

# TELESAT 565 • TELESAT 585

DVB-S2<sup>®</sup>



Installation guide  
and user manual



**TELECO**



## TELECO WARRANTY

Teleco guarantees its satellite dishes and terrestrial antennas against any material and/or construction fault and defect. The warranty offered by TELECO is limited to the free-of-charge replacement or repairing of any parts that are deemed faulty by TELECO. The warranty is applicable for a period of 3 YEARS starting from the product purchase date; however, it will only be considered valid if the Customer is able to produce a written document (invoice or tax receipt) showing the purchase date.

The following is excluded from the TELECO warranty:

- a. Damages caused by incorrect installation and/or use and/or maintenance
- b. Damages resulting from product alterations not authorised by Teleco
- c. Damages resulting from the use of spare parts different from original Teleco parts
- d. Damages resulting from repairs carried out by personnel not authorised by Teleco
- e. Normal part wear;
- f. Expenses incurred for spare parts transport between the Customer's and the service centre
- g. Damages that may occur during transport:  
the Customer shall always be responsible for transport risks.

### Information

Congratulations on your purchase! TeleSat S is among the most technologically advanced products in the field of satellite TV reception. This handbook has been prepared to provide information on how to install, use, maintain and technical specifications your TeleSat S.

For additional information, please contact your local dealer or directly the manufacturers:

**TELECO s.p.a.**  
Via E. Majorana 49  
48022 LUGO (RA)

Web site: [www.telecogroup.com](http://www.telecogroup.com)

Technical attendance: 899.899.856

TELECO .p.a. declines all responsibility for any errors contained in this manual. All the contained information are up to the dates of printing and of the above-mentioned software revisions. TELECO .p.a. reserves the right to introduce any modification made necessary by the development of its products.

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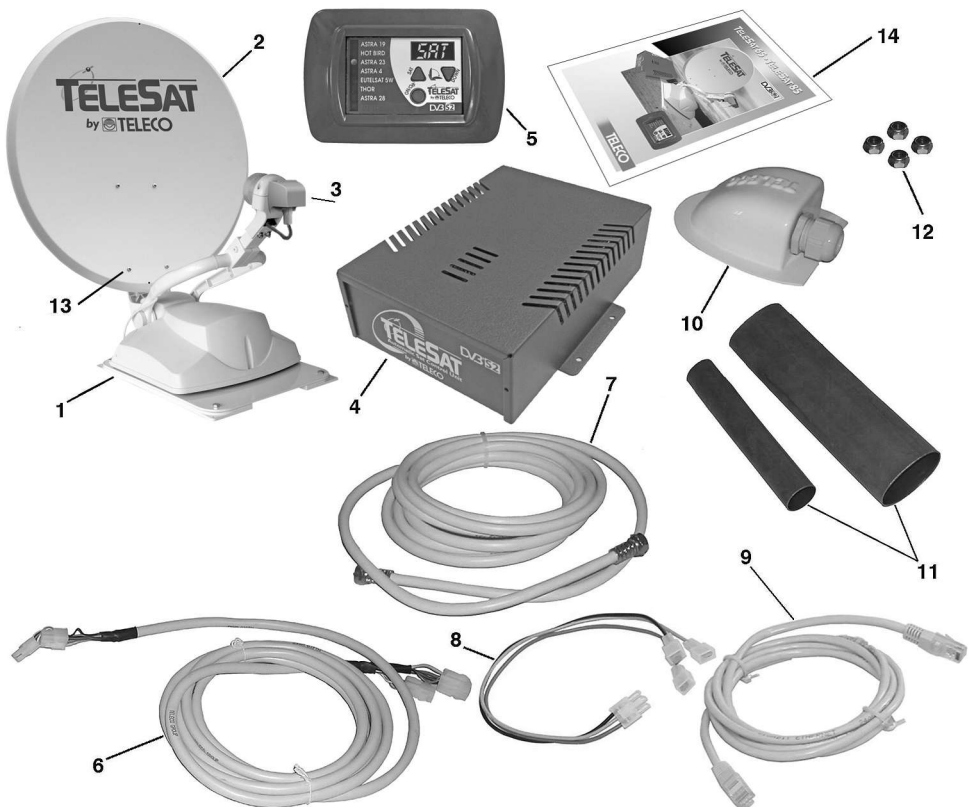


**Recycling:** with a view to reducing disposal of waste electrical and electronic equipment as much as possible, do not throw out this end of life appliance together with other unsorted municipal waste, but make use of a recycling centre.

## List of accessories

TeleSat S is delivered inside a cardboard case that has been specially made to protect it from knocks and pressure. The following accessories are supplied:

- 1 External motor-driven unit
- 2 65 - 85 cm dish
- 3 Universal LNB
- 4 Control unit
- 5 Wall-mounted control panel
- 6 Motor connecting cable extension
- 7 Coaxial cable extension for antenna signal
- 8 Power Supply Cable
- 9 Control unit/control panel connection cable
- 10 Waterproof box to pass leads through to interior
- 11 Heat-shrinking sheaths
- 12 No. 4 Locknuts M6
- 13 No. 4 Screws and Locknuts – M6
- 14 User's manual



## Important notice

**TeleSat S is packaged in two separate cartons for transport reasons:**

- a) the first package contains the driving unit with all the cables, and the Control unit.
- b) the second package only contains the dish.

• It is important to check that the dish has not been damaged during transport when the package is opened. In particular, check the following well:

• By resting the dish edge against a flat surface (e.g. the floor or a wall) check that it makes contact to the surface all around. If it is not so, try and make the edge level, without denting the dish, or call our After-Sales Service.

**YES**

**NO**



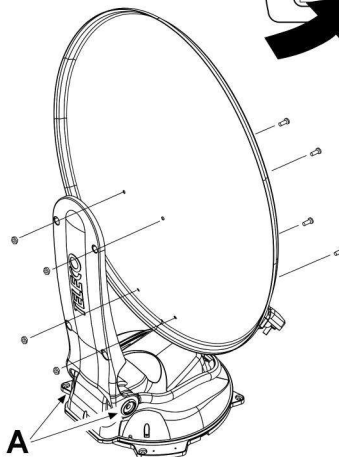
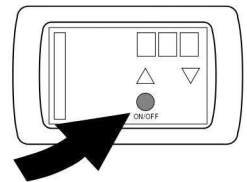
• After checking that everything is in order, install the dish on the driving unit as follows:

- 1) Temporarily connect the Control unit to the driving unit through the grey motor cable.
- 2) Connect the Control panel to the Control unit through the RJ45 cable.
- 3) Power the Control unit using a battery.

**Warning: For correct connection of the wiring and to prevent damage to the equipment please consult page 9 “Connections”.**

- 4) Press the switch-on button on the control panel and wait for the dish support mast to rise.
- 5) Once the desired position has been reached, turn off the TeleSat S via the same button.
- 6) Secure the dish to the mast and screw down the four supplied screws.
- 7) Turn the unit on again and wait for the antenna to close.

- 8) **Disconnect the the Control unit, the battery and install the driving unit on the vehicle**

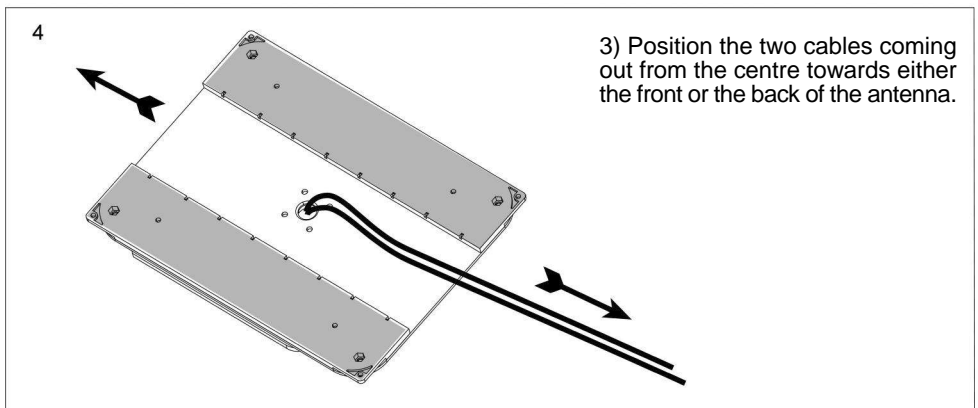
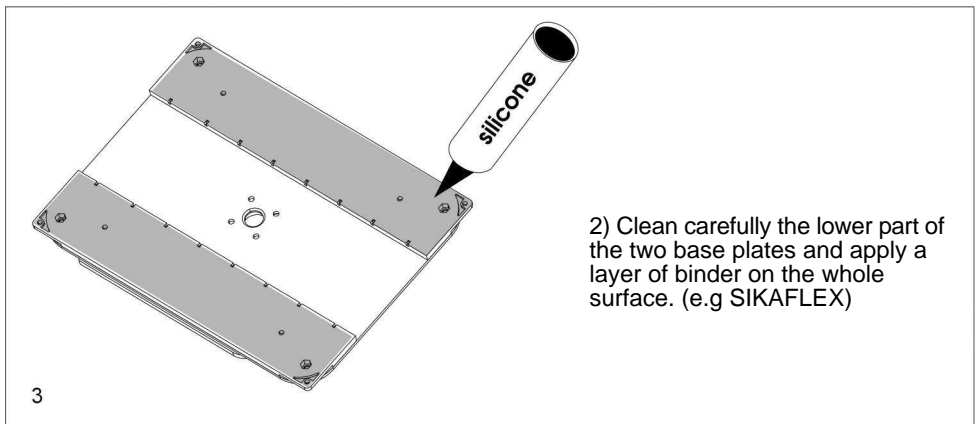
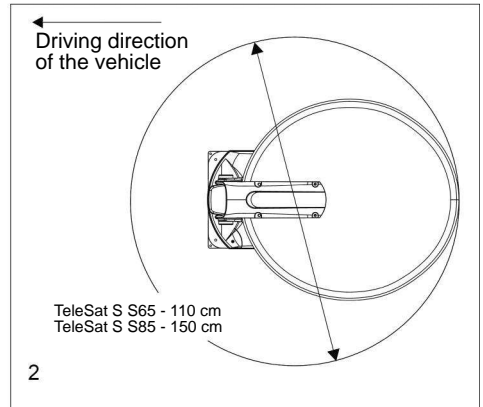
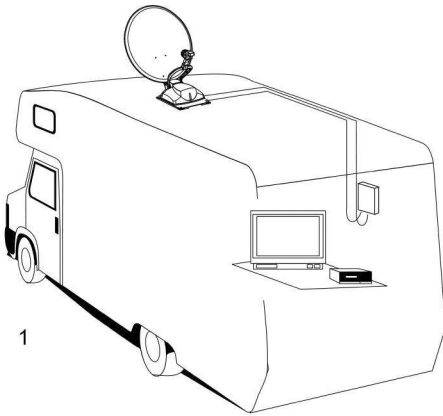


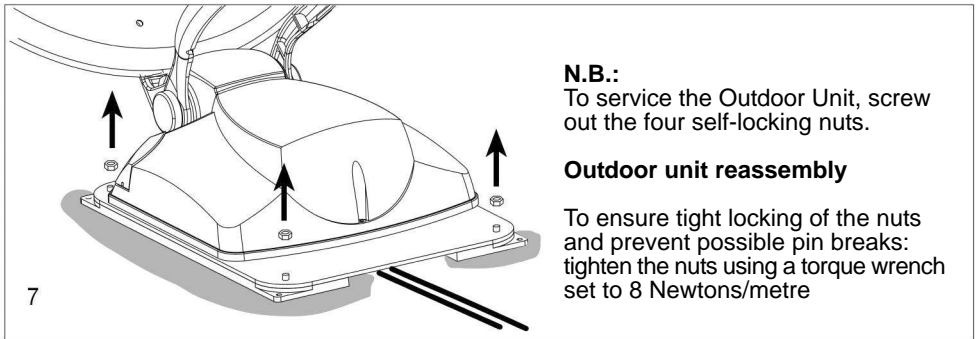
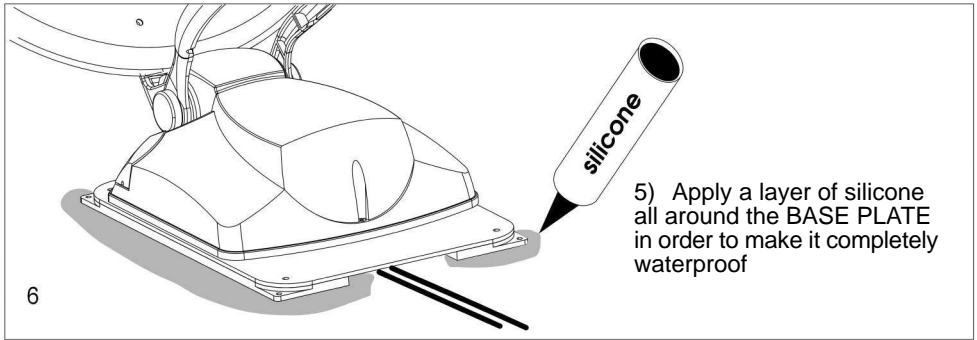
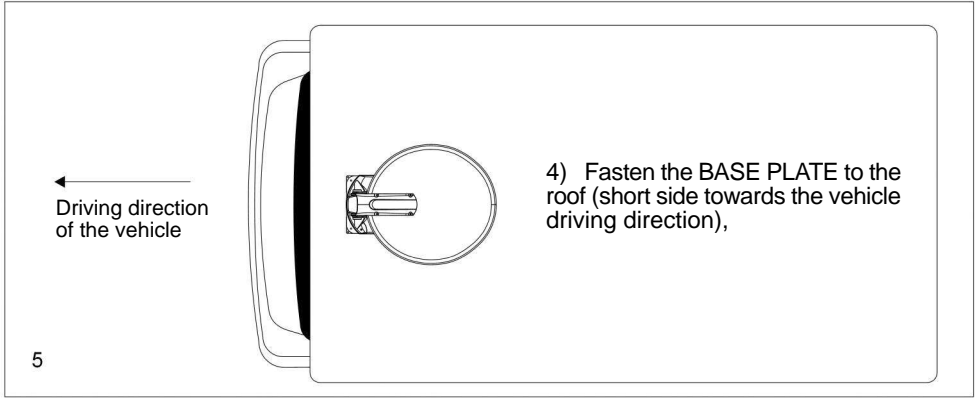
## Warning:

**NEVER** loosen the two dish arm lock screws (A) to attach the dish as this will result in loss of alignment with the antenna.

## Assembly instructions

- 1) On the roof of the vehicle, choose a free area large enough to allow the antenna to revolve (Fig. 2).



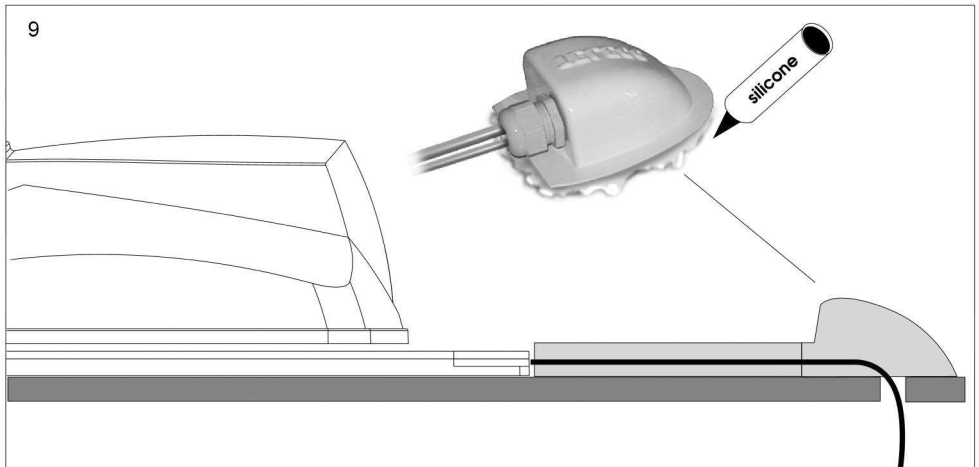
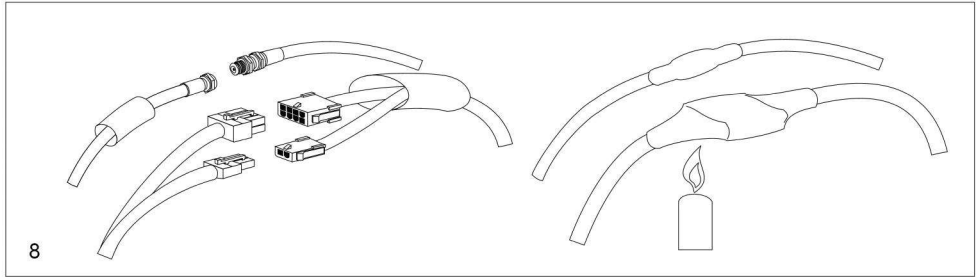




## Connection with extension

**WARNING** The Grey and Black cables coming out of the Outside Unit are generally long enough to allow for connection to the Control unit. If it is not so, use the extension cables and perform the following operations:

- 1) Connect the two cables coming from the centre of the OUTSIDE UNIT to the two supplied extensions, waterproofing the connectors using the two pieces of heat-shrinking tube.



- 2) Accomodate the cables into a protection raceway up to the point where the cables go into the vehicle, using the suitable supplied fairlead.

**Seal the fairlead carefully so as to prevent any infiltration by water**

## Control Unit Installation

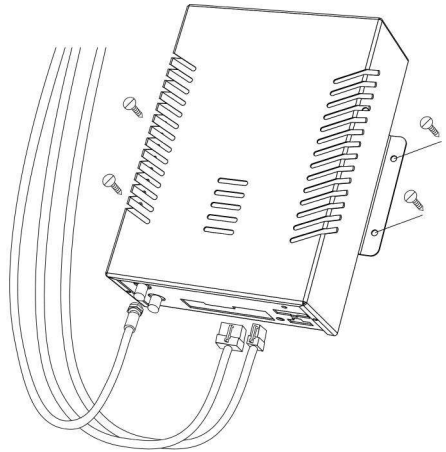
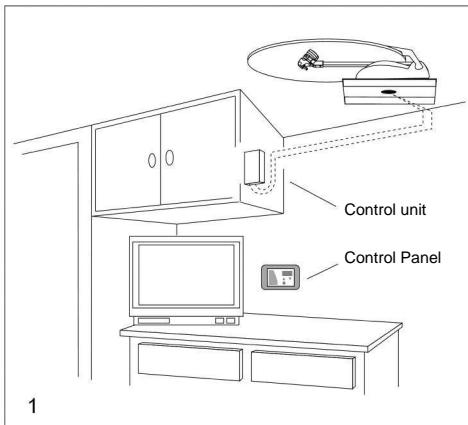
- 1) Position the Control unit in an easy accessible, ventilated compartment.

### **!** WARNING:

**Do not install the Control unit in areas where liquids can be spilled, since this could cause irreparable damage.**

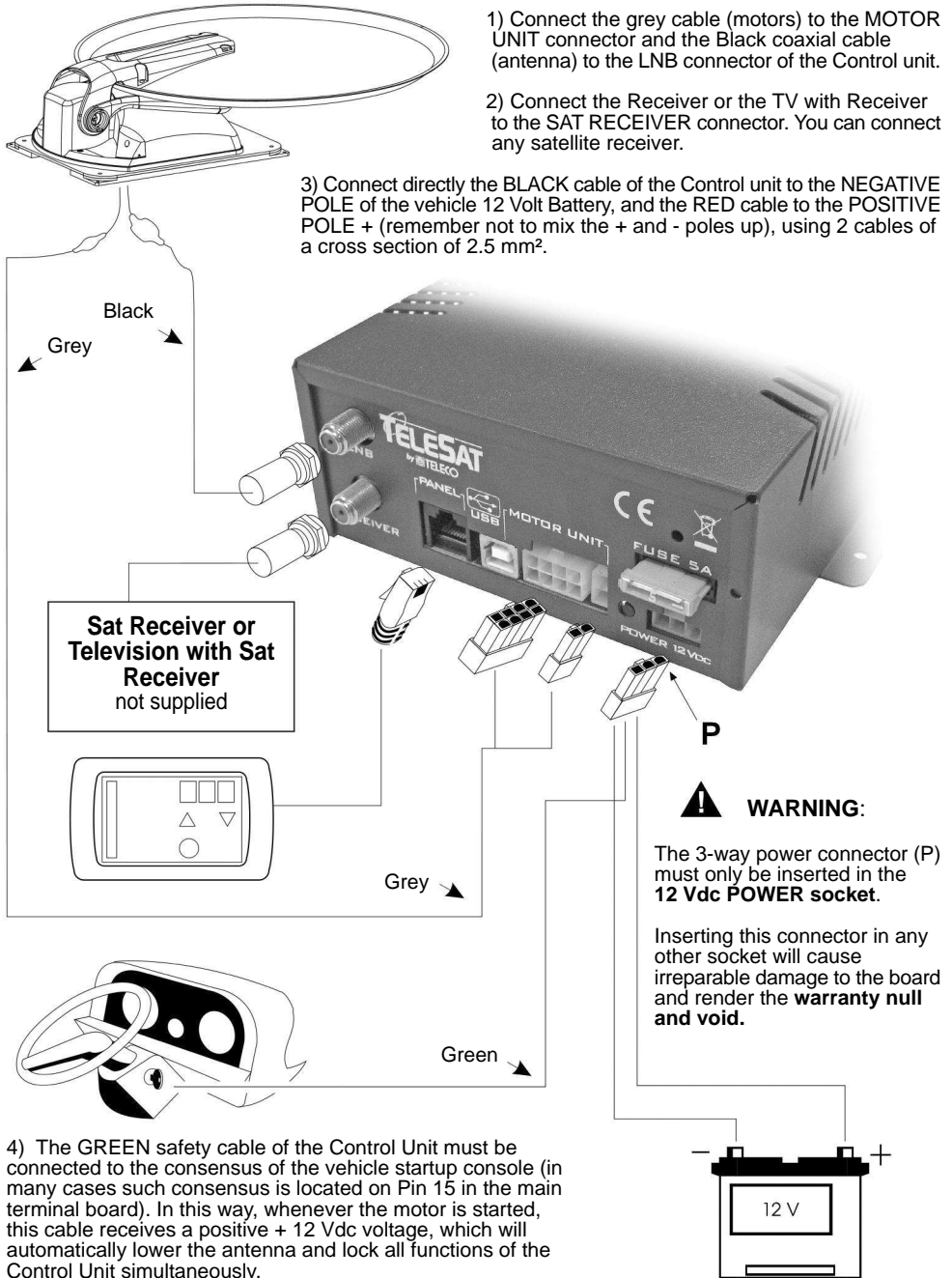
**Do not install the Control unit in very small, unventilated compartments, since overheating could compromise its functionality and render the warranty null and void.**

- 2) Place the Control panel comando in an easily accessible, visible position.
- 3) Install the connection cables (Grey and Black) until you reach the OUTSIDE UNIT installation area.



**Note:** Install the wall-mounted control unit with the (Grey and Black) connection cables bent as shown in the picture. This installation tip will prevent any condensation water from flowing down the cables into your control unit electronics - damaging it beyond repair and voiding your warranty.

## Connections



## **WARNING**

**This technical note is to call the attention of the installation personnel to certain details of TeleSat S installation. During installation, you must take the following precautions:**

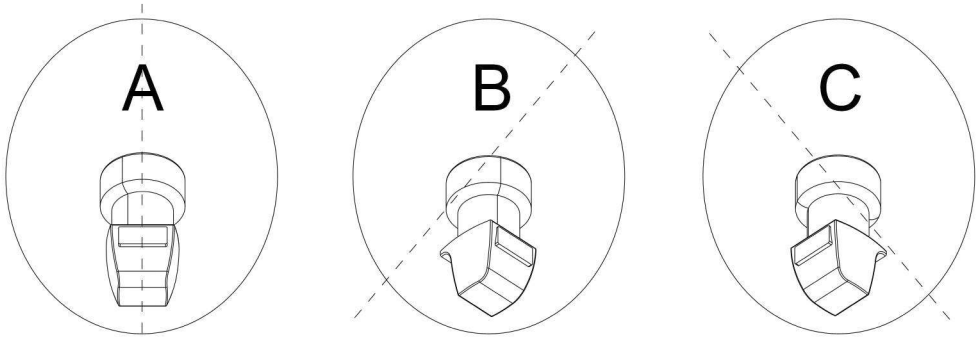
The power supply cable must directly come from the battery and must have no junctions. Minimum cross section of the cable is 2,5 mm<sup>2</sup>. For cable lengths equal to or above 6 metres, the minimum cross-section is 4 mm<sup>2</sup>. Only the TeleSat S must be connected to this cable; all the other devices must be connected to another power supply cable.

The cable connecting the driving unit to the TeleSat S Control unit must NEVER be cut for any reason whatsoever: should the cable turn out to be too long, wind the extra part into a coil in a free area of the vehicle. Leave a little cable in the driving unit area; should any technical operation be required, it will make it easier to remove the driving unit.

**Failure to observe these instructions shall render the Warranty null and void.**

### **LNB rotation for ideal signal reception in extreme (South-western or South-eastern) areas in Europe**

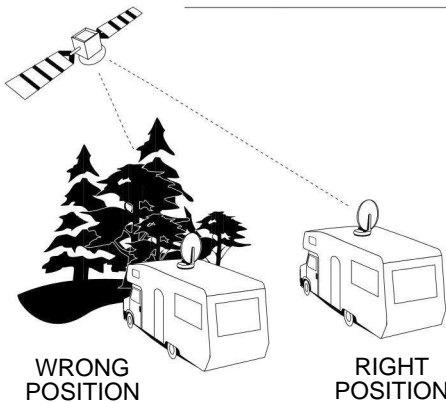
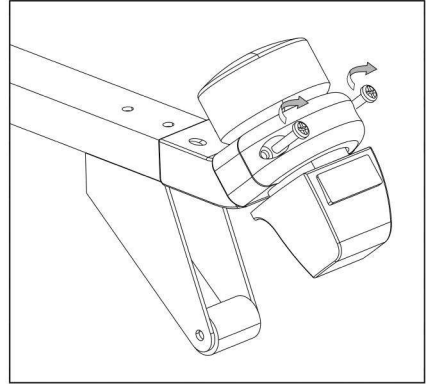
Please be reminded that your outside low-noise block converter (LNB) has its own special mounting position that must be maintained, otherwise you will be unable to receive any signals. The LNB pre-defined installation position is along the dish centre line (Fig. A): in this configuration, the TeleSat S System will operate correctly in most European countries. If, however, you happen to find yourselves very far from the orbital position of your required satellite, you may want to adjust your low-noise block converter angle. This is especially true if you wish to receive satellite signals from Astra 19E, Astra 28E or HotBird 13E and you are in Portugal or Morocco: you will then have to adjust the LNB angle as shown in fig. B, while if you happen to be in Turkey, to receive signals from the same satellites you will have to adjust your LNB to the position shown in fig. C.



Place	Position	HotBird 13E	Astra 19E	Astra 28E
Lisbona	B	25°	28°	37°
Casablanca	B	27°	34°	41°
Ankara	C	22°	15°	5°

## LNB tilt adjustment

- 1) Loosen the LNB U-bolt locking screws
- 2) Turn in either the Clockwise (West) or the Anti-clockwise (South-East) direction
- 3) Lock the LNB again with the special screws



## Important information for proper antenna tracking

- 1) Before performing antenna tracking operation, make sure you have positioned your vehicle so that the view towards the South (where Satellite signals come from) is free from any nearby obstacle (trees, houses, etc.). This way, the antenna will be free to receive signals coming from the satellite.

2) It is also important to know that satellites do not transmit with the same intensity throughout Europe, so if you are outside the reception area, your TeleSat S search might be unsuccessful. The reception areas for each Satellite can be found on the main magazines dealing in this line of business. Also remember that the larger the dish, the more reception area is available.

## WRONG POSITION



## RIGHT POSITION



## Tips on the best use of TeleSat S

When you park your vehicle, make sure that:

- 1) No obstacle (for example trees) is too near your antenna, preventing it from moving freely. No metal or glass wall is very near (about 5 m) the antenna, since this would act as a mirror for satellite signals and could induce the antenna to stop towards it.
  - 2) Remove any snow or ice from the TeleSat S before actuating it in order to avoid wasting battery power trying to lift it.
  - 3) If you decide to turn the engine of your vehicle on in order to re-charge its batteries, with the safety cable connected to the ignition key, the antenna, if lifted, will come down automatically and it will not be possible to lift it again as long as the engine is running.
  - 4) Make sure that your batteries are always sufficiently charged, since, if the voltage falls below 10 Volts, the TeleSat S electronic safety circuit will prevent the antenna from rising.
  - 5) Should you use 12 Volt power supply instead of batteries, be careful to use stabilized power supply being able to provide 5 A continuously and at least 10 A for short periods. At all costs, avoid using low quality, non stabilized battery chargers.
  - 6) **It is recommended not to use the antenna under strong wind conditions (80 km/h). Failure to comply with this condition may result in product degradation which the manufacturer cannot be held responsible for.**
  - 7) **Antenna closing operations, whether by user's control or automatically for vehicle start-up, require variable time. Before starting the vehicle, always make sure that the antenna is fully closed.**
- \* **The manufacturer declines any liability for all degradations suffered by the product owing to misuse.**

## Operation of TeleSat S

TeleSat S is a fully automatic satellite tracking system and can track satellites that emit both DVB-S and DVB-S2 signals.

All the operations of the TeleSat S System are carried out via the Control panel.



### Turning on the TeleSat S

To turn on the TeleSat S System, press the ON/OFF button (3). Upon pressing the button, all signal lights will go on to allow you to check the proper operation of the board. After this step, the message ON will appear on the display (4), the red power supply indicator (6) will go on and one of the LEDs (5) will start flashing to indicate the selected satellite,

### Selecting the satellite

If the flashing LED already corresponds to the desired satellite just wait a few seconds and the antenna will begin its search. Should, instead, the user wish to track a different satellite, he/she must press the SAT key (1) repeatedly until the LED that is on (5) corresponds to the chosen satellite. A few seconds later the antenna will begin the new search.



### Searching the satellite

During the seeking stage, the green LED by the name of the satellite blinks fast, while the message ON appears on the display (4) followed by an animated bar which indicates the rotation of the antenna. The antenna will stop moving as soon as it finds the satellite; in this case the message SAT will be brought to the display and the green signal light will remain always on. At this point the satellite receiver and the desired TV program can be turned on. **The position of the antenna will automatically be saved after first satellite tracking operation: this speeds up tracking when the system is switched back on after parking the antenna.**

### Automatic Parking of antenna via the Control Panel (OFF indicator off)

Should you decide to park (stow) the antenna by pressing key (2), the antenna starts to be lowered and the word OFF appears on the Display. Once the antenna has been completely closed the word OFF disappears and only the Power LED remains on.

### Turning off the TeleSat S

If you wish to turn off the TeleSat S, press the ON/OFF button (3) and make sure that all signal lights are off. In this case the antenna remains in the position it was before turning off. Proper connection of the green safety cable ensures that the antenna is closed as long as the vehicle moves.

### Error code display

In the event of faults or malfunctions, the Control Panel shows the corresponding Error Code on the display:

- ER1** No satellite found. It is necessary to check that the TeleSat S system is not obstructed SOUTH of the satellite.
- ER2** The elevation motor is locked. Make sure that no foreign matters hinder regular movement
- ER3** The rotation motor is locked. Make sure that no foreign matters hinder regular movement
- ER9** During the switch-on stage a fault occurred in the driving motor. Make sure that no foreign matters hinder regular movement.



## Troubleshooting

• If the TeleSat S has not found the satellite after a complete search, check the following:

- a) Is the view towards the South free from any obstacle?
- b) Is the place you are at within the reception area of the satellite you have chosen?
- c) Is the cable connecting the LNB to the antenna firmly fastened?  
It could have been ripped off or come loose because of contact with an unexpected obstacle.
- d) Are all the connections on the Control unit properly set up?

• **If the antenna has stopped after performing tracking, but neither messages nor images appear on the screen:**

- a) Have you switched your receiver on ?
- b) Have you switched your TV set on ?
- c) Have you selected the right satellite ? Make sure that the services you wish to receive are really available on the required satellite.

• **If the Control panel does not turn on when you press the ON/OFF button, check the following:**

- a) Is the engine of your vehicle running? Turn it off, since this means the safety system which keeps the antenna down is operating.
- b) Is the battery charged?
- c) Is the fuse on the power lead intact? Replace it with a 5A one of the same type.

## Technical specifications

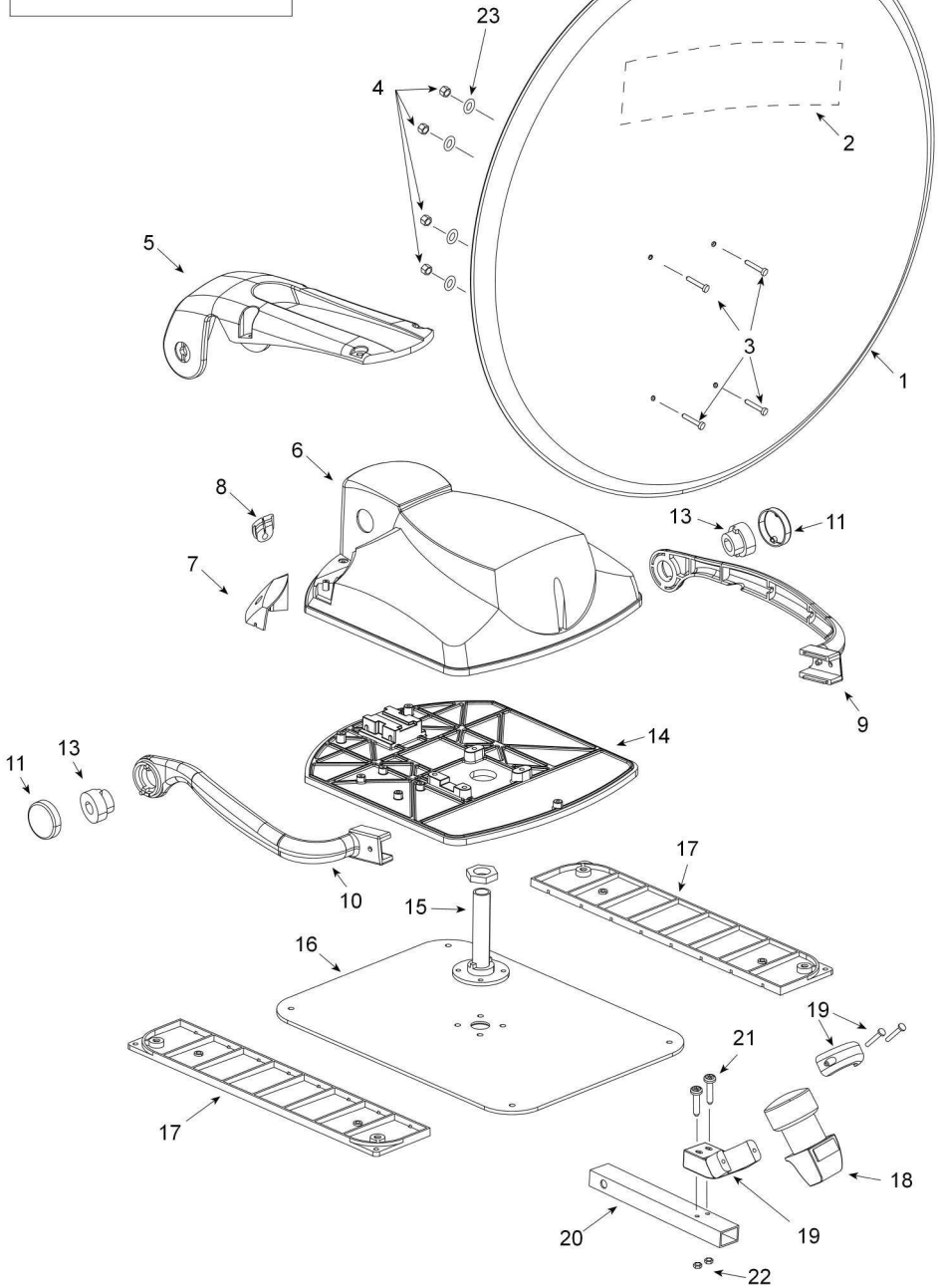
### SPECIFICATIONS

Search system	<b>Fully automatic, NID recognition according to the DVB-SI EN 300 468 specifications with DVBS2 tuner.</b>
Satellites which can be set	7
Extensions	USB 1.0 Port Control panel

### MISCELLANEA

Power supply	12 Vdc ( 10 - 15 Vdc )
Absorbed current	5 A max.
Current in stand-by	< 5 mA
Fuse	5 A
Dimensions	160 x 187 x 58 mm (Control unit) 120 x 35 x 80 mm (Control panel)
Weight	~ 1 kg (Control unit and Control panel)
(outside driving unit)	TeleSat S65: ~ 9 kg. TeleSat S85: ~ 10,6 kg

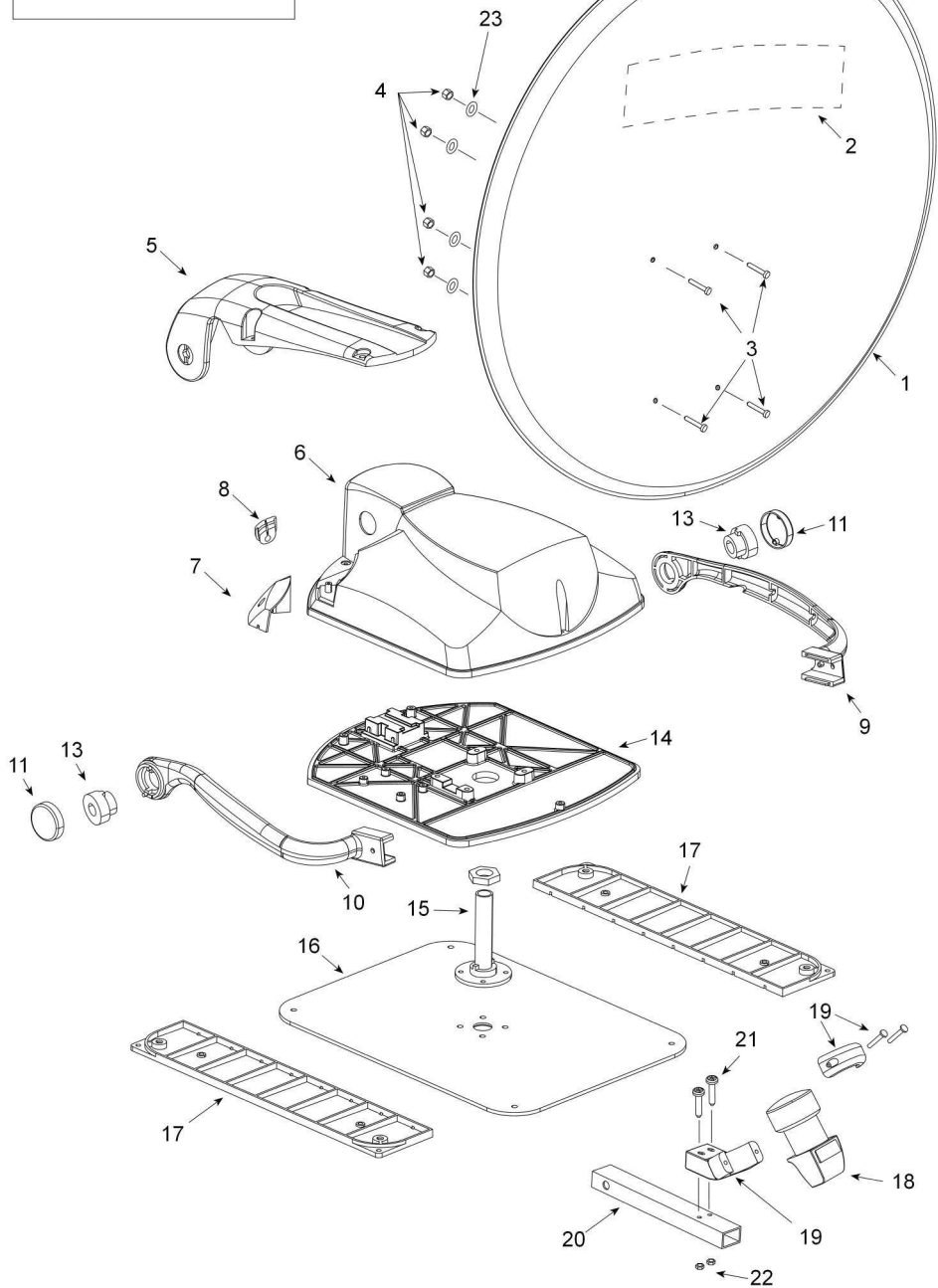
# TeleSat S 65



## TeleSat S 65

Pos	Code	Q.tà	Description	
1	10487		Parabolic antenna D=650 mm	1
2	15116		Sticker TeleSat S	1
3	08595		Screw M5X14	4
4	03685		Self-locking nut M5 UNI 7474	4
5	12544		65 Dish arm aluminium	1
6	12571		Plastic cover	1
7	12859		Plastic door for cable	1
8	11008		Hole Gromet	1
9	12858		Lnb arm left	1
10	12857		Lnb arm right	1
11	12860		Plastic cover for screw lnb arm	2
13	12319		Dish arm insert in zamak	2
14	12316		Motor base	1
15	12318		Central shaft	1
16	12317		Base for shaft	1
17	12320		Aluminium protection base	2
18	15718		LNB STARK S1	1
19	13110		Complete white support for LNB ABS	1
20	12679		LNB holder tube 650 TeleSat S	1
21	09014		Screw M5X14	2
22	09015		Sut M5	2
23	15616		Flat washer D 5	4

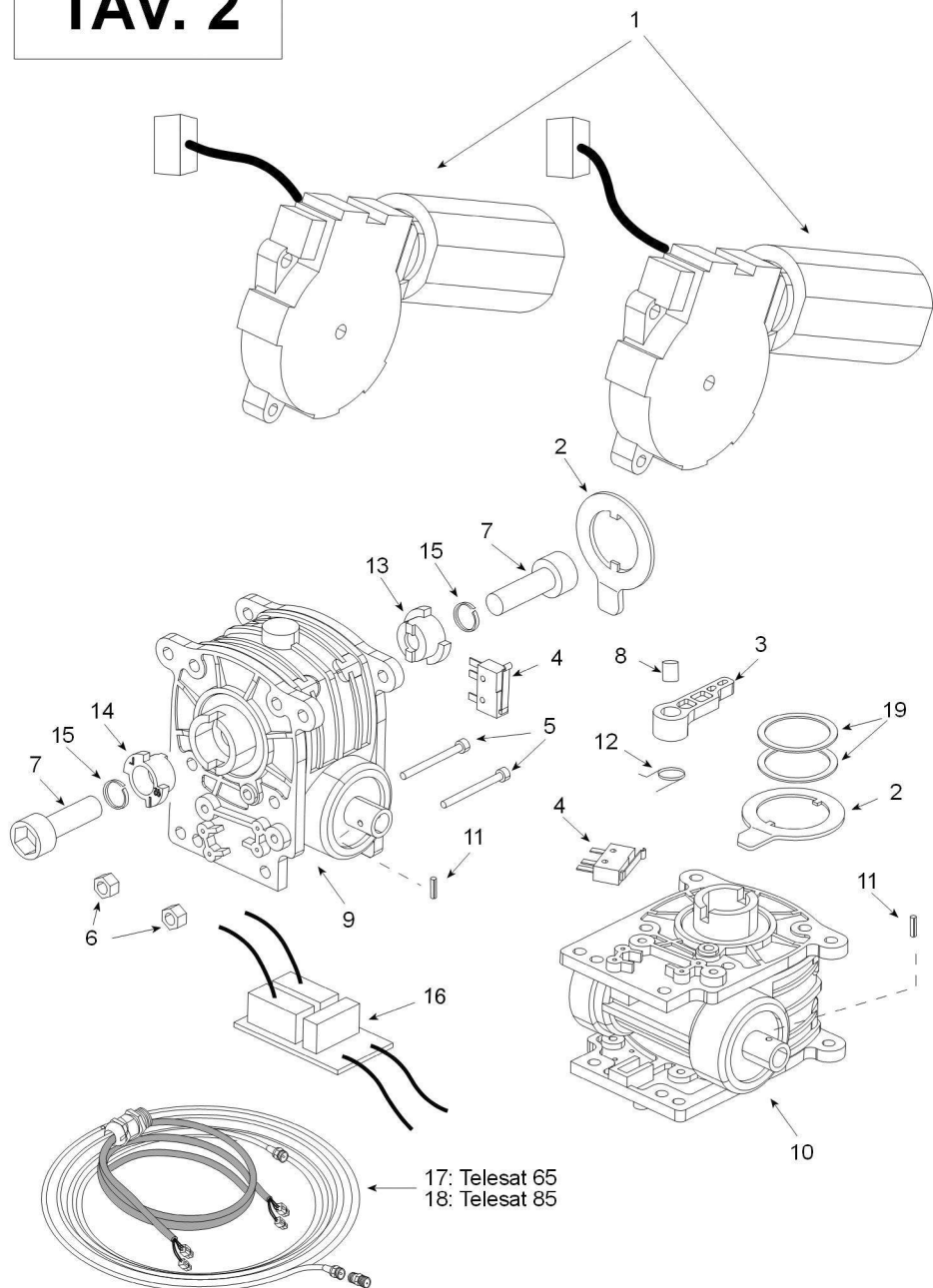
# TeleSat S 85



## TeleSat S 85

Pos	Code	Q.tà	Description	
1	10488		Parabolic antenna D=850 mm	1
2	15116		Sticker TeleSat S	1
3	15614		Screw M6X16	4
4	03684		Self-locking nut M6 UNI 7474	4
5	12543		85 Dish arm aluminium	1
6	12571		Plastic cover	1
7	12859		Plastic door for cable	1
8	11008		Hole Gromet	1
9	12858		Lnb arm left	1
10	12857		Lnb arm right	1
11	12860		Plastic cover for screw lnb arm	2
13	12319		Dish arm insert in zamak	2
14	12316		Motor base	1
15	12318		Central shaft	1
16	12317		Base for shaft	1
17	12320		Aluminium protection base	2
18	15718		LNB STARK S1	1
19	13110		Complete white support for LNB ABS	1
20	12680		LNB holder tube 850 TeleSat S	1
21	09014		Screw M5X14	2
22	09015		Sut M5	2
23	15617		Flat washer D 6	4

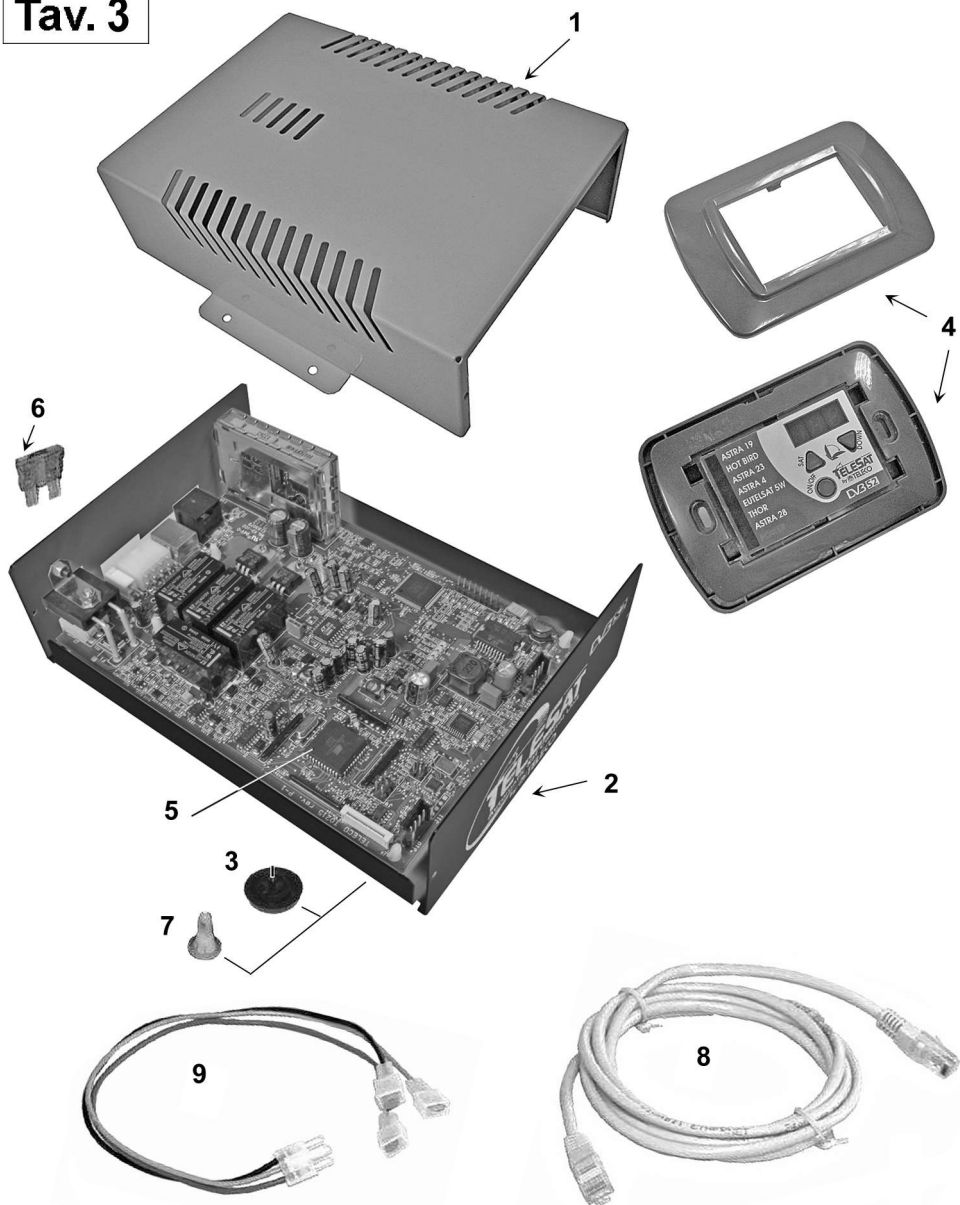
# TAV. 2



## TAV 2

Pos	Code	Q.tà	Description
1	11161	Electric motor	2
2	12322	Rotating slider	2
3	12321	Switch pusher in zamak	1
4	12671	Waterproof microswitch	2
5	07503	Screw M5x60	2
6	03685	Self-locking nut M5 UNI7474	2
7	13434	Screw M10X40 UNI 5931	2
8	12856	Brass bushing	1
9	12570	Vertical gear	1
10	12569	Horizontal gear	1
11	09241	Spring pin 3x20	2
12	13130	Spring for commutator	1
13	12862	Lnb bushing left	1
14	12861	Lnb bushing right	1
15	13503	Spring washer	2
16	12616	Connector strip T0074D	1
17	13568	Motor Cable Kit 2,5 mt ( TeleSat S 65 )	1
18	14749	Motor Cable Kit 2,5 mt ( TeleSat S 85 )	1
19	16424	Washer	2

**Tav. 3**

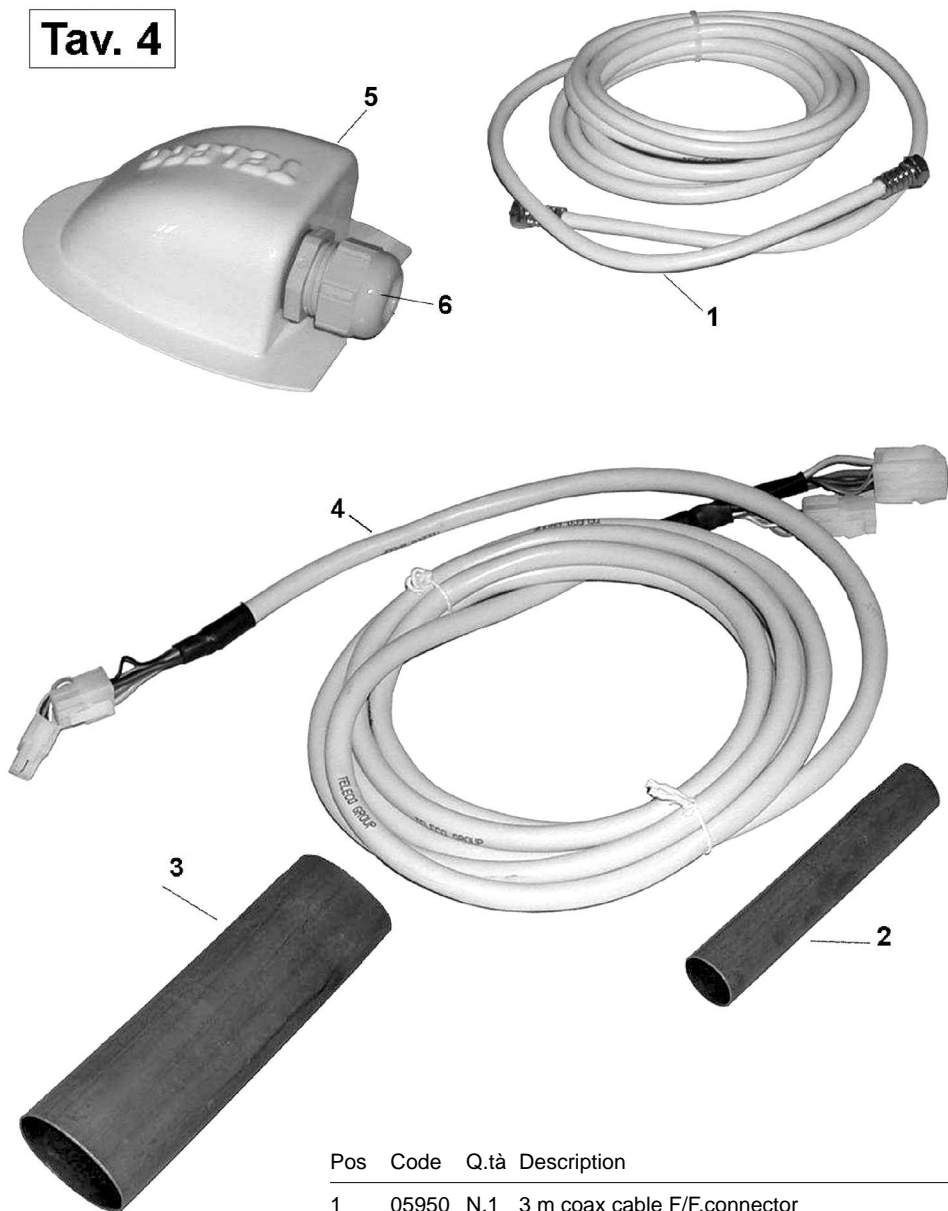


Pos	Code	Q.tà	Description
1	15056	N.1	Control unit lid
2	15054	N.1	Control unit bottom
3	09835	N.4	Black rubber foot
4	15112	N.1	Control panel
5	14918	N.1	T0215 board

Pos	Code	Q.tà	Description
6	02203	N.1	4A Fuse
7	01458	N.4	Support
8	11742	N.1	PATCH UTP Cable
9	09318	N.1	Power supply cable



**Tav. 4**



Pos	Code	Q.tà	Description
1	05950	N.1	3 m coax cable F/F.connector
2	03598	N.1	Shrink-wrap sheath
3	03597	N.1	Shrink-wrap sheath
4	13018	N.1	Motor connecting cable extension 2+8 poles 3mt with connector
5	13171	N.1	Cable cover abs
6	06900	N.1	Gasket O-SEALING VITON PG21
7	06901	N.1	SKINTOP cable gland PG21
8	06898	N.1	SKINTOP plastic nut PG21



## CONFORMITY CERTIFICATE

**The manufacturer Teleco Spa**

Via Majorana nr. 49, 48022 Lugo ( RA )  
Declares under its own responsibility that the following products:

**TeleSat S 65**  
**TeleSat S 85**

which are the subject of this certificate, conform to the following norms:

EN 60065: 2002  
EN 55013: 2001 + A1: 2003  
EN 61000 – 3 - 2: 2000 + A2: 2005  
EN 61000 – 3 – 3: 1995 + A1: 2001 + A2: 2005  
EN 55020: 2002 + A2: 2005

according to the terms of the European directive 2006/95/EC  
Low Voltage ( modified by 93/68/CEE ) and  
2004/108/CEE of Electromagnetic Compatibility  
(modified by 92/31/CEE e 93/68/CEE ) of the European Parliament.

Lugo 21 / 05 / 2015

THE PRESIDENT

Ing. Raul Fabbri





Group  
**TELECO**



 **TELECO** SPA  
ITALY

Via E. Majorana 49  
48022 LUGO ( RA )  
Tel. + 39 0545 25037  
Fax. + 39 0545 32064  
mail: info@telecogroup.com  
www.telecogroup.com  
Assistenza 899 899 856

 **TELECO** GmbH  
DEUTSCHLAND

82041 Deisenhofen  
Tel. 08031 98939  
Fax 08031 98949  
telecogmbh@telecogroup.com  
www.telecogroup.com

 **TELECO** SCS  
FRANCE

3, Impasse des Iles  
ZA La Maladière  
07300 St Jean de Muzols  
mail: contact@telecogroup.fr  
www.telecogroup.fr

 **Telair** SRL  
ITALY

Via E. Majorana 49  
48022 LUGO ( RA )  
Tel. + 39 0545 25037  
Fax. + 39 0545 32064  
mail: telair@telecogroup.com  
www.telecogroup.com

## IN EUROPE:

**GREAT BRITAIN - SCAN TERIEUR LTD**  
30, The Metro Centre, Tolpits Lane - Watford,  
Herts - England - WD18 9XG  
Tel. 01923 800353 - Fax 01923 220358  
e-mail: info@scan-terieur.com  
www.scan-terieur.com

**THE NETHERLANDS/BELGIUM/LUXEMBOURG/DENMARK/SWEDEN**  
KARMAN TRADING  
Tel. +31 ( 0 ) 341 722450 - Fax +31 ( 0 ) 341 722451  
e-mail: info@karmantrading.eu  
www.karmantrading.eu

**FRANCE - TELECO SAS**  
3, impasse des Iles - ZA La Maladière  
07300 St Jean de Muzols - France  
Tél. 04 75 08 49 17 - Fax 09 70 32 83 00  
contact@telecogroup.fr  
www.telecogroup.fr

**SERVICE COMMERCIAL :**  
Jean-Philippe Bleyes  
Tél. 02 48 58 03 67 Fax 02 48 58 35 85  
teleco.telair@bleysetd.com

**Service Technique :**  
Tél. 06 83 31 44 05 ou 04 75 08 28 25  
www.techmobilefrance.com

**ESPAÑA - ADD SICMAP S.L.**  
EVA Caravan - Via Sergia 92 - Pol. Ind. Pla d'en Boet II  
08302 MATARO ( Barcelona )  
Tel. 93 790 35 26 - Fax. 93 796 21 17  
info@addsicmap.com  
**Servicio técnico:** Fills de Rocha i Lopez, S.L- C/Goya,4  
08903 L'Hospitalet de Llogrebat - Barcelona - España  
Tel. 933 333 753 - Fax 933 337 236  
fillsrocha@fillsrocha.com

**ÖSTERREICH - TELECO GmbH**  
82041 Deisenhofen - Deutschland  
Tel. 0049 8031 98939 - Fax. 0049 8031 98949  
telecogmbh@telecogroup.com  
www.telecogroup.com  
**SERVICE 0900 94 94 70**

**DEUTSCHLAND - TELECO GmbH**  
82041 Deisenhofen - Deutschland  
Tel. 08031 98939 - Fax 08031 98949  
telecogmbh@telecogroup.com  
www.telecogroup.com  
**VERTRETUNG:**  
**Zimmer - Technik für Mobile Freizeit**  
Raiffeisenstr. 6 - 64347 Griesheim  
Tel. 06155 797873 - Fax 06155 797871  
info@zimmer-mobiltechnik.de  
**SERVICE 08921129997**



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