



MasterPoint S2 SSR Monitor (G35)

The Beel Technologies standard MasterPoint S2 SSR monitor provides continuous verification of integrity, accuracy, phase and azimuth alignment of MSSRs and can support basic programmable extended squitters when optionally configured.

Typical features include :

- Single or dual channel version
- Automatic switchover (dual channel only)
- Operation in Mode 3/A, C, and S Level 2
- User set range, altitude, FID, Mode A, Mode S address
- Remote control of user set values
- Fully solid state with modular construction
- Integral 0-50 dB Attenuator (1dB increment)
- 19 inch rack mount chassis
- Optional support for
 - Mode 1, 2, and B
 - APM using Mode B
 - MA triggered functions (Mode A, FID, SLM, etc.)
 - Remote standby
 - Extended squitter (Lat/Long, Vel A/B)

SPECIFICATIONS

Part Numbers	Single Channel 31134-G35	Dual Channel 32164-G35
Transmitter	31134-G35	32164-G35
Transmit Frequency	1090.0 ± 1 MHz	
Transmit Power (nominal)	250 watts	200 watts
Transmit Power (minimum)		125 watts peak
Receiver		
Center Frequency	1030 MHz	
Sensitivity	-74 ± 3 dBm for 90% replies	
Parameters		
Interrogation Modes	3/A, C, S Level 2	
Altitude	-1,000 to 99,900ft, 100 ft incr.	
Range Delay	0.0 - 300 NM in 0.1 NM steps	
Optional Parameters		
Active II/SI reporting*	BDS 0xDE, 0xDF dynamic updates	
Interrogation Modes*	1, 2, and/or B	
MA trigger patterns*	Factory configurable	
Acquisition Squitter*	Enabled/Disabled	
Extended Squitter*	Enabled/Disabled	
Power		
AC Input	88 - 264V AC	
Frequency	47 - 63 Hz	
Power consumption	35 watts max (31134-G35) 70 watts max (32164-G35)	
Optional power		
DC Input (optional)*	24V DC	
Dimensions (L x W x H)		
Single channel (3U)		463 x 484 x 134 mm
Dual channel (6U)		463 x 484 x 268 mm
Antenna*		457 x 457 x 57mm
Weight		
SSR Monitor	10.5 kg	15.4 kg
Antenna		2.5 kg
Reliability		
MTBF (hours)	30,000	44,000
MTTR (minutes)	12	15
Transponder Standards		
MOPS		DO-181E Class 1
TSO		C112e, C166b Class B1S
Environmental		
Operating Temperature		0°C to + 40°C
Storage		-40° C to + 65° C
Relative Humidity		Up to 90%, non-condensing
Altitude, Operating		Up to 4,570 m
Altitude, Non-Operating		Up to 15,240 m
Optional environmental		
Wide Temperature operating*		-20°C to +55°C

* Factory options

System Configurations

Options	Description
-	Base configuration includes user configurable Mode S Address, Mode A, Flight ID, Altitude and Range delay on front panel and via embedded web interface (configurable per channel in dual channel units)
012	Mode 1 and 2 interrogations
A8S	APM, BITE (dual channel only), 0-60dB Rx/Tx attenuation, disabled squitters (acquisition & extended)
ES0	Extended Squitter with user set LAT/LONG and VEL A/B (simulated GPS input)
F01	APM, Independent Rx/Tx with 0-60dB attenuation, and replies to All-Call with 0.8µs P4 pulse
F02	Includes F01 options and support for wide temperature (-20°C to +55°C) startup
MA1	Support for Comm-A triggered functions (MSP Channel 6) such as test Mode A code, test Flight ID, etc.
ROW	Support for APM, wide temperature support (-20°C to +55°C), 0-60dB and MA triggers

LCD Interface

Sample menus are provided below to show the typical configuration and control screens in the base model. Models with option **ES0** ordered from the factory include the ability to set GPS data as shown in the last example below.

Status / Config Back

State :

Mode A :

Altitude : Ft

Range : Nm

Flight ID :

System Settings Back

GPS Data Back

Latitude : Degrees

Longitude : Degrees

Velocity A : m/s N-S

Velocity B : m/s E-W

TA-1060 Antenna Specifications



The TA-1060 directional panel antenna is based on a printed broadband dipole array on an aluminum base with a UV stabilized ASA radome for excellent weatherability. It may be mounted for either vertical or horizontal polarization. The antenna is at DC ground to aid in lightning protection.

Technical Specifications

Frequency Range:	1030-1090 MHz
Gain:	> 12.5 dBi
VSWR:	1.5:1 max
Front to Back Ratio:	25 dB min.
Polarization:	Vertical or Horizontal
Power Rating:	250 Watts CW average 500 Watts peak
H-Plane Beamwidth:	40° ± 1°
E-Plane Beamwidth:	40° ± 1°
Cross Pol. Discrimination:	20 dB min.
Impedance:	50 ohms (nominal)
Termination:	N female

Physical Specifications

Length:	457 mm (18 in)
Width:	457 mm (18 in)
Depth:	57 mm (2 ¼ in)
Weight (incl. Clamps):	2.5 (5.0) kg, 5.5 (11) lb
Rated Wind Velocity:	200 km/h (125 mph)
Hor. Thrust at rated wind:	63.6 kg (140 lb)
Mounting (O.D.):	50 - 89 mm

Materials

Radiating Elements:	Plated copper on PCB
Reflector:	Irridited aluminum
Radome:	Gray UV stabilized ASA
Clamps:	Aluminum and HDG Steel

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