

Accessory device to a taximeter

Issued to

Halda AB

Hammarbacken 8, 191 81 Sollentuna, Sweden

Type of accessory and intended use

Printer designated RX90hn, and accompanied software, intended to generate the print-outs required from STAFS 2012:5. The printer shall be used together with taximeter C30 covered by EC Type Examination Certificate No. 0402-MID-50 23 02 revision 11 dated 2019-06-27 issued in accordance with directive 2014/32/EU.

The printer can also be used with taximeter M2 covered by EC Type Examination Certificate No. 0402-MID-502305 revision 3 dated 2021-09-02 issued in accordance with directive 2014/32/EU.

In accordance with

The Swedish Act on Metrology and Verification STAFS 2012:5 (updated in accordance with STAFS 2016:15).

Certificate

RISE Research Institutes of Sweden AB hereby certify that the product described above fulfils the requirements stated in STAFS 2012:5 (updated in accordance with STAFS 2016:15). The certification is verified by assessment according to the procedure described in STAFS 2012:5, which includes type testing and surveillance of the factory production control. Rise Certification Rule SPCR 179 issue 2019-03-28 has been applied.

Rated operating conditions

Mechanic environment class:	M3 according to directive 2014/32/EU
Electromagnetic environment class:	E3 according to directive 2014/32/EU
Climatic environment:	-25 to +55 °C, Condensing, Closed (installed in a car)

The principal characteristics and approval conditions are set out in the appendix hereto, which forms part of the approval document. All the plans, schematic diagrams and documentations are recorded under reference file ELE 4P04492, 5P09828 and P110694.

Originally issued: 2014-12-16

Expiry date: 2024-12-16

This certificate replaces earlier issues. Conditions according to STAFS 2012:5 and RISE Certification Rules SPCR 179 apply.

Martin Tillander

Certificate 502304| issue 5 | 2021-09-02

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The accessory must correspond with the following specifications:

1 Design of the instrument

1.1 Construction

Product names

The accessory device is sold under 2 brand names: Semel RX90hn and Halda RX90hn respectively. RX90hn is the printer part.

Supply voltage

Printer: 9-16 V



Figure 1: Printer RX90hn

1.2 Software

The validation of software was based on the essential requirements given in STAFS 2012:5.

Software version

The following program versions are approved:

Type of program	Program version	Checksum
Semel C30 CPU software	C30.BSE.01790X.XXXXXX	3075236790
	C30.BSE.06203X.XXXXXX	3109973203
TM208 CPU software (M2)	M2.DSE.06780X.XXXXXX	1734540780
	M2.DSE.06805X.XXXXXX	501314805
RX90hn printer software	1.26m	006451D7
	1.30m	1D41A65B

X states information not required by the directive 2014/32/EU (for M2 or C30), 2004/22/EC (for C30) or STAFS 2012:5.

The software identification number and the checksums can be seen in the following way:

Example:

Complete program version: C30.BSE.01999A.105010

C30 is the taximeter type

B is the hardware version

SE is stating which country the program is intended for (e.g. language, SE means Sweden).

01 is the version number for country specific functions

999 is the three last digits of the checksum

A is the version of customers' function in the country

1 is the version of bigger changes

05 is the version of smaller changes

01 is the revision number

0 not in use

The software identification number and the checksum can be seen in the following way: use code* 96E in OFF or "For hire" mode. Alternatively the checksum can be read by making a "Taxameterkontroll" (code 91E).

1.3 Parameter settings

Even if program version and checksum are the same as required, functionality can be altered by changing parameters. Compared to the requirements of directive 2004/22/EC the following additional parameters are to be set: Parameters can be read by using code 601E.

Parameter	Taximeter display	Press / Scroll	Setting to fulfil the requirements of STAFS 2012:5
TAR.NAM	Show tariff name/number on display.	0=Show number(DEFAULT) 1=Show name	0
MID.OP	Show OFF and FOR HIRE status	0 = Not shown on display 1= OFF mode (shift off) and FOR HIRE mode is indicated on display.(DEFAULT)	1
PRI.OBL	Printer mandatory	0= Not mandatory (DEFAULT) 1= Mandatory	1
DRI.NO	Driver number minimum length	0= No driver number needed (DEFAULT) 1-X = Driver number min. length	6

Parameter SKR.TYPs can be read by using code 600E.

Parameter	Taximeter display	Press / Scroll	Setting to fulfil the requirements of STAFS 2012:5
SKR.TYP	Printer type	0 = No printer 2 = RX80e (DEFAULT) 4 = RX90hn	4

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2 Labelling and inscriptions

2.1 Information to be borne by the instrument

The marking on the accessory shall contain the following information:

- the name of the manufacturer
- the serial number
- the designation or type name (according to “Product names” Appendix page 1)
- the certificate number
- the national Swedish marking STAFS 2012:5

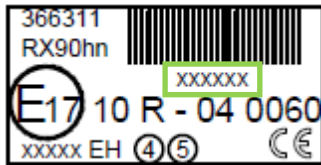


Figure 2: Marking plate on RX90hn, where “XXXXXX” (marked with green) is serial number

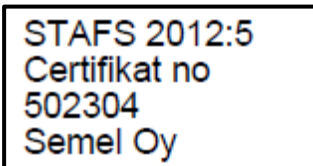


Figure 3: Marking plat with certificate number, manufacturer and “STAFS 2012:5”



Figure 4 and 5: Marking plats with brand names

2.2 Further inscriptions, if necessary

Further inscriptions can be necessary.

3 User’s manual

The following manuals are to accompany the different systems in the official language of the country of use (the manufacturer is responsible for the translation of approved documents).

Title of manual	Document No.	Version number	Date	Language of examined version
C30 User Manual with TD321	73540G	1.2	15.12.2014	English
Semel RX90hn Användarmanual	12232 SE	0.9	13.05.2014	Swedish
Semel RX90hn Modern skrivare Användarmanual	24998 SE	1.0	14.12.2018	Swedish
M2 User Manual with TT430	17308	6	14.11.2016	English
Halda M2 T användarmanual	18055	1.1	29.10.2018	Swedish

4 Applied environmental testing

Vibration

IEC 68-2-64 revision 1, test Fh (this is a higher severity than Class M3 in accordance with OIML D11):

- 10-20 Hz: 0,05 g²/Hz
- 20-500Hz: -3 dB/octave

Testing was carried out in three mutually perpendicular axes for 0.5 hours in each direction and the taximeter was connected to power during testing.

Dry Heat

OIML R21 with testing according to IEC 60068-2-2 test Bd, with the duration 16h and the highest temperature +55°. The test object was connected to power during the test.

Cyclic damp heat

Testing of damp heat was carried out in accordance with the IEC 60068-2-30 edition 2 revision 1. test Db. temperature: +55 °C with a duration of 2 cycles.

Cold

Testing of cold was carried out according to OIML R21 with testing according to IEC 60068-2-1, with duration of 16h at the lowest temperature -25°C.

Emission

EN 55022:2010 class B

Immunity

OIML R21 A.5.4.6 Electrostatic discharged according to IEC61000-4-2, 6kV CD/8 kV AD

OIML R21 A.5.4.5.1 Radiated RF immunity according to IEC61000-4-3, 24V/m

OIML R21 A.5.4.5.2 Injected RF immunity according to IEC61000-4-6, 24V

OIML R21 14.2.1 Voltage variation according to ISO16750-2

OIML R21 A.5.4.7.1 Automotive voltage transient immunity according to ISO 7637-2, level 4 pulses 1, 2a, 2b, 3a, 3b, 4 and 5b

OIML R21 A.5.4.7.2 Automotive voltage transient immunity ISO 7637-3, level 4 pulses 3a and 3b

5. Traceability of reports concerning the EU type examination

STAFS 2012:5 type examination reports of accessory device Printer RX90hn

Report	Title	Date
4P04492-TS	Type examination of an accessory device to a taximeter	2014-12-15
5P09828-TS	Supplementary examination of taximeter accessory device	2018-06-08
P110697.DP1.A1-2	Supplementary examination of taximeter accessory device	2021-06-29