

# R&S® NRPxS & NRPxSN 3 Path Diode Power Sensors Release Notes

**Firmware Version 02.50.23032501**

PAD-TM: 3574.3288.02/04.00/CI/1/EN

**ROHDE & SCHWARZ**

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# 1 Information on the current version and history

## 1.1 Version 02.50.23032501

Released: April, 2023

### New functionality

#### Functions

The following commands have been added for compatibility reasons to configure the unit of the related parameter:

SYSTem:MINPower:UNIT

TRIGger:LEVel:UNIT

### Modified functionality

#### Functions

None

### Improvements

#### Improvements

When S-parameter correction is active, the queries SYSTem:MINPower? and SYSTem:INFO? will return the correct value for the minimum power.

The query FETCh:ARRay[:POWer][:AVG]? returns the correct results if the sensor is in buffered-mode.

If SENSE:ROSCillator:SOURce is set to EXTernal or HOST and the reference clock is no longer supplied, the sensor will no longer crash.

Device states that are stored with \*SAV and loadable with \*RCL are usable without restriction after a FW update.

### Known issues

#### Known Issues

None

## 1.2 Version 02.40.22081101

Released: September, 2022

### New functionality

#### Functions

None

### Modified functionality

#### Functions

None

### Improvements

#### Improvements

Fixed inaccessibility of the sensor after short sequences of INIT:CONT ON and INIT:CONT OFF and small aperture times.

Fixed "-213,'INIT ignored'" SCPI error after INIT:IMM when auto averaging is active.

### Known issues

#### Known Issues

None

## 1.3 Version 02.30.21062301

Released: July, 2021

### New functionality

#### Functions

Added SCPI queries for input reflection coefficient:

SENSe:IGAMma:MAGNitude?,

SENSe:IGAMma:PHASe?,

SENSe:IGAMma:EUNCertainty?

Added new commands for trigger synchronization among multiple sensors: TRIGger:SENDER/RECEIVER

### Modified functionality

#### Functions

Web browser based user interface optimized for small devices

### Improvements

#### Improvements

Fixed dead lock in overload state which caused timeout

Fixed missing parameter updates in web browser based user interface

### Known issues

#### Known Issues

None

## 1.4 Version 02.20.20100902

Released: October, 2020

### New functionality

#### Functions

None

### Modified functionality

#### Functions

Triggered measurements in ContAv mode with positive trigger delay values.

### Improvements

#### Improvements

None

### Known issues

#### Known Issues

None

## 1.5 Version 02.10.20051901

Released: June, 2020

### New functionality

#### Functions

None

### Modified functionality

#### Functions

NRX compatible buffered mode

### Improvements

#### Improvements

None

### Known issues

#### Known Issues

None

## 1.6 Version 02.00.20021703

Released: February, 2020

### New functionality

#### Functions

Continuous average measurements in buffered mode can process up to 100000 measurements per second while using internal or external trigger endlessly

NRX base unit can control LAN capable sensors via network protocol.

### Modified functionality

#### Functions

Burst measurement with a burst repetition rate between app. 5s until 9s now triggers for each burst

Auxiliary values (MIN and MAX) made available for auto triggered trace measurements (TRIGger:ATRIGger:STATe ON)

### Improvements

#### Improvements

Selecting external reference clock reference without clock applied does no longer stop sensor accessibility

### Known issues

#### Known Issues

None



## 1.7 Version 18.06.14.10

Released: June, 2019

### New functionality

#### Functions

None

### Modified functionality

#### Functions

None

### Improvements

#### Improvements

NRP Sensor not accessible after power cycle

### Known issues

#### Known Issues

None

## 1.8 Version 18.06.14.01

Released: July, 2018

### New functionality

#### Functions

Enhanced sensor sanitizing feature

### Modified functionality

#### Functions

None

### Improvements

#### Improvements

None

### Known issues

#### Known Issues

None

## 1.9 Version 17.11.27.03

Released: December, 2017

### New functionality

#### Functions

None

### Modified functionality

#### Functions

\*RCL on a not previously stored parameter set returns no error code

### Improvements

#### Improvements

Continuously opening and closing sensor communication via LAN at a certain point leads to inaccessibility of the sensor

### Known issues

#### Known Issues

None

## 1.10 Version 17.06.27.06

Released: July, 2017

### New functionality

#### Functions

SYSTem:PRESet implemented: Resets all parameters but not INIT:CONT, SENSE:AVERage:TCONtrol and SENSE:TRACe:AVERage:TCONtrol

Trace output provides up to 100000 points instead of 8192  
(Not available in NRP legacy USB mode and via NRP2)

Support of sanitizing according to "Manual for the Certification and Accreditation of Classified Systems under the NISPOm"

Remote control is provided for LED blinking sequence in addition to LED color

### Modified functionality

#### Functions

None

### Improvements

#### Improvements

Averaging with single triggered measurements now works reliable also with moving filter setting (SENSe:AVERage:TCONtrol)

Sensor instability fixed when using the integrated web interface in parallel to a Visa viLock

### Known issues

#### Known Issues

None

## 1.11 Version 16.05.13.02

Released: May, 2016

### New functionality

#### Functions

None

### Modified functionality

#### Functions

Trigger delay support for continuous average mode

### Improvements

#### Improvements

Solved false reporting of errors that have been already cleared

Critical measurement speed issue solved

### Known issues

#### Known Issues

None

## 1.12 Version 16.03.22.01

Released: March, 2016

### New functionality

#### Functions

LAN Sensor web interface: Improved compatibility with Internet Explorer

### Modified functionality

#### Functions

Auto trigger indication is now reset safely when resetting or aborting measurements

The maximum number of slots was increased from 32 to 128 in timeslot mode

### Improvements

#### Improvements

Fixed result error when using moving average and fast mode together

Detection of sensor plug location works correctly on SMW and SMBV signal generators

Auto trigger indication is now reset safely when resetting or aborting measurements

### Known issues

#### Known Issues

Trigger delay is not supported for continuous average mode

## 1.13 Version 15.12.10.01

Released: December, 2015

### New functionality

#### Functions

Static error queue replaces static error momentary output  
new commands SYSTem:SERRor:LIST? and SYSTem:SERRor:LIST:ALL?

### Modified functionality

#### Functions

Queries for enumeration parameters return the short form

### Improvements

#### Improvements

Download of new sensor calibration while measuring fixed

False overload notification when plugging a sensor to NRP2 fixed

Change of measuring mode immediately after fetch? does no longer lead to an unexpected behavior

### Known issues

#### Known Issues

None

## 1.14 Version 15.10.27.01

Released: October, 2015

### New functionality

#### Functions

Auto trigger delay time configurable with TRIGger:ATRigger:DElay command: The auto trigger function starts a single measurement in triggered modes if no regular trigger occurred since. This former fixed 300ms time is now configurable in a range from 0.1s to 5s

### Modified functionality

#### Functions

Built in Web GUI: Improved compatibility with different browsers

### Improvements

#### Improvements

Built in Web GUI: Rounding errors at parameter borders lead to rejections of setting to limits

SCPI status system: Corrections of behavior in some special trigger cases

### Known issues

#### Known Issues

None



## 1.15 Version 15.07.02.01

Released: July, 2015

### New functionality

#### Functions

Built in Web GUI: Firmware update support

Note: Updating for this version still requires using the firmware download from the Toolkit.

Just the next firmware can be downloaded via Web GUI.

### Modified functionality

#### Functions

None

### Improvements

#### Improvements

Improved compatibility with NRP2

Improved interworking with sensors of previous generation while connected to same host

Fixed an incorrect state change sequence in buffered mode when using legacy USB interface

Built in Web GUI: Radio buttons now visible in Opera Browser 27.0

Parameter reset while changing interfaces done correctly

Built in Web GUI: Rounding errors at parameter borders lead to rejections of setting to limits

### Known issues

#### Known Issues

None

## 1.16 Version 15.03.13.03

Released: March, 2015

### New functionality

#### Functions

R&S NRPxS(N) are now supported by R&S SMW at front panel and back side USB connectors

### Modified functionality

#### Functions

Built in Web GUI: Sensor name can be set independently from network hostname to identify the sensor

Built in Web GUI: Support of external trigger on EXT1 and EXT2

Text outputs: Line termination is LF in SCPI modes, CR/LF in legacy USB mode

### Improvements

#### Improvements

Buffered mode: Enhanced stability in some complex use cases

Burst Mode: Duty cycle does no longer affect measured values

Built in Web GUI: Corrected issue that some activities required two mouse clicks

S-parameter correction: correct handling with built in web client and after downloading new sets

Auto Averaging: Corrected behavior of auto averaging when using trigger modes EXT1/2, BUS or INTERNAL

Correct XML style formatting of the device footprint (SERVICE:DFPRINT? command)

### Known issues

#### Known Issues

None

## 2 Modifications to the documentation

The current documentation is up-to-date.

## 3 Firmware update

### 3.1 Update information

Please refer to the document " R&S®NRPxxS(N) Power Sensors User Manual" ([https://www.rohde-schwarz.com/manual/nrp\\_s\\_sn](https://www.rohde-schwarz.com/manual/nrp_s_sn)).

## 4 Customer support

### Technical support – where and when you need it

For quick, expert help with any Rohde & Schwarz product, contact our customer support center. A team of highly qualified engineers provides support and works with you to find a solution to your query on any aspect of the operation, programming or applications of Rohde & Schwarz products.

### Contact information

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