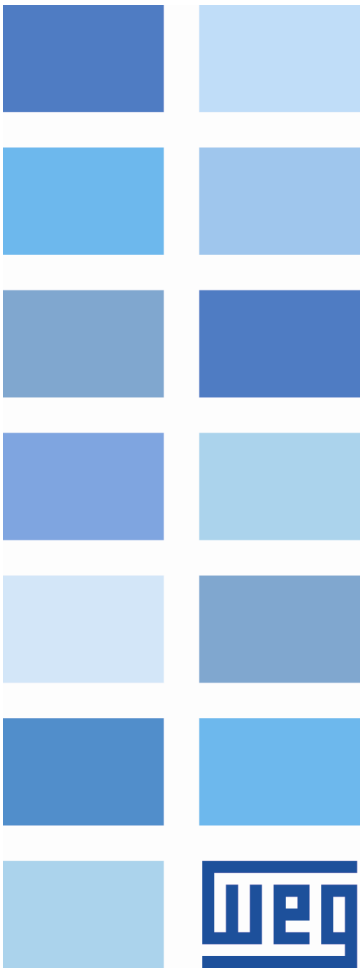
Modbus TCP

CFW900

User's Guide



Modbus TCP User's Guide

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The information below describes the reviews made in this manual.

Version	Revision	Description
V1.02.XX	R00	First edition.
V1.04.XX	R01	General review and parameter list update.
V1.06.XX	R03	General review and parameter list update.
V1.07.XX	R04	General review and parameter list update.

CONTENTS

ABOUT THE MANUAL

This manual supplies the necessary information for the operation of the CFW900 frequency inverter using the Modbus TCP protocol. This manual must be used together with the CFW900 user's manual and programming manual.

ABBREVIATIONS AND DEFINITIONS

ASCII American Standard Code for Information Interchange
CRC Cyclic Redundancy Check
CSMA/CD Carrier Sense Multiple Access/Collision Detection
IP Internet Protocol
MAC Medium Access Control
TCP Transmission Control Protocol
UDP User Datagram Protocol
LSB Least Significant Bit/Byte
MSB Most Significant Bit/Byte
ro Read only
rw Read/write
cfg Configuration

NUMERICAL REPRESENTATION

Decimal numbers are represented by means of digits without suffix. Hexadecimal numbers are represented with the letter 'h' after the number. Binary numbers are represented with the letter 'b' after the number.

DOCUMENTS

The Modbus protocol was developed based on the following specifications and documents:

Document	Version	Source
MODBUS Application Protocol Specification, December 28th 2006.	V1.1b	MODBUS.ORG
MODBUS Messaging On TCP/IP Implementation Guide, October 24th 2006.	V1.0b	MODBUS.ORG

In order to obtain this documentation, consult MODBUS.ORG, which is nowadays the organization that keeps, publishes and updates the information related to the Modbus protocol.

1 MAIN CHARACTERISTICS

Below are the main characteristics for communication of the frequency inverter CFW900 with Modbus TCP accessory.

- The interface follows the Fast Ethernet 100BASE-TX standard.
- It allows communication using the 10 or 100 Mbps rates in half or full duplex mode.
- It has a built-in, two-port Ethernet switch.
- The Ethernet ports work with Auto-MDIX (automatic medium-dependent interface crossover), a technology which automatically detects the type of cable used and configures the connection accordingly, eliminating the need of cross-over cables.
- Operates as Modbus TCP server.
- The server provides up to 4 simultaneous Modbus TCP connections.
- Allows data communication for equipment operation and parameterization.

1.1 MODBUS TCP IMPLEMENTATION

The functions available in the CFW900 frequency inverter for the Modbus TCP are the following:

- Function 01 - READ COILS.
- Function 02 - READ INPUT DISCRETE.
- Function 03 - READ HOLDING REGISTER.
- Function 04 - READ INPUT REGISTER.
- Function 05 - WRITE SINGLE COIL.
- Function 06 - WRITE SINGLE REGISTER.
- Function 15 - WRITE MULTIPLE COILS.
- Function 16 - WRITE MULTIPLE REGISTER.
- Function 43 - READ DEVICE IDENTIFICATION.

Modbus TCP does not add to the PDU an error checking field; however, the Ethernet frame already uses CRC-32, making another checking field unnecessary.

The Modbus TCP client must start a TCP connection with the server in order to send the requests. The TCP port 502 is the standard port for the connection with the Modbus TCP servers.

2 INTERFACE DESCRIPTION

2.1 CONNECTORS

The accessory for Modbus TCP communication has two RJ45 connectors for network connection. The connector pin out follows the Fast Ethernet 100BASE-TX standard, using two pairs of cables for data transmission and reception.

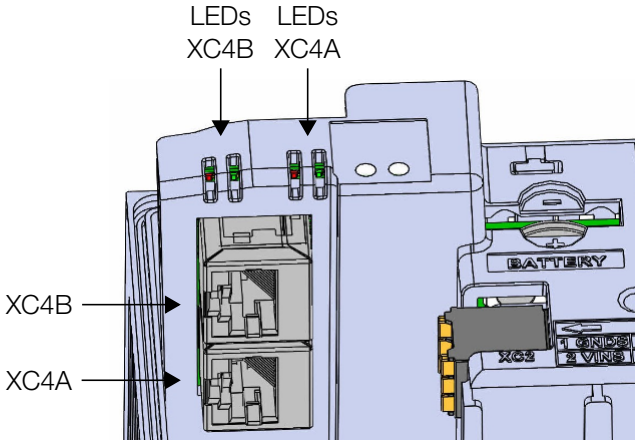

Figure 2.1: *Ethernet XC4A and XC4B connectors*

The housings of the Ethernet connectors, which are normally connected to the cable shield, have connections between themselves and to the protective earth via an RC circuit.

2.2 INDICATION LEDS

Each Ethernet port (XC4A and XC4B) has an LED for speed indication and another for link / network activity indication. These LEDs have the following functions and indications.

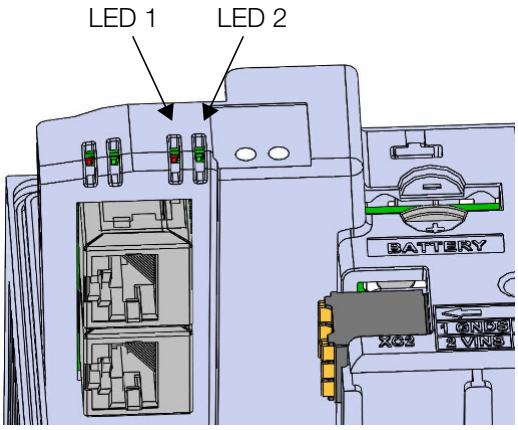

Table 2.1: *LED 1 - link/activity*

State	Description
Off	Equipment off or no link.
Red, solid	Link up and no activity.
Red, flashing	Link up and activity.

Table 2.2: *LED 2 - speed*

State	Description
Off	Equipment off or 10 Mbps link.
Green, solid	100 Mbps link.

3 MODBUS TCP NETWORK INSTALLATION

This chapter presents recommendations related to equipment installation in an Modbus TCP network.

3.1 IP ADDRESS

Every equipment in an Ethernet network needs an IP address and subnet mask.

The IP addressing is unique in the network, and each equipment must have a different IP. The subnet mask is used to define which IP address range is valid in the network.

The CFW900 frequency inverter allows the use of two methods for programming these features, programmable via C9.4.1:

- Parameters: uses the configurations of IP address, mask and gateway as programmed on equipment parameters.
- DHCP: enable the configuration of the CFW900 via DHCP server. The DHCP can automatically assign IP addresses, subnet mask, etc. to the devices on the network. The configurations performed via parameters are disregarded.

3.2 COMMUNICATION RATE

The Ethernet interfaces of the CFW900 frequency inverter can communicate using the 10 or 100 Mbps rates in half or full duplex mode.

NOTE!
It is important that, for each Ethernet connection made between two points, the baud rate and the duplex mode are set to the same option. If the option AUTO is used in one of the points, you must set the other point also to AUTO, or to half duplex mode.

3.3 CABLE

Recommended characteristics of the cable used in the installation:

- Standard Ethernet cable, 100Base-TX (FastEthernet), CAT 5e or higher.
- Shielded cable.
- Maximum length between devices: 100 m.

For installation, it is recommended the use of shielded Ethernet cables specific for use in industrial environment.

3.4 NETWORK TOPOLOGY

To connect CFW900 frequency inverter in an Modbus TCP network, usually the star connection is made using an industrial switch.

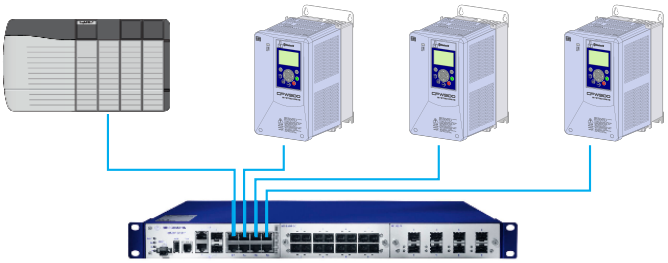

Figure 3.1: *Star topology*

It is also possible to make the connection in daisy chain, allowing a topology equivalent to a bus.

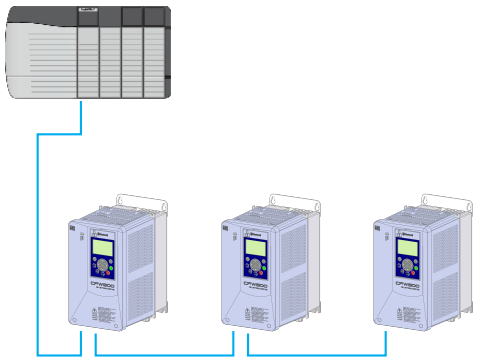

Figure 3.2: *Daisy chain topology*

NOTE!
When the equipment is turned off, the built-in switch is also deactivated, preventing communication with the subsequent equipment.

3.5 RECOMMENDATIONS FOR GROUNDING CONNECTION AND CABLE ROUTING

The correct connection with the ground decreases problems caused by interference in an industrial environment. The following are some recommendations about grounding and cable routing:

- Always use shielded twisted pair Ethernet cables and connectors with metallic housing.
- Connect the equipment grounding via grounding terminal. Avoid the cable connection on multiple grounding points, especially where there are grounds with different potentials.
- Pass signal cables and communication cables in dedicated pathways. Prevent laying these cables next to power cables.

4 S STATUS

This menu contains the status information of the inverter, motor, control accessories and networks. It is also possible to access information related to the functional safety of the inverter. It allows viewing the reading variables of the CFW900.

NOTE!
All parameters in this menu can only be viewed on the HMI display, and cannot be changed by the user, unless they are linked to the parameters in the **Configuration** menu.

S5 COMMUNICATIONS

It allows viewing the parameters used for monitoring and controlling the CFW900 inverter using communication interfaces.

S5.1 Status and Commands

It allows viewing the CFW900 logical status and commands.

S5.1 Status and Commands	
.1 Status Word 1	0 ... 15 Bit
.2 Speed	-200.00 ... 200.00 %
.3 Status Word 2	0 ... 15 Bit
.4 Status Word 3	0 ... 1 Bit

.1 Status Word 1 It indicates the operating status of the inverter. Each bit represents a status.

Bit	Value/Description
Bit 0 STO	**0 = No**: STO function is inactive (inverter operational) **1 = Yes**: STO function is active (inverter locked)
Bit 1 Run Command	**0 = No**: no run command active **1 = Yes**: run command active
Bit 2 Local	**0 = No**: inverter in Remote command mode **1 = Yes**: inverter in Local command mode (via HMI)
Bit 3 Not used	Not used.
Bit 4 No Quick Stop	**0 = No**: quick stop command active **1 = Yes**: no quick stop command active
Bit 5 2nd Ramp	**0 = No**: 1st Ramp acceleration and deceleration by C6.1.1 and C6.1.2 **1 = Yes**: 2nd Ramp acceleration and deceleration by C6.1.4 and C6.1.5
Bit 6 Config. Mode	**0 = No**: inverter in normal operation **1 = Yes**: inverter in configuration status. It indicates a special condition in which the inverter cannot be enabled
Bit 7 Alarm	**0 = No**: without alarm **1 = Yes**: with alarm active
Bit 8 Running	**0 = No**: motor is stopped **1 = Yes**: motor is running according to reference and command
Bit 9 Enabled	**0 = No**: inverter is general disabled **1 = Yes**: inverter is general enabled
Bit 10 Reverse	**0 = No**: motor running in the forward direction **1 = Yes**: motor running in the reverse direction
Bit 11 JOG	**0 = No**: no JOG command active **1 = Yes**: JOG command is active
Bit 12 Remote 2	**0 = No**: inverter in Remote 1 command mode **1 = Yes**: inverter in Remote 2 command mode
Bit 13 Undervoltage	**0 = No**: without undervoltage **1 = Yes**: with undervoltage
Bit 14 Not used	Not used.
Bit 15 Fault	**0 = No**: normal operation **1 = Yes**: fault acting

.2 Speed It indicates the actual speed of the motor driven by the inverter in percentage of the maximum speed.
- S5.1.2 = 0.00 % ⇒ motor speed = 0 rpm
- S5.1.2 = 100.00 % ⇒ motor speed = C4.3.1.1.2

Intermediate or higher speed values can be obtained by using this scale. For example, if the value read is 25.0 %, considering C4.3.1.1.2 = 1800 rpm, to obtain the value in rpm you must calculate:

100.00 % : 1800 rpm
25.00 % : Speed

$$\text{Speed} = \frac{25.00 \times 1800}{100.00}$$

Speed = 450 rpm

Negative values indicate motor rotating in the reverse direction of rotation.

.3 Status Word 2 It indicates other status of the inverter functions. Each bit represents a status.

Bit	Value/Description
Bit 0 Self-tuning	**0 = No**: inverter is not running the Self-tuning routine. **1 = Yes**: inverter is running the Self-tuning routine for estimating motor parameters
Bit 1 Not used	Not used.
Bit 2 Pre-Charge OK	**0 = No**: pre-charge of the DC link capacitors not completed **1 = Yes**: pre-charge of the DC link capacitors completed
Bit 3 SF Reduction	**0 = No**: output frequency reduction inactive **1 = Yes**: output frequency reduction active
Bit 4 Not used	Not used.
Bit 5 Decel. Ramp	**0 = No**: no deceleration **1 = Yes**: inverter decelerating
Bit 6 Accel. Ramp	**0 = No**: no acceleration **1 = Yes**: inverter accelerating
Bit 7 Freeze Ramp	**0 = No**: ramp in normal operation **1 = Yes**: the path of the ramp is frozen by some command source or internal function
Bit 8 Setpoint OK	**0 = No**: motor speed has not reached the reference yet **1 = Yes**: motor speed has reached the reference
Bit 9 DC Voltage Limitation	**0 = No**: DC link limitation or current limitation inactive **1 = Yes**: DC link limitation or current limitation active
Bit 10 Current Limitation	**0 = No**: current limitation inactive **1 = Yes**: current limitation active
Bit 11 Torque Limitation	**0 = No**: torque limitation inactive **1 = Yes**: torque limitation active
Bit 12 Ride-Through	**0 = No**: Ride-through not running **1 = Yes**: running Ride-through
Bit 13 Flying Start	**0 = No**: Flying start not running **1 = Yes**: running Flying start
Bit 14 DC Braking	**0 = No**: DC breaking inactive **1 = Yes**: DC breaking active
Bit 15 PWM pulses	**0 = No**: PWM voltage pulses at the output disabled **1 = Yes**: PWM voltage pulses at the output enabled

.4 Status Word 3 Indicates other states of the inverter functions. Each bit represents a state.

Bit	Value/Description
Bit 0 SD Card	SD card detection is performed only during the inverter initialization, so the inverter does not detect SD card disconnection during operation. **0 = No**: SD card not connected **1 = Yes**: SD card connected
Bit 1 Not used	Not used.

S5.3 Ethernet

It allows viewing the status of the Ethernet network interface and the commands received by this interface.

S5.3 Ethernet	
.1 Interface Status	0 ... 1 Bit
.2 Control Word	0 ... 7 Bit
.3 Speed Reference	-200.00 ... 200.00 %
.5 Actual IP Address	0.0.0.0 ... 255.255.255.255
.6 MQTT Status	0 ... 2
.7 Last Public. MQTT	YYYY-MM-DD HH:MM:SS
.8 SNTP - Status	0 ... 2
.9 SNTP - Last update	YYYY-MM-DD HH:MM:SS
.10 SymbiNet: Groups Status	0 ... 7 Bit

.1 Interface Status It indicates the status of the Ethernet network interface. Each bit represents a state.

Bit	Value/Description
Bit 0 Link 1	**0 = No**: Link active at port 1. **1 = Yes**: Link active at port 1.
Bit 1 Link 2	**0 = No**: No link at port 2. **1 = Yes**: Link active at port 2.

.2 Control Word It indicates the status of the control word via Ethernet network interface. This parameter can only be changed via Ethernet network interface. For other sources, only read access is allowed.

For the commands written in this parameter to be executed, the inverter must be programmed to be commanded via Ethernet. This programming is done through menu C4.

Each bit of this word represents a command that can be executed on the inverter.

Bit	Value/Description
Bit 0 Enable Ramp	**0 = No**: it stops the motor by deceleration ramp **1 = Yes**: the motor turns according to the acceleration ramp until reaching the speed reference value
Bit 1 General Enable	**0 = No**: it disables the inverter completely, interrupting the motor power supply **1 = Yes**: it enables the inverter completely, allowing the operation of the motor
Bit 2 Run Reverse	**0 = No**: turn the motor in the direction of the reference signal (forward direction) **1 = Yes**: run the motor in the opposite direction of the reference signal (reverse direction)
Bit 3 Enable JOG	**0 = No**: it disables the JOG function **1 = Yes**: it enables the JOG function
Bit 4 R1/R2 Mode	**0 = R1**: it selects the Remote 1 command mode **1 = R2**: it selects the Remote 2 command mode
Bit 5 2nd Ramp	**0 = No**: 1st Ramp acceleration and deceleration according to parameters C6.1.1 and C6.1.2 **1 = Yes**: 2nd Ramp acceleration and deceleration according to parameters C6.1.4 and C6.1.5
Bit 6 No Quick Stop	**0 = No**: it enables quick stop **1 = Yes**: it disables quick stop
Bit 7 Fault Reset	**0 = No**: not used **1 = Yes**: in the transition, if a fault is active, it resets the fault

.3 Speed Reference It indicates the speed reference sent via Ethernet network interface to the motor driven by the inverter in percentage of the maximum speed. This parameter can only be changed via Ethernet network interface. For other sources, only read access is allowed.

For the reference written in this parameter to be used, the inverter must be programmed to use the speed reference via Ethernet. This programming is done through menu C4.
- S5.3.3 = 0.00 % ⇒ speed reference = 0 rpm
- S5.3.3 = 100.00 % ⇒ speed reference = C4.3.1.1.2

Intermediate or higher speed values can be obtained by using this scale. For example, if the desired value for the

reference is 900 rpm, considering C4.3.1.1.2 = 1800 rpm, it should be calculated:

100.00 % : 1800 rpm
Reference % : 900 rpm

$$\text{Reference \%} = \frac{900 \times 100.00}{1800}$$

Reference % = 50 %

Negative values can be used to reverse the direction of rotation of the motor. The direction of rotation of the motor, however, also depends on the value of the rotation direction command bit in S5.3.2 or S1.6.1:

- Bit Rotation Direction = 0 and S5.3.3 > 0: reference for the forward direction
- Bit Rotation Direction = 0 and S5.3.3 < 0: reference for the reverse direction
- Bit Rotation Direction = 1 and S5.3.3 > 0: reference for the reverse direction
- Bit Rotation Direction = 1 and S5.3.3 < 0: reference for the forward direction

.5 Actual IP Address It allows viewing the IP address in use by the device.

.6 MQTT Status It indicates the status of the MQTT communication, regarding settings and the sending of data to the server.

Indication	Description
0 = Inactive	It indicates that the Embedded Drive Scan function is not set; it is disabled.
1 = No Connection	It indicates that the Embedded Drive Scan function has been set and is enabled, but there is currently no active connection to the configured Broker.
2 = Connected	It indicates that the Embedded Drive Scan function has been set up and is enabled, and has an active connection to the configured Broker.

.7 Last Public. MQTT It indicates the date and time of the last successful sending of collected data to the MQTT communication.

.8 SNTP - Status It indicates the status of the NTP server, regarding configuration and receiving data from the server.

Indication	Description
0 = Inactive	It indicates that the NTP server is not configured; it is disabled.
1 = No Connection	It indicates that the NTP server has been set up and is enabled, but currently has no active connection.
2 = Connected	It indicates that the NTP server has been set up and is enabled, and has active connection.

.9 SNTP - Last update It indicates the date and time of the last NTP server update.

.10 SymbiNet: Groups Status Indicates the communication status for the groups programmed for SymbiNet communication. Each bit represents the state of one group, where bit 0 indicates the state of group 1, and bit 7 indicates the state of group 8.

Bit	Value/Description
Bit 0 Group 1 Status	**0 = Inactive**: Indicates the group for SymbiNet communication is inactive (no data received within the programmed period), or the group is not programmed. **1 = Active**: Indicates the group for SymbiNet communication is active, meaning the group data has been received and is update.
Bit 1 Group 2 Status	**0 = Inactive**: Indicates the group for SymbiNet communication is inactive (no data received within the programmed period), or the group is not programmed. **1 = Active**: Indicates the group for SymbiNet communication is active, meaning the group data has been received and is update.
Bit 2 Group 3 Status	**0 = Inactive**: Indicates the group for SymbiNet communication is inactive (no data received within the programmed period), or the group is not programmed. **1 = Active**: Indicates the group for SymbiNet communication is active, meaning the group data has been received and is update.
Bit 3 Group 4 Status	**0 = Inactive**: Indicates the group for SymbiNet communication is inactive (no data received within the programmed period), or the group is not programmed. **1 = Active**: Indicates the group for SymbiNet communication is active, meaning the group data has been received and is update.
Bit 4 Group 5 Status	**0 = Inactive**: Indicates the group for SymbiNet communication is inactive (no data received within the programmed period), or the group is not programmed. **1 = Active**: Indicates the group for SymbiNet communication is active, meaning the group data has been received and is update.
Bit 5 Group 6 Status	**0 = Inactive**: Indicates the group for SymbiNet communication is inactive (no data received within the programmed period), or the group is not programmed. **1 = Active**: Indicates the group for SymbiNet communication is active, meaning the group data has been received and is update.
Bit 6 Group 7 Status	**0 = Inactive**: Indicates the group for SymbiNet communication is inactive (no data received within the programmed period), or the group is not programmed. **1 = Active**: Indicates the group for SymbiNet communication is active, meaning the group data has been received and is update.
Bit 7 Group 8 Status	**0 = Inactive**: Indicates the group for SymbiNet communication is inactive (no data received within the programmed period), or the group is not programmed. **1 = Active**: Indicates the group for SymbiNet communication is active, meaning the group data has been received and is update.

S5.5 Modbus TCP

It allows viewing information regarding the Modbus TCP protocol.

S5.5 Modbus TCP

.1 Communication Status	0 ... 3
.2 Received Telegrams	0 ... 65535
.3 Transmitted Telegrams	0 ... 65535
.4 Active Connections	0 ... 4

.1 Communication Status It allows to identify the communication status with Modbus TCP server.

Indication	Description
0 = Inactive	Not used.
1 = No Connection	Communication enabled, but no Modbus TCP connection active.
2 = Connected	At least one active Modbus TCP connection.
3 = Timeout Error	The equipment detected timeout in the Modbus TCP communication.

.2 Received Telegrams It indicates the number of telegrams received by the device as a server in the Modbus TCP network.

.3 Transmitted Telegrams It indicates the number of telegrams sent by the device as a server in the Modbus TCP network.

NOTE!
These counters start at 0 whenever the product is powered on. They also return to 0 whenever the maximum limit of the parameter is reached.

.4 Active Connections It indicates the number of Modbus TCP connections active in the product.

5 C CONFIGURATION

It allows changing the setting parameters of CFW900. Depending on the property of the parameter, it is possible to adjust its value according to the table below.

Property	Description
Stopped	Parameter can only be changed when the motor is stopped.
Model	Default value may change depending on the inverter model.

NOTE!
Parameter options with the description ”Reserved” are for WEG’s exclusive use.

C9 COMMUNICATIONS

It sets the CFW900 to exchange information via communication network.

C9.2 I/O Data

It sets the cyclic data exchange area of the communication networks.

C9.2.1 Reading Data

It configures a set of 16-bit parameters to be read via communication network.

C9.2.1 Reading Data
C9.2.1.1 Word #1

C9.2.1.1 to C9.2.1.100

C9.2.1 Reading Data
C9.2.1.100 Word #100
Range: 0 ... 9999 **Default:** 0
Properties: Stopped

Description:
It selects the address (Net Id) of the parameter whose content should be provided in the reading area for the fieldbus interfaces (input: sent to the network master).

The size of the referenced parameter must be taken into account. If the data size is greater than 16 bits, the configuration parameter of the next programmable word must be set to the same address.

C9.2.2 Writing Data

It configures a set of 16-bit parameters to be written via communication network.

C9.2.2 Writing Data
C9.2.2.1 Update Delay
Range: 0.0 ... 999.0 s **Default:** 0.0 s
Properties:

Description:
Whenever there is a transition from offline (without cyclic data) to online (with cyclic writing data), the data received via communication network (writing words) is ignored during this programmed time, remaining in the status it was before the beginning of the reception.

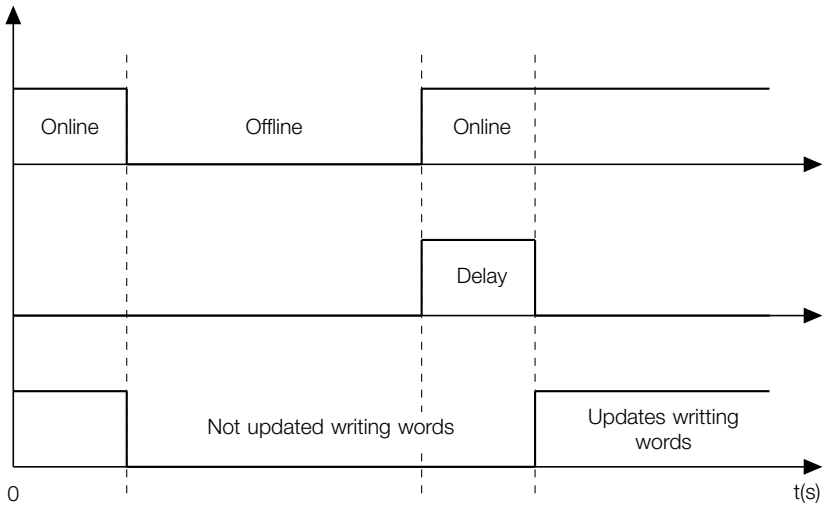

Figure 5.1: *Delay in the update of the I/O words*

C9.2.2 Writing Data
C9.2.2.2 Word #1

C9.2.2.2 to C9.2.2.101

C9.2.2 Writing Data
C9.2.2.101 Word #100

Range:	0 ... 9999	**Default:** 0
Properties:	Stopped	

Description:
It selects the address (Net Id) of the parameter whose content should be provided in the writing area for the fieldbus interfaces (output: received from the network master).

The size of the referenced parameter must be taken into account. If the data size is greater than 16 bits, the configuration parameter of the next programmable word must be set to the same address.

C9.4 Ethernet

Settings for the product built-in Ethernet port.

C9.4 Ethernet
C9.4.1 IP Address Configuration

Range:	0 ... 1	**Default:** 1
Properties:		

Description:
It allows setting the IP address for the built-in Ethernet interface.

Indication	Description
0 = Parameters	The IP address, subnet mask and gateway must be set through the product parameters.
1 = DHCP	It enables the DHCP function. The IP address and other network settings are received from a DHCP server via network.

C9.4 Ethernet

C9.4.2 IP Address

Range: 0.0.0.0 ... 255.255.255.255 **Default:** 192.168.0.10
Properties:

Description:
It allows programming the IP address of the Ethernet interface. It only takes effect if the address was set via parameters.

C9.4 Ethernet

C9.4.3 Network Mask

Range: 0 ... 31 **Default:** 24
Properties:

Description:
It allows programming the subnet mask used for the Ethernet interface. It only takes effect if the address was set via parameters.

The following table shows the allowable values for CIDR and the equivalent dot-separated notation for the subnet mask:

Indication	Description
0 = Reserved	Subnet mask
1 = 128.0.0.0	Subnet mask
2 = 192.0.0.0	Subnet mask
3 = 224.0.0.0	Subnet mask
4 = 240.0.0.0	Subnet mask
5 = 248.0.0.0	Subnet mask
6 = 252.0.0.0	Subnet mask
7 = 254.0.0.0	Subnet mask
8 = 255.0.0.0	Subnet mask
9 = 255.128.0.0	Subnet mask
10 = 255.192.0.0	Subnet mask
11 = 255.224.0.0	Subnet mask
12 = 255.240.0.0	Subnet mask
13 = 255.248.0.0	Subnet mask
14 = 255.252.0.0	Subnet mask
15 = 255.254.0.0	Subnet mask
16 = 255.255.0.0	Subnet mask
17 = 255.255.128.0	Subnet mask
18 = 255.255.192.0	Subnet mask
19 = 255.255.224.0	Subnet mask
20 = 255.255.240.0	Subnet mask
21 = 255.255.248.0	Subnet mask
22 = 255.255.252.0	Subnet mask
23 = 255.255.254.0	Subnet mask
24 = 255.255.255.0	Subnet mask. Factory setting.
25 = 255.255.255.128	Subnet mask
26 = 255.255.255.192	Subnet mask
27 = 255.255.255.224	Subnet mask
28 = 255.255.255.240	Subnet mask
29 = 255.255.255.248	Subnet mask
30 = 255.255.255.252	Subnet mask
31 = 255.255.255.254	Subnet mask

C9.4 Ethernet
C9.4.4 Gateway

Range:	0.0.0.0 ... 255.255.255.255	**Default:** 0.0.0.0
Properties:		

Description:
It allows programming the IP address of the default gateway used by the Ethernet interface. It only takes effect if the address was set via parameters.

C9.4 Ethernet
C9.4.5 SNTP - Server 1

Range:	0.0.0.0 ... 255.255.255.255	**Default:** 0.0.0.0
Properties:		

Description:
It allows programming the IP address of the NTP primary server. If the value is zero, the NTP client is disabled.

C9.4 Ethernet
C9.4.6 SNTP - Server 2

Range:	0.0.0.0 ... 255.255.255.255	**Default:** 0.0.0.0
Properties:		

Description:
It allows programming the IP address of the NTP secondary server.

C9.4 Ethernet
C9.4.7 SNTP - Update

Range:	0 ... 65535	**Default:** 0
Properties:		

Description:
It indicates the NTP server date and time update interval. If the value is zero, the NTP client is disabled. The minimum interval is 15 seconds.

C9.6 Modbus TCP

It allows setting the Modbus TCP network protocol using the CFW900 built-in Ethernet port.

C9.6 Modbus TCP
C9.6.1 TCP Port

Range:	0 ... 65535	**Default:** 0
Properties:	Stopped	

Description:
It allows setting the number of the TCP port used for Modbus TCP connections.

Port 502 is the default TCP port for Modbus TCP connections, and it is always available. If you want an additional port to establish Modbus TCP connections, you can set the number of another TCP port in this parameter.

NOTE!
After changing this property, the device must be turned off and back on to effect the modifications.

C9.6 Modbus TCP		
C9.6.3 Timeout		
Range:	0.0 ... 999.0 s	**Default:** 0.0 s
Properties:	Stopped	

Description:
Time to detect interruption in Modbus TCP communication.

After the Modbus TCP communication is started, if the device stops receiving valid telegrams for a period longer than the one programmed in this parameter, it will consider that the communication has been interrupted, and will indicate alarm/fault. For the case of an alarm, the action for communication error will also be performed.

Time counting will start from the first valid telegram received. The value 0.0 disables this function.

6 OPERATION IN THE MODBUS TCP NETWORK – SERVER MODE

NOTE!

- The RS485, USB and Ethernet interfaces, for using the same functions to access the data and programming of the equipment, must not be used simultaneously to perform program download or on-line monitoring functions of the CFW900 frequency inverter, because conflicts may occur during the simultaneous access to the data.

6.1 AVAILABLE FUNCTIONS

In the Modbus specification are defined the functions used to access different types of data. In the CFW900, in order to access those data the following services (or functions) have been made available:

Table 6.1: *Supported Modbus Functions*

Code	Name	Description
01	Read Coils	Reading of bit blocks of the coil type
02	Read Discrete Inputs	Reading of bit blocks of the discrete input type
03	Read Holding Registers	Reading of register blocks of the holding register type
05	Write Single Coil	Writing in a single bit of the coil type
06	Write Single Register	Writing in a single register of the holding type
15	Write Multiple Coils	Writing in bit blocks of the coil type
16	Write Multiple Registers	Writing in register blocks of the holding register type
22	Mask Write Register	Writing in holding register using mask
23	Read/Write Multiple registers	Reading and writing in register blocks of the holding register type
43	Read Device Identification	Identification of the device model

6.2 MEMORY MAP

The frequency inverter CFW900 has different types of data accessible through the Modbus communication. These data are mapped at data addresses and access functions as described in the following items.

6.2.1 Parameters

The CFW900 frequency inverter Modbus communication is based on the reading/writing of the equipment parameters. All parameters of the equipment are available as 16-bits holding registers. The data addressing is done with the offset equal to zero, which means that the parameter's network address (Net Id) corresponds to the register address.

It is necessary to know the device list of parameters to be able to operate the equipment. Thus, it is possible to identify what data are needed for the status monitoring and the control of the functions. The main parameters are:

Monitoring (reading):

- S5.1.1 (holding register address 680): Status and Commands Status Word 1

Command (writing):

- S5.3.2 (holding register address 664): Ethernet Control Word
- S5.3.3 (holding register address 665): Ethernet Speed Reference

Refer to the item 12 for a complete parameter list of the equipment.

NOTE!

- Depending on the master that is used, those registers are referenced starting from the base address 40000 or 4x. In this case, the address that must be programmed in the master for a parameter is the address showed in the table 12.1 added to the base address. Refer to the master documentation to find out how to access holding registers.
- It should be noted that read-only parameters can only be read from the equipment, while other parameters can be read and written through the network.
- Parameters that have the property *Stopped* are only changed when the motor is stopped.
- The data is transmitted as an integer value, without the indication of the decimal places. For the number of decimal places, see the item 12.

6.2.2 Memory Markers

Besides the parameters, other types of data as bit markers, word or float, can also be accessed using the Modbus protocol. Those markers are used mainly by the SoftPLC function, available for the CFW900. Refer to the SoftPLC documentation for the description of those markers, as well as for the addresses via Modbus.

6.2.3 Indirect Parameters

Modbus TCP does not define a channel of cyclic data dedicated like in other networks. However, the CFW900, has dedicated registers so as to optimize the access to non-contiguous parameter areas.

The holding registers with address 1300 to 1399 are used to read, while the ones with address 1400 to 1499 write values of the parameters mapped on menu C9.2.

Table 6.2: *Relationship between configuration parameters and access address*

Programmable parameter	Indirect access register	Description
C9.2.1.1 Reading Data Word #1	1300	Register 1300 contains the value of the parameter whose Net Id is configured in C9.2.1.1
⋮		
C9.2.1.100 Reading Data Word #100	1399	Register 1399 contains the value of the parameter whose Net Id is configured in C9.2.1.100
C9.2.2.2 Writing Data Word #1	1400	Register 1400 contains the value of the parameter whose Net Id is configured in C9.2.2.2
⋮		
C9.2.2.101 Writing Data Word #100	1499	Register 1499 contains the value of the parameter whose Net Id is configured in C9.2.2.101

NOTE!

- For the Modbus protocol, each object referenced in the output area is only changed when the last word mapped for this object is written.

6.3 DATA ACCESS

The Modbus protocol allows the access only by bits or by 16-bits registers.

To make it possible to write or read a block of more than 2 registers without an error return even if there is an invalid register in the selected range, the following definitions have been used:

- Reading registers that do not represent available parameters return the value zero when the requested number of registers is greater than 2. For requests with a quantity equal to 1 or 2 registers, error code 2 (Invalid data address) is returned.
- Write to registers that represent read-only or invalid parameters have no effect and do not return error when the requested number of registers is greater than 2. For requests with a quantity equal to 1 or 2 registers, error code 2 (Invalid data address) is returned.

Data types greater than 16 bits must be accessed as multiple registers. If the number of registers requested is not sufficient to access the full size of the data type, error code 2 (Invalid data address) is returned.

For example, the float data type take four bytes of memory. In the access by registers, it is necessary to read or write two registers in sequence (least significant value in the first register) so that the four bytes will be accessed.

The Modbus protocol defines that in order to transmit a 16-bits register, the most significant byte (MSB) must be transmitted first. Therefore, if four registers are read in a row, from the register with address 0, the content of each register will be transmitted the following way:

1st Register – 0		2nd Register – 1		3rd Register – 2		4th Register – 3	
W0 MSB	W0 LSB	W1 MSB	W1 LSB	W2 MSB	W2 LSB	W3 MSB	W3 LSB

6.4 COMMUNICATION ERRORS

Communication errors may occur in the transmission of telegrams, as well as in the contents of the transmitted telegrams.

In the event of a successful reception, during the treatment of the telegram, the server may detect problems and send an error message, indicating the kind of problem found:

Table 6.3: *Error codes for Modbus*

Error Code	Description
1	Invalid function: the requested function is not implemented for the equipment
2	Invalid data address: the data address (register or bit) does not exist
3	Invalid data value: ▪ Value out of the allowed range. ▪ Writing on data that cannot be changed (read only register or bit).

NOTE!
It is important that it be possible to identify at the client what type of error occurred, in order to be able to diagnose problems during the communication.

7 STARTUP GUIDE

The main steps to start up the CFW900 frequency inverter in Modbus TCP network are described below. These steps represent an example of use. Check out the specific chapters for details on the indicated steps.

Connect the cables, considering the recommended instructions in network installation, as described in item 3.5:

- Use shielded cable.
- Properly ground network equipment.
- Avoid laying communication cables next to power cables.

7.1 CONFIGURING THE EQUIPMENT

1. Follow the recommendations described in the user manual to program the device parameters related to the motor parameterization, desired functions for the I/O signals, etc.
2. Program the command sources as desired for the application in menu C4.
3. Configure communication parameters, such as DHCP, IP address, communication rate, etc. in C9.4.
4. Configure the timeout for the Modbus TCP communication in C9.6.3.
5. Program the desired action for the equipment in case of communication fault in C9.7.8.
6. Define which data will be read and written at frequency inverter CFW900, based on its parameter list. It is not necessary to define I/O words. The Modbus TCP protocol enables direct access to any device parameter, and does not distinguish between cyclic and acyclic data. Nevertheless, data exchange areas can be configured via menu C9.2 (see item 6.2.3). Among the main parameters that can be used to control the device, we can mention:
   - S5.1.1 Status and Commands Status Word 1 (read).
   - S5.3.2 Ethernet Control Word (write).
   - S5.3.3 Ethernet Speed Reference (write).

7.2 CLIENT CONFIGURATION

The way the network configuration is done depends greatly on the used client and the configuration tool. It is essential to know the tools used to perform this activity. In general, the following steps are necessary to perform the network configuration.

1. Configure the client to access the holding registers, based on the defined equipment parameters to read and write. The register address is based on the parameter's network address (Net Id), as shown in the item 12.
2. It is recommended that reading and writing are done in a cyclic manner, allowing detection of communication errors by timeout. The period of data update must be in accordance with the value programmed in parameter C9.6.3.

7.3 COMMUNICATION STATUS

Once the network is assembled and the client programmed, it is possible to use the LEDs and parameters of the equipment to identify some status related to the communication.

- The parameter S5.5.1 indicates the status of communication between the device and the network master.

The client of the network must also supply information about the communication with the server.

8 WEB SERVER

Besides the communication protocol, the peripheral also provides a WEB server with a HTML page to access data in the CFW900 frequency inverter. If the IP address is known, you can use a web browser by typing the IP address in the browser address bar, and it will present a web page with links to interface settings and device data.

Figure 8.1: *WEB page showing CFW900's status.*

9 SNTP CLIENT

The SNTP is a protocol used to synchronize clocks in a network. Devices can synchronize the date and time through one or more servers..

The frequency inverter CFW900 has a built-in SNTP client and uses this protocol to request date and time information from a server, and automatically change its settings. The SNTP server sends the date and time in UTC (Universal Time Coordinated) format and the current local time must be set according to the time zone.

Using the HMI, you can configure the SNTP client of frequency inverter CFW900. The IP addresses of the primary and secondary server must be informed, as indicated in the parameters C9.4.5 and C9.4.6, to which CFW900 must connect to synchronize date and time information. The secondary server is used when the primary server is not accessible on the network. You can configure the time interval between updates, according to the parameter C9.4.7.

NOTE!
If the primary server is 0.0.0.0 or the update interval is zero, the SNTP client is inactive.

The states of the primary and secondary servers are indicated in the parameter S5.3.8 and the time of the last synchronization performed by the SNTP server, according to the parameter S5.3.9.

NOTE!
The frequency inverter CFW900 not getting a response from the primary or secondary servers, after 30 seconds of the first connection attempt will indicate the alarm A145.

10 FAULTS AND ALARMS

Fault/Alarm	Description	Possible Causes
A145: SNTP Connection Timeout	It indicates that the inverter tried to connect to the NTP server and got no response. It occurs after starting connection with the NTP server and the server has not returned the response requested by the inverter.	▪ Check the configuration and IP address. ▪ Check if the NTP server is active.
A149: Modbus TCP Timeout	It indicates that the equipment stopped receiving valid telegrams for a period longer than the setting in C9.6.3. The time counting starts after the first valid telegram is received.	▪ Check the network installation, broken cable or poor contact on the connections with the network, grounding. ▪ Ensure that the Modbus TCP client always sends telegrams to the equipment in a shorter time than the set in C9.6.3. ▪ Disable the Timeout function in C9.6.3.
F249: Modbus TCP Timeout	It indicates that the equipment stopped receiving valid telegrams for a period longer than the setting in C9.6.3. The time counting starts after the first valid telegram is received.	▪ Check the network installation, broken cable or poor contact on the connections with the network, grounding. ▪ Ensure that the Modbus TCP client always sends telegrams to the equipment in a shorter time than the set in C9.6.3. ▪ Disable the Timeout function in C9.6.3.

11 PARAMETER STRUCTURE

S Status

- S1 Inverter
  - S1.1 Status
  - S1.2 Software Version
    - S1.2.2 Details
  - S1.3 Inverter Data
  - S1.4 Control Accessory Data
    - S1.4.1 Backplane
    - S1.4.2 Slot A
    - S1.4.3 Slot B
    - S1.4.4 Slot C
    - S1.4.5 Slot D
    - S1.4.6 Slot E
    - S1.4.7 Slot F
    - S1.4.8 Slot G
  - S1.5 Date/Hour
  - S1.6 Control Words
- S2 Measurements
  - S2.1 Motor Speed
  - S2.2 Motor Torque
  - S2.3 Inverter Output
  - S2.4 Motor Temperatures
  - S2.5 Inverter Temperatures
    - S2.5.1 IGBT Temperature
    - S2.5.3 Internal Air Temperature
  - S2.7 DC Link
  - S2.8 Torque Current Limitation
- S3 I/Os
  - S3.1 Slot X Status
    - S3.1.1 Analog Inputs
    - S3.1.2 Analog Outputs
    - S3.1.3 Digital Inputs
    - S3.1.4 Digital Outputs
    - S3.1.5 Encoder
  - S3.2 Slot A Status
    - S3.2.1 Analog Inputs
    - S3.2.2 Analog Outputs
    - S3.2.3 Digital Inputs
    - S3.2.4 Digital Outputs
    - S3.2.5 Encoder
    - S3.2.6 Temperatures
  - S3.3 Slot B Status
  - S3.4 Slot C Status
  - S3.5 Slot D Status

S Status (cont.)

- S3 I/Os (cont.)
  - S3.6 Slot E Status
  - S3.7 Slot F Status
  - S3.8 Slot G Status
- S4 Functional Safety
- S5 Communications
  - S5.1 Status and Commands
  - S5.2 Serial RS485
  - S5.3 Ethernet
  - S5.4 EtherNet/IP
  - S5.5 Modbus TCP
  - S5.7 CAN/CANopen/DNet
  - S5.9 Bluetooth
- S6 SoftPLC
  - S6.1 Program Execution
  - S6.2 Control and References
- S7 User

D Diagnostics

- D1 Faults
  - D1.1 Actual
  - D1.2 History
- D2 Alarms
  - D2.1 Actual
  - D2.2 History
- D3 Hour Control
- D4 Inverter and Control Access.
  - D4.1 Inverter
    - D4.1.1 Fan Speed
    - D4.1.2 Temperatures
    - D4.1.3 DC Link
    - D4.1.4 Control Voltages
    - D4.1.5 Motor Overl. Fault
    - D4.1.6 Thermal Management
  - D4.2 Control Accessories
    - D4.2.1 Diag. Slot A
    - D4.2.2 Diag. Slot B
    - D4.2.3 Diag. Slot C
    - D4.2.4 Diag. Slot D
    - D4.2.5 Diag. Slot E
    - D4.2.6 Diag. Slot F
    - D4.2.7 Diag. Slot G
- D5 Changed Parameters

D Diagnostics (cont.)

- D5 Changed Parameters (cont.)
  - D5.1 Configuration
  - D5.2 Application

C Configuration

- C1 Inverter and Power Supply
  - C1.1 Power Supply
  - C1.2 Inverter Use
  - C1.3 Switching Frequency
  - C1.4 PWM Modulation
  - C1.5 Fans Configuration
  - C1.6 Other Inverter Config.
- C2 Motor
  - C2.1 Motor Data
  - C2.2 Motor Model Parameters
- C3 Control
  - C3.1 Configuration
  - C3.2 Scalar (V/F) and VVW+ Control
    - C3.2.1 V/F Curve
    - C3.2.2 VVW+ Optimization
      - C3.2.2.1 VVW+ Induction Motor
      - C3.2.2.2 VVW+ PM Motor
    - C3.2.3 Current Stabilization
    - C3.2.4 Pre-Magnetization
    - C3.2.5 I/F Control
  - C3.3 Vector Control
    - C3.3.1 Configuration
    - C3.3.2 Regulators
      - C3.3.2.1 Speed Regulator
      - C3.3.2.2 Torque Regulator
      - C3.3.2.3 Flux Regulator
      - C3.3.2.4 Current Regulator
    - C3.3.3 Output Voltage Limiter
    - C3.3.4 Torque Mode
      - C3.3.4.1 Speed Limiter
    - C3.3.5 Speed Mode
      - C3.3.5.1 Torque Limiter
    - C3.3.7 Speed Steady State Estimator
    - C3.3.9 Online Parameter Estimation
  - C3.4 Current Limiter
  - C3.5 DC Link Voltage Limiter
    - C3.5.1 DC Link Volt.Limit.Config.
    - C3.5.2 Scalar and VVW+ Control

C Configuration (cont.)

- C3 Control (cont.)
  - C3.5 DC Link Voltage Limiter (cont.)
    - C3.5.3 Vector Control
  - C3.6 Dynamic Braking
  - C3.7 DC braking
  - C3.8 Flying Start
    - C3.8.1 Flying Start Setting
    - C3.8.2 Scalar and VVW+ Control
    - C3.8.3 Vector Control
  - C3.9 Ride-Through
    - C3.9.1 Ride-Through Config.
    - C3.9.2 Scalar and VVW+ Control
    - C3.9.3 Vector Control
  - C3.10 Advanced Energy Saving
- C4 Commands and References
  - C4.1 LOC/REM Mode Config.
  - C4.2 Commands
    - C4.2.1 R1 Config. Commands
    - C4.2.2 R2 Config. Commands
    - C4.2.3 DIs Config. for Commands
    - C4.2.4 HMI Config. for Commands
  - C4.3 References
    - C4.3.1 Speed
      - C4.3.1.1 Speed Ref. Range
      - C4.3.1.2 Speed Ref. Source
      - C4.3.1.3 Ref. HMI, AIs and FIs
      - C4.3.1.4 E.P. Ref.-DIs Config.
      - C4.3.1.5 Multispeed Ref.
      - C4.3.1.6 Skip Speed
    - C4.3.2 JOG Speed
    - C4.3.3 Torque
- C5 I/Os
  - C5.1 Slot X
    - C5.1.1 Slot X - Analog Inputs
    - C5.1.2 Slot X - Analog Outputs
    - C5.1.3 Slot X - Digital Inputs
    - C5.1.4 Slot X - Digital Outputs
    - C5.1.5 Slot X-Encoder
  - C5.2 Slot A
    - C5.2.1 Slot A-Analog Inputs
    - C5.2.2 Slot A - Analog Outputs
    - C5.2.4 Slot A - Digital Outputs
    - C5.2.5 Slot A-Encoder

C Configuration (cont.)

- C5 I/Os (cont.)
  - C5.2 Slot A (cont.)
    - C5.2.6 Slot A-Temperatures
  - C5.3 Slot B
    - C5.3.1 Slot B-Analog Inputs
    - C5.3.2 Slot B-Analog Outputs
    - C5.3.4 Slot B-Digital Outputs
    - C5.3.5 Slot B-Encoder
    - C5.3.6 Slot B-Temperatures
  - C5.4 Slot C
    - C5.4.1 Slot C-Analog Inputs
    - C5.4.2 Slot C-Analog Outputs
    - C5.4.4 Slot C-Digital Outputs
    - C5.4.5 Slot C-Encoder
    - C5.4.6 Slot C-Temperatures
  - C5.5 Slot D
    - C5.5.1 Slot D-Analog Inputs
    - C5.5.2 Slot D-Analog Outputs
    - C5.5.4 Slot D-Digital Outputs
    - C5.5.5 Slot D-Encoder
    - C5.5.6 Slot D-Temperatures
  - C5.6 Slot E
    - C5.6.1 Slot E-Analog Inputs
    - C5.6.2 Slot E-Analog Outputs
    - C5.6.4 Slot E-Digital Outputs
    - C5.6.5 Slot E-Encoder
    - C5.6.6 Slot E-Temperatures
  - C5.7 Slot F
    - C5.7.1 Slot F-Analog Inputs
    - C5.7.2 Slot F-Analog Outputs
    - C5.7.4 Slot F-Digital Outputs
    - C5.7.5 Slot F-Encoder
    - C5.7.6 Slot F-Temperatures
  - C5.8 Slot G
    - C5.8.1 Slot G-Analog Inputs
    - C5.8.2 Slot G-Analog Outputs
    - C5.8.4 Slot G-Digital Outputs
    - C5.8.5 Slot G-Encoder
    - C5.8.6 Slot G-Temperatures
  - C5.9 DO Operation Levels
- C6 Ramps
  - C6.1 Speed Control Ramps
  - C6.2 Torque Control Ramps

C Configuration (cont.)

- C7 Protections
  - C7.1 Power Supply Phase Loss
  - C7.2 Ground Fault
  - C7.4 Motor Overload Fault
  - C7.5 Over/Undertemp. Prot.
  - C7.6 Fan Speed Fault
  - C7.7 Motor Overspeed
  - C7.8 Pre-charge
  - C7.9 Auto-Reset
  - C7.10 External Fault/Alarm
  - C7.11 Thermal Management
- C8 Functional Safety
- C9 Communications
  - C9.1 Communication Errors
    - C9.1.1 Master Offline
    - C9.1.2 Master Idle/Prog
  - C9.2 I/O Data
    - C9.2.1 Reading Data
    - C9.2.2 Writing Data
  - C9.3 Serial RS485
  - C9.4 Ethernet
  - C9.5 EtherNet/IP
  - C9.6 Modbus TCP
  - C9.8 CAN/CANopen/DNet
  - C9.10 Bluetooth
  - C9.11 SymbiNet
- C10 SoftPLC
  - C10.1 Configuration
  - C10.2 Engineering Unit
- C11 HMI
  - C11.1 Configuration
  - C11.2 Main Screen
  - C11.3 User
    - C11.3.1 Login
    - C11.3.2 Change password
- C12 Backup

W Wizards

A Application

- A1 User Parameters

Table 12.1: *Characteristics of the parameters for the communication protocol*

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
S1 Status\Inverter						
S1.1	Status					
S1.1.1	Inverter	0 = Ready 1 = Run 2 = Undervoltage 3 = Fault 4 = Configuration 5 = STO 6 = Power Off 7 = Disabled 8 = SS1 9 = Self-Tuning		6	enum	1
S1.1.2	HMI	0 = Ready 1 = Run 2 = Sub 3 = Fault 4 = Config 5 = STO 6 = P.Off 7 = Disab. 8 = SS1 9 = SelfTun		1010	enum	1
S1.1.3	Pre-Charge	0 = Running 1 = Completed		2051	enum	1
S1.1.4	Config	0 = No Config 1 = Run/Stop DIx 2 = Forward R1 3 = Forward R2 4 = Reverse R1 5 = Reverse R2 6 = 3-wire Start/Stop 7 = Direction of Rotation DIx 8 = JOG DIx 9 = R1/R2 DIx 10 = Ramp selection DIx 11 = Oriented Startup 12 = Backup 13 = Not used 14 = SS1 configuration 15 = Switching Frequency 16 = Undefined model		49	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		17 = Encoder Vector Control 18 = ENC Acc. not configured 19 = AIx/FIx Speed Ref. 20 = PM Motor Control 21 = General Enable DIx 22 = Multispeed 23 = Not used 24 = Electronic Potentiometer 25 = FI used as DI 26 = AIx/FIx Torque Ref.				
S1.2	Software Version					
S1.2.1	Package	to	0	22	NONE	2
S1.2.2	Details					
S1.3	Inverter Data					
S1.3.1	Model	1 to 40	0	9900	NONE	0
S1.3.2	Inverter Serial No.	0 to 4294967295	0	2056	32bit	2
S1.3.3	Power Board Serial No.	0 to 4294967295	0	2058	32bit	2
S1.3.4	Power - Options/Voltages	Bit 0 = 200 V Bit 1 = 208/220/230/240 V Bit 2 = 380 V Bit 3 = 400/415 V Bit 4 = 440/460 V Bit 5 = 480 V Bit 6 = 500/525 V Bit 7 = 550/575/600 V Bit 8 = 660/690 V Bit 9 = DC Link Power Supply Bit 10 = Single-phase Power Supply Bit 11 = Three-phase Power Supply Bit 12 = Not used		2064	13bit	1
S1.3.5	Rated Current	0.0 to 6553.0 A	1	1295	16bit	1
S1.3.6	Effective Rated Current	0.0 to 6553.0 A	1	1299	16bit	1
S1.3.7	Inverter Model Version	0 to 4294967295	0	9950	32bit	2
S1.4	Control Accessory Data					
S1.4.1	Backplane					
S1.4.1.1	Model	0 = Disconnected 1 = CFW900-4SLOTS 2 = CFW900-7SLOTS		7000	enum	1
S1.4.2	Slot A					
S1.4.2.1	Accessory Identified	0 = Unknown 1 = No Accessory 2 = CFW900-IOAI-01 3 = CFW900-IOD-01 4 = CFW900-REL-01 5 = CFW900-TEMP-01 6 = CFW900-ENC-01		7310	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		7 = Not used 8 = CFW900-CCAN-W 9 = Not used				
S1.4.3	Slot B					
S1.4.3.1	Accessory Identified	0 = Unknown 1 = No Accessory 2 = CFW900-IOAI-01 3 = CFW900-IOD-01 4 = CFW900-REL-01 5 = CFW900-TEMP-01 6 = CFW900-ENC-01 7 = Not used 8 = CFW900-CCAN-W 9 = Not used		7610	enum	1
S1.4.4	Slot C					
S1.4.4.1	Accessory Identified	0 = Unknown 1 = No Accessory 2 = CFW900-IOAI-01 3 = CFW900-IOD-01 4 = CFW900-REL-01 5 = CFW900-TEMP-01 6 = CFW900-ENC-01 7 = Not used 8 = CFW900-CCAN-W 9 = Not used		7910	enum	1
S1.4.5	Slot D					
S1.4.5.1	Accessory Identified	0 = Unknown 1 = No Accessory 2 = CFW900-IOAI-01 3 = CFW900-IOD-01 4 = CFW900-REL-01 5 = CFW900-TEMP-01 6 = CFW900-ENC-01 7 = Not used 8 = CFW900-CCAN-W 9 = Not used		8210	enum	1
S1.4.6	Slot E					
S1.4.6.1	Accessory Identified	0 = Unknown 1 = No Accessory 2 = CFW900-IOAI-01 3 = CFW900-IOD-01 4 = CFW900-REL-01 5 = CFW900-TEMP-01 6 = CFW900-ENC-01 7 = Not used		8510	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		8 = CFW900-CCAN-W 9 = Not used				
S1.4.7	Slot F					
S1.4.7.1	Accessory Identified	0 = Unknown 1 = No Accessory 2 = CFW900-IOAI-01 3 = CFW900-IOD-01 4 = CFW900-REL-01 5 = CFW900-TEMP-01 6 = CFW900-ENC-01 7 = Not used 8 = CFW900-CCAN-W 9 = Not used		8810	enum	1
S1.4.8	Slot G					
S1.4.8.1	Accessory Identified	0 = Unknown 1 = No Accessory 2 = CFW900-IOAI-01 3 = CFW900-IOD-01 4 = CFW900-REL-01 5 = CFW900-TEMP-01 6 = CFW900-ENC-01 7 = Not used 8 = CFW900-CCAN-W 9 = Not used		9110	enum	1
S1.5	Date/Hour					
S1.5.1	Actual	to	0	1008	NONE	2
S1.6	Control Words					
S1.6.1	Global	Bit 0 = Enable Ramp Bit 1 = General Enable Bit 2 = Run Reverse Bit 3 = Enable JOG Bit 4 = R1/R2 Mode Bit 5 = 2nd Ramp Bit 6 = No Quick Stop Bit 7 = Fault Reset		666	8bit	1
S1.6.2	HMI	Bit 0 = Enable Ramp Bit 1 = General Enable Bit 2 = Run Reverse Bit 3 = Enable JOG Bit 4 = LOC/REM Mode Bit 5 = 2nd Ramp Bit 6 = No Quick Stop Bit 7 = Reset Fault		668	8bit	1
S1.6.3	DI	Bit 0 = Enable Ramp		670	8bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		Bit 1 = General Enable Bit 2 = Run Reverse Bit 3 = Enable JOG Bit 4 = R1/R2 Mode Bit 5 = 2nd Ramp Bit 6 = No Quick Stop Bit 7 = Fault Reset				
		S2 Status\Measurements				
S2.1	Motor Speed					
S2.1.1	Reference	0 to 60000 rpm	0	1	16bit	1
S2.1.2	Total Reference	0 to 60000 rpm	0	1011	16bit	1
S2.1.3	Actual Value	0 to 60000 rpm	0	2	16bit	1
S2.1.4	Encoder	0 to 65535 rpm	0	38	16bit	1
S2.1.5	Estimated Value	0 to 60000 rpm	0	39	16bit	1
S2.2	Motor Torque					
S2.2.1	Reference	-400.0 to 400.0 %	1	12	s16bit	1
S2.2.2	Total Reference	-400.0 to 400.0 %	1	3068	TIME	2
S2.2.3	Estimated Value	-400.0 to 400.0 %	1	9	s16bit	1
S2.3	Inverter Output					
S2.3.1	Current	0.0 to 4500.0 A	1	3	16bit	1
S2.3.2	Voltage	0 to 2000 V	0	7	16bit	1
S2.3.3	Frequency	0.0 to 1020.0 Hz	1	5	16bit	1
S2.3.4	cos phi	-1.00 to 1.00	2	11	s16bit	1
S2.3.5	Power	0.00 to 655.35 kW	2	10	16bit	1
S2.3.6	Energy GWh	0 to 999 GWh	0	3045	16bit	1
S2.3.7	Energy MWh	0 to 999 MWh	0	3046	16bit	1
S2.3.8	Energy kWh	0.0 to 999.9 kWh	1	48	16bit	1
S2.3.9	Current Switc. Freq.	0.00 to 16.00 kHz	2	3040	16bit	1
S2.4	Motor Temperatures					
S2.4.1	Thermal Image	0.00 to 655.35 %	2	364	16bit	1
S2.4.3	Sensor Measured Value	-100.0 to 250.0 °C	1	365	s16bit	1
S2.5	Inverter Temperatures					
S2.5.1	IGBT Temperature					
S2.5.1.1	Phase U/T1 IGBT1	-50.0 to 250.0 °C	1	2020	s16bit	1
S2.5.1.2	Phase V/T2 IGBT1	-50.0 to 250.0 °C	1	2021	s16bit	1
S2.5.1.3	Phase W/T3 IGBT1	-50.0 to 250.0 °C	1	2022	s16bit	1
S2.5.3	Internal Air Temperature					
S2.5.3.1	Power	-50.0 to 250.0 °C	1	2029	s16bit	1
S2.5.3.2	Control	-50.0 to 250.0 °C	1	990	s16bit	1
S2.7	DC Link					
S2.7.1	Voltage	0 to 2000 V	0	4	16bit	1
S2.8	Torque Current Limitation					
S2.8.1	Alx Global Torque	0.0 to 400.0 %	1	3090	16bit	1
		S3 Status\I/Os				
S3.1	Slot X Status					
S3.1.1	Analog Inputs					
S3.1.1.1	AI1	-100.00 to 100.00 %	2	7017	s16bit	1
S3.1.1.2	AI2	-100.00 to 100.00 %	2	7018	s16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
S3.1.2	Analog Outputs					
S3.1.2.1	AO1	-100.00 to 100.00 %	2	7031	s16bit	1
S3.1.2.2	AO1 Network	-100.00 to 100.00 %	2	7035	s16bit	1
S3.1.2.3	AO1 SoftPLC	-100.00 to 100.00 %	2	7039	s16bit	1
S3.1.2.4	AO2	-100.00 to 100.00 %	2	7032	s16bit	1
S3.1.2.5	AO2 Network	-100.00 to 100.00 %	2	7036	s16bit	1
S3.1.2.6	AO2 SoftPLC	-100.00 to 100.00 %	2	7040	s16bit	1
S3.1.3	Digital Inputs					
S3.1.3.1	DI	Bit 0 = DI1 Bit 1 = DI2 Bit 2 = DI3 Bit 3 = DI4 Bit 4 = DI5 Bit 5 = DI6		7016	6bit	1
S3.1.3.2	FI5	-100.00 to 100.00 %	2	7086	s16bit	1
S3.1.3.3	FI5 (Hz)	0 to 32000 Hz	0	7088	16bit	1
S3.1.3.4	FI6	-100.00 to 100.00 %	2	7087	s16bit	1
S3.1.3.5	FI6 (Hz)	0 to 32000 Hz	0	7089	16bit	1
S3.1.4	Digital Outputs					
S3.1.4.1	DO	Bit 0 = DO1 Bit 1 = DO2		7027	2bit	1
S3.1.4.2	DO Network	Bit 0 = DO1 Bit 1 = DO2		7028	2bit	1
S3.1.4.3	DO SoftPLC	Bit 0 = DO1 Bit 1 = DO2		7029	2bit	1
S3.1.4.4	FO1	-100.00 to 100.00 %	2	7090	s16bit	1
S3.1.4.5	FO1 (Hz)	0 to 32000 Hz	0	7092	16bit	1
S3.1.4.6	FO1 Network	-100.00 to 100.00 %	2	7094	s16bit	1
S3.1.4.7	FO1 SoftPLC	-100.00 to 100.00 %	2	7096	s16bit	1
S3.1.4.8	FO2	-100.00 to 100.00 %	2	7091	s16bit	1
S3.1.4.9	FO2 (Hz)	0 to 32000 Hz	0	7093	16bit	1
S3.1.4.10	FO2 Network	-100.00 to 100.00 %	2	7095	s16bit	1
S3.1.4.11	FO2 SoftPLC	-100.00 to 100.00 %	2	7097	s16bit	1
S3.1.5	Encoder					
S3.1.5.1	Number of Revolutions	0 to 65535	0	7011	16bit	1
S3.1.5.2	Revolution Fraction	0 to 65535	0	7012	16bit	1
S3.1.5.3	Speed	-60000 to 60000 rpm	0	7014	s32bit	2
S3.2	Slot A Status					
S3.2.1	Analog Inputs					
S3.2.1.1	AI1	-100.00 to 100.00 %	2	7317	s16bit	1
S3.2.1.2	AI2	-100.00 to 100.00 %	2	7318	s16bit	1
S3.2.1.3	AI3	-100.00 to 100.00 %	2	7319	s16bit	1
S3.2.2	Analog Outputs					
S3.2.2.1	AO1	-100.00 to 100.00 %	2	7331	s16bit	1
S3.2.2.2	AO1 Network	-100.00 to 100.00 %	2	7335	s16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
S3.2.2.3	AO1 SoftPLC	-100.00 to 100.00 %	2	7339	s16bit	1
S3.2.2.4	AO2	-100.00 to 100.00 %	2	7332	s16bit	1
S3.2.2.5	AO2 Network	-100.00 to 100.00 %	2	7336	s16bit	1
S3.2.2.6	AO2 SoftPLC	-100.00 to 100.00 %	2	7340	s16bit	1
S3.2.3	Digital Inputs					
S3.2.3.1	DI	Bit 0 = DI1 Bit 1 = DI2 Bit 2 = DI3 Bit 3 = DI4 Bit 4 = DI5 Bit 5 = DI6 Bit 6 = DI7 Bit 7 = DI8		7316	8bit	1
S3.2.4	Digital Outputs					
S3.2.4.1	DO	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		7327	8bit	1
S3.2.4.2	DO Network	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		7328	8bit	1
S3.2.4.3	DO SoftPLC	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		7329	8bit	1
S3.2.5	Encoder					
S3.2.5.1	Number of Revolutions	0 to 65535	0	7311	16bit	1
S3.2.5.2	Revolution Fraction	0 to 65535	0	7312	16bit	1
S3.2.5.3	Speed	-60000 to 60000 rpm	0	7314	s32bit	2
S3.2.5.4	Search Zero	0 = Inactive 1 = Completed		7313	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
S3.2.6	Temperatures					
S3.2.6.1	Sensor 1	-100.0 to 250.0 °C	1	7321	s16bit	1
S3.2.6.2	Sensor 2	-100.0 to 250.0 °C	1	7322	s16bit	1
S3.2.6.3	Sensor 3	-100.0 to 250.0 °C	1	7323	s16bit	1
S3.2.6.4	Sensor 4	-100.0 to 250.0 °C	1	7324	s16bit	1
S3.2.6.5	Sensor 5	-100.0 to 250.0 °C	1	7325	s16bit	1
S3.2.6.6	Sensor 6	-100.0 to 250.0 °C	1	7326	s16bit	1
S3.3	Slot B Status					
S3.3.1	Analog Inputs					
S3.3.1.1	AI1	-100.00 to 100.00 %	2	7617	s16bit	1
S3.3.1.2	AI2	-100.00 to 100.00 %	2	7618	s16bit	1
S3.3.1.3	AI3	-100.00 to 100.00 %	2	7619	s16bit	1
S3.3.2	Analog Outputs					
S3.3.2.1	AO1	-100.00 to 100.00 %	2	7631	s16bit	1
S3.3.2.2	AO1 Network	-100.00 to 100.00 %	2	7635	s16bit	1
S3.3.2.3	AO1 SoftPLC	-100.00 to 100.00 %	2	7639	s16bit	1
S3.3.2.4	AO2	-100.00 to 100.00 %	2	7632	s16bit	1
S3.3.2.5	AO2 Network	-100.00 to 100.00 %	2	7636	s16bit	1
S3.3.2.6	AO2 SoftPLC	-100.00 to 100.00 %	2	7640	s16bit	1
S3.3.3	Digital Inputs					
S3.3.3.1	DI	Bit 0 = DI1 Bit 1 = DI2 Bit 2 = DI3 Bit 3 = DI4 Bit 4 = DI5 Bit 5 = DI6 Bit 6 = DI7 Bit 7 = DI8		7616	8bit	1
S3.3.4	Digital Outputs					
S3.3.4.1	DO	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		7627	8bit	1
S3.3.4.2	DO Network	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		7628	8bit	1
S3.3.4.3	DO SoftPLC			7629	8bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8				
S3.3.5	Encoder					
S3.3.5.1	Number of Revolutions	0 to 65535	0	7611	16bit	1
S3.3.5.2	Revolution Fraction	0 to 65535	0	7612	16bit	1
S3.3.5.3	Speed	-60000 to 60000 rpm	0	7614	s32bit	2
S3.3.5.4	Search Zero	0 = Inactive 1 = Completed		7613	enum	1
S3.3.6	Temperatures					
S3.3.6.1	Sensor 1	-100.0 to 250.0 °C	1	7621	s16bit	1
S3.3.6.2	Sensor 2	-100.0 to 250.0 °C	1	7622	s16bit	1
S3.3.6.3	Sensor 3	-100.0 to 250.0 °C	1	7623	s16bit	1
S3.3.6.4	Sensor 4	-100.0 to 250.0 °C	1	7624	s16bit	1
S3.3.6.5	Sensor 5	-100.0 to 250.0 °C	1	7625	s16bit	1
S3.3.6.6	Sensor 6	-100.0 to 250.0 °C	1	7626	s16bit	1
S3.4	Slot C Status					
S3.4.1	Analog Inputs					
S3.4.1.1	AI1	-100.00 to 100.00 %	2	7917	s16bit	1
S3.4.1.2	AI2	-100.00 to 100.00 %	2	7918	s16bit	1
S3.4.1.3	AI3	-100.00 to 100.00 %	2	7919	s16bit	1
S3.4.2	Analog Outputs					
S3.4.2.1	AO1	-100.00 to 100.00 %	2	7931	s16bit	1
S3.4.2.2	AO1 Network	-100.00 to 100.00 %	2	7935	s16bit	1
S3.4.2.3	AO1 SoftPLC	-100.00 to 100.00 %	2	7939	s16bit	1
S3.4.2.4	AO2	-100.00 to 100.00 %	2	7932	s16bit	1
S3.4.2.5	AO2 Network	-100.00 to 100.00 %	2	7936	s16bit	1
S3.4.2.6	AO2 SoftPLC	-100.00 to 100.00 %	2	7940	s16bit	1
S3.4.3	Digital Inputs					
S3.4.3.1	DI	Bit 0 = DI1 Bit 1 = DI2 Bit 2 = DI3 Bit 3 = DI4 Bit 4 = DI5 Bit 5 = DI6 Bit 6 = DI7 Bit 7 = DI8		7916	8bit	1
S3.4.4	Digital Outputs					
S3.4.4.1	DO	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3		7927	8bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8				
S3.4.4.2	DO Network	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		7928	8bit	1
S3.4.4.3	DO SoftPLC	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		7929	8bit	1
S3.4.5	Encoder					
S3.4.5.1	Number of Revolutions	0 to 65535	0	7911	16bit	1
S3.4.5.2	Revolution Fraction	0 to 65535	0	7912	16bit	1
S3.4.5.3	Speed	-60000 to 60000 rpm	0	7914	s32bit	2
S3.4.5.4	Search Zero	0 = Inactive 1 = Completed		7913	enum	1
S3.4.6	Temperatures					
S3.4.6.1	Sensor 1	-100.0 to 250.0 °C	1	7921	s16bit	1
S3.4.6.2	Sensor 2	-100.0 to 250.0 °C	1	7922	s16bit	1
S3.4.6.3	Sensor 3	-100.0 to 250.0 °C	1	7923	s16bit	1
S3.4.6.4	Sensor 4	-100.0 to 250.0 °C	1	7924	s16bit	1
S3.4.6.5	Sensor 5	-100.0 to 250.0 °C	1	7925	s16bit	1
S3.4.6.6	Sensor 6	-100.0 to 250.0 °C	1	7926	s16bit	1
S3.5	Slot D Status					
S3.5.1	Analog Inputs					
S3.5.1.1	AI1	-100.00 to 100.00 %	2	8217	s16bit	1
S3.5.1.2	AI2	-100.00 to 100.00 %	2	8218	s16bit	1
S3.5.1.3	AI3	-100.00 to 100.00 %	2	8219	s16bit	1
S3.5.2	Analog Outputs					
S3.5.2.1	AO1	-100.00 to 100.00 %	2	8231	s16bit	1
S3.5.2.2	AO1 Network	-100.00 to 100.00 %	2	8235	s16bit	1
S3.5.2.3	AO1 SoftPLC	-100.00 to 100.00 %	2	8239	s16bit	1
S3.5.2.4	AO2	-100.00 to 100.00 %	2	8232	s16bit	1
S3.5.2.5	AO2 Network	-100.00 to 100.00 %	2	8236	s16bit	1
S3.5.2.6	AO2 SoftPLC	-100.00 to 100.00 %	2	8240	s16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
S3.5.3	Digital Inputs					
S3.5.3.1	DI	Bit 0 = DI1 Bit 1 = DI2 Bit 2 = DI3 Bit 3 = DI4 Bit 4 = DI5 Bit 5 = DI6 Bit 6 = DI7 Bit 7 = DI8		8216	8bit	1
S3.5.4	Digital Outputs					
S3.5.4.1	DO	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		8227	8bit	1
S3.5.4.2	DO Network	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		8228	8bit	1
S3.5.4.3	DO SoftPLC	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		8229	8bit	1
S3.5.5	Encoder					
S3.5.5.1	Number of Revolutions	0 to 65535	0	8211	16bit	1
S3.5.5.2	Revolution Fraction	0 to 65535	0	8212	16bit	1
S3.5.5.3	Speed	-60000 to 60000 rpm	0	8214	s32bit	2
S3.5.5.4	Search Zero	0 = Inactive 1 = Completed		8213	enum	1
S3.5.6	Temperatures					
S3.5.6.1	Sensor 1	-100.0 to 250.0 °C	1	8221	s16bit	1
S3.5.6.2	Sensor 2	-100.0 to 250.0 °C	1	8222	s16bit	1
S3.5.6.3	Sensor 3	-100.0 to 250.0 °C	1	8223	s16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
S3.5.6.4	Sensor 4	-100.0 to 250.0 °C	1	8224	s16bit	1
S3.5.6.5	Sensor 5	-100.0 to 250.0 °C	1	8225	s16bit	1
S3.5.6.6	Sensor 6	-100.0 to 250.0 °C	1	8226	s16bit	1
S3.6	Slot E Status					
S3.6.1	Analog Inputs					
S3.6.1.1	AI1	-100.00 to 100.00 %	2	8517	s16bit	1
S3.6.1.2	AI2	-100.00 to 100.00 %	2	8518	s16bit	1
S3.6.1.3	AI3	-100.00 to 100.00 %	2	8519	s16bit	1
S3.6.2	Analog Outputs					
S3.6.2.1	AO1	-100.00 to 100.00 %	2	8531	s16bit	1
S3.6.2.2	AO1 Network	-100.00 to 100.00 %	2	8535	s16bit	1
S3.6.2.3	AO1 SoftPLC	-100.00 to 100.00 %	2	8539	s16bit	1
S3.6.2.4	AO2	-100.00 to 100.00 %	2	8532	s16bit	1
S3.6.2.5	AO2 Network	-100.00 to 100.00 %	2	8536	s16bit	1
S3.6.2.6	AO2 SoftPLC	-100.00 to 100.00 %	2	8540	s16bit	1
S3.6.3	Digital Inputs					
S3.6.3.1	DI	Bit 0 = DI1 Bit 1 = DI2 Bit 2 = DI3 Bit 3 = DI4 Bit 4 = DI5 Bit 5 = DI6 Bit 6 = DI7 Bit 7 = DI8		8516	8bit	1
S3.6.4	Digital Outputs					
S3.6.4.1	DO	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		8527	8bit	1
S3.6.4.2	DO Network	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		8528	8bit	1
S3.6.4.3	DO SoftPLC	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4		8529	8bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8				
S3.6.5	Encoder					
S3.6.5.1	Number of Revolutions	0 to 65535	0	8511	16bit	1
S3.6.5.2	Revolution Fraction	0 to 65535	0	8512	16bit	1
S3.6.5.3	Speed	-60000 to 60000 rpm	0	8514	s32bit	2
S3.6.5.4	Search Zero	0 = Inactive 1 = Completed		8513	enum	1
S3.6.6	Temperatures					
S3.6.6.1	Sensor 1	-100.0 to 250.0 °C	1	8521	s16bit	1
S3.6.6.2	Sensor 2	-100.0 to 250.0 °C	1	8522	s16bit	1
S3.6.6.3	Sensor 3	-100.0 to 250.0 °C	1	8523	s16bit	1
S3.6.6.4	Sensor 4	-100.0 to 250.0 °C	1	8524	s16bit	1
S3.6.6.5	Sensor 5	-100.0 to 250.0 °C	1	8525	s16bit	1
S3.6.6.6	Sensor 6	-100.0 to 250.0 °C	1	8526	s16bit	1
S3.7	Slot F Status					
S3.7.1	Analog Inputs					
S3.7.1.1	AI1	-100.00 to 100.00 %	2	8817	s16bit	1
S3.7.1.2	AI2	-100.00 to 100.00 %	2	8818	s16bit	1
S3.7.1.3	AI3	-100.00 to 100.00 %	2	8819	s16bit	1
S3.7.2	Analog Outputs					
S3.7.2.1	AO1	-100.00 to 100.00 %	2	8831	s16bit	1
S3.7.2.2	AO1 Network	-100.00 to 100.00 %	2	8835	s16bit	1
S3.7.2.3	AO1 SoftPLC	-100.00 to 100.00 %	2	8839	s16bit	1
S3.7.2.4	AO2	-100.00 to 100.00 %	2	8832	s16bit	1
S3.7.2.5	AO2 Network	-100.00 to 100.00 %	2	8836	s16bit	1
S3.7.2.6	AO2 SoftPLC	-100.00 to 100.00 %	2	8840	s16bit	1
S3.7.3	Digital Inputs					
S3.7.3.1	DI	Bit 0 = DI1 Bit 1 = DI2 Bit 2 = DI3 Bit 3 = DI4 Bit 4 = DI5 Bit 5 = DI6 Bit 6 = DI7 Bit 7 = DI8		8816	8bit	1
S3.7.4	Digital Outputs					
S3.7.4.1	DO	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7		8827	8bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		Bit 7 = DO8				
S3.7.4.2	DO Network	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		8828	8bit	1
S3.7.4.3	DO SoftPLC	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		8829	8bit	1
S3.7.5	Encoder					
S3.7.5.1	Number of Revolutions	0 to 65535	0	8811	16bit	1
S3.7.5.2	Revolution Fraction	0 to 65535	0	8812	16bit	1
S3.7.5.3	Speed	-60000 to 60000 rpm	0	8814	s32bit	2
S3.7.5.4	Search Zero	0 = Inactive 1 = Completed		8813	enum	1
S3.7.6	Temperatures					
S3.7.6.1	Sensor 1	-100.0 to 250.0 °C	1	8821	s16bit	1
S3.7.6.2	Sensor 2	-100.0 to 250.0 °C	1	8822	s16bit	1
S3.7.6.3	Sensor 3	-100.0 to 250.0 °C	1	8823	s16bit	1
S3.7.6.4	Sensor 4	-100.0 to 250.0 °C	1	8824	s16bit	1
S3.7.6.5	Sensor 5	-100.0 to 250.0 °C	1	8825	s16bit	1
S3.7.6.6	Sensor 6	-100.0 to 250.0 °C	1	8826	s16bit	1
S3.8	Slot G Status					
S3.8.1	Analog Inputs					
S3.8.1.1	AI1	-100.00 to 100.00 %	2	9117	s16bit	1
S3.8.1.2	AI2	-100.00 to 100.00 %	2	9118	s16bit	1
S3.8.1.3	AI3	-100.00 to 100.00 %	2	9119	s16bit	1
S3.8.2	Analog Outputs					
S3.8.2.1	AO1	-100.00 to 100.00 %	2	9131	s16bit	1
S3.8.2.2	AO1 Network	-100.00 to 100.00 %	2	9135	s16bit	1
S3.8.2.3	AO1 SoftPLC	-100.00 to 100.00 %	2	9139	s16bit	1
S3.8.2.4	AO2	-100.00 to 100.00 %	2	9132	s16bit	1
S3.8.2.5	AO2 Network	-100.00 to 100.00 %	2	9136	s16bit	1
S3.8.2.6	AO2 SoftPLC	-100.00 to 100.00 %	2	9140	s16bit	1
S3.8.3	Digital Inputs					
S3.8.3.1	DI	Bit 0 = DI1 Bit 1 = DI2		9116	8bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		Bit 2 = DI3 Bit 3 = DI4 Bit 4 = DI5 Bit 5 = DI6 Bit 6 = DI7 Bit 7 = DI8				
S3.8.4	Digital Outputs					
S3.8.4.1	DO	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		9127	8bit	1
S3.8.4.2	DO Network	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		9128	8bit	1
S3.8.4.3	DO SoftPLC	Bit 0 = DO1 Bit 1 = DO2 Bit 2 = DO3 Bit 3 = DO4 Bit 4 = DO5 Bit 5 = DO6 Bit 6 = DO7 Bit 7 = DO8		9129	8bit	1
S3.8.5	Encoder					
S3.8.5.1	Number of Revolutions	0 to 65535	0	9111	16bit	1
S3.8.5.2	Revolution Fraction	0 to 65535	0	9112	16bit	1
S3.8.5.3	Speed	-60000 to 60000 rpm	0	9114	s32bit	2
S3.8.5.4	Search Zero	0 = Inactive 1 = Completed		9113	enum	1
S3.8.6	Temperatures					
S3.8.6.1	Sensor 1	-100.0 to 250.0 °C	1	9121	s16bit	1
S3.8.6.2	Sensor 2	-100.0 to 250.0 °C	1	9122	s16bit	1
S3.8.6.3	Sensor 3	-100.0 to 250.0 °C	1	9123	s16bit	1
S3.8.6.4	Sensor 4	-100.0 to 250.0 °C	1	9124	s16bit	1
S3.8.6.5	Sensor 5	-100.0 to 250.0 °C	1	9125	s16bit	1
S3.8.6.6	Sensor 6	-100.0 to 250.0 °C	1	9126	s16bit	1
S4 Status\Functional Safety						

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
S4.1	Status	0 = Not used 1 = STO 2 = Operational 3 = Programming 4 = SS1-t 5 = Fault		90	enum	1
S4.2	SS1-t Delay Time	0 to 999 s	0	92	16bit	1
		S5 Status\Communications				
S5.1	Status and Commands					
S5.1.1	Status Word 1	Bit 0 = STO Bit 1 = Run Command Bit 2 = Local Bit 3 = Not used Bit 4 = No Quick Stop Bit 5 = 2nd Ramp Bit 6 = Config. Mode Bit 7 = Alarm Bit 8 = Running Bit 9 = Enabled Bit 10 = Reverse Bit 11 = JOG Bit 12 = Remote 2 Bit 13 = Undervoltage Bit 14 = Not used Bit 15 = Fault		680	16bit	1
S5.1.2	Speed	-200.00 to 200.00 %	2	681	s16bit	1
S5.1.3	Status Word 2	Bit 0 = Self-tuning Bit 1 = Not used Bit 2 = Pre-Charge OK Bit 3 = SF Reduction Bit 4 = Not used Bit 5 = Decel. Ramp Bit 6 = Accel. Ramp Bit 7 = Freeze Ramp Bit 8 = Setpoint OK Bit 9 = DC Voltage Limitation Bit 10 = Current Limitation Bit 11 = Torque Limitation Bit 12 = Ride-Through Bit 13 = Flying Start Bit 14 = DC Braking Bit 15 = PWM pulses		690	16bit	1
S5.1.4	Status Word 3	Bit 0 = SD Card Bit 1 = Not used		691	2bit	1
S5.2	Serial RS485					
S5.2.1	Interface Status			735	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		0 = Inactive 1 = Active 2 = Timeout Error				
S5.2.2	Control Word	Bit 0 = Enable Ramp Bit 1 = General Enable Bit 2 = Run Reverse Bit 3 = Enable JOG Bit 4 = R1/R2 Mode Bit 5 = 2nd Ramp Bit 6 = No Quick Stop Bit 7 = Fault Reset		682	8bit	1
S5.2.3	Speed Reference	-200.00 to 200.00 %	2	683	s16bit	1
S5.2.5	Received Telegrams	0 to 65535	0	736	16bit	1
S5.2.6	Transmitted Telegrams	0 to 65535	0	737	16bit	1
S5.2.7	Telegrams with Error	0 to 65535	0	738	16bit	1
S5.2.8	Reception Errors	0 to 65535	0	739	16bit	1
S5.3	Ethernet					
S5.3.1	Interface Status	Bit 0 = Link 1 Bit 1 = Link 2		890	2bit	1
S5.3.2	Control Word	Bit 0 = Enable Ramp Bit 1 = General Enable Bit 2 = Run Reverse Bit 3 = Enable JOG Bit 4 = R1/R2 Mode Bit 5 = 2nd Ramp Bit 6 = No Quick Stop Bit 7 = Fault Reset		664	8bit	1
S5.3.3	Speed Reference	-200.00 to 200.00 %	2	665	s16bit	1
S5.3.5	Actual IP Address	0.0.0.0 to 255.255.255.255		846	STRING	2
S5.3.6	MQTT Status	0 = Inactive 1 = No Connection 2 = Connected		841	enum	1
S5.3.7	Last Public. MQTT	to	0	842	NONE	2
S5.3.8	SNTP - Status	0 = Inactive 1 = No Connection 2 = Connected		778	enum	1
S5.3.9	SNTP - Last update	to	0	780	NONE	2
S5.3.10	SymbiNet: Groups Status	Bit 0 = Group 1 Status Bit 1 = Group 2 Status Bit 2 = Group 3 Status Bit 3 = Group 4 Status Bit 4 = Group 5 Status Bit 5 = Group 6 Status Bit 6 = Group 7 Status		1067	8bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		Bit 7 = Group 8 Status				
S5.4	EtherNet/IP					
S5.4.1	EIP Master Status	0 = Run 1 = Idle		869	enum	1
S5.4.2	Communication Status	0 = Inactive 1 = No Connection 2 = Connected 3 = I/O Connection Timeout 4 = Duplicate IP		870	enum	1
S5.4.3	DLR Topology	0 = Linear 1 = Ring		876	enum	1
S5.4.4	DLR Status	0 = Idle State 1 = Normal State 2 = Fault State		877	enum	1
S5.5	Modbus TCP					
S5.5.1	Communication Status	0 = Inactive 1 = No Connection 2 = Connected 3 = Timeout Error		860	enum	1
S5.5.2	Received Telegrams	0 to 65535	0	861	16bit	1
S5.5.3	Transmitted Telegrams	0 to 65535	0	862	16bit	1
S5.5.4	Active Connections	0 to 4	0	863	16bit	1
S5.7	CAN/CANopen/DNet					
S5.7.1	CAN Controller Status	0 = Disabled 1 = Auto-Baud 2 = CAN Active 3 = Warning 4 = Error Passive 5 = Bus Off 6 = No Bus Power		705	enum	1
S5.7.2	Control Word	Bit 0 = Enable Ramp Bit 1 = General Enable Bit 2 = Run Reverse Bit 3 = Enable JOG Bit 4 = R1/R2 Mode Bit 5 = 2nd Ramp Bit 6 = No Quick Stop Bit 7 = Fault Reset		684	8bit	1
S5.7.3	Speed Reference	-200.00 to 200.00 %	2	685	s16bit	1
S5.7.5	Received Telegrams	0 to 65535	0	706	16bit	1
S5.7.6	Transmitted Telegrams	0 to 65535	0	707	16bit	1
S5.7.7	Bus Off Counter	0 to 65535	0	708	16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
S5.7.8	Lost Messages	0 to 65535	0	709	16bit	1
S5.7.9	CANopen Comm. Status	0 = Inactive 1 = Reserved 2 = Comm. Enabled 3 = Enab. Error Ctrl. 4 = Guarding Error 5 = Heartbeat Error		721	enum	1
S5.7.10	CANopen Node Status	0 = Inactive 1 = Initialization 2 = Stopped 3 = Operational 4 = Pre-Operational		722	enum	1
S5.7.11	DNet Network Status	0 = Offline 1 = Online Not Conn. 2 = Online Connected 3 = Conn. Timed Out 4 = Link Failure 5 = Auto-Baud		716	enum	1
S5.7.12	DNet Master Status	0 = Run 1 = Idle		717	enum	1
S5.9	Bluetooth					
S5.9.1	MAC Address	00:00:00:00:00:00 to FF:FF:FF:FF:FF:FF		801	NONE	3
		S6 Status\SoftPLC				
S6.1	Program Execution					
S6.1.1	Status	0 = No Program 1 = Saving Program 2 = Invalid Program 3 = Program Stopped 4 = Program Running		5000	enum	1
S6.1.2	Time	0 to 65535 ms	0	5001	16bit	1
S6.2	Control and References					
S6.2.1	Control Word	Bit 0 = Enable Ramp Bit 1 = General Enable Bit 2 = Run Reverse Bit 3 = Enable JOG Bit 4 = R1/R2 Mode Bit 5 = 2nd Ramp Bit 6 = No Quick Stop Bit 7 = Fault Reset		5110	8bit	1
S6.2.3	Speed Reference	-200.00 to 200.00 %	2	5112	s16bit	1
		S7 Status\User				
S7.1	Login Active			199	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		0 = Administrator 1 = Operator 2 ... 5 = Not used				
		D1 Diagnostics\Faults				
D1.1	Actual					
D1.1.1	Fault 1	0 to 1999	0	60	16bit	1
D1.1.2	Fault 2	0 to 1999	0	61	16bit	1
D1.1.3	Fault 3	0 to 1999	0	62	16bit	1
D1.1.4	Fault 4	0 to 1999	0	63	16bit	1
D1.1.5	Fault 5	0 to 1999	0	64	16bit	1
D1.2	History					
		D2 Diagnostics\Alarms				
D2.1	Actual					
D2.1.1	Alarm 1	0 to 1999	0	50	16bit	1
D2.1.2	Alarm 2	0 to 1999	0	51	16bit	1
D2.1.3	Alarm 3	0 to 1999	0	52	16bit	1
D2.1.4	Alarm 4	0 to 1999	0	53	16bit	1
D2.1.5	Alarm 5	0 to 1999	0	54	16bit	1
D2.2	History					
		D3 Diagnostics\Hour Control				
D3.1	Time Powered	0 to 65536 h	0	42	NONE	2
D3.2	Hours Enabled	0 to 65536 h	0	44	NONE	2
D3.3	Fan Enabled Hours	0 to 65536 h	0	46	NONE	2
		D4 Diagnostics\Inverter and Control Access.				
D4.1	Inverter					
D4.1.1	Fan Speed					
D4.1.1.1	Power Fan 1 Speed	0 to 30000 rpm	0	2014	16bit	1
D4.1.1.2	Power Fan 2 Speed	0 to 30000 rpm	0	2015	16bit	1
D4.1.1.3	Power Fan 3 Speed	0 to 30000 rpm	0	2016	16bit	1
D4.1.1.4	Power Fan 4 Speed	0 to 30000 rpm	0	2017	16bit	1
D4.1.1.5	Int. Fan 1 Speed	0 to 30000 rpm	0	2018	16bit	1
D4.1.1.6	Int. Fan 2 Speed	0 to 30000 rpm	0	2019	16bit	1
D4.1.2	Temperatures					
D4.1.2.2	Control Temperature 2	-50.0 to 250.0 °C	1	991	s16bit	1
D4.1.2.3	Control Temperature 3	-50.0 to 250.0 °C	1	992	s16bit	1
D4.1.2.4	Power Temp. 2	-50.0 to 250.0 °C	1	2030	s16bit	1
D4.1.3	DC Link					
D4.1.3.1	100 Hz Harmonic	0.0 to 999.9 V	1	624	16bit	1
D4.1.3.2	120 Hz Harmonic	0.0 to 999.9 V	1	625	16bit	1
D4.1.4	Control Voltages					
D4.1.4.1	Voltage 24V IO	0.00 to 655.35 V	2	1004	16bit	1
D4.1.4.2	Battery Voltage	0.00 to 655.35 V	2	1003	16bit	1
D4.1.4.3	Voltage 3.3V Control	0.00 to 655.35 V	2	1005	16bit	1
D4.1.4.4	Voltage 24V Control	0.00 to 655.35 V	2	1006	16bit	1
D4.1.4.5	Voltage 3.3V IO	0.00 to 655.35 V	2	1007	16bit	1
D4.1.4.6	Voltage 5V AUI	0.00 to 655.35 V	2	1002	16bit	1
D4.1.5	Motor Overl. Fault					
D4.1.5.1	Ixt Motor Level	0 to 100 %	0	37	16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
D4.1.6	Thermal Management					
D4.1.6.1	IGBT Overload Status	0 = No Overload 1 = Slow Curve Overload 2 = Fast Curve 1 Overload 3 = Fast Curve 2 Overload		1200	enum	1
D4.1.6.2	IGBT Overload Counter	0.00 to 100.00 %	2	1201	16bit	1
D4.1.6.3	Heatsink Temp.	0.00 to 655.35 °C	2	3063	16bit	1
D4.1.6.4	IGBT Junction Temp.	0.00 to 655.35 °C	2	3062	16bit	1
D4.1.6.5	Diode Junction Temp.	0.00 to 655.35 °C	2	3066	16bit	1
D4.2	Control Accessories					
D4.2.1	Diag. Slot A					
D4.2.1.1	Status	0 = Not Connected 1 = Initializing 2 = Active 3 = Error		7400	enum	1
D4.2.1.2	Error Cause	0 = No Error 1 = Recognition Error 2 = Accessory Not Supported 3 = Initialization Error 4 = Not used 5 = Incorrect Accessory 6 = Disconnected 7 = Data Error 1 8 = Not used		7401	enum	1
D4.2.1.3	Temperature	-100.0 to 250.0 °C	1	7406	s16bit	1
D4.2.2	Diag. Slot B					
D4.2.2.1	Status	0 = Not Connected 1 = Initializing 2 = Active 3 = Error		7700	enum	1
D4.2.2.2	Error Cause	0 = No Error 1 = Recognition Error 2 = Accessory Not Supported 3 = Initialization Error 4 = Not used 5 = Incorrect Accessory 6 = Disconnected 7 = Data Error 1 8 = Not used		7701	enum	1
D4.2.2.3	Temperature	-100.0 to 250.0 °C	1	7706	s16bit	1
D4.2.3	Diag. Slot C					
D4.2.3.1	Status	0 = Not Connected 1 = Initializing		8000	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		2 = Active 3 = Error				
D4.2.3.2	Error Cause	0 = No Error 1 = Recognition Error 2 = Accessory Not Supported 3 = Initialization Error 4 = Not used 5 = Incorrect Accessory 6 = Disconnected 7 = Data Error 1 8 = Not used		8001	enum	1
D4.2.3.3	Temperature	-100.0 to 250.0 °C	1	8006	s16bit	1
D4.2.4	Diag. Slot D					
D4.2.4.1	Status	0 = Not Connected 1 = Initializing 2 = Active 3 = Error		8300	enum	1
D4.2.4.2	Error Cause	0 = No Error 1 = Recognition Error 2 = Accessory Not Supported 3 = Initialization Error 4 = Not used 5 = Incorrect Accessory 6 = Disconnected 7 = Data Error 1 8 = Not used		8301	enum	1
D4.2.4.3	Temperature	-100.0 to 250.0 °C	1	8306	s16bit	1
D4.2.5	Diag. Slot E					
D4.2.5.1	Status	0 = Not Connected 1 = Initializing 2 = Active 3 = Error		8600	enum	1
D4.2.5.2	Error Cause	0 = No Error 1 = Recognition Error 2 = Accessory Not Supported 3 = Initialization Error 4 = Not used 5 = Incorrect Accessory 6 = Disconnected 7 = Data Error 1 8 = Not used		8601	enum	1
D4.2.5.3	Temperature	-100.0 to 250.0 °C	1	8606	s16bit	1
D4.2.6	Diag. Slot F					
D4.2.6.1	Status			8900	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		0 = Not Connected 1 = Initializing 2 = Active 3 = Error				
D4.2.6.2	Error Cause	0 = No Error 1 = Recognition Error 2 = Accessory Not Supported 3 = Initialization Error 4 = Not used 5 = Incorrect Accessory 6 = Disconnected 7 = Data Error 1 8 = Not used		8901	enum	1
D4.2.6.3	Temperature	-100.0 to 250.0 °C	1	8906	s16bit	1
D4.2.7	Diag. Slot G					
D4.2.7.1	Status	0 = Not Connected 1 = Initializing 2 = Active 3 = Error		9200	enum	1
D4.2.7.2	Error Cause	0 = No Error 1 = Recognition Error 2 = Accessory Not Supported 3 = Initialization Error 4 = Not used 5 = Incorrect Accessory 6 = Disconnected 7 = Data Error 1 8 = Not used		9201	enum	1
D4.2.7.3	Temperature	-100.0 to 250.0 °C	1	9206	s16bit	1
		D5 Diagnostics\Changed Parameters				
D5.1	Configuration					
D5.2	Application					
		C1 Configuration\Inverter and Power Supply				
C1.1	Power Supply					
C1.1.1	Type	0 = Three-phase AC 1 = Single-phase AC 2 = DC		1294	enum	1
C1.1.2	Rated Voltage	1 to 1200 V	0	1296	16bit	1
C1.2	Inverter Use					
C1.2.1	Overload Type	0 = Normal Duty (ND) 1 = Heavy Duty (HD)		1298	enum	1
C1.3	Switching Frequency					
C1.3.1	User	1.0 to 16.0 kHz	1	1297	16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C1.3.2	Minimum	1.00 to 16.00 kHz	2	3038	16bit	1
C1.4	PWM Modulation					
C1.4.1	Type	0 = Standard 1 = Not used 2 = Modulation for Long Cable		4000	enum	1
C1.4.4	PMW Wid. Adj. Long Cab.	0.00 to 1.00	2	3061	16bit	1
C1.4.5	Dead Time Compensation	0 = Disable 1 = Enable		356	enum	1
C1.5	Fans Configuration					
C1.5.1	Power Fan Setting	0 = Off 1 = On 2 = Temp. Control w/ Init.Test 3 = Control by Temperature		2000	enum	1
C1.5.2	Internal Fan Setting	0 = Off 1 = On 2 = Temp. Control w/ Init.Test 3 = Control by Temperature		2001	enum	1
C1.6	Other Inverter Config.					
C1.6.1	Invert Output Phase Seq.	0 = U(T1)/V(T2)/W(T3) 1 = W(T3)/V(T2)/U(T1)		3060	enum	1
C1.6.2	Reset Counters	0 = Disabled 1 = Energy 2 = Fan On 3 = Inverter Enabled		3047	enum	1
C1.6.3	User Delta Temp.	0.0 to 100.0 °C	1	1293	s16bit	1
C1.6.4	Manual Inom Derating	0.0 to 100.0 %	1	1292	16bit	1
		C2 Configuration\Motor				
C2.1	Motor Data					
C2.1.1	Motor Type	0 = Induction 1 = Permanent Magnet (PM)		205	enum	1
C2.1.2	Motor Power Unit	0 = HP/cv 1 = kW		405	enum	1
C2.1.3	Rated Power	0.0 to 2000.0	1	404	16bit	1
C2.1.4	Rated Voltage	1 to 690 V	0	400	16bit	1
C2.1.5	Rated Current	0.0 to 2223.0 A	1	401	16bit	1
C2.1.6	Rated Frequency	1 to 500 Hz	0	403	16bit	1
C2.1.7	Number of Pole Pairs	1 to 48	0	431	16bit	1
C2.1.8	Rated Speed	0 to 18000 rpm	0	402	16bit	1
C2.1.9	Rated Efficiency	50.0 to 99.9 %	1	399	16bit	1
C2.1.10	Rated cos phi	0.50 to 0.99	2	407	16bit	1
C2.1.11	Service Factor	1.00 to 1.50	2	398	16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C2.1.12	Ventilation	0 = Self-ventilated 1 = Independent		406	enum	1
C2.2	Motor Model Parameters					
C2.2.1	Stator Resistance	0.000 to 10.000 Ω	3	409	16bit	1
C2.2.2	Magnetization Reactance	0.0 to 500.0 Ω	1	410	16bit	1
C2.2.3	Leakage Reactance	0.00 to 50.00 Ω	2	411	16bit	1
C2.2.4	Rotor Resistance	0.000 to 10.000 Ω	3	412	16bit	1
C2.2.5	Rotor Reactance	0.00 to 50.00 Ω	2	413	16bit	1
C2.2.8	Ke Constant	0.0 to 2000.0	1	435	16bit	1
		C3 Configuration\Control				
C3.1	Configuration					
C3.1.1	Control Type	0 = Scalar 1 = VVW+ 2 = Encoder Vector 3 = Sensorless Vector		202	enum	1
C3.2	Scalar (V/F) and VVW+ Control					
C3.2.1	V/F Curve					
C3.2.1.1	Manual Torque Boost	0.0 to 20.0 %	1	136	TIME	2
C3.2.1.2	Low Output Voltage	0.0 to 100.0 %	1	144	TIME	2
C3.2.1.3	Interm. Output Voltage	0.0 to 100.0 %	1	143	TIME	2
C3.2.1.4	Maximum Output Voltage	0.0 to 100.0 %	1	142	TIME	2
C3.2.1.5	Low Speed	0.0 to 200.0 %	1	147	16bit	1
C3.2.1.6	Intermediate Speed	0.0 to 200.0 %	1	146	16bit	1
C3.2.1.7	Field Weakening Start Speed	0.0 to 200.0 %	1	145	16bit	1
C3.2.1.8	Rated Flux	0.0 to 120.0 %	1	148	TIME	2
C3.2.2	VVW+ Optimization					
C3.2.2.1.1	Slip Compensator Gain	0.00 to 10.00	2	3022	16bit	1
C3.2.2.1.2	Voltage Comp. Gain	0.00 to 5.00	2	3023	16bit	1
C3.2.2.1.3	Cut freq. of Slip Filter	1 to 100 Hz	0	3088	16bit	1
C3.2.2.2.1	MTPA Function	0 = Disable 1 = Enable		619	enum	1
C3.2.2.2.2	MTPA Optimizer	0 = Disable 1 = Enable		613	enum	1
C3.2.2.2.3	MTPA Minimum Speed	0 to 100 %	0	618	16bit	1
C3.2.2.2.4	Efficiency Adjustment Gain	0.000 to 4.000	3	620	16bit	1
C3.2.2.2.5	Kp MTPA Gain	0.000 to 1.000	3	617	16bit	1
C3.2.2.2.6	Ki MTPA Gain	0.000 to 1.000	3	616	16bit	1
C3.2.2.2.7	MTPA Reference	0 to 100 %	0	615	s16bit	1
C3.2.2.2.8	MTPA Minimum Voltage	0 to 100 %	0	614	16bit	1
C3.2.3	Current Stabilization					
C3.2.3.1	Enable Function	0 = Disable 1 = Enable		359	enum	1
C3.2.3.2	Stabilization Kp Gain	0.000 to 1.999	3	621	16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C3.2.3.3	Stabilization Ki Gain	0.000 to 1.999	3	622	16bit	1
C3.2.3.4	Stab. PI Saturation	0.0 to 10.0 %	1	623	16bit	1
C3.2.3.5	Max. Operation Freq.	0 to 300 %	0	3067	16bit	1
C3.2.4	Pre-Magnetization					
C3.2.4.1	Enable Function	0 = Disable 1 = Enable		3077	enum	1
C3.2.4.2	Current	0 to 350 %	0	3025	16bit	1
C3.2.4.3	Time	0 to 5000 ms	0	3024	16bit	1
C3.2.4.4	Gain	1.0 to 7.0	1	3027	16bit	1
C3.2.5	I/F Control					
C3.2.5.1	Enabled	0 = Disable 1 = Enable		3093	enum	1
C3.2.5.2	Enable on Reversal	0 = Disable 1 = Enable		3099	enum	1
C3.2.5.3	Current	0 to 200 %	0	3094	16bit	1
C3.2.5.4	Transition Speed	0 to 100 %	0	3095	16bit	1
C3.2.5.5	Drag Time	0 to 10 s	0	3096	16bit	1
C3.2.5.6	Kick-off Speed	0 to 50 %	0	3097	16bit	1
C3.3	Vector Control					
C3.3.1	Configuration					
C3.3.1.1	Control Mode	0 = Speed 1 = Torque 2 = Defined by DI		3000	enum	1
C3.3.1.2	Control Mode DI Config.	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6		3001	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C3.3.1.3	Control Encoder	0 = Slot X 1 = Slot A 2 = Slot B 3 = Slot C 4 = Slot D 5 = Slot E 6 = Slot F 7 = Slot G		3017	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		8 = None				
C3.3.1.6	Magnetization Mode	0 = General Enable 1 = Run/Stop		181	enum	1
C3.3.2	Regulators					
C3.3.2.1.1	Adaptive Gain	0 = Disable 1 = Enable		160	enum	1
C3.3.2.1.2	Proportional Gain	0.0 to 50.0	1	161	16bit	1
C3.3.2.1.3	Integral Gain	0.001 to 1.000	3	162	16bit	1
C3.3.2.1.4	Differential Gain	0.00 to 7.99	2	166	16bit	1
C3.3.2.1.5	Filter	0.012 to 1.000 s	3	165	16bit	1
C3.3.2.2.1	Proportional Gain	0.00 to 5.00	2	3002	16bit	1
C3.3.2.2.2	Integral Gain	0.000 to 1.000	3	3003	16bit	1
C3.3.2.2.3	Differential Gain	0.00 to 7.99	2	3084	16bit	1
C3.3.2.2.4	Filter	0.012 to 10.000	3	3016	16bit	1
C3.3.2.3.1	Proportional Gain	0.0 to 5.0	1	175	16bit	1
C3.3.2.3.2	Integral Gain	0.000 to 1.000	3	176	16bit	1
C3.3.2.3.3	Rated Flux	0.0 to 120.0 %	1	178	16bit	1
C3.3.2.4.1	Id Prop. Gain	0.00 to 1.99	2	440	16bit	1
C3.3.2.4.2	Id Integral Gain	0.001 to 1.000	3	441	16bit	1
C3.3.2.4.3	Iq Prop. Gain	0.00 to 1.99	2	438	16bit	1
C3.3.2.4.4	Iq Integral Gain	0.001 to 1.000	3	439	16bit	1
C3.3.3	Output Voltage Limiter					
C3.3.3.1	Maximum Output Voltage	0.0 to 120.0 %	1	190	16bit	1
C3.3.3.2	Proportional Gain	0.00 to 5.00	2	3030	16bit	1
C3.3.3.3	Integral Gain	0.000 to 1.000	3	3031	16bit	1
C3.3.4	Torque Mode					
C3.3.4.1.1	Direct Speed	0 to 32000 rpm	0	171	16bit	1
C3.3.4.1.2	Reverse Speed	0 to 32000 rpm	0	172	16bit	1
C3.3.4.1.3	Proportional Gain	0.00 to 5.00	2	3043	16bit	1
C3.3.4.1.4	Integral Gain	0.000 to 1.000	3	3044	16bit	1
C3.3.5	Speed Mode					
C3.3.5.1.1	Global Torque	0.0 to 400.0 %	1	3015	16bit	1
C3.3.5.1.2	Torque Q1	0.0 to 400.0 %	1	169	16bit	1
C3.3.5.1.3	Torque Q2	0.0 to 400.0 %	1	170	16bit	1
C3.3.5.1.4	Torque Q3	0.0 to 400.0 %	1	3013	16bit	1
C3.3.5.1.5	Torque Q4	0.0 to 400.0 %	1	3014	16bit	1
C3.3.5.1.6	Global Torque AI Config.	0 = Inactive 1 = AI X-1 2 = AI X-2 3 = AI A-1 4 = AI A-2 5 = AI A-3 6 = Not used 7 = AI B-1 8 = AI B-2 9 = AI B-3 10 = Not used		3011	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		11 = AI C-1 12 = AI C-2 13 = AI C-3 14 = Not used 15 = AI D-1 16 = AI D-2 17 = AI D-3 18 = Not used 19 = AI E-1 20 = AI E-2 21 = AI E-3 22 = Not used 23 = AI F-1 24 = AI F-2 25 = AI F-3 26 = Not used 27 = AI G-1 28 = AI G-2 29 = AI G-3 30 = Not used				
C3.3.5.1.7	Proportional Gain	0.00 to 5.00	2	3032	16bit	1
C3.3.5.1.8	Integral Gain	0.00 to 100.00	2	3033	16bit	1
C3.3.7	Speed Steady State Estimator					
C3.3.7.1	Speed Setting	0.10 to 10.00	2	3079	16bit	1
C3.3.7.2	Regenerative Compensator	0.00 to 2.00	2	3059	16bit	1
C3.3.7.3	Proportional Gain	0.00 to 10.00	2	3053	16bit	1
C3.3.7.4	Integral Gain	0.00 to 10.00	2	3054	16bit	1
C3.3.7.5	Filter.	1 to 15 ms	0	3083	16bit	1
C3.3.9	Online Parameter Estimation					
C3.3.9.1	Estimator Configuration	Bit 0 = Enable Xm Estimator Bit 1 = Enable Taus Estimator Bit 2 = Enable Taur Estimator		3058	3bit	1
C3.4	Current Limiter					
C3.4.1	Actuation Level	0 to 300 %	0	135	16bit	1
C3.4.3	Proportional Gain	0.0 to 5.0	1	3034	16bit	1
C3.4.4	Integral Gain	0.0 to 5.0	1	3035	16bit	1
C3.5	DC Link Voltage Limiter					
C3.5.1	DC Link Volt.Limit.Config.					
C3.5.1.1	Enable Function	0 = Disable 1 = Enable		3029	enum	1
C3.5.2	Scalar and VVW+ Control					
C3.5.2.1	DC Link Volt. Lim.-Level	114.0 to 160.0 %	1	151	16bit	1
C3.5.2.2	DC Link Volt.Lim.-Kp Gain	0.00 to 9.99	2	152	16bit	1
C3.5.2.3	DC Link Volt.Lim.-Ki Gain	0.000 to 1.000	3	3018	16bit	1
C3.5.2.4	DC Link Volt.Lim.-Est.Gain	0.000 to 9.999	3	3026	s16bit	1
C3.5.3	Vector Control					
C3.5.3.1	Optim. Braking Func. Enable			184	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		0 = No 1 = Yes				
C3.5.3.2	DC Link Volt.Lim.-Level	114.0 to 160.0 %	1	185	16bit	1
C3.5.3.3	DC Link Volt.Lim.-Kp Gain	0.00 to 6.39	2	186	16bit	1
C3.5.3.4	DC Link Volt.Lim.-Ki Gain	0.000 to 1.000	3	187	16bit	1
C3.6	Dynamic Braking					
C3.6.1	DC Link Voltage Level	0.1 to 100.0 %	1	153	16bit	1
C3.7	DC braking					
C3.7.1	Enable Function	0 = Disable 1 = Only Start 2 = Only Stop 3 = Start and Stop 4 = Always Enabled		307	enum	1
C3.7.2	DC-Braking Start Time	0.0 to 15.0 s	1	299	16bit	1
C3.7.3	DC-Braking Stop Time	0.0 to 15.0 s	1	300	16bit	1
C3.7.4	Starting Speed	0 to 450 rpm	0	301	16bit	1
C3.7.5	Current	0.0 to 100.0 %	1	302	16bit	1
C3.8	Flying Start					
C3.8.1	Flying Start Setting					
C3.8.1.1	Enable Function	0 = Disable 1 = Enable		3008	enum	1
C3.8.1.2	Function Reset	0 = General Enable 1 = Run/Stop		327	enum	1
C3.8.1.3	Tracking	0 = Two Trackings 1 = One Tracking		328	enum	1
C3.8.1.4	Ramp	0.2 to 60.0 s	1	331	16bit	1
C3.8.1.5	Disable Flying Start	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3		6012	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C3.8.2	Scalar and VVW+ Control					
C3.8.2.1	Current	0.0 to 100.0 %	1	332	16bit	1
C3.8.3	Vector Control					
C3.8.3.1	Flux Reference	0.0 to 100.0 %	1	329	TIME	2
C3.9	Ride-Through					

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C3.9.1	Ride-Through Config.					
C3.9.1.1	Function Enable	0 = Disable 1 = Enable		320	enum	1
C3.9.2	Scalar and VVW+ Control					
C3.9.2.1	DC Link Volt.-Ride-Through	76.0 to 95.0 %	1	3021	16bit	1
C3.9.2.2	Ride-Through-Gain Kp	0.00 to 2.00	2	3019	16bit	1
C3.9.2.3	Ride-Through-Gain Ki	0.000 to 1.000	3	3020	16bit	1
C3.9.3	Vector Control					
C3.9.3.1	DC Link Volt.-Ride-Through	76.0 to 95.0 %	1	322	16bit	1
C3.9.3.2	Ride-Through-Gain Kp	0.00 to 2.00	2	325	16bit	1
C3.9.3.3	Ride-Through-Gain Ki	0.000 to 1.000	3	326	16bit	1
C3.10	Advanced Energy Saving					
C3.10.1	Enable Function	0 = Disable 1 = Enable		3028	enum	1
C3.10.2	Adv. Optimum Flux Config.	0 = Disable 1 = Enable		592	enum	1
C3.10.3	Cos phi Reference	0.50 to 0.99	2	3009	s16bit	1
C3.10.4	Maximum Torque	0 to 150 %	0	588	s16bit	1
C3.10.5	Minimum Voltage	40 to 80 %	0	589	s16bit	1
C3.10.6	Minimum Speed	0 to 100 %	0	590	s16bit	1
C3.10.7	Torque Hysteresis	0 to 30 %	0	591	s16bit	1
		C4 Configuration\Commands and References				
C4.1	LOC/REM Mode Config.					
C4.1.1	Command mode	0 = Always Local 1 = Remote 1 2 = Remote 2 3 = Serial 4 = Not used 5 = CAN/CO/DN 6 = SoftPLC 7 = Not used 8 = Ethernet 9 = Digital Input (DI)		220	enum	1
C4.1.2	DI Remote 1/Remote 2	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4		6011	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7				

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		62 = DI G-8				
C4.1.3	HMI LOC/REM key	0 = Disable 1 = Enable		9803	enum	1
C4.2	Commands					
C4.2.1	R1 Config. Commands					
C4.2.1.1	General Enable	0 = Always enabled 1 = HMI 2 = Serial 3 = Not used 4 = CAN/CO/DN 5 = SoftPLC 6 = Not used 7 = Ethernet 8 = Digital Input (DI)		240	enum	1
C4.2.1.2	Run/Stop	0 = HMI I/O Keys 1 = Serial 2 = Not used 3 = CAN/CO/DN 4 = SoftPLC 5 = Not used 6 = Ethernet 7 = Run/Stop DI 8 = Forward/Reverse DI 9 = 3-Wire Start/Stop DI		224	enum	1
C4.2.1.3	Direction of Rotation	0 = Forward 1 = HMI DR key 2 = Serial 3 = Not used 4 = CAN/CO/DN 5 = SoftPLC 6 = Not used 7 = Ethernet 8 = Direction of Rotation DI 9 = Forward/Reverse DI 10 = Speed Reference		223	enum	1
C4.2.1.4	JOG	0 = Inactive 1 = HMI JOG Key 2 = Serial 3 = Not used 4 = CAN/CO/DN 5 = SoftPLC 6 = Not used 7 = Ethernet 8 = Digital Input (DI)		225	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C4.2.2	R2 Config. Commands					
C4.2.2.1	General Enable	0 = Always enabled 1 = HMI 2 = Serial 3 = Not used 4 = CAN/CO/DN 5 = SoftPLC 6 = Not used 7 = Ethernet 8 = Digital Input (DI)		241	enum	1
C4.2.2.2	Run/Stop	0 = HMI I/O Keys 1 = Serial 2 = Not used 3 = CAN/CO/DN 4 = SoftPLC 5 = Not used 6 = Ethernet 7 = Run/Stop DI 8 = Forward/Reverse DI 9 = 3-Wire Start/Stop DI		227	enum	1
C4.2.2.3	Direction of Rotation	0 = Forward 1 = HMI DR key 2 = Serial 3 = Not used 4 = CAN/CO/DN 5 = SoftPLC 6 = Not used 7 = Ethernet 8 = Direction of Rotation DI 9 = Forward/Reverse DI 10 = Speed Reference		226	enum	1
C4.2.2.4	JOG	0 = Inactive 1 = HMI JOG Key 2 = Serial 3 = Not used 4 = CAN/CO/DN 5 = SoftPLC 6 = Not used 7 = Ethernet 8 = Digital Input (DI)		228	enum	1
C4.2.3	DIs Config. for Commands					
C4.2.3.1	General Enable	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3		6000	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8				

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.3.2	Run/Stop	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3		6004	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.3.3	3-Wire Start	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6		6005	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.3.4	3-Wire Stop	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1		6006	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.3.5	Forward	0 = Inactive 1 = DI X-1 2 = DI X-2		6007	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7				

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.3.6	Reverse	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2		6008	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.3.7	Quick Stop	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5		6001	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.3.8	Direction of Rotation	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8		6010	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.3.9	JOG	0 = Inactive 1 = DI X-1		6009	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6				

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.3.10	Ramp Selection	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1		6003	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.3.11	Fault Reset	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4		6002	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.2.4	HMI Config. for Commands					
C4.2.4.1	Stop Key Function	0 = Ramp to Stop 1 = General Enable to Stop 2 = Quick Stop		229	enum	1
C4.3	References					
C4.3.1	Speed					
C4.3.1.1.1	Minimum Reference	0 to 60000 rpm	0	133	16bit	1
C4.3.1.1.2	Maximum Reference	1 to 60000 rpm	0	134	16bit	1
C4.3.1.2.1	Remote 1 Mode	0 = Keypad 1 = E.P. 2 = Multispeed 3 = Serial		221	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		4 = Not used 5 = CAN/CO/DN 6 = Ethernet 7 = Not used 8 = SoftPLC 9 = Analog Input (AI) 10 = Frequency Input (FI)				
C4.3.1.2.2	Remote 2 Mode	0 = Keypad 1 = E.P. 2 = Multispeed 3 = Serial 4 = Not used 5 = CAN/CO/DN 6 = Ethernet 7 = Not used 8 = SoftPLC 9 = Analog Input (AI) 10 = Frequency Input (FI)		222	enum	1
C4.3.1.3.1	Speed Ref. via HMI	0 to 60000 rpm	0	121	16bit	1
C4.3.1.3.2	Speed Ref. AI Config.	0 = Inactive 1 = AI X-1 2 = AI X-2 3 = AI A-1 4 = AI A-2 5 = AI A-3 6 = Not used 7 = AI B-1 8 = AI B-2 9 = AI B-3 10 = Not used 11 = AI C-1 12 = AI C-2 13 = AI C-3 14 = Not used 15 = AI D-1 16 = AI D-2 17 = AI D-3 18 = Not used 19 = AI E-1 20 = AI E-2 21 = AI E-3 22 = Not used 23 = AI F-1 24 = AI F-2 25 = AI F-3 26 = Not used 27 = AI G-1 28 = AI G-2 29 = AI G-3		6017	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		30 = Not used				
C4.3.1.3.3	Speed Ref. FI Config.	0 = Inactive 1 = FI X-5 2 = FI X-6		6018	enum	1
C4.3.1.4.1	DI Increase E.P.	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6		6033	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.3.1.4.2	DI Decrease E.P.	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1		6034	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.3.1.5.1	Multispeed Ref. 1	0 to 60000 rpm	0	124	16bit	1
C4.3.1.5.2	Multispeed Ref. 2	0 to 60000 rpm	0	125	16bit	1
C4.3.1.5.3	Multispeed Ref. 3	0 to 60000 rpm	0	126	16bit	1
C4.3.1.5.4	Multispeed Ref. 4	0 to 60000 rpm	0	127	16bit	1
C4.3.1.5.5	Multispeed Ref. 5	0 to 60000 rpm	0	128	16bit	1
C4.3.1.5.6	Multispeed Ref. 6	0 to 60000 rpm	0	129	16bit	1
C4.3.1.5.7	Multispeed Ref. 7	0 to 60000 rpm	0	130	16bit	1
C4.3.1.5.8	Multispeed Ref. 8	0 to 60000 rpm	0	131	16bit	1
C4.3.1.5.9	Multispeed 1 DI Config.	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4		6030	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7				

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		62 = DI G-8				
C4.3.1.5.10	Multispeed 2 DI Config.	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2		6031	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.3.1.5.11	Multispeed 3 DI Config.	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5		6032	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C4.3.1.6.1	Speed 1	0 to 60000 rpm	0	303	16bit	1
C4.3.1.6.2	Speed 2	0 to 60000 rpm	0	304	16bit	1
C4.3.1.6.3	Speed 3	0 to 60000 rpm	0	305	16bit	1
C4.3.1.6.4	Skip Range	0 to 750 rpm	0	306	16bit	1
C4.3.2	JOG Speed					
C4.3.2.1	JOG Reference	0 to 60000 rpm	0	118	16bit	1
C4.3.3	Torque					
C4.3.3.1	Torque Reference via HMI	-400.0 to 400.0 %	1	119	s16bit	1
C4.3.3.2	Maximum Torque	0.0 to 400.0 %	1	3070	16bit	1
C4.3.3.3	Minimum Torque	0.0 to 400.0 %	1	3071	16bit	1
C4.3.3.4	Torque Ref. Source	0 = Keypad 1 = Analog Input (AI) 2 = Frequency Input (FI)		9802	enum	1
C4.3.3.5	Torque Ref. AI Config.	0 = Inactive 1 = AI X-1 2 = AI X-2 3 = AI A-1 4 = AI A-2 5 = AI A-3 6 = Not used 7 = AI B-1		9801	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		8 = AI B-2 9 = AI B-3 10 = Not used 11 = AI C-1 12 = AI C-2 13 = AI C-3 14 = Not used 15 = AI D-1 16 = AI D-2 17 = AI D-3 18 = Not used 19 = AI E-1 20 = AI E-2 21 = AI E-3 22 = Not used 23 = AI F-1 24 = AI F-2 25 = AI F-3 26 = Not used 27 = AI G-1 28 = AI G-2 29 = AI G-3 30 = Not used				
C4.3.3.6	Torque Ref. FI Config.	0 = Inactive 1 = FI X-5 2 = FI X-6		9800	enum	1
		C5 Configuration\I/Os				
C5.1	Slot X					
C5.1.1	Slot X - Analog Inputs					
C5.1.1.1	AI1 Configurations	Bit 0 = Detect Disconnection Bit 2 = Signal Config.		7126	2bit	1
C5.1.1.2	AI1 Filter	0.00 to 16.00 s	2	7130	16bit	1
C5.1.1.3	AI1 Gain	0.000 to 9.999	3	7134	16bit	1
C5.1.1.4	AI1 Offset	-100.00 to 100.00 %	2	7138	s16bit	1
C5.1.1.5	AI1 Dead Zone	0.00 to 100.00 %	2	7142	16bit	1
C5.1.1.6	AI2 Configurations	Bit 0 = Detect Disconnection Bit 2 = Signal Config.		7127	2bit	1
C5.1.1.7	AI2 Filter	0.00 to 16.00 s	2	7131	16bit	1
C5.1.1.8	AI2 Gain	0.000 to 9.999	3	7135	16bit	1
C5.1.1.9	AI2 Offset	-100.00 to 100.00 %	2	7139	s16bit	1
C5.1.1.10	AI2 Dead Zone	0.00 to 100.00 %	2	7143	16bit	1
C5.1.2	Slot X - Analog Outputs					
C5.1.2.1	AO1 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA		7179	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V				
C5.1.2.2	AO1 Gain	0.000 to 9.999	3	7183	16bit	1
C5.1.2.3	AO1 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		7187	enum	1
C5.1.2.4	AO1 Offset	-100.00 to 100.00 %	2	7191	s16bit	1
C5.1.2.5	AO2 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V		7180	enum	1
C5.1.2.6	AO2 Gain	0.000 to 9.999	3	7184	16bit	1
C5.1.2.7	AO2 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used		7188	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		20 = Torque Ref. 21 = Total Torque Ref.				
C5.1.2.8	AO2 Offset	-100.00 to 100.00 %	2	7192	s16bit	1
C5.1.3	Slot X - Digital Inputs					
C5.1.3.4	DI5 Operation Mode	0 = Polling 1 = Not used 2 = Frequency 3 = Encoder		7289	enum	1
C5.1.3.5	FI5 Min Frequency	0 to 32000 Hz	0	7273	16bit	1
C5.1.3.6	FI5 Maximum Frequency	0 to 32000 Hz	0	7271	16bit	1
C5.1.3.7	FI5 Gain	0.000 to 9.999	3	7269	16bit	1
C5.1.3.8	FI5 Offset	-100.00 to 100.00 %	2	7267	s16bit	1
C5.1.3.9	DI6 Operation Mode	0 = Polling 1 = Not used 2 = Frequency 3 = Encoder		7290	enum	1
C5.1.3.10	FI6 Minimum Frequency	0 to 32000 Hz	0	7274	16bit	1
C5.1.3.11	FI6 Maximum Frequency	0 to 32000 Hz	0	7272	16bit	1
C5.1.3.12	FI6 Gain	0.000 to 9.999	3	7270	16bit	1
C5.1.3.13	FI6 Offset	-100.00 to 100.00 %	2	7268	s16bit	1
C5.1.4	Slot X - Digital Outputs					
C5.1.4.1	DO1 Operation Mode	0 = Polling 1 = Frequency		7293	enum	1
C5.1.4.2	DO1 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm		7155	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.1.4.3	FO1 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = Not used 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		7275	enum	1
C5.1.4.4	FO1 Minimum Frequency	0 to 32000 Hz	0	7283	16bit	1
C5.1.4.5	FO1 Maximum Frequency	0 to 32000 Hz	0	7281	16bit	1
C5.1.4.6	FO1 Gain	0.000 to 9.999	3	7279	16bit	1
C5.1.4.7	FO1 Offset	-100.00 to 100.00 %	2	7277	s16bit	1
C5.1.4.10	DO2 Operation Mode	0 = Polling 1 = Frequency		7294	enum	1
C5.1.4.11	DO2 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode		7156	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.1.4.12	FO2 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = Not used 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		7276	enum	1
C5.1.4.13	FO2 Minimum Frequency	0 to 32000 Hz	0	7284	16bit	1
C5.1.4.14	FO2 Maximum Frequency	0 to 32000 Hz	0	7282	16bit	1
C5.1.4.15	FO2 Gain	0.000 to 9.999	3	7280	16bit	1
C5.1.4.16	FO2 Offset	-100.00 to 100.00 %	2	7278	s16bit	1
C5.1.5	Slot X-Encoder					
C5.1.5.1	Number of Pulses	1 to 65535 ppr	0	7123	16bit	1
C5.2	Slot A					
C5.2.1	Slot A-Analog Inputs					
C5.2.1.1	AI1 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		7426	2bit	1
C5.2.1.2	AI1 Filter	0.00 to 16.00 s	2	7430	16bit	1
C5.2.1.3	AI1 Gain	0.000 to 9.999	3	7434	16bit	1
C5.2.1.4	AI1 Offset	-100.00 to 100.00 %	2	7438	s16bit	1
C5.2.1.5	AI1 Dead Zone	0.00 to 100.00 %	2	7442	16bit	1
C5.2.1.6	AI2 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		7427	2bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C5.2.1.7	AI2 Filter	0.00 to 16.00 s	2	7431	16bit	1
C5.2.1.8	AI2 Gain	0.000 to 9.999	3	7435	16bit	1
C5.2.1.9	AI2 Offset	-100.00 to 100.00 %	2	7439	s16bit	1
C5.2.1.10	AI2 Dead Zone	0.00 to 100.00 %	2	7443	16bit	1
C5.2.1.11	AI3 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		7428	2bit	1
C5.2.1.12	AI3 Filter	0.00 to 16.00 s	2	7432	16bit	1
C5.2.1.13	AI3 Gain	0.000 to 9.999	3	7436	16bit	1
C5.2.1.14	AI3 Offset	-100.00 to 100.00 %	2	7440	s16bit	1
C5.2.1.15	AI3 Dead Zone	0.00 to 100.00 %	2	7444	16bit	1
C5.2.2	Slot A - Analog Outputs					
C5.2.2.1	AO1 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		7479	enum	1
C5.2.2.2	AO1 Gain	0.000 to 9.999	3	7483	16bit	1
C5.2.2.3	AO1 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		7487	enum	1
C5.2.2.4	AO1 Offset	-100.00 to 100.00 %	2	7491	s16bit	1
C5.2.2.5	AO2 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		7480	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C5.2.2.6	AO2 Gain	0.000 to 9.999	3	7484	16bit	1
C5.2.2.7	AO2 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		7488	enum	1
C5.2.2.8	AO2 Offset	-100.00 to 100.00 %	2	7492	s16bit	1
C5.2.4	Slot A - Digital Outputs					
C5.2.4.1	DO1 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction		7455	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		29 = Ride-Through 30 = Pre-Charge OK				
C5.2.4.4	DO2 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		7456	enum	1
C5.2.4.7	DO3 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run		7457	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.2.4.10	DO4 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		7458	enum	1
C5.2.4.13	DO5 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix		7459	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.2.4.16	DO6 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		7460	enum	1
C5.2.4.19	DO7 Function			7461	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.2.4.22	DO8 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault		7462	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.2.5	Slot A-Encoder					
C5.2.5.1	Number of Pulses	1 to 65535 ppr	0	7423	16bit	1
C5.2.5.2	Settings	Bit 0 = Broken Cable A Bit 2 = Broken Cable B Bit 4 = Broken Cable Z Bit 6 = Search Zero Bit 7 = Signal Direction		7424	5bit	1
C5.2.6	Slot A-Temperatures					
C5.2.6.1	Sensor Type	0 = PT100 1 = PT1000 2 = Single PTC 3 = Triple PTC		7446	enum	1
C5.2.6.2	Overtemperature Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		7447	6bit	1
C5.2.6.3	Measurement Error Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		7448	6bit	1
C5.2.6.4	Temp. 1 Sensor Setpoint	-100.0 to 250.0 °C	1	7449	s16bit	1
C5.2.6.5	Temp. 2 Sensor Setpoint	-100.0 to 250.0 °C	1	7450	s16bit	1
C5.2.6.6	Temp. 3 Sensor Setpoint	-100.0 to 250.0 °C	1	7451	s16bit	1
C5.2.6.7	Temp. 4 Sensor Setpoint	-100.0 to 250.0 °C	1	7452	s16bit	1
C5.2.6.8	Temp. 5 Sensor Setpoint	-100.0 to 250.0 °C	1	7453	s16bit	1
C5.2.6.9	Temp. 6 Sensor Setpoint	-100.0 to 250.0 °C	1	7454	s16bit	1
C5.3	Slot B					
C5.3.1	Slot B-Analog Inputs					
C5.3.1.1	AI1 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		7726	2bit	1
C5.3.1.2	AI1 Filter	0.00 to 16.00 s	2	7730	16bit	1
C5.3.1.3	AI1 Gain	0.000 to 9.999	3	7734	16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C5.3.1.4	AI1 Offset	-100.00 to 100.00 %	2	7738	s16bit	1
C5.3.1.5	AI1 Dead Zone	0.00 to 100.00 %	2	7742	16bit	1
C5.3.1.6	AI2 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		7727	2bit	1
C5.3.1.7	AI2 Filter	0.00 to 16.00 s	2	7731	16bit	1
C5.3.1.8	AI2 Gain	0.000 to 9.999	3	7735	16bit	1
C5.3.1.9	AI2 Offset	-100.00 to 100.00 %	2	7739	s16bit	1
C5.3.1.10	AI2 Dead Zone	0.00 to 100.00 %	2	7743	16bit	1
C5.3.1.11	AI3 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		7728	2bit	1
C5.3.1.12	AI3 Filter	0.00 to 16.00 s	2	7732	16bit	1
C5.3.1.13	AI3 Gain	0.000 to 9.999	3	7736	16bit	1
C5.3.1.14	AI3 Offset	-100.00 to 100.00 %	2	7740	s16bit	1
C5.3.1.15	AI3 Dead Zone	0.00 to 100.00 %	2	7744	16bit	1
C5.3.2	Slot B-Analog Outputs					
C5.3.2.1	AO1 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		7779	enum	1
C5.3.2.2	AO1 Gain	0.000 to 9.999	3	7783	16bit	1
C5.3.2.3	AO1 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		7787	enum	1
C5.3.2.4	AO1 Offset	-100.00 to 100.00 %	2	7791	s16bit	1
C5.3.2.5	AO2 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA		7780	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used				
C5.3.2.6	AO2 Gain	0.000 to 9.999	3	7784	16bit	1
C5.3.2.7	AO2 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		7788	enum	1
C5.3.2.8	AO2 Offset	-100.00 to 100.00 %	2	7792	s16bit	1
C5.3.4	Slot B-Digital Outputs					
C5.3.4.1	DO1 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault		7755	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.3.4.4	DO2 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		7756	enum	1
C5.3.4.7	DO3 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx		7757	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.3.4.10	DO4 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		7758	enum	1
C5.3.4.13	DO5 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx		7759	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.3.4.16	DO6 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network		7760	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.3.4.19	DO7 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		7761	enum	1
C5.3.4.22	DO8 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode		7762	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.3.5	Slot B-Encoder					
C5.3.5.1	Number of Pulses	1 to 65535 ppr	0	7723	16bit	1
C5.3.5.2	Settings	Bit 0 = Broken Cable A Bit 2 = Broken Cable B Bit 4 = Broken Cable Z Bit 6 = Search Zero Bit 7 = Signal Direction		7724	5bit	1
C5.3.6	Slot B-Temperatures					
C5.3.6.1	Sensor Type	0 = PT100 1 = PT1000 2 = Single PTC 3 = Triple PTC		7746	enum	1
C5.3.6.2	Overtemperature Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		7747	6bit	1
C5.3.6.3	Broken Cable Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		7748	6bit	1
C5.3.6.4	Temp. 1 Sensor Setpoint	-100.0 to 250.0 °C	1	7749	s16bit	1
C5.3.6.5	Temp. 2 Sensor Setpoint	-100.0 to 250.0 °C	1	7750	s16bit	1
C5.3.6.6	Temp. 3 Sensor Setpoint	-100.0 to 250.0 °C	1	7751	s16bit	1
C5.3.6.7	Temp. 4 Sensor Setpoint	-100.0 to 250.0 °C	1	7752	s16bit	1
C5.3.6.8	Temp. 5 Sensor Setpoint	-100.0 to 250.0 °C	1	7753	s16bit	1
C5.3.6.9	Temp. 6 Sensor Setpoint	-100.0 to 250.0 °C	1	7754	s16bit	1
C5.4	Slot C					
C5.4.1	Slot C-Analog Inputs					

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C5.4.1.1	AI1 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8026	2bit	1
C5.4.1.2	AI1 Filter	0.00 to 16.00 s	2	8030	16bit	1
C5.4.1.3	AI1 Gain	0.000 to 9.999	3	8034	16bit	1
C5.4.1.4	AI1 Offset	-100.00 to 100.00 %	2	8038	s16bit	1
C5.4.1.5	AI1 Dead Zone	0.00 to 100.00 %	2	8042	16bit	1
C5.4.1.6	AI2 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8027	2bit	1
C5.4.1.7	AI2 Filter	0.00 to 16.00 s	2	8031	16bit	1
C5.4.1.8	AI2 Gain	0.000 to 9.999	3	8035	16bit	1
C5.4.1.9	AI2 Offset	-100.00 to 100.00 %	2	8039	s16bit	1
C5.4.1.10	AI2 Dead Zone	0.00 to 100.00 %	2	8043	16bit	1
C5.4.1.11	AI3 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8028	2bit	1
C5.4.1.12	AI3 Filter	0.00 to 16.00 s	2	8032	16bit	1
C5.4.1.13	AI3 Gain	0.000 to 9.999	3	8036	16bit	1
C5.4.1.14	AI3 Offset	-100.00 to 100.00 %	2	8040	s16bit	1
C5.4.1.15	AI3 Dead Zone	0.00 to 100.00 %	2	8044	16bit	1
C5.4.2	Slot C-Analog Outputs					
C5.4.2.1	AO1 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		8079	enum	1
C5.4.2.2	AO1 Gain	0.000 to 9.999	3	8083	16bit	1
C5.4.2.3	AO1 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref.		8087	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		21 = Total Torque Ref.				
C5.4.2.4	AO1 Offset	-100.00 to 100.00 %	2	8091	s16bit	1
C5.4.2.5	AO2 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		8080	enum	1
C5.4.2.6	AO2 Gain	0.000 to 9.999	3	8084	16bit	1
C5.4.2.7	AO2 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		8088	enum	1
C5.4.2.8	AO2 Offset	-100.00 to 100.00 %	2	8092	s16bit	1
C5.4.4	Slot C-Digital Outputs					
C5.4.4.1	DO1 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode		8055	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.4.4.4	DO2 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8056	enum	1
C5.4.4.7	DO3 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used		8057	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.4.4.10	DO4 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through		8058	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		30 = Pre-Charge OK				
C5.4.4.13	DO5 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8059	enum	1
C5.4.4.16	DO6 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready		8060	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.4.4.19	DO7 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8061	enum	1
C5.4.4.22	DO8 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix		8062	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.4.5	Slot C-Encoder					
C5.4.5.1	Number of Pulses	1 to 65535 ppr	0	8023	16bit	1
C5.4.5.2	Settings	Bit 0 = Broken Cable A Bit 2 = Broken Cable B Bit 4 = Broken Cable Z Bit 6 = Search Zero Bit 7 = Signal Direction		8024	5bit	1
C5.4.6	Slot C-Temperatures					
C5.4.6.1	Sensor Type	0 = PT100 1 = PT1000 2 = Single PTC 3 = Triple PTC		8046	enum	1
C5.4.6.2	Overtemperature Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		8047	6bit	1
C5.4.6.3	Broken Cable Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		8048	6bit	1
C5.4.6.4	Temp. 1 Sensor Setpoint	-100.0 to 250.0 °C	1	8049	s16bit	1
C5.4.6.5	Temp. 2 Sensor Setpoint	-100.0 to 250.0 °C	1	8050	s16bit	1
C5.4.6.6	Temp. 3 Sensor Setpoint	-100.0 to 250.0 °C	1	8051	s16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C5.4.6.7	Temp. 4 Sensor Setpoint	-100.0 to 250.0 °C	1	8052	s16bit	1
C5.4.6.8	Temp. 5 Sensor Setpoint	-100.0 to 250.0 °C	1	8053	s16bit	1
C5.4.6.9	Temp. 6 Sensor Setpoint	-100.0 to 250.0 °C	1	8054	s16bit	1
C5.5	Slot D					
C5.5.1	Slot D-Analog Inputs					
C5.5.1.1	AI1 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8326	2bit	1
C5.5.1.2	AI1 Filter	0.00 to 16.00 s	2	8330	16bit	1
C5.5.1.3	AI1 Gain	0.000 to 9.999	3	8334	16bit	1
C5.5.1.4	AI1 Offset	-100.00 to 100.00 %	2	8338	s16bit	1
C5.5.1.5	AI1 Dead Zone	0.00 to 100.00 %	2	8342	16bit	1
C5.5.1.6	AI2 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8327	2bit	1
C5.5.1.7	AI2 Filter	0.00 to 16.00 s	2	8331	16bit	1
C5.5.1.8	AI2 Gain	0.000 to 9.999	3	8335	16bit	1
C5.5.1.9	AI2 Offset	-100.00 to 100.00 %	2	8339	s16bit	1
C5.5.1.10	AI2 Dead Zone	0.00 to 100.00 %	2	8343	16bit	1
C5.5.1.11	AI3 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8328	2bit	1
C5.5.1.12	AI3 Filter	0.00 to 16.00 s	2	8332	16bit	1
C5.5.1.13	AI3 Gain	0.000 to 9.999	3	8336	16bit	1
C5.5.1.14	AI3 Offset	-100.00 to 100.00 %	2	8340	s16bit	1
C5.5.1.15	AI3 Dead Zone	0.00 to 100.00 %	2	8344	16bit	1
C5.5.2	Slot D-Analog Outputs					
C5.5.2.1	AO1 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		8379	enum	1
C5.5.2.2	AO1 Gain	0.000 to 9.999	3	8383	16bit	1
C5.5.2.3	AO1 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC		8387	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.				
C5.5.2.4	AO1 Offset	-100.00 to 100.00 %	2	8391	s16bit	1
C5.5.2.5	AO2 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		8380	enum	1
C5.5.2.6	AO2 Gain	0.000 to 9.999	3	8384	16bit	1
C5.5.2.7	AO2 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		8388	enum	1
C5.5.2.8	AO2 Offset	-100.00 to 100.00 %	2	8392	s16bit	1
C5.5.4	Slot D-Digital Outputs					
C5.5.4.1	DO1 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx		8355	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.5.4.4	DO2 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8356	enum	1
C5.5.4.7	DO3 Function	0 = Off 1 = On		8357	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.5.4.10	DO4 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm		8358	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.5.4.13	DO5 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8359	enum	1
C5.5.4.16	DO6 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used		8360	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.5.4.19	DO7 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8361	enum	1
C5.5.4.22	DO8 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny		8362	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.5.5	Slot D-Encoder					
C5.5.5.1	Number of Pulses	1 to 65535 ppr	0	8323	16bit	1
C5.5.5.2	Settings	Bit 0 = Broken Cable A Bit 2 = Broken Cable B Bit 4 = Broken Cable Z Bit 6 = Search Zero Bit 7 = Signal Direction		8324	5bit	1
C5.5.6	Slot D-Temperatures					
C5.5.6.1	Sensor Type	0 = PT100 1 = PT1000 2 = Single PTC 3 = Triple PTC		8346	enum	1
C5.5.6.2	Overtemperature Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		8347	6bit	1
C5.5.6.3	Broken Cable Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A		8348	6bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A				
C5.5.6.4	Temp. 1 Sensor Setpoint	-100.0 to 250.0 °C	1	8349	s16bit	1
C5.5.6.5	Temp. 2 Sensor Setpoint	-100.0 to 250.0 °C	1	8350	s16bit	1
C5.5.6.6	Temp. 3 Sensor Setpoint	-100.0 to 250.0 °C	1	8351	s16bit	1
C5.5.6.7	Temp. 4 Sensor Setpoint	-100.0 to 250.0 °C	1	8352	s16bit	1
C5.5.6.8	Temp. 5 Sensor Setpoint	-100.0 to 250.0 °C	1	8353	s16bit	1
C5.5.6.9	Temp. 6 Sensor Setpoint	-100.0 to 250.0 °C	1	8354	s16bit	1
C5.6	Slot E					
C5.6.1	Slot E-Analog Inputs					
C5.6.1.1	AI1 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8626	2bit	1
C5.6.1.2	AI1 Filter	0.00 to 16.00 s	2	8630	16bit	1
C5.6.1.3	AI1 Gain	0.000 to 9.999	3	8634	16bit	1
C5.6.1.4	AI1 Offset	-100.00 to 100.00 %	2	8638	s16bit	1
C5.6.1.5	AI1 Dead Zone	0.00 to 100.00 %	2	8642	16bit	1
C5.6.1.6	AI2 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8627	2bit	1
C5.6.1.7	AI2 Filter	0.00 to 16.00 s	2	8631	16bit	1
C5.6.1.8	AI2 Gain	0.000 to 9.999	3	8635	16bit	1
C5.6.1.9	AI2 Offset	-100.00 to 100.00 %	2	8639	s16bit	1
C5.6.1.10	AI2 Dead Zone	0.00 to 100.00 %	2	8643	16bit	1
C5.6.1.11	AI3 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8628	2bit	1
C5.6.1.12	AI3 Filter	0.00 to 16.00 s	2	8632	16bit	1
C5.6.1.13	AI3 Gain	0.000 to 9.999	3	8636	16bit	1
C5.6.1.14	AI3 Offset	-100.00 to 100.00 %	2	8640	s16bit	1
C5.6.1.15	AI3 Dead Zone	0.00 to 100.00 %	2	8644	16bit	1
C5.6.2	Slot E-Analog Outputs					
C5.6.2.1	AO1 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		8679	enum	1
C5.6.2.2	AO1 Gain	0.000 to 9.999	3	8683	16bit	1
C5.6.2.3	AO1 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current		8687	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.				
C5.6.2.4	AO1 Offset	-100.00 to 100.00 %	2	8691	s16bit	1
C5.6.2.5	AO2 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		8680	enum	1
C5.6.2.6	AO2 Gain	0.000 to 9.999	3	8684	16bit	1
C5.6.2.7	AO2 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		8688	enum	1
C5.6.2.8	AO2 Offset	-100.00 to 100.00 %	2	8692	s16bit	1
C5.6.4	Slot E-Digital Outputs					
C5.6.4.1	DO1 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny		8655	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.6.4.4	DO2 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC		8656	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.6.4.7	DO3 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8657	enum	1
C5.6.4.10	DO4 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode		8658	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.6.4.13	DO5 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8659	enum	1
C5.6.4.16	DO6 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx		8660	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.6.4.19	DO7 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8661	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C5.6.4.22	DO8 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8662	enum	1
C5.6.5	Slot E-Encoder					
C5.6.5.1	Number of Pulses	1 to 65535 ppr	0	8623	16bit	1
C5.6.5.2	Settings	Bit 0 = Broken Cable A Bit 2 = Broken Cable B Bit 4 = Broken Cable Z Bit 6 = Search Zero Bit 7 = Signal Direction		8624	5bit	1
C5.6.6	Slot E-Temperatures					
C5.6.6.1	Sensor Type	0 = PT100 1 = PT1000 2 = Single PTC 3 = Triple PTC		8646	enum	1
C5.6.6.2	Overtemperature Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A		8647	6bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		Bit 10 = S6 Sensor F/A				
C5.6.6.3	Broken Cable Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		8648	6bit	1
C5.6.6.4	Temp. 1 Sensor Setpoint	-100.0 to 250.0 °C	1	8649	s16bit	1
C5.6.6.5	Temp. 2 Sensor Setpoint	-100.0 to 250.0 °C	1	8650	s16bit	1
C5.6.6.6	Temp. 3 Sensor Setpoint	-100.0 to 250.0 °C	1	8651	s16bit	1
C5.6.6.7	Temp. 4 Sensor Setpoint	-100.0 to 250.0 °C	1	8652	s16bit	1
C5.6.6.8	Temp. 5 Sensor Setpoint	-100.0 to 250.0 °C	1	8653	s16bit	1
C5.6.6.9	Temp. 6 Sensor Setpoint	-100.0 to 250.0 °C	1	8654	s16bit	1
C5.7	Slot F					
C5.7.1	Slot F-Analog Inputs					
C5.7.1.1	AI1 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8926	2bit	1
C5.7.1.2	AI1 Filter	0.00 to 16.00 s	2	8930	16bit	1
C5.7.1.3	AI1 Gain	0.000 to 9.999	3	8934	16bit	1
C5.7.1.4	AI1 Offset	-100.00 to 100.00 %	2	8938	s16bit	1
C5.7.1.5	AI1 Dead Zone	0.00 to 100.00 %	2	8942	16bit	1
C5.7.1.6	AI2 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8927	2bit	1
C5.7.1.7	AI2 Filter	0.00 to 16.00 s	2	8931	16bit	1
C5.7.1.8	AI2 Gain	0.000 to 9.999	3	8935	16bit	1
C5.7.1.9	AI2 Offset	-100.00 to 100.00 %	2	8939	s16bit	1
C5.7.1.10	AI2 Dead Zone	0.00 to 100.00 %	2	8943	16bit	1
C5.7.1.11	AI3 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		8928	2bit	1
C5.7.1.12	AI3 Filter	0.00 to 16.00 s	2	8932	16bit	1
C5.7.1.13	AI3 Gain	0.000 to 9.999	3	8936	16bit	1
C5.7.1.14	AI3 Offset	-100.00 to 100.00 %	2	8940	s16bit	1
C5.7.1.15	AI3 Dead Zone	0.00 to 100.00 %	2	8944	16bit	1
C5.7.2	Slot F-Analog Outputs					
C5.7.2.1	AO1 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		8979	enum	1
C5.7.2.2	AO1 Gain	0.000 to 9.999	3	8983	16bit	1
C5.7.2.3	AO1 Function	0 = Off (0 %)		8987	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.				
C5.7.2.4	AO1 Offset	-100.00 to 100.00 %	2	8991	s16bit	1
C5.7.2.5	AO2 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		8980	enum	1
C5.7.2.6	AO2 Gain	0.000 to 9.999	3	8984	16bit	1
C5.7.2.7	AO2 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		8988	enum	1
C5.7.2.8	AO2 Offset	-100.00 to 100.00 %	2	8992	s16bit	1
C5.7.4	Slot F-Digital Outputs					

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C5.7.4.1	DO1 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8955	enum	1
C5.7.4.4	DO2 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO		8956	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.7.4.7	DO3 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8957	enum	1
C5.7.4.10	DO4 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx		8958	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.7.4.13	DO5 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8959	enum	1
C5.7.4.16	DO6 Function	0 = Off 1 = On		8960	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.7.4.19	DO7 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm		8961	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.7.4.22	DO8 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		8962	enum	1
C5.7.5	Slot F-Encoder					
C5.7.5.1	Number of Pulses	1 to 65535 ppr	0	8923	16bit	1
C5.7.5.2	Settings	Bit 0 = Broken Cable A Bit 2 = Broken Cable B Bit 4 = Broken Cable Z Bit 6 = Search Zero Bit 7 = Signal Direction		8924	5bit	1
C5.7.6	Slot F-Temperatures					
C5.7.6.1	Sensor Type	0 = PT100 1 = PT1000 2 = Single PTC 3 = Triple PTC		8946	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C5.7.6.2	Overtemperature Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		8947	6bit	1
C5.7.6.3	Broken Cable Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		8948	6bit	1
C5.7.6.4	Temp. 1 Sensor Setpoint	-100.0 to 250.0 °C	1	8949	s16bit	1
C5.7.6.5	Temp. 2 Sensor Setpoint	-100.0 to 250.0 °C	1	8950	s16bit	1
C5.7.6.6	Temp. 3 Sensor Setpoint	-100.0 to 250.0 °C	1	8951	s16bit	1
C5.7.6.7	Temp. 4 Sensor Setpoint	-100.0 to 250.0 °C	1	8952	s16bit	1
C5.7.6.8	Temp. 5 Sensor Setpoint	-100.0 to 250.0 °C	1	8953	s16bit	1
C5.7.6.9	Temp. 6 Sensor Setpoint	-100.0 to 250.0 °C	1	8954	s16bit	1
C5.8	Slot G					
C5.8.1	Slot G-Analog Inputs					
C5.8.1.1	AI1 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		9226	2bit	1
C5.8.1.2	AI1 Filter	0.00 to 16.00 s	2	9230	16bit	1
C5.8.1.3	AI1 Gain	0.000 to 9.999	3	9234	16bit	1
C5.8.1.4	AI1 Offset	-100.00 to 100.00 %	2	9238	s16bit	1
C5.8.1.5	AI1 Dead Zone	0.00 to 100.00 %	2	9242	16bit	1
C5.8.1.6	AI2 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		9227	2bit	1
C5.8.1.7	AI2 Filter	0.00 to 16.00 s	2	9231	16bit	1
C5.8.1.8	AI2 Gain	0.000 to 9.999	3	9235	16bit	1
C5.8.1.9	AI2 Offset	-100.00 to 100.00 %	2	9239	s16bit	1
C5.8.1.10	AI2 Dead Zone	0.00 to 100.00 %	2	9243	16bit	1
C5.8.1.11	AI3 Settings	Bit 0 = Detect Disconnection Bit 2 = Signal Setting		9228	2bit	1
C5.8.1.12	AI3 Filter	0.00 to 16.00 s	2	9232	16bit	1
C5.8.1.13	AI3 Gain	0.000 to 9.999	3	9236	16bit	1
C5.8.1.14	AI3 Offset	-100.00 to 100.00 %	2	9240	s16bit	1
C5.8.1.15	AI3 Dead Zone	0.00 to 100.00 %	2	9244	16bit	1
C5.8.2	Slot G-Analog Outputs					
C5.8.2.1	AO1 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA		9279	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used				
C5.8.2.2	AO1 Gain	0.000 to 9.999	3	9283	16bit	1
C5.8.2.3	AO1 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network 19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.		9287	enum	1
C5.8.2.4	AO1 Offset	-100.00 to 100.00 %	2	9291	s16bit	1
C5.8.2.5	AO2 Signal Type	0 = 0 to 20 mA 1 = 4 to 20 mA 2 = 20 to 0 mA 3 = 20 to 4 mA 4 = 0 to 10 V 5 = 10 to 0 V 6 ... 7 = Not used		9280	enum	1
C5.8.2.6	AO2 Gain	0.000 to 9.999	3	9284	16bit	1
C5.8.2.7	AO2 Function	0 = Off (0 %) 1 = On (100%) 2 = Speed Ref. 3 = Total Speed Ref. 4 = Real Speed 5 ... 6 = Not used 7 = Output Current 8 ... 9 = Not used 10 = Output Power 11 ... 12 = Not used 13 = Motor Torque 14 = SoftPLC 15 = PTC 16 = Motor Ixt 17 = Encoder Speed 18 = Network		9288	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		19 = Not used 20 = Torque Ref. 21 = Total Torque Ref.				
C5.8.2.8	AO2 Offset	-100.00 to 100.00 %	2	9292	s16bit	1
C5.8.4	Slot G-Digital Outputs					
C5.8.4.1	DO1 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		9255	enum	1
C5.8.4.4	DO2 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode		9256	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.8.4.7	DO3 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		9257	enum	1
C5.8.4.10	DO4 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N*		9258	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.8.4.13	DO5 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction		9259	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		29 = Ride-Through 30 = Pre-Charge OK				
C5.8.4.16	DO6 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		9260	enum	1
C5.8.4.19	DO7 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run		9261	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK				
C5.8.4.22	DO8 Function	0 = Off 1 = On 2 = N* > Nx 3 = N > Nx 4 = N < Ny 5 = N = N* 6 ... 7 = Not used 8 = F > Fx 9 = Is > Ix 10 = Is < Ix 11 = Torque > Tx 12 = Torque < Tx 13 = Hours Enabled > Hx 14 ... 15 = Not used 16 = Local Mode 17 = Remote 1 Mode 18 = Remote 2 Mode 19 = Run 20 = Ready 21 = STO 22 = No Fault 23 = With Fault 24 = No Alarm 25 = No Fault and Alarm 26 = Network 27 = SoftPLC 28 = Forward Direction 29 = Ride-Through 30 = Pre-Charge OK		9262	enum	1
C5.8.5	Slot G-Encoder					
C5.8.5.1	Number of Pulses	1 to 65535 ppr	0	9223	16bit	1
C5.8.5.2	Settings	Bit 0 = Broken Cable A Bit 2 = Broken Cable B Bit 4 = Broken Cable Z Bit 6 = Search Zero Bit 7 = Signal Direction		9224	5bit	1
C5.8.6	Slot G-Temperatures					

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C5.8.6.1	Sensor Type	0 = PT100 1 = PT1000 2 = Single PTC 3 = Triple PTC		9246	enum	1
C5.8.6.2	Overtemperature Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		9247	6bit	1
C5.8.6.3	Broken Cable Config.	Bit 0 = S1 Sensor F/A Bit 2 = S2 Sensor F/A Bit 4 = S3 Sensor F/A Bit 6 = S4 Sensor F/A Bit 8 = S5 Sensor F/A Bit 10 = S6 Sensor F/A		9248	6bit	1
C5.8.6.4	Temp. 1 Sensor Setpoint	-100.0 to 250.0 °C	1	9249	s16bit	1
C5.8.6.5	Temp. 2 Sensor Setpoint	-100.0 to 250.0 °C	1	9250	s16bit	1
C5.8.6.6	Temp. 3 Sensor Setpoint	-100.0 to 250.0 °C	1	9251	s16bit	1
C5.8.6.7	Temp. 4 Sensor Setpoint	-100.0 to 250.0 °C	1	9252	s16bit	1
C5.8.6.8	Temp. 5 Sensor Setpoint	-100.0 to 250.0 °C	1	9253	s16bit	1
C5.8.6.9	Temp. 6 Sensor Setpoint	-100.0 to 250.0 °C	1	9254	s16bit	1
C5.9	DO Operation Levels					
C5.9.1	Fx Frequency	0.0 to 300.0 Hz	1	281	16bit	1
C5.9.2	Fx Hysteresis	0.0 to 15.0 Hz	1	282	16bit	1
C5.9.3	Nx/Ny Hysteresis	0 to 900 rpm	0	287	16bit	1
C5.9.4	Nx Speed	0 to 18000 rpm	0	288	16bit	1
C5.9.5	Ny Speed	0 to 18000 rpm	0	289	16bit	1
C5.9.6	Ix Current	0.0 to 200.0 %	1	290	16bit	1
C5.9.8	N = N* Range	0 to 18000 rpm	0	292	16bit	1
C5.9.9	Torque Tx	0.0 to 200.0 %	1	293	16bit	1
C5.9.10	Hx Hours	0 to 65536 h	0	294	NONE	2
		C6 Configuration\Ramps				
C6.1	Speed Control Ramps					
C6.1.1	Acceleration Time	0.1 to 999.9 s	1	100	16bit	1
C6.1.2	Deceleration Time	0.1 to 999.9 s	1	101	16bit	1
C6.1.3	1st/2nd Ramp Selection	0 = 1st Ramp 1 = 2nd Ramp 2 = Serial 3 = Not used 4 = CAN/CO/DN 5 = SoftPLC 6 = Not used 7 = Ethernet 8 = DI Ramp Selection		105	enum	1
C6.1.4	2nd Ramp Acceleration Time	0.1 to 999.9 s	1	102	16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C6.1.5	2nd Ramp Deceleration Time	0.1 to 999.9 s	1	103	16bit	1
C6.1.6	Quick Stop Time	0.1 to 999.9 s	1	106	16bit	1
C6.1.7	Ramp Type	0 = Linear 1 = S Ramp		104	enum	1
C6.2	Torque Control Ramps					
C6.2.1	Increment Ramp	0.1 to 999.9 s	1	4001	16bit	1
C6.2.2	Decrement Ramp	0.1 to 999.9 s	1	4002	16bit	1
		C7 Configuration\Protections				
C7.1	Power Supply Phase Loss					
C7.1.1	Min. Detection Time	0 to 60 s	0	357	16bit	1
C7.1.2	Level Fine Setting	0.1 to 5.0	1	358	16bit	1
C7.2	Ground Fault					
C7.2.1	Configuration	0 = Inactive 1 = Fault Enab.; Standard Level 2 = Fault Enab.; Extended Level		2002	enum	1
C7.4	Motor Overload Fault					
C7.4.1	Enable Fault	0 = Disable 1 = Fault and Alarm 2 = Fault 3 = Alarm		348	enum	1
C7.4.2	Alarm Level	10 to 100 %	0	349	16bit	1
C7.4.3	Factor @ 100% Rat. Speed	0 to 200 %	0	156	s16bit	1
C7.4.4	Factor @ 50% Rat. Speed	0 to 200 %	0	157	s16bit	1
C7.4.5	Factor @ 5% Rat, Speed	0 to 200 %	0	158	s16bit	1
C7.4.6	Motor Thermal Class	0 = Class 5E 1 = Class 10E 2 = Class 15 3 = Class 20E 4 = Class 25 5 = Class 30E 6 = Class 35 7 = Class 40 8 = Class 45		159	enum	1
C7.5	Over/Undertemp. Prot.					
C7.5.1	Configuration	Bit 0 = IGBT Overtemp. Bit 1 = Rectifier Overtemp. Bit 2 = Power Internal Air Overtemp. Bit 3 = Control Internal Air Overtemp. Bit 4 = Undertemperature		353	5bit	1
C7.5.2	Motor Overtemp. Conf.	0 = Alarm and Fault 1 = Fault 2 = Alarm		351	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		3 = Disabled				
C7.6	Fan Speed Fault					
C7.6.1	Power Fan Config.	0 = Alarm/Fault 1 = Alarm		354	enum	1
C7.6.2	Internal Fan Config.	0 = Alarm/Fault 1 = Alarm		1054	enum	1
C7.7	Motor Overspeed					
C7.7.1	Maximum Overspeed Level	0.0 to 100.0 %	0	132	TIME	2
C7.8	Pre-charge					
C7.8.1	Pre-charge Fault Settings	Bit 0 = Phase disconnected Bit 1 = Freq. out of range Bit 2 = Input Voltage Unbalance Bit 3 = Input Phase Unb.		2008	4bit	1
C7.9	Auto-Reset					
C7.9.1	Time	0 to 3600 s	0	340	16bit	1
C7.10	External Fault/Alarm					
C7.10.1	External Alarm DI	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1 16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6		6038	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C7.10.2	External Fault DI	0 = Inactive 1 = DI X-1 2 = DI X-2 3 = DI X-3 4 = DI X-4 5 = DI X-5 6 = DI X-6 7 = DI A-1 8 = DI A-2 9 = DI A-3 10 = DI A-4 11 = DI A-5 12 = DI A-6 13 = DI A-7 14 = DI A-8 15 = DI B-1		6037	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		16 = DI B-2 17 = DI B-3 18 = DI B-4 19 = DI B-5 20 = DI B-6 21 = DI B-7 22 = DI B-8 23 = DI C-1 24 = DI C-2 25 = DI C-3 26 = DI C-4 27 = DI C-5 28 = DI C-6 29 = DI C-7 30 = DI C-8 31 = DI D-1 32 = DI D-2 33 = DI D-3 34 = DI D-4 35 = DI D-5 36 = DI D-6 37 = DI D-7 38 = DI D-8 39 = DI E-1 40 = DI E-2 41 = DI E-3 42 = DI E-4 43 = DI E-5 44 = DI E-6 45 = DI E-7 46 = DI E-8 47 = DI F-1 48 = DI F-2 49 = DI F-3 50 = DI F-4 51 = DI F-5 52 = DI F-6 53 = DI F-7 54 = DI F-8 55 = DI G-1 56 = DI G-2 57 = DI G-3 58 = DI G-4 59 = DI G-5 60 = DI G-6 61 = DI G-7 62 = DI G-8				
C7.11	Thermal Management					
C7.11.1	Jt, min IGBT Overload Fast Curve	-50 to 200 °C	0	1202	s16bit	1
C7.11.2	Temperature Regulator Config.			3037	3bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		Bit 0 = Heatsink Temp. Reg. with fsw Operation Bit 1 = Junction Temperature Regulator Bit 2 = Heat sink Temp. Reg. w/ Power Fan Speed				
C7.11.7	Junction Temp. Regul. - Proport. Gain	0.00 to 20.00	2	3039	16bit	1
C7.11.8	Junction Temp. Regul. - Integral Gain	0.00 to 20.00	2	3065	16bit	1
C7.11.9	NTC Temp. Regul. - Proport. Gain	0.00 to 20.00	2	3080	16bit	1
C7.11.10	NTC Temp. Regul. - Integral Gain	0.00 to 20.00	2	3081	16bit	1
		C8 Configuration\Functional Safety				
C8.1	SS1-t Ramp Deceleration Time	0.1 to 999.9 s	1	96	16bit	1
		C9 Configuration\Communications				
C9.1	Communication Errors					
C9.1.1	Master Offline					
C9.1.1.1	Mode	0 = Inactive 1 = Fault 2 = Alarm		895	enum	1
C9.1.1.2	Alarm Action	0 = Off 1 = Stop by Ramp 2 = General Disable 3 = Go to R1 4 = Go to R2		896	enum	1
C9.1.2	Master Idle/Prog					
C9.1.2.1	Mode	0 = Inactive 1 = Fault 2 = Alarm		897	enum	1
C9.1.2.2	Action Alarm	0 = Off 1 = Stop by Ramp 2 = General Disable 3 = Go to R1 4 = Go to R2		898	enum	1
C9.2	I/O Data					
C9.2.1	Reading Data					
C9.2.1.1	Word #1	0 to 9999	0	1300	s16bit	1
C9.2.1.2	Word #2	0 to 9999	0	1301	s16bit	1
C9.2.1.3	Word #3	0 to 9999	0	1302	s16bit	1
C9.2.1.4	Word #4	0 to 9999	0	1303	s16bit	1
C9.2.1.5	Word #5	0 to 9999	0	1304	s16bit	1
C9.2.1.6	Word #6	0 to 9999	0	1305	s16bit	1
C9.2.1.7	Word #7	0 to 9999	0	1306	s16bit	1
C9.2.1.8	Word #8	0 to 9999	0	1307	s16bit	1
C9.2.1.9	Word #9	0 to 9999	0	1308	s16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C9.2.1.10	Word #10	0 to 9999	0	1309	s16bit	1
C9.2.1.11	Word #11	0 to 9999	0	1310	s16bit	1
C9.2.1.12	Word #12	0 to 9999	0	1311	s16bit	1
C9.2.1.13	Word #13	0 to 9999	0	1312	s16bit	1
C9.2.1.14	Word #14	0 to 9999	0	1313	s16bit	1
C9.2.1.15	Word #15	0 to 9999	0	1314	s16bit	1
C9.2.1.16	Word #16	0 to 9999	0	1315	s16bit	1
C9.2.1.17	Word #17	0 to 9999	0	1316	s16bit	1
C9.2.1.18	Word #18	0 to 9999	0	1317	s16bit	1
C9.2.1.19	Word #19	0 to 9999	0	1318	s16bit	1
C9.2.1.20	Word #20	0 to 9999	0	1319	s16bit	1
C9.2.1.21	Word #21	0 to 9999	0	1320	s16bit	1
C9.2.1.22	Word #22	0 to 9999	0	1321	s16bit	1
C9.2.1.23	Word #23	0 to 9999	0	1322	s16bit	1
C9.2.1.24	Word #24	0 to 9999	0	1323	s16bit	1
C9.2.1.25	Word #25	0 to 9999	0	1324	s16bit	1
C9.2.1.26	Word #26	0 to 9999	0	1325	s16bit	1
C9.2.1.27	Word #27	0 to 9999	0	1326	s16bit	1
C9.2.1.28	Word #28	0 to 9999	0	1327	s16bit	1
C9.2.1.29	Word #29	0 to 9999	0	1328	s16bit	1
C9.2.1.30	Word #30	0 to 9999	0	1329	s16bit	1
C9.2.1.31	Word #31	0 to 9999	0	1330	s16bit	1
C9.2.1.32	Word #32	0 to 9999	0	1331	s16bit	1
C9.2.1.33	Word #33	0 to 9999	0	1332	s16bit	1
C9.2.1.34	Word #34	0 to 9999	0	1333	s16bit	1
C9.2.1.35	Word #35	0 to 9999	0	1334	s16bit	1
C9.2.1.36	Word #36	0 to 9999	0	1335	s16bit	1
C9.2.1.37	Word #37	0 to 9999	0	1336	s16bit	1
C9.2.1.38	Word #38	0 to 9999	0	1337	s16bit	1
C9.2.1.39	Word #39	0 to 9999	0	1338	s16bit	1
C9.2.1.40	Word #40	0 to 9999	0	1339	s16bit	1
C9.2.1.41	Word #41	0 to 9999	0	1340	s16bit	1
C9.2.1.42	Word #42	0 to 9999	0	1341	s16bit	1
C9.2.1.43	Word #43	0 to 9999	0	1342	s16bit	1
C9.2.1.44	Word #44	0 to 9999	0	1343	s16bit	1
C9.2.1.45	Word #45	0 to 9999	0	1344	s16bit	1
C9.2.1.46	Word #46	0 to 9999	0	1345	s16bit	1
C9.2.1.47	Word #47	0 to 9999	0	1346	s16bit	1
C9.2.1.48	Word #48	0 to 9999	0	1347	s16bit	1
C9.2.1.49	Word #49	0 to 9999	0	1348	s16bit	1
C9.2.1.50	Word #50	0 to 9999	0	1349	s16bit	1
C9.2.1.51	Word #51	0 to 9999	0	1350	s16bit	1
C9.2.1.52	Word #52	0 to 9999	0	1351	s16bit	1
C9.2.1.53	Word #53	0 to 9999	0	1352	s16bit	1
C9.2.1.54	Word #54	0 to 9999	0	1353	s16bit	1
C9.2.1.55	Word #55	0 to 9999	0	1354	s16bit	1
C9.2.1.56	Word #56	0 to 9999	0	1355	s16bit	1
C9.2.1.57	Word #57	0 to 9999	0	1356	s16bit	1
C9.2.1.58	Word #58	0 to 9999	0	1357	s16bit	1
C9.2.1.59	Word #59	0 to 9999	0	1358	s16bit	1
C9.2.1.60	Word #60	0 to 9999	0	1359	s16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C9.2.1.61	Word #61	0 to 9999	0	1360	s16bit	1
C9.2.1.62	Word #62	0 to 9999	0	1361	s16bit	1
C9.2.1.63	Word #63	0 to 9999	0	1362	s16bit	1
C9.2.1.64	Word #64	0 to 9999	0	1363	s16bit	1
C9.2.1.65	Word #65	0 to 9999	0	1364	s16bit	1
C9.2.1.66	Word #66	0 to 9999	0	1365	s16bit	1
C9.2.1.67	Word #67	0 to 9999	0	1366	s16bit	1
C9.2.1.68	Word #68	0 to 9999	0	1367	s16bit	1
C9.2.1.69	Word #69	0 to 9999	0	1368	s16bit	1
C9.2.1.70	Word #70	0 to 9999	0	1369	s16bit	1
C9.2.1.71	Word #71	0 to 9999	0	1370	s16bit	1
C9.2.1.72	Word #72	0 to 9999	0	1371	s16bit	1
C9.2.1.73	Word #73	0 to 9999	0	1372	s16bit	1
C9.2.1.74	Word #74	0 to 9999	0	1373	s16bit	1
C9.2.1.75	Word #75	0 to 9999	0	1374	s16bit	1
C9.2.1.76	Word #76	0 to 9999	0	1375	s16bit	1
C9.2.1.77	Word #77	0 to 9999	0	1376	s16bit	1
C9.2.1.78	Word #78	0 to 9999	0	1377	s16bit	1
C9.2.1.79	Word #79	0 to 9999	0	1378	s16bit	1
C9.2.1.80	Word #80	0 to 9999	0	1379	s16bit	1
C9.2.1.81	Word #81	0 to 9999	0	1380	s16bit	1
C9.2.1.82	Word #82	0 to 9999	0	1381	s16bit	1
C9.2.1.83	Word #83	0 to 9999	0	1382	s16bit	1
C9.2.1.84	Word #84	0 to 9999	0	1383	s16bit	1
C9.2.1.85	Word #85	0 to 9999	0	1384	s16bit	1
C9.2.1.86	Word #86	0 to 9999	0	1385	s16bit	1
C9.2.1.87	Word #87	0 to 9999	0	1386	s16bit	1
C9.2.1.88	Word #88	0 to 9999	0	1387	s16bit	1
C9.2.1.89	Word #89	0 to 9999	0	1388	s16bit	1
C9.2.1.90	Word #90	0 to 9999	0	1389	s16bit	1
C9.2.1.91	Word #91	0 to 9999	0	1390	s16bit	1
C9.2.1.92	Word #92	0 to 9999	0	1391	s16bit	1
C9.2.1.93	Word #93	0 to 9999	0	1392	s16bit	1
C9.2.1.94	Word #94	0 to 9999	0	1393	s16bit	1
C9.2.1.95	Word #95	0 to 9999	0	1394	s16bit	1
C9.2.1.96	Word #96	0 to 9999	0	1395	s16bit	1
C9.2.1.97	Word #97	0 to 9999	0	1396	s16bit	1
C9.2.1.98	Word #98	0 to 9999	0	1397	s16bit	1
C9.2.1.99	Word #99	0 to 9999	0	1398	s16bit	1
C9.2.1.100	Word #100	0 to 9999	0	1399	s16bit	1
C9.2.2	Writing Data					
C9.2.2.1	Update Delay	0.0 to 999.0 s	1	899	16bit	1
C9.2.2.2	Word #1	0 to 9999	0	1400	s16bit	1
C9.2.2.3	Word #2	0 to 9999	0	1401	s16bit	1
C9.2.2.4	Word #3	0 to 9999	0	1402	s16bit	1
C9.2.2.5	Word #4	0 to 9999	0	1403	s16bit	1
C9.2.2.6	Word #5	0 to 9999	0	1404	s16bit	1
C9.2.2.7	Word #6	0 to 9999	0	1405	s16bit	1
C9.2.2.8	Word #7	0 to 9999	0	1406	s16bit	1
C9.2.2.9	Word #8	0 to 9999	0	1407	s16bit	1
C9.2.2.10	Word #9	0 to 9999	0	1408	s16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C9.2.2.11	Word #10	0 to 9999	0	1409	s16bit	1
C9.2.2.12	Word #11	0 to 9999	0	1410	s16bit	1
C9.2.2.13	Word #12	0 to 9999	0	1411	s16bit	1
C9.2.2.14	Word #13	0 to 9999	0	1412	s16bit	1
C9.2.2.15	Word #14	0 to 9999	0	1413	s16bit	1
C9.2.2.16	Word #15	0 to 9999	0	1414	s16bit	1
C9.2.2.17	Word #16	0 to 9999	0	1415	s16bit	1
C9.2.2.18	Word #17	0 to 9999	0	1416	s16bit	1
C9.2.2.19	Word #18	0 to 9999	0	1417	s16bit	1
C9.2.2.20	Word #19	0 to 9999	0	1418	s16bit	1
C9.2.2.21	Word #20	0 to 9999	0	1419	s16bit	1
C9.2.2.22	Word #21	0 to 9999	0	1420	s16bit	1
C9.2.2.23	Word #22	0 to 9999	0	1421	s16bit	1
C9.2.2.24	Word #23	0 to 9999	0	1422	s16bit	1
C9.2.2.25	Word #24	0 to 9999	0	1423	s16bit	1
C9.2.2.26	Word #25	0 to 9999	0	1424	s16bit	1
C9.2.2.27	Word #26	0 to 9999	0	1425	s16bit	1
C9.2.2.28	Word #27	0 to 9999	0	1426	s16bit	1
C9.2.2.29	Word #28	0 to 9999	0	1427	s16bit	1
C9.2.2.30	Word #29	0 to 9999	0	1428	s16bit	1
C9.2.2.31	Word #30	0 to 9999	0	1429	s16bit	1
C9.2.2.32	Word #31	0 to 9999	0	1430	s16bit	1
C9.2.2.33	Word #32	0 to 9999	0	1431	s16bit	1
C9.2.2.34	Word #33	0 to 9999	0	1432	s16bit	1
C9.2.2.35	Word #34	0 to 9999	0	1433	s16bit	1
C9.2.2.36	Word #35	0 to 9999	0	1434	s16bit	1
C9.2.2.37	Word #36	0 to 9999	0	1435	s16bit	1
C9.2.2.38	Word #37	0 to 9999	0	1436	s16bit	1
C9.2.2.39	Word #38	0 to 9999	0	1437	s16bit	1
C9.2.2.40	Word #39	0 to 9999	0	1438	s16bit	1
C9.2.2.41	Word #40	0 to 9999	0	1439	s16bit	1
C9.2.2.42	Word #41	0 to 9999	0	1440	s16bit	1
C9.2.2.43	Word #42	0 to 9999	0	1441	s16bit	1
C9.2.2.44	Word #43	0 to 9999	0	1442	s16bit	1
C9.2.2.45	Word #44	0 to 9999	0	1443	s16bit	1
C9.2.2.46	Word #45	0 to 9999	0	1444	s16bit	1
C9.2.2.47	Word #46	0 to 9999	0	1445	s16bit	1
C9.2.2.48	Word #47	0 to 9999	0	1446	s16bit	1
C9.2.2.49	Word #48	0 to 9999	0	1447	s16bit	1
C9.2.2.50	Word #49	0 to 9999	0	1448	s16bit	1
C9.2.2.51	Word #50	0 to 9999	0	1449	s16bit	1
C9.2.2.52	Word #51	0 to 9999	0	1450	s16bit	1
C9.2.2.53	Word #52	0 to 9999	0	1451	s16bit	1
C9.2.2.54	Word #53	0 to 9999	0	1452	s16bit	1
C9.2.2.55	Word #54	0 to 9999	0	1453	s16bit	1
C9.2.2.56	Word #55	0 to 9999	0	1454	s16bit	1
C9.2.2.57	Word #56	0 to 9999	0	1455	s16bit	1
C9.2.2.58	Word #57	0 to 9999	0	1456	s16bit	1
C9.2.2.59	Word #58	0 to 9999	0	1457	s16bit	1
C9.2.2.60	Word #59	0 to 9999	0	1458	s16bit	1
C9.2.2.61	Word #60	0 to 9999	0	1459	s16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C9.2.2.62	Word #61	0 to 9999	0	1460	s16bit	1
C9.2.2.63	Word #62	0 to 9999	0	1461	s16bit	1
C9.2.2.64	Word #63	0 to 9999	0	1462	s16bit	1
C9.2.2.65	Word #64	0 to 9999	0	1463	s16bit	1
C9.2.2.66	Word #65	0 to 9999	0	1464	s16bit	1
C9.2.2.67	Word #66	0 to 9999	0	1465	s16bit	1
C9.2.2.68	Word #67	0 to 9999	0	1466	s16bit	1
C9.2.2.69	Word #68	0 to 9999	0	1467	s16bit	1
C9.2.2.70	Word #69	0 to 9999	0	1468	s16bit	1
C9.2.2.71	Word #70	0 to 9999	0	1469	s16bit	1
C9.2.2.72	Word #71	0 to 9999	0	1470	s16bit	1
C9.2.2.73	Word #72	0 to 9999	0	1471	s16bit	1
C9.2.2.74	Word #73	0 to 9999	0	1472	s16bit	1
C9.2.2.75	Word #74	0 to 9999	0	1473	s16bit	1
C9.2.2.76	Word #75	0 to 9999	0	1474	s16bit	1
C9.2.2.77	Word #76	0 to 9999	0	1475	s16bit	1
C9.2.2.78	Word #77	0 to 9999	0	1476	s16bit	1
C9.2.2.79	Word #78	0 to 9999	0	1477	s16bit	1
C9.2.2.80	Word #79	0 to 9999	0	1478	s16bit	1
C9.2.2.81	Word #80	0 to 9999	0	1479	s16bit	1
C9.2.2.82	Word #81	0 to 9999	0	1480	s16bit	1
C9.2.2.83	Word #82	0 to 9999	0	1481	s16bit	1
C9.2.2.84	Word #83	0 to 9999	0	1482	s16bit	1
C9.2.2.85	Word #84	0 to 9999	0	1483	s16bit	1
C9.2.2.86	Word #85	0 to 9999	0	1484	s16bit	1
C9.2.2.87	Word #86	0 to 9999	0	1485	s16bit	1
C9.2.2.88	Word #87	0 to 9999	0	1486	s16bit	1
C9.2.2.89	Word #88	0 to 9999	0	1487	s16bit	1
C9.2.2.90	Word #89	0 to 9999	0	1488	s16bit	1
C9.2.2.91	Word #90	0 to 9999	0	1489	s16bit	1
C9.2.2.92	Word #91	0 to 9999	0	1490	s16bit	1
C9.2.2.93	Word #92	0 to 9999	0	1491	s16bit	1
C9.2.2.94	Word #93	0 to 9999	0	1492	s16bit	1
C9.2.2.95	Word #94	0 to 9999	0	1493	s16bit	1
C9.2.2.96	Word #95	0 to 9999	0	1494	s16bit	1
C9.2.2.97	Word #96	0 to 9999	0	1495	s16bit	1
C9.2.2.98	Word #97	0 to 9999	0	1496	s16bit	1
C9.2.2.99	Word #98	0 to 9999	0	1497	s16bit	1
C9.2.2.100	Word #99	0 to 9999	0	1498	s16bit	1
C9.2.2.101	Word #100	0 to 9999	0	1499	s16bit	1
C9.3	Serial RS485					
C9.3.1	Protocol	0 ... 1 = Reserved 2 = Modbus RTU		730	enum	1
C9.3.2	Address	1 to 247	0	731	8bit	1
C9.3.3	Baud Rate	0 = 9600 bit/s 1 = 19200 bit/s 2 = 38400 bit/s 3 = 57600 bit/s		732	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C9.3.4	Bytes Config.	0 = 8-bits, no, 1 1 = 8-bits, even,1 2 = 8-bits, odd, 1 3 = 8-bits, no, 2 4 = 8-bits, even,2 5 = 8-bits, odd, 2		733	enum	1
C9.3.5	RS485 Timeout	0.0 to 999.0 s	1	734	16bit	1
C9.4	Ethernet					
C9.4.1	IP Address Configuration	0 = Parameters 1 = DHCP		850	enum	1
C9.4.2	IP Address	0.0.0.0 to 255.255.255.255		852	STRING	2
C9.4.3	Network Mask	0 = Reserved 1 = 128.0.0.0 2 = 192.0.0.0 3 = 224.0.0.0 4 = 240.0.0.0 5 = 248.0.0.0 6 = 252.0.0.0 7 = 254.0.0.0 8 = 255.0.0.0 9 = 255.128.0.0 10 = 255.192.0.0 11 = 255.224.0.0 12 = 255.240.0.0 13 = 255.248.0.0 14 = 255.252.0.0 15 = 255.254.0.0 16 = 255.255.0.0 17 = 255.255.128.0 18 = 255.255.192.0 19 = 255.255.224.0 20 = 255.255.240.0 21 = 255.255.248.0 22 = 255.255.252.0 23 = 255.255.254.0 24 = 255.255.255.0 25 = 255.255.255.128 26 = 255.255.255.192 27 = 255.255.255.224 28 = 255.255.255.240 29 = 255.255.255.248 30 = 255.255.255.252 31 = 255.255.255.254		855	enum	1
C9.4.4	Gateway	0.0.0.0 to 255.255.255.255		856	STRING	2
C9.4.5	SNTP - Server 1	0.0.0.0 to 255.255.255.255		770	STRING	2
C9.4.6	SNTP - Server 2	0.0.0.0 to 255.255.255.255		774	STRING	2
C9.4.7	SNTP - Update	0 to 65535	0	779	16bit	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C9.5	EtherNet/IP					
C9.5.1	EtherNet/IP I/O Instances	0 = 20/70 CIP 1 = 21/71 CIP 2 ... 3 = Not used 4 = 120/170 CIP + I/O data 5 = 121/171 CIP + I/O data 6 ... 7 = Not used 8 = 100/150 Manuf. + I/O data 9 = 101/151 Manuf. + I/O data 10 = 102/152 Config I/O data		871	enum	1
C9.5.2	Reading 1st Word	1 to 100	0	872	s16bit	1
C9.5.3	Reading Quantity	0 to 50	0	873	s16bit	1
C9.5.4	Writing 1st Word	1 to 100	0	874	s16bit	1
C9.5.5	Writing Quantity	0 to 50	0	875	s16bit	1
C9.6	Modbus TCP					
C9.6.1	TCP Port	0 to 65535	0	865	16bit	1
C9.6.3	Timeout	0.0 to 999.0 s	1	868	16bit	1
C9.8	CAN/CANopen/DNet					
C9.8.1	Protocol	0 = Disabled 1 = CANopen 2 = DeviceNet		700	enum	1
C9.8.2	Address	0 to 127	0	701	16bit	1
C9.8.3	Baud Rate	0 = 1 Mbps/Auto 1 = Reserved/Auto 2 = 500 Kbps 3 = 250 Kbps 4 = 125 Kbps 5 = 100 Kbps/Auto		702	enum	1
C9.8.4	Bus Off Reset	0 = Manual 1 = Automatic		703	enum	1
C9.8.5	DeviceNet I/O Instances	0 = 20/70 CIP 1 = 21/71 CIP 2 ... 3 = Not used 4 = 120/170 CIP + I/O data 5 = 121/171 CIP + I/O data 6 ... 7 = Not used 8 = 100/150 Manuf. + I/O data 9 = 101/151 Manuf. + I/O data 10 = 102/152 Config I/O data		710	enum	1
C9.8.6	DNet Reading 1st Word	1 to 100	0	712	s16bit	1
C9.8.7	DNet Reading Quantity	0 to 50	0	713	s16bit	1
C9.8.8	DNet Writing 1st Word	1 to 100	0	714	s16bit	1
C9.8.9	DNet Writing Quantity	0 to 50	0	715	s16bit	1
C9.10	Bluetooth					

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
C9.10.1	Mode	0 = Inactive 1 = Active		800	enum	1
C9.10.2	PIN	6 to 6	0	804	NONE	0
C9.10.3	Device Name	1 to 15	0	808	NONE	0
C9.11	SymbiNet					
C9.11.1	Enable Protocol	0 = Disable 1 = Enable		1060	enum	1
C9.11.2	Publication Time	2 to 100 ms	0	1061	16bit	1
C9.11.3	Grp1: Source Addr.	0 to 254	0	1068	16bit	1
C9.11.4	Grp1: Source Reg.	0 to 65535	0	1069	16bit	1
C9.11.5	Grp1: Dest. Reg.	0 to 65535	0	1070	16bit	1
C9.11.6	Grp1: Num. of Registers	0 to 8	0	1071	16bit	1
C9.11.7	Grp2: Source Addr.	0 to 254	0	1072	16bit	1
C9.11.8	Grp2: Source Reg.	0 to 65535	0	1073	16bit	1
C9.11.9	Grp2: Dest. Reg.	0 to 65535	0	1074	16bit	1
C9.11.10	Grp2: Num. of Registers	0 to 8	0	1075	16bit	1
C9.11.11	Grp3: Source Addr.	0 to 254	0	1076	16bit	1
C9.11.12	Grp3: Source Reg.	0 to 65535	0	1077	16bit	1
C9.11.13	Grp3: Dest. Reg.	0 to 65535	0	1078	16bit	1
C9.11.14	Grp3: Num. of Registers	0 to 8	0	1079	16bit	1
C9.11.15	Grp4: Source Addr.	0 to 254	0	1080	16bit	1
C9.11.16	Grp4: Source Reg.	0 to 65535	0	1081	16bit	1
C9.11.17	Grp4: Dest. Reg.	0 to 65535	0	1082	16bit	1
C9.11.18	Grp4: Num. of Registers	0 to 8	0	1083	16bit	1
C9.11.19	Grp5: Source Addr.	0 to 254	0	1084	16bit	1
C9.11.20	Grp5: Source Reg.	0 to 65535	0	1085	16bit	1
C9.11.21	Grp5: Dest. Reg.	0 to 65535	0	1086	16bit	1
C9.11.22	Grp5: Num. of Registers	0 to 8	0	1087	16bit	1
C9.11.23	Grp6: Source Addr.	0 to 254	0	1088	16bit	1
C9.11.24	Grp6: Source Reg.	0 to 65535	0	1089	16bit	1
C9.11.25	Grp6: Dest. Reg.	0 to 65535	0	1090	16bit	1
C9.11.26	Grp6: Num. of Registers	0 to 8	0	1091	16bit	1
C9.11.27	Grp7: Source Addr.	0 to 254	0	1092	16bit	1
C9.11.28	Grp7: Source Reg.	0 to 65535	0	1093	16bit	1
C9.11.29	Grp7: Dest. Reg.	0 to 65535	0	1094	16bit	1
C9.11.30	Grp7: Num. of Registers	0 to 8	0	1095	16bit	1
C9.11.31	Grp8: Source Addr.	0 to 254	0	1096	16bit	1
C9.11.32	Grp8: Source Reg.	0 to 65535	0	1097	16bit	1
C9.11.33	Grp8: Dest. Reg.	0 to 65535	0	1098	16bit	1
C9.11.34	Grp8: Num. of Registers	0 to 8	0	1099	16bit	1
		C10 Configuration\SoftPLC				
C10.1	Configuration					
C10.1.1	Command	0 = Stop 1 = Run 2 ... 4 = Not Used 5 = Erase		5100	enum	1
C10.1.2	Active Application			5101	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		0 = User Application 1 1 = User Application 2 2 ... 6 = Not used				
C10.1.3	Action Application Stopped	0 = Inactive 1 = Generate Alarm 2 = Trip Fault		5102	enum	1
C10.2	Engineering Unit					
C10.2.1	Engineering Unit 1	0 = No Unit 1 = A 2 = bar 3 = °C 4 = CPM 5 = CV 6 = ft³ 7 = ft³/h 8 = ft³/min 9 = ft³/s 10 = m³ 11 = m³/h 12 = m³/min 13 = m³/s 14 = °F 15 = ft 16 = ft/h 17 = ft/min 18 = ft/s 19 = gal 20 = gal/h 21 = gal/min 22 = gal/s 23 = H 24 = Hz 25 = HP 26 = h 27 = in 28 = InWC 29 = K 30 = kg 31 = kgf 32 = kgf/cm² 33 = kgf/m² 34 = kl/h 35 = kPa 36 = kW 37 = kWh 38 = l 39 = l/h 40 = l/min 41 = l/s		5120	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		42 = lbf 43 = mA 44 = mca 45 = m 46 = m/h 47 = m/min 48 = m/s 49 = mbar 50 = ms 51 = min 52 = MPa 53 = mwc 54 = N 55 = Nm 56 = Pa 57 = % 58 = psi 59 = rpm 60 = s 61 = V 62 = W 63 = W/m² 64 = Wh/m²				
C10.2.2	Dec. Point Eng. Unit 1	0 to 3	0	5121	8bit	1
C10.2.3	Engineering Unit 2	0 = No Unit 1 = A 2 = bar 3 = °C 4 = CPM 5 = CV 6 = ft³ 7 = ft³/h 8 = ft³/min 9 = ft³/s 10 = m³ 11 = m³/h 12 = m³/min 13 = m³/s 14 = °F 15 = ft 16 = ft/h 17 = ft/min 18 = ft/s 19 = gal 20 = gal/h 21 = gal/min 22 = gal/s 23 = H 24 = Hz 25 = HP		5122	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		26 = h 27 = in 28 = InWC 29 = K 30 = kg 31 = kgf 32 = kgf/cm² 33 = kgf/m² 34 = kl/h 35 = kPa 36 = kW 37 = kWh 38 = l 39 = l/h 40 = l/min 41 = l/s 42 = lbf 43 = mA 44 = mca 45 = m 46 = m/h 47 = m/min 48 = m/s 49 = mbar 50 = ms 51 = min 52 = MPa 53 = mwc 54 = N 55 = Nm 56 = Pa 57 = % 58 = psi 59 = rpm 60 = s 61 = V 62 = W 63 = W/m² 64 = Wh/m²				
C10.2.4	Dec. Point Eng. Unit 2	0 to 3	0	5123	8bit	1
C10.2.5	Engineering Unit 3	0 = No Unit 1 = A 2 = bar 3 = °C 4 = CPM 5 = CV 6 = ft³ 7 = ft³/h 8 = ft³/min 9 = ft³/s		5124	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		10 = m^3 11 = m^3/h 12 = m^3/min 13 = m^3/s 14 = °F 15 = ft 16 = ft/h 17 = ft/min 18 = ft/s 19 = gal 20 = gal/h 21 = gal/min 22 = gal/s 23 = H 24 = Hz 25 = HP 26 = h 27 = in 28 = InWC 29 = K 30 = kg 31 = kgf 32 = kgf/cm^2 33 = kgf/m^2 34 = kl/h 35 = kPa 36 = kW 37 = kWh 38 = l 39 = l/h 40 = l/min 41 = l/s 42 = lbf 43 = mA 44 = mca 45 = m 46 = m/h 47 = m/min 48 = m/s 49 = mbar 50 = ms 51 = min 52 = MPa 53 = mwc 54 = N 55 = Nm 56 = Pa 57 = % 58 = psi 59 = rpm 60 = s				

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		61 = V 62 = W 63 = W/m² 64 = Wh/m²				
C10.2.6	Dec. Point Eng. Unit 3	0 to 3	0	5125	8bit	1
C10.2.7	Engineering Unit 4	0 = No Unit 1 = A 2 = bar 3 = °C 4 = CPM 5 = CV 6 = ft³ 7 = ft³/h 8 = ft³/min 9 = ft³/s 10 = m³ 11 = m³/h 12 = m³/min 13 = m³/s 14 = °F 15 = ft 16 = ft/h 17 = ft/min 18 = ft/s 19 = gal 20 = gal/h 21 = gal/min 22 = gal/s 23 = H 24 = Hz 25 = HP 26 = h 27 = in 28 = InWC 29 = K 30 = kg 31 = kgf 32 = kgf/cm² 33 = kgf/m² 34 = kl/h 35 = kPa 36 = kW 37 = kWh 38 = l 39 = l/h 40 = l/min 41 = l/s 42 = lbf 43 = mA 44 = mca		5126	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		45 = m 46 = m/h 47 = m/min 48 = m/s 49 = mbar 50 = ms 51 = min 52 = MPa 53 = mwc 54 = N 55 = Nm 56 = Pa 57 = % 58 = psi 59 = rpm 60 = s 61 = V 62 = W 63 = W/m² 64 = Wh/m²				
C10.2.8	Dec. Point Eng. Unit 4	0 to 3	0	5127	8bit	1
		C11 Configuration\HMI				
C11.1	Configuration					
C11.1.1	Time Zone	0 = UTC-12:00 1 = UTC-11:30 2 = UTC-11:00 3 = UTC-10:30 4 = UTC-10:00 5 = UTC-09:30 6 = UTC-09:00 7 = UTC-08:30 8 = UTC-08:00 9 = UTC-07:30 10 = UTC-07:00 11 = UTC-06:30 12 = UTC-06:00 13 = UTC-05:30 14 = UTC-05:00 15 = UTC-04:30 16 = UTC-04:00 17 = UTC-03:30 18 = UTC-03:00 19 = UTC-02:30 20 = UTC-02:00 21 = UTC-01:30 22 = UTC-01:00 23 = UTC-00:30 24 = UTC+00:00 25 = UTC+00:30 26 = UTC+01:00		196	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		27 = UTC+01:30 28 = UTC+02:00 29 = UTC+02:30 30 = UTC+03:00 31 = UTC+03:30 32 = UTC+04:00 33 = UTC+04:30 34 = UTC+05:00 35 = UTC+05:30 36 = UTC+06:00 37 = UTC+06:30 38 = UTC+07:00 39 = UTC+07:30 40 = UTC+08:00 41 = UTC+08:30 42 = UTC+09:00 43 = UTC+09:30 44 = UTC+10:00 45 = UTC+10:30 46 = UTC+11:00 47 = UTC+11:30 48 = UTC+12:00 49 = UTC+12:30 50 = UTC+13:00 51 = UTC+13:30 52 = UTC+14:00				
C11.1.2	Date/Hour	to	0	194	NONE	2
C11.1.3	Language	0 = Português 1 = English 2 = Español 3 = Deutsch		201	enum	1
C11.1.4	Display Brightness	0 to 100 %	0	216	16bit	1
C11.1.5	Contrast	0 to 100 %	0	217	16bit	1
C11.2	Main Screen					
C11.3	User					
C11.3.1	Login					
C11.3.2	Change password					
		C12 Configuration\Backup				
C12.1	Load Parameters	0 = Not Used 1 = Default 60 Hz 2 = Default 50 Hz 3 = Param. Set 1 -> CFW 4 = Param. Set 2 -> CFW 5 = Param. Set 3 -> CFW 6 = CFW -> Param. Set 1 7 = CFW -> Param. Set 2 8 = CFW -> Param. Set 3 9 = SD Card -> CFW		204	enum	1

Parameter	Description	Range of values	Decimal places	Net Id	Size	Qty mapped words
		10 = CFW -> SD Card 11 = HMI -> CFW 12 = CFW -> HMI				
A1 Application\User Parameters						

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