BS EN 16602-70-18:2014

BSI Standards Publication

Space product assurance — Preparation, assembly and mounting of RF coaxial cables

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National foreword

This British Standard is the UK implementation of EN 16602-70-18:2014.

The UK participation in its preparation was entrusted to Technical Committee ACE/68, Space systems and operations.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

ISBN 978 0 580 84593 2

ICS 49.090; 49.140

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 November 2014.

Amendments issued since publication

Date	Text affected

BS EN 16602-70-18:2014

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 16602-70-18

October 2014

ICS 49.090; 49.140

English version

Space product assurance - Preparation, assembly and mounting of RF coaxial cables

Assurance produit des projets spatiaux - Préparation, assemblage et montage des câbles radiofréquence coaxiaux

Raumfahrtproduktsicherung - Vorbereitung, Zusammenbau und Befestigung von RF-Koaxial-Kabeln

This European Standard was approved by CEN on 11 April 2014.

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Ref. No. EN 16602-70-18:2014 E

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Foreword

This document (EN 16602-70-18:2014) has been prepared by Technical Committee CEN/CLC/TC 5 “Space”, the secretariat of which is held by DIN.

This standard (EN 16602-70-18:2014) originates from ECSS-Q-ST-70-18C.

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of an identical text or by endorsement, at the latest by April 2015, and conflicting national standards shall be withdrawn at the latest by April 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

This document has been developed to cover specifically space systems and has therefore precedence over any EN covering the same scope but with a wider domain of applicability (e.g. : aerospace).

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Introduction

The main part of this Standard is based on industrial experience and recommendations from European soldering technology experts. Modifications are incorporated into the text to provide for the specific requirement of low-outgassing electrical systems which are required by scientific and application satellites. Other additions were made in the light of recent technological advances and results of metallurgical test programmes. The use of processes other than solder assembly is recognized, but only certain general requirements are given in this Standard.

These requirements apply to assemblies designed to operate within the temperature limits from -45 °C to +85 °C. More extreme temperatures or other unusual environmental applications require special design measures or processing steps to provide environmental survival capability.

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Scope

This Standard defines the technical requirements and quality assurance provisions for the assembly and mounting of high-reliability, radio-frequency (RF) coaxial-cable interconnections for use as transmission lines in spacecraft and associated equipment.

In general, these assemblies are designed for low-loss, stable operation from the relatively low frequencies through the higher frequencies in the microwave regions.

These transmission-line cables should not be confused with low-frequency cables with conductive sheaths (usually copper braid), which are used in applications where shielding of the centre conductors from the surrounding electrical ambient is required. The interconnection of those shielded cables, not covered by the present standard, is covered in ECSS-Q-ST-70-08.

This standard may be tailored for the specific characteristics and constrains of a space project in conformance with ECSS-S-ST-00.