

MiniSystem Combiner

4 Channel Compact Combining System – Single Antenna Operation – with Rx Preamplifier

340-520MHz

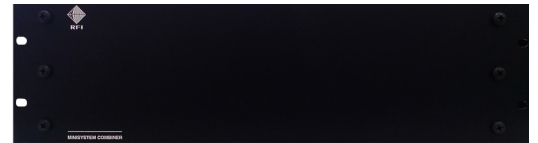
MSxxx-0405-SP Series



The MiniSystem Combiner (MSC) is an innovative solution that simplifies the design, quotation, procurement and installation of RF combining for applications requiring 1-4 RF channels. It caters for most standard frequency sub-bands, channel spacings and Tx-Rx frequency separations. The MSC Tx combiner uses dual stage isolators and hybrid combining techniques to provide excellent Tx-Tx isolation and to minimise intermodulation (IM) impacts. The Rx system uses an ultra low noise preamplifier with user-selectable gain and excellent 3OIP performance, with a multi-way output divider to ensure optimum system receive sensitivity is available. Integral high quality bandpass filtering provides high Rx selectivity and Tx-Rx system isolation performance. Form-C relay outputs provide alarm notification of DC power or Rx LNA amplifier failure. The MSC is available in sub-bands covering VHF, UHF and 7/8/900MHz frequency ranges.

Features:

- 4 channel capacity
- Integral duplexer for single antenna operation
- 50W Tx input power (per channel)
- 100% Tx Duty Cycle
- Open-circuit antenna port VSWR protection
- Ultra low noise receiver preamplifier
- User-selectable Rx gain
- DC power and Rx LNA Fail alarm monitoring
- Compact 19in rack mounting



FRONT VIEW



REAR VIEW

Specifications

Model MSxxx-0405-SP	3436	3638	3840	4043	4345	4547	4750	5052
Frequency Range (MHz)	340-360	360-380	380-400	400-430	430-450	450-470	470-500	500-520
System Channel Capacity	≤ 4							
Tx Input Power	≤ 50W per channel							
Tx Duty Cycle	100% per channel							
Tx-Tx Bandwidth	1.2MHz							
Tx Insertion Loss	9dB typ.							
Tx-Tx / Ant-Tx / Tx-Rx Isolation	>70dB / >60dB / >80dB (typ.)							
Tx-Tx Frequency Spacing	No minimum							
Tx Input Return Loss	20dB typ.							
Tx-Rx Separation	5MHz min.							
Rx-Rx Bandwidth	1.2MHz							
Rx System Gain	-10 to +10dB (in 1dB steps)							
Rx LNA Noise Figure	< 2dB (1.2dB typ.)							
Rx-Rx Frequency Spacing	No minimum							
Rx Maximum Input Level	-10dBm							
Rx-Rx Isolation	> 18dB							
Rx Output Return Loss	> 20dB							
Impedance	50 ohms (all RF ports)							
Alarms	DC Supply Voltage Low, Rx LNA Fail							
Alarm Outputs	Dry Relay Form-C (N.C./N.O./CMN)							
RF Connectors	Tx = N (female) Rx = BNC (female)							
DC Connector	2pin 5mm Phoenix (mating plug supplied)							
Alarm Connector	3pin 5mm Phoenix (mating plug supplied)							
Enclosure	3RU 19in Rack Mount (Black)							
DC Power Requirements	+11VDC to +28VDC 3.5W typ. (polarity protected)							
IP Rating	Indoor Use Only							
Temperature Range	-30° to +60° C (-122° to +140° F)							
Dimensions (HxWxD)	133x483x430mm (5.23x19x17in)							
Weight	19Kg (42lbs)							

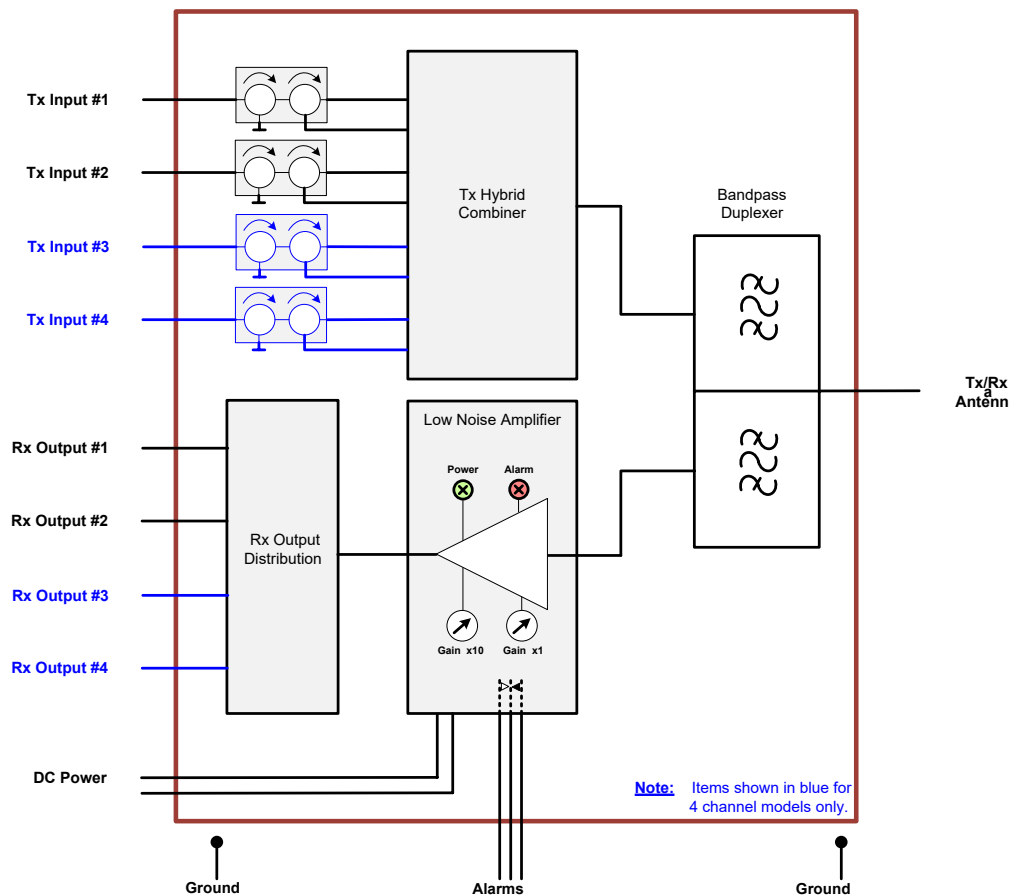
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Ordering information	
RFI Part Number	Description
MS3436-0405-SP	MiniSystem Combiner, 340-360MHz, 4 Channel, 50 Watt, Single Antenna Operation, Preamplifier fitted
MS3638-0405-SP	MiniSystem Combiner, 360-380MHz, 4 Channel, 50 Watt, Single Antenna Operation, Preamplifier fitted
MS3840-0405-SP	MiniSystem Combiner, 380-400MHz, 4 Channel, 50 Watt, Single Antenna Operation, Preamplifier fitted
MS4043-0405-SP	MiniSystem Combiner, 400-430MHz, 4 Channel, 50 Watt, Single Antenna Operation, Preamplifier fitted
MS4345-0405-SP	MiniSystem Combiner, 430-450MHz, 4 Channel, 50 Watt, Single Antenna Operation, Preamplifier fitted
MS4547-0405-SP	MiniSystem Combiner, 450-470MHz, 4 Channel, 50 Watt, Single Antenna Operation, Preamplifier fitted
MS4750-0405-SP	MiniSystem Combiner, 470-500MHz, 4 Channel, 50 Watt, Single Antenna Operation, Preamplifier fitted
MS5052-0405-SP	MiniSystem Combiner, 500-520MHz, 4 Channel, 50 Watt, Single Antenna Operation, Preamplifier fitted
SP0000-6001-11	BNC 50ohm termination for unused Rx ports
RX0000-3000-AC	100-240VAC Mains Plug Pack Power Supply



MiniSystem Combiner (SP Model) Configuration