



MasterPoint S2 SSR Monitor

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

Typical features include :

- Single or dual channel version
- Automatic switchover (dual channel only)
- Operation in modes 3/A, C, and S Level 2
- Fully solid state
- Modular construction
- Directional antenna
- Integral 0-50 dB Attenuator (1dB increment)
- Indoor 19 inch rack mount chassis
- Mode S features:
 - Level 2 (Elementary Surveillance)
 - Hexadecimal Mode S address
 - Flight ID on front panel
 - Programmable extended squitter (option ES0)

SPECIFICATIONS

Part Numbers : 31134 – Single Channel

32164 – Dual Channel

Transmitter

Transmit Frequency 1090 ± 1 MHz
 Transmit Power 250 watts (nominal)
 125 watts minimum peak

Dimensions (L x W x H)

Single channel (3U) 463 x 484 x 134 mm
 Dual channel (6U) 563 x 484 x 268 mm
 Antenna* 457 x 457 x 57mm

Receiver

Center Frequency 1030 MHz
 Sensitivity -74 ± 1 dBm for 90% replies

Weight

	31134	32164
SSR Monitor	11 kg	18 kg
Antenna	2.5 kg	

Parameters

Interrogation Modes 3/A, C, S Level 2
 Altitude -1,000 to 99,000ft, 100 ft incr.
 Range Delay 0.0 - 300 NM in 0.1 NM steps

Reliability

	31134	32164
MTBF (hours)	24,000	40,000
MTTR (minutes)	22	30

Transponder Standards

EUROCAE	ED-73E
MOPS	DO-181E Class 1
ADS-B	DO-260B Class B1S
TSO	C112d, C166b

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 3,000 m
Altitude, Non-Operating	Up to 5,000 m
Antenna* Humidity	Up to 100% humidity;
Antenna* Wind	160 km/h with 4cm ice load 200 km/h standard 240 km/h not operating

* Antenna may be optionally deleted.

Power

AC Input 86 - 264V AC
 (24V DC optional)
 Frequency 47 - 63 Hz
 Power consumption 40 watts (31134)
 80 watts (32164)

System Configurations

Config	Description
12B	Support for Mode 1, 2 and B replies
ES0	Adds extended squitter support (GPS Lat/Long, velocities A/B) set via LCD interface or embedded web server.
1DR	Ruggedized transit and accessory case

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

Channel 1

State : ACTIVE (Active/Standby)

Altitude : 61000 Ft

Range : 10.0 NM

Current IP : 172.16.25.63 / 255.0.0.0

Main Menu

Status/Config

Advanced Config

Extended Squitter

Advanced Settings

Back

Network

Factory reset

Screen saver

Password reset

LCD Brightness

Version

Temperature

GPS Data

Back

Latitude : 45.5000 Degrees

Longitude : -73.4000 Degrees

Velocity A : 80.00 m/s N-S

Velocity B : 20.00 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		Physical Specifications	
Frequency Range:	1030-1090 MHz	Length:	457 mm (18 in)
Gain:	> 12.5 dBi	Width:	457 mm (18 in)
VSWR:	1.5:1 max	Depth:	57 mm (2 ¼ in)
Front to Back Ratio:	25 dB min.	Weight (incl. Clamps):	2.5 (5.0) kg, 5.5 (11) lb
Polarization:	Vertical or Horizontal	Rated Wind Velocity:	200 km/h (125 mph)
Power Rating:	250 Watts CW average	Hor. Thrust at rated wind:	63.6 kg (140 lb)
	500 Watts peak	Mounting (O.D.):	50 - 89 mm
H-Plane Beamwidth:	40° ± 1°	Materials	
E-Plane Beamwidth:	40° ± 1°	Radiating Elements:	Plated copper on PCB
Cross Pol. Discrimination:	20 dB min.	Reflector:	Irridited aluminum
Impedance:	50 ohms (nominal)	Radome:	Gray UV stabilized ASA
Termination:	N female	Clamps:	Aluminum and HDG Steel

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