

Federal Aviation Administration, DOT

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The recorded values must meet the designated range, resolution and accuracy requirements during static and dynamic conditions. Dynamic condition means the parameter is experiencing change at the maximum rate attainable, including the maximum rate of reversal. All data recorded must be correlated in time to within one second.

Parameters	Range	Accuracy (sensor input)	Seconds per sampling interval	Resolution	Remarks
10. Autopilot Engagement.	Discrete "on" or "off".	1	
11. Longitudinal Acceleration.	$\pm 1g$	$\pm 1.5\%$ max. range excluding datum error of $\pm 5\%$.	0.25	0.004g	
12a. Pitch control(s) position (nonfly-by-wire systems). ¹⁸	Full Range	$\pm 2^\circ$ unless higher accuracy uniquely required.	0.5 or 0.25 for airplanes operated under § 121.344(f).	0.5% of full range.	For airplanes that have a flight control breakaway capability that allows either pilot to operate the controls independently, record both control inputs. The control inputs may be sampled alternately once per second to produce the sampling interval of 0.5 or 0.25, as applicable.
12b. Pitch control(s) position (fly-by-wire systems). ^{3 18}	Full Range	$\pm 2^\circ$ unless higher accuracy uniquely required.	0.5 or 0.25 for airplanes operated under § 121.344(f).	0.2% of full range.	
13a. Lateral control position(s) (nonfly-by-wire). ¹⁸	Full Range	$\pm 2^\circ$ unless higher accuracy uniquely required.	0.5 or 0.25 for airplanes operated under § 121.344(f).	0.2% of full range.	For airplanes that have a flight control breakaway capability that allows either pilot to operate the controls independently, record both control inputs. The control inputs may be sampled alternately once per second to produce the sampling interval of 0.5 or 0.25, as applicable.
13b. Lateral control position(s) (fly-by-wire). ^{4 18}	Full Range	$\pm 2^\circ$ unless higher accuracy uniquely required.	0.5 or 0.25 for airplanes operated under § 121.344(f).	0.2% of full range..	
14a. Yaw control position(s) (nonfly-by-wire). ^{5 18}	Full Range	$\pm 2^\circ$ unless higher accuracy uniquely required.	0.5	0.3% of full range.	For airplanes that have a flight control breakaway capability that allows either pilot to operate the controls independently, record both control inputs. The control inputs may be sampled alternately once per second to produce the sampling interval of 0.5.
14b. Yaw control position(s) (fly-by-wire). ¹⁸	Full Range	$\pm 2^\circ$ unless higher accuracy uniquely required.	0.5	0.2% of full range.	
15. Pitch control surface(s) position. ^{6 18}	Full Range	$\pm 2^\circ$ unless higher accuracy uniquely required.	0.5 or 0.25 for airplanes operated under § 121.344(f).	0.3% of full range.	For airplanes fitted with multiple or split surfaces, a suitable combination of inputs is acceptable in lieu of recording each surface separately. The control surfaces may be sampled alternately once per second to produce the sampling interval of 0.5 or 0.25, as applicable.