

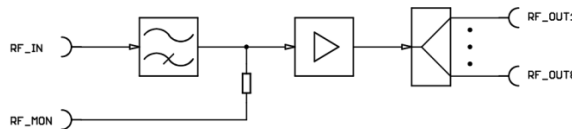
8 x 400 mW 8 Way Multicoupler 20 ... 2700 MHz

## Features

- wideband
- output power up to 8 x 400 mW
- high amplitude balance
- auxiliary input / output

## Applications

- HTOL tests
- AM / FM / DAB / GPS / SDARS / DVB-T
- ISM 433 / 868 / 2400 MHz
- GSM, UMTS, LTE
- signal distributions
- final testing



## Wideband

WSDU-1X8P is a wideband multicoupler with medium output power capability that distributes one input signal to 8 outputs. Each output provides up to +26 dBm output power. The frequency range extends from 20 MHz up to more than 2700 MHz.

## 1 to 8 Distribution without any Loss in Signal Level

The RF input the signal is amplified by using broadband low-noise amplifiers with a wide dynamic range. As a result, the distributed input signal is made available at the eight outputs of the multicoupler without any loss in level. All inputs and outputs have SMA female connectors.

## Wideband Distribution Systems

The wide frequency range makes WSDU-1X8P ideal in applications such as production, research and development (R&D) and everywhere, where several signals in a wide frequency range must be distributed with output power levels of up to 400 mW.

## HTOL Applications

Power stress tests and HTOL tests require RF systems that offer high output power. WSDU-1X8P

is especially designed for use in such tests due to its output power of up to 400 mW per channel.

## Compact and Flexible

The SR6-11C system platform allows the integration of up to 11 modules in compact 19", 6 U space. Thereby up to 88 outputs can be realized in a very space-saving way. In combination with the wideband multicoupler WSDU1X8, multichannel sources with medium power capability can be realized in an easy and flexible way.

## High Port-to-Port Isolation

WSDU-1X8P features high port-to-port isolation to prevent the connected receivers from affecting each other, e.g. via local oscillators or synthesizers.

## Signal Path Tests

The auxiliary port of WSDU-1X8P offers RF monitoring or test signal injection for signal path tests in extensive RX or distribution systems.

## RF Specifications

| Parameter                       | Symbol             | Min. | Typ.      | Max.      | Unit | Condition                                     |
|---------------------------------|--------------------|------|-----------|-----------|------|---|
| impedance                       | $Z_{in} / Z_{out}$ |      | 50        |           | Ohm  |   |
| low frequency                   | $f_{min}$          |      | 15        | 20        | MHz  |   |
| high frequency                  | $f_{max}$          | 2700 | 3000      |           | MHz  |   |
| gain                            | $S_{21}$           | 24   | 26        | 28        | dB   |   |
| gain flatness                   | $\Delta S_{21}$    |      | $\pm 2.0$ | $\pm 2.5$ | dB   |   |
| amplitude balance               |                    |      | $\pm 0.1$ | $\pm 0.5$ | dB   | $f \leq 2500$ MHz                             |
|                                 |                    |      | $\pm 0.3$ | $\pm 0.8$ | dB   | $f > 2500$ MHz                                |
| input return loss               | $S_{11}$           |      | -17       | -10       | dB   | $20 \text{ MHz} \leq f \leq 2700 \text{ MHz}$ |
| output return loss              | $S_{22}$           |      | -20       | -12       | dB   |   |
| reverse isolation               | $S_{12}$           |      | -85       | -60       | dB   |   |
| output isolation                | $S_{23}$           |      | -28       | -20       | dB   | neighbouring outputs ( $d=1$ )                |
| 1 dB compression                | $P_{1dB}$          | +24  | +26       |           | dBm  |   |
| 3 <sup>rd</sup> order intercept | OPIP3 <sup>1</sup> | 19   | 22        |           | dBm  | $f = 1000$ MHz                                |
|                                 |                    | 14   | 16        |           | dBm  | $f = 2000$ MHz                                |
| 2 <sup>nd</sup> order intercept | OPIP2 <sup>1</sup> | 37   | 45        |           | dBm  | $f = 1000$ MHz                                |
| noise figure                    | NF                 |      | 9.0       |           | dB   |   |
| maximum input power             | $P_{in \max}$      |      |           | +15       | dBm  | CW, no damage                                 |
| RF connectors                   |                    |      |           |           |      | SMA female                                    |
| monitor coupling                | a                  |      | -30       |           | dB   | bidirectional                                 |

Note 1: frequency space 100 MHz

## Common Specifications

| Parameter             | Symbol    | Min.                   | Typ. | Max.        | Unit | Condition                |
|-----------------------|-----------|------------------------|------|-------------|------|--------------------------|
| power supply          | U         | 23.5                   |      | 24.5        | V    | DC                       |
| power consumption     | P         |                        | 10   | 12          | W    |                          |
| dimensions            | L x W x H | approx. 197 x 30 x 262 |      |             | mm   | 6 U, 6HP                 |
| weight                | m         |                        | 1330 |             | g    |                          |
| operating temp. range | $T_o$     | +5                     |      | +60         | °C   |                          |
| storage temp. range   | $T_s$     | -40                    |      | +70         | °C   |                          |
| ordering information  |           | WSDU-1X8P              |      | 1202.6200.1 |      |                          |
| system rack           |           | SR6-11C                |      | 1409.1202.1 |      | 6 U, 11 Slots, 400W max. |



**S-Parameters** (typical responses)

**Isolation**

**Output Balance**

**Dynamic Range**

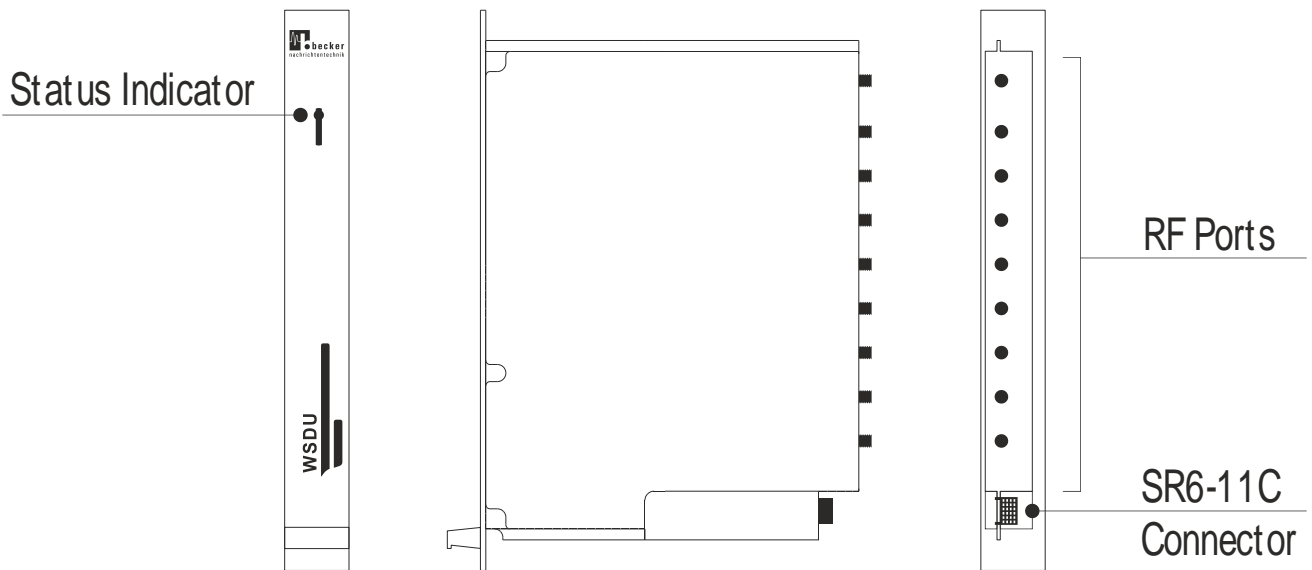
**Front View**



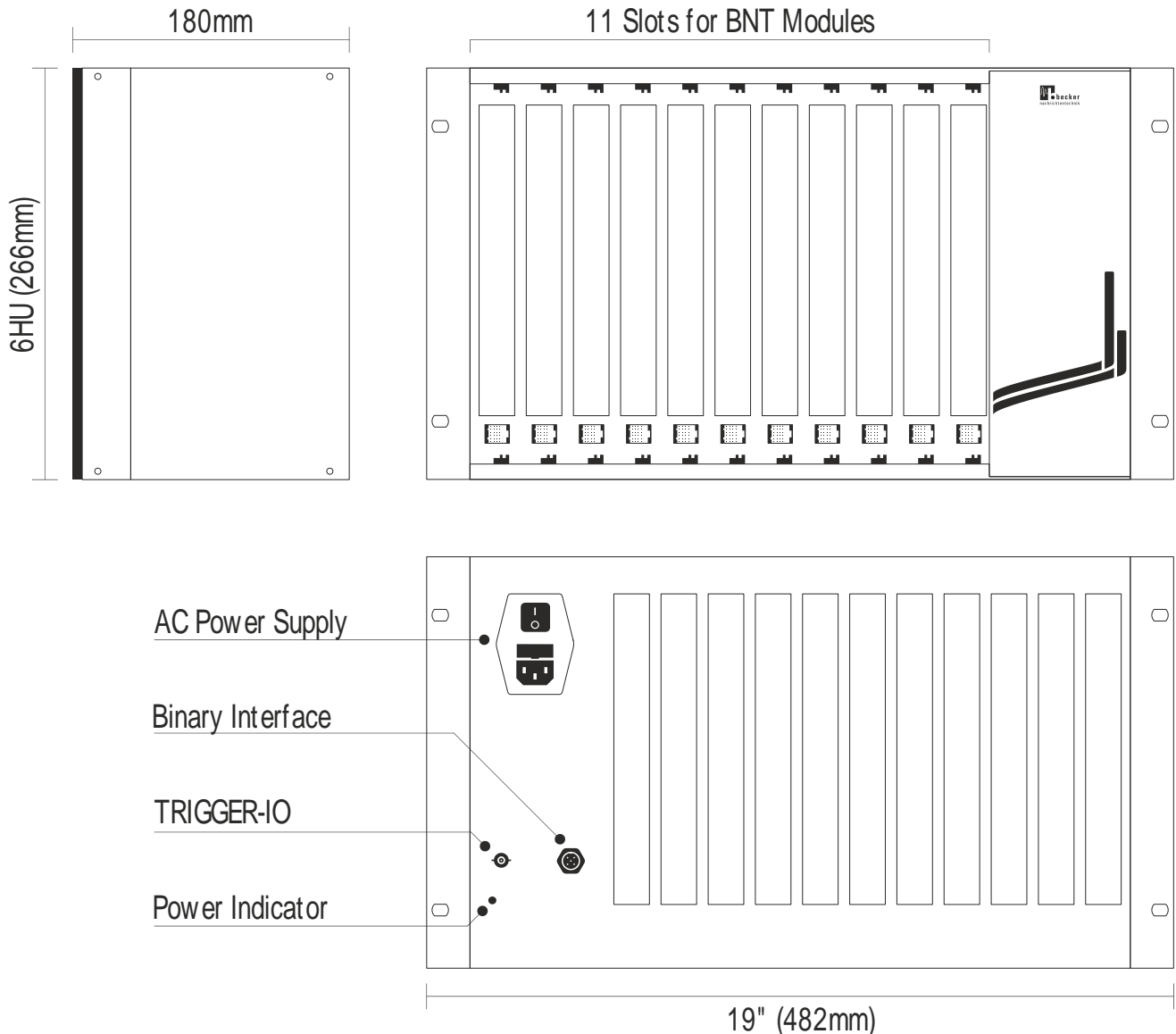
**Rear View**



**Technical Drawing**



## SR6-11C System Platform



## Related Products

| Product    | Description   | P/N         |
|------------|---|-------------|
| SR6-11C    | System Platform with 11 Slots   | 1409.1202.1 |
| SR6-CU     | Controller Unit with LAN and USB  | 1409.3000.1 |
| WSDU1X8    | High Dynamic 1X8 Multicoupler Module 100 kHz ... 4000 MHz               | 1202.6100.1 |
| WSDU-1X2PL | 5 W Medium Output Power Multicoupler 20 ... 2800 MHz                    | 1202.6300.3 |
| WSDU-2X4E+ | Two Channel 1X4 plus One Channel 1X2 Multicoupler Module 20... 8000 MHz | 1502.6200.1 |
| WSDU-1X8S  | 8 Way Multicoupler for the Short Wave Range 1.7 ... 30 MHz              | 1502.6100.1 |