Table 2. Part 135 - Flight Data Recorder Parameter Specifications

This table refers to the FDR requirements of rule 135.369.

Parameters	Range	Installed system minimum accuracy (to recovered data) [1]	Sampling interval (per second)	Resolution read out [2]
Relative time (from recorded on prior to take-off)	25 hr minimum 24 hours	±0.125% per hour	1 0.25	1 sec
Indicated airspeed	V_{min} to V_D (KIAS) (minimum airspeed signal attainable with installed pitot/static system) As the installed measuring system	±5% or ±10 knots, whichever is greater ±3%	1	1 kt.
Altitude	-1,000 ft to 20,000 ft pressure altitude -1,000 ft to max certificated altitude of aircraft	±100 to ±700 ft (see Table 1, TSO C51-a)	1	25 to 150 ft 5’ to 30’
Magnetic heading	360°	±5° ±2°	1	1° 0.5°
Vertical acceleration	-3 g to +6 g	±0.2 g in addition to ±0.3 g maximum datum ±1% of max range excluding datum error of ±5%	4 (or 1 per second where peaks, ref. to 1 g are recorded) 8	0.05 g 0.01g
Longitudinal acceleration	±1.0 g	±1.5% max. range excluding datum error of ±5%	2 4	0.03 g 0.01g

Table 2. Part 135 - Flight Data Recorder Parameter Specifications

This table refers to the FDR requirements of rule 135.369.

Parameters	Range	Installed system minimum accuracy (to recovered data) [1]	Sampling interval (per second)	Resolution read out [2]
Lateral Acceleration	±1.0 g	±1.5% max. range excluding datum error of ±5%	4	0.01g
Pitch attitude	100% of usable range ±75°	±2°	1 2	0.8° 0.5°
Roll attitude	±60° or 100% of usable range, whichever is greater ±180°	±2°	1 2	0.8° 0.5°
Altitude rate	±8,000 fpm ±6,000 fpm	±10% Resolution 250 fpm below 12,000 ft indicated As installed	1 2	250 fpm below 12,000 0.2%
Engine power each engine				
Main rotor speed	Maximum range 0-130%	±5% ±2%	1 2	1% of full range 0.3% of full range
Free or power turbine	Maximum range 0-130% (power Turbine Speed)	+5% +2%	1 (per engine)	1% of full range 0.2% to 0.4% of full range
Engine torque	Maximum range	±5% ±2%	1 (per engine)	1% of full range 0.2% to 0.4% of full range

Table 2. Part 135 - Flight Data Recorder Parameter Specifications

This table refers to the FDR requirements of rule 135.369.

Parameters	Range	Installed system minimum accuracy (to recovered data) [1]	Sampling interval (per second)	Resolution read out [2]
Flight Control - Hydraulic Pressure				
Hydraulic Pressure Low	Discrete, each circuit		1	
Hydraulic Pressure Selector Switch Position, 1st and 2nd Stage	Discrete		1	
Primary (discrete)	High/low		1	
Secondary - if applicable (discrete)	High/low		1	
Avionics				
Radio transmitter keying (discrete)	On/off		1	
Autopilot engaged (discrete)	Engaged or disengaged		1	
AFCS Mode and Engagement	Discrete (5 bits necessary)		1	
SAS status - engaged (discrete)	Engaged/disengaged		1	
SAS fault status (discrete)	Fault/OK		1 0.25	
Flight Controls				

Table 2. Part 135 - Flight Data Recorder Parameter Specifications

This table refers to the FDR requirements of rule 135.369.

Parameters	Range	Installed system minimum accuracy (to recovered data) [1]	Sampling interval (per second)	Resolution read out [2]
Collective	Full range	±3%	2	1% of full range 0.5% of full range
Pedal position	Full range	±3%	2	1% of full range 0.5% of full range
Lateral cyclic	Full range	±3%	2	1% of full range 0.5% of full range
Longitudinal cyclic	Full range	±3%	2	1% of full range 0.5% of full range
Controllable stabilator position	Full range	±3%	2	1% of full range 0.4% of full range
Main Gearbox Temperature Low	As installed	As installed	0.25	0.5% of full range
Main Gearbox Temperature High	As installed	As installed	0.5	0.5% of full range

Table 2. Part 135 - Flight Data Recorder Parameter Specifications

This table refers to the FDR requirements of rule 135.369.

Parameters	Range	Installed system minimum accuracy (to recovered data) [1]	Sampling interval (per second)	Resolution read out [2]
Master Warning	Discrete		1	
Nav 1 and Nav 2 Frequency Selection	Full range	As installed	0.25	
Outside Air Temperature	-50°C to +90°C	±2°C	0.5	0.3°C

Notes:

1. When data sources are aircraft instruments (except altimeters) of acceptable quality to fly the aircraft the recording system excluding these sensors (but including all other characteristics of the recording system) must contribute no more than half of the values in this column.

2. This column applies to aircraft manufactured after October 11, 1991.