

Product Information

Antenna Distribution System AVS 2G 10 kHz – 30 MHz / 1.5 MHz – 30 MHz

The Antenna Distribution System AVS 2G is a flexible antenna distribution solution for short wave communication applications.

The single housing variants are furnished into a 19-inch 4 HU slide-in unit providing the non-blocking distribution of up to 8 antenna inputs to up to 40 receiver outputs.

The AVS 2G “A” versions cover 0.01 – 30 MHz.

The AVS 2G “B” versions cover 1.5 – 30 MHz.



The number of antenna inputs can be configured in steps of 4.
The number of receiver outputs can be configured in steps of 10.

There are no restrictions concerning the assignment of antennas to receivers. All receivers can also be assigned to one antenna without any reduction of power.

The antenna distribution system is controlled and monitored in local operation from the front panel and in remote operation through a LAN interface.

An integrated control unit monitors the distributor system. Failure of a subunit can also be signaled by an acoustic signal. The antenna/receiver configuration is stored so that after a mains failure or after switching off the system the previous switching conditions are automatically restored.

To meet future application needs the AVS 2G system concept provides upgrade features to increase the number of inputs or outputs for the user convenience.

Technical Data

Parameter	Data
Dimension slide-in unit (w x h x d)	19" 4 HU, 360 mm
Weight	approx. 15,0 kg
Colour of Front Panel	RAL 7035 (light grey)
Labelling	English
Mains Supply	nom. 100 – 240 Vac, 50/60 Hz max. 90 – 264 Vac, 47 – 63 Hz
Power Consumption	typ. 75 VA max. 100 VA
Ambient Temperature	-10°C ... +60°C
Storage Temperature	-20°C ... +70°C
Relative Humidity ⁽¹⁾	95%
EMC / EMI	Immunity EN 61000-6-2 Emission EN 61000-6-3
Antenna Selection	full fan-out (non-blocking)
Input Protection	2 kV 1,2/50 µs
Remote Control	LAN 10/100 MB
Switching Time	typ. 3 ms



Start Screen

HF Data

Parameter	AVS 2G
Frequency Range AVS 2G .../.../A ⁽²⁾	0,01 – 30 MHz
Frequency Range AVS 2G .../.../B ⁽²⁾	1,5 – 30 MHz
Antenna Inputs ⁽³⁾	8 (N socket)
Input Impedance	50 Ω VSWR ≤ 1,5
Receiver Outputs ⁽⁴⁾	40 (BNC socket)
Output Impedance	50 Ω VSWR ≤ 1,5
Gain	0,5 ± 1,5 dB
Noise Figure	7,0 – 9,0 dB
Intercept Point IPOP2	60 dBm
Intercept Point IPOP3	35 dBm
1 dB Compression	≥ 12 dBm
Maximum Signal Level CW	33 dBm
Decoupling between two outputs	typ. 65 dB
Decoupling between output and input	typ. 90 dB
Crosstalk between inputs	> 36 dB typ. 40 dB

Note 1:
 Relative humidity valid for the front panel, non-condensing

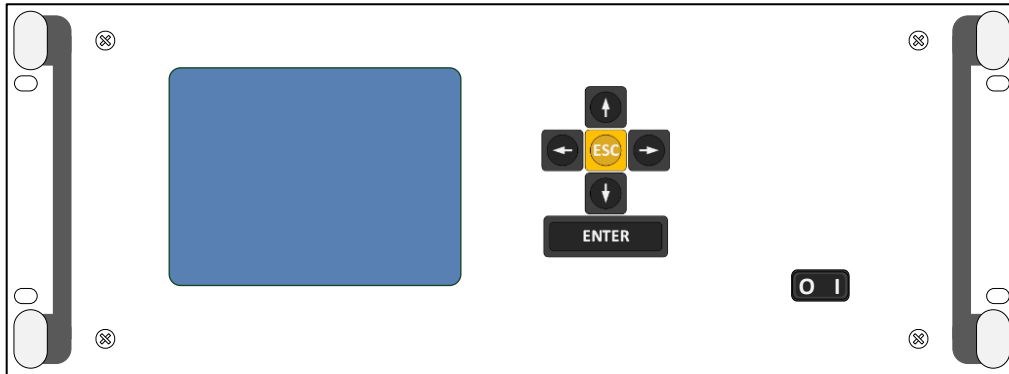
Note 2:
 The AVS 2G “A” versions cover 0.01 – 30 MHz.
 The AVS 2G “B” versions cover 1.5 – 30 MHz.
 For details see variants and order information.

Note 3:
 The number of antenna inputs can be configured in steps of 4.
 Depending on the configuration 8 or 4 antenna inputs are provided in a single 4 HU housing.
 For details see variants and order information.

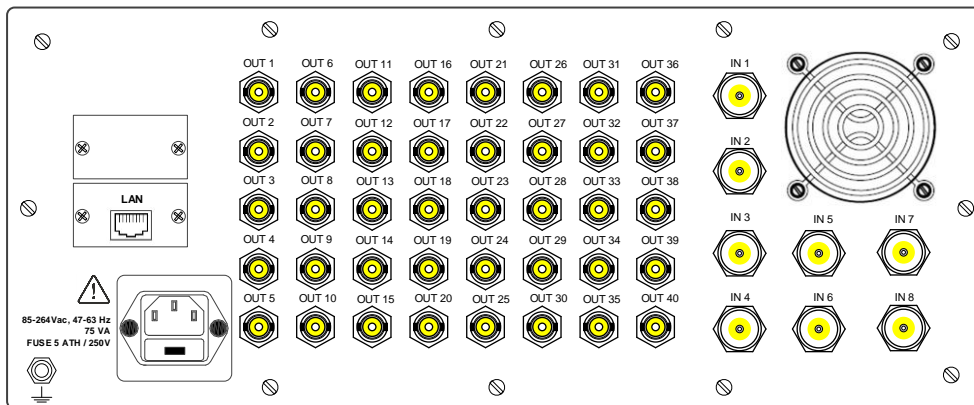
Note 4:
 The number of receiver outputs can be configured in steps of 10.
 Depending on the configuration 10, 20, 30 or 40 receiver outputs are provided in a single 4 HU housing.
 For details see variants and order information.

Data given without tolerance are typical values.
 Design and specification are subject to change without prior notice, errors excepted.

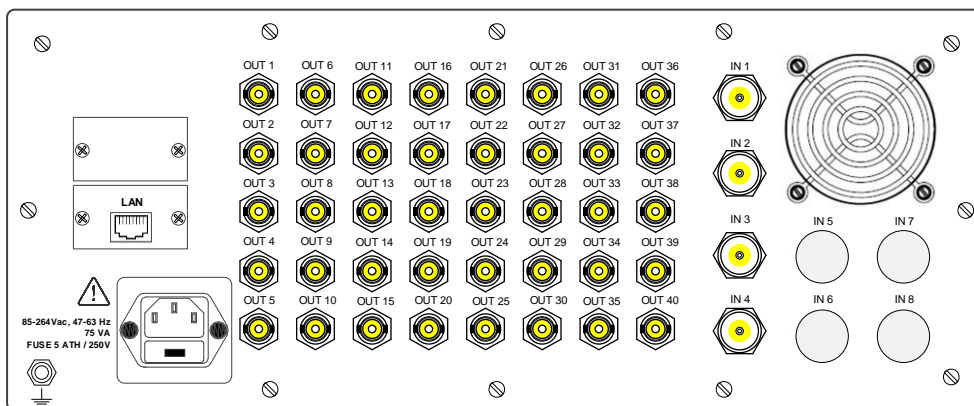
Views and Dimensions



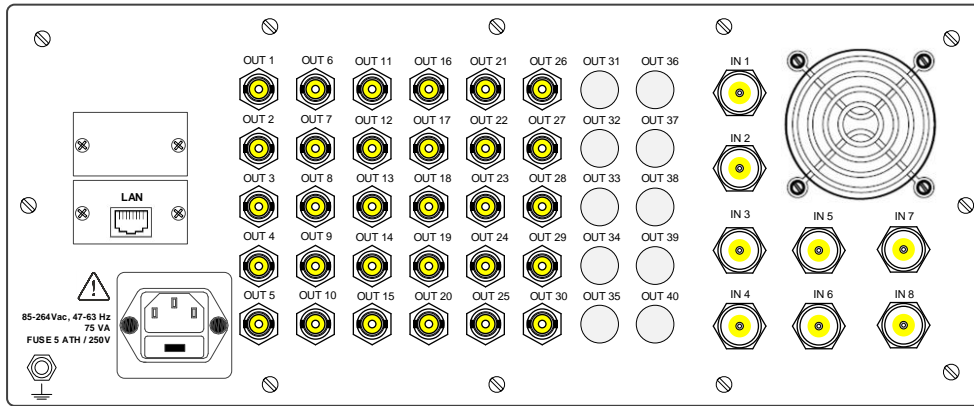
Front View



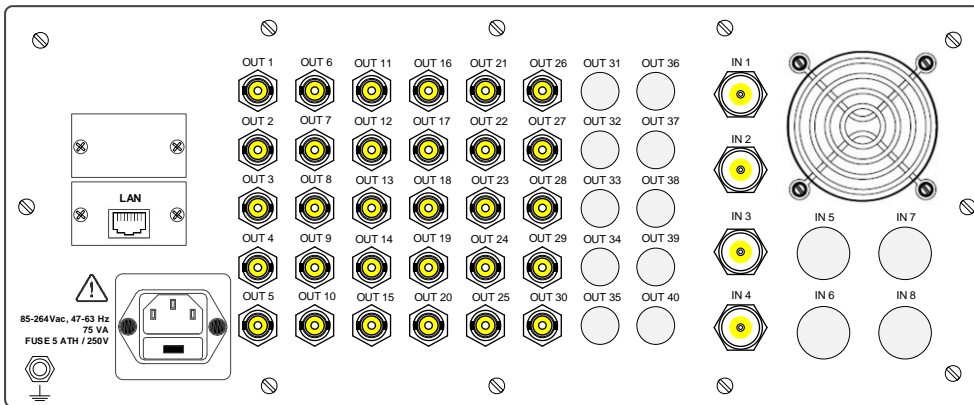
Rear View AVS 2G with 40 Outputs / 8 Inputs



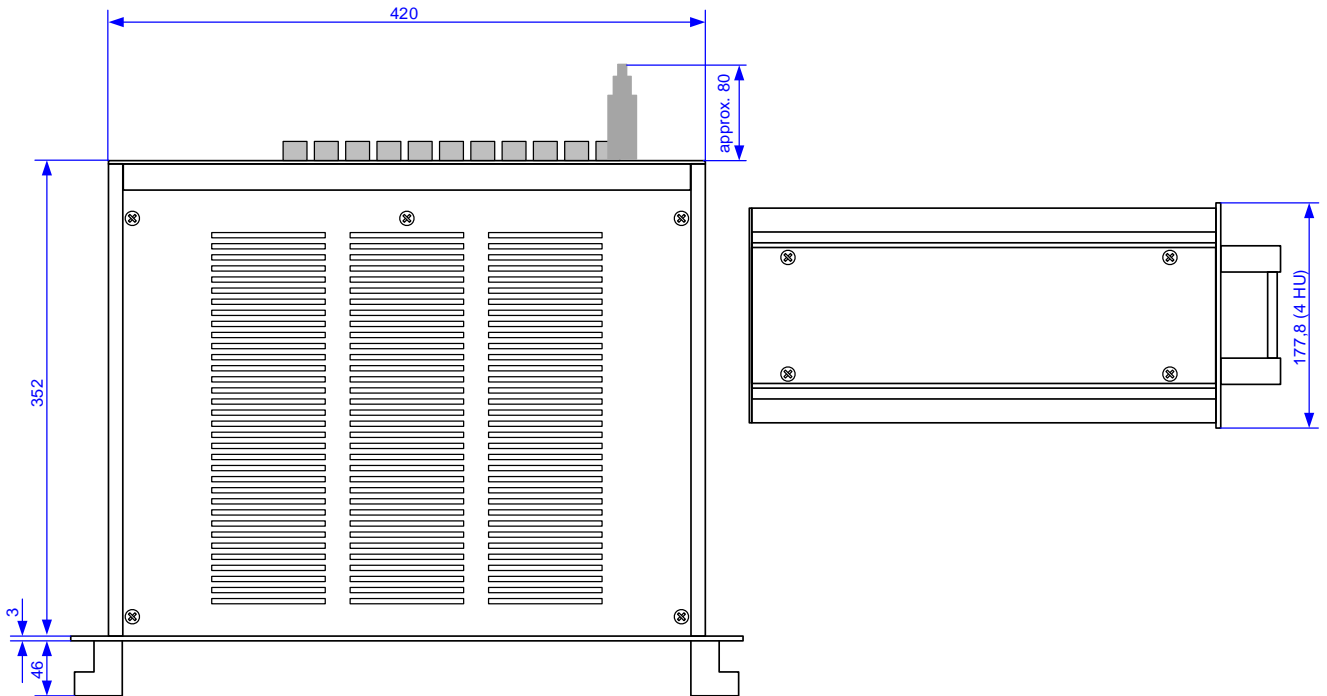
Rear View AVS 2G with 40 Outputs / 4 Inputs



Rear View AVS 2G with 30 Outputs / 8 Inputs



Rear View AVS 2G with 30 Outputs / 4 Inputs



Dimensions AVS 2G 19-inch 4 HU Unit

Scope of Supply

Pos.	Description
1	Antenna Distribution System AVS 2G ... (depends on AVS configuration)
2	Accessory Set ZS xx (depends on AVS configuration)
3	USB stick with product documentation in pdf format

Variants and Order Information

The single housing variants are furnished into a 19-inch 4 HU slide-in unit.

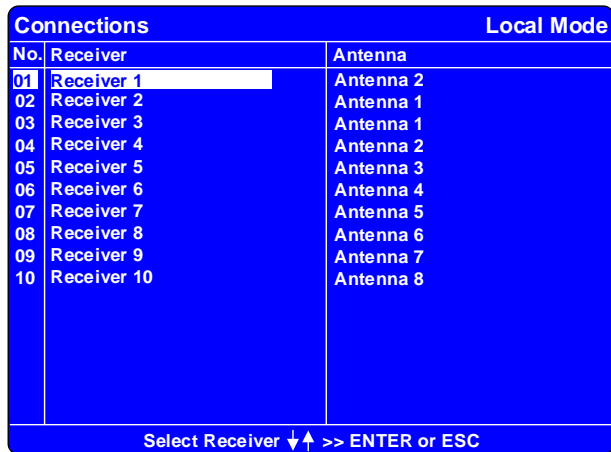
Type Designation	Part Number	Description
AVS 2G 10/8/A	2063.2010.00	10 Outputs, 8 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G 10/8/B	2063.2011.00	10 Outputs, 8 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit
AVS 2G 20/8/A	2063.2012.00	20 Outputs, 8 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G 20/8/B	2063.2013.00	20 Outputs, 8 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit
AVS 2G 30/4/A	2063.2014.00	30 Outputs, 4 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G 30/4/B	2063.2015.00	30 Outputs, 4 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit
AVS 2G 30/8/A	2063.2016.00	30 Outputs, 8 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G 30/8/B	2063.2017.00	30 Outputs, 8 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit

Variants and Order Information (continued)

Type Designation	Part Number	Description
AVS 2G 40/4/A	2063.2018.00	40 Outputs, 4 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G 40/4/B	2063.2019.00	40 Outputs, 4 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit
AVS 2G 40/8/A	2063.2020.00	40 Outputs, 8 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G 40/8/B	2063.2021.00	40 Outputs, 8 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit

If the application requires 4 antenna inputs and up to 20 receiver outputs:

- AVA series for frequency range 0.01-30 MHz, see PIG 020156
- AVB series for frequency range 1.5-30 MHz, see PIG 020160



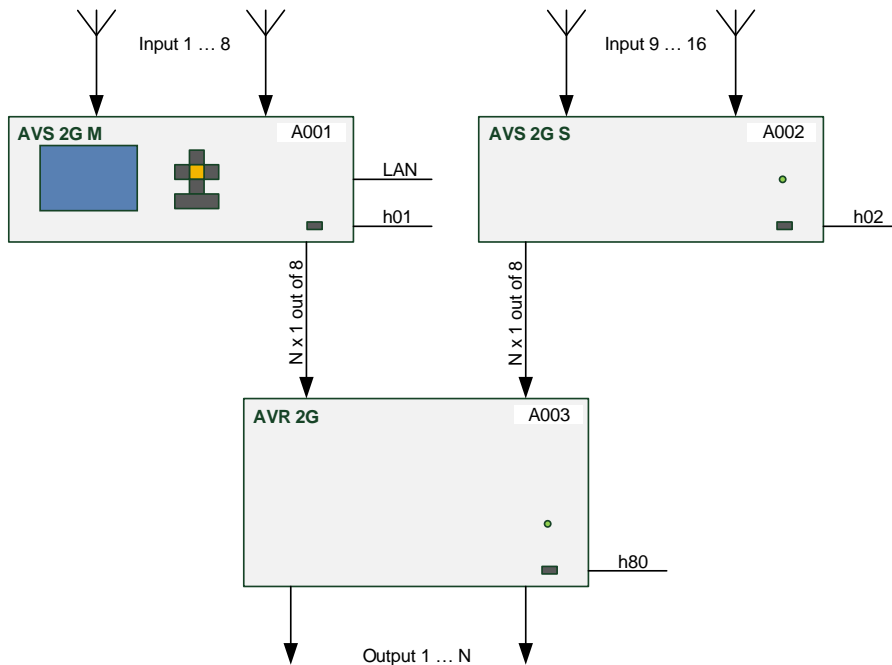
Connections screen with exemplary assignments between receiver and antenna

Larger distribution systems are realised by using master (AVS 2G M), slave (AVS 2G S) and matrix AVR 2G units.



The exemplary shown AVS 2G 40/16/. provides 16 antenna inputs and can be configured from 10 to 40 receiver outputs.

The matrix unit AVR 2G provides the non-blocking switching distribution of up to 2x 40 input signals to max. 40 receiver outputs.

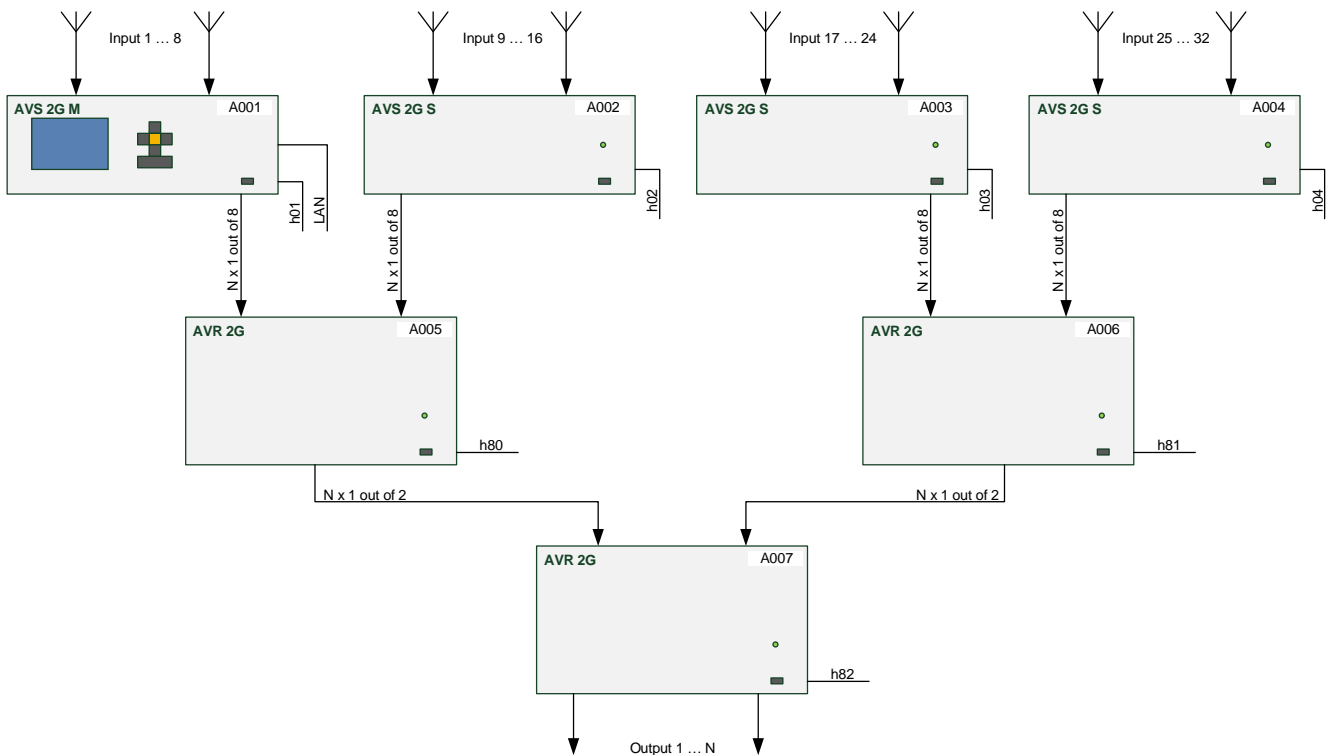


System Configuration AVS 2G 40/16/.

The master AVS 2G M provides system control of several slave units AVS 2G S and matrix AVR 2G units.



The exemplary shown AVS 2G 40/32/. provides 32 antenna inputs and can be configured from 10 to 40 receiver outputs.



System Configuration AVS 2G 40/32/.

Variants AVS 2G M (Master Units)

If the application requires more than 8 antenna inputs or more than 40 receiver outputs master and slave units are required to form such distribution systems.

Type Designation	Part Number	Description
AVS 2G M 10/8/A	2063.2022.00	Master with 10 Outputs, 8 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 10/8/B	2063.2023.00	Master with 10 Outputs, 8 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 20/8/A	2063.2024.00	Master with 20 Outputs, 8 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 20/8/B	2063.2025.00	Master with 20 Outputs, 8 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 30/4/A	2063.2026.00	Master with 30 Outputs, 4 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 30/4/B	2063.2027.00	Master with 30 Outputs, 4 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 30/8/A	2063.2028.00	Master with 30 Outputs, 8 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 30/8/B	2063.2029.00	Master with 30 Outputs, 8 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 40/4/A	2063.2030.00	Master with 40 Outputs, 4 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 40/4/B	2063.2031.00	Master with 40 Outputs, 4 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 40/8/A	2063.2032.00	Master with 40 Outputs, 8 Inputs 0,01-30 MHz, LAN 4HU 19-inch Unit
AVS 2G M 40/8/B	2063.2033.00	Master with 40 Outputs, 8 Inputs 1,5-30 MHz, LAN 4HU 19-inch Unit

Variants AVS 2G S (Slave Units)

If the application requires more than 8 antenna inputs or more than 40 receiver outputs slave and master units are required to form such distribution systems.

Type Designation	Part Number	Description
AVS 2G S 10/8/A	2063.2034.00	Slave with 10 Outputs, 8 Inputs 0,01-30 MHz 4HU 19-inch Unit
AVS 2G S 10/8/B	2063.2035.00	Slave with 10 Outputs, 8 Inputs 1,5-30 MHz 4HU 19-inch Unit
AVS 2G S 20/8/A	2063.2036.00	Slave with 20 Outputs, 8 Inputs 0,01-30 MHz 4HU 19-inch Unit
AVS 2G S 20/8/B	2063.2037.00	Slave with 20 Outputs, 8 Inputs 1,5-30 MHz 4HU 19-inch Unit
AVS 2G S 30/4/A	2063.2038.00	Slave with 30 Outputs, 4 Inputs 0,01-30 MHz 4HU 19-inch Unit
AVS 2G S 30/4/B	2063.2039.00	Slave with 30 Outputs, 4 Inputs 1,5-30 MHz 4HU 19-inch Unit
AVS 2G S 30/8/A	2063.2040.00	Slave with 30 Outputs, 8 Inputs 0,01-30 MHz 4HU 19-inch Unit
AVS 2G S 30/8/B	2063.2041.00	Slave with 30 Outputs, 8 Inputs 1,5-30 MHz 4HU 19-inch Unit
AVS 2G S 40/4/A	2063.2042.00	Slave with 40 Outputs, 4 Inputs 0,01-30 MHz 4HU 19-inch Unit
AVS 2G S 40/4/B	2063.2043.00	Slave with 40 Outputs, 4 Inputs 1,5-30 MHz 4HU 19-inch Unit
AVS 2G S 40/8/A	2063.2044.00	Slave with 40 Outputs, 8 Inputs 0,01-30 MHz 4HU 19-inch Unit
AVS 2G S 40/8/B	2063.2045.00	Slave with 40 Outputs, 8 Inputs 1,5-30 MHz 4HU 19-inch Unit

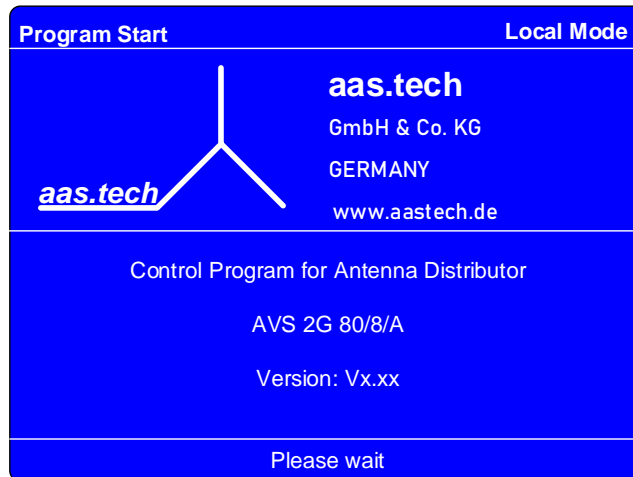
Variants AVR 2G (Matrix Units)

The matrix unit AVR 2G provides the non-blocking switching distribution of up to 2x 40 input signals to max. 40 receiver outputs.

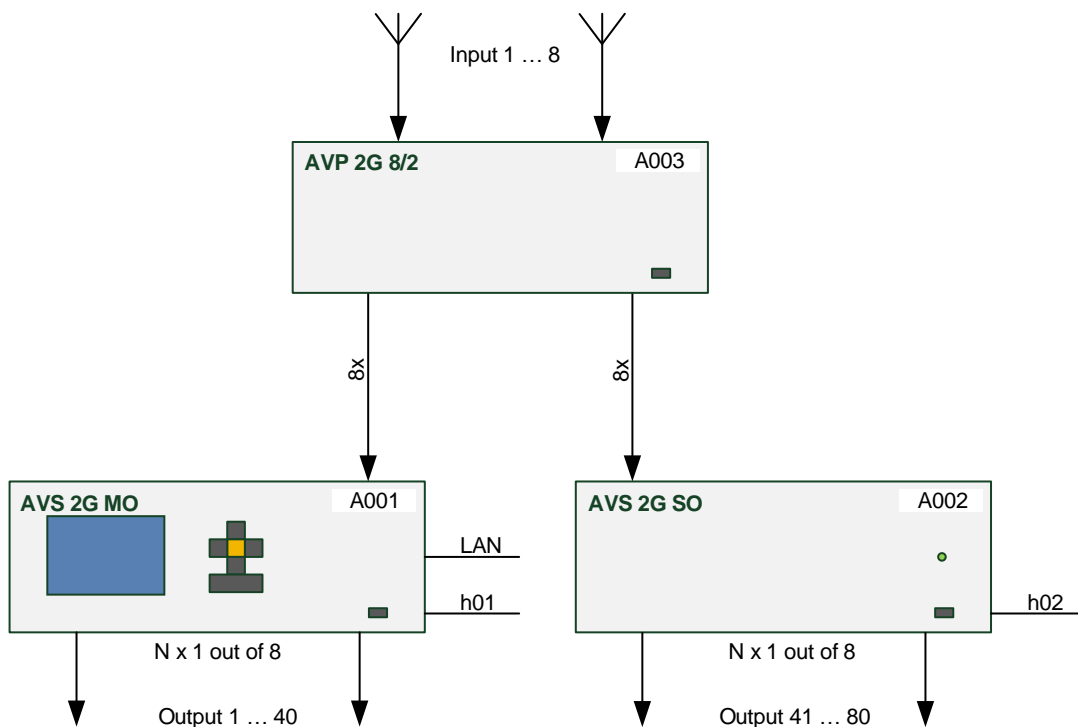
Type Designation	Part Number	Description
AVR 2G 10/2	2063.2046.00	Matrix with 10 Outputs, 2x 10 Inputs 0,01-30 MHz 6HU 19-inch Unit
AVR 2G 20/2	2063.2047.00	Matrix with 20 Outputs, 2x 20 Inputs 0,01-30 MHz 6HU 19-inch Unit
AVR 2G 30/2	2063.2048.00	Matrix with 30 Outputs, 2x 30 Inputs 0,01-30 MHz 6HU 19-inch Unit
AVR 2G 40/2	2063.2049.00	Matrix with 40 Outputs, 2x 40 Inputs 0,01-30 MHz 6HU 19-inch Unit



To extend the number of antenna inputs pre-distributors AVP 2G with frequency band filter are used. The pre-distributor AVP 2G requires master AVS 2G MO and slave AVS 2G SO units to distribute further the antenna signals.



The exemplary shown AVS 2G 80/8/. provides 8 antenna inputs and can be configured to 80 or 60 receiver outputs.



System Configuration AVS 2G 80/8/.

Variants AVP 2G (Pre-Distributors)

Pre-distributors AVP 2G with frequency band filter provide the extension of the number of antenna inputs.

Type Designation	Part Number	Description
AVP 2G 8/2A	2063.2074.00	Pre-Distributor with 16 Outputs, 8 Inputs for use in applications with AVP 2G MO, AVP 2G SO 0.01-30 MHz 4HU 19-inch Unit
AVP 2G 8/2B	2063.2075.00	Pre-Distributor with 16 Outputs, 8 Inputs for use in applications with AVP 2G MO, AVP 2G SO 1.5-30 MHz 4HU 19-inch Unit

Variants AVS 2G MO (Master Units)

In combination with pre-distributors AVP 2G master AVS 2G MO and slave AVS 2G SO units are required to form such distribution systems.

Type Designation	Part Number	Description
AVS 2G MO 10/8	2063.2050.00	Master with 10 Outputs, 8 Inputs (IOs not equipped) for use in applications with AVP 2G LAN 4HU 19-inch Unit
AVS 2G MO 20/8	2063.2051.00	Master with 20 Outputs, 8 Inputs (IOs not equipped) for use in applications with AVP 2G LAN 4HU 19-inch Unit
AVS 2G MO 30/4	2063.2052.00	Master with 30 Outputs, 4 Inputs (IOs not equipped) for use in applications with AVP 2G LAN 4HU 19-inch Unit
AVS 2G MO 30/8	2063.2053.00	Master with 30 Outputs, 8 Inputs (IOs not equipped) for use in applications with AVP 2G LAN 4HU 19-inch Unit
AVS 2G MO 40/4	2063.2054.00	Master with 40 Outputs, 4 Inputs (IOs not equipped) for use in applications with AVP 2G LAN 4HU 19-inch Unit
AVS 2G MO 40/8	2063.2055.00	Master with 40 Outputs, 8 Inputs (IOs not equipped) for use in applications with AVP 2G LAN 4HU 19-inch Unit

Variants AVS 2G SO (Slave Units)

In combination with pre-distributors AVP 2G slave AVS 2G SO and master AVS 2G MO units are required to form such distribution systems.

Type Designation	Part Number	Description
AVS 2G SO 10/8	2063.2056.00	Slave with 10 Outputs, 8 Inputs (IOs not equipped) for use in applications with AVP 2G 4HU 19-inch Unit
AVS 2G SO 20/8	2063.2057.00	Slave with 20 Outputs, 8 Inputs (IOs not equipped) for use in applications with AVP 2G 4HU 19-inch Unit
AVS 2G SO 30/4	2063.2058.00	Slave with 30 Outputs, 4 Inputs (IOs not equipped) for use in applications with AVP 2G 4HU 19-inch Unit
AVS 2G SO 30/8	2063.2059.00	Slave with 30 Outputs, 8 Inputs (IOs not equipped) for use in applications with AVP 2G 4HU 19-inch Unit
AVS 2G SO 40/4	2063.2060.00	Slave with 40 Outputs, 4 Inputs (IOs not equipped) for use in applications with AVP 2G 4HU 19-inch Unit
AVS 2G SO 40/8	2063.2061.00	Slave with 40 Outputs, 8 Inputs (IOs not equipped) for use in applications with AVP 2G 4HU 19-inch Unit

Options

Option	Description
N Output Connectors	Receiver connections equipped with N sockets (max. 30) instead of the standard BNC sockets
Type x Output Connectors	Type of output connectors to be specified by customer
Power Supply Redundancy	Redundant power supply to increase operational reliability
DC Mains supply	Power Supply with additional DC input 24 – 36 Vdc
Colour of Front Panel	Colour to be specified by customer RAL number

Other options are available on request.

Altered type designation used when configuring the AVS 2G with options.

Spare Parts

Designation	Type	Part No.	Remark
Wideband Amplifier	WA 4A	0029.5600.80	supports 1 input
Channel Board	CB A	0008.7613.80	supports 10 outputs
Power Supply	PS G3	0008.7432.00	
Input Option	IO 41	0029.5601.80	10 kHz – 30 MHz
Input Option	IO 43	0029.5602.80	1,5 MHz – 30 MHz
Control Unit	CU N	depends on version	
Keypad board	KB E	0028.0549.80	
Display Unit	DU F3	0028.0554.80	
Motherboard	MB AVS 2	0028.2343.80	
LAN Interface	LAN B1	0028.0542.00	
Ventilator	FAN B	0029.1007.20	

Associated Products

For integration into the application environment associated products are available.

Type Designation	Part No. NSN	Description
AAN 110	2061.0110.00	<p>19-inch 1 HU Remote Power Supply Unit Frequency range 0.01 – 100 MHz</p> <p>The AAN 110 provides 1 remote power feeding port and 1 receiver port, typically used with 1 active monopole antenna STA or 1 active dipole antenna HD 1 A.</p> <p>AAN 110 replaces AAN 10/B (0008.7424.00) Concerning 19-inch rack installation the AAN 110 requires 1 HU rack space instead of 3 HU required by AAN 10/B.</p>
AAN 120	2061.0120.00	<p>19-inch 1 HU Remote Power Supply Unit Frequency range 0.01 – 100 MHz</p> <p>The AAN 120 provides 2 remote power feeding ports and 2 receiver ports, typically used with 2 active monopole antennas STA or 2 active dipole antennas HD 1 A or 1 active dipole antenna HD 2 A.</p>
AAN 130	2061.0130.00	<p>19-inch 1 HU Remote Power Supply Unit Frequency range 0.01 – 100 MHz</p> <p>The AAN 130 provides 3 remote power feeding ports and 3 receiver ports, typically used with 3 active monopole antennas STA or 2 active dipole antennas HD 1 A or 1 active dipole antenna HD 2 A or 1 active combination antenna HD 2 A + STA ...</p> <p>AAN 130 replaces AAN 30/B (0008.7427.00) Concerning 19-inch rack installation the AAN 130 requires 1 HU rack space instead of 3 HU required by AAN 30/B.</p>
AAN 140	2061.0140.00	<p>19-inch 1 HU Remote Power Supply Unit Frequency range 0.01 – 100 MHz</p> <p>The AAN 140 provides 4 remote power feeding ports and 4 receiver ports, typically used with 4 active monopole antennas STA or 2 active dipole antennas HD 1 A or 1 active dipole antenna HD 2 A or 1 active combination antenna HD 2 A + STA ...</p>

Associated Products (continued)

Type Designation	Part No. NSN	Description
RF Coaxial Cable	2078.xxxx.00 ---	Assembled ready-made coaxial cable according to customer specification. Type of connectors and type of cable to be specified by customer.

Compatible Active Antenna Products

The following active receiving antennas match ideally to feed the distributors of the AVS series.

Type Designation	Part No. NSN	Description
STA 10 A/D/0.01-30	0005.8914.00 5985-12-314-1129	Active Receiving Antenna 0.01-30 MHz Doc. FIG 010103
STA 5 A/D/0.01-0.6	0005.8963.00	Active Receiving Antenna 0.01-0.6 MHz Doc. FIG 010105
STA 10 A/D/0.01-1.6	0005.8969.00	Active Receiving Antenna 0.01-1.6 MHz Doc. FIG 010106
STA 10 A/D/1.6-30	0005.8971.00	Active Receiving Antenna 1.6-30 MHz Doc. FIG 010108
HD 1 A	0005.6610.00	Active Receiving Dipole 1.5-30 MHz Doc. FIG 010202
HD 2 A	0005.6620.00	Active Receiving Dipole 1.5-30 MHz Doc. FIG 010203
HD 1 A + STA 10 A/D/0.01-30	0005.6631.00	Active Receiving Combination Antenna System 0.01-30 MHz Doc. FIG 010303
HD 2 A + STA 10 A/D/0.01-30	0005.6641.00	Active Receiving Combination Antenna System 0.01-30 MHz Doc. FIG 010305