NMO

OIML

Member State of OIML
United Kingdom of Great Britain
and Northern Ireland

OIML Certificate No
R21/2007-GB1-17.03

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: **M1 STD**

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: **31 October 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 P02292 which includes 15 pages.

Characteristics of the instrument:

Characteristics:

The pattern is a family of taximeters designated the M1 STD, 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 is incorporated in a vehicle rear-view mirror and comprises a PCB housed within a plastic enclosure, five push buttons, two LED displays, a mirror, a tariff LED and a status LED behind the mirror.

The plastic enclosure consists of front and rear parts held together with screws, with removable parts preventing access to the PCB, test connector and communication ports.

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

Interfaces:

- 2 x RS232
- Passenger Sensor
- External Lights Input
- External Lights power output
- Odometer Input
- Optional Can Bus Input
- Test Connector
- Service/Programming Keys
- Optional Bluetooth Low Energy Module (custom serial port)

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. These can be displayed as follows:

- From For Hire Position press at the same time K2+K3+K4
- Wait few seconds
- In the left display the CRC-16 Firmware number will be shown
- In the right display the the software identification (e.g. M1S01) will be shown.

The software identification shall be as follows:

Software release name	**CRC (checksum value)**	**Country / Language**
M1S01	45205	Generic / Programmable

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 it will show the tariff CRC in its left display and the Country identification with 3 characters and 2 numbers in the right display.

Sealing measures:

The taximeter is fitted with sealing points preventing access to the metrological components and the communication ports.

CERTIFICATE HISTORY

ISSUE NO.	**DATE**	**DESCRIPTION**
R21/2007-GB1-17.03	31 October 2017	Certificate first issued.
-	-	No revisions have been issued.