



DESIGN AUTHORIZATION DATA SHEET Nº ERPAS-2869808

Authorization Holder:

SANTIAGO & CINTRA IMPORTAÇÃO E EXPORTAÇÃO LTDA
Rua Barão do Triunfo, 88, 16º Andar, Conj. 1606
Brooklin Paulista, São Paulo/SP
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Brazil

ERPAS-2869808-00
Sheet 01

SENSEFLY
EBEE PLUS /
EBEE SQ

16 April 2019

This data sheet, which is part of Design Authorization Process No. 00066.002002/2018-14, prescribes conditions and limitations under which the product, for which the Design Authorization was issued, meets the requirements of the Brazilian Civil Aviation Special Regulation RBAC-E No. 94, Subpart E.

I - Model eBee Plus, authorized in April 2019.

RPAS This is a Remotely Piloted Aircraft System (RPAS) that is comprised of a Remote Piloted Aircraft (RPA), a ground station modem and a Remote Pilot Station (RPS).

RPA Type: Single body flying wing.
Wingspan: 1,097 mm (43 in).
Material: EPP Foam, carbon structure & composite parts.

Assembly Units:

Fuselage Pair of micro-servos for aileron actuation
PN: SI030001 SenseFly PN: MCMOT00029
(See NOTE 9)

Engine
Manufacturer: AXI Model Motors
Model: AXI 2808/20.
ANAC Engine Type Certificate: None.
Type: Electric brushless motor.
SenseFly PN: MCMOT00016

Electronic Speed Controller (ESC)
Manufacturer: YGE
Model: YGE60
SenseFly PN: MCOTH00473

Air Data Link Modem (Transceiver) 2.4 GHz
SenseFly PN: HWPCB00786
ANATEL Homologation Certificate: 02048-15-05976

GNSS Reception Board
SenseFly PN: MCOTH00513

	Automatic Flight Module Manufacturer: SenseFly SenseFly PN: HWPCB00752 Firmware version: 3.5.0 (See NOTE 5)
	Pitot Manufacturer: SenseFly SenseFly PN: SF200085
	Ground Proximity Sensor Manufacturer: SenseFly SenseFly PN: SF200086
	External Radio Antenna SenseFly PN: MCANT00009
	Blisters SenseFly PN: MCOTH00509
	Battery Compartment SenseFly PN: MCSAS00593
	Camera Compartment SenseFly PN: MCSAS00594
	Wing Fences SenseFly PN: Right: MCPLA01507 Left: MCPLA01508
	Wings: SenseFly PN: Right: SI020002 Left: SI020003
ENGINE LIMITS (PROPULSIVE UNIT LIMITS)	Nominal Static Traction: 1.2 kgf (11.8 N) Maximum electrical power input: 378 W Maximum rotation: 12000 RPM
PROPELLER	Manufacturer: APC Propellers Model: 8"x6" Electric Pusher Propeller PN: 8x6EP ANAC Propeller Type Certificate: None Propeller fastening rubber rings. SenseFly PN: MCRUB00210
FUEL	Not applicable.
BATTERY	Manufacturer: Fullymax Battery Co. Ltd. PN: MCBAT00012A Type: Lithium polymer battery, 11.1V, 4900mAh, 54.39Wh.
ANTI-COLISION LIGHTS	Manufacturer: Flytron PN: L01

TRACKER	Manufacturer: <u>SenseFly</u> SenseFly PN: SF200004
C2 LINK (RPS)	Ground Station Modem Manufacturer: SenseFly SenseFly PN: SI020004 ANATEL Homologation Certificate: 02050-15-05976
RPS	Software Flight planning & execution: eMotion Manufacturer: SenseFly Model: eMotion 3 Software version: 3.5.0 (see NOTE 5)
AIRSPPEED LIMITS (IAS)	V_{NE} : 30 m/s (58.3 KIAS). V_{MIN} : 11 m/s (21.4 KIAS). V_{MO} : 25 m/s (48.6 KIAS).
C. G. RANGE	-230.6 mm (9.08 in) to -190.9 mm (7.52 in)
EMPTY WEIGHT C. G. RANGE	NOTE 7
DATUM	Motor flange
LEVELING MEANS	NOTE 7
MAXIMUM WEIGHT	1.40 kg (3.08 lb).
EMPTY WEIGHT	0.70 kg (1.54 lb) (+0.05kg/0.11 lb if RTK)
MINIMUM CREW	One remote pilot.
NUMBER OF SEATS	Not applicable.
FUEL CAPACITY	Not applicable.
OIL CAPACITY	Not applicable.
MAX. OPERATING HEIGHT	400 ft (122 m) AGL (See NOTE 8).
NOMINAL ENDURANCE	55 minutes.
FLIGHT LIMITATIONS	<ol style="list-style-type: none"> 1. Daylight Visual Flight Rules (VFR) in visual meteorological conditions (VMC), airspace classes F or G. 2. Beyond visual line of sight (BVLOS) up to 5 km (2.7 nm) from remote pilot in command. 3. Wind resistance: up to 12 m/s (23 KIAS) 4. Operation is permitted in non-urban areas. NOTAM area shall be at least 150 meters (495 feet) away from urban areas. 5. Operation above ground infrastructure (e.g. power transmission lines, power stations, etc) is prohibited unless authorized by its owner/operator. 6. Operation with any inoperative (or missing) instruments or equipment is prohibited. 7. BVLOS operation is prohibited in assisted or full manual mode (See NOTE 4).
SERIAL NUMBERS APPROVED	All serial numbers eligible for BVLOS authorization (See NOTE 8).

AUTHORIZATION BASIS Brazilian Civil Aviation Special Regulation RBAC-E No. 94, Subpart E, dated 3 May 2017.

PRODUCTION BASIS None (See NOTE 1).

II - Model eBee SQ, authorized in April 2019.

RPAS This is a Remotely Piloted Aircraft System (RPAS) that is comprised of a Remote Piloted Aircraft (RPA), a ground station modem and a Remote Pilot Station (RPS).

RPA

Type: Single body flying wing.
Wingspan: 1,097 mm (43 in).
Material: EPP Foam, carbon structure & composite parts.

Assembly Units:

Fuselage
PN: SI020001
(See NOTE 9)

Pair of micro-servos for aileron actuation
SenseFly PN: MCMOT00029

Engine
Manufacturer: AXI Model Motors
Model: AXI 2808/20.
ANAC Engine Type Certificate: None.
Type: Electric brushless motor.
SenseFly PN: MCMOT00016

Electronic Speed Controller (ESC)
Manufacturer: YGE
Model: YGE60
SenseFly PN: MCOH00473

Air Data Link Modem (Transceiver) 2.4 GHz
SenseFly PN: HWPCB00786
ANATEL Homologation Certificate: 02048-15-05976

GNSS Reception Board
SenseFly PN: HWPCB00755

Automatic Flight Module
Manufacturer: SenseFly
SenseFly PN: HWPCB00752
Firmware version: 3.5.0 (See NOTE 5)

Pitot
Manufacturer: SenseFly
SenseFly PN: SF200085

Ground Proximity Sensor
Manufacturer: SenseFly
SenseFly PN: SF200086

External Radio Antenna
SenseFly PN: MCANT00009

		Blister SenseFly PN: MCOTH00465
		Battery Compartment SenseFly PN: MCSAS00589
		Camera Compartment SenseFly PN: MCSAS00590
		Wing Fences SenseFly PN: Right: MCPLA01409 Left: MCPLA01410
	Wings:	SenseFly PN: Right: SI020002 Left: SI020003
ENGINE LIMITS (PROPULSIVE UNIT LIMITS)	Nominal Static Traction:	1.2 kgf (11.8 N)
	Maximum electrical power input:	378 W
	Maximum rotation:	12000 RPM
PROPELLER	Manufacturer: APC Propellers Model: 8"x6" Electric Pusher Propeller PN: 8x6EP ANAC Propeller Type Certificate: None	
	Propeller fastening rubber rings. SenseFly PN: MCRUB00210	
FUEL	Not applicable.	
BATTERY	Manufacturer: Fullymax Battery Co. Ltd. PN: MCBAT00012A Type: Lithium polymer battery, 11.1V, 4900mAh, 54.39Wh.	
ANTI-COLLISION LIGHTS	Anti-collision Lights Manufacturer: Flytron PN: L01	
TRACKER	Manufacturer: SenseFly SenseFly PN: SF200004	
C2 LINK (RPS)	Ground Station Modem Manufacturer: SenseFly SenseFly PN: SI020004 ANATEL Homologation Certificate: 02050-15-05976	
RPS	Software Flight planning & execution: eMotion Manufacturer: SenseFly Model: eMotion Ag Software version: 3.5.0 (see NOTE 5)	

AIRSPPEED LIMITS (IAS)	V _{NE} : 30 m/s (58.3 KIAS). V _{MIN} : 11 m/s (21.4 KIAS). V _{MO} : 25 m/s (48.6 KIAS).
C. G. RANGE	-230.6 mm (9.08 in) to -190.9mm (7.52 in)
EMPTY WEIGHT C. G. RANGE	NOTE 7
DATUM	Motor flange
LEVELING MEANS	NOTE 7
MAXIMUM WEIGHT	1.40 kg (3.08 lb).
EMPTY WEIGHT	0.70 kg (1.54 lb)
MINIMUM CREW	One remote pilot.
NUMBER OF SEATS	Not applicable.
FUEL CAPACITY	Not applicable.
OIL CAPACITY	Not applicable.
MAX. OPERATING HEIGHT	400 ft (122 m) AGL (See NOTE 8).
NOMINAL ENDURANCE	55 minutes.
FLIGHT LIMITATIONS	<ol style="list-style-type: none"> 1. Daylight Visual Flight Rules (VFR) in visual meteorological conditions (VMC), airspace classes F or G. 2. Beyond visual line of sight (BVLOS) up to 5 km (2.7 nm) from remote pilot in command. 3. Wind resistance: up to 12 m/s (23 KIAS) 4. Operation is permitted in non-urban areas. NOTAM area shall be at least 150 meters (495 feet) away from urban areas. 5. Operation above ground infrastructure (e.g. power transmission lines, power stations, etc) is prohibited unless authorized by its owner/operator. 6. Operation with any inoperative (or missing) instruments or equipment is prohibited. 7. BVLOS operation is prohibited in assisted or full manual mode (See NOTE 4).
SERIAL NUMBERS APPROVED	All serial numbers eligible for BVLOS authorization (See NOTE 8).
AUTHORIZATION BASIS	Brazilian Civil Aviation Special Regulation RBAC-E No. 94, Subpart E, dated 3 May 2017.
PRODUCTION BASIS	None (See NOTE 1).

NOTES:

- NOTE 1** A declaration of conformity, issued by Santiago & Cintra, must be furnished for each aircraft at the time of its first inspection by ANAC.
- NOTE 2** Markings and placards: all markings and placards required by Brazilian Civil Aviation Special Regulation RBAC-E No. 94 must be installed in the appropriate locations.

- NOTE 3** The RPAS shall be operated and maintained under RBAC E-94 and in accordance with Santiago & Cintra Manual para Operadores Brasileiros AL-eBee-015 Rev. "1", dated January 2019, or later ANAC approved revision.
The operation shall also be conducted in accordance with DECEA regulations applicable.
- NOTE 4** A remote controller may be provided by the manufacturer but its use is not part of this design authorization. Using the remote controller (operation in assisted manual or full manual modes) is prohibited while flying BVLOS.
- NOTE 5** eMotion 3.5 is applicable to RPAS eBee Plus.
eMotion Ag 3.5 is applicable to RPAS eBee SQ.
eMotion software versions are defined as 3.5.X. The (X) field indicates release version.
New releases must be approved by ANAC.
- NOTE 6** The RPAS was tested up to 3,030 m (10,000 ft) AMSL.
- NOTE 7** The RPAS is approved for weight and balance obtained only from SenseFly approved payload. No weight and balance task is required before operation. Empty weight excludes weight from battery and payload modules.
- NOTE 8** Only aircraft which incorporated the modifications described in Service Bulletin SB-eBee-001 are eligible for BVLOS operations and receiving a declaration of conformity.
- NOTE 9** The RPA fuselage is sealed and its opening causes damage to its structure integrity. A statement from the manufacturer detailing all part numbers included in the fuselage assembly must be available to ANAC at the time of the aircraft inspection.

**MÁRIO IGAWA****Gerente-Geral de Certificação de Produto Aeronáutico
(General Manager, Aeronautical Product Certification)**