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WEIGHTS & MEASURES DIRECTORATE  
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## REQUIREMENTS FOR TYPE APPROVAL OF AN ELECTRONIC MEASURING INSTRUMENT

1. **An application letter for type approval of the equipment addressed to the Director Weights and Measures stating the specific model to be approved and the field of use of the equipment**
2. **-an OIML type approval certificate(OIML Certificate of Conformity) and test report for the instrument from the Legal Metrology Authority of the country of manufacture of the instrument,**
3. **Letter of Agency from the manufacturer of the instrument model intended to be sold in the country,**
4. **A copy of relevant valid technician's licence from a person employed by a registered measuring instruments Service Company and a copy of the Workshop approval of the Service Company issued by Weights and Measures Department,**
5. **A properly prepared technical manual with the following details;**
  - (i) -a specific description giving the technical characteristics and the principle of operation,
  - (ii)-a photograph (GIVE COLOUR BROCHURE) of the instrument,
  - (iii) – a description of the available functions and their settings
  - (iv) -a list of the components with a description of their constituent materials when this has a metrological influence,
  - (v) -an assembly drawing with identification of different components,
  - (vi) - the references of the approval certificates of the constituent elements, if any,
  - (vii) -a description of how the calibration point is accessed and the calibration procedure and how correction parameters are determined,
  - (viii) -a drawing showing the location of seals for securing the instrument after verification and location of verification marks,
  - (ix) -installation practices or operational constraints,
  - (x) -instructions on how to access metrological software on the instrument [and version number of software],
  - (xi) –a description of how the software works

- (xii) **-A description and location of a mechanism in form of a switch used for securing the access to the metrologically relevant parameters and communication ports(if any) to ensure no external access (even through the ports) can be achieved for system configuration after verification and securing,**
- (xiii) -description and location of a non-resettable totalizer
- (xiv) -test data from notified body laboratory showing compliance with requirements of OIML,
- (xv) -a functional description of the various electronic devices,
- (xvi) -a flow diagram of the logic, showing the functions of the electronic devices,
- (xvii) -a list of any purely digital elements that are considered to be replaceable,
- (xviii)- the communication protocol available in the instrument and how quantity signals can be tapped,
- (xix) -the accuracy class of the instrument,

#### 5. Software and its documentation should meet the following criteria

No.	Test	Passed	Failed	Remarks
A	Disturbances			
1	Indication of significant faults in the display does not lead to confusion with other messages			
2	Instrument made automatically inoperative upon 1 above until user takes action			
B	Display check			
1	Upon switch on signs of indication are active long enough to be checked by operator			
C	External Equipment			
(i)	Interfaces( Mechanical, electrical ,logical) do not allow			
1	-Functions and measurement data to be inadmissibly influenced by peripheral devices, or other connected instruments, or disturbances			
2	-Displaying data which could be mistaken for a measurement result			
3	-Falsifying measurement results(displayed, processed, stored)			

4	-changing adjustment factor or adjusting the instrument (except authorized cases)			
5	- falsifying displayed primary indications(direct sales)			
(ii)1	-interfaces transmit data so that peripheral devices can meet requirements			
2	-metrologically relevant functions performed or initiated through the interface meet relevant requirements of the relevant OIML recommendation.			
D	Devices with embedded software			
(i)	Declaration of the manufacturer that the software:			
1	-is used in a fixed hardware and software environment, and			
2	-cannot be modified or uploaded by any means after securing/ verification			
(ii)	The software documentation contains:			
1	-description of the legally relevant functions			
2	-description of the securing means(evidence of an intervention)			
3	-software identification			
4	-description of how to check the actual software identification			
(iii)	The software identification is:			
1	-clearly assigned to the legally relevant software and functions			
2	-provided by the instrument as documented			

**6. A sample equipment of the model to be type approved**

**7. Stipulated fees according to the equipment to be evaluated**

## ENGAGEMENT CRITERIA

The timelines for the applicant to respond to raised issues by the evaluator on an application are as below:

	<b>Description</b>	<b>Duration</b>
1.	Missing application documents	1 week
2.	Inadequate information in submitted documents	1 month
3.	Equipment evaluation issues	3 months