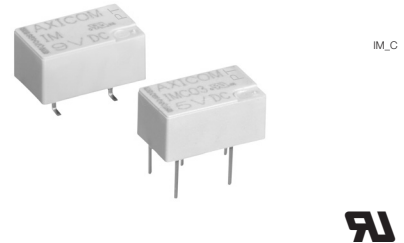


**IM - C Relay**

- Minimum board-space 60 mm<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 4A
- 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

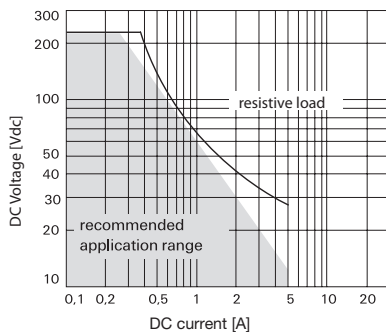


**Approvals**

UL 508 File No. E 111441  
Technical data of approved types on request

Contact Data	standard	C
	standard version	high dielectric version
Contact arrangement	1 Form C (CO)	
Max. switching voltage	220VDC, 250VAC	
Rated current	4A	4A
Limiting continuous current	3A	3A
Switching power	60W, 62.5VA	
Contact material	PdRu	
Contact style	Au covered twin contacts	
Min. recommended contact load	100μV/1μA	
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	
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	
resistive, 30VDC / 1A - 30W	min. 5x10 <sup>5</sup> operations	
resistive, 30VDC / 2A - 60W	min. 1x10 <sup>5</sup> 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	10 <sup>8</sup> operations

**Coil Data**

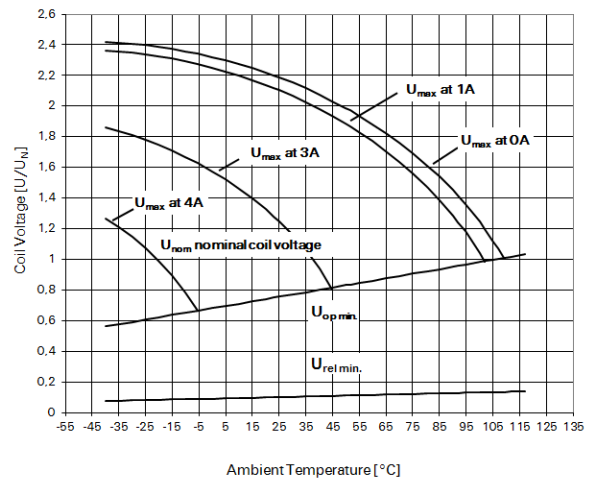
Magnetic system	monostable, bistable
Coil voltage range	1.5 to 24VDC
Max. coil temperature	125°C.
Thermal resistance	<150K/W

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

Coil code	Rated voltage VDC	Operate set voltage min VDC	Release voltage VDC	Coil resistance Ω±10%	Rated coil power mW
01	3	2.25	0.30	64	140
02	4.5	3.38	0.45	145	140
03	5	3.75	0.50	178	140
06	12	9.00	1.20	1029	140
07	24	18.00	2.40	2880	140

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

**Coil operating range, standard version**



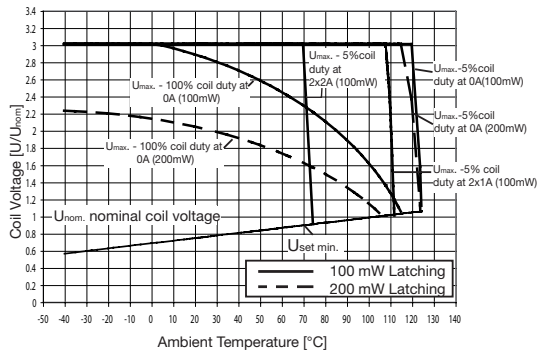
## IM - C Relay (Continued)

### Coil Data (continued)

#### Coil versions, bistable 1 coil

Coil code	Rated voltage VDC	Set voltage VDC	Reset Voltage VDC	Coil resistance $\Omega \pm 10\%$	Rated coil power mW
41	3	2.25	-2.25	90	100

#### Coil operating range, bistable 1 coil



All figures are given for coil without pre-energization, at ambient temperature  $+23^{\circ}C$

### Insulation

	standard*	C*
	standard version	high dielectric version
Initial dielectric strength		
between open contacts	1000V <sub>rms</sub>	1600V <sub>rms</sub>
between contact and coil	1800V <sub>rms</sub>	2200V <sub>rms</sub>
between adjacent contacts		
Initial surge withstand voltage		
between open contacts	1500V	2200V
between contact and coil	2500V	3000V
Initial insulation resistance		
between insulated elements	$>10^9 \Omega$	$>10^9 \Omega$
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

Cross talk 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](http://www.te.com/customer-support/rohssupportcenter)

Ambient temperature	$-40^{\circ}C$ to $+85^{\circ}C$
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

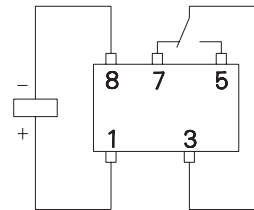
### Other Data (continued)

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-020D	MSL3
related only to SMT relays	
packed in original dry-packs	
Ultrasonic cleaning	not recommended
Packaging/unit	
THT version	tube/50pcs., box/1000 pcs.
SMT version	reel/1000 pcs., box/1000 or 5000 pcs.

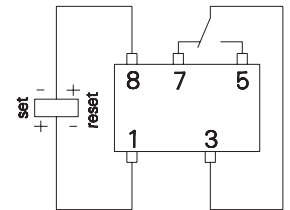
### Terminal assignment

TOP view on relay

Monostable version



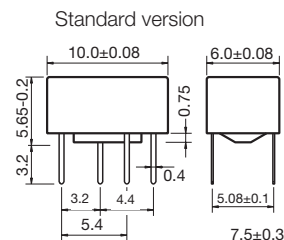
Bistable version, 1 coil reset condition



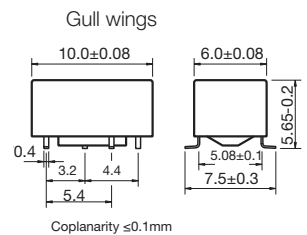
Contacts are shown in reset condition. Contact position might change during transportation and must be reset before use.

### Dimensions

#### THT version



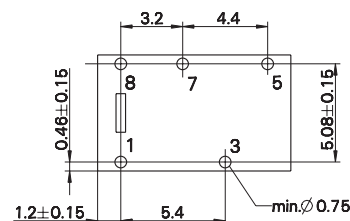
#### SMT version



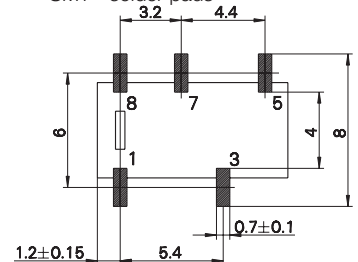
### PCB layout

TOP view on component side of PCB

#### THT mounting holes



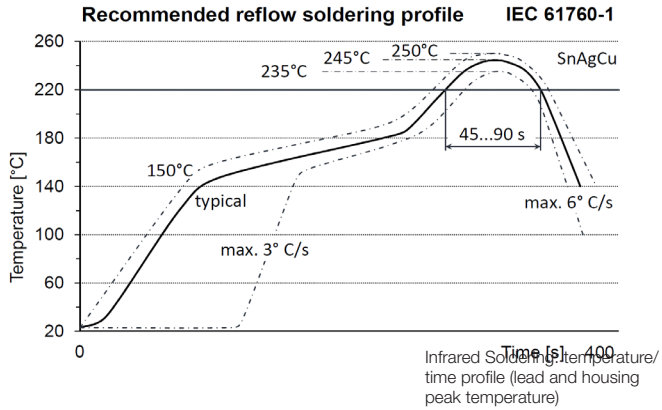
#### SMT - solder pads



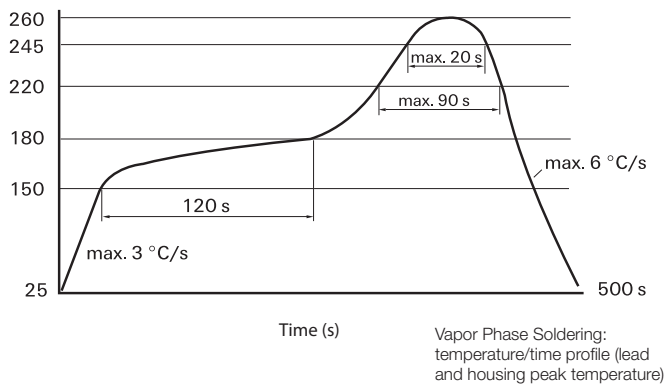
**IM - C Relay (Continued)**

**Processing**

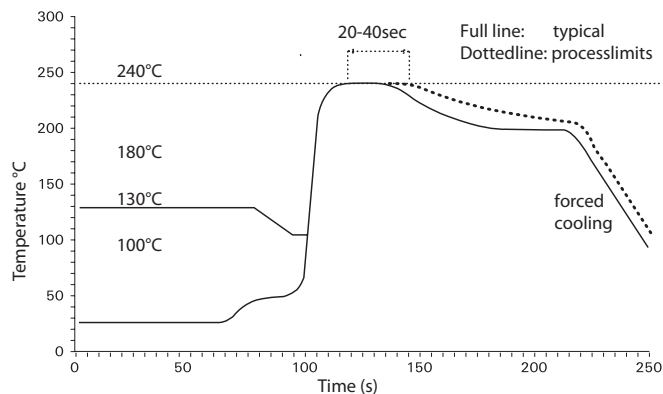
Recommended soldering conditions



Resistance to soldering heat - Reflow profile



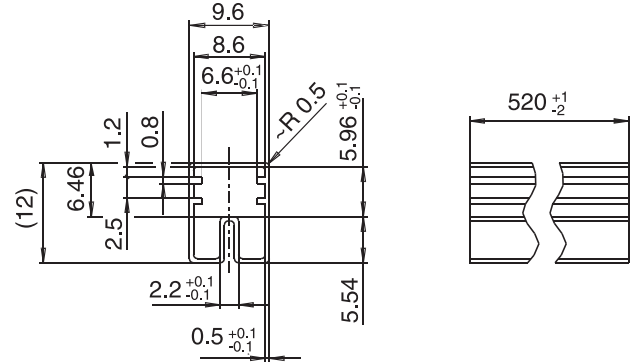
Soldering conditions according IEC 60058-2-58 and IPC/JEDEC J-STD-020D



**Packing**

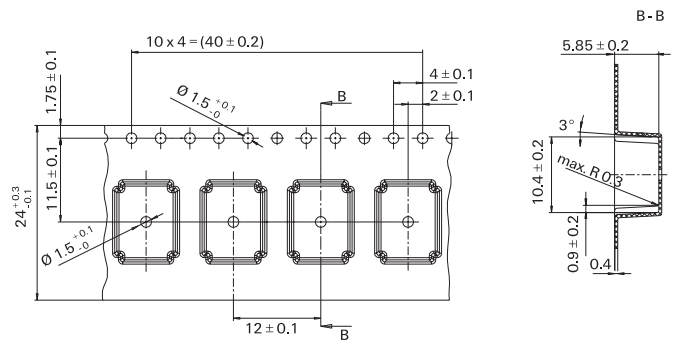
Tube for THT version

50 relays per tube, 1000 relays per box

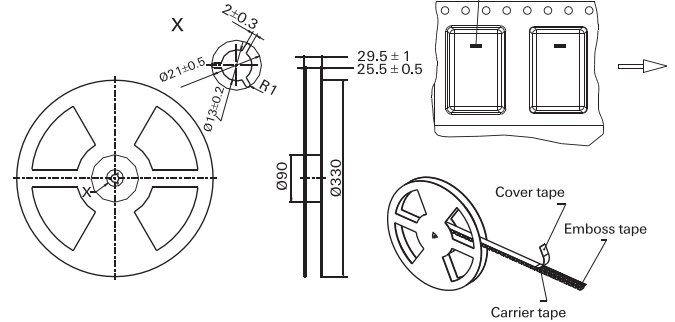


Tape and reel for SMT version

1000 relays per reel, 1000 or 5000 relays per box



Reel dimensions



**IM - C Relay** (Continued)

<b>Product code structure</b>		Typical product code	<b>IM</b>	<b>C</b>	<b>03</b>	<b>G</b>	<b>R</b>
<b>Type</b>	<b>IM</b> Signal Relays IM Series IMC						
<b>Contact arrangement</b>	<b>C</b> 1 form C, 1 CO						
<b>Coil</b>	Coil code: please refer to coil versions table						
<b>Performance type</b>	<b>Blank</b> Standard version			<b>C</b> High Dielectric Version			
<b>Terminals</b>	<b>T</b> THT - standard			<b>G</b> SMT - gull wing			
<b>Packing</b>	<b>S</b> Tube			<b>R</b> Reel			

Product code	Arrangement	Perf. type	Coil	Coil type	Terminals	Part number
IMC01GR	1 form C, 1 CO contact	Standard	3VDC	Monostable	SMT gull wing	1462042-1
IMC01TS			THT standard		1462042-4	
IMC02GR	4.5VDC		SMT gull wing		1462042-2	
IMC02TS	THT standard		1462042-5			
IMC03GR	5VDC		SMT gull wing		1462042-8	
IMC03TS	THT standard		1462042-7			
IMC06GR	12VDC		SMT gull wing		1462042-3	
IMC06TS	THT standard		1462042-6			
IMC07GR	24VDC		SMT gull wing		1-1462042-1	
IMC07TS	THT standard		1-1462042-2			
IMC02CGR		High dielectric	4.5VDC		SMT gull wing	1-1462042-0
IMC06CGR			12VDC		1462042-9	
IMC06CTS			9VDC		THT standard	1-1462042-4
IMC41CTS			3VDC		Bistable	1-1462042-3