GOOD SKY ELECTRIC CO., LTD.

ZEM SERIES

For Automotive

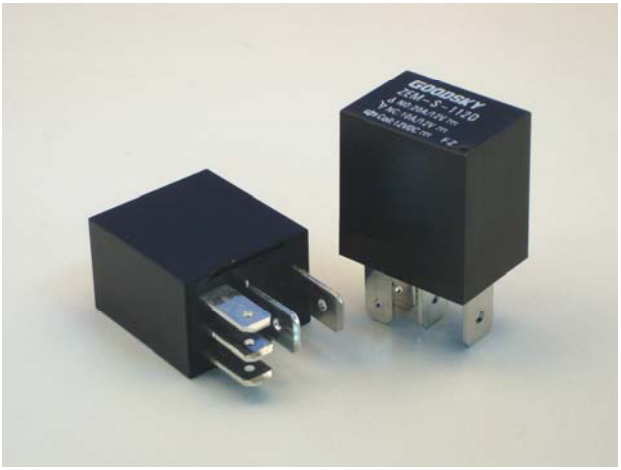
Application Control Board on ABS / Transmission / Cell Motor; etc.

Features Parallel with Resistor or Diode on Coil.
Protection Enhancement to Coil.
High Current 30A

RoHS Compliant

GOODSKY

ZEM



Main Feature

1. ZEM Series Relays are designed for switching capacity by 30A to comply with industrial control system use.
2. Compatible fixed terminal to match corresponding power relay.
3. Simple magnetic circuit to meet low cost demand.
4. Standard type contact form SPDT and SPST are available for customers' preference.
5. Operating ambient temperature range from -40°C to 85°C.

Contact Rating

Load Type	ZEM (DM/LM)	ZEM (D/L)
Rated Load (Resistive)	30A 12VDC	NO: 30A 12VDC
	15A 24VDC	15A 24VDC
	-	NC: 20A 12VDC
	-	10A 24VDC
Rated Carrying Current	30A	30A
Max. Allowable Voltage	DC 30V	DC 30V
Max. Allowable Current	30A	30A
Max. Allowable Power Force	360W	360W
Contact Material	Ag Alloy	Ag Alloy
Contact Form	SPST	SPDT

Application

Direct connection with Cell Motors, Transmission etc. and Anti-Locking Brake System.

Performance (at Initial Value)

- Contact Resistance ..... 100 mΩ Max. @1A,6VDC
- Operate Time ..... 10 mSec. Max.
- Release Time ..... 10 mSec. Max.
- Dielectric Strength:
  Between Coil & Contact ..... 500VAC at 50/60 Hz for one minute.
  Between Contacts ..... 500VAC at 50/60 Hz for one minute.
- 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 .....45~80% RH.
- Coil Temperature Rise.....60 °C Max.
- Vibration:
  Endurance .....10 to 55 Hz dual amplitude width 1.5 mm
  Error Operation.....10 to 55 Hz dual amplitude width 1.5mm.
- Shock:
  Endurance .....1,000 m/S^2.
  Error Operation .....100 m/S^2.
- Life Expectancy:
  Electrical.....10^5 Operations at Rated Resistive Load.
  Mechanical .....10^7 Operations at No Load condition.
- Weight.....About 20 g.

Safety Standard & Its File Number

- NIL

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Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage(VDC)	Nominal Current (mA)	Coil Resistance (Ω±10%)	Power Consumption (W±10%)	Pull-In Voltage (VDC)	Drop-Out Voltage (VDC)	Maximum Allowable Voltage (VDC)
ZEM-D	12	133	90	Abt. 1.6	8	1.2	130%
	24	67	360		16	2.4	
ZEM-L	12	100	120	Abt. 1.2	8	1.2	
	24	50	480		16	2.4	

Ordering Information

ZEM - S - 1 12 D M R

Options: **NIL** Standard
R Coil Parallel With 1/2W Resistor
680Ω for Coil Voltage 12VDC
2700Ω for Coil Voltage 24VDC
D1 Coil parallel with diode IN4007 the Positive pole "+" on #85 terminal
D2 Coil parallel with diode IN4007 the Negative pole "-" on #85 terminal

Contact Form: **NIL** One Form C
M One Form A

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

Coil Voltage: **12**: 12V, **24**: 24V

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

Type of Sealing: **S:** RT Dust Protected Relays

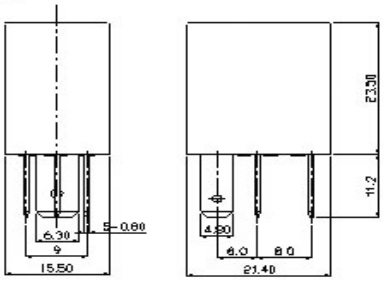
Type: **ZEM**

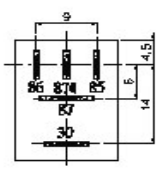
Classification

Model	ZEM			
Coil Sensitivity	Standard DC Coil		High Sensitivity DC Type	
Contact Form	1C	1A	1C	1A
No Bracket Standard	ZEM-S-1□ □D	ZEM -S-1□ □DM	ZEM -S-1□ □L	ZEM -S-1□ □LM
Coil Additional Parts	Please add your choice Coil Parallel "R D1 or D2" at the back of all above-mentioned part number			

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

ZEM-S





BOTTOM VIEW

Electric diagrams