Miniature PCB Relay ORWH

- **Compact relay with 1 form A and 1 form C contact arrangement**
- **15A switching capacity**
- **Flux proof or sealed type available**
- **6kV dielectric strength type available**

Typical applications
Appliances, HVAC, emergency lighting.

Approvals

UL E82292, TUV R50138967
Technical data of approved types on request.

Contact Data

Contact arrangement	1 form A, 1 NO 1 form C, 1 CO
Rated voltage	28VDC, 277VAC
Max. switching voltage	28VDC, 277VAC
Rated current	10A
Contact material	AgZnO, AgCdO, AgNi
Min. recommended contact load	100mA, 5VDC
Frequency of operation	600 ops./h
Operate/release time max.	10ms/5ms
Electrical endurance	
AgZnO: form A, 10A, 250VAC, res., +85°C, Class B or F only	$100x10^3$ ops.
AgNi: 15A, 125VAC, res., +23°C	$6x10^3$ ops.
AgCdO: form A, 10A, 250VAC, res., +85°C, Class B or F only	$50x10^3$ ops.
AgNi: form A, 10A, 250VAC, res., +85°C, Class B or F only	$50x10^3$ ops.
AgZnO: 15A, 125VAC, res., +23°C	$6x10^3$ ops.
Contact ratings, form A/form B	10A/6A 250VAC resistive 10A/6A 28VDC resistive
Mechanical endurance, DC coil	$10x10^6$ operations

Coil Data

Coil voltage range	3 to 48VDC
Operative range, IEC 61810	2
Coil insulation system according UL	Class A, B, F

Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10 %	Rated coil power mW
003	3	2.1	0.3	25	360
005	5	3.5	0.5	70.0	360
006	6	4.2	0.6	100	360
009	9	6.3	0.9	225	360
012	12	8.4	1.2	400	360
024	24	16.8	2.4	1600	360
048	48	33.6	4.8	6400	360

All figures are given for coil without pre-energization, at ambient temperature +23°C.

Insulation Data

Initial dielectric strength	
between open contacts	$750V_{rms}$
between contact and coil	$1500V_{rms}$
Clearance/creepage	
between open contacts	>1.6mm
between contact and coil	>3.2mm
Clearance/creepage	
between open contacts, standard type	>1.6mm
for 6kV dielectrial strength type	>4mm
between contact and coil, standard type	>3.2mm
for 6kV dielectrial strength type	>4mm

Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter	
Ambient temperature	-30°C to 85°C
Category of environmental protection	
IEC 61810	RTII - flux proof RTIII - wash tight
Vibration resistance (functional)	1.5mm, 10-55 Hz
Shock resistance (functional)	10g for 11msec
Shock resistance (destructive)	100g
Weight	9.5g
Resistance to soldering heat THT	
IEC 60068-2-20	RTII: 270°C/10s RTIII: 260°C/5s
Packaging/unit	tube/25, carton box/1000

Accessories

Product Code	Description
27E1064	Socket, rated 10A at 300VAC. UL Recognized for US and Canada. Designed to fit same suggested board layout as relay.

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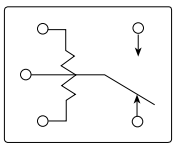
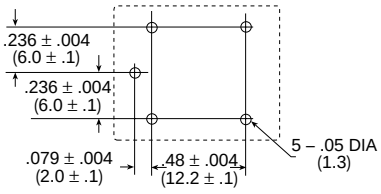
Terminal assignment

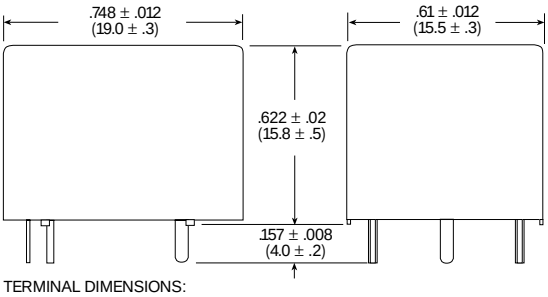
Bottom view on solder pins



PCB layout



Dimensions



TERMINAL DIMENSIONS:
COIL: 0.024 (0.6) DIA.
LOAD: 0.12 x 0.35 (0.3 x 0.9)

Product code structure Typical product code: **ORWH -SH -1 12 D M 1 F WG ,000**

Type
ORWH Miniature PCB Relay ORWH

Category of protection
SS Flux proof
SH Wash tight

Number of poles
1 1 pole

Coil voltage
Coil code: please refer to coil versions table (e.g. 12 = 12VDC)

Coil version
D Standard
H High temperature type

Contact arrangement
Blank 1 form C, 1 CO
M 1 form A, 1 NO

Contact material
Blank AgCdo
1 AgZnO
5 AgZnO + Au plating
3 AgNi
7 AgNi + Au plating

Insulation system designation
Blank Class 105 (A)
B Class 120 (B)
F F = Class 155 (F)

Option material
Blank Standard
H Insulation plate use type
WG For domestic appliances (IEC 60335-1, 4 Edition);

Suffix
,000 Standard

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Product code	Enclosure	Coil	Coil	Arrangement	Cont.mat.	Insulation	Option	Part number
ORWH-SH-105D1F,000	Wash tight	5VDC	Standard	1 From C, 1CO	AgZnO	Class F	Standard Type	1-1721150-0
ORWH-SS-105D1F,000	Flux proof			1 From C, 1CO				2071448-5
ORWH-SH-105DM1F,000	Wash tight			1 From A, 1NO				2071448-3
ORWH-SS-109D1F,000	Flux proof	9VDC		1 From C, 1CO				2071448-4
ORWH-SH-112D1F,000	Wash tight	12VDC		1 From C, 1CO				1-1721150-3
ORWH-SS-112D1F,000	Flux proof			1 From C, 1CO				1721150-5
ORWH-SH-112DM1F,000	Wash tight			1 From A, 1NO				2071448-8
ORWH-SS-112DM1F,000	Flux proof			1 From A, 1NO				2071448-2
ORWH-SH-124D1F,000	Wash tight	24VDC		1 From C, 1CO				1-1721150-5
ORWH-SS-124D1F,000	Flux proof			1 From C, 1CO				2-2071448-0
ORWH-SH-124DM1F,000	Wash tight			1 From A, 1NO				1-2071448-5
ORWH-SS-124DM1F,000	Flux proof			1 From A, 1NO				1-2071448-8
ORWH-SH-105H3F,000	Wash tight	5VDC	High temp	1 From C, 1CO	AgNi		Standard Type	2071448-6
ORWH-SS-105H3F,000	Flux proof			1 From C, 1CO				2071448-7
ORWH-SH-112H3F,000	Wash tight	12VDC		1 From C, 1CO				2071448-9
ORWH-SS-112H3F,000	Flux proof			1 From C, 1CO				1-2071448-2
ORWH-SH-112HM3F,000	Wash tight			1 From A, 1NO				1-2071448-0
ORWH-SS-112HM3F,000	Flux proof			1 From A, 1NO				1-2071448-3
ORWH-SS-118H3FH,000	Flux proof	18VDC		1 From C, 1CO			Insulation pl.	1721948-6
ORWH-SH-124H3F,000	Wash tight	24VDC		1 From C, 1CO			Standard Type	1-2071448-6
ORWH-SS-124H3F,000	Flux proof			1 From C, 1CO				1-2071448-9
ORWH-SH-124HM3F,000	Wash tight			1 From A, 1NO				1-2071448-4
ORWH-SS-124HM3F,000	Flux proof			1 From A, 1NO				1-2071448-7

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