

IM - E Relay

- Minimum board-space 60mm²
- Slim line 10x6mm (0.39x0.24") and
- Low profile 5.65mm (0.222")
- Switching power 60W/62.5VA
- Switching voltage 220VDC/250VAC
- Switching current 2A
- Bifurcated contacts
- High mechanical shock resistance

Typical applications

Telecommunication, access and transmission equipment, optical network terminals, modems, office and business equipment, consumer electronics, measurement and test equipment, industrial control, medical equipment. Buyer entirely assumes the risk and all liability relating to (a) assessing the suitability for Buyer's intended use of the Products and of any system design or drawing and (b) determining the compliance of Buyer's use of the Products with applicable laws, regulations, codes and standards. For more info on the exclusive and applicable warranty, please refer to TE standard warranty terms.

Approvals

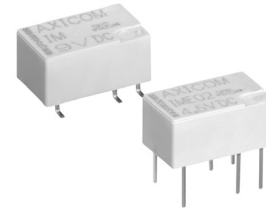
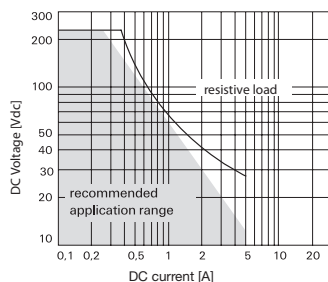
UL 61810-1 (former UL 508) File No. E214025

Technical data of approved types on request

Contact Data

Contact arrangement	2 Form A, 2 NO
Max. switching voltage	220VDC, 250VAC
Rated current	2A
Limiting continuous current	2A
Switching power	60W, 62.5VA
Contact material	PdRu
	Au covered
Contact style	twin contacts
Minimum switching voltage	100µV
Initial contact resistance	<50mΩ at 10mA/30mV
Thermoelectric potential	<10µV
Operate time	typ. 1ms, max. 3ms
Release time	
without diode in parallel	typ. 1ms, max. 3ms
with diode in parallel	typ. 3ms, max. 5ms
Set/reset time max.	typ. 1ms, max. 3ms
Bounce time max.	typ. 1ms, max. 5ms
Electrical endurance	
at contact application 0	
(≤30mV/≤10mA)	min. 2.5x10 ⁶ operations
cable load open end	min. 2.0x10 ⁶ operations
resistive, 125VDC / 0.24A - 30W	min. 5x10 ⁵ operations
resistive, 220 VDC / 0.27A - 60W	min. 1x10 ⁵ operations
resistive, 250VAC / 0.25A - 62.5VA	min. 1x10 ⁵ operations
resistive, 30VDC / 1A - 30W	min. 5x10 ⁵ operations
resistive, 30VDC / 2A - 60W	min. 1x10 ⁵ operations

Max. DC load breaking capacity



Contact Data (continued)

UL contact rating	30VDC, 2A, 60W, NO only 110VDC, 0.3A, 33W 220VDC, 0.27A, 60W 125VAC, 0.5A, 62.5W 250VAC, 0.25A, 62.5W
Mechanical endurance	min. 10 ⁷ operations

Coil Data

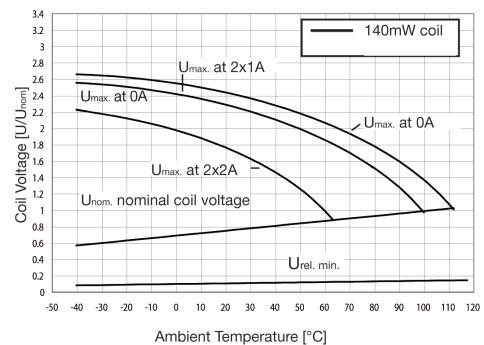
Coil voltage range	1.5 to 24VDC
Max. coil temperature	125°C
Thermal resistance	<150K/W

Coil versions, standard version, monostable, 1 coil

Coil code	Rated voltage VDC	Operate voltage VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
01	3.0	2.25	0.30	64	140
02	4.5	3.38	0.45	145	140
03	5.0	3.75	0.50	178	140
06	12.0	9.00	1.20	1029	140

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

Coil operating range, standard version



IM - E Relay (Continued)

Insulation

Initial dielectric strength	
between open contacts	750V _{rms}
between contact and coil	1800V _{rms}
between adjacent contacts	1000V _{rms}
Initial surge withstand voltage	
between open contacts	1500V
between contact and coil	2500V
between adjacent contacts	1500V
Initial insulation resistance	
between insulated elements	>10 ⁹ Ω
Capacitance	
between open contacts	max. 1pF
between contact and coil	max. 2pF
between adjacent contacts	max. 2pF

RF Data

Isolation at 100MHz/900MHz	37.0dB / 18.8dB
Insertion loss at 100MHz/900MHz	0.03dB / 0.33dB
Voltage standing wave ratio (VSWR) at 100MHz/900MHz	1.06 / 1.49

Other Data

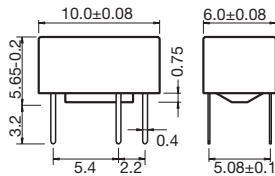
Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content
refer to the Product Compliance Support Center at
www.te.com/customer-support/rohssupportcenter

Ambient temperature	-40°C to +85°C
Thermal resistance	<150K/W
Category of environmental protection	
IEC 61810	RT V - hermetically sealed
Degree of protection	
IEC 60529	IP 67, immersion cleanable
Vibration resistance (functional)	20g, 10 to 500Hz
Shock resistance (functional), half sinus 11ms,	50g
Shock resistance (destructive), half sinus 0.5ms	500g
Weight	max. 0.75g
Resistance to soldering heat THT	Peak value
IEC 60068-2-20	265°C/10s
Resistance to soldering heat SMT	
IEC 60068-2-58	265°C. / 10s
Moisture sensitive level, JEDEC J-STD-020E	MSL3
related only to SMT relays packed in original dry-packs. Calculated shelf life in sealed bag: 36 months at <40° C and <90% relative humidity (RH). Floor life (out of the bag) at assembly site is 168 Hours at ≤ 30°/60% RH.	
Washing	see application notes
Ultrasonic cleaning	not recommended
Storage conditions	3 years
Packaging/unit	
THT version	tube/50 pcs, box/1000 pcs
SMT version	reel/1000 pcs., box/1000 or 5000 pcs.

Dimensions

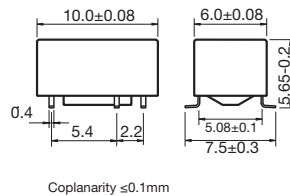
THT version

Standard version



SMT version

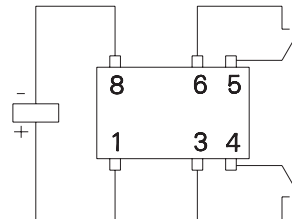
Gull wings



Terminal assignment

TOP view on relay

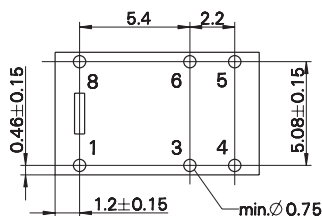
IM-E, 2 form A (2 NO)



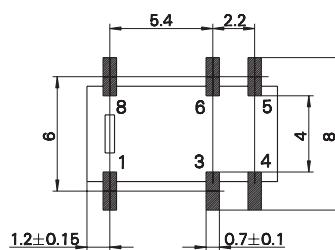
PCB layout

TOP view on component side of PCB

THT mounting holes



SMT - solder pads

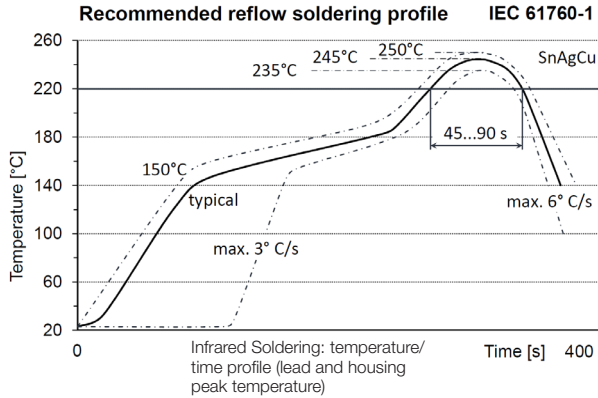


Customer needs to apply enough solder
paste volume / thickness / solder material
content to ensure a stable solder joint

IM - E Relay (Continued)

Processing

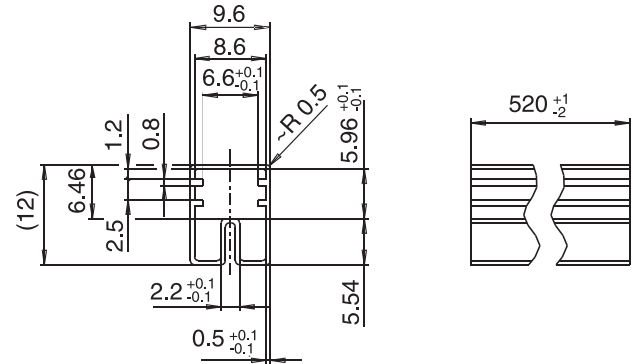
Recommended soldering conditions



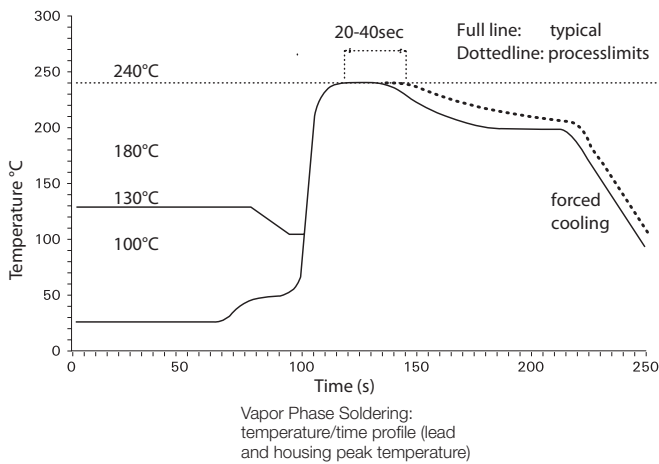
Packing

Tube for THT version

50 relays per tube, 1000 relays per box

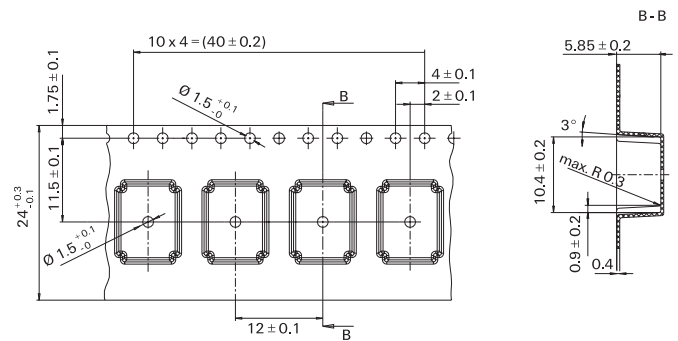


Recommended vapor phase soldering profile

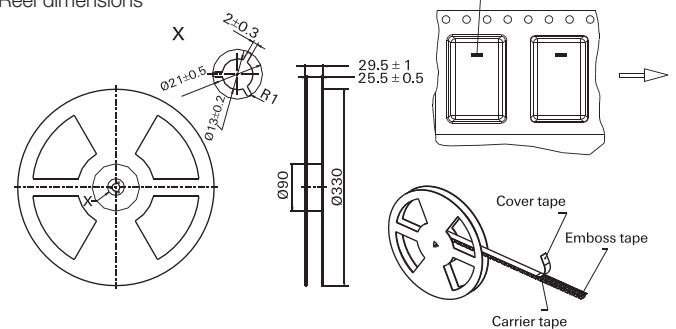


Tape and reel for SMT version

1000 relays per reel, 1000 or 5000 relays per box



Reel dimensions



IM - E Relay (Continued)

Product code structure		Typical product code				
		IM	E	03	G	R
Type						
		IM Signal Relays IM Series IMD/IME				
Contact arrangement						
		E 2 form A, 2 NO				
Coil						
		Coil code: please refer to coil versions table				
Performance type						
		Blank Standard version				
Terminals						
		T THT - standard G SMT - gull wing				
Packing						
		S Tube R Reel				

Product code	Arrangement	Perf. type	Coil	Coil type	Terminals	Part number
IME01GR	2 form A,	Standard	3VDC	Monostable	SMT gull wing	1462043-1
IME01TS	2 NO				THT standard	1462043-5
IME02GR	contacts		4.5VDC		SMT gull wing	1462043-2
IME02TS					THT standard	1462043-6
IME03GR			5VDC		SMT gull wing	1462043-3
IME03TS					THT standard	1462043-7
IME06GR			12VDC		SMT gull wing	1462043-4
IME06TS					THT standard	1462043-8