

## ⇒ Highlights

- Class 0.1
- Precision 24-bit A/D conversion and digital signal processing
- Current measurement up to 120 A
- Continuous voltage and current ranges with auto-range functionality
- Programmable meter constant
- Fully programmable impulse output assignable to various quantities or constant frequency
- Without display and keypad

## ⇒ Description

The **Reference Standard RS 1x20B** is single-phase (RS 1120B) and three-phase (RS 1320B) version of precision meter for electrical power and energy measurement. The Reference Standard is designed to meet all requirements put on a reference standard in a single- and three-phase electricity meter testing and calibration systems. The Reference Standard can be set to any real or artificial mode of operation in three phase system and is capable to evaluate the individual quantities per phase and the three-phase cumulative quantities as well.

Reference Standard is based on precision 24-bit A/D conversion and digital signal processing technology enabling accurate evaluation of all main and informative quantities. Beyond measurement of all kinds of power, voltage, current and phase, the meter measures the harmonic content and distortion of the input signals.

The meter constant of Reference Standard generating value-proportional impulses on the frequency output is freely programmable and can be assigned to various quantities or set to generate any precise constant frequency for testing purposes.

## ⇒ Available Models

Model	Phases	Class
RS 1120B	1	0.1
RS 1320B	3	0.1

## ⇒ Technical Specification

Basic Error	
Apparent Power	0.1 %
Active Power *	0.1 %
Reactive Power *	0.2 %
Power Factor	0.002
Frequency	0.01 Hz
Distortion	0.5 %
Phase angle	0.1 °

\* related to the Apparent Power

General Parameters	
Measured Quantities	Voltage, Current, Active/Reactive/Apparent Power, Active/Reactive/Apparent Energy, Power Factor, Phase Angle, Frequency, Distortion
Basic Frequency	40 .. 70 Hz
Input Circuits	1-phase 2-wire (RS 1120 & RS 1320) 1-phase 3-wire and 2-phase (RS 1320 only) 3-phase 3-wire / 4-wire (RS 1320 only)
Voltage Range	1 .. 500 V (phase to neutral)
Current Range	1 mA .. 120 A
Power Factor Range	-1 .. 0 .. 1
Phase Angle	0 .. 360 °
Communication Interface	RS-232

Impulse Output	
Number of impulse outputs	1
Impulses assigned to	Active / Reactive / Apparent Energy or programmable constant frequency
Meter constant	programmable
Maximal impulse frequency	70 kHz