

Nautical Leeway Angle

PGN: 128000

hex: 1F400

This PGN provides the Nautical Leeway Angle, which is defined as the angle between the vessel's heading (direction to which the vessel's bow points) and its course (direction of its motion (track) through the water). The Nautical Leeway Angle is water referenced and does not account for slip due to current.

This is commonly provided by dual-axis speed sensors. Dual axis speed sensors are able to measure accurately the ship's speed in a longitudinal direction and a transverse direction. By measuring both speed components (i.e. the velocity vector), the Nautical Leeway Angle can be determined, and this angle can be used to optimize the vessel's course.

Note: This Nautical Leeway Angle is used primarily in the sailing segment of the maritime industry and may differ from oceanographic or scientific definitions of Leeway.

The Sequence ID field (SID) is used to link this PGN to other related PGN's from the same source address. When no linkage exists, the value of the SID shall be set to 255.

Single Frame: **Yes** Priority Default: **4** Default Update Rate: **200** milliseconds Frequency: **5** cycles per second
 Destination: **Global** Query Support: **Optional** Command Support: **Optional** ACK Rqmnts: **No**

Field # Field Name Original Reference ID # 257

1	Sequence ID			Byte Field Size: 1		Request Parameter: Optional	
				Bit Field Size:		Command Parameter: Optional	
	DD056 Sequence ID			An upward counting number used to tie related information together between different PGNs . For example, the SID would be used to tie together the COG, SOG and RAIM values to a given position. 255=no valid position fix to tie it to. Range 0 to 252 for valid position fixes.			
	DF53 Integer, 8 bit unsigned	uint8	Range: 0 to 252	Resolution: 1 bit		Unit-less number	
2	Nautical Leeway Angle			Byte Field Size: 2		Request Parameter: Optional	
				Bit Field Size:		Command Parameter: Optional	
	DD438 Nautical Leeway Angle			Positive angles indicate slippage to starboard, that is, the vessel is tracking to the right of its heading, and negative angles indicate slippage to port.			
	DF04 Angle, signed	int16	Range: +/-Pi rad	Resolution: 1x10E-4 rad		Resolution ~0.0057deg	
3	NMEA Reserved			Byte Field Size:		Request Parameter:	
				Bit Field Size: resv 40		Command Parameter:	
	DD001 Reserved field			Variable number of reserved bits, all set to logic "1"			
	DF52 Bit field	bit(n)	Range: Variable	Resolution: 1		Used to construct bit fields	
	Used to align subsequent data on byte boundary.						