NEXEM Electro Mechanical Devices for Next

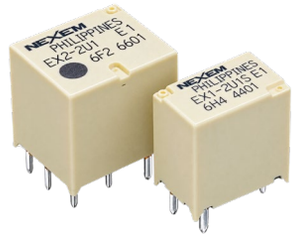
EM Devices Corporation

Product Lineup and Development Roadmap

Mass Production

◆ EX2 Series — Twin Relays. The silver-saving structure was first adopted in this series because1of using relatively large amounts of silver.

◆ EX1 Series — Single Relays.



Planned Launches (Early Mass Production Available)

EM1, HX1, and other series. Rollout will proceed based on production volume and silver usage.

The range of applicable part numbers will be expanded progressively. For details on applicability and supply schedules, please contact our sales team.

Ecology Relay Inquiries

Sales and Customer Support | EM Devices Corporation, Global Sales Headquarters
Tel: 03-6288-9418

Specifications are subject to change without notice. Before use, please refer to the Ecology Relay catalog and the relevant product specification sheet.

Why Choose Ecology Relay

Approximately 40% Less Contact Silver

Our engineering expertise reduces contact silver by approximately 40% without compromising rated performance.

Performance Equivalent to Existing Standard Products

All specifications—including rated load, switching current, and service life—remain unchanged.

Pin-Compatible Design

The terminal layout and recommended PCB land pattern are identical to those of existing standard products, enabling replacement without design changes.

No Material Change

NEXEM solved “less silver means lower performance” with NEXEM’s engineering expertise.

NEXEM Electro Mechanical Devices for Next

EM Devices Corporation

Automotive Power Relay

Ecology Relay

A new contact structure reduces silver use by approximately 40%

Applicable P/N: EX2-2U1S; phased rollout to follow.



© 2026 EM Devices Corporation. All rights reserved.

01

A Contact-Structure Breakthrough That Overcomes the Silver–Performance Trade-Off

Conventional Wisdom

Reducing the silver content of contacts typically compromises weld resistance, contact reliability, and durability. Silver reduction and high performance have therefore been considered difficult to achieve simultaneously.

NEXEM's Breakthrough

By optimizing materials and contact structure, NEXEM has reduced contact silver usage by approximately 40% while maintaining rated performance—demonstrating its engineering expertise.





02

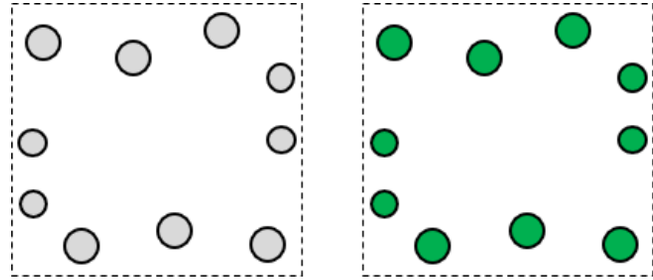
Same Performance and Compatibility as Existing Standard Products

Identical Specifications

Rated load	25 A at 14 V DC (motor load)
Maximum Switching Current	60 A ON / 30 A OFF
Electrical Life	100,000 operations at rated load
Operating Temperature Range	-40 to 125 °C
Insulation Resistance	100 MΩ minimum at 500 VDC

Pin-Compatible — Direct Replacement

The terminal arrangement and recommended PCB land pattern are identical to those of existing standard products. No changes to the PCB design or mounting equipment are required.



Newly Developed Contact Structure

The contact geometry and structure have been optimized. A new processing technology ensures the required contact reliability and current-carrying performance while reducing silver usage.
The reduction is achieved through the contact structure itself, not through material substitution.

03

Combining Environmental Value with Price Competitiveness

ESG IMPACT

Approximately 2.7 Tons of Silver Saved Annually

Approximately 40%

Contact silver usage is reduced by approximately 40%. The estimated annual savings are calculated based on our production volume.

Greater Resilience to Price Fluctuations

Reducing silver consumption through structural innovation mitigates the impact of silver-market fluctuations on costs and pricing, supporting price stability and supply-chain resilience.

Improved Resource Efficiency

Reducing silver consumption lowers both resource use and CO_2 emissions.

We will recommend the optimal solution based on your application requirements.

* For details, please request the *Ecology Relay Data Sheet*.