



EPA300 CANopen

PROCESS CONTROL DEVICE



CANOPEN
USER
MANUAL

INDEX

INDEX-----	2
1. CONFIGURATION -----	3
2.1. Configuration with Layer Setting Service (LSS) -----	3
2.2. Configuration with Service Data Objects (SDO) -----	5
2. OBJECT DICTIONARY -----	7

1. CONFIGURATION

2.1. Configuration with Layer Setting Service (LSS)

Use the following tables to set the Node ID and bit rate using the LSS protocol.

- * For the configuration with LSS, the bit rate settings of Master device and Slave device must be the same.
- * For configuration with LSS, only Master and Slave devices should be in the network.
- * The default bit rate for your EPA300 device is 250 kbps and the Node ID is 1.
- ** To change any value with LSS, the device must be in Configuration Mode.
- *** Please restart your device for changes to take effect.

LSS-Master Request ➡ COB-ID for LSS-Slave operations: **0x7E5**

LSS-Slave Response ➡ COB-ID for LSS-Master operations: **0x7E4**

To switch to the Configuration mode required to make Node ID or Baud Rate changes; If you do not want all devices to use the Switch Mode Global command; Use Switch Mode Selective commands only if it is a device on your network. For Selective mode, you need to know one of the Vendor ID, Product Code, Revision Number, Serial Number or Node ID of your device. If you do not know, you can use the Inquire commands by connecting your Master device and the Slave device you want to learn.

COB-ID	DATA (Hex)	COMMAND	EXPLANATION
0x7E5	04 00 00 00 00 00 00 00	Switch Mode Global - Operation Mode	Command to import all connected devices into Operational Mode
0x7E5	04 01 00 00 00 00 00 00	Switch Mode Global - Configuration Mode	Command to import all connected devices into Configuration Mode
0x7E5	5A 00 00 00 00 00 00 00	Inquire - Vendor ID	Vendor ID request command from sensor
0x7E4	5A ZZ 00 00 00 00 00 00	Vendor ID : 0xZZ	The answer from the sensor contains the Vendor ID information.
0x7E5	5B 00 00 00 00 00 00 00	Inquire - Product Code	Command to request product code from sensor
0x7E4	5B YY ZZ 00 00 00 00 00	Product Code : 0xZZYY	The answer from the sensor contains Product Code information
0x7E5	5C 00 00 00 00 00 00 00	Inquire - Revision Number	Request Revision Number from Sensor
0x7E4	5C XX YY ZZ 00 00 00 00	Revision Number : 0xZZYYXX	The response from the sensor contains Revision Number information
0x7E5	5D 00 00 00 00 00 00 00	Inquire - Serial Number	Command to request Serial Number from sensor
0x7E4	5D TT XX YY ZZ 00 00 00	Serial Number : 0xZZYYXTTT	The response from the sensor contains Serial Number information.
0x7E5	5E 00 00 00 00 00 00 00	Inquire - Node ID	Command to request Node ID from sensor
0x7E4	5E ZY 00 00 00 00 00 00	Node ID – NID : 0xZY	The response from the sensor contains Node ID information.
0x7E5	40 ZZ 00 00 00 00 00 00	Switch Mode Selective – Vendor ID : 0xZZ	0xZZ Command to import Vendor ID device into Configuration Mode

0x7E5	41 YY ZZ 00 00 00 00 00	Switch Mode Selective – Product Code : 0xZZYY	0xZZYY Command to import Product Code Device into Configuration Mode
0x7E5	42 XX YY ZZ 00 00 00 00	Switch Mode Selective- Revision Number: 0xZZYYXX	0xZZYYXX Command to import Revision Number Device into Configuration Mode
0x7E5	43 TT XX YY ZZ 00 00 00	Switch Mode Selective – Serial Nr. : 0xZZYYXTT	0xZZYYXTT Command to import Serial Number Device into Configuration Mode
0x7E4	44 YY 00 00 00 00 00 00	Switch Mode Selective Response	Response from sensor to switch to Configuration Mode: 'YY'=00= Successful 'YY'=01= Unsuccessful

*** Please restart the device for changes to take effect.

You can use the following commands to make Node ID and Bitrate changes in your Slave device that you have imported in Configuration mode. After the changes you have made, you must use the store configuration command to save changes from the temporary memory to the permanent memory.

COB-ID	DATA (Hex)	COMMAND	EXPLANATION
0x7E5	13 XX 00 00 00 00 00 00	Configure Bit Rate	Sensor command for bit rate change Values for [XX]: '00'=10 kbps, '01'=20 kbps, '02'=50 kbps, '03'=100 kbps, '04'=125 kbps, '05'=250 kbps, '06'=500 kbps, '07'= 800 kbps, '08'= 1000 kbps
0x7E4	13 YY 00 00 00 00 00 00	Configure Bit Rate Response	Response from the sensor for bit rate change: 'YY'=00= Successful 'YY'=01= Unsuccessful
0x7E5	11 XX 00 00 00 00 00 00	Configure Node ID	Sensor command for Node ID change: for [XX]: Value between 1 and 127
0x7E4	11 YY 00 00 00 00 00 00	Configure Node ID Response	Response from the sensor for Node ID change: 'YY'=00= Successful 'YY'=01= Unsuccessful
0x7E5	17 00 00 00 00 00 00 00	Store Configuration	Command to save changes
0x7E4	17 YY 00 00 00 00 00 00	Store Configuration Response	The response to the command to save changes: 'YY'=00= Successful 'YY'=01= Unsuccessful

*** Please restart the device for changes to take effect.

2.2. Configuration with Service Data Objects (SDO)

Use the following tables to set any parameters with the SDO protocol.

- * For the configuration with SDO, the bit rate settings of Master device and Slave device should be same.
- * Node IDs of all CANopen devices in the network should be different from each other.
- * The default bit rate for your EPA300 device is 250 kbps and the Node ID is 1.
- ** To change any value with SDO, the device must be in Configuration Mode.
- *** Please restart your device for changes to take effect.

COB-ID	DATA (Hex)	COMMAND	EXPLANATION
0x600+Node ID	22 ZZ YY XX TT SS RR PP	Download request	Write command Index: 0xYYZZ Subindex: 0xXX Data: 0xPPRRSSTT
0x580+Node ID	60 ZZ YY XX 00 00 00 00	Download response	Confirmation that the parameter successfully registered
0x600+Node ID	11 ZZ YY XX 00 00 00 00	Upload request	Read command Index: 0xYYZZ Subindex: 0xXX
0x580+Node ID	11 ZZ YY XX TT SS RR PP	Upload response	Contains the information of the data being read. Index: 0xYYZZ Subindex: 0xXX Data: 0xPPRRSSTT
0x580+Node ID	80 ZZ YY XX TT SS RR PP	Abort message response	If a command fails, it contains information about what the error means. Index: 0xYYZZ Subindex: 0xXX Hata kodu: [0xPPRRSSTT]
Error code: [0xPPRRSSTT] list only 0x06090011: Subindex is incorrect 0x06090030: Max value exceeded 0x06020000: Index is incorrect 0x06010001: Parameter write-			0x06010002: Parameter read-only 0x08000020: Data transfer error 0x08000000: General error 0x08000022: Incorrect state

*** Please restart the device for changes to take effect.

Example to make Node ID 2 of device with Node ID 1:

(NodeID): index=0x3001, subindex=0x00

COB-ID	DATA (Hex)	COMMAND	EXPLANATION
0x601	22 01 30 00 02 00 00 00	Download request	Write command Data: 0x00000002
0x581	60 01 30 00 00 00 00 00	Download response	Node ID changed successfully

Node ID 2, Bit rate of 250 kbps device to make 125 kbps example:

(baudrate): index=0x3000, subindex=0x00

COB-ID	DATA (Hex)	COMMAND	EXPLANATION
0x602	22 00 30 00 04 00 00 00	Download request	Write command / Data: 0x00000004 Options for the last two digits: '00'=10 kbps, '01'=20 kbps, '02'=50 kbps, '03'=100 kbps, '04'=125 kbps, '05'=250 kbps, '06'=500 kbps, '07'= 800 kbps, '08'= 1000 kbps
0x582	60 00 30 00 00 00 00 00	Download response	Confirmation that the parameter successfully registered

2. OBJECT DICTIONARY

- All Index and Subindex are hexadecimal (0xZZZZ).

EPA300 CAN NETWORK SETTINGS

Index/ Subindex	Parameter name	Data Type	Read/ Write	Explanation
3000	BaudRate	Unsigned 8	Read/ Write	CAN bit rate value, '0'=10 kbps, '1'=20 kbps '2'=50 kbps, '3'=100 kbps, '4'=125 kbps, '5'=250 kbps '6'=500 kbps, '7'= 800 kbps '8'= 1000 kbps
3001	NodeID	Unsigned 8	Read/ Write	NodeID value, between 1 and 127
3010/1	Unique_ID 1	Unsigned 32	Read/ Only	Device-specific Unique ID
3010/2	Unique_ID 2			
3010/3	Unique_ID 3			
3010/4	Unique_ID 4			

OPERATING MODULE GENERAL FUNCTIONS

Index/ Subindex	Parameter name	Data Type	Read/ Write	Explanation
2000/1	ProcessVal/ Raw16	Unsigned 16	Read/ Only	Unprocessed raw value from sensor
2000/2	ProcessVal/ Val16	Integer 16		Display value
2000/3	ProcessVal/ Val24	Integer 24		
2000/4	ProcessVal/ Val32	Integer 32		
2000/5	ProcessVal/ Real32	Real 32		
2001/1	Valley/Val16	Integer 16	Read/ Only	The lowest value that appears since device was turned on
2001/2	Valley/Val24	Integer 24		
2001/3	Valley/Val32	Integer 32		
2001/4	Valley/ ValReal32	Real 32		
2001/5	Valley/Reset	Unsigned 8	Write/ Only	Enter '1' to reset the lowest value information
2002/1	Peak/Val16	Integer 16	Read/ Only	The highest value that has appeared since device was turned on
2002/2	Peak/Val24	Integer 24		
2002/3	Peak/Val32	Integer 32		
2002/4	Peak/ValReal32	Real 32		
2002/5	Peak/Reset	Unsigned 8	Write/ Only	Enter '1' to reset the maximum value
2003/1	TareFunc/ SignalStatus	Unsigned 8	Read/ Only	Status of external Tare Module '0'=Devre Dışı '1'=Aktif

2003/2	TareFunc/ TareStatus	Unsigned 8	Read- Only	Status of internal Tare function
2003/3	TareFunc/ Apply		Write/ Only	Enter the '1' value to activate the internal Tare function
2004/1	OutputFunc/ RelayOutputStatus	Unsigned 8	Read/ Only	Status of relay outputs '0'= All relays disabled Starting from the right, the relays are activated or disabled so that each bit represents each relay in turn. Example: '0101'= 1. ve 3. Relays active, 2. ve 4. Relays passive
2004/2	OutputFunc/ RelayOutputSet		Write/ Only	Values for activating Relay Outputs: '0000'= All relays disabled '0001'= 1. Relay active '0010'= 2. Relay active '0100'= 3. Relay active '1000'= 4. Relay active
2004/3	OutputFunc/ AnalogOutput1Stat us	Real 32	Read/ Only	Percentage proportional if analog output module is available
2004/4	OutputFunc/ AnalogOutput2Stat us			Percentage proportional if analog output module is available
2004/5	OutputFunc/ AnalogOutput3Stat us			Percentage proportional if analog output module is available
2004/6	OutputFunc/ AnalogOutput1Set		Write/ Only	Enter '1' to activate the analog output module if it is available
2004/7	OutputFunc/ AnalogOutput2Set			Enter '1' to activate the analog output module if it is available
2004/8	OutputFunc/ AnalogOutput2Set			Enter '1' to activate the analog output module if it is available
2005/1	BuzzerFunc/ Play100ms	Unsigned 8	Write/ Only	When the '1' value is written, beep sounding buzzer 100 ms beat
2005/2	BuzzerFunc/Pla y	Unsigned 16		When the '1' value is written, beep sounding buzzer 1 ms beat
2006/1	KeypadFunc/ KeypadStatus	Unsigned 8	Read/ Only	The state of the Up key
2006/2	KeypadFunc/ PressKeyN		Write/ Only	When '1' is written, the Up key is pressed and at the same time the Tare function is activated.
2007	DioStatus	Unsigned 8	Write/ Only	For the first [3: 0] bit relay outputs, [4] bits indicate the status for the external Tare module 0 = Inactive, 1 = Active

OUTPUT MENU

Index/ Subindex	Parameter name	Data Type	Read/ Write	Explanation
2101/1	Out1 / Set 1A	Real 64	Read/ Write	Set 1A value for Relay 1
2101/2	Out1 / Set 1B	Real 64		Set 1B value according to type of function for Relay 1
2101/3	Out1 / Mode	Unsigned 8		Function type for relay 1: '0'=OFF, '1'=Stand, '2'=Band, '3'=Catch, '4'=Dual, '5'=Periodic
2101/4	Out1 / Delay	Real 64		Delay value for relay 1
2101/5	Out1 / HysUp	Real 64		Hysteresis UP value for relay 1
2101/6	Out1 / HysDown	Real 64		Hysteresis DOWN value for relay 1
2101/7	Out1 / Offset	Real 64		Offset (start) value for the relay 1
2101/8	Out1 / Condition	Unsigned 8		The normal state of the relay 1: '0'=NC(Normally closed) '1'=NO(Normally open)
2102/1	Out2 / Set 2A	Real 64	Read/ Write	Set 2A value for Relay 2
2102/2	Out2 / Set 2B	Real 64		Set 2B value according to type of function for Relay 2
2102/3	Out2 / Mode	Unsigned 8		Function type for relay 2: '0'=OFF, '1'=Stand, '2'=Band, '3'=Catch, '4'=Dual, '5'=Periodic
2102/4	Out2 / Delay	Real 64		Delay value for relay 2
2102/5	Out2 / HysUp	Real 64		Hysteresis UP value for relay 2
2102/6	Out2 / HysDown	Real 64		Hysteresis DOWN value for relay 2
2102/7	Out2 / Offset	Real 64		Offset (start) value for the relay 2
2102/8	Out2 / Condition	Unsigned 8		The normal state of the relay 2: '0'=NC(Normally closed) '1'=NO(Normally open)
2103/1	Out3 / Set 3A	Real 64	Read/ Write	Set 3A value for Relay 3
2103/2	Out3 / Set 3B	Real 64		Set 3B value according to type of function for Relay 3
2103/3	Out3 / Mode	Unsigned 8		Function type for relay 3: '0'=OFF, '1'=Stand, '2'=Band, '3'=Catch, '4'=Dual, '5'=Periodic
2103/4	Out3 / Delay	Real 64		Delay value for relay 3
2103/5	Out3 / HysUp	Real 64		Hysteresis UP value for relay 3
2103/6	Out3 / HysDown	Real 64		Hysteresis DOWN value for relay 3
2103/7	Out3 / Offset	Real 64		Offset (start) value for the relay 3
2103/8	Out3 / Condition	Unsigned 8		The normal state of the relay 3: '0'=NC(Normally closed) '1'=NO(Normally open)
2104/1	Out4 / Set 4A	Real 64	Read/ Write	Set 4A value for Relay 4
2104/2	Out4 / Set 4B	Real 64		Set 4B value according to type of function for Relay 4
2104/3	Out4 / Mode	Unsigned 8		Function type for relay 4: '0'=OFF, '1'=Stand, '2'=Band, '3'=Catch, '4'=Dual, '5'=Periodic
2104/4	Out4 / Delay	Real 64		Delay value for relay 4
2104/5	Out4 / HysUp	Real 64		Hysteresis UP value for relay 4

2104/6	Out4 / HysDown	Real 64		Hysteresis DOWN value for relay 4
2104/7	Out4 / Offset	Real 64		Offset (start) value for the relay 4
2104/8	Out4 / Condition	Unsigned 8		The normal state of the relay 4: '0'=NC(Normally closed) '1'=NO(Normally open)
2106/1	CANopen/ BaudRate	Unsigned 8	Read/ Write	CAN bit rate value, '0'=10 kbps, '1'=20 kbps, '2'=50 kbps, '3'=100 kbps, '4'=125 kbps, '5'=250 kbps '6'=500 kbps, '7'= 800 kbps '8'= 1000 kbps
2106/2	CANopen/ NodeID	Unsigned 8	Read/ Write	NodeID value, between 1 and 127
2106/3	CANopen/ AutoOper			Your device connected to Master automatically switches to Operational mode '0' = Inactive, '1' = Active
2106/4	CANopen/ SendNmtOper			Automatically send Operational mode command to CANopen which will be connected to it '0' = Inactive, '1' = Active
2107/1	Rpdo1Setting/ CobID	Unsigned 32	Read/ Write	CobID value for RPDO1
2107/2	Rpdo1Setting/ DataStartBit	Unsigned 8		Start bit value for RPDO1
2107/3	Rpdo1Setting/ DataType			Data type for RPDO 1: '0'=unsigned 16, '1'=unsigned 24, '2'=unsigned 32, '3'=int 16, '4'=int 24, '5'=int 32 '6'=real 32
2107/4	Rpdo1Setting/ MulFactor			Real 64
2107/5	Rpdo1Setting/ CalibrationOption	Unsigned 8		RPDO1 calibration on and off '0' = Off, '1' = On
2108/1	Rpdo2Setting/ CobID	Unsigned 32	Read/ Write	CobID value for RPDO2
2108/2	Rpdo2Setting/ DataStartBit	Unsigned 8		Start bit value for RPDO2
2109/1	Tpdo1Setting/ MappedData	Unsigned 8	Read/ Write	Data type for TPDO1: '0'=unsigned 16, '1'=int 16, '2'=int 24, '3'=int 32, '4'=real 32
2109/2	Tpdo1Setting/ EventTimer	Unsigned 16		TPDO data transmission time, in 'ms'
2120/1	UART/ Protocol	Unsigned 8	Read/ Write	Protocol selection for RS232 and RS485 connections '0'=ASCII, '1'=MB_RTU, '2'=MB_ASCII
2120/2	UART/ Address	Unsigned 8		Address information for network connection (Between 1 and 247)
2120/3	UART/ Baud	Unsigned 8		Baudrate option '0'=600, '1'=1200, '2'=2400, '3'=4800, '4'=9600, '5'=14400, '6'=19200, '7'=38400, '8'=57600, '9'=115200
2120/4	UART/ Parity	Unsigned 8		Parity option '0'=None, '1'=Odd, '2'=Even
2120/5	UART/ Period	Unsigned 16		For ASCII protocol Period (in 1/ms)
2130	Sound	Unsigned 8	Read/ Write	The state of beep sounding buzzer '0' = Disabled, '1' = Active

2140/1	AnalogOut1/ Type	Unsigned 8	Read/ Write	For analogue output module: '0'=0-10V, '1'=4-20 mA, '2'=0-5V, '3'=0.5-4.5V, '4'=0-20 mA
2140/2	AnalogOut1/ WaveForm	Unsigned 8		To select the analog output waveform '0'= linear, '1'=trian, '2'=sin, '3'=cos
2140/3	AnalogOut1/ Inverse	Unsigned 8	Read/ Write	Enable analogue outputs to increase or decrease in reverse '0' = Inactive, '1' = Active
2140/4	AnalogOut1/ Scaling	Unsigned 8	Read/ Write	When you want to activate analog output '0' = Inactive, '1' = Active
2140/5	AnalogOut1/ LowScale	Real 64		Minimum scale value when analogue output is 'on'
2140/6	AnalogOut1/ HighScale	Real 64		Maximum scale value when analogue output is 'on'
2140/7	AnalogOut1/ Condition	Unsigned 8		'0' = Inactive, '1' = Active
2141/1	AnalogOut2/ Type	Unsigned 8	Read/ Write	For analogue output module: '0'=0-10V, '1'=4-20 mA, '2'=0-5V, '3'=0.5-4.5V, '4'=0-20 mA
2141/2	AnalogOut2/ WaveForm	Unsigned 8		To select the analog output waveform '0'= linear, '1'=trian, '2'=sin, '3'=cos
2141/3	AnalogOut2/ Inverse	Unsigned 8		Enable analogue outputs to increase or decrease in reverse '0' = Inactive, '1' = Active
2141/4	AnalogOut2/ Scaling	Unsigned 8		When you want to activate analog output '0' = Inactive, '1' = Active
2141/5	AnalogOut2/ LowScale	Real 64		Minimum scale value when analogue output is 'on'
2141/6	AnalogOut2/ HighScale	Real 64		Maximum scale value when analogue output is 'on'
2141/7	AnalogOut2/ Condition	Unsigned 8		'0' = Inactive, '1' = Active
2142/1	AnalogOut3/ Type	Unsigned 8	Read/ Write	For analogue output module: '0'=0-10V, '1'=4-20 mA, '2'=0-5V, '3'=0.5-4.5V, '4'=0-20 mA
2142/2	AnalogOut/ WaveForm	Unsigned 8		To select the analog output waveform '0'= linear, '1'=trian, '2'=sin, '3'=cos
2142/3	AnalogOut3/ Inverse	Unsigned 8		Enable analogue outputs to increase or decrease in reverse '0' = Inactive, '1' = Active
2142/4	AnalogOut3/ Scaling	Unsigned 8		When you want to activate analog output '0' = Inactive, '1' = Active
2142/5	AnalogOut3/ LowScale	Real 64		Minimum scale value when analogue output is 'on'
2142/6	AnalogOut3/ HighScale	Real 64		Maximum scale value when analogue output is 'on'
2142/7	AnalogOut3/ Condition	Unsigned 8		'0' = Inactive, '1' = Active

CALIBRATION MENU

Index/ Subindex	Parameter name	Data Type	Read/ Write	Explanation
2201/1	Scale/Low	Real 64	Read/ Write	Minimal point for calibration S-LO value
2201/2	Scale/High			Maximum point for calibration S-HI value
2201/3	Scale/Factor			Scale factor for calibration
2202	CalibrationOption	Unsigned 8	Read/ Write	Calibration option: '0' = FCAL: Factory calibration '1' = 2_Pnt '2' = Segmented
2203/1	TwoPointCalib/ LowValue	Unsigned 16	Read/ Write	Value for minimum point in manual calibration
2203/2	TwoPointCalib/ HighValue			Value for maximum point in manual calibration
2203/3	TwoPointCalib/ CalLow	Unsigned 8	Write- Only	Enter '1' to perform manual calibration
2203/4	TwoPointCalib/ CalHigh			Enter '1' to perform manual calibration
2204/1	SegmentedCalib/ Seg0_Value	Unsigned 16	Read/ Write	Value for each segment in multiple calibrations
2204/2	SegmentedCalib/ Seg1_Value			
2204/3	SegmentedCalib/ Seg2_Value			
2204/4	SegmentedCalib/ Seg3_Value			
2204/5	SegmentedCalib/ Seg4_Value			
2204/6	SegmentedCalib/ Seg5_Value			
2204/7	SegmentedCalib/ Seg6_Value			
2204/8	SegmentedCalib/ Seg7_Value			
2204/9	SegmentedCalib/ Seg8_Value			
2204/10	SegmentedCalib/ Seg9_Value			
2204/11	SegmentedCalib/ NumberOfSegment	Unsigned 8	Write/ Only	Number of multiple calibration points, 2 to 9
2204/12	SegmentedCalib/ CalibrateSegN			Enter '1' to start multiple calibrations

DISPLAY MENÜSÜ

Index/ Subinde x	Parameter name	Data Type	Read/ Write	Explanation
2301/1	Tare/Event	Unsigned 8	Read/ Write	Tare event mode option '0'=OFF, '1'=Zero, '2'=Preset, '3'=Repeated Zero, '4'=Repeated Preset
2301/2	Tare/Preset	Real 64		Preset value for preset options
2301/3	Tare/InputEdge	Unsigned 8		Edge option that the signal will activate when the button is pressed for the External Tare module '0'=OFF '1'=Rise '2'=Fall
2301/4	Tare/Filter	Unsigned 16		The period for checking the incoming signal for the External Tare module, in ms
2302	DecimalPoints	Unsigned 8	Read/ Write	The location of the point of the decimal digits '0'=A, '1'=A.A, '2'=A.AA, '3'=A.AAA '4'=A.AAAA
2303	RefreshRate	Unsigned 16	Read/ Write	The rate of refresh on the screen in ms
2304/1	Filter/ AverageFilterOn	Unsigned 8	Read/ Write	Average filter to prevent flicker on the screen '0'=OFF '1'=ON
2304/2	Filter/ AverageSampCount	Unsigned 16	Read/ Write	The number of reads to expect to calculate the average filter
2304/3	Filter/LinearQuadraticEstOn	Unsigned 8		LQE filter '0'=OFF '1'=ON
2304/4	Filter/Covariance	Unsigned 16		Covariance value for LQE filter
2304/5	Filter/Error	Unsigned 16		Error parameter for LQE filter
2304/6	Filter/Hysteresis On	Unsigned 8		State option to enable or disable the hysteresis filter '0' = inactive, '1' = active
2304/7	Filter/Delta	Unsigned 16		The value read on the display changes after the entered delta value
2304/8	Filter/TotalError	Unsigned 16		When the sum of the non-reflected values on the screen is equal to A.Error, the display is updated with the average of these values

SECURE MENU

Index/ Subinde x	Parameter name	Data Type	Read/ Write	Explanation
2401/1	HideMenu/All	Unsigned 8	Read/ Write	Hide all menus except Secure
2401/2	HideMenu/Out			Hiding the output menu
2401/3	HideMenu/Calib			Hide the calibration menu
2401/4	HideMenu/ Display			Hide the display menu

2401/5	HideMenu/ QuickOut			Hiding the entered quick set-up entry menu by pressing and holding ESC in run mode
2402/1	LockMenu/All	Unsigned 8	Read/ Write	Encrypt all menus except Secure
2402/2	LockMenu/Out			Output menu encryption
2402/3	LockMenu/Calib			Calibration menu encryption
2402/4	LockMenu/ Display			Display menu encryption
2402/5	LockMenu/ QuickOut			Encrypt the entered quick set-up entry menu by pressing and holding ESC in run mode
2403	UserPassword	Unsigned 32	Read/ Write	User password
2404	FactorySetting	Unsigned 32	Write- Only	Enter '1' to return to the factory settings.
2405	DeviceReset	Unsigned 8	Read/ Write	Enter '1' to restart the device.

SERVICE MENU

Index/ Subindex x	Parameter name	Data Type	Read/ Write	Explanation
2506	ProductionDate	String	Read/ Only	Enter '1' to return to the factory settings.
2507	Assembler	String	Read/ Only	The sensor type of the device is '7' for CANopen

COMMUNICATION PARAMETRELERİ

Index/ Subindex x	Parameter name	Data Type	Read/ Write	Explanation
1000	Device type	Unsigned 32	Read- only	Device type
1001	Error Register	Unsigned 8	Read- only	
1003/1	Standart Error Field	Unsigned 32	Read- only	Error history
1003/2				
1003/3				
1003/4				
1003/5				
1003/6				
1003/7				
1003/8				

1005	SYNC COB ID	Unsigned 32	Read/Write	CAN-identifier. The default is 0x80.
1006	Communication Cycle Period	Unsigned 32	Read/Write	
1008	Manufacturer Device Name	String	Const.	Manufacturer-designated device name
1009	Manufacturer Hardware Version	String	Const.	Manufacturer's hardware version
100A	Manufacturer Software Version	String	Const.	Device software version specified by manufacturer
1010/1	Save All Parameters	Unsigned 32	Read/Write	Each changed parameter is automatically saved, so there is no need to change this parameter.
1011/1	Restore All Default Parameters	Unsigned 32	Read/Write	To return to the default parameters, enter the value 0x64616F6C.
1014	Emergency COB ID	Unsigned 32	Read/Write	Node ID + 0x80
1015	Inhibit Time Emergency	Unsigned 16	Read/Write	
1017	Producer Heartbeat Time	Unsigned 16	Read/Write	Heartbeat value, in ms
1018/1	Identity/Vendor ID	Unsigned 32	Read-only	Device-specific manufacturer-assigned numbers
1018/2	Identity/Product Code			
1018/3	Identity/Revision Number			
1018/4	Identity/Serial Number			

SDO VE PDO PARAMETER

Index/ Subindex	Parameter name	Data Type	Read/ Write	Explanation
0x1200: SERVER SDO				
1200/1	COB ID Client to Server (Receive SDO)	Unsigned 32	Read- only	For sensor-to-device communication COB ID Node ID + 0x600
1200/2	COB ID Server to Client (Transmit SDO)			For device-to-sensor communication COB ID Node ID + 0x580
0x1400: Receive PDO 1 Parameter				
1400/1	COB ID	Unsigned 32	Read/ Write	COB ID for rPDO1 data from the network

1400/2	Transmission Type	Unsigned 8		These parameters are disabled.
1400/3	Inhibit Time	Unsigned 16		
1400/5	Event Timer	Unsigned 16		
1400/6	SYNC start value	Unsigned 8		
0x1401: Recieve PDO 2 Parameter				
1401/1	COB ID	Unsigned 32	Read/ Write	COB ID for rPDO2 data from the network
1401/2	Transmission Type	Unsigned 8		These parameters are disabled.
1401/3	Inhibit Time	Unsigned 16		
1401/5	Event Timer	Unsigned 16		
1401/6	SYNC start value	Unsigned 8		
0x1600: Recieve PDO Mappings: Static PDO mapping is used.				
1600/1	Recieve PDO 1 Mapping*	Unsigned 32	Read/ Write	Mapping information for the value that appears on the screen. COB ID (0x2107 / 1), DataStartbit (0x2107 / 2), and Datatype (0x2107 / 3) values must be specified.
1601/1	Recieve PDO 2 Mapping**	Unsigned 32	Read/ Write	Mapping information for analog output and digital output. COB ID (0x2108 / 1), DataStartbit (0x2108 / 2) must be specified.
0x1800: Transmit PDO 1 Parameter				
1800/1	COB ID	Unsigned 32	Read/ Write	0x180
1800/2	Transmission Type	Unsigned 8		0xFE(Manufacturer specific)
1800/3	Inhibit Time	Unsigned 16		0x00
1800/5	Event Timer	Unsigned 16		0x1F (500 ms)
1800/6	SYNC start value	Unsigned 8		0x00
0x1A00: Transmit PDO Mappings: Variable PDO mapping is used.				
1A00/1	Transmit PDO 1 Mapping Process Data Variable 1	Unsigned 32	Read/ Write	Default value: 0x20000520 (Object dictionary: 0x2000/1: Raw Data, Unsigned 16) Mapping information for raw value from sensor
1A00/2	Transmit PDO 1 Mapping Process Data Variable 2			Default value: 0x20070008 (Object dictionary: 0x2007: DioStatus, Unsigned 8) Mapping information for the status of Digital Outputs

**8-bit data content table for 64-bit RPDO2: (Each tab refers to 8-bit data)

DATA 7	DATA 6	DATA 5	DATA 4	DATA 3	DATA 2	DATA 1	DATA 0
Analog Output value in percent of Real32 type				Input/Output Durumu			