

## MAIN FEATURE

1. Slim size with 12A rated loaded.
2. Low power consumption; AC/DC coil available.
3. Proper insulation distance with 5,000VAC dielectric strength.
4. UL Class F insulation available.
5. In accordance with IEC 60335-1 and IEC 60730-1.
6. Halogen Free series available.
7. Comply with RoHS and REACH regulations.

## CONTACT RATING

Load Type	EMI-1P (DM)	EMI-1P (DB)	EMI-1P (D)	EMI-1P (AM/AB)	EMI-1P (A)
Rated Load (Resistive)	12A 277VAC	12A 250VAC	12A 250VAC	12A 250VAC	12A 250VAC
	12A 30VDC	12A 30VDC	12A 30VDC	12A 30VDC	12A 30VDC
Rated Carrying Current	12A	12A	12A	12A	12A
Max. Allowable Voltage	AC 277V	AC 250V	AC 250V	AC 250V	AC 250V
	DC 300V	DC 300V	DC 300V	DC 300V	DC 300V
Max. Allowable Current	12A	12A	12A	12A	12A
Max. Allowable Power Force	3,324VA	3,000VA	3,000VA	3,000VA	3,000VA
	360W	360W	360W	360W	360W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST	SPDT	SPST	SPDT

Max Allowable Voltage: 300VDC@0.3A

## APPLICATION

Cooking Appliance, Audio Equipment, Domestic Appliance and Controlling Equipment, etc.

## PERFORMANCE (AT INITIAL VALUE)

- Contact Resistance ..... 100 mΩ Max. @1A,6VDC
- Operate Time ..... 12mSec. Max. (DC coil only)  
20mSec. Max. (AC coil only)
- Release Time ..... 8 mSec. Max. (DC coil only)  
20mSec. Max. (AC coil only)
- Dielectric Strength:  
Between Coil & Contact ..... 5,000VAC at 50/60 Hz  
for one minute  
Between Contacts ..... 1,000VAC at 50/60 Hz  
for one minute
- Surge Strength ..... 10,000V (between coil  
& contact 1.2x50μSec.)
- Insulation Strength ..... 100MΩ Min. at  
500VDC
- Max. On/Off Switching:  
Electrical ..... 6 Cycles per Minute  
Mechanical ..... 300 Cycles per Minute
- Temperature Range ..... -40~+85 °C
- Humidity Range ..... 45~85% RH.
- Coil Temperature Rise ..... 30 °C Max.

- Vibration:  
Destruction ..... 10 to 55 to 10 Hz, 0.75 mm single  
amplitude (1.5mm double amplitude)  
Malfunction ..... 10 to 55 to 10 Hz, 0.75 mm single  
amplitude (1.5mm double amplitude)
- Shock:  
Destruction ..... 1,000 m/S  
Malfunction ..... 100 m/S<sup>2</sup>
- Life Expectancy:  
Electrical ..... 10<sup>5</sup> Operations at  
Rated Resistive Load  
Mechanical ..... 10<sup>7</sup> Operations at  
No load condition
- Weight ..... About 12.5 g

## ACCESSORIES & SOCKETS

- PI-35BE ..... See Page 171
- PI-35BE/3 ..... See Page 171
- PI-35-0 ..... See Page 173

## SAFETY STANDARD & FILE NUMBER

- UL & C-UL ..... E141060
- TÜV ..... R50006688
- VDE ..... 40009648
- CQC ..... 02001002512

**COIL SPECIFICATION (AT 20°C)**

Coil Sensitivity	Nominal Voltage (VAC/VDC)	Nominal Current (mA)		Coil Resistance (Ω±10%)	Power Consumption (DC: W; AC: VA)		Pull-In Voltage	Drop-Out Voltage	Maximum Allowable Voltage
		50HZ	60HZ		50HZ	60HZ			
EMI DC Coil	6	66.7		90	Abt. 0.40		80% Maximum	5% Minimum	130%
	9	44.6		202					
	12	33.3		360					
	15	26.6		560					
	18	22.3		810					
	24	16.7		1,440					
	48	8.7		5,520					
	60	8.2		7,340					
EMI AC Coil	110	4.1		26,530					
	24	29.75	25.35	350	0.71	0.61	15% Minimum		
	115	7.65	6.3	8,100	0.88	0.73			
230	3.42	2.72	32,500	0.79	0.63				

**ORDERING INFORMATION**

EMI - **SS** - **1** **12** **D** **M** **G** **F**

**Insulation System:** Nil: Standard Class  
F: Class F

**Contact Material:** Nil: AgNi  
G: AgNi Gilded  
O: AgNi Plated  
N: AgSnO<sub>2</sub>  
S: AgSnO<sub>2</sub> Gilded  
C: AgCdO

**Contact Form:** Nil: One Form C  
M: One Form A  
B: One Form B

**Coil Type:** D: Standard DC  
A: Standard AC

**Coil Voltage:** VDC (06: 6V, 09: 9V, 12: 12V, 15: 15V, 18: 18V, 24: 24V, 48: 48V, 60: 60V, 110: 110V)  
VAC (24: 24V, 115: 115V, 230: 230V)

**Number of Pole:** 1: One Pole

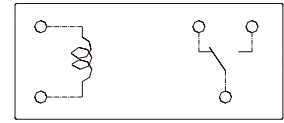
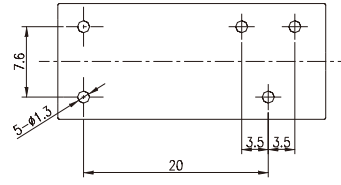
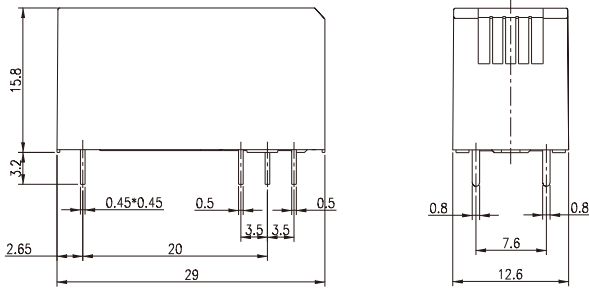
**Type of Sealing:** SS: RT II Flux Proofed  
SH: RT III Wash Tight

**Type:** EMI

**CLASSIFICATION**

Model	EMI - 1P					
	DC Coil			AC Coil		
Contact Form	1C	1A	1B	1C	1A	1B
Flux Proofed	EMI-SS-1□□□D	EMI-SS-1□□□DM	EMI-SS-1□□□DB	EMI-SS-1□□□A	EMI-SS-1□□□AM	EMI-SS-1□□□AB
Wash Tight	EMI-SH-1□□□D	EMI-SH-1□□□DM	EMI-SH-1□□□DB	EMI-SH-1□□□A	EMI-SH-1□□□AM	EMI-SH-1□□□AB

**DIMENSION ( ≤ 5mm ± 0.2mm, > 5mm ± 0.3mm, the tolerance of PCB thru hole: +0.1mm)**

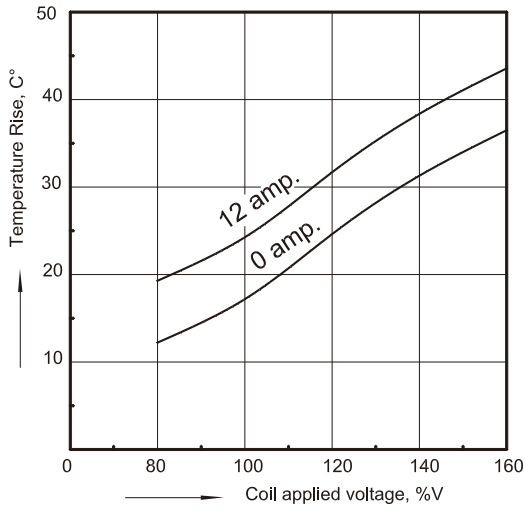


P.C.B Layout  
Bottom View

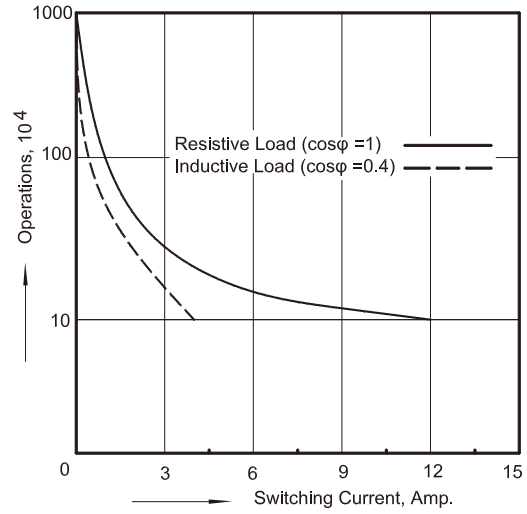
Bottom View

## REFERENCE DATA

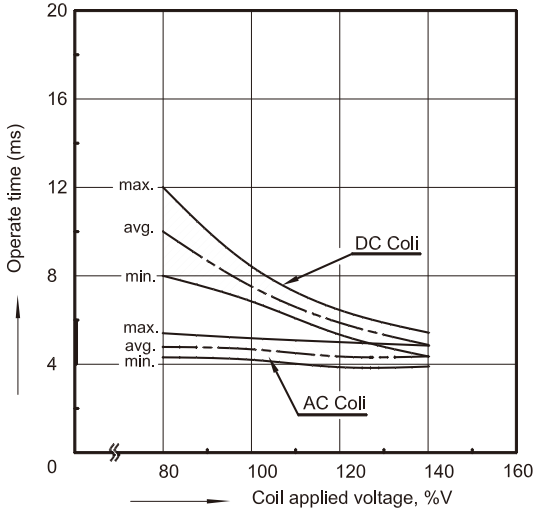
Temperature Rise (at 85°C)



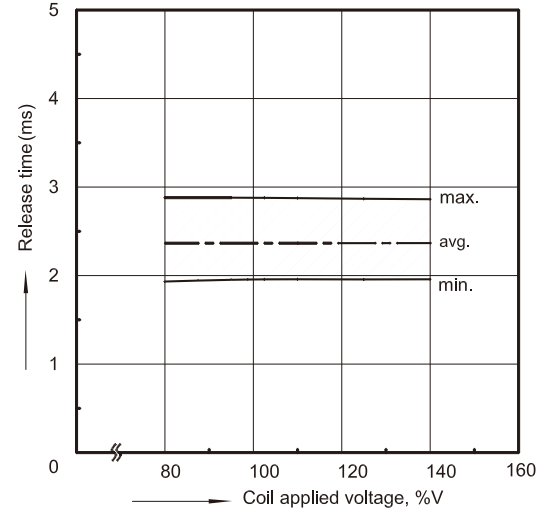
Endurance

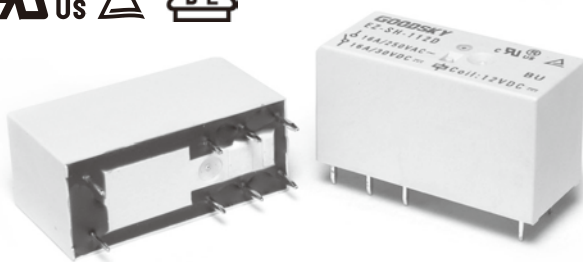


Operate time



Release time





**MAIN FEATURE**

1. High switching current up to 20A in small size.
2. Low power consumption; AC/DC coil available.
3. Proper insulation distance with 5,000VAC dielectric strength.
4. UL Class F insulation available.
5. In accordance with IEC 60335-1 and IEC 60730-1.
6. Halogen Free series available.
7. Comply with RoHS and REACH regulations.

**CONTACT RATING**

Load Type	EZ (DM/DB)	EZ (D)	EZ (AM/AB)	EZ (A)
Rated Load (Resistive)	16A 250 VAC	16A 250 VAC	16A 250 VAC	16A 250 VAC
	20A 120 VAC	20A 120 VAC	20A 120 VAC	20A 120 VAC
	16A 30VDC	16A 30VDC	16A 30VDC	16A 30VDC
Contact capacity	5 FLA /30 LRA 250 VAC	5 FLA /30 LRA 250 VAC	5 FLA /30 LRA 250 VAC	5 FLA /30 LRA 250 VAC
	1/2 HP 250VAC	1/2 HP 250VAC	1/2 HP 250VAC	1/2 HP 250VAC
	Pilot Duty B300/C300	Pilot Duty B300/C300	Pilot Duty B300/C300	Pilot Duty B300/C300
Rated Carrying Current	20A	20A	20A	20A
Max. Allowable Voltage	AC: 250V	AC: 250V	AC: 250V	AC: 250V
	DC: 300V	DC: 300V	DC: 300V	DC: 300V
Max. Allowable Current	20A	20A	20A	20A
Max. Allowable Power Force	4,000VA	4,000VA	4,000VA	4,000VA
	480W	480W	480W	480W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT	SPST	SPDT

Max Allowable Voltage: 300VDC@0.3A

**APPLICATION**

Cooking Appliance, Audio Equipment, Domestic Appliance and Controlling Equipment...etc.

**PERFORMANCE (AT INITIAL VALUE)**

- Contact Resistance ..... 100 mΩ Max. @1A,6VDC
- Operate Time..... 12mSec. Max. (DC coil only)  
20mSec. Max. (AC coil only)
- Release Time ..... 8 mSec. Max. (DC coil only)  
20mSec. Max. (AC coil only)
- Dielectric Strength:  
Between Coil & Contact..... 5,000VAC at 50/60 Hz  
for one minute  
Between Contacts ..... 1,000VAC at 50/60 Hz  
for one minute
- Surge Strength ..... 10,000V (between coil  
& contact 1.2x50μSec.)
- Insulation Resistance ..... 100MΩ Min.at  
500VDC
- Max. On/Off Switching:  
Electrical ..... 6 Cycles per Minute  
Mechanical..... 300 Cycles per Minute
- Temperature Range ..... -40~+85 °C
- Humidity Range ..... 45~85% RH.
- Coil Temperature Rise ..... 30 °C Max.

- Vibration:  
Destruction ..... 10 to 55 to 10 Hz,0.75 mm single  
amplitude (1.5mm double amplitude)  
Malfunction ..... 10 to 55 to 10 Hz,0.75 mm single  
amplitude (1.5mm double amplitude)
- Shock:  
Destruction ..... 1,000 m/S  
Malfunction ..... 100 m/S<sup>2</sup>
- Life Expectancy:  
Electrical ..... 10<sup>5</sup> Operations at  
Rated Resistive Load  
Mechanical ..... 10<sup>7</sup> Operations at  
No load condition
- Weight ..... About 12.5 g

**ACCESSORIES & SOCKETS**

- PI-50BE ..... See Page 171
- PI-50BE/3 ..... See Page 171
- PI-50-0 ..... See Page 173

**SAFETY STANDARD & FILE NUMBER**

- UL & C-UL ..... E141060
- TÜV ..... R50008955
- VDE ..... 40009648
- CQC ..... 02001002513

## COIL SPECIFICATION (AT 20 °C)

Coil Sensitivity	Nominal Voltage (VAC/VDC)	Nominal Current (mA)		Coil Resistance (Ω±10%)	Power Consumption (DC: W; AC: VA)		Pull-In Voltage	Drop-Out Voltage	Maximum Allowable Voltage	
		50HZ	60HZ		50HZ	60HZ				
EZ DC Coil	6	66.7		90	Abt. 0.40		80% Maximum	5% Minimum	130%	
	9	44.6		202						
	12	33.3		360						
	15	26.6		560						
	18	22.3		810						
	24	16.7		1,440						
	48	8.7		5,520						
	60	8.2		7,340						
EZ AC Coil	110	4.1		26,530	0.71	0.61	15% Minimum			
	24	29.75	25.35	350						
	115	7.65	6.3	8,100					0.88	0.73
	230	3.42	2.72	32,500					0.79	0.63

## ORDERING INFORMATION

EZ - SS - 1 12 D M G F

**Insulation System:**

**Nil:** Standard Class

**F:** Class F

**Contact Material:**

**Nil:** AgNi

**G:** AgNi Gilded

**O:** AgNi Plated

**N:** AgSnO<sub>2</sub>

**S:** AgSnO<sub>2</sub> Gilded

**C:** AgCdO

**Contact Form:**

**Nil:** One Form C

**M:** One Form A

**B:** One Form B

**Coil Type:**

**D:** Standard DC

**A:** Standard AC

**Coil Voltage:** VDC (**06:** 6V, **09:** 9V, **12:** 12V, **15:** 15V, **18:** 18V,

**24:** 24V, **48:** 48V, **60:** 60V, **110:** 110V)

VAC (**24:** 24V, **115:** 115V, **230:** 230V)

**Number of Pole:**

**1:** One Pole

**Type of Sealing:**

**SS:** RT II Flux Proofed

**SH:** RT III Wash Tight

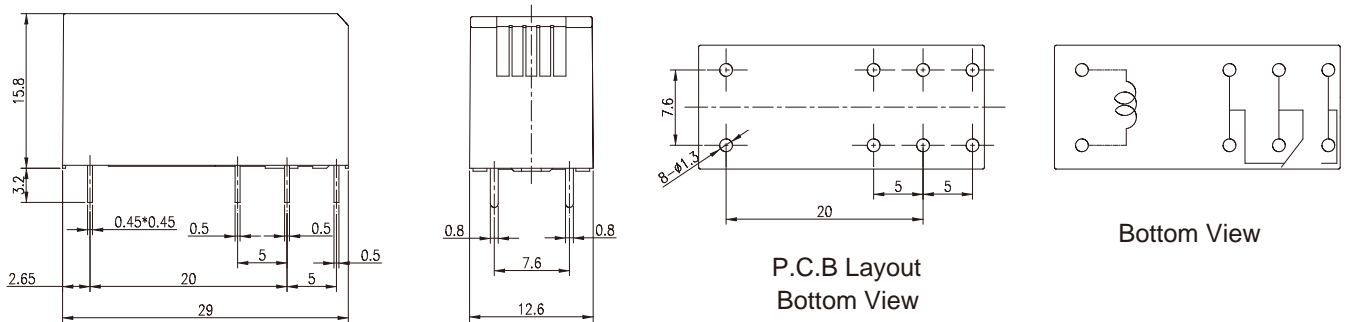
**Type:**

**EZ**

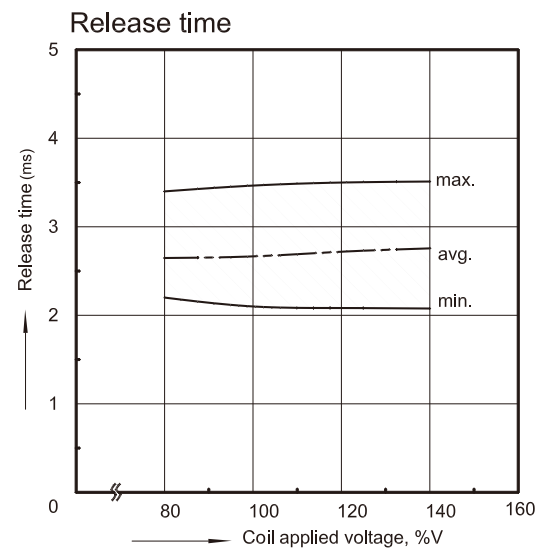
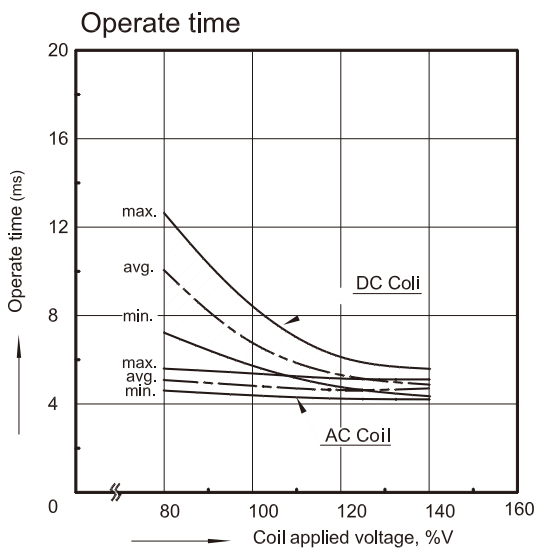
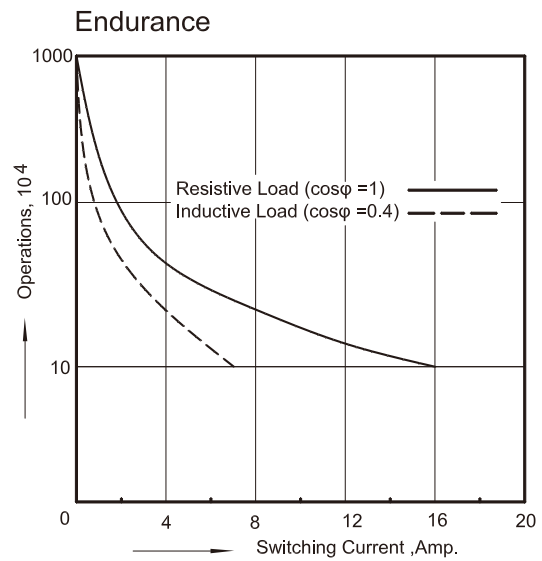
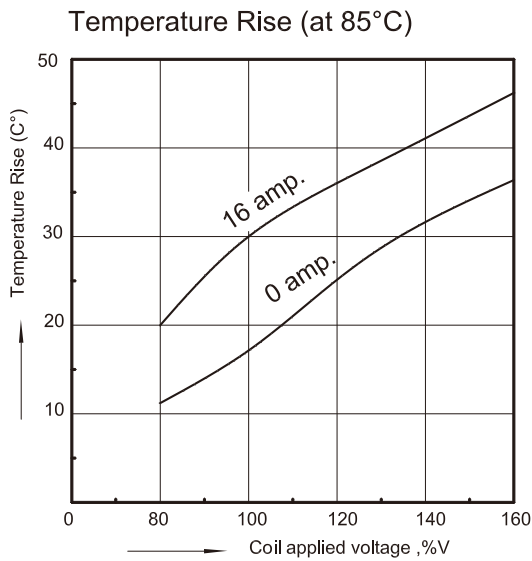
## CLASSIFICATION

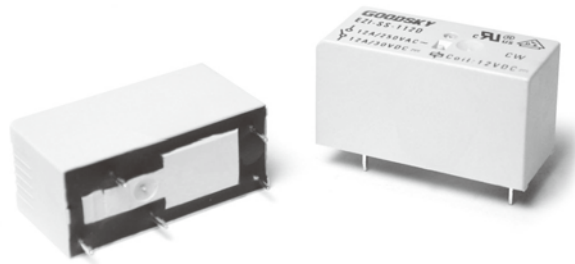
Model	EZ					
	DC Coil			AC Coil		
Contact Form	1C	1A	1B	1C	1A	1B
Flux Proofed	EZ-SS-1□□□D	EZ-SS-1□□□DM	EZ-SS-1□□□DB	EZ-SS-1□□□A	EZ-SS-1□□□AM	EZ-SS-1□□□AB
Wash Tight	EZ-SH-1□□□D	EZ-SH-1□□□DM	EZ-SH-1□□□DB	EZ-SH-1□□□A	EZ-SH-1□□□AM	EZ-SH-1□□□AB

DIMENSION ( ≤ 5mm ± 0.2mm, > 5mm ± 0.3mm, the tolerance of PCB thru hole: +0.1mm)



REFERENCE DATA





## MAIN FEATURE

1. Low power consumption; AC/DC coil available.
2. Proper insulation distance with 5000VAC dielectric strength.
3. Contacts pin out width 5.0 mm.
4. UL Class F insulation available.
5. In accordance with IEC 60335-1 and IEC 60730-1.
6. Halogen Free available.
7. Comply with RoHS and REACH regulations.

## CONTACT RATING

Load Type	EZI (DM/DB)	EZI (D)	EZI (AM/AB)	EZI (A)
Rated Load (Resistive)	12A 250VAC	12A 250VAC	12A 250VAC	12A 250VAC
	12A 30VDC	12A 30 VDC	12A 30VDC	12A 30VDC
Rated Carrying Current	12A	12A	12A	12A
Max. Allowable Voltage	AC 250V	AC 250V	AC 250V	AC 250V
	DC 300V	DC 300V	DC 300V	DC 300V
Max. Allowable Current	12A	12A	12A	12A
Max. Allowable Power Force	3,000VA	3,000VA	3,000VA	3,000VA
	360W	360W	360W	360W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT	SPST	SPDT

Max Allowable Voltage: 300VDC@0.3A

## APPLICATION

Cooking Appliance, Audio Equipment, Domestic Appliance and Controlling Equipment, etc.

## PERFORMANCE (AT INITIAL VALUE)

- Contact Resistance ..... 100 mΩ Max. @1A,6VDC
- Operate Time..... 12mSec. Max. (DC coil only)  
20mSec. Max. (AC coil only)
- Release Time ..... 8 mSec. Max. (DC coil only)  
20mSec. Max. (AC coil only)
- Dielectric Strength:  
Between Coil & Contact..... 5,000VAC at 50/60 Hz  
for one minute  
Between Contacts ..... 1,000VAC at 50/60 Hz  
for one minute
- Surge Strength ..... 10,000V (between coil  
& contact 1.2x50μSec.)
- Insulation Resistance ..... 100MΩ Min. at  
500VDC
- Max. On/Off Switching:  
Electrical ..... 6 Cycles per Minute  
Mechanical..... 300 Cycles per Minute
- Temperature Range ..... -40~+85 °C
- Humidity Range ..... 45~85% RH.
- Coil Temperature Rise ..... 30 °C Max.

- Vibration:  
Destruction ..... 10 to 55 to 10 Hz, 0.75 mm single  
amplitude (1.5mm double amplitude)  
Malfunction ..... 10 to 55 to 10 Hz, 0.75 mm single  
amplitude (1.5mm double amplitude)
- Shock:  
Destruction ..... 1,000 m/S  
Malfunction ..... 100 m/S<sup>2</sup>
- Life Expectancy:  
Electrical ..... 10<sup>5</sup> Operations at  
Rated Resistive Load  
Mechanical ..... 10<sup>7</sup> Operations at  
No load condition
- Weight ..... About 15 g

## ACCESSORIES & SOCKETS

- PI-50BE ..... See Page 171
- PI-50BE/3 ..... See Page 171
- PI-50-0 ..... See Page 173

## SAFETY STANDARD & FILE NUMBER

- UL & C-UL ..... E141060
- VDE ..... 40009648
- CQC ..... 02001002513

**COIL SPECIFICATION (AT 20°C)**

Coil Sensitivity	Nominal Voltage (VAC/VDC)	Nominal Current (mA)		Coil Resistance (Ω±10%)	Power Consumption (DC: W; AC: VA)		Pull-In Voltage	Drop-Out Voltage	Maximum Allowable Voltage
		50HZ	60HZ		50HZ	60HZ			
EZI DC Coil	6	66.7		90	Abt. 0.40		80% Maximum	5% Minimum	130%
	9	44.6		202					
	12	33.3		360					
	15	26.6		560					
	18	22.3		810					
	24	16.7		1,440					
	48	8.7		5,520					
	60	8.2		7,340					
EZI AC Coil	110	4.1		26,530	0.71	0.61	30% Minimum		
	24	29.75	25.35	350	0.88	0.73			
	230	3.42	2.72	32,500	0.79	0.63			

**ORDERING INFORMATION**

EZI - **SS** - **1** **12** **D** **M** **G** **F**

<b>Insulation System:</b>	<b>Nil:</b> Standard Class <b>F:</b> Class F
<b>Contact Material:</b>	<b>Nil:</b> AgNi <b>G:</b> AgNi Gilded <b>O:</b> AgNi Plated <b>N:</b> AgSnO <sub>2</sub> <b>S:</b> AgSnO <sub>2</sub> Gilded <b>C:</b> AgCdO
<b>Contact Form:</b>	<b>Nil:</b> One Form C <b>M:</b> One Form A <b>B:</b> One Form B
<b>Coil Type:</b>	<b>D:</b> Standard DC <b>A:</b> Standard AC
<b>Coil Voltage:</b>	VDC ( <b>06:</b> 6V, <b>09:</b> 9V, <b>12:</b> 12V, <b>15:</b> 15V, <b>18:</b> 18V, <b>24:</b> 24V, <b>48:</b> 48V, <b>60:</b> 60V, <b>110:</b> 110V) VAC ( <b>24:</b> 24V, <b>115:</b> 115V, <b>230:</b> 230V)
<b>Number of Pole:</b>	<b>1:</b> One Pole
<b>Type of Sealing:</b>	<b>SS:</b> RT II Flux Proofed <b>SH:</b> RT III Wash Tight
<b>Type:</b>	<b>EZI</b>

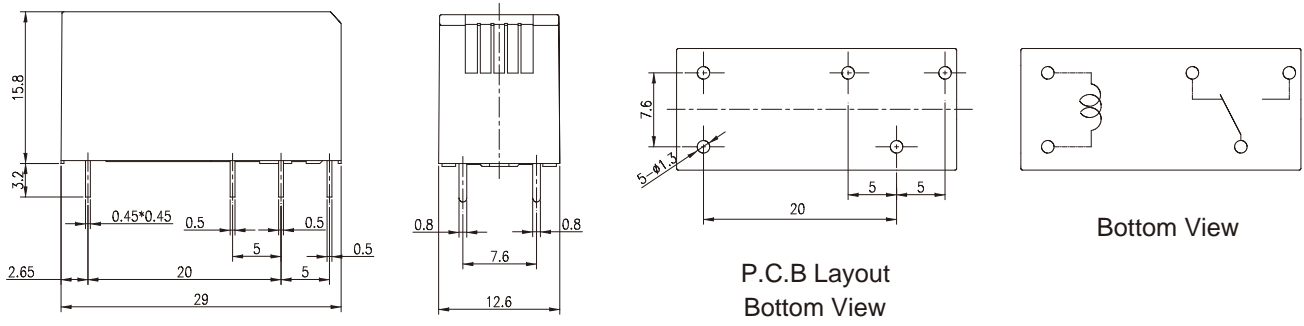
**CLASSIFICATION**

Model	EZI					
	DC Coil			AC Coil		
Contact Form	1C	1A	1B	1C	1A	1B
Flux Proofed	EZI-SS-1□□□D	EZI-SS-1□□□DM	EZI-SS-1□□□DB	EZI-SS-1□□□A	EZI-SS-1□□□AM	EZI-SS-1□□□AB
Wash Tight	EZI-SH-1□□□D	EZI-SH-1□□□DM	EZI-SH-1□□□DB	EZI-SH-1□□□A	EZI-SH-1□□□AM	EZI-SH-1□□□AB

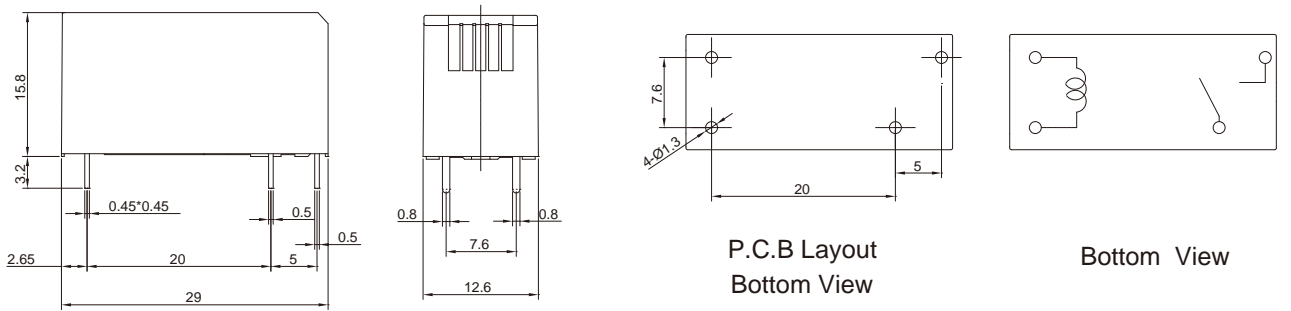


**DIMENSION ( ≤ 5mm ± 0.2mm, > 5mm ± 0.3mm, the tolerance of PCB thru hole: +0.1mm)**

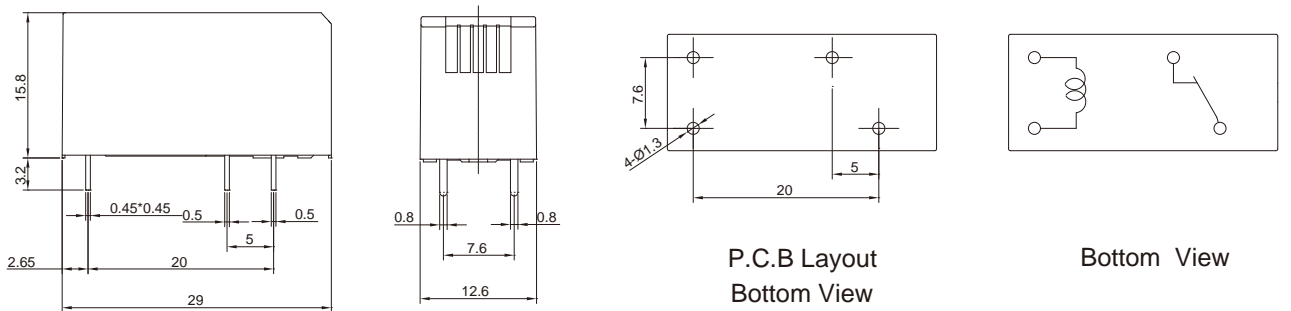
**EZI-D/A**



**EZI-D/AM**

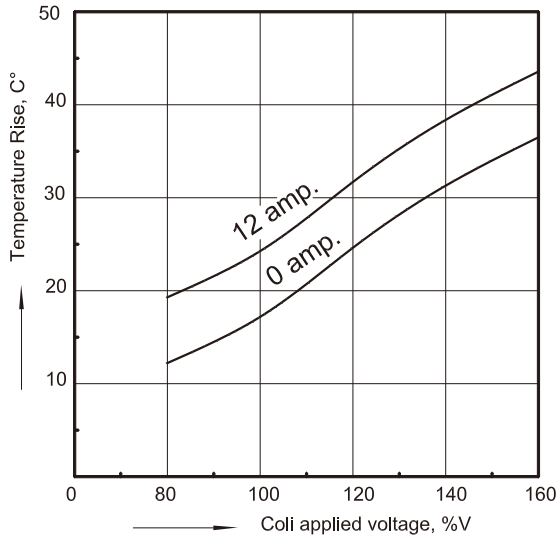


**EZI-D/AB**

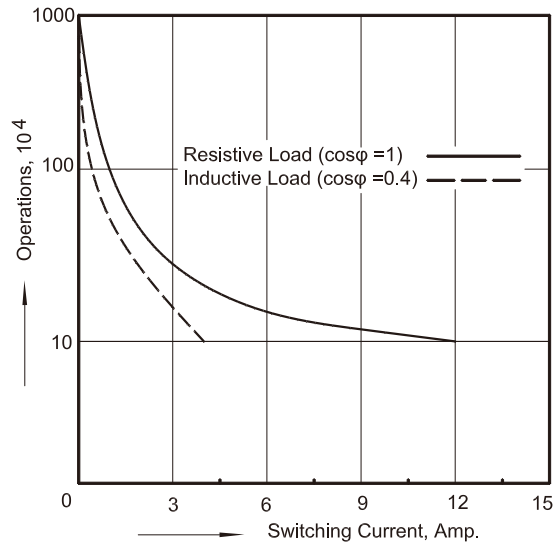


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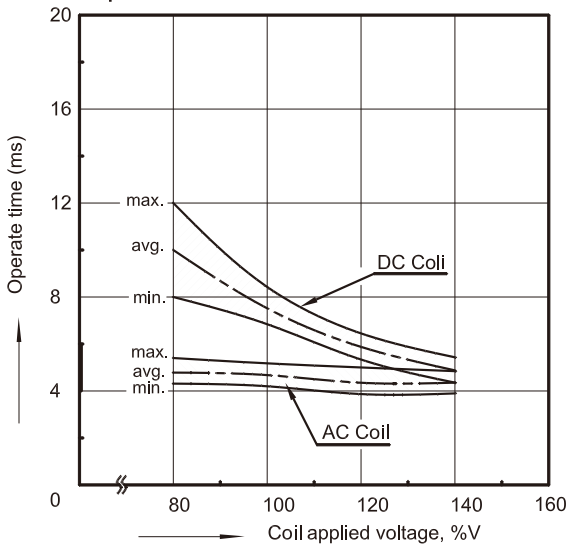
Temperature Rise (at 85°C)



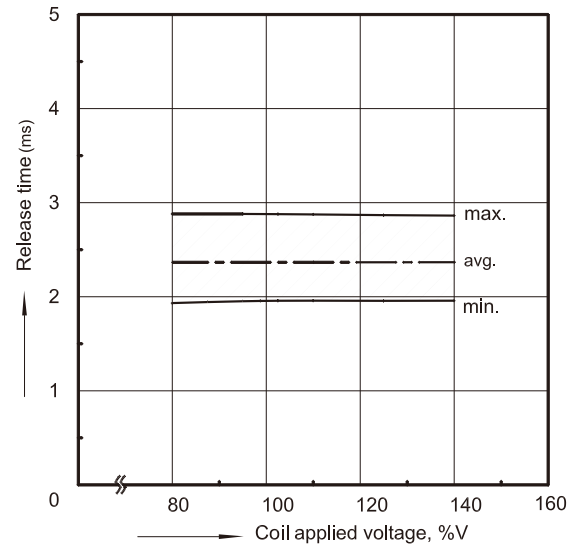
Endurance



Operate time



Release time





## MAIN FEATURE

1. Slim type with 16A rated load.
2. 8 mm insulation distance.
3. Dielectric strength 5,000V and surge strength up to 10,000V.
4. UL Class F insulation available.
5. High sensitivity DC coil type of low power consumption available.
6. Halogen Free series available.
7. Comply with RoHS and REACH regulations.

## CONTACT RATING

Load Type	MI (DM/LM/DB/LB)	MI (D/L)	MIH (DM/LM/DB/LB)	MIH (D/L)
Rated Load (Resistive)	10A 250VAC	10A 250 VAC	16A 240VAC	16A 240VAC
	10A 30VDC	10A 30VDC	16A 24VDC	16A 24VDC
	1/3 HP 250VAC	1/3 HP 125VAC	1/3 HP 250VAC	1/3 HP 125VAC
	-	1/2 HP 250VAC	-	1/2 HP 250VAC
Rated Carrying Current	10A	10A	16A	16A
Max. Allowable Voltage	AC: 250V	AC: 250V	AC: 250V	AC: 250V
	DC: 110V	DC: 110V	DC: 110V	DC: 110V
Max. Allowable Current	10A	10A	16A	16A
Max. Allowable Power Force	2500VA	2500VA	3840VA	3840VA
	300W	300W	384W	384W
Contact Material	Ag Alloy	Ag Alloy	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT	SPST	SPDT

## APPLICATION

Cooking Appliances, Air Conditioner, Audio Equipment, Domestic Appliances, Controlling Equivalent, etc.

## PERFORMANCE (AT INITIAL VALUE)

- Contact Resistance ..... 100mΩMax. @1A,6VDC
- Operate Time..... 15mSec. Max. (D Type)  
20mSec. Max. (L Type)
- Release Time ..... 8 mSec. Max.
- Dielectric Strength:  
Between Coil & Contact..... 5,000VAC at 50/60 Hz  
for one minute  
Between Contacts ..... 1,000VAC at 50/60 Hz  
for one minute
- Surge Strength ..... 10,000V (between Coil  
& Contact 1.2x50μSec.)
- Insulation Resistance..... 100 MegaΩ Min. at  
500VDC
- Max. On/Off Switching:  
Electrical ..... 6 Cycles per Minute  
Mechanical..... 300 Cycles per Minute
- Temperature Range ..... -30~+70°C
- Humidity Range ..... 45~85% RH.

- Coil Temperature Rise .... 45°C Max. (D Type)  
35°C Max. (L Type)
- Vibration:  
Destruction ..... 10 to 55 to 10 Hz,0.75 mm single  
amplitude (1.5mm double amplitude)  
Malfunction ..... 10 to 55 to 10 Hz,0.75 mm single  
amplitude (1.5mm double amplitude)
- Shock:  
Destruction ..... 1,000 m/S<sup>2</sup>  
Malfunction ..... 100 m/S<sup>2</sup>
- Life Expectancy:  
Mechanical ..... 10<sup>7</sup> Operations at No  
Load condition  
Electrical ..... 10<sup>5</sup> Operations at Rated  
Resistive Load  
Weight ..... About 12.2 g

## SAFETY STANDARD & FILE NUMBER

- UL & CUL..... E141060
- TÜV (MI)..... R09552084
- TÜV (MIH)..... R09854160
- VDE (MI-L/LM/D/DM Type) . 40013086

**COIL SPECIFICATION (AT 20°C)**

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ( $\Omega \pm 10\%$ )	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
MI/MIH D/DM/DB	3	240	12.5	Abt. 0.72	80% Maximum	5% Minimum	130%
	5	138.9	36				
	6	120	50				
	9	78.3	115				
	12	60	200				
	24	29.3	820				
	48	14.5	3,300				
MI/MIH L/LM/LB	3	176.5	17	Abt. 0.54	80% Maximum	5% Minimum	130%
	5	106.4	47				
	6	88	68				
	9	58	155				
	12	44.4	270				
	24	21.8	1,100				
	48	10.9	4,400				

**ORDERING INFORMATION**

MI - SS - 1 12 D M F

**Insulation System:** Nil: Standard Class  
F: Class F

**Contact Form:** Nil: One Form C  
M: One Form A  
B: One Form B (VDE only)

**Coil Type:** D: Standard DC  
L: High DC

**Coil Voltage:** 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V

**Number of Pole:** 1: One Pole

**Type of Sealing:** SS: RT II Flux Proofed  
SH: RT III Wash Tight

**Type:** MI  
MIH

**CLASSIFICATION**

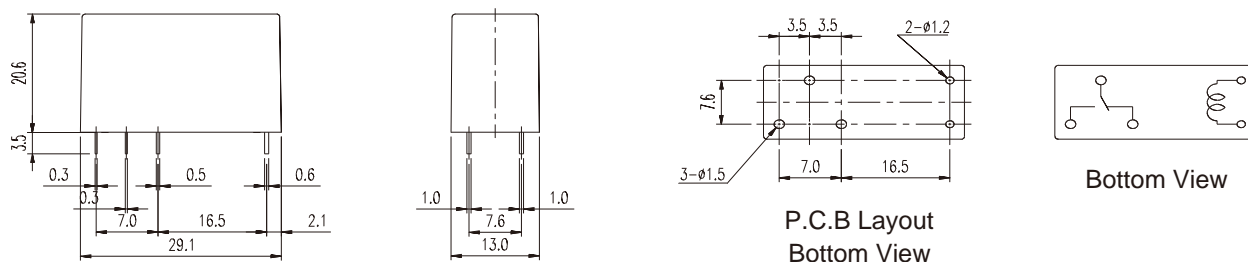
Model	MI / MIH					
	Standard DC			High DC		
Contact Form	1C	1A	1B	1C	1A	1B
Flux Proofed	MI(H)-SS-1□□D	MI(H)-SS-1□□DM	MI(H)-SS-1□□DB	MI(H)-SS-1□□L	MI(H)-SS-1□□LM	MI(H)-SS-1□□LB
Wash Tight	MI(H)-SH-1□□D	MI(H)-SH-1□□DM	MI(H)-SH-1□□DB	MI(H)-SH-1□□L	MI(H)-SH-1□□LM	MI(H)-SH-1□□LB

**ACCESSORIES & SOCKETS**

**MI-1P**

- PI-35BE ..... See Page 171
- PI-35BE/3 ..... See Page 171
- PI-35-0 ..... See Page 173

**Dimension ( ≤ 5mm ± 0.2mm, > 5mm ± 0.3mm, the tolerance of PCB thru hole: +0.1mm)**





## MAIN FEATURE

1. Slim type with 10A rated load.
2. Insulation distance of 8mm is designed.
3. Surge Resistance up to 10,000V.
4. High Sensitivity DC Coil Type of low power consumption available.
5. TV-5 at 120VAC is certified by UL.
6. Comply with RoHS and REACH regulations.

## CONTACT RATING

Load Type	MIT (DM)	MIT (LM)
Rated Load (Resistive)	10A 240VAC	10A 240VAC
	5A 24VDC	5A 24VDC
Contact Capacity	TV-5 120VAC	TV-5 120VAC
	Tungsten (600W)	Tungsten (600W)
Rated Carrying Current	10A	10A
Max. Allowable Voltage	AC 240V	AC 240V
	DC 110V	DC 110V
Max. Allowable Current	10A	10A
Max. Allowable Power Force	2,400VA	2,400VA
	120W	120W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST

## APPLICATION

Remote Control TV Receivers, Monitor Displays, Audio Equipment and High Inrush Current Application.

## PERFORMANCE (AT INITIAL VALUE)

- Contact Resistance ..... 100mΩMax. @1A,6VDC
- Operate Time..... 15mSec. Max. (D Type)  
20mSec. Max. (L Type)
- Release Time .....8 mSec. Max.
- Dielectric Strength:  
Between Coil & Contact.....5,000VAC at 50/60 Hz  
for one minute  
Between Contacts ..... 1,000VAC at 50/60 Hz  
for one minute
- Surge Strength ..... 10,000V (between Coil  
& Contact1.2x50μSec.)
- Insulation Resistance ..... 100 MegaΩ Min. at  
500VDC.
- Max. On/Off Switching:  
Electrical .....6 Cycles per Minute  
Mechanical ..... 300 Cycles per Minute
- Temperature Range.....-30~+85°C
- Humidity Range..... 45~85% RH.

- Coil Temperature Rise ..... 45°C Max. (D Type)  
35°C Max. (L Type)
- Vibration:  
Destruction ..... 10 to 55 to 10 Hz,0.75 mm single  
amplitude (1.5mm double amplitude)  
Malfunction ..... 10 to 55 to 10 Hz,0.75 mm single  
amplitude (1.5mm double amplitude)
- Shock:  
Destruction ..... 1,000 m/S<sup>2</sup>  
Malfunction ..... 100 m/S<sup>2</sup>
- Life Expectancy:  
Mechanical ..... 10<sup>7</sup> Operations at No  
Load condition  
Electrical ..... 10<sup>5</sup> Operations at  
Rated Resistive Load  
2.5x10<sup>4</sup> Operations at  
TV Rated Load
- Weight ..... About 12.2 g

## SAFETY STANDARD & FILE NUMBER

- UL & C-UL ..... E141060
- TÜV ..... R09352331

COIL SPECIFICATION (AT 20°C)

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ( $\Omega \pm 10\%$ )	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
MIT - DM	3	240	12.5	Abt. 0.72	80% Maximum	5% Minimum	130%
	5	138.9	36				
	6	120	50				
	9	78.3	115				
	12	60	200				
	24	29.3	820				
MIT - LM	3	176.5	17	Abt. 0.54	80% Maximum	5% Minimum	130%
	5	106.4	47				
	6	88	68				
	9	58	155				
	12	44.4	270				
	24	21.8	1,100				
	48	11	4,400				

ORDERING INFORMATION

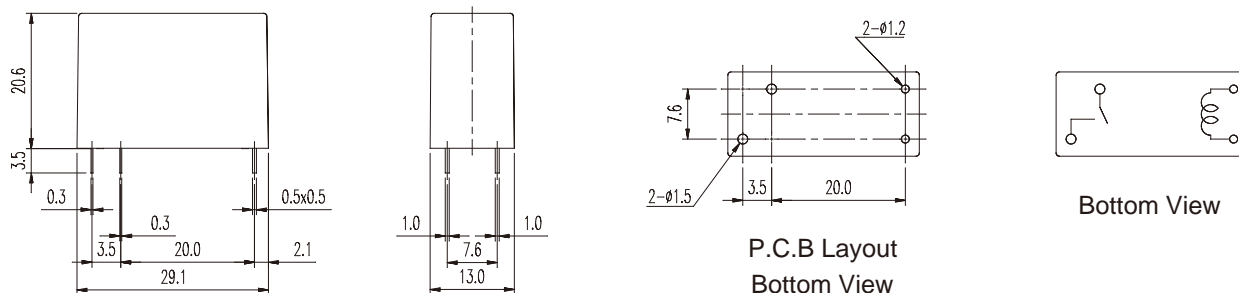
MIT - SS - 1 12 D M

**Contact Form:** M: One Form A  
**Coil Type:** D: Standard DC  
L: High DC  
**Coil Voltage:** 03: 3V, 05: 5V, 06: 6V, 09: 9V, 12: 12V, 24: 24V, 48: 48V  
**Number of Pole:** 1: One Pole  
**Type of Sealing:** SS: RT II Flux Proofed  
SH: RT III Wash Tight  
**Type:** MIT

CLASSIFICATION

Model	MIT	
Coil Sensitivity	Standard DC	High DC
Flux Proofed	MIT-SS-1□□DM	MIT-SS-1□□LM
Wash Tight	MIT-SH-1□□DM	MIT-SH-1□□LM

DIMENSION ( $\leq 5\text{mm} \pm 0.2\text{mm}$ ,  $> 5\text{mm} \pm 0.3\text{mm}$ , the tolerance of PCB thru hole:  $+0.1\text{mm}$ )





## MAIN FEATURE

1. Switching capacity 5A with two changeover contacts.
2. Insulation distance of 8mm Min. is designed.
3. Dielectric strength of 5,000V min. and surge strength 10,000V.
4. 1/8 horse power at 120VAC and 1/8 horse power at 250VAC are certified by UL.
5. TV-3 at 120VAC rating is approved by UL.
6. Halogen free series available.
7. UL Class F insulation available.
8. Comply with RoHS and REACH regulations.

## CONTACT RATING

Load Type	MI-2P (DM/LM/DB/LB)	MI-2P (D/L)
Rated Load (Resistive)	5A 250VAC	5A 250VAC
	5A 30VDC	5A 30VDC
Contact Capacity	TV-3 120VAC	TV-3 120VAC
	1/8HP 120VAC/250VAC	1/8HP 120VAC/250VAC
Rated Carrying Current	5A	5A
Max. Allowable Voltage	AC 240V	AC 240V
	DC 110V	DC 110V
Max. Allowable Current	5A	5A
Max. Allowable Power Force	1,250VA	1,250VA
	150W	150W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	DPST	DPDT

## APPLICATION

Cooking Appliances, Air Conditioner, Audio Equipment, Domestic Appliances, Controlling Equivalent, etc.

## PERFORMANCE (AT INITIAL VALUE)

- Contact Resistance ..... 100mΩ Max. @ 1A, 6VDC
- Operate Time ..... 15mSec. Max. (D Type)  
20mSec. Max. (L Type)
- Release Time ..... 8 mSec. Max.
- Dielectric Strength:
  - Between Coil & Contact ..... 5,000VAC at 50/60 Hz for one minute
  - Between Contacts ..... 1,000VAC at 50/60 Hz for one minute
- Surge Strength ..... 10,000V (between Coil & Contact 1.2x50μSec.)
- Insulation Resistance ..... 100 MegaΩ Min. at 500VDC
- Max. On/Off Switching:
  - Electrical ..... 6 Cycles per Minute
  - Mechanical ..... 300 Cycles per Minute
- Temperature Range ..... -30 ~ +70°C
- Humidity Range ..... 45 ~ 85% RH.
- Coil Temperature Rise ..... 45°C Max. (D Type)  
35°C Max. (L Type)

- Vibration:
  - Destruction ..... 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5mm double amplitude)
  - Malfunction ..... 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5mm double amplitude)
- Shock:
  - Destruction ..... 1,000 m/S<sup>2</sup>
  - Malfunction ..... 100 m/S<sup>2</sup>
- Life Expectancy:
  - Mechanical ..... 10<sup>7</sup> Operations at No Load condition
  - Electrical ..... 10<sup>5</sup> Operations at Rated Resistive Load  
2.5x10<sup>4</sup> Operations at TV Rated Load
- Weight ..... About 13.8 g

## ACCESSORIES & SOCKETS

- PI-50BE ..... See Page 171
- PI-50BE/3 ..... See Page 171
- PI-50-0 ..... See Page 173

## SAFETY STANDARD & FILE NUMBER

- UL & C-UL ..... E141060
- TÜV ..... R09552069
- VDE (MI-D/DM/L/LM Type) ... 40013086

**COIL SPECIFICATION (AT 20°C)**

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ( $\Omega \pm 10\%$ )	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
MI-2P D/DM/DB Type	3	240	12.5	Abt. 0.72	80% Maximum	5% Minimum	130%
	5	138.9	36				
	6	120	50				
	9	78.3	115				
	12	60	200				
	15	48	313				
	18	38	470				
	21	34.3	612.5				
	24	29.3	820				
MI-2P L/LM/LB Type	3	176.5	17	Abt. 0.54	80% Maximum	5% Minimum	130%
	5	100	50				
	6	88	68				
	9	58	155				
	12	44.4	270				
	15	36	417				
	18	30	600				
	21	25.7	817				
	24	21.8	1,100				
28	19.3	1,452					
48	10.9	4,400					

**ORDERING INFORMATION**

MI - SS - 2 12 D M F

**Insulation System:**

**Nil:** Standard Class

**F:** Class F

**Contact Form:**

**Nil:** Form C

**M:** Form A

**B:** Form B

**Coil Type:**

**D:** Standard DC

**L:** High DC

**Coil Voltage:**

**03:** 3V, **05:** 5V, **06:** 6V, **09:** 9V, **12:** 12V, **15:** 15V, **18:** 18V, **21:** 21V, **24:** 24V, **28:** 28V, **48:** 48V

**Number of Pole:**

**2:** Two Poles

**Type of Sealing:**

**SS:** RT II Flux Proofed

**SH:** RT III Wash Tight

**Type:**

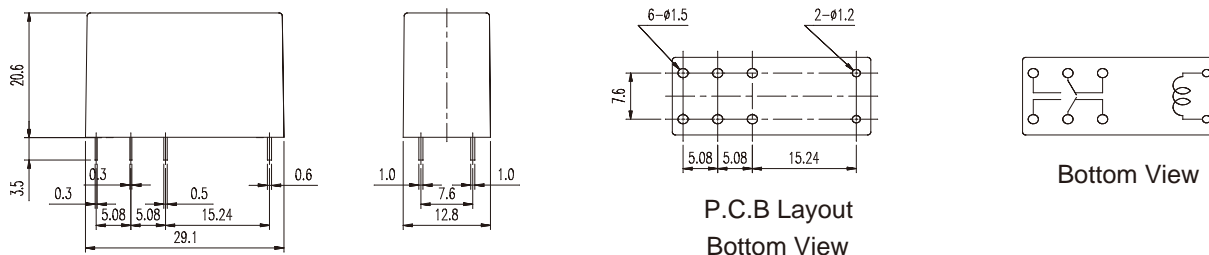
**MI**

**CLASSIFICATION**

Model	MI - 2P					
Coil Sensitivity	Standard DC			High DC		
Contact Form	2C	2A	2B	2C	2A	2B
Flux Proofed	MI-SS-2□□D	MI-SS-2□□DM	MI-SS-2□□DB	MI-SS-2□□L	MI-SS-2□□LM	MI-SS-2□□LB
Wash Tight	MI-SH-2□□D	MI-SH-2□□DM	MI-SH-2□□DB	MI-SH-2□□L	MI-SH-2□□LM	MI-SH-2□□LB

**DIMENSION ( $\leq 5\text{mm} \pm 0.2\text{mm}$ ,  $> 5\text{mm} \pm 0.3\text{mm}$ , the tolerance of PCB thru hole:  $+0.1\text{mm}$ )**

**MI-2P-SS/SH**



V.01EZ





## MAIN FEATURE

1. Miniature size with low power consumption for rated loading to 12A.
2. Surge Strength up to 10,000V.
3. Operating temperature up to 105°C.
4. Halogen Free series available.
5. UL Class F insulation available.
6. Comply with RoHS and REACH regulations.

## CONTACT RATING

Load Type	GQ (LM)	GQ (LM1)
Rated Load (Resistive)	5A 250VAC	10A 250VAC
	-	12A 125VAC
	5A 30VDC	10A 30VDC
	-	10A 277VAC
Contact Capacity	-	TV-5 120VAC
Rated Carrying Current	5A	10A
Max. Allowable Voltage	AC 250V	AC 250V
	DC 30V	DC 30V
Max. Allowable Current	5A	12A
Max. Allowable Power Force	1,250VA	2,500VA
	150W	300W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPST

## APPLICATION

Domestic Appliances, Office Machines, Audio Equipment, etc.

## PERFORMANCE (AT INITIAL VALUE)

- Contact Resistance ..... 100mΩ Max. @1A,6VDC
- Operate Time..... 10mSec. Max.
- Release Time ..... 5 mSec. Max.
- Dielectric Strength:
  - Between Coil & Contact..... 4,000VAC at 50/60 Hz for one minute
  - Between Contacts ..... 1,000VAC at 50/60 Hz For one minute
- Surge Strength ..... 10,000V (between coil & contact 1.2x50μSec.)
- Insulation Resistance ..... 100 MegaΩ Min. at 500VDC
- Max. On/Off Switching:
  - Electrical ..... 6 Cycles per Minute
  - Mechanical..... 300 Cycles per Minute
- Temperature Range ..... -40~+105°C
- Humidity Range ..... 45~85% RH.
- Coil Temperature Rise ..... 40°C Max.

- Vibration:
  - Destruction ..... 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5mm double amplitude)
  - Malfuction ..... 10 to 55 to 10 Hz, 0.75 mm single amplitude (1.5mm double amplitude)
- Shock:
  - Destruction ..... 1,000 m/S<sup>2</sup>
  - Malfuction ..... 100 m/S<sup>2</sup>
- Life Expectancy:
  - Mechanical..... 10<sup>7</sup> Operations at no Load condition
  - Electrical ..... 10<sup>5</sup> Operations at Rated Resistive Load
  - 2.5x10<sup>4</sup> Operations at TV Rated Load
- Weight..... About 9.0 g

## SAFETY STANDARD & FILE NUMBER

- LM:
  - UL & C-UL..... E141060
  - TÜV ..... R50121172
  - VDE ..... 40025456
- LM1:
  - UL & C-UL ..... E141060
  - TÜV ..... R50121172
  - CQC..... 14002112636

**COIL SPECIFICATION (AT 20°C)**

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance ( $\Omega \pm 10\%$ )	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
GQ	3	67	45	Abt. 0.20	80% Maximum	5% Minimum	110%
	5	40	125				
	6	33.3	180				
	9	22.5	400				
	12	16.7	720				
	15	13.3	1,125				
	18	11.1	1,620				
	24	8.3	2,880				
	48	4.2	11,520				

**ORDERING INFORMATION**

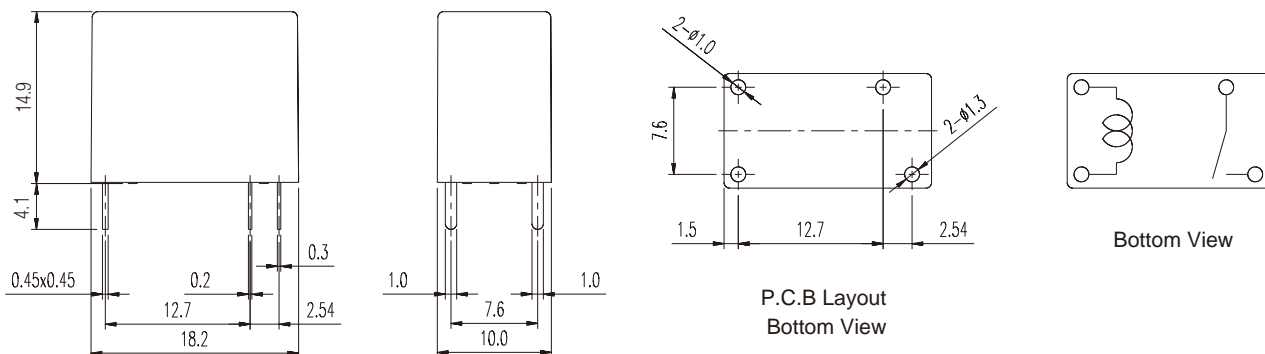
GQ - SS - 1 12 L M 1 F

	<b>Insulation System:</b>	<b>Nil:</b> Standard Class <b>F:</b> Class F
	<b>Rated Carrying Current:</b>	<b>Nil:</b> 5A <b>1:</b> 10A
	<b>Contact Form:</b>	<b>M:</b> One Form A
	<b>Coil Sensitivity:</b>	<b>L:</b> High DC
	<b>Coil Voltage:</b>	<b>03:</b> 3V, <b>05:</b> 5V, <b>06:</b> 6V, <b>09:</b> 9V, <b>12:</b> 12V <b>15:</b> 15V, <b>18:</b> 18V, <b>24:</b> 24V, <b>48:</b> 48V
	<b>Number of Pole:</b>	<b>1:</b> One Pole
	<b>Type of Sealing:</b>	<b>SS:</b> RT II Flux Proofed <b>SH:</b> RT III Wash Tight
	<b>Type:</b>	<b>GQ</b>

**CLASSIFICATION**

Model	GQ	
Rated Carrying Current	5A	10A
Flux Proofed	GQ-SS-1□□LM	GQ-SS-1□□LM1/F
Wash Tight	GQ-SH-1□□LM	GQ-SH-1□□LM1/F

**DIMENSION ( ≤ 5mm ± 0.2mm, > 5mm ± 0.3mm, the tolerance of PCB thru hole: +0.1mm)**



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