

COMITATO ELETTROTECNICO ITALIANO
Viale Monza 259, 20126 Milano

Pag. 1
of 17

CECC 16101-005
Issue 3
Date December 1982

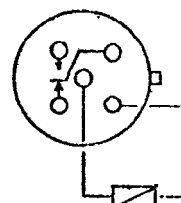
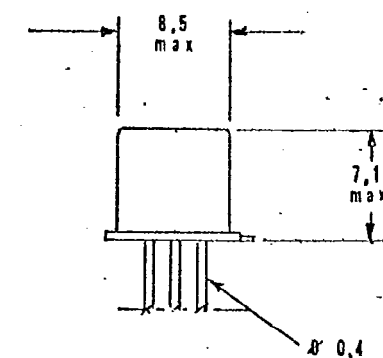


ELECTRONIC COMPONENTS OF ASSESSED QUALITY
IN ACCORDANCE WITH:
CNR-CEI-CECC-16000
CNR-CEI-CECC-16100

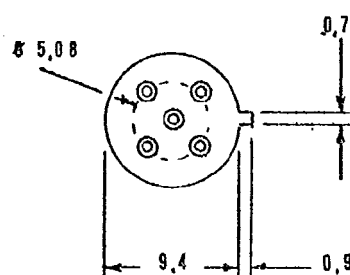
NATIONAL NUMBER:
CNR-CEI-CECC- 16101-005

DETAIL SPECIFICATION FOR:
ALL OR NOTHING RELAYS
TO-5 CAN
HERMETICALLY SEALED

MANUFACTURER:
HI-B D'ITALIA SPA
S.S. APPIA KM 56.420
04012 CISTERNA DI LATINA
TELEPHONE 06/9699666
TELEX 611412



SCHEMATIC
TERMINAL VIEW



DIMENSIONS ARE IN MM
TOLERANCE ± 0.25 UNLESS
OTHERWISE STATED

MANUFACTURER'S TYPE: 1 MA

TWO POLE CHANGEDOVER
CONTACT ARRANGEMENT
(2 FORM C). LIGHT DUTY
WITH LOW LEVEL SWITCHING
CAPABILITY.
SOLDERABLE STRAIGHT
TERMINATIONS.

TEST SCHEDULE 3
WITH ADDITIONS

OPERATING POWER
CONTACT RATING
NOMINAL COIL VOLTAGE
TEMPERATURE RANGE
SHOCK
VIBRATION
BUMP
INSULATION RESISTANCE

100 mW Nominal
1A, 28 V d.c.; Low Level
5 V d.c. to 26.5 V d.c.
-65 C to + 125 C
735 m/s² 6ms halfwave pulse
294 m/s² 10 - 2000 Hz
390 m/s² 6ms halfwave pulse
10000 Megohms minimum

REFER TO QUALIFIED PRODUCTS LIST FOR AVAILABILITY OF RELAYS MADE TO THIS SPECIFICATION

VARIANT CODE AND CHARACTERISTICS

TABLE 1

Coil Variant Code	Rated Voltage D.C.	Coil Resistance Tol. $\pm 10\%$ at 25°C	Saturate Voltage D.C.	Maximum Pull-in Voltage		Maximum Drop-out Voltage		Minimum Drop-out Voltage	
				125°C	25°C	125°C	25°C	-65°C	25°C
-01	5.0	63	6.0	3.7	2.8	2.4	1.7	.15	.23
-02	6.0	125	8.0	4.5	3.5	2.8	2.0	.18	.28
-03	9.0	280	12.0	6.8	5.3	4.2	3.0	.35	.54
-04	12.0	500	16.0	9.0	7.0	5.6	4.0	.40	.63
-05	18.0	1130	24.0	13.5	10.5	8.4	6.0	.58	.91
-06	26.5	2000	32.0	18.0	14.2	10.4	8.0	.89	1.37

Insulation resistance of coil: 10000 Megohms
at 500 V d.c.

Dielectric Strength: 450 V r.m.s.

1.1. Contacts

Resistive and
Inductive load

Category I, II
with low level switching
capability

Two changeover contact units (break-before-make)

Maximum contact voltage

28 V d.c.

Minimum contact voltage

30 mV

Maximum contact current

1.0 A resistive
0.1 A d.c. inductive
with 0.32 H

Minimum contact current

10 mA

Maximum contact current overload

2 A, 100 operations

Insulation resistance

10000 Megohms min. at 500 V d.c.

Dielectric strength

450 V r.m.s.

Contact circuit resistance
(measured at 3mm from glass seal)

100 milliohms max before life
300 milliohms max after life

Contact bounce time

2.0 ms maximum

Operate time

2.5 ms maximum

Release time

2.0 ms maximum

Minimum operations
at 28 V d.c. 1 A resistive

10^5

(1) Relays subjected to high level loads shall not subsequently be used for low level applications

1.2. Environmental limitations

Climatic category	65/125/56
Maximum temperature range	-65°C to + 125°C
Shock (functional)	735 m/s (75 G), 6ms halfsine wave
Vibration	294 m/s ² (30 G), 10-2000 Hz 10-60 Hz 1.5 amplitude peak
Bump (functional)	392 m/s ² (40 G) 6 ms pulse duration

1.3. Physical

Hermetically sealed by welding	
Weight	3.0 g maximum
Finish	Bright tin-lead plated terminals and case

2.0. ORDERING INFORMATION

When ordering relays to this specification, the following information shall be given:

1. The CECC and issue number of this detail specification
2. Code number in the order as follows:

Two digits for coil variant	(see Table 1)
Two digits for termination variant	(see Appendix 1)

Example: CECC-16101-005-02-01

3.0. MARKING

3.1. MARKING OF RELAY

The minimum data to be:

- Manufacturer's name or trade mark
- Relay type and variants code
- Coded date of manufacture (two digits for the year, two digits for the week)
- Circuit diagram

3.2. MARKING OF PACKAGE

- Detail specification reference
- Manufacturer's name or trade mark
- Relay type code
- Manufacturer's batch identification (by purchase order)
- Quantity

4.0. RELATED DOCUMENTS

This specification shall be read in conjunction with:

- CNR-CEI-CECC-16000 - Generic specification, for electromechanical all or nothing relays
- CNR-CEI-CECC-16100 - Sectional specification, for electromechanical all or nothing relays
- CNR-CEI-CECC-16101 - Blank detail specification, for electromechanical all or nothing relays
- CNR-CEI-CECC-00007 - Sampling procedure and tables for inspection by attributes
- CNR-CEI-CECC-00107 - Quality assessment procedure
- IEC-68 - Basic environmental testing procedures
- CECC-00200 - Qualified product list

5.0. QUALIFICATION APPROVAL

See Table 3

5.1. Method 1 of CECC 00107

5.2. Paragraph 6.0 is applicable

5.3. The specimens for qualification are specified in Table 3.
The specimens embrace the entire voltage range.

6.0. QUALITY CONFORMANCE INSPECTION

See Table 2

6.1. General Information

6.1.1 With the exception of subgroup A0, where a subgroup contains more than one test, order of tests is mandatory.

6.1.2 Performance characteristics, Contact Bounce and Contact Timing shall be measured with contacts loaded with 5 V d.c. maximum, 10 mA maximum.

6.1.3 Rated coil voltage as specified in Table 1 shall be used for all tests unless otherwise stated.

6.1.4 Ambient temperature to be 15 C to 30 C unless otherwise stated.

6.1.5 Samples subjected to destructive tests marked 'D' shall not be accepted for release.

6.1.6 Vibration, Shock, Bump test.

Method of mounting: relays shall be rigidly secured by means of adhesive applied between the top of the relay and the mounting plate.

Terminals shall be clamped at approximately 10mm from the body.

Connections to the relay shall be made by soldering stranded flexible wire to the terminals.

When energized the applied voltage shall be as rated.

For purpose of monitoring, contacts shall be loaded with 5 V, 10 mA maximum.