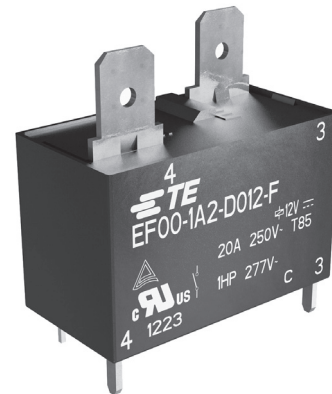


Power PCB Relay EF

- 1 pole 20A, 1 form A (NO) contact
- Low height max. 20mm (max. 30mm with quick connect terminal)
- Ambient temperature 85°C
- Electrical endurance of 100Kops. at 20A/250VAC/resistive
- #250 Quick connect terminal direction for space saving
- Meet 4000VAC dielectric voltage between coil and contacts
- RoHS compliant (Directive 2002/95/EC)
- UL coil insulation system Class155(F)



Typical applications

Air conditioners, washing machine, dish washer

Approvals

UL File No. E58304, TUV File No. R 50117320
Technical data of approved types on request

Contact Data

Contact arrangement	1 form A (NO) contact	
Rated voltage	250VAC, 24VDC	
Max. switching voltage	250VAC	
Rated current	20A	
Switching power	5000VA	
Contact material	AgSnO	
Min. recommended contact load	100mA, 5VDC (reference data)	
Initial contact resistance	100mΩ at 1A, 6VDC	
Frequency of operation, with/without load	30/300 ops./min	
Operate/release time max.	20/10ms	
Electrical endurance	20A 250VAC, resistive 100x10 ³ ops	
Contact ratings	1HP 277VAC, 85°C	
	80A inrush cosφ=0.7	
	250VAC/20A steady cosφ=0.9, 250VAC	
Mechanical endurance, DC coil	5x10 ⁶ operations	

Coil Data

Coil voltage range	5 to 48VDC
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Coil insulation system according UL Class F

Coil versions, DC coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
005	5	3.75	0.25	28	900
006	6	4.50	0.30	40	900
009	9	6.75	0.45	90	900
012	12	9.00	0.60	160	900
018	18	13.50	0.90	360	900
024	24	18.00	1.20	640	900
048	48	36.00	2.40	2560	900

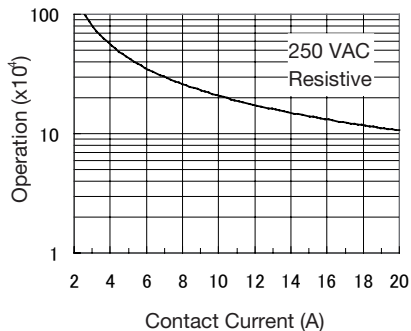
All figures are given for coil without pre-energization, at ambient temperature +23°C

Insulation Data

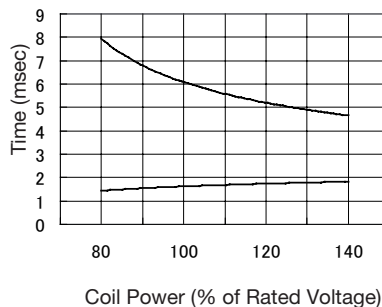
Initial dielectric strength	1000VAC 50/60Hz (1 min)
between open contacts	4000VAC 50/60Hz (1 min)
between contact and coil	
Initial surge withstand voltage	8000V (1.2/50μs)
between contact and coil	
Initial insulation resistance	1000MΩ min. at 500VDC
between insulated elements	
Clearance/creepage	≥6/6mm
between contact and coil	
Tracking index of relay base	PTI 250

Other Data

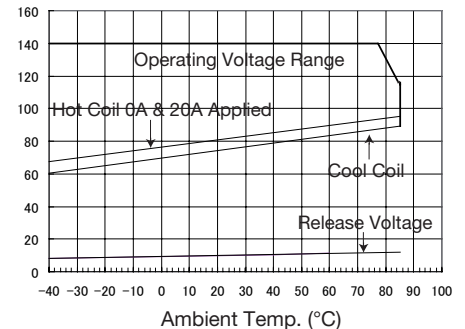
Electrical endurance



Operate time



Coil operative range



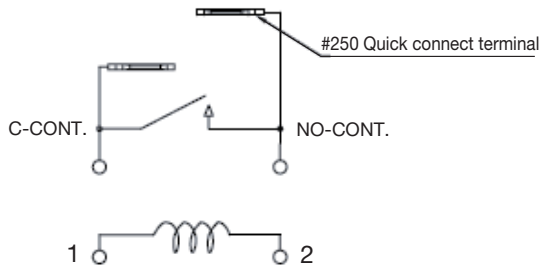
Power PCB Relay EF (Continued)

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customer-support/rohssupportcenter

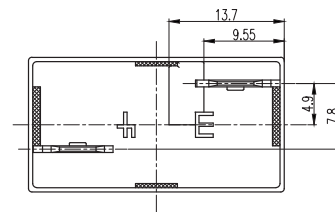
Ambient temperature	-40°C to + 85°C
Category of environmental protection	RTII-flux proof
IEC 61810	
Vibration resistance (functional)	10 to 50Hz, 1.5mm double ampl.
Vibration resistance (destructive)	10 to 50Hz, 1.5mm double ampl.
Shock resistance (functional)	
IEC 60068-2-27 (half-sine wave of 6ms)	98m/s ²
Shock resistance (destructive)	
half-sine of 11ms, permitted duration 1ms	980m/s ²
Weight	approx. 18g
Resistance to soldering heat THT	
IEC 60068-2-20	350°C/3.5s
Packaging/unit	tube/20 pcs., box/500 pcs.

Terminal assignment

Bottom view on solder pins

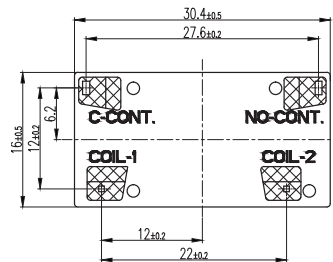
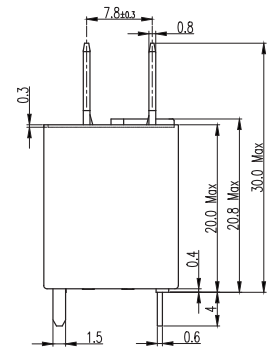
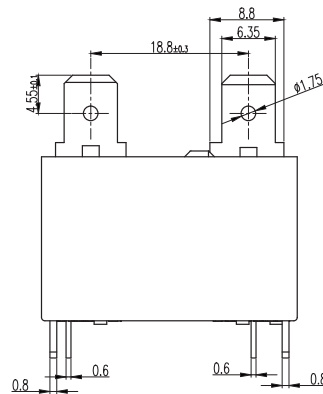
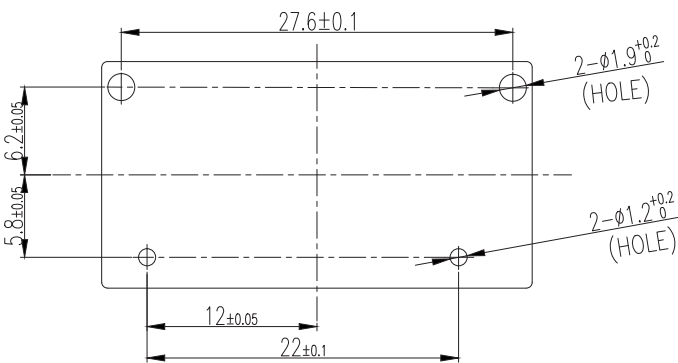


Dimensions



PCB layout

Bottom view on solder pins



Power PCB Relay EF (Continued)

Product code structure		Typical product code		EF	00	-1	A	2	-D	012	-F
Type	EF Power PCB Relay EF										
Sub-product family	00 Standard Type										
Poles	1 1 pole										
Contact arrangement	A 1 Form A										
Contact material	2 AgSnO										
Coil version	D Standard version										
Coil voltage	Coil code: please refer to coil versions table (e.g. 012=12VDC)										
Enclosure	F RTII-flux proof										

Product code	Arrangement	Contact material	Coil	Enclosure	Part number
EF00-1A2-D005-F	1 form A (NO) contact	AgSnO ₂	5VDC	Flux-tight	1649659-1
EF00-1A2-D006-F			6VDC		1649659-2
EF00-1A2-D009-F			9VDC		1649659-3
EF00-1A2-D012-F			12VDC		1649659-4
EF00-1A2-D018-F			18VDC		1649659-5
EF00-1A2-D024-F			24VDC		1649659-6
EF00-1A2-D048-F			48VDC		1649659-7