Intertek

ASTA

CERTIFICATE OF TYPE TESTS

Laboratory Ref. No: LSWGWO00812033/01 **Certificate No.....18134.....**

APPARATUS: Unenclosed, 3-Pole Moulded Case Circuit-breaker, fitted with adjustable/fixed Over Current Releases. (Rated Current I_n = 16A to 100A, U_e = 400V, Ui = 750V, U_{imp} = 8kV, Utilisation Category A), Terminals marked: Line and Load, Reference Ambient Temperature 55°C

DESIGNATION: FTCG / FTCGW (16A- 100A) 25k

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

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

DATES OF TESTS: 28th February to 28th 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 60947 –2: 2009-05 Edition 4.1 with Amendment 1: 2009 - Clause 8.3.3, 8.3.4 & 8.3.5
Test sequence I, II & III

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 29 pages, 1 diagram, 34 oscillograms, 19 photographs, 24 drawings and no other sheets as detailed on page 2 & 3

UKAS PRODUCT CERTIFICATION
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Rajani Menon
.....ASTA Observer

.....Certification Manager

15th June 2011.....Date

Ratings Assigned by the Manufacturer and Proved by Tests

Test Sequence I : General performance characteristics (Clause 8.3.3):

Tripping limits and characteristics (Clause 8.3.3.1):	**Verified**
Dielectric properties (Clause 8.3.3.2):	
Rated operational voltage (U_e):	**400 V**
Rated insulation voltage (U_i):	**750 V**
Rated Impulse withstand voltage (U_{imp}):	**8kV**
Mechanical operation and operational performance capability (Clause 8.3.3.3):	**Verified**
Overload performance (Clause 8.3.3.4):	**Verified**
Verification of dielectric withstand (Clause 8.3.3.5):	**Verified**
Verification of temperature-rise (Clause 8.3.3.6):	
Rated current (In):	**100 A**
Verification of overload releases (Clause 8.3.3.7):	**Verified**
Verification of under voltage and shunt releases (If applicable) (Clause 8.3.3.8):	**Not applicable**
Verification of main contact position (Clause 8.3.3.9): (for circuit breaker suitable for isolation)	**Verified**

Test Sequence II : Rated service short-circuit breaking capacity(Clause 8.3.4)

Rated service short-circuit breaking capacity (Clause 8.3.4.1)

I_{sc} = 13 kA at 400V, p.f. 0.30

Test Sequence II : Rated ultimate short-circuit breaking capacity (Clause: 8.3.5)

Rated ultimate short-circuit breaking capacity

I_{cu} = 25 kA at 400V, p.f. 0.25