

European Aviation Safety Agency

European Technical Standard Order

Subject: AIR TRAFFIC CONTROL RADAR BEACON SYSTEM/MODE SELECT
(ATCRBS/MODE S) AIRBORNE EQUIPMENT

1 - Applicability

This ETSO gives the requirements which airborne Mode S air traffic control (ATC) transponder equipment that is manufactured on or after the date of this ETSO, must meet in order to be identified with the applicable ETSO marking.

2 - Procedures

2.1 - General

Applicable procedures are detailed in CS-ETSO Subpart A.

2.2 - Specific

None

3 - Technical Conditions

3.1 - General

3.1.1 - Minimum Performance Standard

Standards set forth in EUROCAE document ED-73C, "Minimum Operational Performance Specification for Secondary Surveillance Radar Mode S Transponders" dated September 2008.

The following correction applies to: EUROCAE ED-73C. The paragraph 3.29 c. is extended as follows: "In case the optional ACAS interface is not provided the transponder must set Bit 16 of the Data Link Capability Report (BDS 1,0) to zero (0) indicating that no ACAS interface is available."

3.1.2 - Environmental Standard

See CS-ETSO Subpart A paragraph 2.1

3.1.3 - Computer Software

See CS-ETSO Subpart A paragraph 2.2

3.1.4 - Electronic Hardware Qualification

See CS-ETSO Subpart A paragraph 2.3.

3.2 – Specific

3.2.1 - Failure Condition Classification

See CS-ETSO Subpart A paragraph 2.4

Failure of the function defined in paragraph 3.1.1 of this ETSO has been determined to be a major failure condition. The applicant must develop the system to at least the design assurance level commensurate with this failure condition.

4 - Marking

4.1 - General

Marking is detailed in CS-ETSO Subpart A paragraph 1.2

4.2 - Specific

None

5 - Availability of Referenced Document

See CS-ETSO Subpart A paragraph 3