

## PUBLIC PRODUCT DATASHEET

# EVM-40 High voltage DC Relay

**EVM-40** is part of the High Voltage DC Contactor range from SHR MiRelay. This English public datasheet has been rebuilt under the current SHR AUTOSENSOR TECH LIMITED identity for customer selection, sample purchase and RFQ support.

<b>Product Family</b> High Voltage DC Contactor	<b>Model</b> EVM-40	<b>Purchase Path</b> Sample order or RFQ confirmation
<b>Manufacturer</b> SHR AUTOSENSOR TECH LIMITED	<b>Website</b> www.reed-relay.com	<b>Sales Contact</b> sales@reed-relay.com
<b>Contact Form</b> 1 form A	<b>Rated Load</b> 40	<b>Contact Resistance</b> ≤1@20A
<b>Insulation Resistance</b> reaches 1000MΩ(1000VDC)	<b>Release Time</b> 10Max.	<b>Operating Temperature</b> deg C -40+85

## Key Features

- Ceramic Brazing seal, No arc leakage; designed to prevent fire and burst risk
- Compact structure, low noise
- The mixed gas mainly filled with hydrogen can prevent the contact from oxidation and burning
- 40A 85 deg C long time current carrying capacity
- The insulation resistance reaches 1000MΩ(1000VDC)
- an
- d meets the requirements of IEC60664-1

## Technical Specifications

Parameter	Value
Contact Form	1 form A
Rated Load	40
Contact Resistance	≤1@20A
Insulation Resistance	reaches 1000MΩ(1000VDC)
Release Time	10Max.
Operating Temperature	deg C -40+85
Mechanical Durability	3×10 <sup>5</sup>
Electrical Endurance	2)

## Specification Notes

EVM-40 High voltage DC Relay

1 Product Features

Ceramic Brazing seal, No arc leakage; designed to prevent fire and burst risk

Compact structure, low noise

The mixed gas mainly filled with hydrogen can prevent the

contact from oxidation and burning

40A 85 deg C long time current carrying capacity

The insulation resistance reaches 1000M $\Omega$ (1000VDC)

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## 2 Performance Data

Contact Form / 1 form A

Contact Rated Load A 40

Mechanical Durability Ops 3 $\times$ 10<sup>5</sup>

Max. Switching Voltage VDC 1000

Max. Breaking Current / 400A(320V DC) 1 times

Current Tolerance 1) / 80A: 20min; 160A: 30s; 400A: 0.6s

Contact Resistance m $\Omega$   $\leq$ 1 @20A

Operating Time (at rated voltage) ms 30Max.

Release Time (at rated voltage) ms 10Max.

Insulation Resistance M $\Omega$  1000 (1000VDC)

Dielectric

Withstand

Voltage

Between Open Contacts / 3000VAC 50 Hz/60 Hz

Between Contacts and Coil / 4000VAC 50 Hz/60 Hz

Electrical Endurance 2)

40A 450VDC (DC-1) Ops 2 $\times$ 10<sup>4</sup>

40A 750VDC (DC-1) Ops 1 $\times$ 10<sup>4</sup>

Impact

Stability / 196m/s<sup>2</sup>

Strength / 490 m/s<sup>2</sup>

Vibration / 10Hz-500Hz 49 m/s<sup>2</sup>

Operating Temp deg C -40-+85

Fumidity / 5%-85%RH

Form Of Load Outlet / Internal Thread/External Thread

Weight g 150

Outline Dimensions / Reference outline drawing

Remark: 1) please refer to the attached figure "tolerance curve". 2) The on-off ratio is 0.6s: 5.4s. Please note that if the coil parallel diode is used, the release time of the relay will be greatly prolonged and the service life will be reduced.

## 3 Coil Parameters

SHR SENSOR & RELAY

sales@reed-relay.com

Nominal Voltage(Us) 12V DC 24V DC 48V DC

Operating Voltage Range  $\pm$ 20%Us  $\pm$ 20%Us  $\pm$ 20%Us

Pickup Voltage 9Vmax 18Vmax 36Vmax

Dropout Voltage (1-5)V (2-9)V (4-18)V

Coil Power 3.3W 3.3W 3.3W

4 Example of order marking

EV M-40 A■750 -12 C F 5 (XXX)

② ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

■ Product Model: EV

■ Product Type: M: Ceramic Sealed Type

■ Contact form: A: 1 Form A

■ Series Code: 40: 40A

■ Load Voltage: Blank: 450VDC; 750: 750VDC

■ Nominal coil voltage: 12: 12VDC; 24: 24VDC.....

■ Coil Lead-out Mode: Blank: None – Stripped Wires; C: Connector

■ With Auxiliary Contact Or Not: Blank: Without; F: With Normally Open Auxiliary Contacts

■ Form Of Load Outlet: 4: Internal Thread; 5: External Thread

## Ordering & Engineering Support

For production projects, confirm coil voltage, contact form, switching voltage/current, load type, operating environment, target quantity and required approvals before release. Contact [sales@reed-relay.com](mailto:sales@reed-relay.com) or +86 137 6157 1029 for datasheet confirmation, sample availability and cross-reference support.

Address: Room 311, No. 18 Hangchuan Road, Pudong New District, Shanghai, China

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