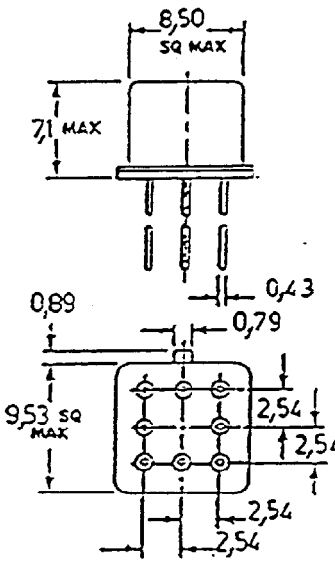
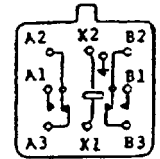
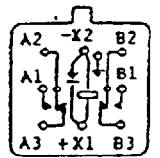


C.E.I. Comitato Elettrotecnico Italiano V.le Monza, 259 - 20100 MILANO	CECC 16 207 - 007 Issue: 1 Page 1 to 20
Electronic components of assessed quality in accordance with: C E C C 16 000 C E C C 16 200	CEI- CECC 16 207 - 007 Issue: 1
Detail specification for Type	: All-or-nothing Relays : monostable not polarized - 2 change over 1A base and with suppression device
Applicable category of contacts:	CA 0, 10 mA max - CA 2, 1 A resistive
Construction	: hermetically sealed - terminals 2,54 mm - grid pattern - solderable straight terminations
OUTLINE DRAWING  STANDARD  WITH TRANSIENT SUPPRESSION  - Dimensions are in millimetres - Non specified tolerances: ± 0.25 mm - Wiring diagram on terminations side view - Diagram references are not marked on the relay - Terminations variants in Appendices	Application: Relays according to this standard are provided for the operation in military and commercial equipment and/or installation for severe airborne and environmental conditions. The applicable load range is from low level to 1 Amperes. Test schedule: 7 Relays have a quality assessment level Y.
Coil data: 5V, 6V, 9V, 12V, 18V, 28Vdc Contacts Contact arrangement : 2 changeover Low-level: 10 mA max - 10 to 50 mV High current : - rated contact voltage = 28 V dc - contact current : 1 A resistive load 0,2 A ; 0,320 H $\pm$ 10% inductive load	
Storage temperature : - 65 to +150°C Ambient temperature : - 65 to +125°C	
See the relevant qualified part list QPL for availability of components qualified under this detailed specification.	

1 - RELATED DOCUMENTS

- CECC 16 000 (issue 2 - 1990)
- CECC 16 200 (issue 1 - 1990)
- CECC 16 207
- IEC 68
- IEC 410
- CECC 00 114

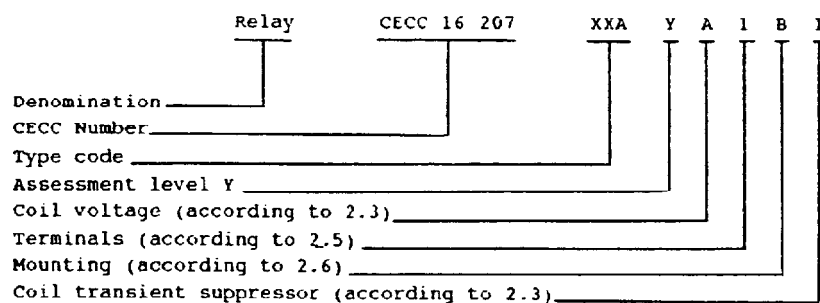
2 - CHARACTERISTICS VALUES

2.1 General data

- Thermal resistance : Not applicable
- Contact category : CA 0 ; 1 & 2
- Contact arrangement : 2 changeover contacts
- Mass (weight) : 2,55 gr max
- Finish of the housing : Tin plated
- Finish of the terminals : Tin plated
- Insulation resistance : 10000 Mohms minimum under 500 V
unless otherwise stated in Table 5
- Dielectric withstanding voltage : see Table 1
- Nominal free internal volume : 0,2 CC

TABLE 1 : DIELECTRIC TEST VOLTAGE

	at sea level V ac min	at 2 kPa (26 600 m) V ac min
Open contacts	500	250
Between adjacent contacts	500	250
Contacts to case	500	250
Coil to contacts	500	250
Coil to case	500	250

2.2 Construction of designation (ordering information)

2.3 Coil and energization data

TABLE 2

IDENTIFICATION LETTER OF THE COIL	VOLTAGE (Vdc)		COIL RESISTANCE AT 23°C ohm ± 10 %	MUST OPERATE VOLTAGE (Vdc)		RELEASE VOLTAGE				RATED POWER/ BURDEN mW/mVA max	COIL TRANSIENT SUPPRESSOR CODE NUMBER (1)
	RATED	Max		23°C	125°C	Max (Vdc)		min (Vdc)			
						23°C	125°C	23°C	-65°C		
A	5	5,8	50	2,7	3,5	1.4	2.3	0.22	0.14		1
B	6	8	98	3,5	4,5	2	3.2	0.28	0.18		1
C	9	12	220	5,3	6,8	3	4.9	0.54	0.35		1
D	12	16	390	7	9	4	6.5	0.63	0.41		1
E	18	24	880	10,5	13,5	6	10	0.91	0.59		1
(2) G	28	29	1560	14.2	18	8	13	1.37	0.89		1

(1) without suppressor the code number is 0
(2) substitutes 26,5 v

2.4 Contacts data

2.4.1 Contacts arrangement : 2 changeover
applicable category: CA 0, 1 & 2

2.4.2 Contacts load
Low level : 10 mA max / 10 to 50 mV
Nominal load life and switching frequency: according to Table 3

TABLE 3 : Load, Switching cycles and frequencies for endurance and overload tests

Loads	at 28 V dc	at 115 V 400 Hz	Switching cycles	Switching frequencies
Low level	30mV/10mA max	na	1.000.000	1 to 10 per s.
Resistive	1 A	na	100.000	20 $\pm$ 2 per min.
Inductive	0,2 A	na	100.000	10 $\pm$ 1 per min.
Lamp	0,1 A	na	100.000	6 $\pm$ 0,1 per min.
Motor	na	na		
Intermediate load	0,1 A	na	50.000	10 $\pm$ 2 per min.
Resistive overload	2 A	na	100	20 $\pm$ 2 per min.
Inductive overload	0,4 A	na	100	10 $\pm$ 1 per min.
Lamp overload	na	na		
Motor overload	na	na		

The following values are for information only, not for inspection purpose

Maximum contact voltage : 90 V d.c (0,1 A max)
Minimum contact voltage : 10 m V
Minimum contact current : 1 μ A
Maximum voltage drop per contact : na

For inductive load : 0,32 H $\pm$ 10%

2.4.3 Static contact resistance

100 m Ohm max at 3 mm max from the relay body
200 m Ohm max after electrical life

2.4.4 Dynamic contact voltage drop

Voltage drop 5% max of rated voltage over across contacts.

2.4.5 Mechanical life

900 000 switching cycles after low level electrical endurance

2.4.6 Timing (over the whole temperature range):

- operate time : 2 ms max
- release time : 1,5 ms max
- 4 ms max (with coil transient suppressor)
- bounce : 1,5 ms max
- contact stabilization time : 2,5 ms max

Note: stabilization time is the sum of bounce time and the time to stabilize to 90% of the static contact resistance.

2.5 Terminals

Table 4.1

Code number	Terminals	Finish
2	Pins 4,75 mm	tinned
4	Long lead 12,7 mm	tinned

For further information see annex 1

2.6 Mounting

Table 4.2

Code letter	Mounting variant
J	Ground pin without spacer
K	Ground pin with spacer pad H = 0,36 mm
L	Ground pin with pad grid 2,54 mm, H=0,8mm
O	without pad, without mount
P	Pad spacer H = 0,36 mm
T	Pad grid 2,54 mm, H = 0,8 mm

For further information see annex 1

2.7 Environmental data

- shock - peak acceleration : 981 m/s^2 (100g) half sine acceleration;
6 ms duration
- bump - peak acceleration : 390 m/s^2 (40 g) half-sine acceleration;
6 ms duration
- vibration, (sinusoidal) : 10 Hz to 60 Hz; 2,5 peak amplitude
60 Hz to 3000 Hz ; 294 m/s^2 (30 g) peak acceleration
- vibration, (random) : $0,2 \text{ g}^2/\text{Hz}$; 20 to 2000 Hz
- acceleration (constant): 490 m/s^2 (50 g); duration 5 min.
- mechanical robustness of terminals:
 - Pull test U_{a1} tensile : 5 N
 - Bend test U_b bending : 2,5 N
 - Shear stress test U_{a2} : n a
 - Torsion U_c : n a

3. Qualification approval

- As stated in CECC 00114/2, par.1.4 fixed sampling
- Sampling and test schedule are specified in Table 5
- The specified tests and their orders are mandatory

4. Quality conformance inspection

It contains, as stated in Table 5 :

- Group A and B tests for inspection lots acceptance
- Group C and D tests for periodic inspection.

All tests of Table 5 are mandatory.

Where a sub-group contains more than one cumulative test, the order of the tests is mandatory. Samples subjected to destructive tests (D), shall not be released for delivery.

4.1 Formation of inspection lots

According to CECC 00114/2, par.3.1

4.2 Intervals between group C and group D tests

The tests of group C and D shall be performed in the intervals specified in table 5

5. Marking and documentation

Relays and their package supplied in accordance with this detail specification shall be marked as follows, as a minimum, unless otherwise stated :

5.1 Marking of the relay

- manufacturer's name or trade mark
- CECC relay type and variants code,
- date of manufacture, year/week according to IEC-62
- wiring diagram
- CECC registration number and CECC mark of conformity

5.2 Package

- manufacturer's name or trade mark
- indication of place and/or country of manufacturing
- CECC designation according to clause 2.2
- date of manufacture, year/week coded, according to IEC-62
- quantity

5.3 Documentation

a certificate of conformity according to CECC 00114 shall be added for each delivery

6. Annexes

Annex 1 shows terminals and mounting variants, their dimensions and corresponding code.
Annex 2 shows insulating pad information

7. Tests7.1 Standard conditions for testing:

If not otherwise stated all tests shall be performed according to section 5.5 of CECC 16000

7.2 Mounting of test items during the test:

The following instructions apply to mechanical tests such as shock, vibration, bump and acceleration.

The relay shall be mounted by its mounting method and additional fixture to the test plate where inherent resonances have been minimized so as not to invalidate the test results; IEC-68-2-47 refers.

7.3 General conditions for testing

Unless otherwise stated, the rated coil voltage specified in Table 2 shall be used for all tests. Unless otherwise specified, the test shall be carried out under general test conditions according to IEC 68 part 1.

8. Ordering information

See clause 2.2

Notes on Table 5

Note 1: Refer to CECC 16 000, Issue 2.

Note 2: p = periodicity (in months)
n = sample size
c = acceptance criterion (permitted number of defectives)

Note 3: More severe requirements than CECC 16 207

Note 4: Refer to blank detail specification