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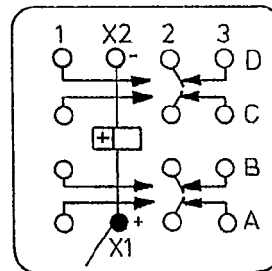
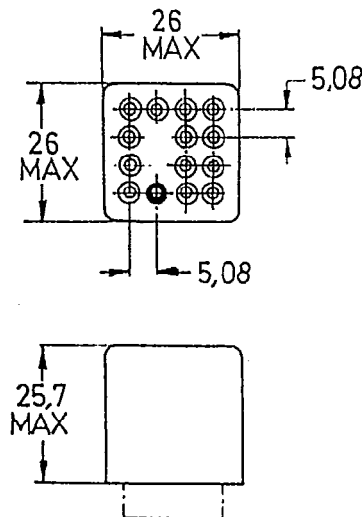
CECC 16101 - 012
Issue 3
Date December 1985

ELECTRONIC COMPONENTS OF
ASSESSED QUALITY IN
ACCORDANCE WITH:

CECC 16 000
CECC 16 100

DETAIL SPECIFICATION FOR	: ALL OR NOTHING RELAYS
TYPE	: ONE CUBIC INCH - 4 PDT - 10 AMP - RELAY
CONSTRUCTION	: HERMETICALLY SEALED - ALL WELDED CONSTRUCTION
TERMINATIONS	: SOLDER HOOK OR STRAIGHT PINS OR GOLD PLATED PLUG IN
MANUFACTURER' TYPE	: M 400-

OUTLINE DRAWING



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APPLICATION :

MEDIUM DUTY WITH 10 AMP
C/B COMPATIBILITY AND
OPTIONAL LOW LEVEL
CAPABILITY

TEST SCHEDULE : 3
(WITH ADDITIONS)

DIMENSIONS ARE IN mm
TOLERANCES +/- 0,25 mm UNLESS
OTHERWISE STATED
VARIANTS ARE SHOWN IN APPENDICES 1 AND 2

4 PDT, 10 Amp., hermetically sealed, DC coil relay.

For 28 Vdc and 115 Vac/400 Hz , 1 and 3 phase system voltage.

1. RELATED DOCUMENTS

This specification shall be read in conjunction with:

- CECC 16 000 - Generic specification, for electro-mechanical all or nothing relays
- CECC 16 100 - Sectional specification, for electro-mechanical all or nothing relays
- CECC 16 101 - Blank detail specification, for electro-mechanical all or nothing relays
- IEC 68-2-6 - Basic environmental testing procedures part 2, test Fe: Vibration (sinusoidal)
- IEC 68-2-14 - Basic environmental testing procedures part 2, test N : Change of temperature
- IEC 68-2-17 - Basic environmental testing procedures part 2, test Q : Sealing
- IEC 68-2-20 - Basic environmental testing procedures part 2, test T : Soldering
- IEC 68-2-21 - Basic environmental testing procedures part 2, test U : Robustness of terminations and integral mounting devices
- IEC 68-2-27 - Basic environmental testing procedures part 2, test Ea: Shock

2.0 VARIANT CODE AND CHARACTERISTICS2.1 COIL CHARACTERISTICS

Coil Variant Code	Nominal Operating Voltage DC	Maximum Operating Voltage DC	Coil Resistance at +25 C Ohms +/-10%	Maximum Pull-in voltage DC +25 C	Maximum Drop-out voltage DC +25 C	Maximum Drop-out voltage DC +125 C	Minimum Drop-out Voltage DC +25 C	Coil Suppression V
- 01	28	29	290	13,5	5,5	7	2,2	1,5
- 02	12	14,5	70	6,5	3,0	4,5	0,9	0,7
- 03	6	7,3	18	3,3	1,7	2,5	0,4	0,35
- 04	28	29	290	13,5	5,5	7	2,2	1,5
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Insulation Resistance: Coil to case : 1.000 MOhms min
Coil to contacts : 1.000 MOhms min

Dielectric Strength : Coil to case : 1.000 Vrms
Coil to contacts : 1.250 Vrms

Note: 1 - for mounting variants see appendix 1
2 - for mounting variants see appendix 2

2.2 CONTACT CHARACTERISTICS

Contact arrangement:	Four Pole Change Over (break before make)	
Category 1	: High level	Code 01
Category 0	: Low level	Code 02
Contact load at	: 28 VDC	115 VAC/400 Hz (1 + 3 phase)
Resistive	: 10 A	10 A
Inductive	: 8 A	8 A
Motor	: 4 A (3)	4 A (5)
Lamp	: 2 A (4)	2 A
Overload	: 40 A	60 A
	<u>Code 01</u>	<u>Code 02</u>
Max. contact voltage	: 29 Vdc	29 Vdc
Min. contact voltage	: 2 Vdc	50 mV
Min. contact current	: 20 mA	1 mA
Max. contact volt. drop	: -	-
static	: 150 mV	150 mV (1)
dynamic	: Not applic.	50 Ohm (2)
Bounce time	: 1 ms max.	
Operate time	: 15 ms max.	
Release time	: 15 ms max.	
Insulation resistance	: 1000 MOhm min.	
Dielectric strength		
- Contact to case	: 1250 Vrms	
- Contact to contact	: 1250 Vrms	
- Between open contacts	: 1000 Vrms	

Note: (1) Test load: 10 A / 6 VDC max.

(2) Test load: 1 mA / 50 mV

The dynamic contact resistance
to be measured 20 msec. after
energising the coil.

(3) Inrush current: 24 amp for 70 msec.

(4) Inrush current: 24 amp for 15 msec.

(5) Inrush current: 20 amp for 70 msec.

2.3 ENVIRONMENTAL LIMITATIONS

Maximum temperature range: -65 to +125 (degree C)
Shock (functional) : 100 g / 11 +/- 1 ms halfsine (1)
Vibration : 1.52 mm D.A. / 10 - 55 Hz (1)
30 g, 55 - 3000 Hz
Bump : Not applicable
Acceleration : 15 g

Performance for relay mounting variant ref. 01, 02, 03.

2.4 PHYSICAL

Hermetic seal : by welding
Weight : 71 g maximum
Finish of case : tin plated

2.5 ORDERING INFORMATION

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

- The CECC symbol and the number allocated to this detail specification: 16 101-012
- Code number in the order as follows:
 - Two digits for contact rating
 - Two digits for coil variant
 - Two digits for mounting variant
 - Two digits for termination variant

CECC CODE:

CECC 16101-012-01-01-02-03

Note (1): For mounting code -01 and -02 only.

For mounting code -03 :

Shock : 50 g / 11 +/- 1 ms halfsine
Vibration : 1.52 mm D.A. / 10 - 55 Hz
20 g / 55 - 3000 Hz

3. FORMATION OF INSPECTION LOTS

Reference is made to table 1.

4. INTERVAL BETWEEN TESTS

Intervals between Group C tests shall be one year.

5. QUALIFICATION APPROVAL

See table 1.

5.1. Method 1 of CECC 00107

5.2. Paragraph 6 is applicable

5.3. The specimens for qualification shall cover the entire voltage range

6. QUALITY CONFORMANCE INSPECTION

See table 1.

6.1. GENERAL INFORMATION

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

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

6.1.3. Ambient temperature to be (23 +/- 2) degree c.

6.1.4 Samples subjected to destructive tests and marked by "D" shall not be released for shipments.