



### IM - E Relay

- Minimum board-space 60mm<sup>2</sup>
- 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

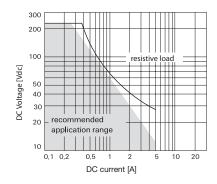


Contact Data				
Contact arrangement	2 Form A, 2 NO			
Max. switching voltage	220VDC, 250VAC			
Rated current	2A			
Limiting continuous current	2A			
Switching power	60W, 62.5VA			
Contact material	PdRu			
	Au covered			
Contact style	twin contacts			
Minimum switching voltage	100μV			
Initial contact resistance	$<$ 50m $\Omega$ 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 <sup>6</sup> operations			
cable load open end	min. 2.0x10 <sup>6</sup> operations			
resistive, 125VDC / 0.24A - 30W	min. 5x10 <sup>5</sup> operations			
resistive, 220 VDC / 0.27A - 60W	min. 1x10 <sup>5</sup> operations			
resistive, 250VAC / 0.25A - 62.5VA	min. 1x10 <sup>5</sup> operations			

# Max. DC load breaking capacity

resistive, 30VDC / 1A - 30W

resistive, 30VDC / 2A - 60W





R

IM DE

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	10 <sup>8</sup> operations

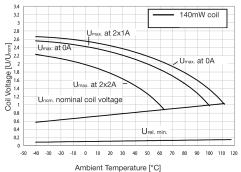
Coil Data	
Coil voltage range	1.5 to 24VDC
Max. coil temperature	125°C
Thermal resistance	<150K/W

#### Coil versions, standard version, monostable, 1 coil

Coil	Rated	Operate	Release	Coil	Rated coil
code	voltage	voltage	voltage	resistance	power
	VDC	VDC	VDC	Ω±10%	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



min.  $5x10^5$  operations min.  $1x10^5$  operations



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### IM - E Relay (Continued)

Insulation*	
Initial dielectric strength	
between open contacts	$1000V_{rms}$
between contact and coil	$1800V_{rms}$
between adjacent contacts	1000V <sub>rms</sub>
Initial surge withstand voltage	
between open contacts	1500V
between contact and coil	2500V
between adjacent contacts	1500V
Initial insulation resistance	
between insulated elements	>10 <sup>9</sup> Ω
Capacitance	
between open contacts	max. 1pF
between contact and coil	max. 2pF
between adjacent contacts	max. 2pF

\*this relay contains SF6 (Sulfur hexafluoride, CAS number: 2551-62-4) for dielectric strength enhancement, SF6 is hermetically sealed in relay without leaks to air during normal application as recommended per the applicable product specification. It is clarified that the usage of SF6 in mini signal relay is not prohibited by related regulations. Please contact TE local sales or field engineer for further information and detailed material declaration.

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/customersupport/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 Peek 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-020D MSL3

related only to SMT relays

packed in orginal dry-packs

Washing see application notes
Ultrasonic cleaning not recommended
Storage conditions 3 years
Packaging/unit

Packaging/unit

THT version tube/50 pcs, box/1000 pcs
SMT version reel/1000 pcs., box/1000 or 5000 pcs.

#### **Dimensions**

#### **THT** version

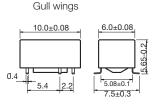
# 10.0±0.08 6.0±0.08

0.4

5.08±0.1

Standard version

#### SMT version

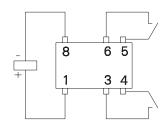


Coplanarity ≤0.1mm

#### Terminal assignment

TOP view on relay

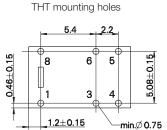
IM-E, 2 form A (2 NO)



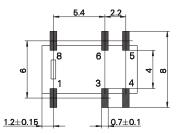
#### PCB layout

5.4 2.2

TOP view on component side of PCB



SMT - solder pads



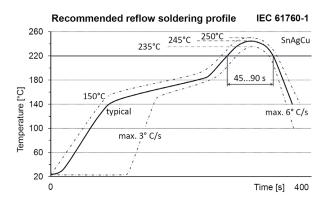


# IM - E Relay (Continued)

#### **Processing**

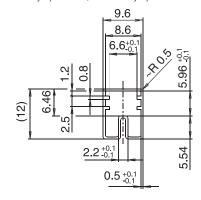
Recommended soldering conditions

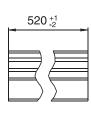
RELAY **PRODUCTS** 



#### **Packing**

Tube for THT version 50 relays per tube, 1000 relays per box





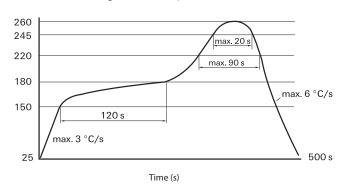
B-B

 $5.85 \pm 0.2$ 

nax.Ro

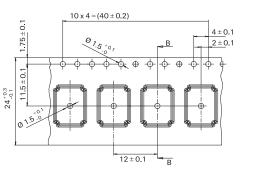
+ 6.0 0.4

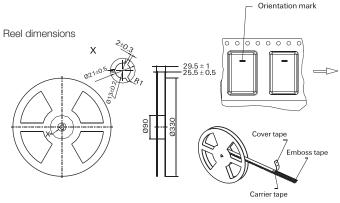
Resistance to soldering heat - Reflow profile



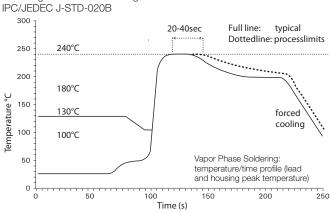
Infrared Soldering: temperature/ time profile (lead and housing peak temperature)

Tape and reel for SMT version 1000 relays per reel, 1000 or 5000 relays per box





Soldering conditions according IEC 60058-2-58 and

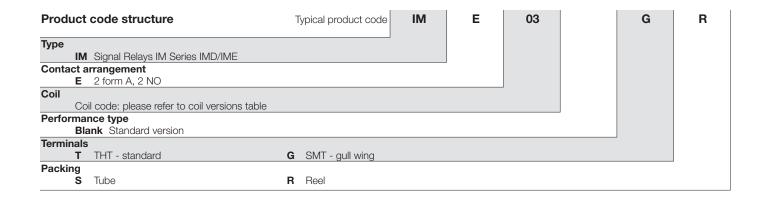




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# IM - E Relay (Continued)



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