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Please note that the number of variants of Goodsky relay part numbers means that it is not possible to maintain stock of every one. If you are researching to replace just one relay on a component, say as a spare part for domestic equipment, you may need to contact the manufacturer of that equipment. Stock of Goodsky relays is maintained in the UK for those exact parts where there is a continuous demand within the UK.

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Important Note

The information shown in these documents is for guidance only. No liability is accepted for any errors or omissions. The designer or user is solely responsible for the safe and proper application of the parts, assemblies or equipment described.

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

ZEM性能比較表 (Performance Comparison List)

品牌 Supplier		GOODSKY	Tyco	OMRON	NAIS	HounFa	
型號 Item		ZEM	VFMA	G8HN-J	CM	HFV6	
Coil Type		DCV	DCV	DCV	DCV	DCV	
接點部 Contact Specs	開關型式 Contact Configuration	1a, 1c	1a, 1c	1a, 1c	1a, 1c	1a, 1c	
	接點材質 Contact Material		AgSnO ₂	Sliver tin oxide	Silver alloy	AgSnO ₂ , AgNi	
	接點規格 Contact Rating	(DM /LM) 30A 12VDC 15A 24VDC (D /L) 20A 12VDC (NO) 10A 24VDC (NO) 10A 12VDC (NC) 5A 24VDC (NC)	25A/12VDC for 1a 15A/24VDC for 1a 15/25A 12VDC for 1c 10/15A 24VDC for 1c	Standard 20A/100A 12VDC (N/O) 10A/50A 12VDC (N/C) 10A/30A 24VDC (N/O) 5A/15A 24VDC (N/C) High capacity 35A/120A 12VDC (N/O) 20A/40A 12VDC (N/C)	12V coil 35A/14VDC (N/O) 20A/14VDC (N/C) 24V coil 15A/28VDC (N/O) 8A/28VDC (N/C)	30A/13VDC (N/O) 10A/20A 13VDC (1c) 20A/27VDC (N/O) 10A/20A 27VDC (1c)	
	最大流通電流 Max. Allowable Current	30A	120A/3S	35A	35A	30A	
	最大承受電壓 Max. Allowable Voltage	30VDC	24VDC	24VDC	28VDC	27VDC	
線圈部 Coil Specs	額定電壓 Nominal Voltage	12, 24	12, 24	12, 24	12, 24	12, 24	
	動作電壓 Pull-In Voltage %	75%	60%	66.67%	58.30%	60%	
	開放電壓 Drop-Out Voltage %	5%	15%	10%	10%	10%	
	額定消耗功率 Power Consumption	1.6W / 1.2W	1.4W, 1.6W, 1.8W		1.5W, 1.8W	1.2W~1.8W	
	最大承受電壓 Max. Allowable Voltage	130%	180~200%		133%	166%	
性能 Performance	接點阻抗 Contact Resistance	100mΩ			15mΩ	50mΩ	
	動作時間 Operate Time	10ms	5 ms	10 ms	10 ms	10ms	
	開放時間 Release Time	10ms	3 ms	10ms	10ms	10ms	
	最大開閉頻率 Max. On/Off Switching:	機械 Mechanical	300 / Min	1200 ops. /min		120 cpm	
		電氣 Electrical	6 / Min	6 ops. /min		15 cpm	
	耐電壓 (AC) Dielectric Strength	I/O	500VAC	500VAC	500VAC	500VAC	500VAC
		O/O	500VAC		500VAC	500VAC	500VAC
	振動 Vibration	耐久 Endurance	100m/S ²	10~500Hz	10~500Hz	10~500Hz	10~500Hz
		誤動作 Error Operation	100m/S ²		10~2,000Hz	10~2,000Hz	
	壽命 Life Expectancy:	機械 Mechanical	1x10 ⁷		1x10 ⁷	10 ⁶	1x10 ⁷
		電氣 Electrical	1x10 ⁵		1x10 ⁵	5x10 ⁴	1x10 ⁵
	使用環境溫度 Temperature Range	-40~85°C	-40 ~ +125°C	-40 ~ +125°C	-40 ~ +85°C	-40 ~ +125°C	
	使用環境濕度 Humidity Range	45~80%RH		5 to 85%RH	5 to 85%RH		
重量 Weight	20g	<20g	20g	20g	22g		
安全規格 Safety Standard	NIL	-	-	-	-		
寸法 Dimension	外型尺寸 Dimension	21.4x15.5x23.5	23x15.5x25.4	23x15.5x25.5	20x15x22	23x15.5x25.4	
端腳外型 Terminal Type	直Pin(DIP)	V	V	V	V	V	
	90°Pin(SMD)						



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 Range45~80% 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:
 - Endurance1,000 m/S².
 - Error Operation100 m/S².
- Life Expectancy:
 - Electrical.....10⁵ Operations at Rated Resistive Load.
 - Mechanical10⁷ Operations at No Load condition.
- Weight.....About 20 g.

Safety Standard & Its File Number

- NIL

Coil Specification (at 20 °C)

Coil Sensitivity	Nominal Voltage(VDC)	Nominal Current (mA)	Coil Resistance ($\Omega \pm 10\%$)	Power Consumption ($W \pm 10\%$)	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
680 Ω for Coil Voltage 12VDC
2700 Ω 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 I Dust Protected Relays

Type:

ZEM

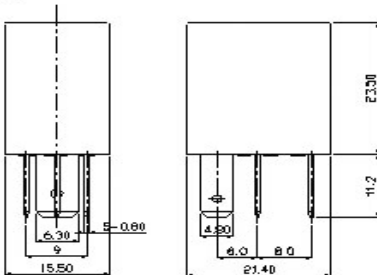
Classification

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			

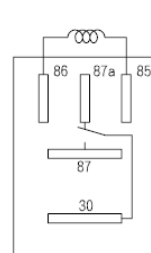
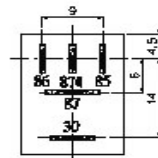
Dimension ($\leq 5\text{mm} \pm 0.2\text{mm}$, $> 5\text{mm} \pm 0.3\text{mm}$, the tolerance of PCB thru hole: $+0.1\text{mm}$)

Electric diagrams

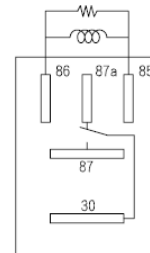
ZEM-S



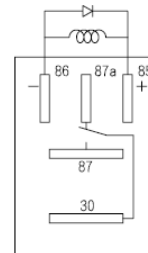
BOTTOM VIEW



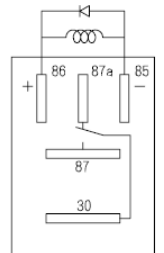
(1c)



"R" type (1c)



"D1" Type (1c)



"D2" Type (1c)