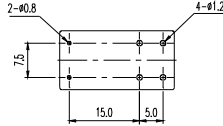
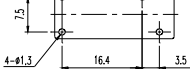
Note: Meaning of symbol marks  : PC board terminal;  : PC board terminal or Plug

MI-2P	GZ/GZT	GZR	EMI-1P	EMI-2P
				
29.1 x 12.8 x 20.6	29.1 x 13.0 x 20.6	28.8 x 12.7 x 25.5	29.0 x 12.6 x 15.8	29.0 x 12.6 x 15.8
13.8g	13.2g	17g	12.5g	12.5g
- Conforms to various safety standards. - TV-3.	- High current switching by 16A. - Insulation distance 8mm. - GZT series is certified by TV-8 rating.	8mm insulation/clearance. - High-capacity type available.	- Switching current by 12A to comply industrial use. - Slim type & low profile. - AC/DC Coil.	- Switching current by 8A to comply Industrial use. - Slim type & low profile. - AC/DC Coil.
DPDT/DPST	SPST/SPDT	SPST/SPDT	SPST/SPDT	DPDT/DPST
				
5A/250VAC 5A/30VDC TV-3/120VAC	GZ 20A/120VAC 20A/24VDC GZT 16A/250VAC 16A/24VDC TV-8/120VAC	16A 250VAC 16A 30VDC	12A/250VAC 12A/30VDC	8A/250VAC 8A/30VDC
		100mA, DC5V		
3,5,6,9,12,24,48	3,5,6,9,12,24,48	3,5,6,9,12,15,18,24,48,60,100	3,5,6,9,12,15,18,24,48,60,110	3,5,6,9,12,15,18,24,48,60,110
-	-	-	24,115,230	24,115,230
D Type : 0.72 W L Type : 0.54W	D Type : 0.72W L Type : 0.54W	0.53W	DC Coil : 0.4W AC Coil : 0.61~0.88VA	DC Coil : 0.4W AC Coil : 0.61~0.88VA
AC 5,000V	AC 5,000V	AC 5,000V	AC 5,000V	AC 5,000V
AC 1,000V	AC 1,000V	AC 1,000V	AC 1,000V	AC 1,000V
1×10^5	(TV-8) 2.5×10^4	1×10^5	1×10^5	1×10^5
1×10^7	1×10^7	1×10^7	1×10^7	1×10^7
UL, TÜV, VDE, CQC	UL, C-UL, TÜV, VDE(L Type), CQC	In Progress	UL, C-UL, TÜV, VDE, CQC	UL, C-UL, TÜV, VDE, CQC
				
				
90-91	92-93	94-95	96-98	99-101

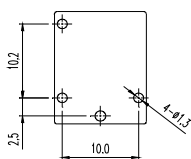
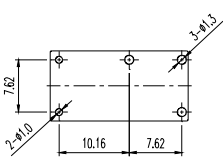
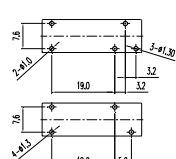
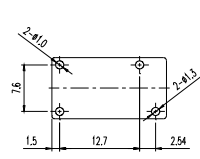
		EMF	EZ	EZI	EZL
Appearance					
Outline (L x W x H) mm		H Type : 44.5 x 12.6 x 15.7 V Type : 41 x 12.6 x 15.7	29.0 x 12.6 x 15.8	29.0 x 12.6 x 15.8	28.5 x 12.2 x 15.0
Weight		14.5g	12.5g	12.5g	12.5g
Features		● Switching current by 16A to comply industrial use. ● Compatible fasten terminal arrangement with this kind of power relay. ● Coil terminals, contact terminals for PCB. ● DC Coil.	● Switching current by 16A to comply industrial use. ● Slim type & low profile. ● AC/DC Coil.	● Switching current by 12A to comply industrial use. ● Slim type & low profile. ● AC/DC Coil.	● Switching current by 10A to comply industrial use. ● 1 N/O contact with a tungsten pre-make contact. ● Slim type & low profile. ● DC Coil.
Contact Specification					
Contact Form		SPST	SPST/SPDT	SPST/SPDT	SPST
Maximum Allowable Contact Current (A)	35A 30A 25A 20A 16A 15A 12A 10A 8A 5A	25A	16A	12A	10A
Contact Capacity (Resistive Load)		25A/250VAC 25A/30VDC	16A/250VAC 16A/30VDC	12A/250VAC 12A/30VDC	10A/250VAC 10A/30VDC
Reference Minimum Switching Load					
Coil Specification					
Nominal Coil Voltage (V)	DC	3,5,6,9,12,15,18,24,48,60	3,5,6,9,12,15,18,24,48,60,110	3,5,6,9,12,15,18,24,48,60,110	6,9,12,18,24,48,60
	AC	-	24,115,230	24,115,230	-
Coil Power Consumption		0.4W	DC Coil : 0.4W AC Coil : 0.61~0.88VA	DC Coil : 0.4W AC Coil : 0.61~0.88VA	0.48W
Dielectric Strength					
Between Coil & Contact (50/60 Hz for 1 minute)		AC 5,000V	AC 5,000V	AC 5,000V	AC 4,000V
Between Contact (50/60 Hz for 1 minute)		AC 1,000V	AC 1,000V	AC 1,000V	AC 1,000V
Life Expectancy (Operations)					
Electrical		1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵	5 x 10 ⁴
Mechanical		1 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷	5 x 10 ⁶
Safety Standard Certificate		UL, C-UL, VDE	UL, C-UL, TÜV, VDE, CQC	UL, C-UL, VDE, CQC	UL, C-UL, VDE
P.C.B. Layout					
Mounting Method					
Page		102-103	104-106	107-109	110-111

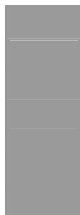
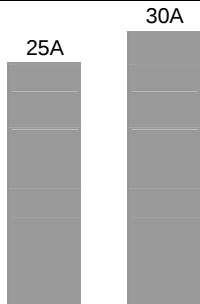
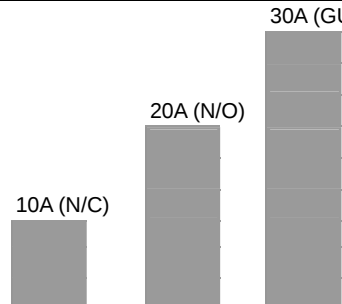
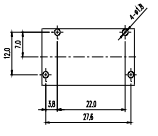
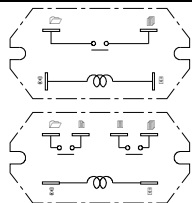
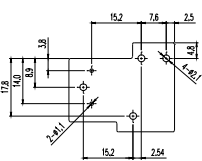
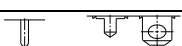
Note: Meaning of symbol marks  : PC board terminal;  : PC board terminal or Plug

EML	JQ		GJ	LR
				
29.0 x 12.6 x 15.7	20.1 x 10.0 x 16.0		18.3 x 10.2 x 15.8	28.0 x 7.0 x 15.0
6g	5.6g		5.4g	6g
● Slim type and low profile. ● Tungsten Load: 3000VA/230VAC. ● DC Coil.	● Small size with slim width. ● Contact Capacity is 10A. ● Surge Resistance can be up to 8,000V.		● Miniature size with 5A contact capacity. ● UL TV-5 rating certified. ● SS & SH types are available.	● Slim size. ● Wide switching capacity. ● Sensitive coil 170mW.
SPST	SPST/SPDT		SPST/SPDT	SPST/SPDT
				
16A/250VAC TV-5/120VAC	1C: NO: 10A/125VAC NC: 5A/125VAC	1A: 10A/125VAC 5A/250VAC 5A/30VDC	TV-5/120VAC 1A: 10A/120VAC 10A/30VDC 6A/125VAC 1C: 3A/250VAC 6A/30VDC	8A/250VAC 8A/30VDC
5,6,9,12,15,18,24,48,60	3,5,6,9,12,24		3,5,6,9,12,24	3,5,6,9,12,15,18,24,48,60
-	-		-	-
0.4W	D Type : 0.45W T Type : 0.4W LM Type : 0.2W		D Type : 0.45W L Type : 0.2W	0.17W
AC 5,000V	AC 4,000V	AC 4,000V	AC 3,000V	AC 5,000V
AC 1,000V	AC 1,000V	AC 750V	AC1,000V	AC 1,000V
1×10^5	1×10^5		1×10^5	N.O: 5×10^4 , N.C: 3×10^4
1×10^7	1×10^7		1×10^7	5×10^6
In Progress	UL, C-UL, TÜV, VDE, CQC		LM/DM: UL, TÜV, CQC	UL, C-UL
				
				
112-113	114-115		116-117	118-119

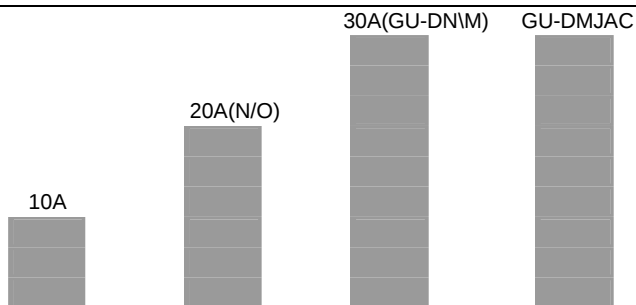
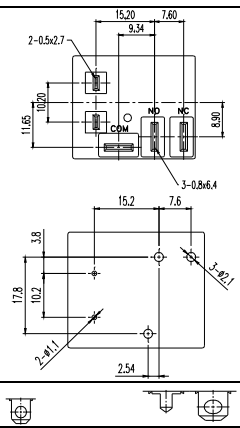
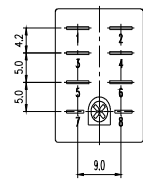
	GSA GCJ GSZ SMIT			
Appearance	   			
Outline (L x W x H) mm	24.5 x 13 x 25	20.4 x 7.0 x 15.0	24.5 x 13.0 x 25.0	24.5 x 10.5 x 24.8
Weight	13.8g	4g	13.6g	10.2g
Features	- UL TV-5 rating is recognized. 2 Form A contact form is designed. - SS & SH type available.	- Sensitive coil 200mW. 8mm insulation/clearance	- High current 16A in small size. - SS & SH types are available for customer's various selections. - UL TV-8.	- High current 10A/120VAC in small relay size. - UL TV-5 rating Recognized.
Contact Specification				
Contact Form	DPST	SPST	SPST	SPST
Maximum Allowable Contact Current (A)	TV-5 5A	5A	16A TV-8	10A TV-5
Contact Capacity (Resistive Load)	TV-5/120VAC 5A/120VAC 5A/30VDC	5A/250VAC 5A/30VDC	16A/120VAC 16A/30VDC TV-8/120VAC	10A/30VDC 10A/250VAC TV-5/120VAC
Reference Minimum Switching Load				
Coil Specification				
Nominal Coil Voltage (V)	DC	3,5,6,9,12,24,48	3,5,6,9,12,15,18,24	3,5,6,9,12,24,48
	AC	-	-	-
Coil Power Consumption	0.54W	0.2W	0.54W	DM Type : 0.54W LM Type : 0.25W
Dielectric Strength				
Between Coil & Contact (50/60 Hz for 1 minute)	AC 3,000V	AC 4,000V	AC 4,000V	AC 4,000V
Between Contact (50/60 Hz for 1 minute)	AC 1,000V	AC 750V	AC 1,000V	AC 900V
Life Expectancy (Operations)				
Electrical	1×10^5	1×10^5	(TV-8) 2.5×10^4	(TV-5) 2.5×10^4
Mechanical	1×10^7	1×10^7	1×10^7	1×10^7
Safety Standard Certificate	UL, C-UL, TÜV, CQC	UL, C-UL, VDE	UL, CQC	UL, TÜV, CQC
P.C.B. Layout				
Mounting Method				
Page	120-121	122-123	124-125	126-127

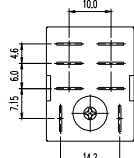
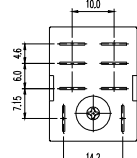
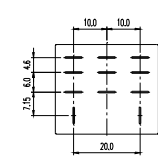
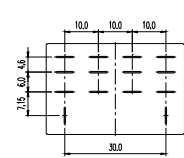
Note: Meaning of symbol marks  : PC board terminal

JMT	JE	EMR	GQ
			
15.7 x 12.2 x 13.7	20 x 10 x 10.5	30 x 10 x 15	18.2 x 10 x 15.5
5.2g	6.0 g	11.0 g	5g
● Application for LCD monitor, only SPST available. ● Dielectric strength between coil and contact 1,000V.	● Low profile 10.5 mm. ● Sensitive Coil 200mW. Clearance and creepage more than 5.0mm.	● 4KV/8 mm Coil-Contact. ● Pinning: 3.2 and 5.0 mm. ● Suitable for resistive and inductive loads on N/O and N/C Contacts.	● Miniature size with high sensitive type 200mW, high contact reliability and sealed type.
SPST	SPST/SPDT	SPST/SPDT	SPST
	 		
TV-5/120VAC 5A/120VAC 5A/30VDC	1C: 5A/250VAC 5A/30VDC 1A: 8A/250VAC 8A/30VDC	8A/250VAC 5A/30 VDC	5A/250VAC 5A/30VDC
3,5,6,9,12,24	3,5,6,9,12,24,48	5,6,9,12,18,24,48,60	3,5,6,9,12,24,48
-	-	-	-
DM Type : 0.54W	0.2W	0.22W	0.2W
AC 1,000V	AC 4,000V	AC 4,000V	AC 4,000V
AC 500V	AC 1,000V	AC 1,000V	AC 1,000V
1×10^5	1×10^5	1×10^5	1×10^5
1×10^7	1×10^7	1×10^7	1×10^7
NIL	UL, C-UL, VDE	UL, C-UL, VDE	UL, C-UL, TÜV, VDE
			
			
128-129	130-131	132-135	136-137

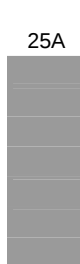
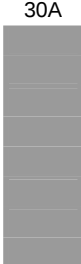
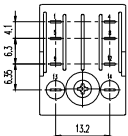
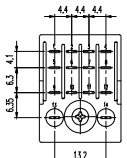
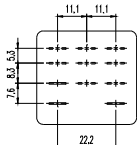
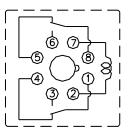
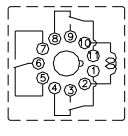
Appearance	GI	GL	GU	
				
Outline (L x W x H) mm	30.2 x 16.2 x 26	67 x 33 x 35	32.2 x 27.5 x 20.2	
Weight	26.6g	90g	27.2g	
Features	● 1 Pole Power relay with tab terminals suitable for air conditioner.	● High resistance to noise. ● High contact capacity 30A. ● High dielectric strength.	● High current 30A (N.O.) with one make contact is designed. ● From open type plastic sealed type is available.	
Contact Specification				
Contact Form	SPST	DPST/SPST	SPST/SPDT	
Maximum Allowable Contact Current (A)				
Contact Capacity (Resistive Load)	20A/250VAC 23A/277VAC 2HP/240VAC 2HP/265VAC	2P 25A 250VAC 1P 30A 250VAC 25A 277VAC 30A 277VAC	10A 240VAC 20A 240VAC 30A 240VAC 10A/30VDC 20A 30VDC 30A 30VDC 30A 120VAC	
Reference Minimum Switching Load				
Coil Specification				
Nominal Coil Voltage (V)	DC	6,12,24,48	6,9,12,24,48,60,100, 110	5,6,9,12,15,18,24,48,110
	AC	-	12,24,48,110~120,200~240	-
Coil Power Consumption	0.9W	DC Type : 1.9W AC type : 1.7 ~ 2.5VA	0.93W	
Dielectric Strength				
Between Coil & Contact (50/60 Hz for 1 minute)	AC 4,000V	AC 4,000V	AC 1,500V	
Between Contact (50/60 Hz for 1 minute)	AC 1,000V	AC 2,000V	AC 1,500V	
Life Expectancy (Operations)				
Electrical	1 x 10 ⁵	1 x 10 ⁵	1 x 10 ⁵	
Mechanical	1 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷	
Safety Standard Certificate	UL, C-UL , TÜV	UL, C-UL , TÜV, CQC	C-UL, CQC	
P.C.B. Layout				
Mounting Method				
Page	138-139	140-141	142-144	

Note: Meaning of symbol marks  : PC board terminal ;  : PC board terminal or Plug;  : Plug-in

GU (Quick Contact Tab)		MRE	
		2 Poles	
			
50.0 x 26.9 x 28.2		22.8 x 18.4 x 27.0	
34.6g 18.2g 34g		18.2g	
● High current 30A(N.O.) with one make contact is designed. ● Quick connect terminal and flanged case are designed.		● Power Relay in miniature size up to 5A/120VAC capacity. ● Two poles are designed with soldered Lug Terminal.	
SPST/SPDT		DPST/DPDT	
			
10A 240VAC 10A 30VDC 20A 240VAC 20A 30VDC 30A 240VAC 30A 30VDC 30A 250VAC 30A 12VDC		5A/120VAC 5A/24VDC	
5,6,9,12,15,18,24,48,110		6,9,12,24,48	
-		-	
0.93W		0.9W	
AC 1,500V		AC 1,000V	
AC 1,500V		AC 500V	
1 x 10 ⁵		1 x 10 ⁵	
1 x 10 ⁷		1 x 10 ⁷	
C-UL, TÜV 12/24DMQ only, CQC		NIL	
			
			
145-147		148-149	

Appearance	RET			
	1 Pole	2 Poles	3 Poles	4 Poles
				
Outline (L x W x H)mm	27.6 x 21.1 x 35	27.6 x 21.1 x 35	31 x 27.5 x 35.5	41 x 27.5 x 35.5
Weight	35g	35g	53.2g	66.5g
Features	● Conforms to foreign safety standard. ● 1 to 4 transfer contact with high power capacity. ● PC Board terminal and solder lug terminal are available. ● Standard and Flanged casing.			
Contact Specification				
Contact Form	SPDT	DPDT	3PDT	4PDT
Maximum Allowable Contact Current (A)	15A	10A	10A	10A
40A				
35A				
30A				
25A				
20A				
15A				
13A				
10A				
8A				
5A				
Contact Capacity (Resistive Load)	15A/250VAC 15A/30VDC	10A/250VAC 10A/30VDC	10A/250VAC 10A/30VDC	10A/250VAC 10A/30VDC
Reference Minimum Switching Load				
Coil Specification				
Nominal Coil Voltage (V)	DC	6,12,24,48,110,120		
	AC	6,12,24,48,110,120,220,240		
Coil Power Consumption	DC Coil: 0.9W AC Coil: 1.0-1.7VA (60HZ)		DC Coil: 1.4W AC Coil: 1.6- 2.0VA (60HZ)	DC Coil: 1.5W AC Coil: 1.95-2.5VA(60HZ)
Dielectric Strength				
Between Coil & Contact (50/60 Hz for 1 minute)	AC 1,500V			
Between Contact (50/60 Hz for 1 minute)	AC 1,000V			
Life Expectancy (Operations)				
Electrical	1 x 10 ⁵			
Mechanical	1 x 10 ⁷			
Safety Standard Certificate	C-UL, CQC		NIL	
P.C.B. Layout				
Mounting Method	 			
Page	150-155			

Note: Meaning of symbol marks  : PC board terminal ;  : Plug-in;  : Plug-in ;  : Plug-in.

RE		RP	RPT	RK	
2 Poles	4 Poles	1 2 3 Poles	1 2 3 Poles	2 Poles	3 Poles
					
27.6 x 21.1 x 36.0		38.0 x 34.5 x 47.6	38.0 x 34.5 x 47.6	33.5 x 33.5 x 53	33.5 x 33.5 x 53
32g	35g	72.6g	85g	72.6g	81.2g
● Conforms to foreign safety standard. ● 2 and 4 transfer contact with high power capacity. ● PC Board terminal and solder lug terminal are available. ● Standard and Flanged casing.		● 1 to 3 Poles with switching current up to 13A. ● PCB terminal and 2 types of solder lug Terminal for customer's various selections.	● 1 to 3 Poles with switching current up to 25A. ● Switching current up to 25A. ● Solder Lug terminal with flanged case are available.	● Easy to mount, wire use. ● Withstanding voltage: 2,000V.	
DPDT	4PDT	SPDT/DPDT/3PDT	SPDT/DPDT/3PDT	DPDT	3PDT
			 		
5A/250VAC 5A/30VDC	5A/250VAC 5A/30VDC	10A/240VAC 13A/120VAC 13A/28VDC	2P 25A/240VAC 13A/28VDC 3P 20A/120VAC 13A/28VDC	10A/240VAC	10A/240VAC
6,12,24,48,110,120,220/240		6,12,24,48,115,125		6,12,24,48,110,120	
6,12,24,48,110,120,		6,12,24,48,120,220,240		6,12,24,48,110,120,220-	
DC Coil: 0.9W AC Coil: 1.0-1.3VA (60Hz)		DC Coil: 1.5W AC Coil: 2-3VA		DC Coil: 1.5W AC Coil: 1.9 to 2.8VA	
AC 1, 500V		AC 1,500V		AC 1,000V	
AC 1,000V		AC 500V		AC 1,000V	
1 x 10 ⁵		1 x 10 ⁵		1 x 10 ⁵	
1 x 10 ⁷		1 x 10 ⁷		1 x 10 ⁷	
UL, C-UL, VDE, CQC		NIL	C-UL	C-UL	
					
					
156-161		162-165		166-168	