

SM180-Ro FIXED MOTORIZED ANTENNA SOLUTION

SVS SM180 Receive Only Antenna system is a robust, high performance, efficient and affordable antenna system. SVS Telekom provides the best value antenna solution to the market with competitive prices, the highest quality products and superb engineering support. These antenna is developed with more than 15 years experiences.

- 1.8m offset antenna
- Compliant for C, Ku and X band feeds
- Constantly technical support
- Galvanized support arm and alignment struts
- Supported by robust mechanic
- Supported by AKS250 antenna controller
- Optionally tracking system with the beacon receiver or DVB tuner card
- Optionally resolver for high sensitivity
- Optionally de-icing system



SVS Telekom presents various antenna system to the market since 1995. As a fixed motorised antenna, SM180 Receive Only Antenna System created a perfect alternative to the customers. SM180 which is supported by AKS250, has excellent movement ability on three axis. SM 180 is used under difficult conditions for many years and at the end of these tests we created perfect matching between SM180 and AKS250 antenna controller.

Key words for SM180-Receive only antenna system

- High Performance
- Robust
- Affordable
- Efficient
- Flexible
- Professional
- Durable
- Constantly Technical Support



SM180-Ro FIXED MOTORIZED ANTENNA SOLUTION

RF SPECIFICATIONS		
	C-Band	Ku-Band
Frequency Band	3.7 - 4.2 GHz	Rx 10.70-12.75 GHz
Polarization	Linear or Circular	Linear or Circular
Antenna Gain	35.3 dBi	45.5 dBi
Antenna Noise Temperature(30° elevation)	36 K	31 K
Antenna Cross Polarization Isolation	30 dB on Axis	30 dB on Axis
Copolar Sidelobe Envelope	0 dB	0 dB
3 dB Beamwidth	3.0 °	1.0°
VSWR	1:4:1 Max	1.3:1 Max
Feed Interface	CPR 229	WR-75 Flat Flange

	CATIONS

Antenna Geometr	v Off-Set Feed Prim	ne Focus

Antenna Reflector Effective Aperture 1,8 m

Ports 2 ports

Elevation Range 10°-90°

Azimuth Range ±150°(Optionally ±180°)

Polarization Range ±100°

Weight 200 kg

Reflector Material Glass Fiber Reinforced Polyester

SPEED	Minimum	Maksimum
Elevation	0.1°/sec	1.5°/sec
Azimuth	0.1°/sec	1.5°/sec
Polarization	0.5°/sec	13°/sec

ENVIRONMENTAL SPECIFICATION

	Operational Operational	Survival
Wind Load	100km/h	160 km/h
Ambient Temperature	-30°C to +60°C	-40°C to +70°C
Humidity	%0 - %100(Condensing)	%0 - %100(Condensing)



SM180-RxTx FIXED MOTORIZED ANTENNA SOLUTION

As a fixed motorised antenna, SM180 Transmit-Receive Antenna System created a perfect alternative to the customers. SM180 which is supported by AKS250, has excellent movement ability on three axis. SM180 is used under difficult conditions for many years and with this experience we found excellent mechanical and controlling design.

- 1.8m transmit-receive offset antenna
- Compliant for C, Ku and X band feeds
- Galvanized support arm and alignment struts
- Supported by robust mechanic
- Supported by AKS250 antenna controller
- Movement on three axis
- Auto-peaking and auto-pointing opportunities
- Optionally, tracking system with the beacon receiver or DVB tuner card.
- Optionally, resolver for high sensitivity
- Optionally, de-icing system



For tracking system we offer you two option, DVD tuner card and beacon receiver. DVB tuner card can use for just Ku-Band antenna. But beacon receiver is fully compliant for Ku-Band and C-Band Antennas.

SVS SM180 Transmit-Receive antenna system is a robust, high performance, efficient and affordable antenna system. SVS Telekom provides the best value antenna solution to the market with competitive prices, the highest quality products and superb engineering support since 1995.

Key words for SM180-RxTx antenna solution;

- High Performance
- Robust
- Affordable
- Efficient
- Flexible
- Professional
- Durable
- Constantly Technical Support



SM180-RxTx FIXED MOTORIZED ANTENNA SOLUTION

Frequency Band	C-Band Tx: 5.850 — 6.725 GHz Rx: 3.400 — 4200 GHz	Ku-Band 13.75 – 14.50 GHz
		10.70 – 12.75 GHz
Polarization	Linear orthgonal	Linear orthgonal
Antenna Gain	Tx: 39,3 dBi @ 6,1GHz Rx: 35.4 dBi @ 3.9 GHz	46.7 dBi @ 14.3 GHz 45.3 dBi @ 12.0 GHz
Antenna Noise Temperature(30° elevation)	33°K	23°K
Antenna Cross Polarization Isolation	30 dB on Axis	30 dB on Axis
Copolar Sidelobe Envelope	0 dB	0 dB
3 dB Beamwidth	Tx: 2,0 ° @ 6,1 GHz Rx: 3.0° @ 3.9 GHz	0.8°@14.3GHz 1.0°@12.0GHz
VSWR	TX: 1:3:1 RX: 1:4:1	1 . 3:1 1:5:1
Feed Interface	TX: CPR 137 or type N RX: CPR 229	WR-75 Flat Flange WR-75 Flat Flange

MECHANICAL SPECIFICATIONS

Antenna Geometry	Off-Set Feed Prime Focus
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Antenna Reflector Effective Aperture 1.8 m

Ports 2 ports

Elevation Range 10°-90°

Azimuth Range ±150°(Optionally ±180°)

Polarization Range ±100°

Weight 200 kg

Reflector Material Glass Fiber Reinforced Polyester

SPEED	Minimum	Maksimum
Elevation	0.1°/sec	1,5°/sec
Azimuth	0.1°/sec	1.5°/sec
Polarization	0.5°/sec	13°/sec

ENVIRONMENTAL SPECIFICATION

	Operational Operational	Survival
Wind Load	100km/h	160 km/h
Ambient Temperature	-30°C to +60°C	-40°C to +70°C
Humidity	%0 - %100(Condensing)	%0 - %100(Condensing)



SM240-Ro FIXED MOTORIZED ANTENNA SOLUTION

SVS SM240 Receive Only Antenna system is a robust, high performance, efficient and affordable antenna system. SVS Telekom provides the best value antenna solution to the market with competitive prices, highest quality products and superb engineering support since 1995.

- 2.4m offset antenna
- > Two pieces of reflector
- Optionally tracking system with the beacon receiver or DVB tuner card.
- Precision compression molded
- Offset reflector
- Three axis motorised system
- Supported by AKS250 antenna controller
- Galvanized king post pedestal
- Designed for C and Ku band feeds
- Available de-icing system



- ✓ Mechanical Limit Switches provide limitation for the 3-axis movement, status control by six limit switches.
- ✓ Integrated DVB-S/S2 Tuner Card in Antenna Controller
- ✓ Antenna Control Capabilities
- ✓ Optional additional outdoor control panel (fixed mount) the distance up to 30m between antenna and antenna controller
- ✓ Tracking of an inclined orbit satellite by using tuner card or beacon receiver
- 2.4m antenna is a high performance, powerful, and efficient motorised antenna system.
- The versatile pedestal mount allows for motorised applications and features ± 150° azimuth coverage in three continuous overlapping ranges.
- Optional The satellite tracking system
- Optional De-icing system



Azimuth

Motor : 36 VDC Sensor : Potentiometer

Resover optional

Elevation

Motor : 36 VDC Sensor : Potentiometer

Resover optional

Polarization

Motor : 24 VDC Sensor : Potentiometer



SM240-Ro FIXED MOTORIZED ANTENNA SOLUTION

RF SPECIFICATIONS		
	C-Band	Ku-Band
Frequency Band	3 . 7 -4. 2 GHz	Rx 10.70-12.75 GHz
Polarization	Linear or Circular	
Antenna Gain	38.0 dBi	47.6 dBi@11.95 GHz
Antenna Noise Temperature(30° elevation)	36 K	31 K
Antenna Cross Polarization Isolation	35 dB on Axis	35 dB on Axis
Copolar Sidelobe Envelope	0 dB	0 dB
3 dB Beamwidth	2.1 °	0.71°@12GHz
VSWR	1:4:1 Max	1.3:1 Max
Feed Interface	CPR 229	WR-75 Flat Flange
MECHANICAL SPECIFICATIONS		
Antenna Geometry	Off-Set Feed F	Prime Focus

Antenna Geometry	Off-Set Feed Prime Focus
Antenna Reflector Effective Aperture	2.4 m
Ports	2 ports
Elevation Range	10°-90°
Azimuth Range	±150°(Optionally ±180°)
Polarization Range	±100°
Weight	300 kg
Reflector Material	Glass Fiber-Reinforced Polyester

SPEED	Minimum	Maksimum
Elevation	0.1°/sec	1,5°/sec
Azimuth	0.1°/sec	1,5°/sec
Polarization	0.5°/sec	13°/sec

ENVIRONMENTAL SPECIFICATION		
	Operational	Survival
Wind Load	100km/h	160 km/h
Ambient Temperature	-30°C to +60°C	-40°C to 70°C
Humidity	%0 - %100	%0 - %100



SM240-RxTx MOTORIZED ANTENNA SOLUTION

SVS Telekom presents various antenna system to the market since 1995. As a fixed motorised antenna, SM240 Transmit-Receive Antenna System created a perfect alternative to the customers. SM 240which is supported by AKS250, has excellent movement ability on three axis. SM 240 is used under difficult conditions for many years and at the end of these tests we created perfect matching between SM240 and

AKS250 antenna controller

- 2.4m offset antenna
- > Two pieces of reflector
- Precision compression molded offset reflector
- Three axis motorised system
- Galvanized king post pedestal
- Designed for C, Ku and DBS band applications,
- Available de-icing system
- Optionally tracking System with the beacon receiver or DVB tuner card.
- Optionally resolver for high sensitivity
- 2.4m antenna is a high performance, powerful, and efficient motorised antenna system.
- The versatile pedestal mount allows for motorised applications and features ± 150° azimuth coverage in three continuous overlapping ranges.
- The satellite tracking system
- Optional De-icing system
- Mechanical Limit Switches: Provides limitation for the 3-axis movement, status control by six limit switches.
- Integrated DVB-S/S2 Tuner Card in Antenna Controller for locking to reference DVB carrier
- > Applicable Options: 2 port receive, de-icing.
- Antenna Control Capabilities:
- > Tracking of an inclined orbit satellite by using tuner card or beacon receiver



Azimuth

Motor : 36 VDC Sensor : Potentiometer

Resover optional

Elevation

Motor : 36 VDC Sensor : Potentiometer

Resover optional

Polarization

Motor : 24 VDC Sensor : Potentiometer



SM240-RxTx FIXED MOTORIZED ANTENNA SOLUTION

RF :	SPE	CIFI	CATI	ONS

Ku-Band

Frequency Band Tx: 13.75-14.50 GHz

Rx 10.70-12.75 GHz

Polarization

Linear, Orthogonal

Antenna Gain

Tx: 49.3dBi @ 14.3 GHz Rx: 47.8dBi @12.0 GHz

Antenna Noise Temperature(30° elevation)

45 K

Antenna Cross Polarization Isolation

35 dB on Axis

Copolar Sidelobe Envelope

0 dB

3 dB Beamwidth

Tx: 0.6°@14.3 GHz Rx: 0.7°@12.0 GHz

VSWR

1.3:1 Max

Feed Interface

WR-75 Flat Flange

MECHANICAL SPECIFICATIONS

Antenna Geometry Off-Set Feed Prime Focus

Antenna Reflector Effective Aperture 2.4 m

Ports 2 (Optionally 3 port)

Elevation Range 10°-90°

Azimuth Range ±150°(Optionally ±180°)

Polarization Range ±100°

Weight 300 kg

Reflector Material Two Piece GlassFiber-Reinforced Polyester

SPEED	Minimum	Maksimum
Elevation	0.1°/sec	1,5°/sec
Azimuth	0.1°/sec	1,5°/sec
Polarization	0.5°/sec	13°/sec

ENVIRONMENTAL SPECIFICATION

	- porational	- Cui III cui
Wind Load	80km/h	150 km/h
Ambient Temperature	-30°C to +60°C	-40°C to +70°C
Humidity	%0 - %100	%0 - %100

Operational

Survival



SM370-Ro FIXED MOTORIZED ANTENNA SOLUTION

- Precision compression molded centerfed reflector
- Compliant with Ku, C or DBS band feeds
- Low transportation cost with eight panel reflector
- Designed for C and Ku-Band uplink
- Fully galvanized steel Az/El mount
- Movement on three axis
- Optionally de-icing system
- Optionally tracking system with the beacon receiver or DVB tuner card.



- SM370 receive only antenna is a high performance, powerful and efficient motorised antenna system.
- The versatile pedestal mount allows for fixed or motorized applications and features 180 degree azimuth coverage in three continuous overlapping ranges.
- Three axis motorized system with 180 degrees of azimuth adjustment
- Integration of de-ice system
- Tracking system provides with support of AKS250



Mechanical Limit Switches:

Provides limitation for the 3-axismovement, stow position & status control by 8-limit switches

DVB Tuner Card and Beacon Receiver:

Provides Tracking specification to the antenna DVB tuner card is a solution just for Ku-Band but beacon receiver can provide the both Band antennas.

Applicable Options:

2 port receive, De-icing

ANTENNA CONTROL CAPABILITIES

Level 1 : Simple version to control azimuth, elevation, polarization movement, automatic stow and deploy to preset position.

Level 2: Automatic antenna pointing to selected satellite by using GPS and fluxgate compass.

Level 3: Tracking of an inclined orbit satellite by using tuner card or Beacon receiver



SM370-Ro FIXED MOTORIZED ANTENNA SOLUTION

RF SPECIFICATIONS		
	C-Band	Ku-Band
Frequency Band	3.7-4.2 GHz	Rx 10.95-12.75 GHz
Polarization	Linear or 0	Circular
Antenna Gain	40.9 dBi	50.7 dBi
Antenna Noise Temperature(30° elevation)	23 K	22 K
Antenna Cross Polarization Isolation	35 dB on Axis	35 dB on Axis
Copolar Sidelobe Envelope	0 dB	0 dB
3 dB Beamwidth	1.45 °	0.5°
VSWR	1:3:1 Max	1.3:1 Max
Feed Interface	CPR 229	WR-75 Flat Flange
MECHANICAL SPECIFICATIONS		
Antenna Geometry	Parabolic,Front Feed	
Antenna Reflector Effective Aperture	3.7 m	
Ports	2 ports	
Elevation Range	0°-80°(Adjustable 10°-90°)	
Azimuth Range	±150°(Optionally ±180°)	
Polarization Range	±100°	
Weight	550 k	kg
Reflector Material	Eight Segment Glass Fiber-Reinforced Polyester	
SPEED	Minimum	Maksimum
Elevation	0.1°/sec	1°/sec
Azimuth	0.1°/sec	1°/sec

ENVIRONMENTAL SPECIFICATION		
	Operational	Survival
Wind Load	100km/h	160 km/h
Ambient Temperature	-30°C to +60°C	-40°C to 70°C
Humidity	%0 - %100	%0 - %100



Polarization

0.5°/sec

13°/sec

SM450-Ro FIXED MOTORIZED ANTENNA SOLUTION

- 4.5 meter receive only parabolic antenna
- Low transportation cost with eight panel reflector
- Compliant with Ku, C or DBS band feeds
- Fully galvanized steel Az/El mount
- Galvanized king post included
- Optionally, tracking system with the beacon Receiver or DVB tuner card optionally de-icing system
- Optionally de-icing system



- SM450 receive only C Band or Ku-Band antenna is a high performance, powerful and efficient motorised antenna system.
- The versatile pedestal mount allows for fixed or motorized applications and features 180 degree azimuth coverage.
- Three axis, motorized system with 180 degrees azimuth adjustment
- Integrated database for potentially accessible satellite



Mechanical Limit Switches

Provides limitation for the 3-axis movement, stow position & status control by 8-limit switches

DVB Tuner Card & Beacon Reciver

Provides tracking specification to the antenna DVB tuner card is a solution just for Ku-Band but beacon receiver can provide the both band antennas.

Applicable Options

2 port receive, de-icing,tracking system,C or Ku Feeds.

Antenna Control Capabilities

Level 1 : Simple version to control azimuth, elevation, polarization movement, automatic stow and deploy to preset position.

Level 2: Automatic antenna pointing to selected satellite by using GPS and fluxgate compass.

Level 3: Tracking of an inclined orbit satellite by using tuner card or Beacon receiver



SM450-Ro FIXED MOTORIZED ANTENNA SOLUTION

RF SPECIFICATIONS		
	C-Band	Ku-Band
Frequency Band	3.7 - 4.2 GHz	Rx 10.95-12.75 GHz
Polarization	Linear or Circular	Linear
Antenna Gain	42 . 9 dBi	52,6 dBi
Antenna Noise Temperature(30° elevation)	23 K	22 K
Antenna Cross Polarization Isolation	35 dB on Axis	35 dB on Axis
Copolar Sidelobe Envelope	0 dB	0 dB
3 dB Beamwidth	1,2 °	0,42°
VSWR	1:3:1 Max	1,3:1 Max
Feed Interface	CPR 229	WR-75 Flat Flange

MECHANICAL SPECIFICATIONS

Antenna Geometry Parabolic, Front Feed

Antenna Reflector Effective Aperture 4.5 m

Ports 2 ports

Elevation Range 0° -70 $^{\circ}$ (Adjustable 20 $^{\circ}$ -90 $^{\circ}$)
Azimuth Range $\pm 150^{\circ}$ (Optionally $\pm 180^{\circ}$)

Polarization Range ±100°

Weight 700 kg

Reflector Material Glass Fiber-Reinforced Polyester

SPEED	Minimum	Maksimum
Elevation	0.1°/sec	1°/sec
Azimuth	0.1°/sec	1°/sec
Polarization	0.5°/sec	13°/sec

ENVIRONMENTAL SPECIFICATION

	Operational	Survival
Wind Load	100km/h	160 km/h
Ambient Temperature	-30°C to +60°C	-40°C to 70°C
Humidity	%0 - %100	%0 - %100



SWB450-4AXIS WIDE BAND ANTENNA SOLUTION

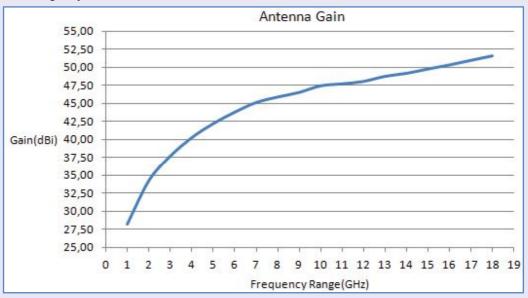
- ➤ 4.5 meter receive only parabolic antenna
- > The same feed system covers 1-18 GHz including C, X, Ku bands.
- Low transportation cost with eight panel reflector
- Movement on 4 axis
- Changing feed position, to adjust the gain according to the frequency
- Optionally, tracking system with the beacon receiver or DVB tuner card
- Optionally de-icing system



- SWB450-4AXIS created as wide band antenna between 1-18 GHz. These frequency values provide three different covered band as C Band, X Band, Ku Band at the same feed structure.
- Treditional motorized antennas has three axis movement but SWB-450-4AXIS provides you 4 axis movement as elevation, azimuth, polarization and special feed arm movement.
- Feed arm movement is performed on 180 mm mechanism. Feed system moves over it and operator sets the distance on the antenna controller unit for each frequency.
- Optionally automatic distance regulation can provide on the antenna controller.

ADVANTAGES;

With this feed system you can adapt your antenna system different bands without changing feed. The feed system can complete the frequency change between 1-18 GHz in 2 minutes and this movement time is changable according to your needs. Also this feed arm movement can manage by the operator or antenna controller automatically.4th axis movement get you more efficient antenna system that you can configure according to your needs.





SWB450-4AXIS WIDE BAND ANTENNA SOLUTION

RF SPECIFICATIONS

Frequency Band

Polarization

Antenna Gain

Antenna Noise Temperature (30° elevation)

3 dB Beamwidth

Feed Interface

Rx 0.9-18 GHz

Linear Polarization

28.25 Ghz(@0.9 Ghz) 51.5 dBi(@18 Ghz)

60.3 K

5° to 0.33°

SMA for Both Polarization

MECHANICAL SPECIFICATIONS

Antenna Geometry

Antenna Reflector Effective Aperture

Ports

Elevation Range

Azimuth Range

Polarization Range

Feed Movement

Feed Arm Length

Weight

Reflector Material

Parabolic, Front Feed

4,5 m

2 ports

0°-70°(Adjustable 20°-90°)

±150°(Optionally ±180°)

±120°

1.5 millimeter/second

180 millimeter

700 kg

Glass Fiber-Reinforced Polyester

SPEED	Minimum	Maksimum
Elevation	0.1°/sec	1°/sec
Azimuth	0.1°/sec	1°/sec
Polarization	0.5°/sec	9°/sec

ENVIRONMENTAL SPECIFICATION Operational Survival Wind Load 100km/h 160 km/h Ambient Temperature -30°C to +60°C -40°C to 70°C Humidity %0 - %100 %0-%100



FIXED NON-MOTORIZED SOLUTIONS

SVS Telekom also presents non-motorized fixed earth stations within the scope of global integration projects. As opposed to fixed motorized antennas, SVS don't have any role as a manufacturer for non-motorized fixed antennas. SVS has global suppliers around the world such as Prodelin, Skyware, Vertex, ASC Signal(Andrew), etc. Some of these global projects that we used non-motorized and/or motorized earth stations with larger reflector sizes of these manufacturers can be shared as follows;



ARABSAT RF and Head-End Project, Riyadh



MONACO TELECOM 7.3m IP Trunking Project



AL-JAZEERA 6.3m Head-End Project, Qatar



SATELLITE SYSTEMS

GLOBAL SUPPLIERS



































AKS250 ANTENNA CONTROLLER

(FOR FIXED MOTORIZED ANTENNA SOLUTIONS)

- Eutelsat certified auto-pointing
- Control via computer 3-Axis movement
- ➤ Built-in DVB-S/S2 tuner
- > Find satellite automatically
- Quick re-finding by satellite memory
- Define your limits
- The ability to control BUC for VSAT Applications
- > Easy to use, and user friendly access levels
- ➤ Locking into DVB-S/S2 carriers and listing service names
- Spectrum viewer (with software licence option)
- > Automatic or manuel De-ice System controlling
- > RF output activation by the time peaking completes
- ➤ Can operate between -40 to +60°C outdoor temperature
 - AKS250 is a high performance, powerful, and efficient antenna controller system for both mobile and fixed antenna applications.
 - > 3-axis movement, auto stow / auto deploy (for mobile antennas)
 - > 1 / 32 or 1 / 255 steps speed adjustment over one screen
 - Find satellite automatically and peak the satellite you find. Recall last satellite info and direct your antenna automatically. Select a satellite from your list of 700 satellites.
 - Inclined satellite orbit tracking (with software licence option)
 - AKS250 can track satellites via DVB tuner, referring to a carrier signal or a beacon receiver. Tracking can be achieved by two ways; Step Track and Memory Track.
 - > Names, coordinates and parameters of 50 satellites can be stored
 - > English and Turkish menu options, manual and auto movement specifications are on the same screen.
 - > PC access via ethernet or serial ports(RS232/485).

Power Consumption	360W Max.(Fixed ant. 550W Max.)
Remote Control	Ethernet or RS485/RS232 Connection
Working Temperature	0-60 Degrees
Dimensions	H:2RU,W19",D:420 mm
Connection	30 pins Circular Connection 5x9 pinsD-SUB RJ45 Ethernet and F-Connector for L Band







SATELLITE SYSTEMS

CAPABILITIES

- Control both 2-axis and 3-axis dishes. AKS250 has limit switches and sensor inputs inside for movement.
- > Through up limit, down limit, and azimuth inhibit information you can enable / disable azimuth movement.
- > There are 3 coordinations info to enable / disable azimuth movement; CW limit, CCW Limit and center info.
- > There are 3 coordinations info to enable / disable elevation movement; up limit, down limit, and azimuth inhibit.
- > There are 2 coordinations info to enable / disable polarization movement; polarization CW limit, polarization CCW limit.



Sensors that can be used with AKS250:

Resolver, Pulse Counter, Optic Encoder, Magnetic Switch, Inductive Sensor, Absolute Shaft Encoder, Potantiometer, Inclinometer.

The position of antenna can be seen as counter or angle:

- > Sensitivity is 360° equal 65536 pulse when the counter mode is selected.
- > Sensitivity is 0.05° (0,01° with resolver option)when the angle mode is selected.
- > 35V DC, 200W max. motors can be used for azimuth and elevation. Polarization needs 24V DC, 50W max.
- > By using smart movement features of AKS250 an alarm or preventing movement can be generated.
- This will be done by AKS250 by controlling every step of an ordered movement. (i.e over current alarm, lack of DC voltage or ordered movement out of limits.
- AKS250 has independent inputs and outputs that can provide a lot of options such as monitoring temperature of the antenna, monitoring and controlling de-ice system and others.





SVS satellite systems



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