FS Datalogger CAN Protocol

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The CAN protocol used between FS Datalogger and Master Controller

Messages

ID: 0x500 - DV Driving Dynamics I

Parameter	Value
Direction	Master Controller -> Datalogger
Transmission Rate	Periodically: 100ms
Size [bits : bytes]	[64 : 8]

Variable Name	Offset	Length in bits	Value Type	Unit	Description
Speed_actual	0	8	uint	km/h	Actual speed
Speed_target	8	8	uint	km/h	Target speed
Steering_angle_actual	16	8	int	°	Actual steering angle, scale=0.5
Steering_angle_actual	24	8	int	°	Target steering angle, scale=0.5
Brake_hydr_actual	32	8	uint	%	Actual brake hydraulic in percent
Brake_hydr_target	40	8	uint	%	Target brake hydraulic in percent
Motor_moment_actual	48	8	int	%	Actual motor moment in percent
Motor_moment_target	56	8	int	%	Target motor moment in percent

ID: 0x501 - DV Driving Dynamics II

Parameter	Value
Direction	Master Controller -> Datalogger
Transmission Rate	Periodically: 100ms
Size [bits : bytes]	[48 : 6]

Variable Name	Offset	Length in bits	Value Type	Unit	Description
Acc_longitude	0	16	int	m/s^2	Longitudinal Acceleration, scale 1/512
Acc_lateral	16	16	int	m/s^2	Lateral Acceleration, scale 1/512
Yaw_rate	32	16	int	°/s	Yaw rate, scale 1/128

ID: 0x502 - DV System Status

Parameter	Value
Direction	Master Controller -> Datalogger
Transmission Rate	Periodically: 100ms
Size [bits : bytes]	[40 : 5]

Variable Name	Offset	Length in bits	Value Type	Unit	Description
AS_state	0	3	enum	-	See competition handbook, p.20
EBS_state	3	2	enum	-	See competition handbook, p.20
AMI_state	4	3	enum	-	See competition handbook, p.20
Steering_state	8	1	bool	-	State of steering
Service_brake_state	9	2	enum	-	See competition handbook, p.20
Lap_counter	11	4	uint	-	Lap counter
Cones_count_actual	15	8	uint	-	Actual Cones Count
Cones_count_all	23	39	uint	-	Total Cones Count

Template

ID: 0xXXX -

Parameter	Value
Direction	<-
Transmission Rate	Periocally: 100ms/Aperiodically

Variable Name	Offset	Length in bits	Value Type	Unit	Description