

Modbus Address	Parameter & Register Name	Number of 16bit regs	Bitfield	Data Type	Range	Default value	Read Write	Unit	Description	EEPROM SAVED
Setting parameters										
0	RESERVED								RESERVED	
1	Slave Type	1		uint16	4	6	R		MOTOR DRIVER SDQIMTRDVR2	
2	RESERVED								RESERVED	
3	RESERVED								RESERVED	
4	RESERVED								RESERVED	
5	SW version	1	15 - 8 7 - 0	2 byte	0.0 = 0x0000 ; 255.255=0xFFFF		R		MSB SW version (number before point) LSB SW version (number after point)	
6	HW version	1	15 - 8 7 - 0	2 byte	0.0 = 0x0000 ; 255.255=0xFFFF	2	R		MSB HW version (number before point) LSB HW version (number after point)	
7	Slave ID	1	15 - 8 7 - 0	uint16	0x0000 ; 0xFFFF	2	R / W		Modbus Slave ID	YES
8	Baudrate	1		uint16	0=9600, 1=19200, 2=38400, 3=57600	1	R / W		Modbus baudrate	YES
9-255	RESERVED								RESERVED	
Data parameters										
256	STATUS_LIMIT_SWITCH_CW(HOME)	1		uint16	0 = Released 1 = Pressed	0	R		Limit switch status, it is used as home limit switch. Driver must be connected to a limit switch to use an automatic RUN (RUN_COMMAND = 1 = 2)	
257	STATUS_LIMIT_SWITCH_CCW	1		uint16	0 = Released 1 = Pressed	0	R		Limit switch status direction CCW	
258	READY_STATUS	1		uint16	0 = NOT READY 1 = READY (HOME ALREADY FOUND), 2 = READY (HOME NEVER FOUND),	2	R		When the driver is power-on this register is configured = 2. When home has been found, this register is = 1, when a command is running this register = 0	
259	RUN_STATUS	1		uint16	0 = IDLE 1 = RUNNING_MANUAL (BUTTONS or RUN_MANUAL_CMD_CONFIG) 2 HOMING (COMAND HOMING) 3 = AUTOMATIC_PID (TARGET) 4 = MAINTENANCE_POS (TARGET)	0	R		This register can be just read, it is set by motordriver. When no command is active is configured = 0 (IDLE)	
260	WARNING_STATUS	1		uint16	0b00000000 = NOT_WARNING 0b00000001 = PROCEDURE_HOME_KO 0b00000010 = DRIVER_OVERCURRENT_CW 0b00000100 = DRIVER_OVERCURRENT_CCW	0	R		When there is a new command (RUN) this register is reset. This register's value can have more than one warning active	
261	ALARM_STATUS	1		uint16	0 = NOT ALLARM 0b00000001 = EXTERNAL EMERGENCY ACTIVE 0b00000010 = TEMPERATURE EMERGENCY ACTIVE	0	R		The system can be connected to Emergency push buttons, connection N.C or N.O can be set using another modbus register CONFIG EMERGENCY.	
262	RUN_COMAND	1			0 = RUNNING_BY_MANUAL 1 = RUNNING_BY_HOMING 2 = RUNNING_AUTO_PID (TARGET_POSITION) 3 = MAINTENANCE_POSITION(TARGET_POSITION) 4 = STOP	0	R/W		A new RUN_COMMAND (RUNNING_BY_HOMING or RUNNING_AUTO_PID) can be accepted if the system is RUN_STATUS = IDLE. A new run command RUNNING_AUTO_PID can be accepted if driver has already found home (READY_STATUS = READY), it means HOME ALREADY FOUND. When system is in ALARM are not accepted commands. When the driver is executing a command (PID or manual) rejects a new RUN_COMMAND configuration; a new configuration is accepted when RUN_STATUS = IDLE.	
263	TARGET_SPEED_TO_GO_HOME	1		uint16	65535 = trimmer enable, 0 - 100	40	R/W	%	Register set to 65535(0xFFFF) enable trimmer configuration otherwise to do home procedure the driver use this value.	YES
264	TIMEOUT_RUNNING_BY_PID	1		uint16	0 - 1800	600	R/W	sec	This register set a timeout value used during these RUN_STATUS: HOMING, AUTOMATIC_PID	YES
265	FEED_FORWARD_VEL	1		uint16	0 - 65535 (0.0 - 1.0)	0	R/W	pulse/sec	kv = coefficient feed forward velocity	YES
266	FEED_FORWARD_ACC_DEC	1		uint16	0 - 65535 (0.0 - 1.0)	0	R/W	pulse/sec^2	ka = coefficient feed forward acceleration	YES
267	TARGET_POS_HOME	2	31 - 0	int32_t	0 ; 2147483647 (positive range) -2147483648 ; 0 (negative range)	0	R/W	pulses	This register is used when register MANUAL_BTN_CONFIG = 1 and RUN_STATUS = RUNNING_MANUAL, when this configuration is enabled, motor can be moved between two target position (TARGET_POS_HOME and TARGET_POS), this configuration uses PID.	YES
267			31 - 16							
268			15 - 0							
269	PID_VALUE_P	2	31 - 0	4 byte			R/W		PID Setting Value P	YES
269			31 - 16			0			MSB PID_P(PARTE INTERA DEL COEFFICIENTE)	
270			15 - 0			1542			LSB PID_P(PARTE DECIMALE DEL COEFFICIENTE)	
271	PID_VALUE_I	2	31 - 0	4 byte			R/W		PID Setting Value I	YES
271			31 - 16			0			MSB PID_I(PARTE INTERA DEL COEFFICIENTE)	
272			15 - 0			129			LSB PID_I(PARTE DECIMALE DEL COEFFICIENTE)	

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273	PID_VALUE_D	1	31 - 0	4 byte			R/W		PID Setting Value D	YES
273			31 - 16			0			MSB PID_D(PARTE INTERA DEL COEFFICIENTE)	
274			15 - 0			21			LSB PID_D(PARTE DECIMALE DEL COEFFICIENTE)	
275	TARGET_POSITION	2	31 - 0	4 byte	0 - 4294967296	3000	R/W	pulses	This register is target position used when RUN_STATUS: AUTOMATIC_PID, MAINTENANCE_POS or when MANUAL_BTN_CONFIG = 1 and RUN_STATUS = RUNNING_MANUAL. These configuration use PID to reached target position.	YES
275			31 - 16							
276			15 - 0							
277	PID_TARGET_SPEED	1		uint16	0 - 65535	600	R/W	pulse/sec	Speed target used when is running an AUTOMATIC_PID	YES
278	PID_TARGET_ACC_DEC	1		uint16	0 - 65535	500	R/W	pulse/sec^2	Acceleration/deceleration target used when is running an AUTOMATIC_PID	YES
279	CURRENT_POSITION	2	31 - 0	uint32_t	0 - 4294967296	0	R		Current position read by encoder, when a motor is in home (STATUS_LIMIT_SWITCH_CW(HOME) = 1) this register is reset to 0	
279			31 - 16							
280			15 - 0							
281	CONFIG_EMERGENCY	1		uint16	0 = N.O. 1 = N.C.	0	R/W		Configuration of Emergency push button, when an emergency is detected "led alive" present on board has a diffent blink and when an alarm is active change thevalue of register ALARM_STATUS	YES
282	MANUAL_BTN_CONFIG	1		uint16	0 = Manual buttons as dead's man 1 = Buttons enable PID	1	R/W		When this register = 1 the system can be moved between TARGET_POS_HOME and TARGET_POS using BUTTON_CW(TARGET_POS2) and BUTTON_CCW(TARGET_POS) or system can be moved setting register RUN_MANUAL_CMD_CONFIG = 1 or = 2	YES
283	MAINTANCE_PID_POSITION	1		uint16	0 = DISABLED 1 = ENABLED	0	R/W		MAINTANCE_PID_POSITION = 1 and RUN_STATUS = AUTOMATIC_PID, when running end, driver doesn't go to RUN_STATUS = IDLE but driver's register is set to RUN_STATUS = MAINTANCE_POSITION, it tries to maintance target position	YES
284	SERIAL_DEBUG_CONFIG	1		uint16	0 = Serial debug disabled 1 = Serial debug enabled	1	R/W		Serial debug can be used to plot PID behaviour, it is usefull to tunning PID parameters. When tunning is made disabled this configuration	
285	EXTRA_OUTPUT2	1		uint16	0 = output disabled 1 = Output enabled	0	R/W		it is used for extra output, when register's value is 0 the output is disabled, if register's value = 1 the output is enabled.	
286	EXTRA_INPUT	1		uint16	0 = GND 1 = VDD	0	R		it is used for extra input, when input is LOW (GND) = 0, otherwise is HIGH(VDD) = 1	
287	RUN_MANUAL_CMD_CONFIG	1		uint16	0 = No manual command(disabled) 1 = Run manual direction CW 2 = Run manual direction CCW	0	R/W		This register is used instead of buttons. If a manual command by modbus is active, writing this register to 0 is enough to stop the motor.	
288	MANUAL_DUTY_CYCLE_CONFIG	1		uint16	65535 = trimmer enable, max duty = 100%	65535	R/W	%	when this register is set = 65535(0xFFFF), it is used trimmer value for manual action (RUN_STATUS == RUNNING_MANUAL)	YES
289	MANUAL_ACC_DEC_CONFIG	1		uint16	65535 = trimmer enable, max 3000msec	65535	R/W	msec	when this register is set = 65535(0xFFFF), it is used trimmer value to define ACC/DEC for manual run (RUN_STATUS == RUNNING_MANUAL)	YES
290	OVERCURRENT_CONFIG	1		uint16	65535 = trimmer enable, max I = 25000mA	65535	R/W	mA	when this register is set = 65535(0xFFFF), it is used trimmer value to define overcurrent. when trimmer is enabled and it is set to max value, overcurrent is disabled. Using this register is not possible disabled overcurrent.	YES