

TERA Radon Program

IP Radon Probe TSRE 1  
TCP/IP Modbus protocol access



v.3 – 2020

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TESLA  
Rubeska 215/1  
190 00 Prague 9 - Vysocany  
[www.tesla.cz](http://www.tesla.cz)

**1 Introduction**

This document describes technical specifications of TCP/IP Modbus protocol access.

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**2 Description**

IP probe also suitable for easy software integration to various and large network systems of third parties (smart house, industrial systems, etc.) due to standard communication protocol TCP/IP Modbus protocol which allow read current measuring data from probe. For connecting is use IP address and standard port 502. Easy acces only via 7 read registers with command 03 ("Read Holding Registers").

Setting of probe basic parameters is made by standard web access over internet browser and IP address. See TSRE1 - Technical Specifications & Operation Manual.

**3 Address and values**

TCP/IP MODBUS			
Current values	address of register	data type	units
ConcentrationAVR L (lower 2 bytes)	1	16-bit signed integer	[ Bq/m <sup>2</sup> ]
Temperature	2	16-bit signed integer	[ °C ]
Relative humidity	3	16-bit signed integer	[ % ]
ConcentrationAVR H (higher 2 bytes)	4	16-bit signed integer	[ Bq/m <sup>2</sup> ]
ConcentrationAVR L (lower 2 bytes)	5	16-bit signed integer	[ Bq/m <sup>2</sup> ]

ConcentrationREC H (higher 2 bytes)	6	16-bit signed integer	[ Bq/m <sup>2</sup> ]
ConcentrationREC L (lower 2 bytes)	7	16-bit signed integer	[ Bq/m <sup>2</sup> ]

ConcentrationAVR – Returns current value of radon concentration (1-hour moving average) in Bq/m<sup>3</sup> measured by IP radon probe. This value is updated every 4 minutes in IP radon probe.

ConcentrationREC – Returns last recorded value of radon concentration in internal memory in Bq/m<sup>3</sup>. This value is updated according to adjusted time „Concentration Record“ in list „Settings“ on probe web.

#### 4 Revision History

Revision	Date	Comments
<b>Rev.1:</b>	31.3.2017	Initial release
<b>Rev.2:</b>	30.6.2020	Extension 2 registers concentration 4 and 5 SW(>1.58)
<b>Rev.3:</b>	1.9.2020	Extension 2 registers concentration 6 and 7 SW(>1.58)