



Application form for testing to ETS 300 390

**Technical characteristics and test conditions
for radio equipment intended for the
transmission of data (and speech)
and using an integral antenna**

The submission documentation to a National Regulatory Body for Type approval purposes shall consist of two parts;

**Part one. Application Form
Part two. Test report form**

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APPLICATION FORM TO TEST LABORATORY FOR TESTING TO ETS 300 390

The application form shall be used for equipment submitted for testing in accordance with ETS 300 390 intended for the transmission of data using constant envelope angle modulation.

The application form shall be completed by the applicant and submitted to a test laboratory accredited in accordance with EN45001 and EN45002 or ISO guides 25 and 38 or a national standard conforming to EN45001 and EN45002 or to ISO guides 25 and 38.

PLEASE READ THE FOLLOWING NOTES:

Note (a)

More than one item of equipment may be required to be submitted for type testing where an equipment needs to be modified to provide connections to facilitate testing, i.e. measurements requiring direct connections to be made. In such cases a second un-modified equipment may be required for radiated i.e. case or cabinet radiation or ERP (effective radiated power) measurements to be performed. Full details of modifications are to be provided.

Note (b)

ETS 300 390 allows for variations in frequency range, maximum power, channel separation etc. to reflect differing national regulatory requirements. Manufacturers producing equipment to this ETS may wish to offer an equipment of the same basic design in a number of different forms with different RF characteristics, such as the frequency range, channel separation, transmitter power, etc. This is subsequently referred to as a family of equipments. Each equipment in the family must be given a unique Type Designation.

In the case of equipment with different frequency ranges and channel separations, a separate set of test results will be required for each frequency range and each channel separation offered. In the case of equipment with different transmitter powers, the procedures laid down in ETS 300 390 permit use of a single set of test results.

Equipment with differing optional features

If an applicant wishes to obtain type approval, on the basis of a single set of test results for a family of equipments derived from the same basic design, where the equipments in the family have different operational features which are not a requirement of ETS 300 390, then the following considerations shall be observed.

Any operational feature shall be clearly defined by the applicant at the time of application, so that an assessment can be made by the national regulatory authority as to whether the addition of the feature concerned, which may be achieved in hardware or software, can affect any of the performance parameters measured in accordance with the appropriate ETSS, and thus assess whether further testing is needed.

Note (c) - Case of combined equipment

- 1) In the case of combined full bandwidth analogue speech/full bandwidth digital equipment, if the analogue speech part of the equipment has already been type approved according to ETS 300 296, according to section 4 of ETS 300 390, only the additional measurements described in the following sub-clauses shall be carried out :

- 8.3 Adjacent channel power
- 8.4 Transmitter spurious emissions
- 8.5 Transmitter attack time
- 8.6 Transmitter release time
- 8.7 Transient behaviour of the transmitter
- 9.1 Average usable sensitivity (field strength, data)
- 9.2 Residual bit error rate in normal operation
- 9.3 Co-channel rejection
- 9.4 Adjacent channel selectivity

If the access protocol described in ETS 300 471 is to be used, the additional measurements described in the following sub-clauses shall be carried out:

- 8.1 Carrier sense delay
- 8.2 Receiver opening delay

- 2) The measurement in sub-clause 8.4 (spurious emissions) shall be performed when testing an add-on data unit to an equipment previously type approved to ETS 300 296.
- 3) In the case of equipment originally combined for speech and data, the measurement in sub-clause 8.4 does not need to be carried out when the data-part is operational while making the test corresponding to ETS 300 296.
- 4) In the case where an equipment has already been type approved according to ETS 300 390, and is resubmitted with an add-on device, using another type of modulation, the additional measurements as described in the following sub-clauses shall be carried out:

- 8.3 Adjacent channel power
- 8.4 Transmitter spurious emissions
- 9.1 Average usable sensitivity (field strength, data)
- 9.2 Residual bit error rate in normal condition
- 9.3 Co-channel rejection
- 9.4 Adjacent channel selectivity

If the access protocol described in ETS 300 471 is to be used, the additional measurement described in the following sub-clause shall be carried out:

- 8.2 Receiver opening delay

- 5) In the case where low bit rate data is transmitted together with analogue speech, the analogue speech part of the equipment is tested according to ETS 300 296, and it is also necessary to check that the low bit rate data does not cause the adjacent channel power and spurious emissions to fall outside the specification limits.

Note (d) - Accessories

It is the applicant's responsibility when submitting equipment(s) to the test laboratory to provide appropriate connectors or alternative coupling arrangements to facilitate the connection of test equipment by the test laboratory to the equipment under test (E.U.T.). This should enable:

- a) access to the equipment RF power output (transmitter) and RF input (receiver);
- b) access to the equipment modulator input;
- c) a connection to be made for the raw bit stream at the modulator input or at other appropriate access point;
- d) a connection to be made to the demodulator output (raw bit stream) or to other appropriate access point;
- e) access to the analogue output of the RF part;
- f) coupling arrangement (e.g. optical or acoustic coupling for equipment having no external antenna connection);
- g) means to turn the data modulating signal ON or OFF;
- h) means of connecting the equipment to an external power supply.

Note (e)

For type approval to be granted on the basis of tests conducted on a pre-production model, that model must be manufactured to the same production drawings and manufacturer's specification as the later production models.

Where this is not the case the national regulatory authority reserves the right to require either partial or full type testing to be carried out on the final production equipment.

Note (f)

It is the applicant's responsibility to ensure that the equipment meets all the regulatory requirements for marking in the country where type approval is being sought.

OTHER APPLICATIONS FOR TYPE TESTING TO ETS 300 390

Has the equipment been previously type tested to ETS 300 390 ?

YES YES NO

If "yes" please provide details :

.....

TYPE TESTING TO OTHER ETS

Has the analogue speech part of the equipment (if any) been previously type tested to ETS 300 296 ?

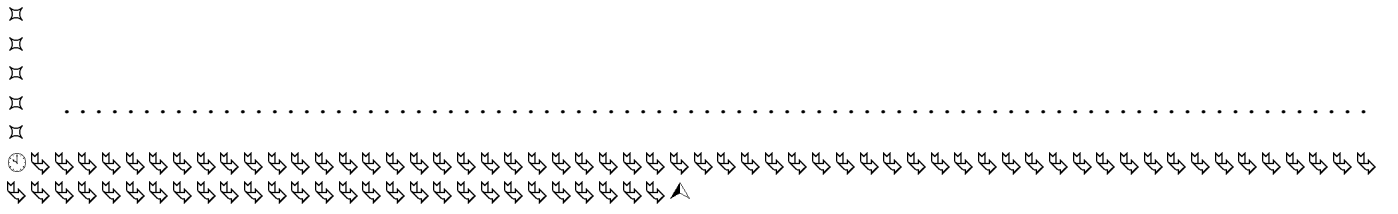
YES YES NO

Is the equipment simultaneously submitted for type testing to ETS 300 296 and ETS 300 390 ?

YES YES NO

Is there any supplementary information ?

.....



TRANSMITTER MODULATION INPUT CHARACTERISTICS

Modulation bit ratebit/s

Type of modulation:

SUBCARRIER:

MSK YES NO

FFSK YES NO

Other

DIRECT:

Direct FSK YES NO

GMSK YES NO

Generalised Tamed FM YES NO

Multilevel State FM YES NO

PLL-4PSK YES NO

8 PSK YES NO

Other

◀ ▶ ↻ 🔍

REMOTE OPERATION OF THE TRANSMITTER (for information)

◀ ▶ ↻ 🔍

Is a facility provided for the remote operation of the transmitter ?

▶ ↻ 🔍 ⓧ Yes

ⓧ ▶ ↻ 🔍

▶ ↻ 🔍 ⓧ No

ⓧ ▶ ↻ 🔍

If YES give details:

.....
.....

◀ ▶ ↻ 🔍

RECEIVER TECHNICAL CHARACTERISTICS

◀ ▶ ↻ 🔍

RECEIVER - FREQUENCY

◀ ▶ ↻ 🔍

METHOD OF FREQUENCY GENERATION

▶ ↻ 🔍 ⓧ CRYSTAL(S)

ⓧ ▶ ↻ 🔍

▶ ↻ 🔍 ⓧ SYNTHESIZER

ⓧ ▶ ↻ 🔍

▶ ↻ 🔍 ⓧ OTHER

ⓧ ▶ ↻ 🔍

INTERMEDIATE FREQUENCIES

INTERFACE FOR DATA TRANSMISSION

SIGNAL LEVEL

V28

Other Details:

DEFINITION OF SIGNALS

V24

Other Details:

NORMAL TEST SIGNAL

Can the equipment transmit continuous bit streams Yes

No

No

No

If NO, give details of the format and information agreed with the National Regulatory Authority (sub-clause 7.1 of ETS 300 390 refers).

NOTE: It is recommended that details of the agreed format are stated on the page of the type test report titled "Additional information supplementary to the test report".

TYPE OF CONNECTOR

25 Pin (RS232)

9 Pin (RS232)

Male

Female

Other Details:

POWER SOURCE(S)

..... DC Voltage (V)

..... DC Maximum Current (A)

Other

BATTERY

Nickel Cadmium

Other Alkaline

Mercury

Lead acid (Vehicle regulated)

Leclanché

Lithium

Other

..... volts End point voltage as quoted by equipment manufacturer

(Refer to sub-clauses 6.3.2 and 6.4.2 of the ETS when completing the above)

ALIGNMENT RANGE

The definition of the alignment range AR1 and AR2 are given in sub-clauses 4.1.2 and 4.1.3 of the Standard. The applicant should ensure that the sample equipment(s) submitted are operational on the appropriate channel(s) as given in sub-clauses 4.1.5 through to 4.1.11 and tick the appropriate box.

- 4.1.5 One sample single channel equipment of category AR1
or 4.1.6 Three samples of single channel equipments of category AR2
or 4.1.7 One sample two channel equipment of category AR1
or 4.1.8 Three samples of two channel equipment of category AR2
or 4.1.9 One sample multichannel equipment of category AR1
or 4.1.10 Three samples of multichannel equipment of category AR2
or 4.1.11 One sample of multichannel equipment of category AR2 where the switching range equals the alignment range

If more than one option of the equipment is being submitted with different Type Designations, one or three samples, as appropriate, of each version shall be submitted.

CHANNEL IDENTIFICATION

Each equipment, whether one or more submitted for tests shall carry clear identification (such as a serial number), together with the frequencies associated with the channel identification displayed on the equipment.

DECLARATION

Are the equipments submitted representative production models?

Yes

No

If not are the equipments pre-production models?

Yes

No

If pre-production equipments are submitted will the final production equipments be identical in all respects with the equipment tested

Yes

No

If no supply full details

I hereby declare that I am entitled to sign on behalf of the applicant and that the information supplied is correct and complete.

Signature

Name

Position held

Date