

# MT4 Relay

**AXICOM**

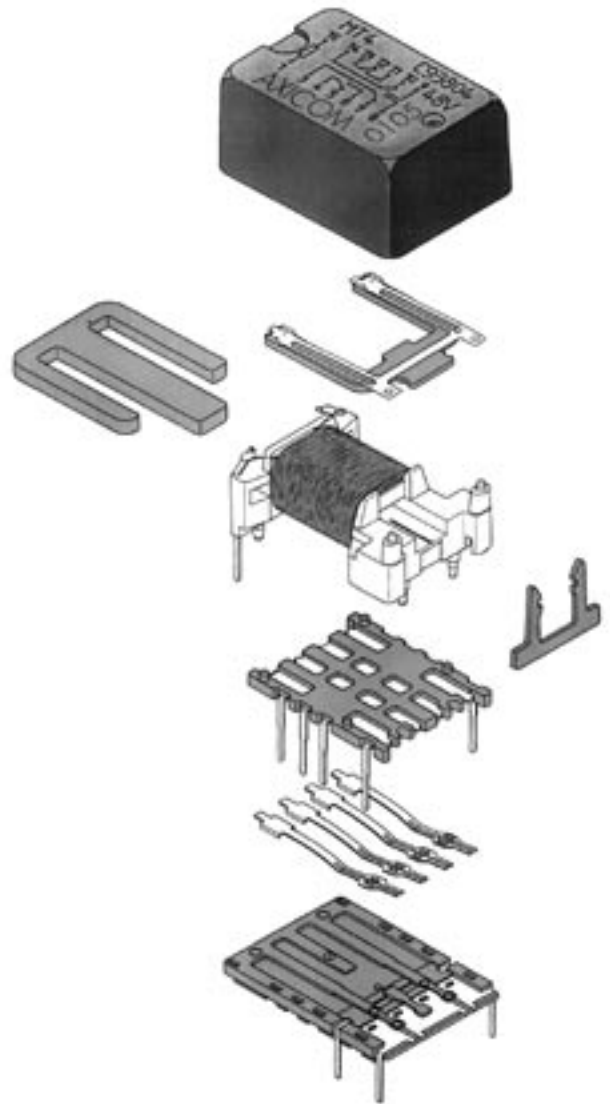
4 pole telecom/signal relay  
Through Hole Type (THT)  
Non-polarized, non-latching 1 coil

## Features

- Telecom/signal relay (dry circuit, test access, ringing)
- 20 x 14.8 mm, 0.795 x 0.582 inch
- Switching current 1.25 A
- 4 changeover contacts (4 form C / 4PDT)
- Bifurcated contacts
- Meets Bellcore GR 1089, FCC Part 68 and ITU-T K20  
2500 V between coil and contacts

## Typical applications

- Communications equipment  
Linecard application – analog, ISDN, xDSL  
PABX  
Voice over IP
- Office and business equipment
- Measurement and control equipment
- Consumer electronics
- Set top boxes, HiFi
- Medical equipment



## European Directive conformance:

MT4 relay product conformance according to:

- Directive 2000/53/EC: ELV (End of Life of Vehicles)
- Directive 2002/95/EC: ROHS (Restrictions of the use of certain hazardous substances in electrical and electronic equipment)

Compliance is evidenced by written declaration from all raw material suppliers.

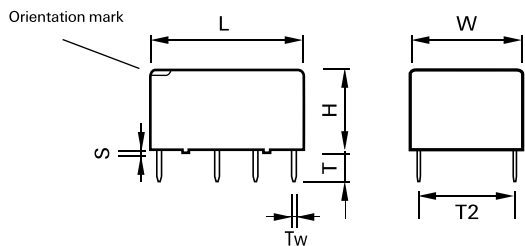
Tyco Electronics AXICOM only has responsibility for the proper processing of these materials.

Confirmation is valid for date codes  $\geq$  0501



UL 508 File No. E 111441

## THT Version

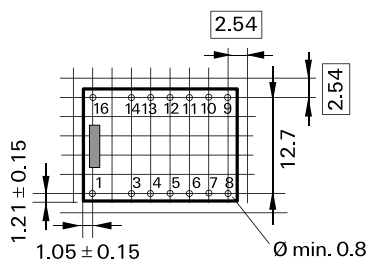


## Dimension

	THT	
	mm	inch
L	20.0 ± 0.1	0.795 ± 0.004
W	14.8 ± 0.1	0.582 ± 0.004
H	11 + 0.1/-0.2	0.433 + 0.004/-0.008
T	3.1 ± 0.3	0.122 + 0.011
T1	N/A	N/A
T2	12.7 ± 0.15	0.5 ± 0.005
Tw	0.5	0.020
S	0.8	0.031

## Mounting hole layout

View onto the component side of the PCB  
(top view)

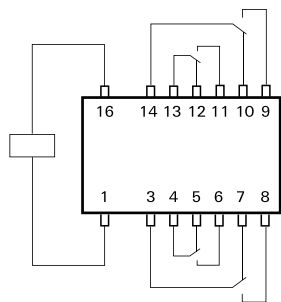


Basic grid 2.54 mm

## Terminal assignment

Relay - top view

non-latching 1 coil  
release condition

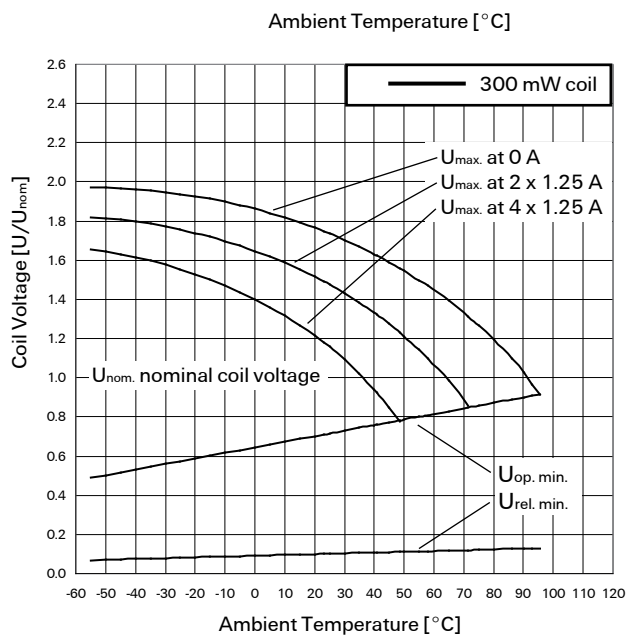


Coil Data (values at 23 °C)				Ordering Information			
Nominal voltage $U_{nom}$	Operate/set voltage range		Release/reset voltage Minimum	Coil power	Coil Resistance	Relay code	Tyco part number
	Minimum voltage $U_{min}$	Maximum voltage $U_{max}$					
Vdc	Vdc	Vdc	Vdc	mW	$\Omega / \pm 10 \%$		

non-latching  
1 coil

3	2.15	5.6	0.30	300	30	C93808	1-1462032-9
4.5	3.2	7.8	0.45	300	67	C 93807	1-1462032-0
5	3.6	8.65	0.50	300	83	C 93801	0-1462032-1
9	6.4	15.6	0.90	300	270	C 93805	0-1462032-9
12	8.6	20.8	1.20	300	480	C 93802	0-1462032-4
24	17.1	41.6	2.40	300	1920	C 93803	0-1462032-7
48	34.1	83.2	4.80	300	7680	C 93804	0-1462032-8

### Coil operating range

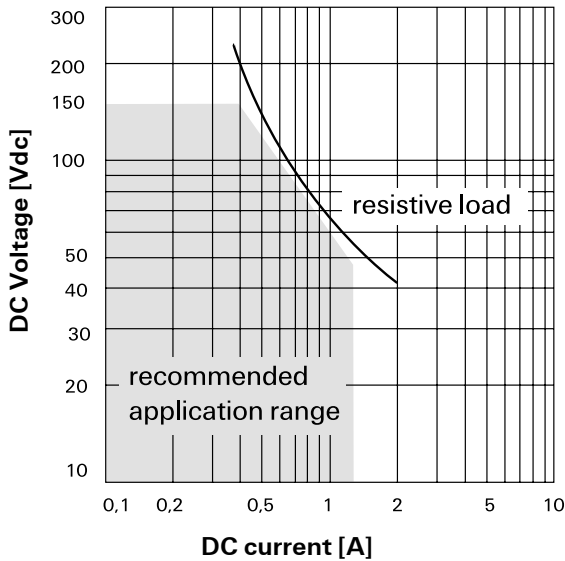


- U<sub>nom</sub> = Nominal coil voltage
- U<sub>max.</sub> = Upper limit of the operative range of the coil voltage (limiting voltage) when coils are continuously energized
- U<sub>op. min.</sub> = Lower limit of the operative range of the coil voltage (reliable operate voltage)
- U<sub>rel. min.</sub> = Lower limit of the operative range of the coil voltage (reliable release voltage)

**Contact Data**

Number of contacts and type	4 changeover contacts
Contact assembly	Bifurcated contacts
Contact material	Silver-nickel, gold-covered
Limiting continuous current at max. ambient temperature	1.25 A
Maximum switching current	1.25 A
Maximum switching voltage	150 Vdc 150 Vac
Maximum switching capacity	30 W, 62.5 VA
Thermoelectric potential	< 10 $\mu$ V
Initial contact resistance / measuring condition: 10 mA / 20 mV	< 70 m $\Omega$
Electrical endurance	min. 1 x 10 <sup>7</sup> operations
Contact application 0 (<=30 mV/<= 10 mA)	min. 5 x 10 <sup>6</sup> operations
Cable load open end	min. 2.0 x 10 <sup>5</sup> operations
Resistive load 150 V / 0.2 A - 30 W	min. 2.0 x 10 <sup>5</sup> operations
24 V / 1.25 A - 30 W	min. 2.0 x 10 <sup>5</sup> operations
Mechanical endurance	typ. 10 <sup>8</sup> operations
UL contact ratings	24 Vdc / 1.25 A 125 Vac / 0.4 A

**Max. DC load breaking capacity**



**Insulation**

Insulation resistance at 500 Vdc	> 10 <sup>9</sup> $\Omega$
Dielectric test voltage (1 min)	
between coil and contacts	1800 Vrms
between adjacent contact sets	750 Vrms
between open contacts	750 Vrms
Surge voltage resistance	
according to Bellcore TR-NWT-001089 (2 / 10 $\mu$ s)	
between coil and contacts	2500 V
between adjacent contact sets	1500 V
between open contacts	1500 V
according to FCC 68 (10 / 160 $\mu$ s) and IEC (10 / 700 $\mu$ s)	
between coil and contacts	2500 V
between adjacent contact sets	1500 V
between open contacts	1500 V

High Frequency Data	
Capacitance	
between coil and contacts	max. 4 pF
between adjacent contact sets	max. 2 pF
between open contacts	max. 2 pF
RF Characteristics	
Isolation at 100 / 900 MHz	- 31.2 dB / - 17.2 dB
Insertion loss at 100 / 900 MHz	- 0.05 dB / - 0.91 dB
V.S.W.R. at 100 / 900 MHz	1.03 / 1.31

General data	
Operate time at $U_{nom}$ typ. / max.	4 ms / 6 ms
Release time without diode in parallel (non-latching), typ. / max.	1 ms / 3 ms
Release time with diode in parallel (non-latching), typ. / max.	4 ms / 6 ms
Bounce time at closing contact, typ. / max.	1 ms / 5 ms
Maximum switching rate without load	50 operations/s
Ambient temperature	-55° C ... +85° C
Thermal resistance	< 100 K/W
Maximum permissible coil temperature	115° C
Vibration resistance (function)	10 G 10 to 500 Hz
Shock resistance, half sinus, 11 ms	10 G (function) 100 G (damage)
Degree of protection	immersion cleanable, IP 67
Needle flame test	application time 10 s,
Mounting position	any
Processing information	Ultrasonic cleaning is not recommended
Weight (mass)	max. 7 g
Terminal surface	SnCu 0.7
Resistance to soldering heat	260° C / 10 s

All data refers to 23° C unless otherwise specified.

Packing

Tube for THT version - 25 relays per tube, 500 relays per box

