

AXICOM
Competence in Technology



The Better Synthesis

IM Relays

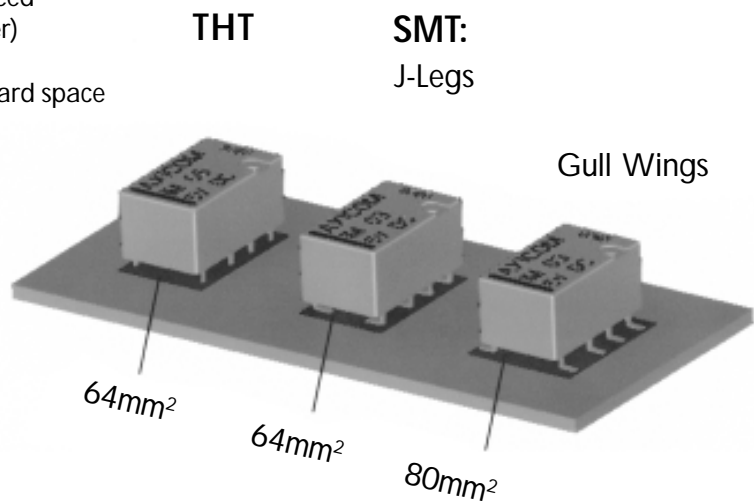
IM Relay

The Better Synthesis

- Slim line and low profile in one

10 x 6 mm = 60 mm²
5,65 mm height

- Surface Mount (SMT) and Through Hole (THT) type
- Small size but outstanding dielectric and surge characteristics
 - Bellcore
 - FCC Part 68
 - ITU-T K20
- Full SMT capability for use with high speed pick and place equipment. (Chip shooter)
- Minimum size 60 mm² for minimum board space consumption



- Telecom/Signal relay with 2 c/o contacts
- 140mW nominal power /
80 mW operate power consumption
- monostable, polarized (single coil latching in preparation)
- UL, CSA, IECQ/CECC, IEC/EN 60950 approvals in progress

Typical applications:

- Public Switching
Analog, ISDN, ADSL
- Private Switching
PABX, ISDN
- Transmission
- Modems
- Computer Peripherals
- Measurement Devices

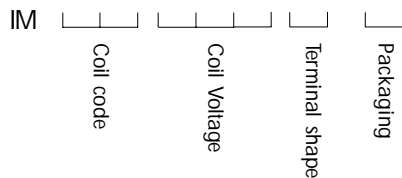
IM relay

Monostable Coil data

Rated voltage U_n ³⁾	1,5V	3V	4,5V	5V	6 V	9 V	12 V	24 V ⁴⁾
Coil code	00	01	02	03	04	05	06	07
Operate voltage at 23° C in V d. c.	min. ¹⁾	1,13	2,25	3,38	3,75	4,5	6,75	9,0
	max. ²⁾	3,4	6,8	10,3	11,4	13,7	20,4	27,3
Release voltage at 23° C in V d. c.	0,15	0,3	0,45	0,5	0,6	0,9	1,2	2,4
Coil resistance at 23° C in $\Omega \pm 10\%$	16	64	145	178	257	574	1028	2880
Nominal power consumption at 23°C mW	140	140	140	140	140	140	140	200
Operate power consumption mW	79	79	79	79	79	79	79	112,5

Latching Version - Single Coil - in Preparation

Ordering code



Packaging: S = Sticks
 R = Reels

Terminal shape: T = THT
 J = J - Legs
 G = Gull Wings

Example: IM 03 05V J R

IM relay monostable 5V J-Legs in Reels

Releases - in progres

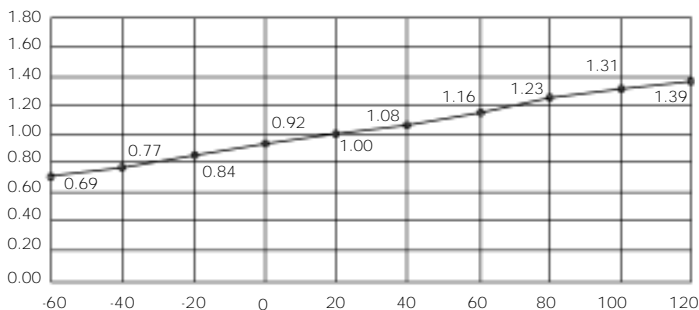
CECC / IECQ

CSA

UL

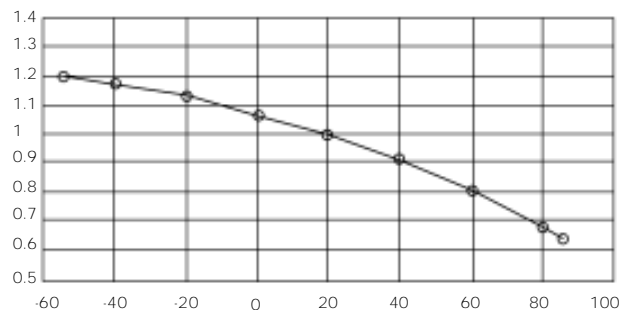
IEC / EN 60950

Factor K1



Coil temperature
before operating

Factor K2



Ambient temperature

- 1) For temperatures other than 23° C, the minimum operate voltage has to be multiplied by factor K1.
- 2) For temperatures other than 23° C, the maximum operate voltage has to be multiplied by factor K2.
- 3) The existing laws of each country concerning voltage limits for low-voltage circuits must be considered.
- 4) Limited availability

Contact data

IM

Contact type: Two change-over
break-before-make, twin-type

Rated contact power (resistive load)	max. 60 W/62.5 VA
Rated contact current (resistive load) Limiting continuous current	max. 2 A 2 A
Rated contact voltage (resistive load)	max. 220 V d.c. / 250 V a.c.3)
Contact-circuit resistance, initial condition (30mV/10mA)	max. 70 mΩ
Electrical endurance - number of switching cycles with 30 W resistive load	min. 500 000
number of switching cycles under dry-circuit conditions (contact application 0) number of switching cycles with cable load of 5 m	min. 2 500 000 min. 2 000 000

General data

Dielectric strength
(at 23° C, 50% relative humidity)

between open contact circuits	min. 1500 V d.c.
between adjacent contact circuits	min. 1500 V d.c.
between coil and contact circuits	min. 2500 V d.c.

Impulse voltage test (1.2/50 μs; 10/700 μs)

between open contacts	min. 1500 V
between adjacent contacts	min. 1500 V
between coil and contacts	min. 2500 V (Bellcore)

Insulation resistance
(at 23° C, 50% relative humidity)

Operate time, make contacts	max. 3 ms
Release time, break contacts	max. 3 ms
with suppression diode	max. 5 ms

Bounce time

when the contacts are closing	max. 3 ms
when the contacts are opening	max. 0,3 ms

Temperature range

Thermal resistance	200 K/W
Thermal time constant	100 s

Capacitance

between open contact circuits	max. 1 pF
between adjacent contact circuits	max. 2 pF
between coil and contact circuits	max. 2 pF

Mechanical endurance, number of
switching cycles

Resistance to vibration, sinusoidal vibration, 10 to 500 Hz (function not disturbed)	min. 10 ⁸ min. 20 g
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Shock resistance,
half-sine shock, duration 11 ms
(function not disturbed)

shock survival, half-sine shock, duration 0.5 ms	min. 50 g (490 m/s ²) min. 500 g (4905 m/s ²)
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Component climatic category

Resistance to soldering heat	55/85/56 max. 10 s (260° C)
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Flammability

(relay on printed circuit board), duration of burning of the needle flame	max. 20 s
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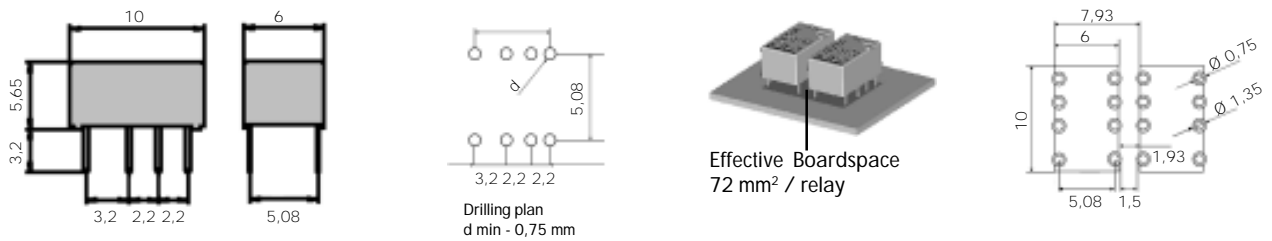
Relay mass

	max. 0,75 g
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Dimension / Boardspace

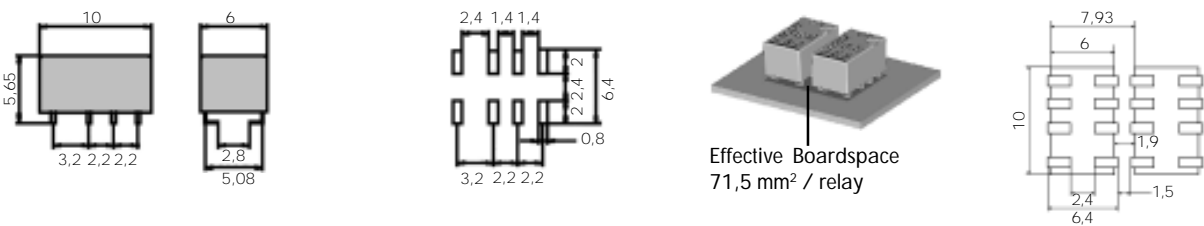
Dimension in mm without considering the pretinning

IM - THT Through hole

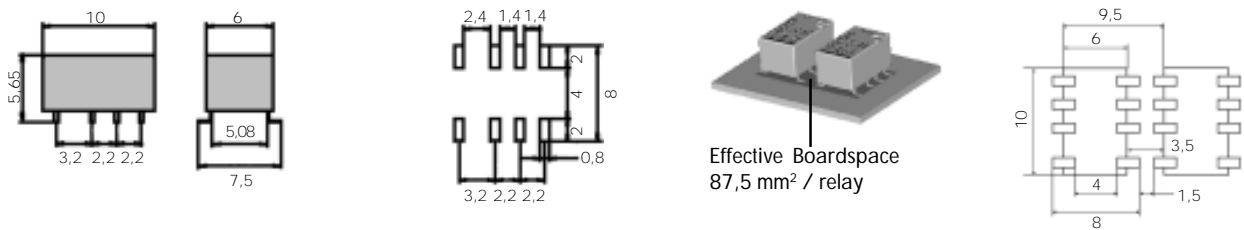


IM - Surface mount types

J - Leg version

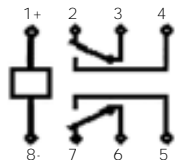


Gull Wing version

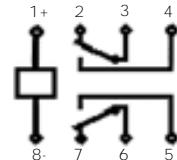


Wiring Diagram - Bottom View

IM - Monostable (Deenergized condition)

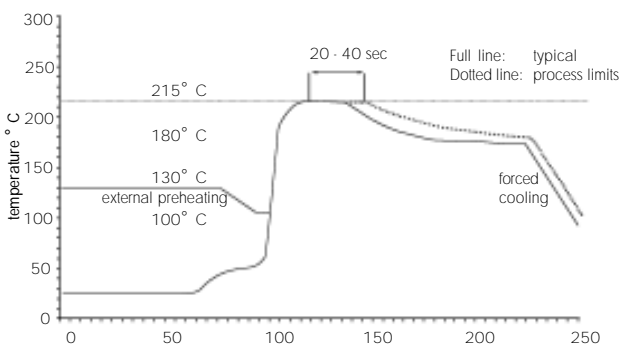


IM - Single Coil Latching (Reset condition)

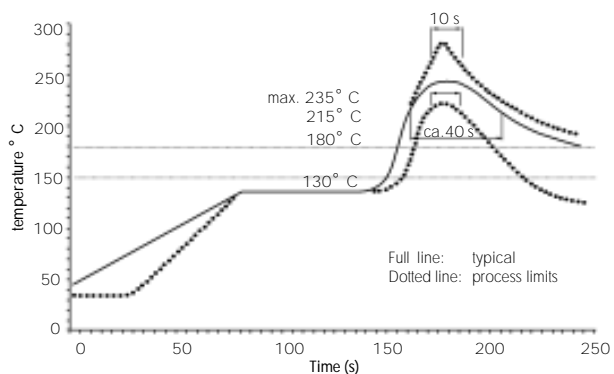


Recommended soldering conditions

Soldering conditions according CECC 00802



Vapor Phase Soldering: Temperature/Time Profile (Lead Temperature)

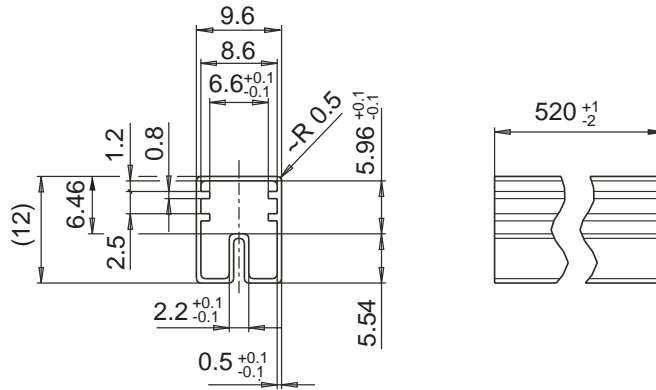


Infrared (Convection) Soldering: Temperature/Time Profile (Lead Temperature)

AXICOM Telecom Relays

Packing

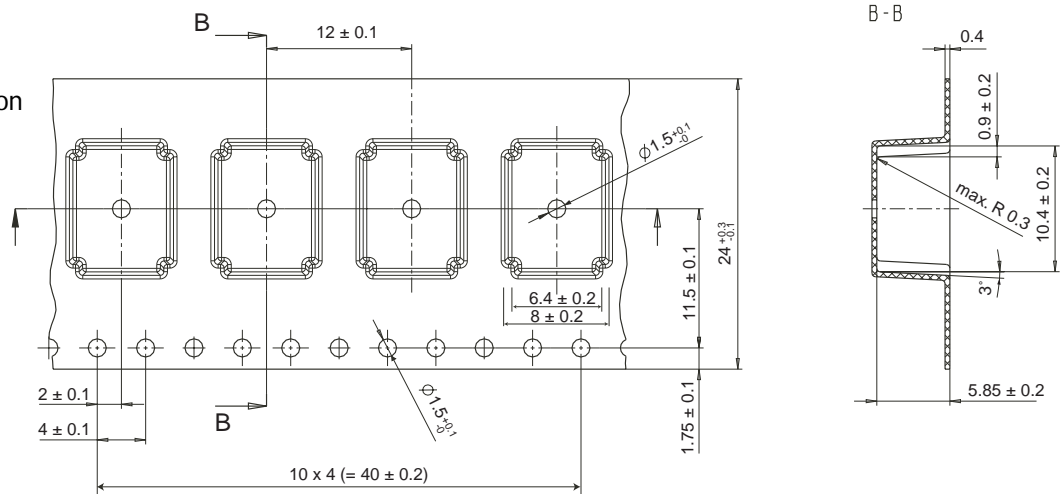
Stick dimension



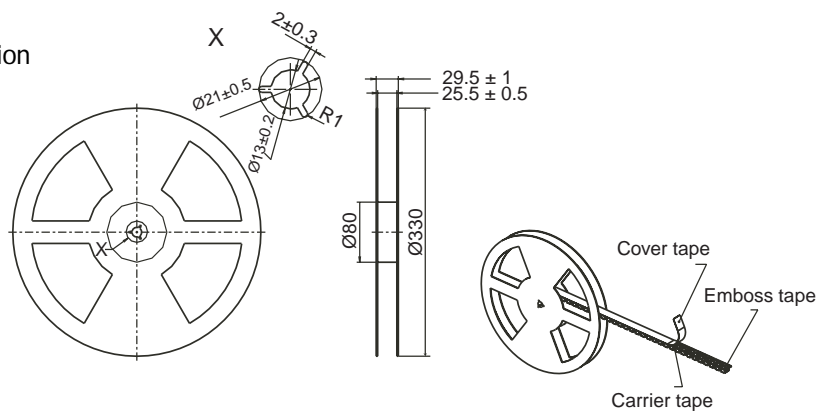
50 relays / stick — 1'000 relays / box

Tape and reel:

Tape dimension



Reel dimension



1'000 relays / reel — 1'000 or 5'000 relays / box

Dimensions in mm

Specifications are subject to change without notice



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