

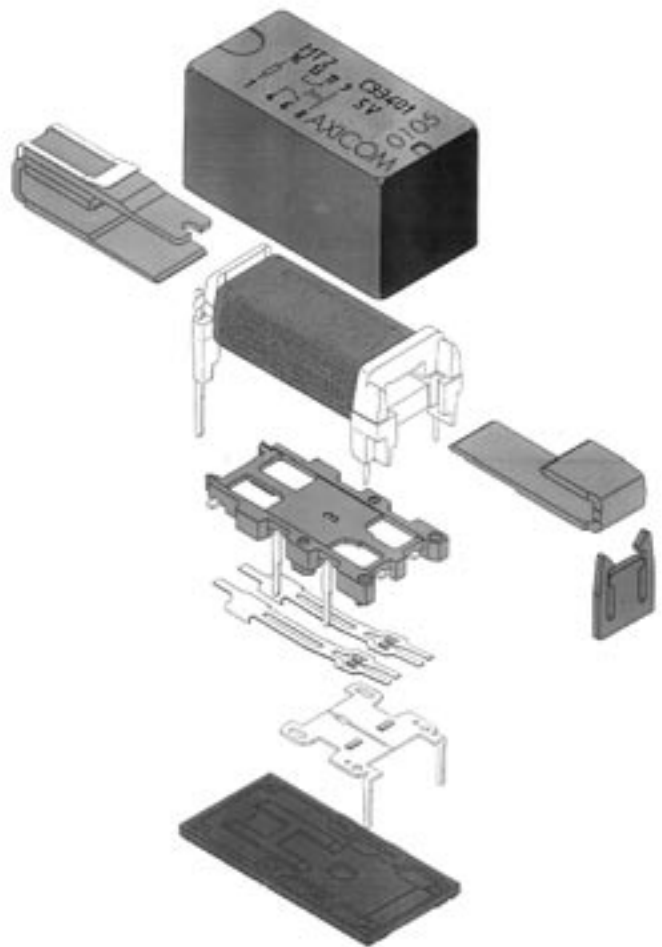
2 pole telecom/signal relay
Through Hole Type (THT)
Non-polarized, non-latching 1 coil

Features

- Telecom/signal relay (dry circuit, test access, ringing)
- Slim line 20 x 10 mm, 0.795 x 0.393 inch
- Switching current 2 A
- 2 changeover contacts (2 form C / DPDT)
- Bifurcated contacts
- Meets FCC Part 68 and ITU-T K20

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
- Automotive Equipment



UL 508 File No. E 111441



IEC 61811-52:02
(QC160504)

European Directive conformance:

MT2 relay product conformance according to:

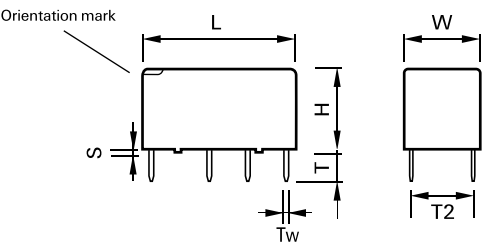
- Directive 2000/53/EC: ELV (End of Life of Vehicles)
- Directive 2002/95/EC: ROHS (Restrictions of the use of certain hazardous substances in electrical and electronic equipment)

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

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

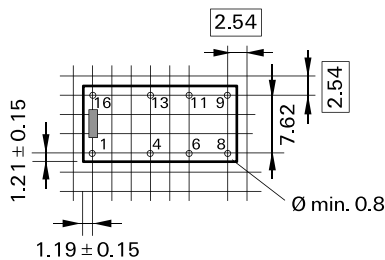
Confirmation is valid for date codes \geq 0416

THT Version



Mounting hole layout

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

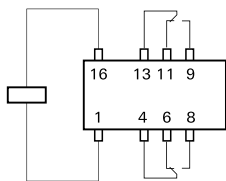


Basic grid 2.54 mm

Terminal assignment

Relay - top view

non-latching 1 coil
release condition



Dimension

	THT	
	mm	inch
L	20.2 + 0.05/-0.02	0.795 + 0.002/-0.0008
W	10 + 0.05/-0.02	0.393 + 0.002/-0.0008
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	7.62 ± 0.15	0.3 ± 0.005
S	0.55	0.021
Tw	0.5	0.020

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
Vdc	Minimum voltage U_{min} Vdc	Maximum voltage U_{max} Vdc	Vdc	mW	$\Omega / \pm 10 \%$		

High sensitive version (150 mW)
non-latching 1 coil

3	2.1	8.1	0.30	150	60	C 93400	1-1462001-2
3.3	2.3	8.8	0.33	150	72	C 93407	1-1462001-3
4.5	3.2	12.2	0.45	150	136	C 93406	2-1462000-2
5	3.6	13.5	0.50	150	168	C 93401	0-1462000-1
6	4.3	16.2	0.60	150	240	C 93427	5-1462000-6
9	6.4	24.3	0.90	150	544	C 93405	2-1462000-0
12	8.6	32.4	1.20	150	968	C 93402	0-1462000-7
24	17.1	64.8	2.40	150	3872	C 93403	1-1462000-3
48	34.1	129.6	4.80	150	15468	C 93404	1-1462000-8

Sensitive version (200 mW)
non-latching 1 coil

3	2.0	7.0	0.30	200	45	C 93414	1-1462001-1
4.5	2.9	10.5	0.45	200	101	C 93415	3-1462000-0
5	3.3	11.6	0.50	200	125	C 93416	3-1462000-1
6	3.9	14.0	0.60	200	180	C 93428	5-1462000-7
9	5.9	21.0	0.90	200	405	C 93417	3-1462000-6
12	7.8	28.0	1.20	200	720	C 93418	3-1462000-7
24	15.6	59.9	2.40	200	2880	C 93419	4-1462000-1
48	31.2	112.0	4.80	200	11520	C 93420	4-1462000-5

Sensitive version (300 mW)
non-latching 1 coil

4.5	3.1	8.9	0.45	300	73	C 93433	6-1462000-6
5	3.4	9.9	0.50	300	90	C 93434	6-1462000-8
12	8.25	23.6	1.20	300	515	C 93412	2-1462000-6
24	16.5	47.3	2.40	300	2060	C 93435	7-1462000-0
48	32.5	54.6	4.80	300	8240	C 93436	7-1462000-2

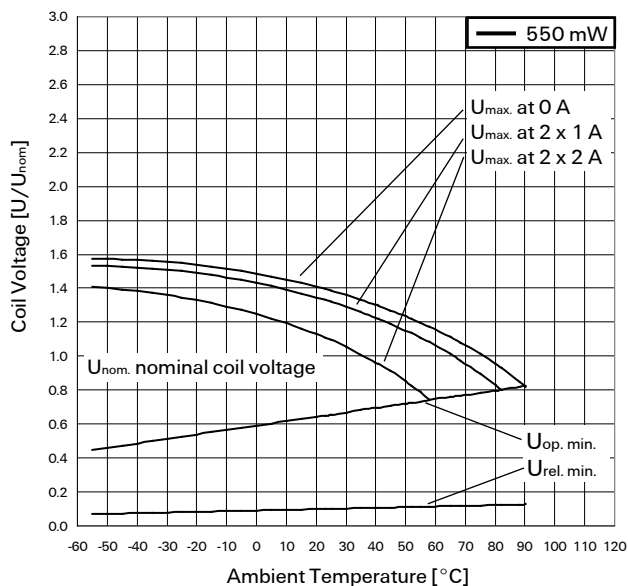
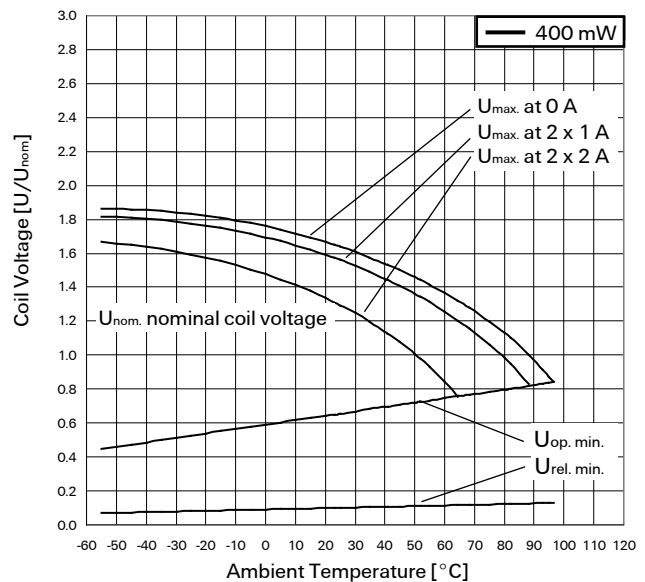
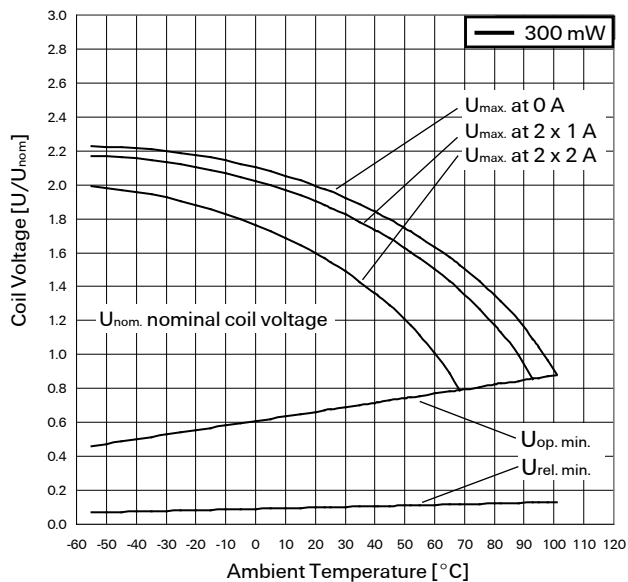
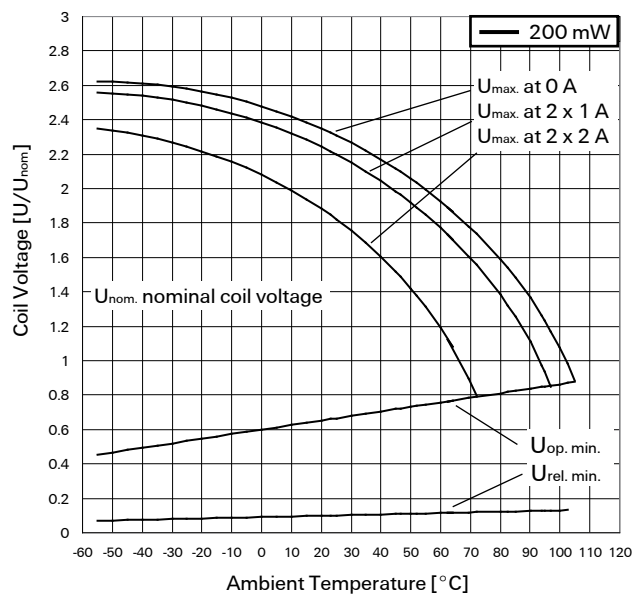
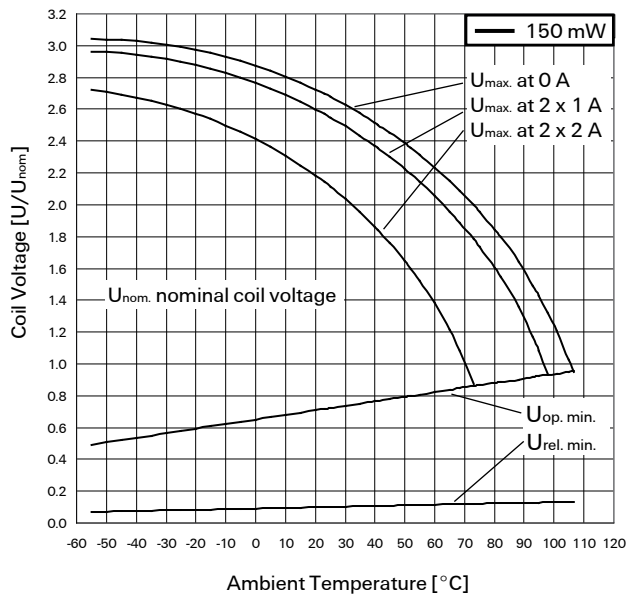
Standard version (400 mW)
non-latching 1 coil

4.5	2.9	8.9	0.45	400	50	C 93421	4-1462000-7
5	3.3	9.9	0.50	400	63	C 93422	4-1462000-8
6	3.9	11.8	0.60	400	90	C 93429	5-1462000-8
9	5.9	17.7	0.90	400	203	C 93423	5-1462000-0
12	7.8	23.6	1.20	400	360	C 93424	5-1462000-1
24	15.6	47.3	2.40	400	1440	C 93425	5-1462000-3
48	31.2	94.6	4.80	400	5760	C 93426	5-1462000-5

Standard version (550 mW)
non-latching 1 coil

4.5	2.9	6.3	0.45	550	36	C 93438	7-1462000-7
5	3.3	7.0	0.5	550	45	C 93450	8-1462000-5
6	3.9	8.4	0.60	550	66	C 93437	7-1462000-6
12	7.8	16.8	1.20	550	280	C 93432	6-1462000-2
24	15.6	33.6	2.40	550	1050	C 93431	6-1462000-1
48	31.2	67.2	4.80	550	4100	C 93430	5-1462000-9

Coil operating range



$U_{nom.}$ = Nominal coil voltage

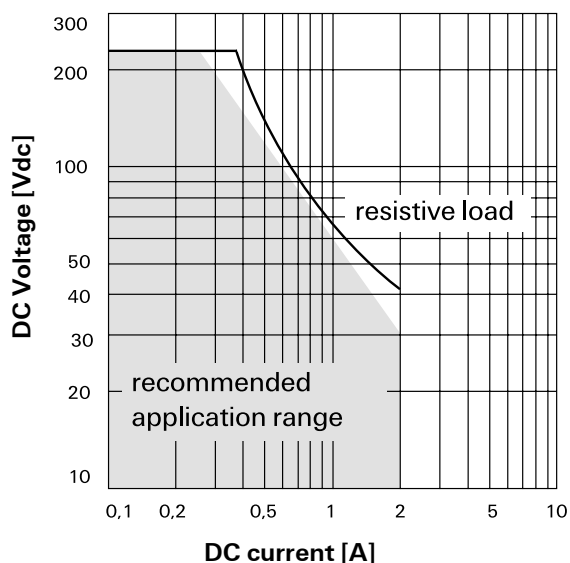
$U_{max.}$ = Upper limit of the operative range of the coil voltage (limiting voltage) when coils are continuously energized

$U_{op. min.}$ = Lower limit of the operative range of the coil voltage (reliable operate voltage)

$U_{rel. min.}$ = Lower limit of the operative range of the coil voltage (reliable release voltage)

Contact Data

Number of contacts and type	2 changeover contacts
Contact assembly	Bifurcated contacts
Contact material	Silver-nickel, gold-covered
Limiting continuous current at max. ambient temperature	2 A
Maximum switching current	2 A
Maximum switching voltage	220 Vdc 250 Vac
Maximum switching capacity	60 W, 62.5 VA
Thermoelectric potential	< 10 μ V
Minimum switching voltage	100 μ V
Initial contact resistance / measuring condition: 10 mA / 20 mV	< 70 m Ω
Electrical endurance	Contact application 0 (30 mV / 10 mA) Cable load open end Resistive load 150 V / 0.2 A - 30 W 24 V / 1.25 A - 30 W
Mechanical endurance	typ. 10 ⁸ operations
UL contact ratings	220 Vdc / 0.24 A - 60 W 125 Vdc / 0.24 A - 30 W 250 Vac / 0.25 A - 62.5 VA 125 Vac / 0.5 A - 62.5 VA 30 Vdc / 2 A - 60 W

Contact Data**Insulation**

Insulation resistance at 500 Vdc	> 10 ⁹ Ω
Dielectric test voltage (1 min)	
between coil and contacts	1050 Vrms
between adjacent contact sets	750 Vrms
between open contacts	750 Vrms
Surge voltage resistance	
according to FCC 68 (10 / 160 μ s) and IEC (10 / 700 μ s)	
between coil and contacts	1500 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	- 31.8 dB / - 14.2 dB
Insertion loss at 100 / 900 MHz	- 0.02 dB / - 0.97 dB
V.S.W.R. at 100 / 900 MHz	1.03 / 1.31

General data

Operate time at U_{nom} typ. / max.	4 ms / 5 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	< 85 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 / 30 G (function)
	30 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. 5 g
Terminal surface	SnCu 0.7
Resistance to soldering heat	260° C / 10 s

All data refers to 23° C unless otherwise specified.

Packing

Dimensions in mm

Tube for THT version - 25 relays per stick, 1'000 relays per box

