becker nachrichtentechnik

WSDU-9C1X8S

9 Channel HF Multicoupler with DC Bypass Function, 300 kHz … 30 MHz

Features

- 9 independent 1X8 multicouplers
- compact, modular 19”, 6 U design
- high dynamic
- RF monitoring ports
- easy maintenance and service
- optional remote built-in test with SNMPv2 trap function (option)

Applications

- shortwave reception
- antenna signal distributions
- radio monitoring
- direction finding

At a Glance

The WSDU-9C1X8S is a 9 channel signal distribution unit, foreseen for the use in professional short wave receiving systems.
It has a modular design with slot-in modules, installed in a 19” system platform.
The power supply of the slot-in modules occurs without the effort of external cabling via the platform internal backplane.
The RF connectors for the in- and outputs are placed on the rear side of the WSDU-1X8S slot-in modules. They are accessible from the rear side of the system rack. A monitoring port is available on the front side of each module.
All RF connectors are SMA female type.
The SR6-11C system rack is AC supplied over a wide voltage range.

DC Bypass Function

Each WSDU-1X8S multicoupler offers a DC bypass path from RF_IN to RF_OUT5 for e.g. phantom supply.

Distribution without Loss in Level

The WSDU-1X8S multicoupler modules utilizes low-noise high dynamic amplifier stages. As a result, the distributed input signal is made available at the eight outputs of the multicoupler without any loss in level for each multicoupler section.

RF Input Protection

The WSDU-1X8S slot-in modules provide protection against lightning, surges and out-of-band signals. The RF input of the device is equipped with a discharge element and an over level protection, using clipping diodes.
An additional bandpass filter suppresses unwanted out-of-band signals.

Device Monitoring

The WSDU-1X8S slot-in module has an internal monitoring function. The total current consumption of the module is monitored. In the case of exceeding limit values, a failure is signalized by the STATUS LED on the front.
Optionally the WSDU-9C1X8S can be equipped with the slot-in controller SR6-CU with LAN and USB remote interfaces. With help of the controller, operating points of amplifier stages, module temperature and the total current consumption can be read out via remote interfaces. Additional the WSDU-1X8S modules can be powered down via remote for energy saving.
The LAN interface has SNMPv2 trap function. It informs identified failures the supervising system automatically.

Further Slot-In Modules

For customer specific solutions Becker Nachrichtentechnik offers further slot-in modules like RF switches, matrices, multicouplers, attenuators, BIAS-Ts, level detectors, bidirectional splitters/combiners for signal conditioning and a controller unit for the integration into SR6-11C system platform.
The control of the modules occurs via the SR6-CU slot-in controller unit. The modules can be controlled via SCPI orientated ASCII command strings.
The ASCII command set is automatically built up and extends with further installed modules.
Available slot-in modules are listed under “related products” below.

Specification

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
number of RF channels	n_{CH}		9			
voltage supply range	U_{AC}	90	230	260	V	45 … 63 Hz AC
power consumption	P_{AC}		80		W	
power socket	X_{AC}		IEC-60320 C14			country specific mains cable
dimensions	WxHxD		approx. 482 x 267 x 180		mm	19”, 6 U
weight			14.7		kg	
relative humidity	RH			95	%	
mean time between failure	MTBF		30000		h	
operating temp. range	T_o	-10		+55	°C	within specification
storage temp. range	T_s	-40		+70	°C	
Product conformity						
Electromagnetic compatibility	EU: in line with EMC directive (2014/30/EC)					applied harmonized standards: EN 61326-1 (for use in industrial environment), EN 61326-2-1, EN 61000-3-2, EN 61000-3-3
Electrical safety	EU: in line with low voltage directive (2014/35/EC)					applied harmonized standard: EN 61010-1
ordering information	WSDU-9C1X8S		P/N: 2002.6102.1			

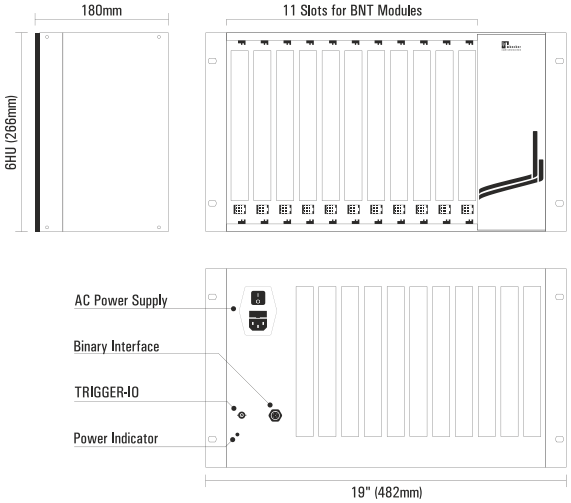
For RF specification please note data sheet WSDU-1X8S.

Appearances

WSDU-9C1X8S front view

WSDU-9C1X8S rear view

Dimensions (SR6-11C System Platform)



Related Products

Product	Description	P/N
SR6-11C	System Platform with 11 Slots for Modules	1409.1202.1
SR6-CU	Controller Unit with LAN and USB Remote Interface	1409.3000.1
Unidirectional Products: Active Multicouplers, Matrices, Level Detectors		
WSDU-1X8A	8 Way High Dynamic Signal Conditioning Multicoupler 100 kHz … 4000 MHz	1807.6300.1
WSDU-2X4A	2 Section 4 Way High Dynamic Signal Conditioning Multicoupler 100 kHz … 4000 MHz	1807.6400.1
WSDU-1X8L	8 Way Multicoupler Module 100 kHz … 4000 MHz	1807.6100.1
WSDU-2X4L	2 Section Hi Dynamic 4 Way Multicoupler Module 100 kHz … 4000 MHz	1807.6200.1
WSDU-2X4E+	2 Section 1x4 plus 1x2 Multicoupler Module 20 … 8000 MHz	1501.6200.1
WSDU-1X8S	High Dynamic 1x8 Shortwave Multicoupler Module 300 kHz … 30 MHz	1502.6100.1
WSDU-1X2PM	2 Channel, 5 W Multicoupler with ALC Capability 20 MHz…3000 MHz	1606.6000.1
RSWM-4X4	4x4 Switching Matrix -Non-blocking-, 100 kHz … 4000 MHz or 20 MHz … 4000 MHz	1205.4100
RSWM-4X4E	4x4 Ultra-Wideband Switching Matrix -Non-blocking-, 20 MHz … 8000 MHz	2001.4100.1
RFLD-8RE	8 Channel True Power RF Level Detector, 1 MHz … 8000 MHz	1505.8000.1
Bidirectional Products: Switches, Matrices, Attenuators, Delay Lines, BIAS-Ts, Splitters/Combiners, Filters		
RSWU-2SP4TS+	2 Channel Non-reflective SP4T Switches plus 1 Channel SPDT Switch, 100 kHz … 8500 MHz	1408.4010.1
RSWU-8SPSTS	8 Channel Non-reflective SPST Switch 100 kHz … 8500 MHz	1408.4000.1
RSWU-4SPDTS	4 Channel Non-reflective SPDT Switch 100 kHz … 8500 MHz	1408.4020.1
RSWU-8SPST-CS	8 Channel High Isolation SPST with DC Load Simulation, 100 kHz … 7500 MHz	1811.4100.1
BSWM-4X4E	4x4 High Isolation Bi-Directional Switching Matrix –Blocking-, 100 kHz … 7500 MHz	1205.4600.1
ATT-8E	8 Channel Digital Step Attenuator 0 … 31.75 dB, 100 kHz … 8000 MHz	1503.4000.1
DLL-4	4 Channel Programmable Delay Line 0 …1700 ps, 250 MHz … 4000 MHz	1303.4200.1
PT-4CS	4 Channel Programmable DC Sink 0 … 400 mA, 100 kHz … 8500 MHz	1605.2020.1
PT-4CL	4 Channel Wideband DC Load, 100 kHz … 8500 MHz	1605.2040.1
BSDU-2X4A+	2 Section 4 Way, Bi-Directional Signal Conditioning plus 2 Way Splitter/Combiner, 500 MHz … 7500 MHz	1903.6100.1
BSDU-2X4+	2 Section 4 Way Wideband Bi-Directional plus 2 Way Splitter/Combiner, 500 MHz … 7500 MHz	1903.6200.1
FBS-1590	L1 Band GNSS Notch Filter	1511.5100.1