# ASTA

## CERTIFICATE OF TYPE TESTS

**Laboratory Ref. No: LSWGWO0077053/01** **Certificate No.** 18087

**APPARATUS:** 6A to 40A, 30mA Residual current operated circuit-breakers with integral over-current protection for household and similar uses (RCBOs), Double Pole (Phase & Neutral) with one over current protection pole and uninterrupted neutral pole, 240V($U_n$), 50/60Hz. 55°C Mounting Connection: plug in and DIN Rail wire in /wire out (screw type terminals)

**DESIGNATION:** FTCOP.1006A TO 1040A & FTCOD.1006A TO 1040A

**MANUFACTURER:** **Farraj Trading & Manufacturing Co.,**
P.O. Box 61122, Jebel Ali, Dubai, United Arab Emirates

**TESTED BY:** **Electrical Research & Development Association**
ERDA Road, Makarpura Industrial Estate, Vadodara-390 010, Gujarat, INDIA

**DATES OF TESTS:** 9th November 2009 to 6th April 2011

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with

**IEC 61009-1: 2006**
**Test Sequences: A, B, C, $D_0$, $D_1$, $E_0$, $E_1$, $F_0$, $F_1$ & G.**

The results are shown in the record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance is considered to comply with the above standard(s) and to justify the ratings assigned by the manufacturer as stated below.

**For ratings assigned by the manufacturer and proved by the tests, see page 1.**

The record of Proving Tests applies only to the apparatus tested. The responsibility for conformity of any apparatus having the same designations with that tested rests with the Manufacturer.

This Certificate comprises 58 pages, 2 diagrams, 116 oscillograms, 42 photographs, 47 drawings and no other sheets as detailed on page 3, 4 & 5

**Only integral reproduction of this Certificate, or reproductions of this page accompanied by any page(s) on which are stated the assigned rated characteristics of the apparatus tested, are permitted without written permission from INTERTEK Testing & Certification Ltd, Hilton House, Corporation Street, Rugby. CV21 2DN, England.**

UKAS PRODUCT CERTIFICATION
010

Rajani Menon
..... ASTA Observer

..... Certification Manager

15th April 2011 .....Date

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Any other use of the Intertek or ASTA names must first be approved in writing by Intertek.

Test results and ratings proven by testing included in ASTA Certificates and ASTA Test Reports relate specifically to the sample(s) tested.

## Types of ASTA Certificates

Certificates are issued when samples of a particular product design have been tested satisfactorily against the requirements of a National, European, International or ASTA Standard. Several forms of Certificate are available, including:

### Certificate of Complete Compliance

Verifies compliance with all the requirements of a Standard

### Certificate of Type/Verification Tests

Verifies complete series of type/verification tests prescribed in a Standard has been made successfully.

### Certificate of Selected Type/Verification Tests

Verifies specified type/verification tests have been made successfully

### Supplementary Certificate

Extends the scope of an existing Certificate to cover changes in rating or in design

## ASTA Test Report

An ASTA Test Report is issued when tests otherwise satisfactory cannot be included in a Certificate for one or more reasons, e.g. verification of non-standard ratings

## ASTA Licences and ASTA Diamond Mark

The use of the ASTA Diamond Mark on products is authorised by an ASTA Licence. Products covered by an ASTA Licence can be referred to as ASTA Approved. Requirements for ASTA Licences include testing for full compliance with relevant standards and satisfactory, on-going assessment of production. Validity and use of ASTA Licences are subject to compliance with Intertek ASTA & BEAB Marks Certification Regulations.

## Authenticity

Authenticity of any ASTA document can be confirmed by contacting Intertek's Rugby office, telephone +44 1788 578435 or asta@intertek.com

## Ratings Assigned by the Manufacturer and Proved by Tests

| | |
|---|---|
| Rated current (Range) ($I_n$): | 6A - 40A |
| Rated residual operating current (Range) ($I_{\Delta n}$): | 30mA |
| Rated residual non-operating current (Range) ($I_{\Delta no}$): | 15mA |
| Rated voltage ($U_e$): | 240V |
| Rated insulation voltage ($U_i$): | 500V |
| Rated impulse withstand voltage ($U_{imp}$): | 4kV |
| Number of Poles and current paths: | Double pole (Phase & Neutral) RCBO with one over current protection pole and uninterrupted Neutral pole |
| Rated frequency: | 50/60Hz |
| Rated residual making and breaking capacity ($I_{\Delta m}$): | 500A |
| Rated short-circuit capacity ($I_{cn}$): | 10kA |
| RCBO type (General/S): | General type |
| Operating characteristics in case of residual current with D.C. components: | Type AC |
| Degree of protection: | IP20 |
| Pollution degree/ Material Group: | 2/II |
| RCBO functionally dependent/independent on line voltage: | Functionally dependent on line voltage |
| Type of installation: | Fixed installation and fixed wiring |
| Adjustable/ fixed residual operating current: | Fixed residual operating current |
| Enclosed type/ non enclosed type: | Enclosed type |
| Method of mounting: | Surface type |
| Method of connection: | Plug-in, Din Rail type |
| Instantaneous tripping current type: | C - type |
| Suitable for IT system: | No |

## Ratings Assigned by the Manufacturer and Proved by Tests (continued)

| | | |
|---|---|---|
| 1. | **Test Sequence A:**<br>(Clauses 6, 8.1.1, 8.1.2, 9.3, 8.1.3, 8.1.6, 9.11, 9.4, 9.5, 9.6, 9.14, 8.1.3, 9.15) | **Verified** |
| 2. | **Test Sequence B:**<br>(Clauses 9.7, 9.8, 9.20, 9.22.2, 9.23) | **Verified** |
| 3. | **Test Sequence C ($C_1$ & $C_2$):**<br>(Clauses 9.10, 9.12.11.2.1, 9.12.12, 9.12.11.2.2, 9.12.12) | **Verified** |
| 4. | **Test Sequence $D_0$:**<br>(Clauses 9.9.1) | **Verified** |
| 5. | **Test Sequence $D_1$:**<br>(Clauses 9.17, 9.19, 9.21, 9.12.13, 9.16) | **Verified** |
| 6. | **Test Sequence $E_0$:**<br>(Clauses 9.9.2, 9.18) | **Verified** |
| 7. | **Test Sequence $E_1$:**<br>(Clauses 9.13, 9.12.3, 9.12.12) | **Verified** |
| 8. | **Test Sequence $F_0$:**<br>(Clauses 9.11.2.4 b), 9.12.12,) | **Verified** |
| 9. | **Test Sequence $F_1$:**<br>(Clauses 9.11.2.4 c, 9.12.12.2) | **Verified** |
| 10. | **Test Sequence G :**<br>(Clauses 9.22.1) | **Verified** |