SLOVENSKI STANDARD
SIST EN 3841-307:2005

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Aeronavtika - Odklopniki - 307. del: Lastnosti pri blokiranem prožilnem sistemu

Aerospace series - Circuit breakers - Test methods - Part 307: Performance with a locked tripping system

Luft- und Raumfahrt - Schutzschalter - Prüfverfahren - Teil 307: Verhalten mit blockiertem Auslösesystem

Série aérospatiale - Disjoncteurs - Méthodes d'essais - Partie 307 : Comportement avec mécanisme bloqué

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ICS:

49.060	Letalska in vesoljska elektriļna oprema in sistemi	Aerospace electric equipment and systems

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Aerospace series - Circuit breakers - Test methods - Part 307: Performance with a locked tripping system

Série aérospatiale - Disjoncteurs - Méthodes d'essais - Partie 307 : Comportement avec mécanisme bloqué

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Contents

Page

Foreword

This document (EN 3841-307:2004) has been prepared by the European Association of Aerospace Manufacturers - Standardization (AECMA-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by June 2005, and conflicting national standards shall be withdrawn at the latest by June 2005.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This standard specifies a method of verifying the performance of circuit breakers with a locked tripping system.

It shall be used together with EN 3841-100.

The test is intended to estimate the consequences of a trip failure in the case of a short-circuit.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 3841-100, *Aerospace series – Circuit breakers – Test methods – Part 100: General*

3 Method

3.1 General conditions

The mechanism shall be locked in order to simulate a welding of the power contacts with no direct action on the bimetal.

For three-pole circuit breakers, only one pole shall be tested, other circuits shall be unloaded.

3.2 Test mounting

The circuit breakers shall be mounted as specified in EN 3841-100, in connection with the applicable technical specification.

3.3 Test circuit

According to Figure 1 with d.c. and a.c., single-pole.

According to Figure 2 with a.c., three-pole.

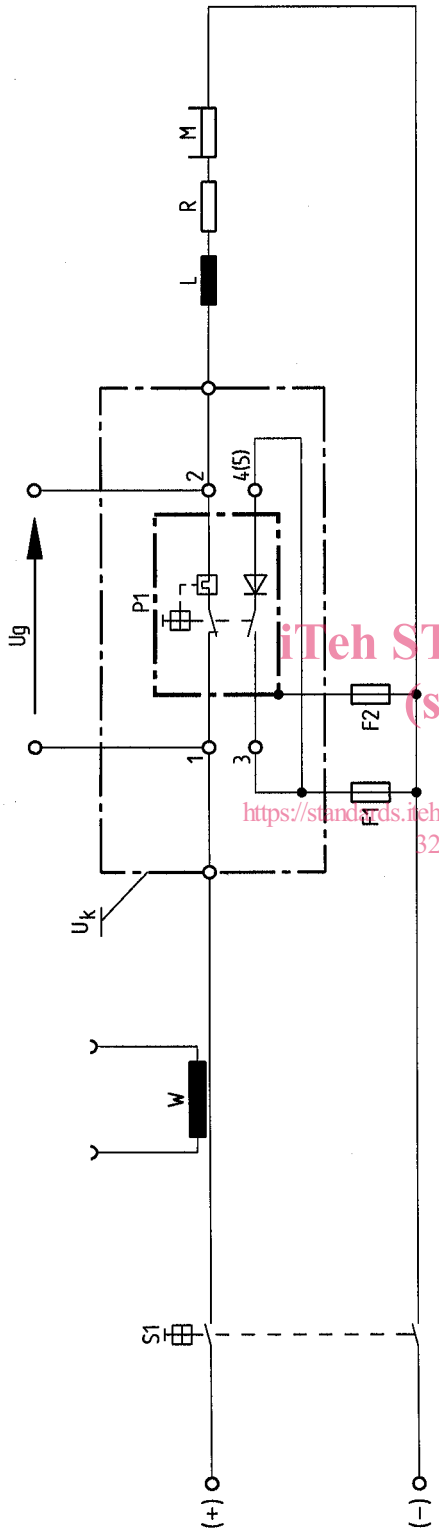

Figure 1

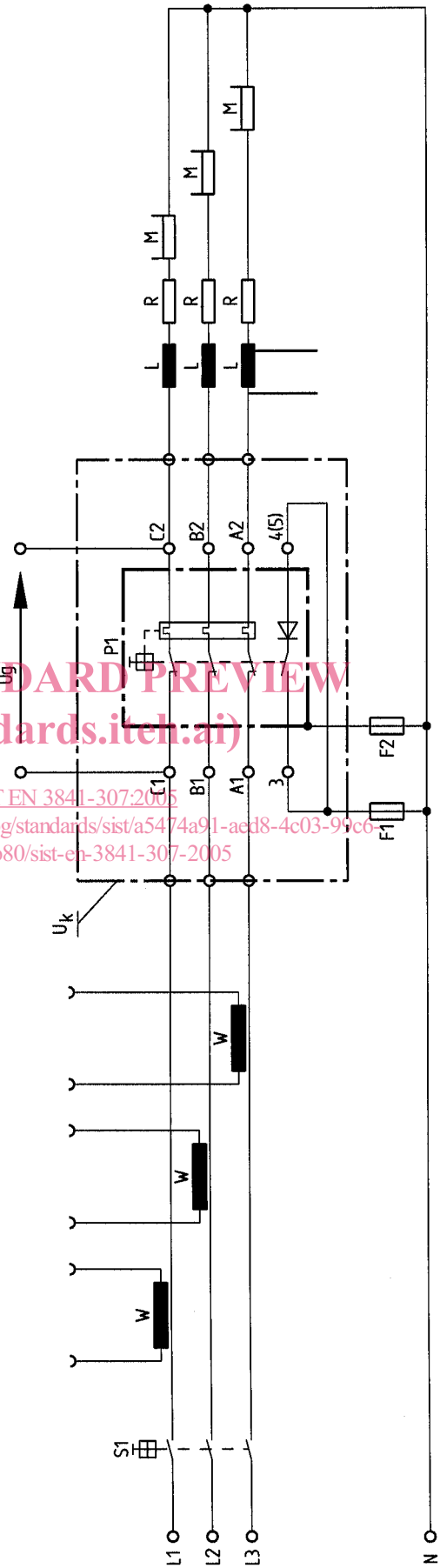

Figure 2

Where **S1** : main switch
L : inductance
R : loading resistor
W or **M** : converter or shunt for current measurement

P1 : test specimen (circuit breaker)
Ug : voltage at circuit breakers' terminals
U_k : test chamber (for explosion proofness)
F1, F2 : fuses 0,1 A

L1, L2, L3 : a.c. phases
N : neutral

3.4 Procedure

The circuit breakers at no load shall be placed in an oven for 2 h at 90 °C. Afterwards the circuit breakers shall be tested within 5 min after being removed from the oven.

The circuit breakers poles shall carry the test currents under the test voltage specified in the technical specification until circuit interruption occurs.

3.5 Requirement

Circuit opening by destruction of circuit breakers without bursting, flaming or thick smoke, in accordance with the maximum duration specified in technical specification.