

BS EN 4728:2015



BSI Standards Publication

# Aerospace series — Circuit breakers, single and three poles dummies — Product standard

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**National foreword**

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The UK participation in its preparation was entrusted to Technical Committee ACE/6, Aerospace avionic electrical and fibre optic technology.

A list of organizations represented on this committee can be obtained on request to its secretary.

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EUROPEAN STANDARD

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English Version

**Aerospace series - Circuit breakers, single and three poles  
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## European foreword

This document (EN 4728:2015) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this European Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, 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of an identical text or by endorsement, at the latest by January 2016, and conflicting national standards shall be withdrawn at the latest by January 2016.

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## 1 Scope

This European Standard specifies the characteristics of dummy circuit breakers used in aircraft on-board circuits in order to connect the cables provisionally installed. There are no electrical connections between any of the terminals.

## 2 Normative references

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

EN 2995-001, *Aerospace series — Circuit breakers, single-pole, temperature compensated, rated current 1 A to 25 A — Part 001: Technical specification*

EN 2995-004, *Aerospace series — Circuit breakers, single-pole, temperature compensated, rated current 1 A to 25 A — Part 004: With signal contact — Product standard*

EN 2995-005, *Aerospace series — Circuit breakers, single-pole, temperature compensated, rated current 1 A to 25 A — Part 005: With polarized signal contact — Product standard*

EN 2996-001, *Aerospace series — Circuit breakers, three-pole, temperature compensated, rated current 1 A to 25 A — Part 001: Technical specification*

EN 2996-004, *Aerospace series — Circuit breakers, three-pole, temperature compensated, rated current 1 A to 25 A — Part 004: With signal contact — Product standard*

EN 3661-001, *Aerospace series — Circuit breakers, single-pole, temperature compensated, rated current 20 A to 50 A — Part 001: Technical specification*

EN 3661-006, *Aerospace series — Circuit breakers, single-pole, temperature compensated, rated current 20 A to 50 A — Part 006: With polarized signal contact — Bus-bar version — Product standard*

EN 3662-001, *Aerospace series — Circuit breakers, three-pole, temperature compensated, rated current 20 A to 50 A — Part 001: Technical specification*

EN 3662-006, *Aerospace series — Circuit breakers, three-pole, temperature compensated, rated current 20 A to 50 A — Part 006: With polarized signal contact — Bus-bar version — Product standard*

EN 6113, *Aerospace series — Circuit breaker, connecting and attachment hardware* <sup>1)</sup>

## 3 Dimensions and mass

### 3.1 Front side characteristics

The circuit breakers do not have to correspond to the pictorial illustration, it shows only the model code.

See Figure 1.

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<sup>1)</sup> Published as ASD-STAN Prestandard at the date of publication of this European Standard (<http://www.asd-stan.org/>).

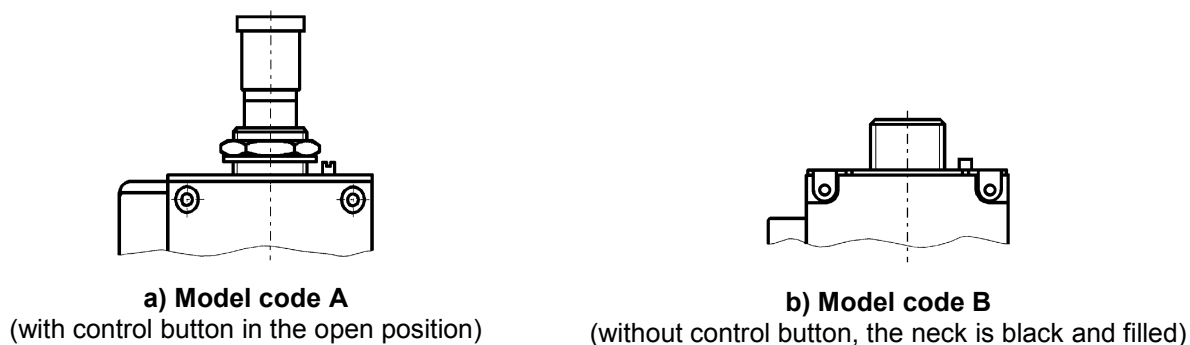


Figure 1 — Front side characteristics

### 3.2 Mass

See Table 1.

### 3.3 Panel mounting

See product standard.

## 4 Characteristics

### 4.1 Material, surface treatment

See Table 4.

### 4.2 Mechanical characteristics

#### 4.2.1 General

See Table 1.

Table 1

Dummy circuit breaker Dimensional code	Corresponding functional circuit breaker With auxiliary contacts	Model code	Tightening torque N.m		Mass g max.
			Terminals	threadneck	
01	EN 2995-004	A or B	$1,6 \pm 0,1$	$4 \pm 0,25$	22,3
03	EN 2996-004	A or B	$1,6 \pm 0,1$	$4 \pm 0,25$	36,9
04	EN 3662-006	A or B	$2,35 \pm 0,15$	$4 \pm 0,25$	90
05 <sup>a</sup>	EN 2995-005	B	NA	$4 \pm 0,25$	10
06	EN 3661-006	B	$2,35 \pm 0,15$	$4 \pm 0,25$	39

<sup>a</sup> No power terminals.

#### 4.2.2 Fasteners

See Table 3.

#### **4.2.3 Recommended tightening torque of attaching nut for installation**

See Table 1.

#### **4.2.4 Recommended tightening torque of terminal connection hardware for installation**

See Table 1.

#### **4.2.5 Resistance to vibrations**

Products shall withstand their respective vibrations requirement of the related circuit breaker specifications, see Clause 7. The pass fail criteria is no defective attachment shall be witness.

#### **4.2.6 Resistance to shocks**

Products shall withstand their respective shocks requirement of the related circuit breaker specifications, see Clause 7. The pass fail criteria is no defective attachment shall be witness.

#### **4.2.7 Mechanical endurance**

Not applicable.

### **4.3 Environment characteristics**

#### **4.3.1 Humidity**

Products shall withstand their respective humidity requirement of the related circuit breaker specifications, see Clause 7.

#### **4.3.2 Corrosion**

Products shall withstand their respective corrosion requirement of the related circuit breaker specifications, see Clause 7.

#### **4.3.3 Contaminating liquids**

Products shall withstand their respective contaminating liquids requirement of the related circuit breaker specifications, see Clause 7.

#### **4.3.4 Overvoltage caused by lightning**

Not applicable.



#### 4.4 Electrical characteristics

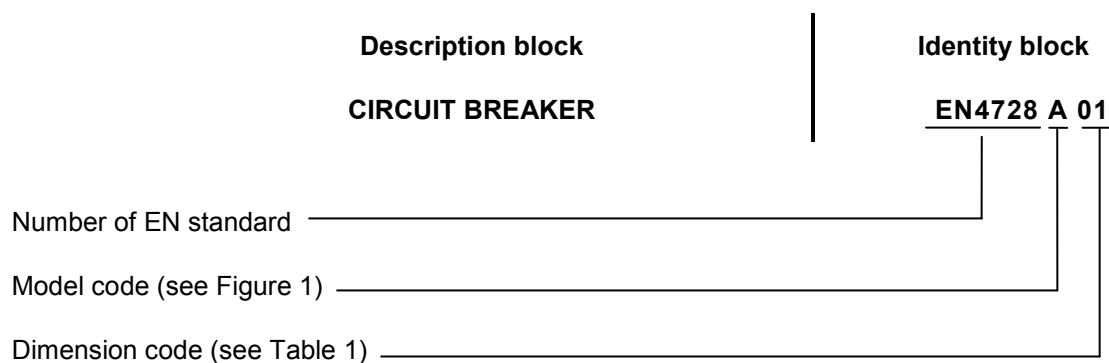
See Table 2.

**Table 2 — Dielectric rigidity**

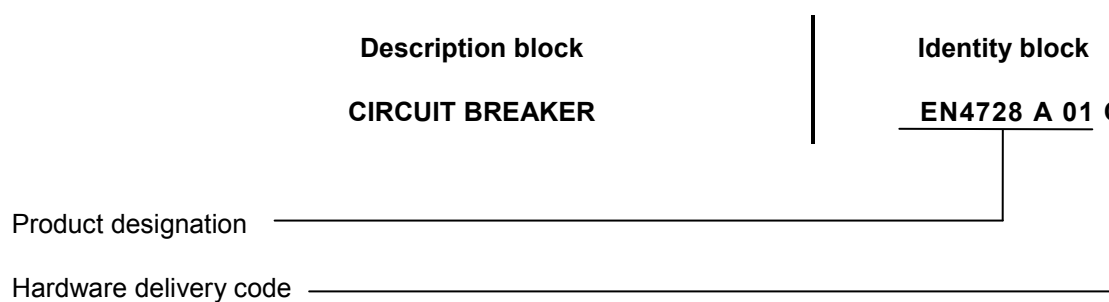
<b>Closed position</b>	Z = 0 m
1 and 2 with attachment	1 500 V
<b>Open position</b>	Z = 0 m
1 with 2 1 and 2 with attachment	1 500 V

### 5 Designation

#### 5.1 Product designation



#### 5.2 Procurement designation



**Table 3 — Delivery hardware code**

Delivery hardware code	Connection and attachment hardware kits EN 6113	Delivery conditions	
	Kit part-No. <sup>a</sup>	Fitted	Supplied separately
A	EN 6113A1	–	X
B	EN 6113B1	–	X
C	Without connection and attachment hardware kits		
D	EN 6113A1	X	–
E	EN 6113B1	X	–

<sup>a</sup> Spare parts could be ordered separately, information see EN 6113.

## 6 Marking

As defined on the drawing and unless otherwise specified by contract, marking on the product shall include:

- the designation defined in 5.1;
- the manufacture date (year, week): YYWW;
- the manufacturer's name or trademark;
- the pin terminal identification;
- the manufacturer's part number.

## 7 Technical specification

See Table 4.

**Table 4**

Dummy circuit breaker Dimensional code	Corresponding circuit breaker Specification
01	EN 2995-001
03	EN 2996-001
04	EN 3662-001
05	EN 2995-001
06	EN 3661-001



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