



GENERAL CONTROL RELAY ETR MIH SERIES

■ FEATURES

- Slim type with 16A rated load.
- 8 mm insulation distance.
- Dielectric strength 5,000V and surge strength up to 10,000V.
- UL Class F insulation available.
- High sensitivity DC coil type of low power consumption available.
- Halogen Free series available.
- Comply with RoHS and REACH regulations.
- In accordance with IEC 60335-1, IEC 62368-1 and IEC 60730-1 standards.

■ SAFETY STANDARD

UL&CUL E141060 UL 508

Model	Load	Cycles
MIH-**-1**D	NO/NC (Silver alloy contact) :	
MIH-**-1**L	16A, 240Vac, 40°C, General Use	6K
	16A, 24Vdc, 40°C, L/R=0	6K
	1/3HP, 120Vac, 40°C	1K

TUV R09854160 IEC 61810-1

(EXCEL CELL ELECTRONIC ANHUI CO., LTD.)

Model	Load	Cycles
MIH-**-1**D	NO/NC (Silver alloy contact) :	
MIH-**-1**L	16A, 250Vac, 40°C, cosφ=1	50K
	3A, 250Vac, 40°C, cosφ=0.4	50K
	16A, 30Vdc, 40°C, L/R=0	50K

TUV R50699822 IEC 61810-1

(EXCEL CELL ELECTRONIC CO., LTD.)

Model	Load	Cycles
MIH-**-1**D	NO/NC (AgSnO ₂ In contact)	
MIH-**-1**L	16A, 250Vac, 85°C, cosφ=0.75	10K
	16A, 30Vdc, 85°C, L/R=0	10K

TUV R50699822 IEC 62368-1

(EXCEL CELL ELECTRONIC CO., LTD.)

Model	Load	Cycles
MIH-**-1**D	NO/NC (AgSnO ₂ In contact)	
MIH-**-1**L	16A, 250Vac, 85°C, cosφ=0.75	10K
	16A, 30Vdc, 85°C, L/R=0	10K

TUV R50699822 IEC 60730-1

(EXCEL CELL ELECTRONIC CO., LTD.)

Model	Load	Cycles
MIH-**-1**D	NO/NC (AgSnO ₂ In contact)	
MIH-**-1**L	16A, 250Vac, 85°C, cosφ=0.75	10K
	16A, 30Vdc, 85°C, L/R=0	10K



***Rely on ECE's Relays,
and You Always Relax!***

■ SPECIFICATIONS(AT INITIAL VALUE)

Contact Resistance	100 mΩ Max. @1A,6VDC
Operate Time	15 mSec. Max. (D Type) 20 mSec. Max. (L Type)
Release Time	8 mSec. Max.
Dielectric Strength	Between Coil & Contact: 5,000VAC at 50/60Hz for one minute Between Contacts: 1,000VAC at 50/60Hz 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°C~+85°C
Humidity Range	45~85%RH
Coil Temperature Range	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 ² Malfunction: 100 m/s ²
Mechanical Life	10 ⁷ operations at no load condition.
Weight	About 12.2g

■ COIL SPECIFICATION AT 20°C

Coil Sensitivity	Nominal Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω±10%)	Power Consumption (W)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Max. Allowable Voltage (VDC)
MIH D/DM/DB	3	240	12.5	Abt. 0.72	80% Max.	5% Min.	130%
	5	138.9	36				
	6	120	50				
	9	78.3	115				
	12	60	200				
	24	29.3	820				
	48	14.5	3,300				
MIH L/LM/DB	3	176.5	17	Abt. 0.54	80% Max.	5% Min.	130%
	5	106.4	47				
	6	88	68				
	9	58	155				
	12	54.4	270				
	24	21.8	1,100				
	48	10.9	4,400				

■ PART NUMBER SYSTEM

ETR - MIH - SS - 1 03 D M F - A H Z

Z: RoHS Compliant

Material requirements

Nil : Standard

H : Halogen Free

IEC/EN 60335-1 (GWT 850 °C / 750 °C)

Nil : Standard

A : IEC 60335-1 Glow wire test available

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 Coil

L: High Sensitivity DC Coil

Coil Voltage

03: 3V, 05: 5V, 06: 9V, 09: 9V

12: 12V, 24: 24V, 48: 48V

Number of Pole

1: One Pole

Type of Sealing

SS: Flux Proofed Type

SH: Plastic Sealed Type

Model Name: MIH

Series Name: ETR



*Marking without: "ETR" & "Z".

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

