



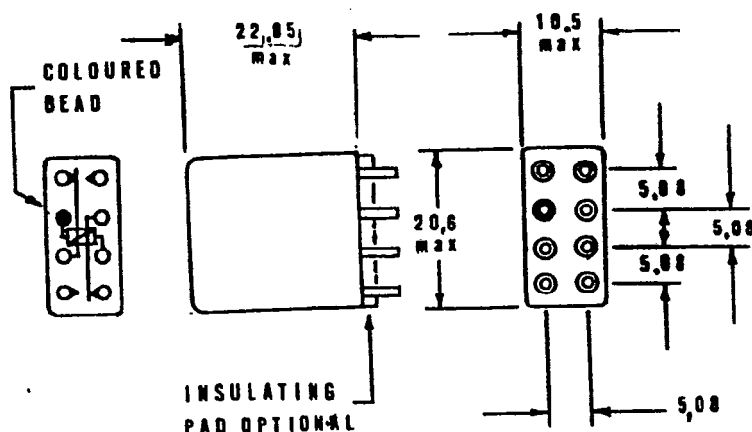
16 101 008

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

NATIONAL NUMBER:
CEI-CECC-16101-008

DETAIL SPECIFICATION FOR:
ALL OR NOTHING RELAYS
CRYSTAL CAN
HERMETICALLY SEALED

MANUFACTURER:
HI-6 B'ITALIA SPA
S.S. APPIA KM 36.420
04012 CISTERNA DI LATINA
TELEPHONE 06/9699666
TELEX 611412

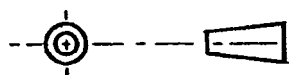


MANUFACTURER'S TYPE: 2B

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

TEST SCHEDULE 3
WITH ADDITIONS

DIMENSIONS ARE IN MM
TOLERANCE ± 0.25 UNLESS OTHERWISE STATED



Outline and dimensions :
(first angle projection)

OPERATING POWER
CONTACT RATING

250 mW Nominal
3A, 28 V d.c.; 1A, 115 V a.c. 400 Hz
Resistive; 0.75, 28 V d.c. inductive;
Low level

NOMINAL COIL VOLTAGE

6 V d.c. to 76 V d.c.

TEMPERATURE RANGE

-65°C to +125°C

SHOCK

490 m/s² 11ms halfwave pulse

VIBRATION

198 m/s² 10 - 2000 Hz

BUMP

380 m/s² 6ms halfwave pulse

INSULATION RESISTANCE

1000 Megohms minimum

Information about manufacturers who have components qualified to this detail specification is available in the current CECC 00 200: Qualified Products List

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	6.0	30	7.0	5.0	—	2.5	—	.4	—
-02		35	7.2	—	3.6	—	—	—	.30
-03		40	7.2	—	3.1	—	—	—	.50
-04		44	7.3	4.2	—	—	—	.14	—
-05	12.0	145	14.0	10.0	—	5.0	—	.8	—
-06		160	14.4	—	6.3	—	—	—	.75
-07		194	14.7	8.9	—	—	—	.32	—
-08		200	14.4	—	7.2	—	—	—	.60
-09	24.0	675	32.0	—	14.4	—	—	—	1.2
-10	26.5	675	32.0	18.0	—	14.0	—	1.5	—
-11		675	32.0	—	13.0	—	—	—	1.5
-12		700	30.0	22.0	—	12.0	—	1.5	—
-13	48.0	2300	55.0	40.0	—	20.0	—	2.9	—
-14		2450	57.6	—	28.3	—	—	—	2.4
-15		2500	58.0	—	25.0	—	—	—	2.5
-16	76.0	5000	90.0	—	35.0	—	—	—	3.0

Insulation resistance of coil: 1000 Megohms at 500 V d.c.

Dielectric Strength: ≥ 1000 V r.m.s.

1.1. Contacts

Resistive and
Inductive load

Category I, II
with low level switching
capability (1)

Two changeover contact units (break-before-make)

Maximum contact voltage	32 V d.c., 115 V r.m.s., (400 Hz) resistive
Minimum contact voltage	30 mV
Maximum contact current	13 A d.c. or 1 A r.m.s. resistive .75 A d.c. inductive, with 200 mH
Minimum contact current	10 mA
Maximum contact current overload	6 A, 100 operations
Insulation resistance	1000 Megohms min. at 500 V d.c.
Dielectric strength	1000 V r.m.s.
Contact circuit resistance (measured at 3mm from glass seal)	50 milliohms max before life 200 milliohms max after life
Contact bounce time	3.0 ms maximum
Operate time	6.5 ms maximum
Release time	3.0 ms maximum
Minimum operations at 28 V d.c. 13 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)	490 m/s ² (50 G), 11ms halfsine wave
Vibration	196 m/s ² (20 G), 10-2000 Hz 10-60 Hz 1.5 amplitude peak
Bump (functional)	392 m/s ² (40 G) 6 ms pulse duration

(Performance for relay mounting variant ref. 02 securely mounted. Derating may occur on other mounting variants)

1.3. Physical

Hermetically sealed by welding

Weight	20 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 mounting variant	(see Appendix 1)
Two digits for termination variant	(see Appendix 2)
Letter "P" if insulating pad is required	(see Appendix 3)

Example: CECC-16101-008-02-01-02-P



Documents

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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



Documents

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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.

Relays shall be rigidly secured, either by their own brackets, or by means of adhesive applied between the top of the relay and the mounting plate.

Long terminals shall be clamped at approximately 10 mm 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.

7.0. INTERVALS BETWEEN TESTS

The interval between Subgroups C2, C3, C4 shall be one year.
The interval between Subgroup C5 shall be two years.

8.0. FORMATION OF INSPECTION LOTS

Inspection lots shall be formed by the aggregation of several lots which are produced over a period not exceeding one week.

9.0. ADDITIONAL INFORMATION

For Qualification Approval Procedure see Table 3.

For mounting variants see Appendix 1.

For termination variants see Appendix 2.

For insulating pad information see Appendix 3.

10.0. NOTES

10.1. Conditions of tests are prescribed once only. Later on they are referred to as 'Test No.'.

10.2. Reference numbers of tests and performance requirements refer to CECC-16000 or to 16100 if applicable.