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Product Information

Antenna Distribution System AVS 2G 40/16/_
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 AVS 2G 40/16/_ is furnished into three 19-inch slide-in units providing the non-blocking distribution of 16 antenna inputs to 40 receiver outputs.

Variants with 30, 20 or 10 outputs are available.

The AVS 2G 40/16/A versions cover 0.01 – 30 MHz.
The AVS 2G 40/16/B versions cover 1.5 – 30 MHz.

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

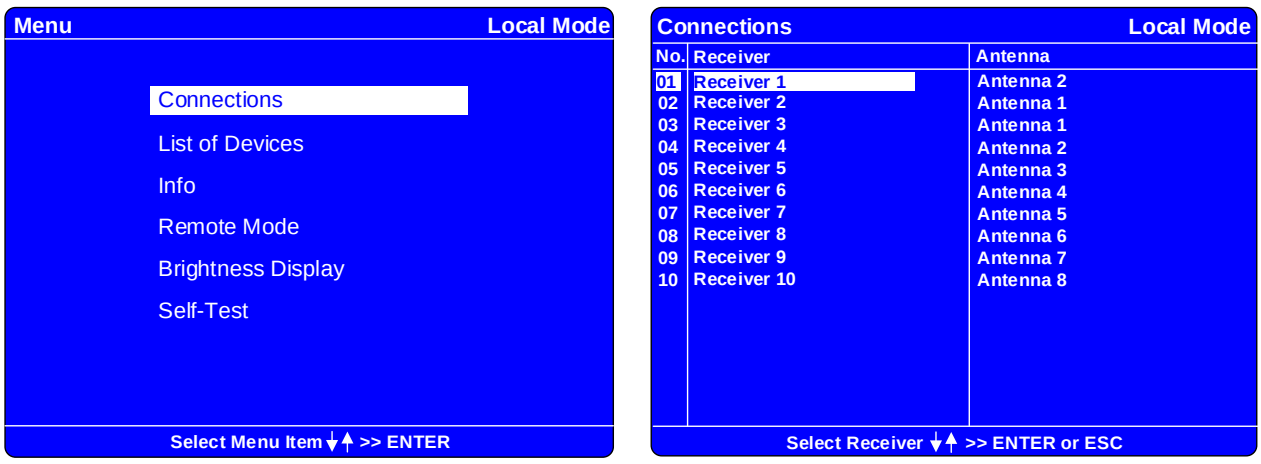
The antenna distribution system is controlled and monitored in local operation from the front panel and in remote operation through a LAN interface.

An integrated control unit monitors the distributor system. Failure of a subunit can also be signalized 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 different number of inputs or outputs for the user convenience.

Technical Data

Parameter	Data
Dimension slide-in unit (w x h x d)	Master: 19“-unit, 4 HU, 360 mm Slave: 19“-unit, 4 HU, 360 mm Relay Matrix: 19“-unit, 6 HU, 360 mm Interface Distributor: 19“-unit, 1 HU, 360 mm
Weight	Master: approx. 13 kg Slave: approx. 12 kg Relay Matrix: approx. 10 kg Interface Distributor: approx. 2 kg
Colour of Front Panel	RAL 7035 (light grey)
Labelling	English
Mains Supply (single units) (4)	nom. 100 – 240 Vac, 50/60 Hz
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



Connections screen with exemplary assignments between receiver and antenna

HF Data

Parameter	AVS 2G 40/16/x
Frequency Range AVS 2G …/…/A (2)	0,01 – 30 MHz
Frequency Range AVS 2G …/…/B (2)	1,5 – 30 MHz
Antenna Inputs	16 (N socket)
Input Impedance	50 Ω VSWR ≤ 1,5
Receiver Outputs (3)	10, 20, 30 or 40 (BNC socket)
Output Impedance (4)	typ. 50 Ω VSWR ≤ 1,5
Gain (4)	typ. 0,5 ± 1,5 dB
Noise Figure (4)	typ. 7,0 – 9,0 dB
Intercept Point IPOP2 (4)	typ. 60 dBm
Intercept Point IPOP3 (4)	typ. 35 dBm
1 dB Compression (4)	1 typ. 2 dBm
Maximum Signal Level CW (4)	typ. 33 dBm
Decoupling between two outputs (4)	typ. 65 dB
Decoupling between output and input (4)	typ. 90 dB
Crosstalk between inputs (4)	> 36 dB typ. 40 dB

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

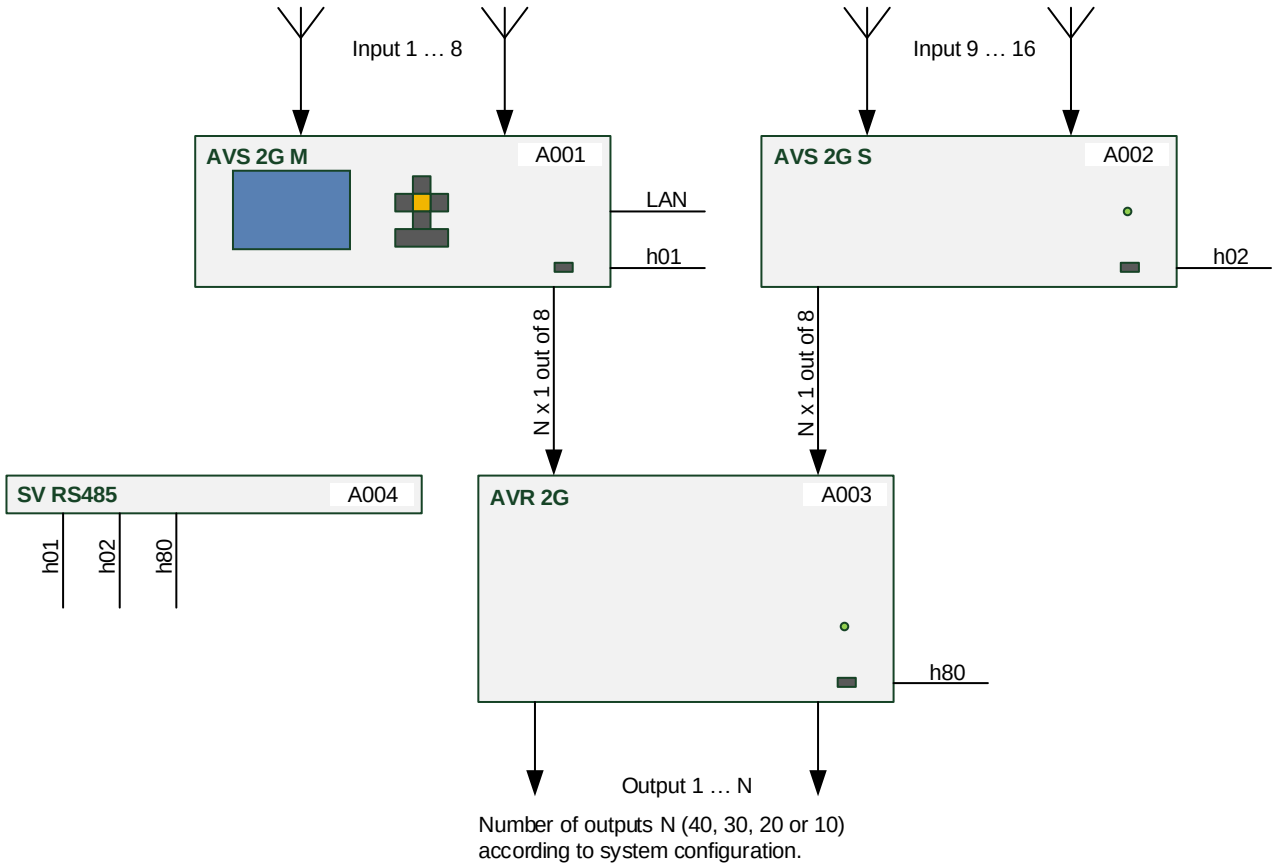
Note 2:
The AVS 2G “A” versions cover 0.01 – 30 MHz.
The AVS 2G “B” versions cover 1.5 – 30 MHz.
For details see variants and order information.

Note 3:
The number of receiver outputs can be configured in steps of 10.
Variants with 10, 20, 30 or 40 receiver outputs are available.
For details see variants and order information.

Note 4:
The technical data of the AVS 2G units are given in the product information document PIG 020601.
The technical data of the AVR 2G units are given in the product information document PIG 020602.
The technical data of the SV RS485 is given in the product information document PIG 021002.

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

Block Diagram



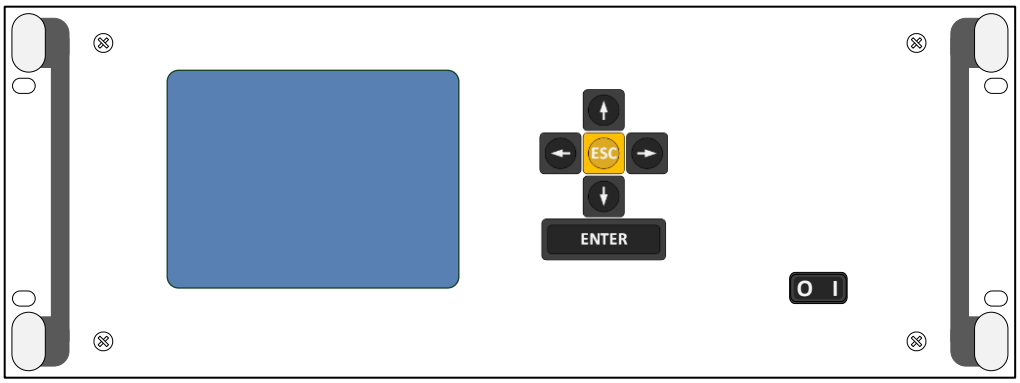
Number of outputs N (40, 30, 20 or 10) according to system configuration.

Rack Space Requirements

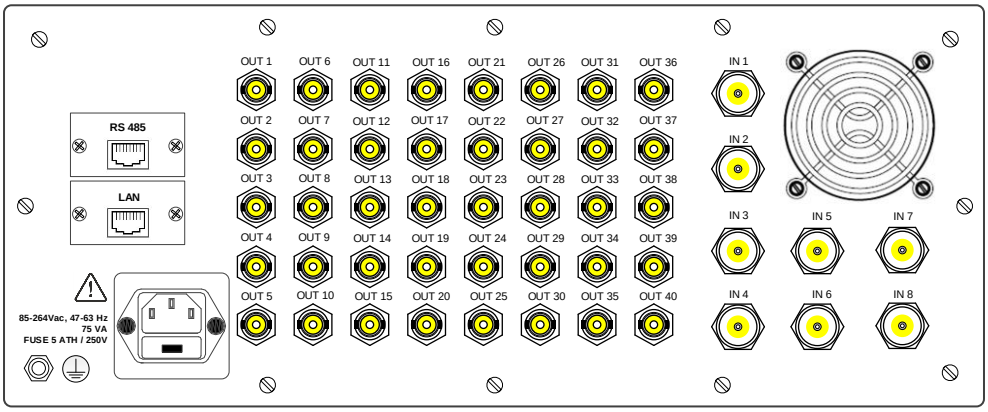
Unit	Unit No.	High Units
Master AVS 2G M …	A001	4HU
Slave AVS 2G S …	A002	4HU
Relais Matrix AVR 2G …	A003	6HU
Interface Distributor SV RS485	A004	1HU
Total	4 Units	15 HU

It is recommended to leave at least 1 HU free space between units.

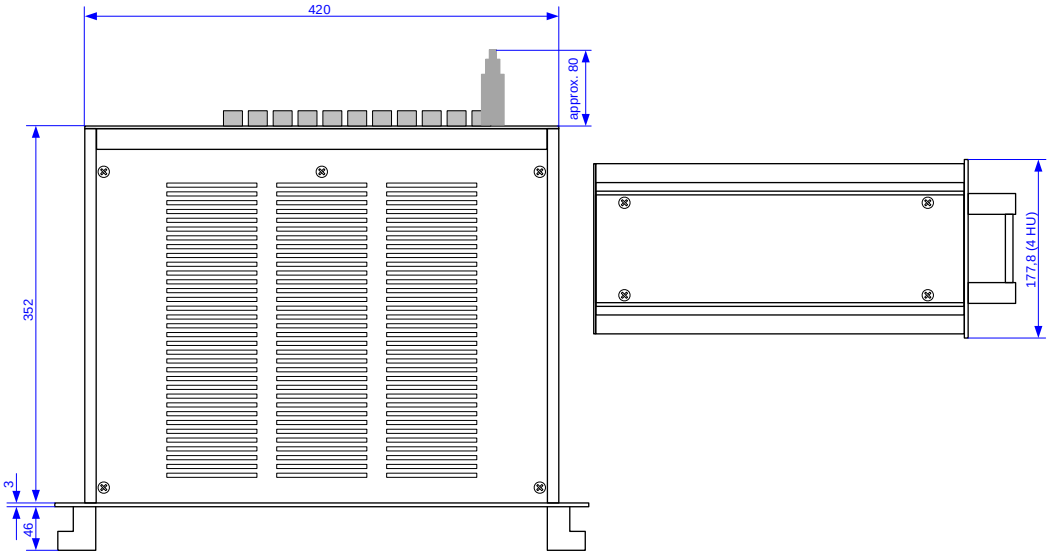
Views and Dimensions AVS 2G M (Master)



Front View AVS 2G M (Master)

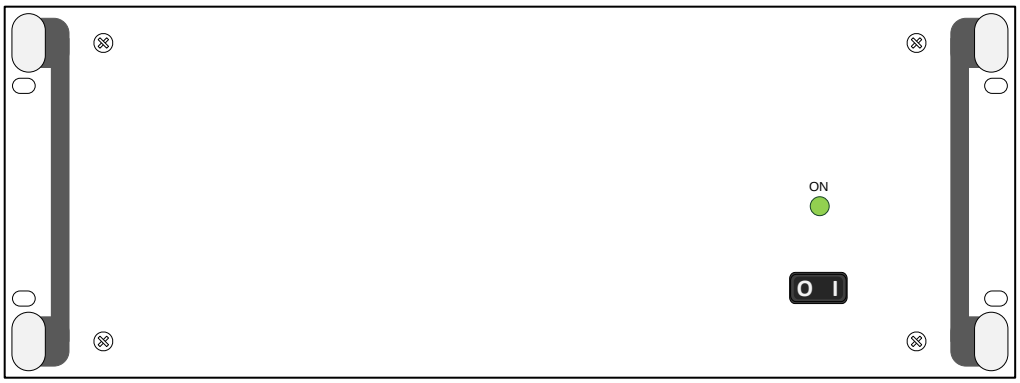


Rear View AVS 2G M with 40 Outputs / 8 Inputs

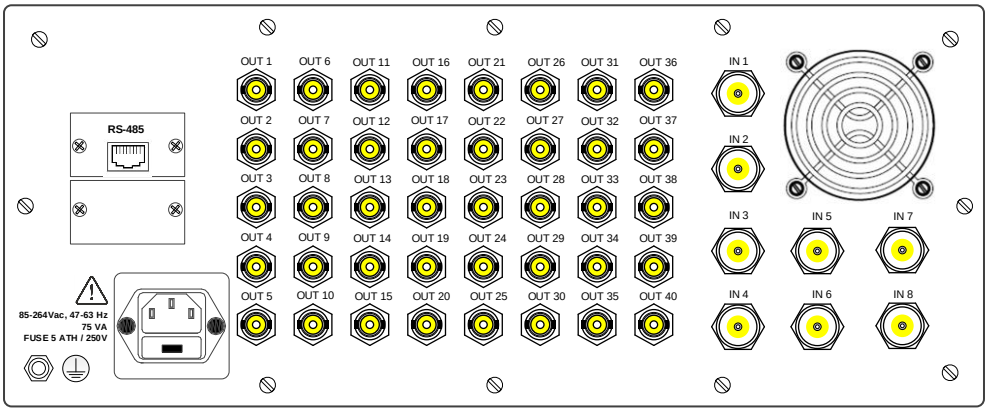


Dimensions AVS 2G 19-inch 4 HU Unit

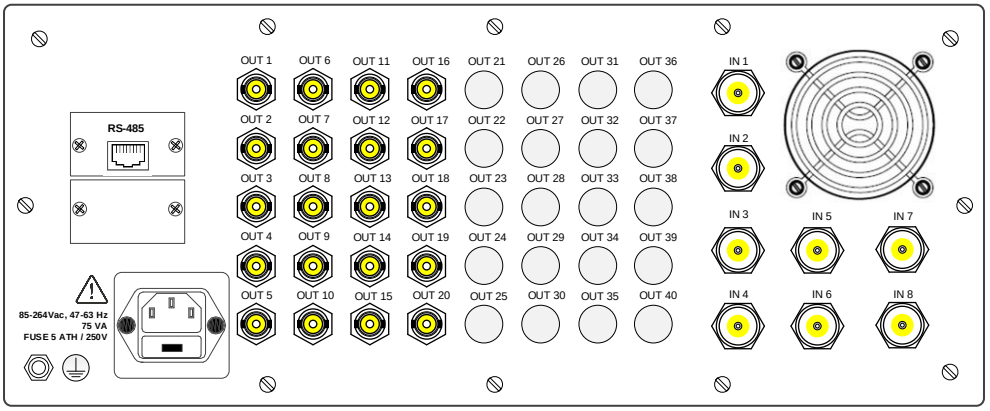
Views and Dimensions AVS 2G S (Slave)



Front View AVS 2G S (Slave)



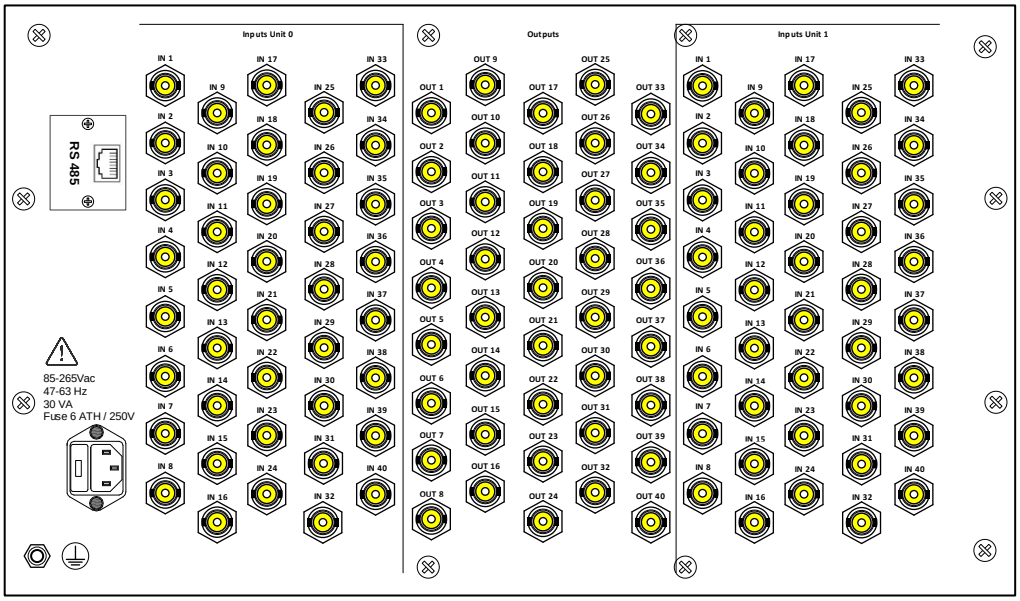
Rear View AVS 2G S with 40 Outputs / 8 Inputs



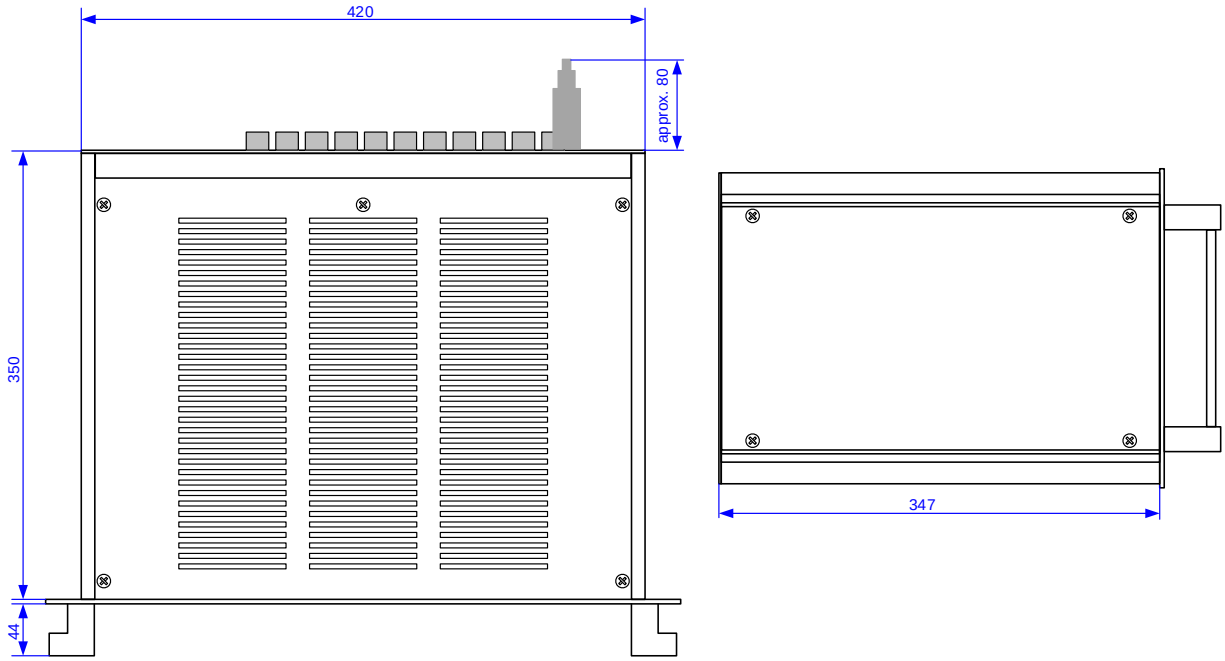
Rear View AVS 2G S with 20 Outputs / 8 Inputs

Views and Dimensions AVR 2G (Relais Matrix)

Front View AVR 2G (Relais Matrix)



Rear View AVR 2G 40/2



Dimensions AVR 2G 19-inch 6 HU Unit

Scope of Supply

Pos.	Qty.	Description
1	1	Antenna Distributor (Master) AVS 2G M … (type depends on configuration)
2	1	Antenna Distributor (Slave) AVS 2G S … (type depends on configuration)
3	1	Antenna Distributor (Matrix) AVR 2G … (type depends on configuration)
4	1	Interface Distributor SV RS485
5	3	Network Cable Cat. 6 RJ-45 2m
6	1	USB stick with product documentation in pdf format

Variants and Order Information (0.01-30 MHz)

The AVS 2G 40/16/A variants provide:
the distribution of 16 inputs
to 40, 30, 20 or 10 outputs
and cover the 0.01 – 30 MHz frequency range.

System Type Designation Part Number	Master Type Designation Part Number	Slave Type Designation Part Number	Relais Matrix Type Designation Part Number
AVS 2G 40/16/A **2063.3010.00**	AVS 2G M 40/8/A 2063.2032.00	AVS 2G S 40/8/A 2063.2044.00	AVR 2G 40/2 2063.2049.00
AVS 2G 30/16/A **2063.3011.00**	AVS 2G M 30/8/A 2063.2028.00	AVS 2G S 30/8/A 2063.2040.00	AVR 2G 30/2 2063.2048.00
AVS 2G 20/16/A **2063.3012.00**	AVS 2G M 20/8/A 2063.2024.00	AVS 2G S 20/8/A 2063.2036.00	AVR 2G 20/2 2063.2047.00
AVS 2G 10/16/A **2063.30xx.00**	AVS 2G M 10/8/A 2063.2022.00	AVS 2G S 10/8/A 2063.2034.00	AVR 2G 10/2 2063.2046.00

Variants and Order Information (1.5-30 MHz)

The AVS 2G 40/16/B variants provide:
the distribution of 16 inputs
to 40, 30, 20 or 10 outputs
and cover the 1.5 – 30 MHz frequency range.

System Type Designation Part Number	Master Type Designation Part Number	Slave Type Designation Part Number	Relais Matrix Type Designation Part Number
AVS 2G 40/16/B **2063.30xx.00**	AVS 2G M 40/8/B 2063.2033.00	AVS 2G S 40/8/B 2063.2045.00	AVR 2G 40/2 2063.2049.00
AVS 2G 30/16/B **2063.30xx.00**	AVS 2G M 30/8/B 2063.2029.00	AVS 2G S 30/8/B 2063.2041.00	AVR 2G 30/2 2063.2048.00
AVS 2G 20/16/B **2063.30xx.00**	AVS 2G M 20/8/B 2063.2025.00	AVS 2G S 20/8/B 2063.2037.00	AVR 2G 20/2 2063.2047.00
AVS 2G 10/16/B **2063.30xx.00**	AVS 2G M 10/8/B 2063.2023.00	AVS 2G S 10/8/B 2063.2035.00	AVR 2G 10/2 2063.2046.00

AVS 2G systems providing more than 16 inputs and more than 40 outputs are available, see PIG 020600.

Options

Option	Description
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	19-inch 1 HU Remote Power Supply Unit Frequency range 0.01 – 100 MHz 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. 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.
AAN 120	2061.0120.00	19-inch 1 HU Remote Power Supply Unit Frequency range 0.01 – 100 MHz 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.
AAN 130	2061.0130.00	19-inch 1 HU Remote Power Supply Unit Frequency range 0.01 – 100 MHz 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 … 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.
AAN 140	2061.0140.00	19-inch 1 HU Remote Power Supply Unit Frequency range 0.01 – 100 MHz 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 …

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. PIG 010103
STA 5 A/D/0.01-0.6	0005.8963.00	Active Receiving Antenna 0.01-0.6 MHz Doc. PIG 010105
STA 10 A/D/0.01-1.6	0005.8969.00	Active Receiving Antenna 0.01-1.6 MHz Doc. PIG 010106
STA 10 A/D/1.6-30	0005.8971.00	Active Receiving Antenna 1.6-30 MHz Doc. PIG 010108
HD 1 A	0005.6610.00	Active Receiving Dipole 1.5-30 MHz Doc. PIG 010202
HD 2 A	0005.6620.00	Active Receiving Dipole 1.5-30 MHz Doc. PIG 010203
HD 1 A + STA 10 A/D/0.01-30	0005.6631.00	Active Receiving Combination Antenna System 0.01-30 MHz Doc. PIG 010303
HD 2 A + STA 10 A/D/0.01-30	0005.6641.00	Active Receiving Combination Antenna System 0.01-30 MHz Doc. PIG 010305