NMO

OIML CERTIFICATE OF CONFORMITY

Issuing authority:	**NMO**
Person responsible:	**Mannie Panesar – Head of Technical Services**
Applicant:	**ITALTAX SRL** **Via dell'Industria, 16** **62017 Porto Recanati (MC)** **Italy**
Manufacturer:	**The applicant**
Identification of the certified pattern:	**F1 Plus & F1 Plus S**

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test report) with the requirements of the following Recommendation of the International Organisation of Legal Metrology (OIML):

OIML R21 - Edition 2007(E)

This certificate relates only to the metrological and technical characteristics of the pattern of the instrument concerned, as covered by the relevant OIML International Recommendation.

This certificate does not bestow any form of legal international approval.

Important note: Apart from the mention of the certificates reference number and the name of the OIML Member State in which the certificate was issued, partial quotation of the certificate or of the associated test report is not permitted, though they may be reproduced in full.

Issue Date: **23 February 2017**

Grégory Glas
Technical Manager
For and on behalf of the Head of Technical Services

UKAS
PRODUCT
CERTIFICATION
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The conformity was established by testing and examinations described in the associated Evaluation Report P02067 which includes 15 pages.

Characteristics of the instrument:

Characteristics:

The pattern is a family of taximeters designated the F1 Plus and F1 Plus S, designed to be installed in a road vehicle for the calculation of fares. The fares are calculated based on measurement of distance and time; the instrument operates in calculation modes S (single application of tariff) or D (double application of tariff). The instrument is powered via the vehicle battery.

The distance measuring device (transducer) is not covered by this certificate.

Main features:

The instrument comprises a PCB housed within a plastic enclosure, two LED displays, five push buttons, and a thermal printer connect to the meter.

The plastic enclosure consists of front and rear parts held together with screws, with a removable part on the left-hand side allowing access to the communication ports and test connector. An additional back plate is fitted at the rear of the instrument to prevent access to the screws sealing the front and rear parts. The side part and rear plate are held together via a screw, which is used to seal the instrument in the vehicle.

Devices:

- Display check
- Calculation modes S or D
- Fare calculation (initial fare, fare increments, extras)
- Display of rate, mode (For Hire, Hired, Stopped) and fare (actual fare and total fare with extras)
- Display of distance and time for the journey
- Loading of tariffs and software (via sealed interface)
- Real time clock
- Long-term totalisers (non-resettable)
- Display of parameters, software and tariff information (read-only)
- Test connector
- Hardwire connected Thermal Printer:
  The taximeter has a secure RS232 serial connection-link with a digitax printer, that at any trip starts the secure connection checks:
      a) The online presence of the printer
      b) The pairing serial number between the taximeter and printer (only the paired taximeter & printer will works)
      c) The paper presence
  In case of one of the above checks is False, the taximeter gets blocked.
  In case that the pair has been done successfully and the taximeter is not blocked, then the taximeter and printer are defined as a one combined system.

Interfaces:

- 2 x RS232
- Passenger Sensor
- External Lights Input

- Odometer Input
- External Lights power output
- Magnetic Card reader
- Dallas 1-Wire Net
- CAN Bus input
- Mobile data terminal interface
- Test Connector
- Service/Programming Keys
- POS point of sale interface
- TIM Reader
- Protocol Interface with third part device
- Interface for external Bluetooth device

Technical data:

Power supply	9 to 16 VDC (12 V nominal)
Taximeter constant k	500 to 65,535 pulses/km
Maximum speed	200 km/h
Pulse voltage amplitude (low/high)	0 - 0.3 VDC / 5 -12 V DC
Pulse frequency	≤ 1 kHz
Minimum pulse width	50 µs
Electromagnetic environment	E3
Mechanical environment	M3
Climatic environment	-25°C to +70 °C
	Condensing (closed)

Firmware:

The legally relevant software is held in the firmware and is unambiguously identified by its release name and CRC-16 checksum value.

The firmware release name and CRC versions programmed in the taximeter can be displayed as follows:

- From For Hire Position press at the same time K2+K3+K4
- Wait few seconds
- In the left display will be shown the CRC Firmware number
- In the right display will be shown the Country identification with 3 letters and 2 numbers.

The software identification shall be as follows:

Software release name	CRC (checksum value)	Country / Language
nnl05	37498	Generic English
ITA10	17987	Italy
OLA04	56249	The Netherlands
ESP08	36941	Spain
GER03	2413	Germany
BEL04	15071	Belgium

POR20	23092	Portugal
ENG20	40104	U.K.
FRA03	23106	France
AUS15	30122	Austria
NOR06	29095	Norway
GRE10	6108	Greece
DAN03	42591	Danish
SVF08	4638	Switzerland / French
SVT08	4682	Switzerland / German
SVI08	3241	Switzerland / Italian
SLO02	6202	Slovakia
LIT01	43798	Lithuania
SVM05	17265	Sweden

Software download is only possible via the Service programming key, which is protected by the mechanical seal described in the Sealing measures section.

Tariff

The tariff is protected by a CRC-16 checksum, the checksum value can be displayed on the taximeter by pressing K1+K4 keys in For Hire status: the taximeter will start the display self-check procedure and at the end will show the tariff CRC in its main display and the firmware name in the secondary display.

Sealing measures:

The taximeter is fitted with a sealing point preventing access to the metrological components and sealing the instrument to the car.

Alternatives:

Having authorised alternative software identifications as follows:

Software release name	CRC (checksum value)	Country / Language
nnl03 or nnl04 or	22470 23780	Generic English
ITA08 or ITA09	22655 43180	Italy
OLA02 or OLA03	61497 3241	The Netherlands
ESP06 or ESP07	49883 52561	Spain
GER01 or GER02	25512 36549	Germany
BEL02 or BEL03	32160 54932	Belgium
POR18 or POR19	38962 39475	Portugal
ENG18 or ENG19	61241 56547	U.K.
FRA01 or FRA02	63307 12678	France

AUS13 or AUS14	40050 46527	Austria
NOR03 or NOR05	23145 15475	Norway
GRE08 or GRE09	21920 32415	Greece
DAN02	32738	Danish
SVF07	12374	Switzerland / French
SVT07	43521	Switzerland / German
SVI07	24536	Switzerland / Italian
SLO01	32746	Slovakia

CERTIFICATE HISTORY

ISSUE NO.	DATE	DESCRIPTION
R21/2007-GB1-17.01	23 February 2017	Certificate first issued.
-	-	No revisions have been issued.