SEW EURODRIVE

Manual

MOVIDRIVE® MDX60B / 61B

Parameter and Operating State Indicators
Firmware Version 13

Edition 02/2010

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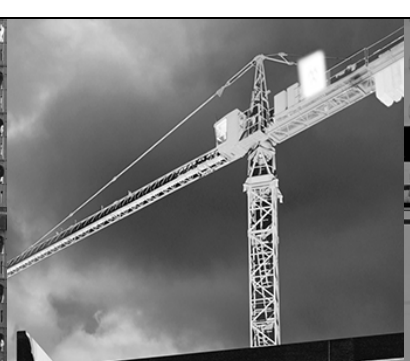


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Contents

1 Overview of Parameters

	INFORMATION • You find a detailed description of the individual parameters in the MOVIDRIVE® MDX60B / 61B system manual in the "Explanation of the parameters" chapter.

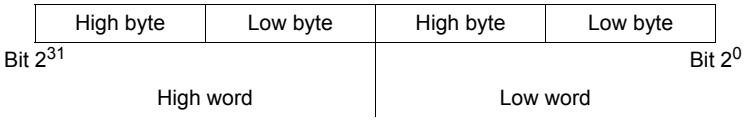
1.1 Explanation of the table header

The entries in the table header have the following meaning:

Par. no.	= Parameter number as it is used in MOVITOOLS® MotionStudio or in DBG60B.	
Parameter	= Parameter name	
Index **Subindex**	= 16-bit index for addressing the parameter via interfaces. Notation in decimal (= dec) and hexadecimal (= hex) format.	
Unit/factor	= Unit index in accordance with the PNO sensor/actuator profile.	Abbr. = Abbreviation of the unit Val. = Value index (e.g. 11 = speed) Conv. = Conversion index (e.g. -3 = 10^{-3})
Access	= Access attributes	S = Save even with parameter lock RO = Read only R = Controller inhibit must be active during a write operation RW = Read/Write N = EEPROM writes value to RAM in case of restart
Default	= Factory setting	
Meaning/ value range	= Meaning and value range of the parameter	

1.1.1 Data format

All parameters are treated as 32-bit value. They are displayed in Motorola format.



1.1.2 MOVILINK® parameters

The parameters are arranged in such a way they are present in the proprietary area of the drive profiles (DRIVECOM-INTERBUS, CANopen, etc.). That means the area for the indices of the MOVILINK® parameters is as follows:

2000_{hex} (= 8192_{dec}) – $5FFF_{hex}$ (= 24575_{dec})

Start index	Number of indices	Content
8300	700	Drive parameters / display values / scope parameters
10000	100	Error responses (max. 255 error codes)
10300	40	Current (Id) motor table
10600	40	Flow motor table
11000	512	IPOS variables (11000 + IPOS variable number)
16000	2048	IPOS program code
20000	513	Curve points for the electronic cam
24575	-	End

1.2 Overveiw of parameters sorted by parameter number

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
0xx Display value									
00x Process values									
000	Speed	8318.0	207E	1/s	11	66	N/RO	0	–
001	User display	8501.0	2135	–	0	0	N/R/RO	0	–
002	Frequency	8319.0	207F	Hz	28	–3	N/RO	0	–
003	Actual position	8320.0	2080	–	0	0	N/RO	0	–
004	Output current	8321.0	2081	%	24	–3	N/RO	0	–
005	Active current	8322.0	2082	%	24	–3	N/RO	0	–
006	Motor utilization 1	8323.0	2083	%	24	–3	N/RO	0	–
007	Motor utilization 2	8324.0	2084	%	24	–3	N/RO	0	–
008	DC link voltage	8325.0	2085	V	21	–3	N/RO	0	–
009	Output current	8326.0	2086	A	22	–3	N/RO	0	–
01x Status displays									
010	Inverter status	8310.0	2076	–	0	0	N/RO	0	–
011	Operating state	8310.0	2076	–	0	0	N/RO	0	–
012	Error status	8310.0	2076	–	0	0	N/RO	0	–
013	Current parameter set	8310.0	2076	–	0	0	N/RO	0	–
014	Heat sink temperature	8327.0	2087	K	17	100	N/RO	0	–
015	Operating hours	8328.0	2088	s	4	70	N/R/RO	0	–
016	Enable hours	8329.0	2089	s	4	70	N/R/RO	0	–
017	Work	8330.0	208A	J	8	5	N/R/RO	0	–
018	KTY utilization 1	9219.0	2403	%	24	–3	N/R/RO	0	–
019	KTY utilization 2	9220.0	2404	%	24	–3	N/R/RO	0	–
02x Analog setpoints									
020	Analog input AI1	8331.0	208B	V	21	–3	N/RO	0	–
021	Analog input AI2	8332.0	208C	V	21	–3	N/RO	0	–
022	External current limit	8333.0	208D	%	24	–3	N/RO	0	–
03x Binary inputs of basic unit									
030	Binary input DIØØ	8334.0	208E	–	0	0	N/RO	0	–
031	Binary input DIØ1	8335.0	208F	–	0	0	N/R/S/ RW	2	0 – 36, Step 1
032	Binary input DIØ2	8336.0	2090	–	0	0	N/R/S/ RW	3	0 – 36, Step 1
033	Binary input DIØ3	8337.0	2091	–	0	0	N/R/S/ RW	1	0 – 36, Step 1
034	Binary input DIØ4	8338.0	2092	–	0	0	N/R/S/ RW	4	0 – 36, Step 1
035	Binary input DIØ5	8339.0	2093	–	0	0	N/R/S/ RW	5	0 – 36, Step 1
036	Binary input DIØ6	8919.0	22D7	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
037	Binary input DIØ7	8920.0	22D8	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
039	Binary inputs DIØØ – DIØ7	8334.0	208E	–	0	0	N/RO	0	–

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
04x Binary inputs of option									
040	Binary input DI1Ø	8340.0	2094	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
041	Binary input DI11	8341.0	2095	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
042	Binary input DI12	8342.0	2096	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
043	Binary input DI13	8343.0	2097	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
044	Binary input DI14	8344.0	2098	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
045	Binary input DI15	8345.0	2099	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
046	Binary input DI16	8346.0	209A	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
047	Binary input DI17	8347.0	209B	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
048	Binary inputs DI1Ø – DI17	8348.0	209C	–	0	0	N/RO	0	–
05x Binary outputs of basic unit									
050	Binary output DBØØ	8349.0	209D	–	0	0	N/RO	0	–
051	Binary output DOØ1	8350.0	209E	–	0	0	N/S/RW	2	0 – 32, Step 1
052	Binary output DOØ2	8351.0	209F	–	0	0	N/S/RW	1	0 – 32, Step 1
053	Binary output DOØ3	8916.0	22D4	–	0	0	N/S/RW	21	0 – 32, Step 1
054	Binary output DOØ4	8917.0	22D5	–	0	0	N/S/RW	21	0 – 32, Step 1
055	Binary output DOØ5	8918.0	22D6	–	0	0	N/S/RW	21	0 – 32, Step 1
059	Binary outputs DB00, DOØ1 – DOØ5	8349.0	209D	–	0	0	N/RO	0	–
06x Binary outputs of options									
060	Binary output DO1Ø	8352.0	20A0	–	0	0	N/S/RW	0	0 – 32, Step 1
061	Binary output DO11	8353.0	20A1	–	0	0	N/S/RW	0	0 – 32, Step 1
062	Binary output DO12	8354.0	20A2	–	0	0	N/S/RW	0	0 – 32, Step 1
063	Binary output DO13	8355.0	20A3	–	0	0	N/S/RW	0	0 – 32, Step 1
064	Binary output DO14	8356.0	20A4	–	0	0	N/S/RW	0	0 – 32, Step 1
065	Binary output DO15	8357.0	20A5	–	0	0	N/S/RW	0	0 – 32, Step 1
066	Binary output DO16	8358.0	20A6	–	0	0	N/S/RW	0	0 – 32, Step 1
067	Binary output DO17	8359.0	20A7	–	0	0	N/S/RW	0	0 – 32, Step 1
068	Binary outputs DO1Ø to DO17	8360.0	20A8	–	0	0	N/RO	0	–
07x Device data									
070	Device type	8301.0	206D	–	0	0	N/RO	0	–
071	Nominal output current	8361.0	20A9	A	22	–3	N/RO	0	–
072	Encoder slot option	8930.0	22E2	–	0	0	N/RO	0	–
072	Firmware encoder slot	8931.0	22E3	–	0	0	N/RO	0	–
072	Encoder data	10432.0	28C0	–	0	0	N/RO	0	–
073	Fieldbus slot option	8362.0	20AA	–	0	0	N/RO	0	–
073	Fieldbus slot firmware	8364.0	20AC	–	0	0	N/RO	0	–
074	Expansion slot option	8363.0	20AB	–	0	0	N/RO	0	–

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
074	Expansion slot firmware	8365.0	20AD	–	0	0	N/RO	0	–
074	Encoder data	10432.0	28C0	–	0	0	N/RO	0	–
076	Basic unit firmware	8300.0	206C	–	0	0	N/RO	0	–
078	Technology function	8878.0	22AE	–	0	0	N/R/S/ RW	0	0 – 5, Step 1
079	Device variant	8890.0	22BA	–	0	0	N/R/S/ RW	0	0 = Standard 1 = Application
08x Error memory									
080	Error t-0	8366.0	20AE	–	0	0	N/R/RO	0	–
080	Suberror code t-0	9304.0	2458	–	0	0	N/R/RO	0	–
080	Binary inputs DIØØ – DIØ7	8371.0	20B3	–	0	0	N/R/RO	0	–
080	Binary inputs DI1Ø – DI17	8376.0	20B8	–	0	0	N/R/RO	0	–
080	Binary outputs DB00, DOØ1 – DOØ5	8381.0	20BD	–	0	0	N/R/RO	0	–
080	Binary inputs D01Ø – D017	8386.0	20C2	–	0	0	N/R/RO	0	–
080	Operating state	8391.0	20C7	–	0	0	N/R/RO	0	–
080	Inverter status	8391.0	20C7	–	0	0	N/R/RO	0	–
080	Heat sink temperature	8396.0	20CC	K	17	100	N/R/RO	0	–
080	Speed	8401.0	20D1	1/s	11	66	N/R/RO	0	–
080	Output current	8406.0	20D6	%	24	–3	N/R/RO	0	–
080	Active current	8411.0	20DB	%	24	–3	N/R/RO	0	–
080	Unit utilization	8416.0	20E0	%	24	–3	N/R/RO	0	–
080	DC link voltage	8421.0	20E5	V	21	–3	N/R/RO	0	–
080	Operating hours	8426.0	20EA	s	4	70	N/R/RO	0	–
080	Enable hours	8431.0	20EF	s	4	70	N/R/RO	0	–
080	Parameter set	8391.0	20C7	–	0	0	N/R/RO	0	–
080	Motor utilization 1	8441.0	20F9	%	24	–3	N/R/RO	0	–
080	Motor utilization 2	8446.0	20FE	%	24	–3	N/R/RO	0	–
081	Error t-1	8367.0	20AF	–	0	0	N/R/RO	0	–
081	Suberror code t-1	9305.0	2459	–	0	0	N/R/RO	0	–
081	Binary inputs DIØØ – DIØ7	8372.0	20B4	–	0	0	N/R/RO	0	–
081	Binary inputs DI1Ø – DI17	8377.0	20B9	–	0	0	N/R/RO	0	–
081	Binary outputs DB00, DOØ1 – DOØ5	8382.0	20BE	–	0	0	N/R/RO	0	–
081	Binary inputs D01Ø – D017	8387.0	20C3	–	0	0	N/R/RO	0	–
081	Operating state	8392.0	20C8	–	0	0	N/R/RO	0	–
081	Inverter status	8392.0	20C8	–	0	0	N/R/RO	0	–
081	Heat sink temperature	8397.0	20CD	K	17	100	N/R/RO	0	–
081	Speed	8402.0	20D2	1/s	11	66	N/R/RO	0	–
081	Output current	8407.0	20D7	%	24	–3	N/R/RO	0	–
081	Active current	8412.0	20DC	%	24	–3	N/R/RO	0	–
081	Unit utilization	8417.0	20E1	%	24	–3	N/R/RO	0	–
081	DC link voltage	8422.0	20E6	V	21	–3	N/R/RO	0	–
081	Operating hours	8427.0	20EB	s	4	70	N/R/RO	0	–
081	Enable hours	8432.0	20F0	s	4	70	N/R/RO	0	–
081	Parameter set	8392.0	20C8	–	0	0	N/R/RO	0	–

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
081	Motor utilization 1	8442.0	20FA	%	24	–3	N/R/RO	0	–
081	Motor utilization 2	8447.0	20FF	%	24	–3	N/R/RO	0	–
082	Error t-2	8368.0	20B0	–	0	0	N/R/RO	0	–
082	Suberror code t-2	9306.0	245A	–	0	0	N/R/RO	0	–
082	Binary inputs DIØØ – DIØ7	8373.0	20B5	–	0	0	N/R/RO	0	–
082	Binary inputs DI1Ø – DI17	8378.0	20BA	–	0	0	N/R/RO	0	–
082	Binary outputs DB00, DOØ1 – DOØ5	8383.0	20BF	–	0	0	N/R/RO	0	–
082	Binary outputs D01Ø to D017	8388.0	20C4	–	0	0	N/R/RO	0	–
082	Operating state	8393.0	20C9	–	0	0	N/R/RO	0	–
082	Inverter status	8393.0	20C9	–	0	0	N/R/RO	0	–
082	Heat sink temperature	8398.0	20CE	K	17	100	N/R/RO	0	–
082	Speed	8403.0	20D3	1/s	11	66	N/R/RO	0	–
082	Output current	8408.0	20D8	%	24	–3	N/R/RO	0	–
082	Active current	8413.0	20DD	%	24	–3	N/R/RO	0	–
082	Unit utilization	8418.0	20E2	%	24	–3	N/R/RO	0	–
082	DC link voltage	8423.0	20E7	V	21	–3	N/R/RO	0	–
082	Operating hours	8428.0	20EC	s	4	70	N/R/RO	0	–
082	Enable hours	8433.0	20F1	s	4	70	N/R/RO	0	–
082	Parameter set	8393.0	20C9	–	0	0	N/R/RO	0	–
082	Motor utilization 1	8443.0	20FB	%	24	–3	N/R/RO	0	–
082	Motor utilization 2	8448.0	2100	%	24	–3	N/R/RO	0	–
083	Error t-3	8369.0	20B1	–	0	0	N/R/RO	0	–
083	Suberror code t-3	9307.0	245B	–	0	0	N/R/RO	0	–
083	Binary inputs DIØØ – DIØ7	8374.0	20B6	–	0	0	N/R/RO	0	–
083	Binary inputs DI1Ø – DI17	8379.0	20BB	–	0	0	N/R/RO	0	–
083	Binary outputs DB00, DOØ1 – DOØ5	8384.0	20C0	–	0	0	N/R/RO	0	–
083	Binary inputs D01Ø – D017	8389.0	20C5	–	0	0	N/R/RO	0	–
083	Operating state	8394.0	20CA	–	0	0	N/R/RO	0	–
083	Inverter status	8394.0	20CA	–	0	0	N/R/RO	0	–
083	Heat sink temperature	8399.0	20CF	K	17	100	N/R/RO	0	–
083	Speed	8404.0	20D4	1/s	11	66	N/R/RO	0	–
083	Output current	8409.0	20D9	%	24	–3	N/R/RO	0	–
083	Active current	8414.0	20DE	%	24	–3	N/R/RO	0	–
083	Unit utilization	8419.0	20E3	%	24	–3	N/R/RO	0	–
083	DC link voltage	8424.0	20E8	V	21	–3	N/R/RO	0	–
083	Operating hours	8429.0	20ED	s	4	70	N/R/RO	0	–
083	Enable hours	8434.0	20F2	s	4	70	N/R/RO	0	–
083	Parameter set	8394.0	20CA	–	0	0	N/R/RO	0	–
083	Motor utilization 1	8444.0	20FC	%	24	–3	N/R/RO	0	–
083	Motor utilization 2	8449.0	2101	%	24	–3	N/R/RO	0	–
084	Error t-4	8370.0	20B2	–	0	0	N/R/RO	0	–
084	Suberror code t-4	9308.0	245C	–	0	0	N/R/RO	0	–
084	Binary inputs DIØØ – DIØ7	8375.0	20B7	–	0	0	N/R/RO	0	–
084	Binary inputs DI1Ø – DI17	8380.0	20BC	–	0	0	N/R/RO	0	–

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
084	Binary outputs DB00, DOØ1 – DOØ5	8385.0	20C1	–	0	0	N/R/RO	0	–
084	Binary outputs D01Ø – D017	8390.0	20C6	–	0	0	N/R/RO	0	–
084	Operating state	8395.0	20CB	–	0	0	N/R/RO	0	–
084	Inverter status	8395.0	20CB	–	0	0	N/R/RO	0	–
084	Heat sink temperature	8400.0	20D0	K	17	100	N/R/RO	0	–
084	Speed	8405.0	20D5	1/s	11	66	N/R/RO	0	–
084	Output current	8410.0	20DA	%	24	–3	N/R/RO	0	–
084	Active current	8415.0	20DF	%	24	–3	N/R/RO	0	–
084	Unit utilization	8420.0	20E4	%	24	–3	N/R/RO	0	–
084	DC link voltage	8425.0	20E9	V	21	–3	N/R/RO	0	–
084	Operating hours	8430.0	20EE	s	4	70	N/R/RO	0	–
084	Enable hours	8435.0	20F3	s	4	70	N/R/RO	0	–
084	Parameter set	8395.0	20CB	–	0	0	N/R/RO	0	–
084	Motor utilization 1	8445.0	20FD	%	24	–3	N/R/RO	0	–
084	Motor utilization 2	8450.0	2102	%	24	–3	N/R/RO	0	–

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
09x Bus diagnostics									
090	PD configuration	8451.0	2103	–	0	0	N/S/RW	4	0 = PARAM + 1 PD 1 = 1 PD 2 = PARAM + 2 PD 3 = 2 PD 4 = PARAM + 3 PD 5 = 3 PD 6 = PARAM + 6 PD 7 = 6 PD 8 = PARAM + 10 PD 9 = 10 PD 10 = PARAM + 0 PD 11 = 0 PD 12 = PARAM + 4 PD 13 = 4 PD 14 = PARAM + 5 PD 15 = 5 PD 16 = PARAM + 7 PD 17 = 7 PD 18 = PARAM + 8 PD 19 = 8 PD 20 = PARAM + 9 PD 21 = 9 PD 22 = PARAM + 11 PD 23 = 11 PD 24 = PARAM + 12 PD 25 = 12 PD ".."

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
091	Fieldbus type	8452.0	2104	–	0	0	N/S/RW	0	0 = NO FIELDBUS 1 = PROFIBUS FMS/DP 2 = INTERBUS 3 = Beckhoff Lightbus 4 = CAN 5 = PROFIBUS DP 6 = DEVICENET 7 = CANOPEN 8 = DIAS-BUS 9 = MODBUS TCP 10 = PROFINET IO 11 = ETHERNET/IP 12 = DEVICENET 13 = PROFIBUS DPV1 14 = PLC+PROFIBUS 15 = DP PROFIsafe 16 = DP PROFIsafe 17 = EtherCAT 18 = KNet 19 = PLC+ETHERNET 20 = EtherCAT 21 = ETHERNET 22 = ETHERNET 23 = PROFINET 24 = ETH/IP+MODBUS TCP 25 = PN PROFIsafe 26 = PN PROFIsafe 27 = MODBUS TCP 28 = PLC+PROFIBUS 29 = PLC+DeviceNet 30 = PLC+PROFINET 31 = PLC+ETH/ IP+MODBUS 32 = PLC+MODBUSTCP 33 = PROFIBUS 34 = DEVICENET 35 = PROFINET 36 = ETH/IP+MODBUS TCP 37 = MODBUS TCP 38 = ETHERNET 39 = EtherCAT SBus 40 = EtherCAT 41 = ETH/IP+MODBUS TCP

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
092	Fieldbus baud rate	8453.0	2105	–	0	0	N/S/RW	0	0 – 4294967295, Step 1
093	Fieldbus address	8454.0	2106	–	0	0	N/S/RW	0	0 – 65535, Step 1
094	PO1 Setpoint	8455.0	2107	–	0	0	N/S/RW	0	–
095	PO2 Setpoint	8456.0	2108	–	0	0	N/S/RW	0	–
096	PO3 Setpoint	8457.0	2109	–	0	0	N/S/RW	0	–
097	PI1 Actual value	8458.0	210A	–	0	0	N/RO	0	–
098	PI2 Actual value	8459.0	210B	–	0	0	N/RO	0	–
099	PI3 Actual value	8460.0	210C	–	0	0	N/RO	0	–
1xx Setpoints/ramp generators									
10x Setpoint selection									
100	Setpoint source	8461.0	210D	–	0	0	N/R/S/ RW	1	0 = BIPOL./FIX.SETPT. 1 = UNIPOL/FIX.SETPT. 2 = RS485 3 = FIELDBUS 4 = MOTOR POTENTIOM. 5 = MOTORPOT.+AI1 6 = FIX SETP+AI1 7 = FIX SETPT. × AI1 8 = MASTER – SBUS1 9 = MASTER – RS485 10 = SBUS1 11 = FREQUENCY INPUT 12 = SBUS2 13 = IPOS SETPOINT
101	Control signal source	8462.0	210E	–	0	0	N/R/S/ RW	0	0 = TERMINALS 1 = RS485 2 = FIELDBUS 3 = SBUS1 4 = 3-WIRE CONTROL 5 = SBUS2
102	Frequency scaling	8840.0	2288	Hz	28	0	N/S/RW	10000	100 – 65000, Step 10
105	Error response to wire breakage AI1	10416.0	28B0	–	0	0	N/S/RW	0	0 = No response 1 = Immediate stop/fault 2 = Rapid stop/fault 3 = Rapid stop/warning
11x Analog input AI1									
110	AI1 scaling	8463.0	210F	–	0	–3	N/S/RW	1000	–10000 – 0, Step 10 0 – 10000, Step 10
111	AI1 Offset	8464.0	2110	V	21	–3	N/S/RW	0	–500 – 0, Step 1 0 – 500, Step 1
112	AI1 operating mode	8465.0	2111	–	0	0	N/S/RW	1	0 = Ref. 3000 rpm 1 = Reference N-MAX 2 = U-Off., N-MAX 3 = N-Off., N-MAX 4 = Expert charact. 5 = N-MAX, 0 – 20 mA 6 = N-MAX, 4 – 20 mA

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
113	AI1 voltage offset	8466.0	2112	V	21	–3	N/S/RW	0	–10000 – 0, Step 10 0 – 10000, Step 10
114	AI1 speed offset	8467.0	2113	1/s	11	66	N/S/RW	0	–6000000 – 0, Step 200 0 – 6000000, Step 200
115	Filter setpoint	8468.0	2114	s	4	–6	N/S/RW	5000	0 – 1000, Step 1000 1000 – 20000, Step 10 20000 – 50000, Step 100 50000 – 100000, Step 1000
12x Analog inputs on option									
120	AI2 operating mode (optional)	8469.0	2115	–	0	0	N/R/S/ RW	0	0 = NO FUNCTION 1 = 0 – ±10 V+SETPT1 2 = 0 – 10 V I-LIMIT 3 = ACTUAL VALUE PID CONTROLLER
13x Speed ramp 1									
130	Ramp t11 up CW	8470.0	2116	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
131	Ramp t11 down CW	8471.0	2117	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
132	Ramp t11 up CCW	8472.0	2118	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
133	Ramp t11 down CCW	8473.0	2119	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
134	Ramp t12 UP = DOWN	8474.0	211A	s	4	–3	N/S/RW	10000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
135	S pattern t12	8475.0	211B	–	0	0	N/S/RW	0	0 = 0 1 = 1 2 = 2 3 = 3
136	Stop ramp t13	8476.0	211C	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 20000, Step 1000
137	Emergency stop ramp t14	8477.0	211D	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 20000, Step 1000
138	Ramp limit VFC	8794.0	225A	–	0	0	N/R/S/ RW	1	0 = NO 1 = YES
139	Ramp monitoring 1	8928.0	22E0	–	0	0	N/S/RW	0	See parameter 138 or index 8794.0

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
14x Speed ramp 2									
140	Ramp t21 up CW	8478.0	211E	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
141	Ramp t21 down CW	8479.0	211F	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
142	Ramp t21 up CCW	8480.0	2120	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
143	Ramp t21 down CCW	8481.0	2121	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
144	Ramp t22 UP = DOWN	8482.0	2122	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
145	S pattern t22	8483.0	2123	–	0	0	N/S/RW	0	See parameter 135 or index 8475.0
146	Stop ramp t23	8484.0	2124	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 20000, Step 1000
147	Emergency stop ramp t24	8485.0	2125	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 20000, Step 1000
149	Ramp monitoring 2	8929.0	22E1	–	0	0	N/S/RW	0	See parameter 138 or index 8794.0
15x Motor potentiometer									
150	Ramp t3 up	8486.0	2126	s	4	–3	N/S/RW	20000	200 – 1000, Step 10 1000 – 10000, Step 100 10000 – 50000, Step 1000
151	Ramp t3 down	8487.0	2127	s	4	–3	N/S/RW	20000	200 – 1000, Step 10 1000 – 10000, Step 100 10000 – 50000, Step 1000
152	Save last setpoint	8488.0	2128	–	0	0	N/S/RW	0	0 = OFF 1 = ON

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
16x Fixed setpoints 1									
160	Internal setpoint n11 [rpm]	8489.0	2129	1/s	11	66	N/S/RW	150000	–6000000 – 0, Step 200 0 – 6000000, Step 200
161	Internal setpoint n11 [%In]	8489.0	2129	1/s	11	66	N/S/RW	150000	–6000000 – 0, Step 200 0 – 6000000, Step 200
162	Internal setpoint n12 [rpm]	8490.0	212A	1/s	11	66	N/S/RW	750000	–6000000 – 0, Step 200 0 – 6000000, Step 200
163	Internal setpoint n12 [%In]	8490.0	212A	1/s	11	66	N/S/RW	750000	–6000000 – 0, Step 200 0 – 6000000, Step 200
164	Internal setpoint n13 [rpm]	8491.0	212B	1/s	11	66	N/S/RW	1500000	–6000000 – 0, Step 200 0 – 6000000, Step 200
165	Internal setpoint n13 [%In]	8491.0	212B	1/s	11	66	N/S/RW	1500000	–6000000 – 0, Step 200 0 – 6000000, Step 200
17x Fixed setpoints 2									
170	Internal setpoint n21 [rpm]	8492.0	212C	1/s	11	66	N/S/RW	150000	–6000000 – 0, Step 200 0 – 6000000, Step 200
171	Internal setpoint n21 [%In]	8492.0	212C	1/s	11	66	N/S/RW	150000	–6000000 – 0, Step 200 0 – 6000000, Step 200
172	Internal setpoint n22 [rpm]	8493.0	212D	1/s	11	66	N/S/RW	750000	–6000000 – 0, Step 200 0 – 6000000, Step 200
173	Internal setpoint n22 [%In]	8493.0	212D	1/s	11	66	N/S/RW	750000	–6000000 – 0, Step 200 0 – 6000000, Step 200
174	Internal setpoint n23 [rpm]	8494.0	212E	1/s	11	66	N/S/RW	1500000	–6000000 – 0, Step 200 0 – 6000000, Step 200
175	Internal setpoint n23 [%In]	8494.0	212E	1/s	11	66	N/S/RW	1500000	–6000000 – 0, Step 200 0 – 6000000, Step 200
2xx Controller parameters									
20x Speed control									
200	P gain n-controller	8495.0	212F	1/s	11	–3	N/S/RW	2000	10 – 32000, Step 1
201	Time constant n-controller	8496.0	2130	s	4	–6	N/S/RW	10000	0 – 1000, Step 1000 1000 – 20000, Step 10 20000 – 50000, Step 100 50000 – 200000, Step 1000 200000 – 300000, Step 2000 300000 – 1000000, Step 20000 1000000 – 3000000, Step 200000
202	Gain acceleration precontrol	8497.0	2131	%	24	–3	N/S/RW	0	0 – 65000, Step 1
203	Filter acceleration precontrol	8498.0	2132	s	4	–6	N/S/RW	0	0 – 1000, Step 1000 1000 – 20000, Step 10 20000 – 50000, Step 100 50000 – 100000, Step 1000
204	Filter actual speed value	8499.0	2133	s	4	–6	N/S/RW	0	0 – 1000, Step 1000 1000 – 20000, Step 10 20000 – 32000, Step 100
205	Load precontrol CFC	8436.0	20F4	%	24	–3	N/S/RW	0	–150000 – 0, Step 1000 0 – 150000, Step 1000
206	Sampling time n-controller	8437.0	20F5	–	0	0	N/S/RW	0	0 = 1.0 1 = 0.5

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
207	Load precontrol VFC	8786.0	2252	%	24	–3	N/S/RW	200000	–200000 – 0, Step 1000 0 – 200000, Step 1000
21x Hold controller									
210	P gain hold controller	8500.0	2134	–	0	–3	N/S/RW	500	100 – 32000, Step 10
22x Synchronous operation (only with the DRS11B option)									
220	P-gain DRS	8509.0	213D	–	0	–3	N/S/RW	10000	1000 – 200000, Step 1000
221	Master gear unit factor	8502.0	2136	–	0	0	N/S/RW	1	1 – 3999999999, Step 1
222	Slave gear unit factor	8503.0	2137	–	0	0	N/S/RW	1	1 – 3999999999, Step 1
223	Mode selection	8504.0	2138	–	0	0	N/S/RW	0	0 = MODE 1 1 = MODE 2 2 = MODE 3 3 = MODE 4 4 = MODE 5 5 = MODE 6 6 = MODE 7 7 = MODE 8
224	Slave counter	8505.0	2139	–	0	0	N/S/RW	10	–99999999 – 0, Step 1 0 – 99999999, Step 1
225	Offset 1	8506.0	213A	–	0	0	N/S/RW	10	–32767 – 0, Step 1 0 – 32767, Step 1
226	Offset 2	8507.0	213B	–	0	0	N/S/RW	10	–32767 – 0, Step 1 0 – 32767, Step 1
227	Offset 3	8508.0	213C	–	0	0	N/S/RW	10	–32767 – 0, Step 1 0 – 32767, Step 1
228	Precontrol filter DRS	8438.0	20F6	s	4	–6	N/S/RW	0	0 – 1000, Step 1000 1000 – 20000, Step 10 20000 – 50000, Step 100 50000 – 100000, Step 1000
23x Synchronous operation with distance encoder (only with the DRS11B option)									
230	Distance encoder	8510.0	213E	–	0	0	N/R/S/ RW	0	0 = OFF 1 = EQUAL-RANKING 2 = CHAIN
231	Factor slave encoder	8511.0	213F	–	0	0	N/S/RW	1	1 – 1000, Step 1
232	Factor slave synchronous encoder	8512.0	2140	–	0	0	N/S/RW	1	1 – 1000, Step 1
233	Distance encoder resolution	8915.0	22D3	–	0	0	N/S/RW	3	0 = 128 1 = 256 2 = 512 3 = 1024 4 = 2048
234	Master encoder resolution	9263.0	242F	–	0	0	N/R/S/ RW	3	0 = 128 1 = 256 2 = 512 3 = 1024 4 = 2048

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
24x Synchronous operation with catch up									
240	Synchronous speed	8513.0	2141	1/s	11	66	N/S/RW	1500000	0 – 6000000, Step 200
241	Synchronous ramp	8514.0	2142	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 50000, Step 1000
26x Process controller parameters									
260	Operating mode	9006.0	232E	–	0	0	N/S/RW	0	0 = CONTROLLER OFF 1 = CONTROL 2 = STEP RESPONSE
261	Cycle time	9007.0	232F	s	4	–3	N/S/RW	5	0 = 1 1 = 5 2 = 10
262	Interruption	9008.0	2330	–	0	0	N/S/RW	0	0 = UNCONSIDERED 1 = MOVE CLOSER TO SETPOINT
263	Factor K_P	9009.0	2331	–	0	–3	N/S/RW	1000	0 – 32767, Step 1
264	Integrative time T_n	9010.0	2332	s	4	–3	N/S/RW	0	0 – 65535, Step 1
265	Derivative time T_V	9011.0	2333	s	4	–3	N/S/RW	0	0 – 30, Step 1
266	Precontrol	9012.0	2334	–	0	0	N/S/RW	0	–32767 – 0, Step 1 0 – 32767, Step 1
27x Process controller input values									
270	Setpoint source	9013.0	2335	–	0	0	N/S/RW	0	0 = PARAMETER 1 = IPOS VARIABLE 2 = ANALOG1 3 = ANALOG2
271	Setpoint	9014.0	2336	–	0	0	N/S/RW	0	–32767 – 0, Step 1 0 – 32767, Step 1
272	IPOS setpoint address	9015.0	2337	–	0	0	N/S/RW	0	0 – 1023, Step 1
273	Time constant	9016.0	2338	s	4	–3	N/S/RW	0	0 – 1000, Step 1000 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
274	Scaling setpoints	9017.0	2339	–	0	–3	N/S/RW	1000	–32767 – 0, Step 1 0 – 32767, Step 1
275	Actual value source	9018.0	233A	–	0	0	N/S/RW	0	0 = ANALOG 1 1 = ANALOG 2 2 = IPOS VARIABLE
276	IPOS actual value address	9019.0	233B	–	0	0	N/S/RW	0	0 – 1023, Step 1
277	Actual value scaling factor	9020.0	233C	–	0	–3	N/S/RW	1000	–32767 – 0, Step 1 0 – 32767, Step 1
278	Actual offset value	9021.0	233D	–	0	0	N/S/RW	0	–32767 – 0, Step 1 0 – 32767, Step 1
279	Time constant actual value	9022.0	233E	s	4	–6	N/S/RW	0	0 – 200000, Step 1000 20000 – 250000, Step 2000 250000 – 450000, Step 5000 450000 – 500000, Step 10000

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
28x Process controller limits									
280	Minimum offset + actual value	9023.0	233F	–	0	0	N/S/RW	0	–32767 – 0, Step 1 0 – 32767, Step 1
281	Maximum offset + actual value	9024.0	2340	–	0	0	N/S/RW	10000	–32767 – 0, Step 1 0 – 32767, Step 1
282	Minimum output PID controller	9025.0	2341	–	0	0	N/S/RW	–1000	–32767 – 0, Step 1 0 – 32767, Step 1
283	Maximum output PID controller	9026.0	2342	–	0	0	N/S/RW	10000	–32767 – 0, Step 1 0 – 32767, Step 1
284	Minimum output process controller	9027.0	2343	–	0	0	N/S/RW	0	–32767 – 0, Step 1 0 – 32767, Step 1
285	Maximum output process controller	9028.0	2344	–	0	0	N/S/RW	7500	–32767 – 0, Step 1 0 – 32767, Step 1
3xx Motor parameters									
300	Start/stop speed 1	8515.0	2143	1/s	11	66	N/S/RW	60000	0 – 150000, Step 200
301	Minimum speed 1	8516.0	2144	1/s	11	66	N/S/RW	15000	0 – 6100000, Step 200
302	Maximum speed 1	8517.0	2145	1/s	11	66	N/S/RW	150000	0 – 6100000, Step 200
303	Current limit 1	8518.0	2146	%	24	–3	N/S/RW	150000	0 – 200000, Step 1000
304	Torque limit	8688.0	21F0	%	24	–3	N/S/RW	0	0 – 200000, Step 1000
310	Start/stop speed 2	8519.0	2147	1/s	11	66	N/S/RW	60000	0 – 150000, Step 200
311	Minimum speed 2	8520.0	2148	1/s	11	66	N/S/RW	15000	0 – 6100000, Step 200
312	Maximum speed 2	8521.0	2149	1/s	11	66	N/S/RW	150000	0 – 6100000, Step 200
313	Current limit 2	8522.0	214A	%	24	–3	N/S/RW	150000	0 – 200000, Step 1000
32x Motor compensation 1 (asynchronous)									
320	Automatic adjustment 1	8523.0	214B	–	0	0	N/S/RW	1	See parameter 152 or index 8488
321	Boost 1	8524.0	214C	%	24	–3	N/S/RW	0	0 – 100000, Step 1000
322	IxR adjustment 1	8525.0	214D	%	24	–3	N/S/RW	0	0 – 10000, Step 10
323	Premagnetization time 1	8526.0	214E	s	4	–3	N/S/RW	100	0 – 20000, Step 1
324	Slip compensation 1	8527.0	214F	1/s	11	66	N/S/RW	0	0 – 500000, Step 200
33x Motor compensation 2 (asynchronous)									
330	Automatic adjustment 2	8528.0	2150	–	0	0	N/S/RW	1	See parameter 152 or index 8488.0
331	Boost 2	8529.0	2151	%	24	–3	N/S/RW	0	0 – 100000, Step 1000
332	IxR adjustment 2	8530.0	2152	%	24	–3	N/S/RW	0	0 – 100000, Step 10
333	Premagnetization time 2	8531.0	2153	s	4	–3	N/S/RW	100	0 – 20000, Step 1
334	Slip compensation 2	8532.0	2154	1/s	11	66	N/S/RW	0	0 – 500000, Step 200
34x Motor protection									
340	Motor protection 1	8533.0	2155	–	0	0	N/S/RW	0	0 = OFF 1 = ASYNCHRONOUS ON 2 = SERVO ON
341	Cooling type 1	8534.0	2156	–	0	0	N/S/RW	0	0 = FAN COOLED 1 = FORCED COOLING
342	Motor protection 2	8535.0	2157	–	0	0	N/S/RW	0	0 = OFF 1 = ASYNCHRONOUS ON
343	Cooling type 2	8536.0	2158	–	0	0	N/S/RW	0	See parameter 341 or index 8534.0

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
344	Interval for motor protection	8907.0	22CB	s	4	–3	N/S/RW	4000	100 – 20000, Step 1
345	I_N UL monitoring 1	9114.0	239A	A	22	–3	N/S/RW	0	100 – 500000, Step 100
346	I_N UL monitoring 2	9115.0	239B	A	22	–3	N/S/RW	0	100 – 500000, Step 100
35x Motor direction of rotation									
350	Direction of rotation reversal 1	8537.0	2159	–	0	0	N/R/S/ RW	0	See parameter 152 or index 8488.0
351	Direction of rotation reversal 2	8538.0	215A	–	0	0	N/R/S/ RW	0	See parameter 152 or index 8488.0
4xx Reference signals									
40x Speed reference signal									
400	Speed reference value	8539.0	215B	1/s	11	66	N/S/RW	150000 0	0 – 6000000, Step 200
401	Hysteresis	8540.0	215C	1/s	11	66	N/S/RW	100000	0 – 500000, Step 1000
402	Delay time	8541.0	215D	s	4	–3	N/S/RW	1000	0 – 9000, Step 100
403	Signal = "1" if:	8542.0	215E	–	0	0	N/S/RW	0	0 = n < n ref 1 = n > n ref
41x Speed window signal									
410	Window center	8543.0	215F	1/s	11	66	N/S/RW	150000 0	0 – 6000000, Step 200
411	Range width	8544.0	2160	1/s	11	66	N/S/RW	0	0 – 6000000, Step 200
412	Delay time	8545.0	2161	s	4	–3	N/S/RW	1000	0 – 9000, Step 100
413	Signal = "1" if:	8546.0	2162	–	0	0	N/S/RW	0	0 = INSIDE 1 = OUTSIDE
42x Speed setpoint/actual value comparison									
420	Hysteresis	8547.0	2163	1/s	11	66	N/S/RW	100000	1000 – 300000, Step 1000
421	Delay time	8548.0	2164	s	4	–3	N/S/RW	1000	0 – 9000, Step 100
422	Signal = "1" if:	8549.0	2165	–	0	0	N/S/RW	0	0 = n < > n setpt 1 = n = n setpt
43x Current reference signal									
430	Current reference value	8550.0	2166	%	24	–3	N/S/RW	100000	0 – 200000, Step 1000
431	Hysteresis	8551.0	2167	%	24	–3	N/S/RW	5000	0 – 30000, Step 1000
432	Delay time	8552.0	2168	s	4	–3	N/S/RW	1000	0 – 9000, Step 100
433	Signal = "1" if:	8553.0	2169	–	0	0	N/S/RW	0	0 = I < I ref 1 = I > I ref
44x Imax signal									
440	Hysteresis	8554.0	216A	%	24	–3	N/S/RW	5000	5000 – 50000, Step 1000
441	Delay time	8555.0	216B	s	4	–3	N/S/RW	1000	0 – 9000, Step 100
442	Signal = "1" if:	8556.0	216C	–	0	0	N/S/RW	0	0 = I = I max 1 = I < I max

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
5xx Monitoring functions									
50x Speed monitoring									
500	Speed monitoring 1	8557.0	216D	–	0	0	N/S/RW	3	0 = OFF 1 = MOTOR MODE 2 = REGENERATIVE MODE 3 = MOT. + REGENERATIVE
501	Delay time 1	8558.0	216E	s	4	–3	N/S/RW	1000	0 – 10000, Step 10
502	Speed monitoring 2	8559.0	216F	–	0	0	N/S/RW	3	See parameter 500 or index 8557.0
503	Delay time 2	8560.0	2170	s	4	–3	N/S/RW	1000	0 – 10000, Step 10
504	Encoder monitoring motor	8832.0	2280	–	0	0	N/R/S/RW	0	See parameter 138 or index 8794.0
505	Distance encoder monitoring	8903.0	22C7	–	0	0	N/S/RW	0	See parameter 138 or index 8794.0
51x Synchronous operation monitoring									
510	Positional tolerance slave	8561.0	2171	–	0	0	N/S/RW	25	10 – 32768, Step 1
511	Lag error prewarning	8562.0	2172	–	0	0	N/S/RW	50	50 – 99999999, Step 1
512	Lag error limit	8563.0	2173	–	0	0	N/S/RW	4000	100 – 99999999, Step 1
513	Lag error signal delay	8564.0	2174	s	4	–3	N/S/RW	1000	0 – 99000, Step 100
514	Counter LED display	8565.0	2175	–	0	0	N/S/RW	100	10 – 32768, Step 1
515	Position signal delay time	8566.0	2176	s	4	–3	N/S/RW	10	5 – 2000, Step 1
516	X41 Encoder monitoring	9259.0	242B	–	0	0	N/R/S/RW	0	See parameter 138 or index 8794.0
517	X41 Pulse count monitoring	9260.0	242C	–	0	0	N/R/S/RW	0	See parameter 138 or index 8794.0
518	X42 Encoder monitoring	9261.0	242D	–	0	0	N/R/S/RW	0	See parameter 138 or index 8794.0
519	X42 Pulse count monitoring	9262.0	242E	–	0	0	N/R/S/RW	0	See parameter 138 or index 8794.0
52x Mains Off monitoring									
520	Mains OFF response time	8567.0	2177	s	4	–3	N/S/RW	0	0 – 5000, Step 1
521	Mains OFF response	8753.0	2231	–	0	0	N/S/RW	0	0 = CONTROLLER INHIBIT 1 = EMERGENCY STOP
522	Phase failure monitoring	8927.0	22DF	–	0	0	N/S/RW	0	See parameter 152 or index 8488.0
53x Thermal protection motor									
530	Sensor type 1	8904.0	22C8	–	0	0	N/R/S/RW	0	0 = NO SENSOR 1 = TF/TH 2 = KTY 3 = TF/TH DEU 4 = KTY DEU
531	Sensor type 2	8905.0	22C9	–	0	0	N/R/S/RW	0	0 = NO SENSOR 1 = TF/TH 2 = KTY

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
54x Gear unit/motor monitoring									
540	Response to drive vibration/ warning	9284.0	2444	–	0	0	N/S/RW	1	0 = NO RESPONSE 1 = DISPLAY ERROR 2 = IMM. STOP/FAULT 3 = EMERG. ST/FAULT 4 = RAPID STOP/FAULT 5 = IMM. STOP/WARN. 6 = EMERG.STOP/WARN. 7 = RAPID STOP/WARN.
541	Response to drive vibration/ fault	9285.0	2445	–	0	0	N/S/RW	7	See parameter 540 or index 9284.0
542	Response to oil aging/ warning	9286.0	2446	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
543	Response to oil aging/error	9287.0	2447	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
544	Response to oil aging/ overtemperature	9288.0	2448	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
545	Response to oil aging/ready	9289.0	2449	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
549	Response to brake wear	9290.0	244A	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
55x DCS safety monitor									
550	DCS safety monitor status	9292.0	244C	–	0	0	N/RO	0	–
551	Binary inputs DCS 1 ... 8	9309.0	245D	–	0	0	N/RO	0	–
552	Binary outputs DCS DO0_P –DO2_M	9310.0	245E	–	0	0	N/RO	0	–
553	Serial number DCS	9302.0	2456	–	0	0	N/S/RW	0	0 – 4294967295, Step 1
554	CRC DCS	9303.0	2457	–	0	0	N/S/RW	0	0 – 4294967295, Step 1
555	Fault response DCS	9313.0	2461	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
556	DCS alarm response	9314.0	2462	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
557	Actual position source DCS	9315.0	2463	–	0	0	N/S/RW	0	0 = MOTOR ENCODER (X15) 1 = EXT. ENCODER (X14) 2 = ABSOLUTE ENC. (X62)
56x Ex-e motor current limit									
560	Ex-e motor current limit	9293.0	244D	–	0	0	N/R/S/ RW	0	See parameter 152 or index 8488.0
561	Frequency A	9294.0	244E	Hz	28	–3	N/R/S/ RW	5000	0 – 60000, Step 1000
562	Current limit A	9295.0	244F	%	24	–3	N/S/RW	50000	0 – 150000, Step 1000
563	Frequency B	9296.0	2450	Hz	28	–3	N/R/S/ RW	10000	0 – 104000, Step 1000
564	Current limit B	9297.0	2451	%	24	–3	N/S/RW	80000	0 – 200000, Step 1000
565	Frequency C	9298.0	2452	Hz	28	–3	N/R/S/ RW	25000	0 – 104000, Step 1000
566	Current limit C	9299.0	2453	%	24	–3	N/S/RW	100000	0 – 200000, Step 1000

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
6xx Terminal assignment									
60x Binary inputs of basic unit									
600	Binary input DIØ1	8335.0	208F	–	0	0	N/R/S/ RW	2	0 = NO FUNCTION 1 = ENABLE/STOP 2 = CW/STOP 3 = CCW/STOP 4 = n11/n21 5 = n12/n21 6 = FIX SETPT. SELECT 7 = PARAM. SELECT 8 = RAMP SELECT 9 = MOTOR POT. UP 10 = MOTOR POT. DOWN 11 = /EXT. ERROR 12 = ERROR RESET 13 = /HOLD CONTROL 14 = /LS RIGHT 15 = /LS LEFT 16 = IPOS INPUT 17 = REFERENCE CAM 18 = START REF.TRAVEL 19 = SLAVE FREE RUN-NING 20 = ACCEPT SETPOINT 21 = MAINS ON 22 = SET DRS ZERO 23 = START DRS SLAVE 24 = DRS TEACH IN 25 = DRS MASTER STOP 26 = RESERVED 27 = VIBRATION/WARNING 28 = VIBRATION/ERROR 29 = BRAKE WEAR 30 = /CONTROLLER INHIBIT 31 = RESERVED 32 = MQX ENCODER IN 33 = OIL AGING/WARN. 34 = OIL AGING/ERROR 35 = OIL AGING OVER-TEMP. 36 = OIL AGING/READY
601	Binary input DIØ2	8336.0	2090	–	0	0	N/R/S/ RW	3	See parameter 600 or index 8335.0
602	Binary input DIØ3	8337.0	2091	–	0	0	N/R/S/ RW	1	See parameter 600 or index 8335.0
603	Binary input DIØ4	8338.0	2092	–	0	0	N/R/S/ RW	4	See parameter 600 or index 8335.0
604	Binary input DIØ5	8339.0	2093	–	0	0	N/R/S/ RW	5	See parameter 600 or index 8335.0
605	Binary input DIØ6	8919.0	22D7	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
606	Binary input DIØ7	8920.0	22D8	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
61x Binary inputs of option									
610	Binary input DI1Ø	8340.0	2094	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
611	Binary input DI11	8341.0	2095	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
612	Binary input DI12	8342.0	2096	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
613	Binary input DI13	8343.0	2097	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
614	Binary input DI14	8344.0	2098	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
615	Binary input DI15	8345.0	2099	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
616	Binary input DI16	8346.0	209A	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
617	Binary input DI17	8347.0	209B	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
62x Binary outputs of basic unit									
620	Binary output DOØ1	8350.0	209E	–	0	0	N/S/RW	2	0 = NO FUNCTION 1 = /MALFUNCTION 2 = READY 3 = OUTPUT STAGE ON 4 = ROTATING FIELD ON 5 = BRAKE RELEASED 6 = BRAKE APPLIED 7 = MOTOR STANDSTILL 8 = PARAMETER SET 9 = SPEED REFERENCE 10 = SPEED WINDOW 11 = SETPT/ ACT.VAL.COMP. 12 = CURRENT REFERENCE 13 = Imax SIGNAL 14 = /MOTOR UTILIZ. 1 15 = /MOTOR UTILIZ. 2 16 = /DRS PREWARN. 17 = /DRS LAG ERROR 18 = /DRS SLAVE IN POS 19 = IPOS IN POSITION 20 = IPOS REFERENCE 21 = IPOS OUTPUT 22 = IPOS FAULT 23 = RESERVED 24 = Ex-e CURRENT LIMIT 25 = LSM COMMUTATION 26 = S PATTERN 27 = SAFE STOP
621	Binary output DOØ2	8351.0	209F	–	0	0	N/S/RW	1	See parameter 620 or index 8350.0
622	Binary output DOØ3	8316.0	22D4	–	0	0	N/S/RW	21	See parameter 620 or index 8350.0
623	Binary output DOØ4	8917.0	22D5	–	0	0	N/S/RW	21	See parameter 620 or index 8350.0
624	Binary output DOØ5	8918.0	22D6	–	0	0	N/S/RW	21	See parameter 620 or index 8350.0

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
63x Binare outputs of option									
630	Binary outputs DO1Ø	8352.0	20A0	–	0	0	N/S/RW	0	See parameter 620 or index 8350
631	Binary outputs DO11	8353.0	20A1	–	0	0	N/S/RW	0	See parameter 620 or index 8350
632	Binary outputs DO12	8354.0	20A2	–	0	0	N/S/RW	0	See parameter 620 or index 8350
633	Binary outputs DO13	8355.0	20A3	–	0	0	N/S/RW	0	See parameter 620 or index 8350
634	Binary outputs DO14	8356.0	20A4	–	0	0	N/S/RW	0	See parameter 620 or index 8350
635	Binary outputs DO15	8357.0	20A5	–	0	0	N/S/RW	0	See parameter 620 or index 8350
636	Binary outputs DO16	8358.0	20A6	–	0	0	N/S/RW	0	See parameter 620 or index 8350
637	Binary outputs DO17	8359.0	20A7	–	0	0	N/S/RW	0	See parameter 620 or index 8350
64x Optional analog outputs									
640	Analog output AO1	8568.0	2178	–	0	0	N/S/RW	3	0 = NO FUNCTION 1 = RAMP INPUT 2 = SETPOINT SPEED 3 = ACTUAL SPEED 4 = ACTUAL FREQUENCY 5 = OUTPUT CURRENT 6 = ACTIVE CURRENT 7 = UNIT UTILIZATION 8 = IPOS OUTPUT 9 = RELATIVE TORQUE 10 = IPOS OUTPUT 2
641	Scaling AO1	8569.0	2179	–	0	–3	N/S/RW	1000	–10000 – 0, Step 10 0 – 10000, Step 10
642	Operating mode AO1	8570.0	217A	–	0	0	N/S/RW	1	0 = OFF 1 = –10 V – 10 V 2 = 0 – 20 mA 3 = 4 – 20 mA
643	Analog output AO2	8571.0	217B	–	0	0	N/S/RW	5	See parameter 640 or index 8568
644	Scaling AO2	8572.0	217C	–	0	–3	N/S/RW	1000	–10000 – 0, Step 10 0 – 10000, Step 10
645	Operating mode AO2	8573	217D	–	0	0	N/S/RW	1	See parameter 642 or index 8570

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
7xx Control functions									
70x Operating modes									
700	Operating mode 1	8574.0	217E	–	0	0	N/S/RW	0	0 = VFC 1 1 = VFC 1 & GROUP 2 = VFC 1 & HOIST 3 = VFC 1 & DC BRAKE 4 = VFC 1 & FLYING START 5 = VFC-n CONTROL 6 = VFC-n-CTRL&GRP. 7 = VFC-n-CTRL.&HOIST 8 = VFC-n-CTRL.&SYNC. 9 = VFC-n-CTRL.&IPOS 10 = VFC-n-CTRL.&DPx. 11 = CFC 12 = CFC & M-CONTROL 13 = CFC & IPOS 14 = CFC & SYNC. 15 = CFC & DPx 16 = SERVO 17 = SERVO & M-CON-TROL 18 = SERVO & IPOS 19 = SERVO & SYNC. 20 = SERVO & DPx 21 = V/f CHARACTER. 22 = V/f & DC BRAKING
701	Operating mode 2	8575.0	217F	–	0	0	N/S/RW	0	0 = VFC 2 1 = VFC 2 & GROUP 2 = VFC 2 & HOIST 3 = VFC 2 & DC BRAKE 4 = VFC 2 & FLYING START 5 – 20 = RESERVED 21 = V/f CHARACTER. 22 = V/f & DC BRAKING
702	Motor category	9316.0	2464	–	0	0	N/R/S/ RW	0	0 = ROTATORY 1 = LINEAR
71x Standstill current									
710	Standstill current 1	8576.0	2180	%	24	–3	N/S/RW	0	0 – 50000, Step 1000
711	Standstill current 2	8577.0	2181	%	24	–3	N/S/RW	0	0 – 50000, Step 1000
72x Setpoint stop function									
720	Setpoint stop function 1	8578.0	2182	–	0	0	N/S/RW	0	See parameter 152 or index 8488
721	Stop setpoint 1	8579.0	2183	1/s	11	66	N/S/RW	30000	0 – 500000, Step 200
722	Start offset 1	8580.0	2184	1/s	11	66	N/S/RW	30000	0 – 500000, Step 200
723	Setpoint stop function 2	8581.0	2185	–	0	0	N/S/RW	0	See parameter 152 or index 8488
724	Stop setpoint 2	8582.0	2186	1/s	11	66	N/S/RW	30000	0 – 500000, Step 200
725	Start offset 2	8583.0	2187	1/s	11	66	N/S/RW	30000	0 – 500000, Step 200
73x Brake function									
730	Brake function 1	8584.0	2188	–	0	0	N/S/RW	1	See parameter 152 or index 8488
731	Brake release time 1	8749.0	222D	s	4	–3	N/S/RW	0	0 – 2000, Step 1
732	Brake application time 1	8585.0	2189	s	4	–3	N/S/RW	200	0 – 2000, Step 1

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
733	Brake function 2	8586.0	218A	–	0	0	N/S/RW	1	See parameter 152 or index 8488
734	Brake release time 2	8750.0	222E	s	4	–3	N/S/RW	0	0 – 2000, Step 1
735	Brake application time 2	8587.0	218B	s	4	–3	N/S/RW	200	0 – 2000, Step 1
74x Speed skip									
740	Skip window center 1	8588.0	218C	1/s	11	66	N/S/RW	1500000	0 – 6000000, Step 200
741	Skip width 1	8589.0	218D	1/s	11	66	N/S/RW	0	0 – 300000, Step 200
742	Skip window center 2	8590.0	218E	1/s	11	66	N/S/RW	1500000	0 – 6000000, Step 200
743	Skip width 2	8591.0	218F	1/s	11	66	N/S/RW	0	0 – 300000, Step 200
75x Master-slave function									
750	Slave setpoint	8592.0	2190	–	0	0	N/S/RW	0	0 = MASTER-SLAVE OFF 1 = SPEED (RS485) 2 = SPEED (SBUS1) 3 = SPEED (485+SBUS1) 4 = TORQUE (RS485) 5 = TORQUE (SBUS1) 6 = TORQUE (485+SBUS1) 7 = LOAD SHARE (RS485) 8 = LOAD SHARE (SBUS1) 9 = LOAD SHARE (485+SBUS1)
751	Scaling slave setpoint	8593.0	2191	–	0	–3	N/S/RW	1000	–10000 – 0, Step 1 0 – 10000, Step 1
76x Manual mode									
760	Lockout run/stop keys	8798.0	225E	–	0	0	N/R/S/RW	0	See parameter 138 or index 8794

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
77x Energy-saving function									
770	Energy-saving function	8925.0	22DD	–	0	0	N/R/S/ RW	0	See parameter 152 or index 8488
78x Ethernet configuration									
780	IP address	8992.0	2320	–	0	0	N/S/RW	3232238084	0 – 4294967295, Step 1
781	Subnet mask	8993.0	2321	–	0	0	N/S/RW	4294967040	0 – 4294967295, Step 1
782	Standard gateway	8994.0	2322	–	0	0	N/S/RW	0	0 – 3758096383, Step 1
783	Baud rate [MBaud]	8997.0	2325	1/s	11	6	N/S/RW	0	0 – 4294967295, Step 1
784	MAC address	8995.0	2323	–	0	0	N/S/RW	0	0 – 4294967295, Step 1
785	EtherNet/IP startup configuration	9233.0	2411	–	0	0	N/S/RW	2	0 = STORED IP PARA. 1 = DHCP
8xx Unit functions									
801 Language									
802	Factory setting	8594.0	2192	–	0	0	N/R/S/ RW	0	0 = NO 1 = DEFAULT 2 = DELIVERY STATUS
803	Parameter lock	8595.0	2193	–	0	0	N/S/RW	0	See parameter 152 or index 8488
804	Reset statistics data	8596.0	2194	–	0	0	N/S/RW	0	0 = NO 1 = ERROR MEMORY 2 = KWH COUNTER 3 = OPERATING HOURS
81x Serial communication									
810	RS485 address	8597.0	2195	–	0	0	N/S/RW	0	0 – 99, Step 1
811	RS485 group address	8598.0	2196	–	0	0	N/S/RW	100	100 – 199, Step 1
812	RS485 timeout interval	8599.0	2197	s	4	–3	N/S/RW	0	0 – 650000, Step 10
819	Fieldbus timeout interval	8606.0	219E	s	4	–3	N/S/RW	500	0 – 650000, Step 1
82x Braking operation									
820	4-quadrant operation 1	8607.0	219F	–	0	0	N/S/RW	1	See parameter 152 or index 8488
821	4-quadrant operation 2	8608.0	21A0	–	0	0	N/S/RW	1	See parameter 152 or index 8488
83x Error responses									
830	Response EXT. ERROR	8609.0	21A1	–	0	0	N/S/RW	3	See parameter 540 or index 9284
831	Response FIELDBUS TIMEOUT	8610.0	21A2	–	0	0	N/S/RW	7	0 = NO RESPONSE 1 = DISPLAY ERROR 2 = IMM. STOP/FAULT 3 = EMERG.STOP/FAULT 4 = RAPID STOP/FAULT 5 = IMM. STOP/WARN. 6 = EMERG.STOP/WARN. 7 = RAPID STOP/WARN. 8 = RESERVED 9 = RESERVED 10 = PO DATA = 0/WARN.
832	Response MOTOR OVERLOAD	8611.0	21A3	–	0	0	N/S/RW	3	See parameter 540 or index 9284

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
833	Response RS485 TIMEOUT	8612.0	21A4	–	0	0	N/S/RW	7	See parameter 540 or index 9284
834	LAG ERROR response	8613.0	21A5	–	0	0	N/S/RW	3	See parameter 540 or index 9284
835	TF SIGNAL response	8616.0	21A8	–	0	0	N/S/RW	0	See parameter 540 or index 9284
836	TIMEOUT SBUS1 response	8615.0	21A7	–	0	0	N/S/RW	3	See parameter 540 or index 9284
837	TIMEOUT SBUS2 response	8936.0	22E8	–	0	0	N/S/RW	3	See parameter 540 or index 9284
838	SW LIMIT SWITCH response	8958.0	22FE	–	0	0	N/S/RW	3	See parameter 540 or index 9284
839	POSITIONING INTERRUPTION response	10416.0	28B0	–	0	0	N/S/RW	6	See parameter 540 or index 9284
84x Reset response									
840	Manual reset	8617.0	21A9	–	0	0	N/S/RW	0	See parameter 138 or index 8794
841	Auto reset	8618.0	21AA	–	0	0	N/S/RW	0	See parameter 152 or index 8488
842	Restart time	8619.0	21AB	s	4	–3	N/S/RW	3000	1000 – 30000, Step 1000
85x Scaling actual speed value									
850	Scaling factor numerator	8747.0	222B	–	0	0	N/S/RW	1	1 – 65535, Step 1
851	Scaling factor denominator	8748.0	222C	–	0	0	N/S/RW	1	1 – 65535, Step 1
852	User-defined unit	8772.0	2244	–	0	0	N/S/RW	176876 3185	0 – 4294967295, Step 1
86x Modulation									
860	PWM frequency 1 VFC	8620.0	21AC	–	0	0	N/S/RW	0	0 = 2.5 1 = 4 2 = 8 3 = 12 4 = 16
861	PWM frequency 2 VFC	8621.0	21AD	–	0	0	N/S/RW	0	See parameter 860 or index 8620
862	PWM fix 1	8751.0	222F	–	0	0	N/S/RW	0	See parameter 152 or index 8488
863	PWM fix 2	8752.0	2230	–	0	0	N/S/RW	0	See parameter 152 or index 8488
864	PWM CFC	8827.0	227B	–	0	0	N/S/RW	0	0 = 2.5 1 = 4 2 = 8 3 = 12 4 = 16

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
87x Process data description									
870	Setpoint description PO1	8304.0	2070	–	0	0	N/S/RW	9	0 = NO FUNCTION 1 = SPEED 2 = CURRENT 3 = POSITION LO 4 = POSITION HI 5 = MAX. SPEED 6 = MAX. CURRENT 7 = SLIP 8 = RAMP 9 = CONTROL WORD 1 10 = CONTROL WORD 2 11 = SPEED [%] 12 = IPOS PO DATA
871	Setpoint description PO2	8305.0	2071	–	0	0	N/S/RW	1	See parameter 870 or index 8304
872	Setpoint description PO3	8306.0	2072	–	0	0	N/S/RW	0	See parameter 870 or index 8304
873	Actual value description PI1	8307.0	2073	–	0	0	N/S/RW	6	0 = NO FUNCTION 1 = SPEED 2 = OUTPUT CURRENT 3 = ACTIVE CURRENT 4 = POSITION LO 5 = POSITION HI 6 = STATUS WORD 1 7 = STATUS WORD 2 8 = SPEED [%] 9 = IPOS PI DATA 10 = RESERVED 11 = STATUS WORD 3
874	Actual value description PI2	8308.0	2074	–	0	0	N/S/RW	1	See parameter 873 or index 8307
875	Actual value description PI3	8309.0	2075	–	0	0	N/S/RW	2	See parameter 873 or index 8307
876	PO data enable	8622.0	21AE	–	0	0	N/S/RW	1	See parameter 152 or index 8488
88x Serial communication SBus 1									
880	Protocol SBus 1	8937.0	22E9	–	0	0	N/S/RW	0	0 = SBUS MOVILINK 1 = CANopen 2 = DCS protocol
881	SBus address 1	8600.0	2198	–	0	0	N/S/RW	0	0 – 63, Step 1
882	Group address SBus 1	8601.0	2199	–	0	0	N/S/RW	0	0 – 63, Step 1
883	Timeout interval SBus 1	8602.0	219A	s	4	–3	N/S/RW	0	0 – 650000, Step 10
884	SBus baud rate 1	8603.0	219B	–	0	0	N/S/RW	2	0 = 125 1 = 250 2 = 500 3 = 1000
885	SBus 1 synchronization ID	8604.0	219C	–	0	–3	N/S/RW	0	0 – 2047000, Step 1000
886	CANopen 1 address	8989.0	231D	–	0	0	N/S/RW	0	1 – 127, Step 1
887	Synchronization ext. controller	8964.0	2304	–	0	0	N/R/S/ RW	0	See parameter 152 or index 8488
888	Synchronization time	8991.0	231F	s	4	–3	N/R/S/ RW	0	1 – 10, Step 1

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
889	Parameter channel 2	9266.0	2432	–	0	0	N/R/S/ RW	0	See parameter 138 or index 8794
89x Serial communication SBus 2									
890	Protocol SBus 2	8938.0	22EA	–	0	0	N/S/RW	0	See parameter 880 or index 8937
891	SBus 2 address	8932.0	22E4	–	0	0	N/S/RW	0	0 – 63, Step 1
892	Group address SBus 2	8933.0	22E5	–	0	0	N/S/RW	0	0 – 63, Step 1
893	Timeout interval SBus 2	8934.0	22E6	s	4	–3	N/S/RW	0	0 – 650000, Step 10
894	Baud rate SBus 2	8939.0	22EB	–	0	0	N/S/RW	2	See parameter 884 or index 8603
895	SBus 2 synchronization ID	8935.0	22E7	–	0	–3	N/S/RW	0	0 – 2047000, Step 1000
896	CANopen 2 address	8990.0	231E	–	0	0	N/S/RW	0	1 – 127, Step 1
899	Parameter channel 2	9267.0	2433	–	0	0	N/R/S/ RW	0	See parameter 138 or index 8794
9xx IPOS parameters									
90x IPOS reference travel									
900	Reference offset	8623.0	21AF	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
901	Reference speed 1	8624.0	21B0	1/s	11	66	N/S/RW	200000	0 – 6000000, Step 200
902	Reference speed 2	8625.0	21B1	1/s	11	66	N/S/RW	50000	0 – 6000000, Step 200
903	Reference travel type	8626.0	21B2	–	0	0	N/S/RW	0	0 – 8, Step 1
904	Reference travel to zero pulse	8839.0	2287	–	0	0	N/S/RW	0	0 = YES 1 = NO
905	Hiperface® offset X15	8896.0	22C0	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
906	Cam distance	10455.0	28D7	Inc	32	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
91x IPOS travel parameters									
910	Gain X controller	8627.0	21B3	1/s	11	–3	N/S/RW	500	0 – 32000, Step 10
911	Positioning ramp 1	8628.0	21B4	s	4	–3	N/S/RW	1000	10 – 500, Step 1 500 – 2000, Step 10 2000 – 10000, Step 200 10000 – 20000, Step 1000
912	Positioning ramp 2	8696.0	21F8	s	4	–3	N/S/RW	1000	10 – 500, Step 1 500 – 2000, Step 10 2000 – 10000, Step 200 10000 – 20000, Step 1000
913	Travel speed CW	8629.0	21B5	1/s	11	66	N/S/RW	1500000	0 – 6000000, Step 200
914	Travel speed CCW	8630.0	21B6	1/s	11	66	N/S/RW	1500000	0 – 6000000, Step 200
915	Velocity precontrol	8631.0	21B7	–	0	–3	N/S/RW	100000	–199990 – 0, Step 10 0 – 199990, Step 10

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
916	Ramp type	8632.0	21B8	–	0	0	N/R/S/ RW	0	0 = LINEAR 1 = SINE 2 = SQUARE 3 = BUS RAMP 4 = JERK LIMITED 5 = ELECTRONIC CAM 6 = I SYNCHRONOUS OPERATION 7 = CROSS CUTTER 8 = INTERPOLATION SPEED 9 = POS. INTERPOL. 12BIT 10 = POS. INTERPOL 16BIT
917	Ramp mode	8921.0	22D9	–	0	0	N/S/RW	0	0 = MODE 1 1 = MODE 2
92x IPOS monitoring									
920	SW limit switch RIGHT	8633.0	21B9	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
921	SW limit switch LEFT	8634.0	21BA	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
922	Position window	8635.0	21BB	–	0	0	N/S/RW	50	0 – 1073741824, Step 1
923	Lag error window	8636.0	21BC	–	0	0	N/S/RW	5000	0 – 2147483647, Step 1
924	Positioning interruption detection	10493.0	28FD	–	0	0	N/R/S/ RW	0	See parameter 152 or index 8488
93x IPOS special functions									
930	Override	8637.0	21BD	–	0	0	N/S/RW	0	See parameter 152 or index 8488
933	Jerk time	8906.0	22CA	s	4	–3	N/S/RW	5	5 – 2000, Step 1
938	Speed task 1	8888.0	22B8	–	0	0	N/S/RW	0	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4 5 = 5 6 = 6 7 = 7 8 = 8 9 = 9
939	IPOS speed task 2	8962.0	2302	–	0	0	N/S/RW	0	See parameter 938 or index 8888
94x IPOS encoder									
941	Actual position source	8729.0	2219	–	0	0	N/S/RW	0	See parameter 557 or index 9315
942	Encoder factor numerator	8774.0	2246	–	0	0	N/S/RW	1	1 – 32767, Step 1
943	Encoder factor denominator	8775.0	2247	–	0	0	N/S/RW	1	1 – 32767, Step 1
944	Encoder scaling ext. encoder	8787.0	2253	–	0	0	N/R/S/ RW	0	0 = x 1 1 = x 2 2 = x 4 3 = x 8 4 = x 16 5 = x 32 6 = x 64

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
945	Distance encoder type (X14)	8891.0	22BB	–	0	0	N/R/S/ RW	0	0 = TTL 1 = SIN/COS 2 = HTL 3 = HIPERFACE/RS485
946	Distance encoder counting direction (X14)	8894.0	22BE	–	0	0	N/R/S/ RW	0	0 = NORMAL 1 = INVERTED
947	Hiperface® offset X14	8895.0	22BF	–	0	0	N/R/S/ RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
948	Automatic encoder replacement detection	10432.0	28C0	–	0	0	N/S/RW	1	See parameter 152 or index 8488
95x Absolute encoder (SSI)									
950	Encoder type	8777.0	2249	–	0	0	N/R/S/ RW	0	0 = NO ENCODER 1 = VISOLUX EDM 2 = T&R CE65, CE58, CE100MSSI 3 = T&R LE100, LE200 4 = T&R LA66K 5 = AV1Y/ROQ424 6 = STEGMANN AG100 MSSI 7 = SICK DME-3000-111 8 = STAHL WCS2-LS311 9 = STEGM.AG626/SICK ATM60 10 = IVO GM401, GXMMW A202PA2 11 = STAHL WCS3 12 = LEUZE OMS1, OMS2 13 = T&R ZE65M 14 = LEUZE BPS37 15 = SICK DME4000, DME5000 16 = SICK POMUX KH53 17 = KÜBLER 9081 18 = LEUZE AMS200 19 = MTS TEMPOSONICS RP 20 = AV2Y/P+F AVM58X-1212 21 = AH7Y/HÜBNER HMG161 22 = BALLUFF BTL5-S112B-M1500 23 = T&R LA41K 24 = ELGO LIMAX2 25 = STAHL WCS3B (CANopen) 26 = T&R CE58M (CANopen) 27 = T&R LE200 (CANopen) 28 = SICK DME 4000 (CANopen) 29 = AS7Y/HÜBNER AMG73 SSI 30 = AG7Y/HÜBNER AMG83 SSI 31 = P+F VDM100-150

Par. no.	Parameter	Index		Unit/factor			Access	Default	Meaning/value range
		Dec	Hex	Abbr.	Val.	Conv.			
951	Counting direction	8776.0	2248	–	0	0	N/R/S/ RW	0	See parameter 946 or index 8894
952	Clock rate	8778.0	224A	%	24	–3	N/R/S/ RW	100000	1000 – 200000, Step 100
953	Position offset	8779.0	224B	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
954	Zero point offset	8781.0	224D	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
955	Encoder scaling	8784.0	2250	–	0	0	N/R/S/ RW	0	See parameter 944 or index 8787
956	CAN encoder baud rate	10477.0	28ED	–	0	0	N/S/RW	2	0 = 125 kBaud 1 = 250 kBaud 2 = 500 kBaud 3 = 1 MBaud
96x IPOS modulo function									
960	Modulo function	8835.0	2283	–	0	0	N/S/RW	0	0 = OFF 1 = SHORT 2 = CW 3 = CCW
961	Modulo numerator	8836.0	2284	–	0	0	N/S/RW	1	1 – 2147483647, Step 1
962	Modulo denominator	8837.0	2285	–	0	0	N/S/RW	1	1 – 2147483647, Step 1
963	Modulo encoder resolution	8838.0	2286	–	0	0	N/S/RW	4096	1 – 65535, Step 1
97x IPOS synchronization									
970	DPRAM synchronization	9225.0	2409	–	0	0	N/S/RW	0	See parameter 138 or index 8794
971	Synchronization phase	9226.0	240A	s	4	–6	N/S/RW	0	–2000 – 0, Step 1 0 – 2000, Step 1

1.3 Parameter list sorted by index number

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8300.0	206C	076	Basic unit firmware	–	0	0	N/RO	0	–
8301.0	206D	070	Device type	–	0	0	N/RO	0	–
8304.0	2070	870	Setpoint description PO1	–	0	0	N/S/RW	9	0 = NO FUNCTION 1 = SPEED 2 = CURRENT 3 = POSITION LO 4 = POSITION HI 5 = MAX. SPEED 6 = MAX. CURRENT 7 = SLIP 8 = RAMP 9 = CONTROL WORD 1 10 = CONTROL WORD 2 11 = SPEED [%] 12 = IPOS PO DATA
8305.0	2071	871	Setpoint description PO2	–	0	0	N/S/RW	1	See parameter 870 or index 8304
8306.0	2072	872	Setpoint description PO3	–	0	0	N/S/RW	0	See parameter 870 or index 8304
8307.0	2073	873	Actual value description PI1	–	0	0	N/S/RW	6	0 = NO FUNCTION 1 = SPEED 2 = OUTPUT CURRENT 3 = ACTIVE CURRENT 4 = POSITION LO 5 = POSITION HI 6 = STATUS WORD 1 7 = STATUS WORD 2 8 = SPEED [%] 9 = IPOS PI DATA 10 = RESERVED 11 = STATUS WORD 3
8308.0	2074	874	Actual value description PI2	–	0	0	N/S/RW	1	See parameter 873 or index 8307
8309.0	2075	875	Actual value description PI3	–	0	0	N/S/RW	2	See parameter 873 or index 8307
8310.0	2076	010	Inverter status	–	0	0	N/RO	0	–
8310.0	2076	011	Operating state	–	0	0	N/RO	0	–
8310.0	2076	012	Error status	–	0	0	N/RO	0	–
8310.0	2076	013	Current parameter set	–	0	0	N/RO	0	–
8316.0	22D4	622	Binary output DOØ3	–	0	0	N/S/RW	21	See parameter 620 or index 8350.0
8318.0	207E	000	Speed	1/s	11	66	N/RO	0	–
8319.0	207F	002	Frequency	Hz	28	–3	N/RO	0	–
8320.0	2080	003	Actual position	–	0	0	N/RO	0	–
8321.0	2081	004	Output current	%	24	–3	N/RO	0	–
8322.0	2082	005	Active current	%	24	–3	N/RO	0	–
8323.0	2083	006	Motor utilization 1	%	24	–3	N/RO	0	–
8324.0	2084	007	Motor utilization 2	%	24	–3	N/RO	0	–
8325.0	2085	008	DC link voltage	V	21	–3	N/RO	0	–
8326.0	2086	009	Output current	A	22	–3	N/RO	0	–
8327.0	2087	014	Heat sink temperature	K	17	100	N/RO	0	–

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8328.0	2088	015	Operating hours	s	4	70	N/R/RO	0	–
8329.0	2089	016	Enable hours	s	4	70	N/R/RO	0	–
8330.0	208A	017	Work	J	8	5	N/R/RO	0	–
8331.0	208B	020	Analog input AI1	V	21	–3	N/RO	0	–
8332.0	208C	021	Analog input AI2	V	21	–3	N/RO	0	–
8333.0	208D	022	External current limit	%	24	–3	N/RO	0	–
8334.0	208E	030	Binary input DIØØ	–	0	0	N/RO	0	–
8334.0	208E	039	Binary inputs DIØØ – DIØ7	–	0	0	N/RO	0	–
8335.0	208F	031	Binary input DIØ1	–	0	0	N/R/S/ RW	2	0 – 36, Step 1
8335.0	208F	600	Binary input DIØ1	–	0	0	N/R/S/ RW	2	0 = NO FUNCTION 1 = ENABLE/STOP 2 = CW/STOP 3 = CCW/STOP 4 = n11/n21 5 = n12/n21 6 = FIX SETPT. SELECT 7 = PARAM. SELECT 8 = RAMP SELECT 9 = MOTOR POT. UP 10 = MOTOR POT. DOWN 11 = /EXT. ERROR 12 = ERROR RESET 13 = /HOLD CONTROL 14 = /LS RIGHT 15 = /LS LEFT 16 = IPOS INPUT 17 = REFERENCE CAM 18 = START REF.TRAVEL 19 = SLAVE FREE RUNNING 20 = ACCEPT SETPOINT 21 = MAINS ON 22 = SET DRS ZERO 23 = START DRS SLAVE 24 = DRS TEACH IN 25 = DRS MASTER STOP 26 = RESERVED 27 = VIBRATION/WARNING 28 = VIBRATION/ERROR 29 = BRAKE WEAR 30 = /CONTROLLER INHIBIT 31 = RESERVED 32 = MQX ENCODER IN 33 = OIL AGING/WARN. 34 = OIL AGING/ERROR 35 = OIL AGING OVERTEMP. 36 = OIL AGING/READY
8336.0	2090	032	Binary input DIØ2	–	0	0	N/R/S/ RW	3	0 – 36, Step 1
8336.0	2090	601	Binary input DIØ2	–	0	0	N/R/S/ RW	3	See parameter 600 or index 8335.0
8337.0	2091	033	Binary input DIØ3	–	0	0	N/R/S/ RW	1	0 – 36, Step 1
8337.0	2091	602	Binary input DIØ3	–	0	0	N/R/S/ RW	1	See parameter 600 or index 8335.0

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8338.0	2092	034	Binary input DIØ4	–	0	0	N/R/S/ RW	4	0 – 36, Step 1
8338.0	2092	603	Binary input DIØ4	–	0	0	N/R/S/ RW	4	See parameter 600 or index 8335.0
8339.0	2093	035	Binary input DIØ5	–	0	0	N/R/S/ RW	5	0 – 36, Step 1
8339.0	2093	604	Binary input DIØ5	–	0	0	N/R/S/ RW	5	See parameter 600 or index 8335.0
8340.0	2094	040	Binary input DI1Ø	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
8340.0	2094	610	Binary input DI1Ø	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
8341.0	2095	041	Binary input DI11	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
8341.0	2095	611	Binary input DI11	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
8342.0	2096	042	Binary input DI12	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
8342.0	2096	612	Binary input DI12	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
8343.0	2097	043	Binary input DI13	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
8343.0	2097	613	Binary input DI13	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
8344.0	2098	044	Binary input DI14	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
8344.0	2098	614	Binary input DI14	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
8345.0	2099	045	Binary input DI15	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
8345.0	2099	615	Binary input DI15	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
8346.0	209A	046	Binary input DI16	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
8346.0	209A	616	Binary input DI16	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
8347.0	209B	047	Binary input DI17	–	0	0	N/R/S/ RW	0	0 – 36, Step 1
8347.0	209B	617	Binary input DI17	–	0	0	N/R/S/ RW	0	See parameter 600 or index 8335.0
8348.0	209C	048	Binary inputs DI1Ø – DI17	–	0	0	N/RO	0	–
8349.0	209D	050	Binary output DBØØ	–	0	0	N/RO	0	–
8349.0	209D	059	Binary outputs DB00, DOØ1 – DOØ5	–	0	0	N/RO	0	–
8350.0	209E	051	Binary output DOØ1	–	0	0	N/S/RW	2	0 – 32, Step 1

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8350.0	209E	620	Binary output DOØ1	–	0	0	N/S/RW	2	0 = NO FUNCTION 1 = /MALFUNCTION 2 = READY 3 = OUTPUT STAGE ON 4 = ROTATING FIELD ON 5 = BRAKE RELEASED 6 = BRAKE APPLIED 7 = MOTOR STANDSTILL 8 = PARAMETER SET 9 = SPEED REFERENCE 10 = SPEED WINDOW 11 = SETPT/ACT.VAL.COMP. 12 = CURRENT REFERENCE 13 = Imax SIGNAL 14 = /MOTOR UTILIZ. 1 15 = /MOTOR UTILIZ. 2 16 = /DRS PREWARN. 17 = /DRS LAG ERROR 18 = /DRS SLAVE IN POS 19 = IPOS IN POSITION 20 = IPOS REFERENCE 21 = IPOS OUTPUT 22 = IPOS FAULT 23 = RESERVED 24 = Ex-e CURRENT LIMIT 25 = LSM COMMUTATION 26 = S PATTERN 27 = SAFE STOP
8351.0	209F	052	Binary output DOØ2	–	0	0	N/S/RW	1	0 – 32, Step 1
8351.0	209F	621	Binary output DOØ2	–	0	0	N/S/RW	1	See parameter 620 or index 8350.0
8352.0	20A0	060	Binary output DO1Ø	–	0	0	N/S/RW	0	0 – 32, Step 1
8352.0	20A0	630	Binary outputs DO1Ø	–	0	0	N/S/RW	0	See parameter 620 or index 8350
8353.0	20A1	061	Binary output DO11	–	0	0	N/S/RW	0	0 – 32, Step 1
8353.0	20A1	631	Binary outputs DO11	–	0	0	N/S/RW	0	See parameter 620 or index 8350
8354.0	20A2	062	Binary output DO12	–	0	0	N/S/RW	0	0 – 32, Step 1
8354.0	20A2	632	Binary outputs DO12	–	0	0	N/S/RW	0	See parameter 620 or index 8350
8355.0	20A3	063	Binary output DO13	–	0	0	N/S/RW	0	0 – 32, Step 1
8355.0	20A3	633	Binary outputs DO13	–	0	0	N/S/RW	0	See parameter 620 or index 8350
8356.0	20A4	064	Binary output DO14	–	0	0	N/S/RW	0	0 – 32, Step 1
8356.0	20A4	634	Binary outputs DO14	–	0	0	N/S/RW	0	See parameter 620 or index 8350
8357.0	20A5	065	Binary output DO15	–	0	0	N/S/RW	0	0 – 32, Step 1
8357.0	20A5	635	Binary outputs DO15	–	0	0	N/S/RW	0	See parameter 620 or index 8350
8358.0	20A6	066	Binary output DO16	–	0	0	N/S/RW	0	0 – 32, Step 1
8358.0	20A6	636	Binary outputs DO16	–	0	0	N/S/RW	0	See parameter 620 or index 8350
8359.0	20A7	067	Binary output DO17	–	0	0	N/S/RW	0	0 – 32, Step 1

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8359.0	20A7	637	Binary outputs DO17	–	0	0	N/S/RW	0	See parameter 620 or index 8350
8360.0	20A8	068	Binary outputs DO1Ø – DO17	–	0	0	N/RO	0	–
8361.0	20A9	071	Nominal output current	A	22	–3	N/RO	0	–
8362.0	20AA	073	Fieldbus slot option	–	0	0	N/RO	0	–
8363.0	20AB	074	Expansion slot option	–	0	0	N/RO	0	–
8364.0	20AC	073	Fieldbus slot firmware	–	0	0	N/RO	0	–
8365.0	20AD	074	Expansion slot firmware	–	0	0	N/RO	0	–
8366.0	20AE	080	Error t-0	–	0	0	N/R/RO	0	–
8367.0	20AF	081	Error t-1	–	0	0	N/R/RO	0	–
8368.0	20B0	082	Error t-2	–	0	0	N/R/RO	0	–
8369.0	20B1	083	Error t-3	–	0	0	N/R/RO	0	–
8370.0	20B2	084	Error t-4	–	0	0	N/R/RO	0	–
8371.0	20B3	080	Binary inputs DIØØ – DIØ7	–	0	0	N/R/RO	0	–
8372.0	20B4	081	Binary inputs DIØØ – DIØ7	–	0	0	N/R/RO	0	–
8373.0	20B5	082	Binary inputs DIØØ – DIØ7	–	0	0	N/R/RO	0	–
8374.0	20B6	083	Binary inputs DIØØ – DIØ7	–	0	0	N/R/RO	0	–
8375.0	20B7	084	Binary inputs DIØØ – DIØ7	–	0	0	N/R/RO	0	–
8376.0	20B8	080	Binary inputs DI1Ø – DI17	–	0	0	N/R/RO	0	–
8377.0	20B9	081	Binary inputs DI1Ø – DI17	–	0	0	N/R/RO	0	–
8378.0	20BA	082	Binary inputs DI1Ø – DI17	–	0	0	N/R/RO	0	–
8379.0	20BB	083	Binary inputs DI1Ø – DI17	–	0	0	N/R/RO	0	–
8380.0	20BC	084	Binary inputs DI1Ø – DI17	–	0	0	N/R/RO	0	–
8381.0	20BD	080	Binary outputs DB00, DOØ1 – DOØ5	–	0	0	N/R/RO	0	–
8382.0	20BE	081	Binary outputs DB00, DOØ1 – DOØ5	–	0	0	N/R/RO	0	–
8383.0	20BF	082	Binary outputs DB00, DOØ1 – DOØ5	–	0	0	N/R/RO	0	–
8384.0	20C0	083	Binary outputs DB00, DOØ1 – DOØ5	–	0	0	N/R/RO	0	–
8385.0	20C1	084	Binary outputs DB00, DOØ1 – DOØ5	–	0	0	N/R/RO	0	–
8386.0	20C2	080	Binary inputs D01Ø – D017	–	0	0	N/R/RO	0	–
8387.0	20C3	081	Binary inputs D01Ø – D017	–	0	0	N/R/RO	0	–
8388.0	20C4	082	Binary outputs D01Ø – D017	–	0	0	N/R/RO	0	–
8389.0	20C5	083	Binary inputs D01Ø – D017	–	0	0	N/R/RO	0	–
8390.0	20C6	084	Binary outputs D01Ø – D017	–	0	0	N/R/RO	0	–
8391.0	20C7	080	Operating state	–	0	0	N/R/RO	0	–
8391.0	20C7	080	Inverter status	–	0	0	N/R/RO	0	–
8391.0	20C7	080	Parameter set	–	0	0	N/R/RO	0	–
8392.0	20C8	081	Operating state	–	0	0	N/R/RO	0	–
8392.0	20C8	081	Inverter status	–	0	0	N/R/RO	0	–
8392.0	20C8	081	Parameter set	–	0	0	N/R/RO	0	–
8393.0	20C9	082	Inverter status	–	0	0	N/R/RO	0	–
8393.0	20C9	082	Operating state	–	0	0	N/R/RO	0	–
8393.0	20C9	082	Parameter set	–	0	0	N/R/RO	0	–
8394.0	20CA	083	Operating state	–	0	0	N/R/RO	0	–

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8394.0	20CA	083	Inverter status	–	0	0	N/R/RO	0	–
8394.0	20CA	083	Parameter set	–	0	0	N/R/RO	0	–
8395.0	20CB	084	Operating state	–	0	0	N/R/RO	0	–
8395.0	20CB	084	Inverter status	–	0	0	N/R/RO	0	–
8395.0	20CB	084	Parameter set	–	0	0	N/R/RO	0	–
8396.0	20CC	080	Heat sink temperature	K	17	100	N/R/RO	0	–
8397.0	20CD	081	Heat sink temperature	K	17	100	N/R/RO	0	–
8398.0	20CE	082	Heat sink temperature	K	17	100	N/R/RO	0	–
8399.0	20CF	083	Heat sink temperature	K	17	100	N/R/RO	0	–
8400.0	20D0	084	Heat sink temperature	K	17	100	N/R/RO	0	–
8401.0	20D1	080	Speed	1/s	11	66	N/R/RO	0	–
8402.0	20D2	081	Speed	1/s	11	66	N/R/RO	0	–
8403.0	20D3	082	Speed	1/s	11	66	N/R/RO	0	–
8404.0	20D4	083	Speed	1/s	11	66	N/R/RO	0	–
8405.0	20D5	084	Speed	1/s	11	66	N/R/RO	0	–
8406.0	20D6	080	Output current	%	24	–3	N/R/RO	0	–
8407.0	20D7	081	Output current	%	24	–3	N/R/RO	0	–
8408.0	20D8	082	Output current	%	24	–3	N/R/RO	0	–
8409.0	20D9	083	Output current	%	24	–3	N/R/RO	0	–
8410.0	20DA	084	Output current	%	24	–3	N/R/RO	0	–
8411.0	20DB	080	Active current	%	24	–3	N/R/RO	0	–
8412.0	20DC	081	Active current	%	24	–3	N/R/RO	0	–
8413.0	20DD	082	Active current	%	24	–3	N/R/RO	0	–
8414.0	20DE	083	Active current	%	24	–3	N/R/RO	0	–
8415.0	20DF	084	Active current	%	24	–3	N/R/RO	0	–
8416.0	20E0	080	Unit utilization	%	24	–3	N/R/RO	0	–
8417.0	20E1	081	Unit utilization	%	24	–3	N/R/RO	0	–
8418.0	20E2	082	Unit utilization	%	24	–3	N/R/RO	0	–
8419.0	20E3	083	Unit utilization	%	24	–3	N/R/RO	0	–
8420.0	20E4	084	Unit utilization	%	24	–3	N/R/RO	0	–
8421.0	20E5	080	DC link voltage	V	21	–3	N/R/RO	0	–
8422.0	20E6	081	DC link voltage	V	21	–3	N/R/RO	0	–
8423.0	20E7	082	DC link voltage	V	21	–3	N/R/RO	0	–
8424.0	20E8	083	DC link voltage	V	21	–3	N/R/RO	0	–
8425.0	20E9	084	DC link voltage	V	21	–3	N/R/RO	0	–
8426.0	20EA	080	Operating hours	s	4	70	N/R/RO	0	–
8427.0	20EB	081	Operating hours	s	4	70	N/R/RO	0	–
8428.0	20EC	082	Operating hours	s	4	70	N/R/RO	0	–
8429.0	20ED	083	Operating hours	s	4	70	N/R/RO	0	–
8430.0	20EE	084	Operating hours	s	4	70	N/R/RO	0	–
8431.0	20EF	080	Enable hours	s	4	70	N/R/RO	0	–
8432.0	20F0	081	Enable hours	s	4	70	N/R/RO	0	–
8433.0	20F1	082	Enable hours	s	4	70	N/R/RO	0	–

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8434.0	20F2	083	Enable hours	s	4	70	N/R/RO	0	–
8435.0	20F3	084	Enable hours	s	4	70	N/R/RO	0	–
8436.0	20F4	205	Load precontrol CFC	%	24	–3	N/S/RW	0	–150000 – 0, Step 1000 0 – 150000, Step 1000
8437.0	20F5	206	Sampling time n-controller	–	0	0	N/S/RW	0	0 = 1.0 1 = 0.5
8438.0	20F6	228	Precontrol filter DRS	s	4	–6	N/S/RW	0	0 – 1000, Step 1000 1000 – 20000, Step 10 20000 – 50000, Step 100 50000 – 100000, Step 1000
8441.0	20F9	080	Motor utilization 1	%	24	–3	N/R/RO	0	–
8442.0	20FA	081	Motor utilization 1	%	24	–3	N/R/RO	0	–
8443.0	20FB	082	Motor utilization 1	%	24	–3	N/R/RO	0	–
8444.0	20FC	083	Motor utilization 1	%	24	–3	N/R/RO	0	–
8445.0	20FD	084	Motor utilization 1	%	24	–3	N/R/RO	0	–
8446.0	20FE	080	Motor utilization 2	%	24	–3	N/R/RO	0	–
8447.0	20FF	081	Motor utilization 2	%	24	–3	N/R/RO	0	–
8448.0	2100	082	Motor utilization 2	%	24	–3	N/R/RO	0	–
8449.0	2101	083	Motor utilization 2	%	24	–3	N/R/RO	0	–
8450.0	2102	084	Motor utilization 2	%	24	–3	N/R/RO	0	–
8451.0	2103	090	PD configuration	–	0	0	N/S/RW	4	0 = PARAM + 1 PD 1 = 1 PD 2 = PARAM + 2 PD 3 = 2 PD 4 = PARAM + 3 PD 5 = 3 PD 6 = PARAM + 6 PD 7 = 6 PD 8 = PARAM + 10 PD 9 = 10 PD 10 = PARAM + 0 PD 11 = 0 PD 12 = PARAM + 4 PD 13 = 4 PD 14 = PARAM + 5 PD 15 = 5 PD 16 = PARAM + 7 PD 17 = 7 PD 18 = PARAM + 8 PD 19 = 8 PD 20 = PARAM + 9 PD 21 = 9 PD 22 = PARAM + 11 PD 23 = 11 PD 24 = PARAM + 12 PD 25 = 12 PD ".."

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8452.0	2104	091	Fieldbus type	–	0	0	N/S/RW	0	0 = NO FIELDBUS 1 = PROFIBUS FMS/DP 2 = INTERBUS 3 = Beckhoff Lightbus 4 = CAN 5 = PROFIBUS DP 6 = DEVICENET 7 = CANOPEN 8 = DIAS-BUS 9 = MODBUS TCP 10 = PROFINET IO 11 = ETHERNET/IP 12 = DEVICENET 13 = PROFIBUS DPV1 14 = PLC+PROFIBUS 15 = DP PROFIsafe0 16 = DP PROFIsafe 17 = EtherCAT 18 = KNet 19 = PLC+ETHERNET 20 = EtherCAT 21 = ETHERNET 22 = ETHERNET 23 = PROFINET 24 = ETH/IP+MODBUS TCP 25 = PN PROFIsafe 26 = PN PROFIsafe 27 = MODBUS TCP 28 = PLC+PROFIBUS 29 = PLC+DeviceNet 30 = PLC+PROFINET 31 = PLC+ETH/IP+MODBUS 32 = PLC+MODBUSTCP 33 = PROFIBUS 34 = DEVICENET 35 = PROFINET 36 = ETH/IP+MODBUS TCP 37 = MODBUS TCP 38 = ETHERNET 39 = EtherCAT SBus 40 = EtherCAT 41 = ETH/IP+MODBUS TCP

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8453.0	2105	092	Fieldbus baud rate	–	0	0	N/S/RW	0	0 – 4294967295, Step 1
8454.0	2106	093	Fieldbus address	–	0	0	N/S/RW	0	0 – 65535, Step 1
8455.0	2107	094	PO1 Setpoint	–	0	0	N/S/RW	0	–
8456.0	2108	095	PO2 Setpoint	–	0	0	N/S/RW	0	–
8457.0	2109	096	PO3 Setpoint	–	0	0	N/S/RW	0	–
8458.0	210A	097	PI1 Actual value	–	0	0	N/RO	0	–
8459.0	210B	098	PI2 Actual value	–	0	0	N/RO	0	–
8460.0	210C	099	PI3 Actual value	–	0	0	N/RO	0	–
8461.0	210D	100	Setpoint source	–	0	0	N/R/S/ RW	1	0 = BIPOL./FIX.SETPT. 1 = UNIPOL/FIX.SETPT. 2 = RS485 3 = FIELDBUS 4 = MOTOR POTENTIOM. 5 = MOTORPOT.+AI1 6 = FIX SETP+AI1 7 = FIX SETPT. × AI1 8 = MASTER – SBUS1 9 = MASTER – RS485 10 = SBUS1 11 = FREQUENCY INPUT 12 = SBUS2 13 = IPOS SETPOINT
8462.0	210E	101	Control signal source	–	0	0	N/R/S/ RW	0	0 = TERMINALS 1 = RS485 2 = FIELDBUS 3 = SBUS1 4 = 3-WIRE CONTROL 5 = SBUS2
8463.0	210F	110	AI1 scaling	–	0	–3	N/S/RW	1000	–10000 – 0, Step 10 0 – 10000, Step 10
8464.0	2110	111	AI1 Offset	V	21	–3	N/S/RW	0	–500 – 0, Step 1 0 – 500, Step 1
8465.0	2111	112	AI1 operating mode	–	0	0	N/S/RW	1	0 = Ref. 3000 rpm 1 = Reference N-MAX 2 = U-Off., N-MAX 3 = N-Off., N-MAX 4 = Expert charact. 5 = N-MAX, 0 – 20 mA 6 = N-MAX, 4 – 20 mA

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8466.0	2112	113	AI1 voltage offset	V	21	–3	N/S/RW	0	–10000 – 0, Step 10 0 – 10000, Step 10
8467.0	2113	114	AI1 speed offset	1/s	11	66	N/S/RW	0	–6000000 – 0, Step 200 0 – 6000000, Step 200
8468.0	2114	115	Filter setpoint	s	4	–6	N/S/RW	5000	0 – 1000, Step 1000 1000 – 20000, Step 10 20000 – 50000, Step 100 50000 – 100000, Step 1000
8469.0	2115	120	AI2 operating mode (optional)	–	0	0	N/R/S/ RW	0	0 = NO FUNCTION 1 = 0 – ±10 V+SETPT1 2 = 0 – 10 V I-LIMIT 3 = ACTUAL VALUE PID CONTROLLER
8470.0	2116	130	Ramp t11 up CW	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
8471.0	2117	131	Ramp t11 down CW	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
8472.0	2118	132	Ramp t11 up CCW	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
8473.0	2119	133	Ramp t11 down CCW	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
8474.0	211A	134	Ramp t12 UP = DOWN	s	4	–3	N/S/RW	10000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
8475.0	211B	135	S pattern t12	–	0	0	N/S/RW	0	0 = 0 1 = 1 2 = 2 3 = 3
8476.0	211C	136	Stop ramp t13	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 20000, Step 1000
8477.0	211D	137	Emergency stop ramp t14	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 20000, Step 1000
8478.0	211E	140	Ramp t21 up CW	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8479.0	211F	141	Ramp t21 down CW	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
8480.0	2120	142	Ramp t21 up CCW	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
8481.0	2121	143	Ramp t21 down CCW	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
8482.0	2122	144	Ramp t22 UP = DOWN	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
8483.0	2123	145	S pattern t22	–	0	0	N/S/RW	0	See parameter 135 or index 8475.0
8484.0	2124	146	Stop ramp t23	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 20000, Step 1000
8485.0	2125	147	Emergency stop ramp t24	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 20000, Step 1000
8486.0	2126	150	Ramp t3 up	s	4	–3	N/S/RW	20000	200 – 1000, Step 10 1000 – 10000, Step 100 10000 – 50000, Step 1000
8487.0	2127	151	Ramp t3 down	s	4	–3	N/S/RW	20000	200 – 1000, Step 10 1000 – 10000, Step 100 10000 – 50000, Step 1000
8488.0	2128	152	Save last setpoint	–	0	0	N/S/RW	0	0 = OFF 1 = ON
8489.0	2129	160	Internal setpoint n11 [rpm]	1/s	11	66	N/S/RW	150000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8489.0	2129	161	Internal setpoint n11 [%In]	1/s	11	66	N/S/RW	150000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8490.0	212A	162	Internal setpoint n12 [rpm]	1/s	11	66	N/S/RW	750000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8490.0	212A	163	Internal setpoint n12 [%In]	1/s	11	66	N/S/RW	750000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8491.0	212B	164	Internal setpoint n13 [rpm]	1/s	11	66	N/S/RW	1500000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8491.0	212B	165	Internal setpoint n13 [%In]	1/s	11	66	N/S/RW	1500000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8492.0	212C	170	Internal setpoint n21 [rpm]	1/s	11	66	N/S/RW	150000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8492.0	212C	171	Internal setpoint n21 [%In]	1/s	11	66	N/S/RW	150000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8493.0	212D	172	Internal setpoint n22 [rpm]	1/s	11	66	N/S/RW	750000	–6000000 – 0, Step 200 0 – 6000000, Step 200

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8493.0	212D	173	Internal setpoint n22 [%In]	1/s	11	66	N/S/RW	750000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8494.0	212E	174	Internal setpoint n23 [rpm]	1/s	11	66	N/S/RW	1500000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8494.0	212E	175	Internal setpoint n23 [%In]	1/s	11	66	N/S/RW	1500000	–6000000 – 0, Step 200 0 – 6000000, Step 200
8495.0	212F	200	P gain n-controller	1/s	11	–3	N/S/RW	2000	10 – 32000, Step 1
8496.0	2130	201	Time constant n-controller	s	4	–6	N/S/RW	10000	0 – 1000, Step 1000 1000 – 20000, Step 10 20000 – 50000, Step 100 50000 – 200000, Step 1000 200000 – 300000, Step 2000 300000 – 1000000, Step 20000 1000000 – 3000000, Step 200000
8497.0	2131	202	Gain acceleration precontrol	%	24	–3	N/S/RW	0	0 – 65000, Step 1
8498.0	2132	203	Filter acceleration precontrol	s	4	–6	N/S/RW	0	0 – 1000, Step 1000 1000 – 20000, Step 10 20000 – 50000, Step 100 50000 – 100000, Step 1000
8499.0	2133	204	Filter actual speed value	s	4	–6	N/S/RW	0	0 – 1000, Step 1000 1000 – 20000, Step 10 20000 – 32000, Step 100
8500.0	2134	210	P gain hold controller	–	0	–3	N/S/RW	500	100 – 32000, Step 10
8501.0	2135	001	User display	–	0	0	N/R/RO	0	–
8502.0	2136	221	Master gear unit factor	–	0	0	N/S/RW	1	1 – 3999999999, Step 1
8503.0	2137	222	Slave gear unit factor	–	0	0	N/S/RW	1	1 – 3999999999, Step 1
8504.0	2138	223	Mode selection	–	0	0	N/S/RW	0	0 = MODE 1 1 = MODE 2 2 = MODE 3 3 = MODE 4 4 = MODE 5 5 = MODE 6 6 = MODE 7 7 = MODE 8
8505.0	2139	224	Slave counter	–	0	0	N/S/RW	10	–99999999 – 0, Step 1 0 – 99999999, Step 1
8506.0	213A	225	Offset 1	–	0	0	N/S/RW	10	–32767 – 0, Step 1 0 – 32767, Step 1
8507.0	213B	226	Offset 2	–	0	0	N/S/RW	10	–32767 – 0, Step 1 0 – 32767, Step 1
8508.0	213C	227	Offset 3	–	0	0	N/S/RW	10	–32767 – 0, Step 1 0 – 32767, Step 1
8509.0	213D	220	P-gain DRS	–	0	–3	N/S/RW	10000	1000 – 200000, Step 1000
8510.0	213E	230	Distance encoder	–	0	0	N/R/S/RW	0	0 = OFF 1 = EQUAL-RANKING 2 = CHAIN
8511.0	213F	231	Factor slave encoder	–	0	0	N/S/RW	1	1 – 1000, Step 1
8512.0	2140	232	Factor slave distance encoder	–	0	0	N/S/RW	1	1 – 1000, Step 1
8513.0	2141	240	Synchronous speed	1/s	11	66	N/S/RW	1500000	0 – 6000000, Step 200

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8514.0	2142	241	Synchronous ramp	s	4	–3	N/S/RW	2000	0 – 1000, Step 10 1000 – 10000, Step 100 10000 – 50000, Step 1000
8515.0	2143	300	Start/stop speed 1	1/s	11	66	N/S/RW	60000	0 – 150000, Step 200
8516.0	2144	301	Minimum speed 1	1/s	11	66	N/S/RW	15000	0 – 6100000, Step 200
8517.0	2145	302	Maximum speed 1	1/s	11	66	N/S/RW	1500000	0 – 6100000, Step 200
8518.0	2146	303	Current limit 1	%	24	–3	N/S/RW	150000	0 – 200000, Step 1000
8519.0	2147	310	Start/stop speed 2	1/s	11	66	N/S/RW	60000	0 – 150000, Step 200
8520.0	2148	311	Minimum speed 2	1/s	11	66	N/S/RW	15000	0 – 6100000, Step 200
8521.0	2149	312	Maximum speed 2	1/s	11	66	N/S/RW	1500000	0 – 6100000, Step 200
8522.0	214A	313	Current limit 2	%	24	–3	N/S/RW	150000	0 – 200000, Step 1000
8523.0	214B	320	Automatic adjustment 1	–	0	0	N/S/RW	1	See parameter 152 or index 8488
8524.0	214C	321	Boost 1	%	24	–3	N/S/RW	0	0 – 100000, Step 1000
8525.0	214D	322	IxR adjustment 1	%	24	–3	N/S/RW	0	0 – 10000, Step 10
8526.0	214E	323	Premagnetization time 1	s	4	–3	N/S/RW	100	0 – 20000, Step 1
8527.0	214F	324	Slip compensation 1	1/s	11	66	N/S/RW	0	0 – 500000, Step 200
8528.0	2150	330	Automatic adjustment 2	–	0	0	N/S/RW	1	See parameter 152 or index 8488.0
8529.0	2151	331	Boost 2	%	24	–3	N/S/RW	0	0 – 100000, Step 1000
8530.0	2152	332	IxR adjustment 2	%	24	–3	N/S/RW	0	0 – 100000, Step 10
8531.0	2153	333	Premagnetization time 2	s	4	–3	N/S/RW	100	0 – 20000, Step 1
8532.0	2154	334	Slip compensation 2	1/s	11	66	N/S/RW	0	0 – 500000, Step 200
8533.0	2155	340	Motor protection 1	–	0	0	N/S/RW	0	0 = OFF 1 = ASYNCHRONOUS ON 2 = SERVO ON
8534.0	2156	341	Cooling type 1	–	0	0	N/S/RW	0	0 = FAN COOLED 1 = FORCED COOLING
8535.0	2157	342	Motor protection 2	–	0	0	N/S/RW	0	0 = OFF 1 = ASYNCHRONOUS ON
8536.0	2158	343	Cooling type 2	–	0	0	N/S/RW	0	See parameter 341 or index 8534.0
8537.0	2159	350	Direction of rotation reversal 1	–	0	0	N/R/S/RW	0	See parameter 152 or index 8488.0
8538.0	215A	351	Direction of rotation reversal 2	–	0	0	N/R/S/RW	0	See parameter 152 or index 8488.0
8539.0	215B	400	Speed reference value	1/s	11	66	N/S/RW	1500000	0 – 6000000, Step 200
8540.0	215C	401	Hysteresis	1/s	11	66	N/S/RW	100000	0 – 500000, Step 1000
8541.0	215D	402	Delay time	s	4	–3	N/S/RW	1000	0 – 9000, Step 100
8542.0	215E	403	Signal = "1" if:	–	0	0	N/S/RW	0	0 = n < n ref 1 = n > n ref
8543.0	215F	410	Window center	1/s	11	66	N/S/RW	1500000	0 – 6000000, Step 200
8544.0	2160	411	Range width	1/s	11	66	N/S/RW	0	0 – 6000000, Step 200
8545.0	2161	412	Delay time	s	4	–3	N/S/RW	1000	0 – 9000, Step 100
8546.0	2162	413	Signal = "1" if:	–	0	0	N/S/RW	0	0 = INSIDE 1 = OUTSIDE

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8547.0	2163	420	Hysteresis	1/s	11	66	N/S/RW	100000	1000 – 300000, Step 1000
8548.0	2164	421	Delay time	s	4	–3	N/S/RW	1000	0 – 9000, Step 100
8549.0	2165	422	Signal = "1" if:	–	0	0	N/S/RW	0	0 = n < > n setpt 1 = n = n setpt
8550.0	2166	430	Current reference value	%	24	–3	N/S/RW	100000	0 – 200000, Step 1000
8551.0	2167	431	Hysteresis	%	24	–3	N/S/RW	5000	0 – 30000, Step 1000
8552.0	2168	432	Delay time	s	4	–3	N/S/RW	1000	0 – 9000, Step 100
8553.0	2169	433	Signal = "1" if:	–	0	0	N/S/RW	0	0 = I < I ref 1 = I > I ref
8554.0	216A	440	Hysteresis	%	24	–3	N/S/RW	5000	5000 – 50000, Step 1000
8555.0	216B	441	Delay time	s	4	–3	N/S/RW	1000	0 – 9000, Step 100
8556.0	216C	442	Signal = "1" if:	–	0	0	N/S/RW	0	0 = I = I max 1 = I < I max
8557.0	216D	500	Speed monitoring 1	–	0	0	N/S/RW	3	0 = OFF 1 = MOTOR MODE 2 = REGENERATIVE MODE 3 = MOT. + REGENERATIVE
8558.0	216E	501	Delay time 1	s	4	–3	N/S/RW	1000	0 – 10000, Step 10
8559.0	216F	502	Speed monitoring 2	–	0	0	N/S/RW	3	See parameter 500 or index 8557.0
8560.0	2170	503	Delay time 2	s	4	–3	N/S/RW	1000	0 – 10000, Step 10
8561.0	2171	510	Slave position tolerance	–	0	0	N/S/RW	25	10 – 32768, Step 1
8562.0	2172	511	Lag error prewarning	–	0	0	N/S/RW	50	50 – 99999999, Step 1
8563.0	2173	512	Lag error limit	–	0	0	N/S/RW	4000	100 – 99999999, Step 1
8564.0	2174	513	Lag error signal delay	s	4	–3	N/S/RW	1000	0 – 99000, Step 100
8565.0	2175	514	Counter LED display	–	0	0	N/S/RW	100	10 – 32768, Step 1
8566.0	2176	515	Position signal delay time	s	4	–3	N/S/RW	10	5 – 2000, Step 1
8567.0	2177	520	Mains OFF response time	s	4	–3	N/S/RW	0	0 – 5000, Step 1
8568.0	2178	640	Analog output AO1	–	0	0	N/S/RW	3	0 = NO FUNCTION 1 = RAMP INPUT 2 = SETPOINT SPEED 3 = ACTUAL SPEED 4 = ACTUAL FREQUENCY 5 = OUTPUT CURRENT 6 = ACTIVE CURRENT 7 = UNIT UTILIZATION 8 = IPOS OUTPUT 9 = RELATIVE TORQUE 10 = IPOS OUTPUT 2
8569.0	2179	641	Scaling AO1	–	0	–3	N/S/RW	1000	–10000 – 0, Step 10 0 – 10000, Step 10
8570.0	217A	642	Operating mode AO1	–	0	0	N/S/RW	1	0 = OFF 1 = –10 V – 10 V 2 = 0 – 20 mA 3 = 4 – 20 mA
8571.0	217B	643	Analog output AO2	–	0	0	N/S/RW	5	See parameter 640 or index 8568
8572.0	217C	644	Scaling AO2	–	0	–3	N/S/RW	1000	–10000 – 0, Step 10 0 – 10000, Step 10
8573	217D	645	Operating mode AO2	–	0	0	N/S/RW	1	See parameter 642 or index 8570

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8574.0	217E	700	Operating mode 1	–	0	0	N/S/RW	0	0 = VFC 1 1 = VFC 1 & GROUP 2 = VFC 1 & HOIST 3 = VFC 1 & DC BRAKE 4 = VFC 1 & FLYING START 5 = VFC-n CONTROL 6 = VFC-n-CTRL&GRP. 7 = VFC-n-CTRL.&HOIST 8 = VFC-n-CTRL.&SYNC. 9 = VFC-n-CTRL.&IPOS 10 = VFC-n-CTRL.&DPx. 11 = CFC 12 = CFC & M-CONTROL 13 = CFC & IPOS 14 = CFC & SYNC. 15 = CFC & DPx 16 = SERVO 17 = SERVO & M-CONTROL 18 = SERVO & IPOS 19 = SERVO & SYNC. 20 = SERVO & DPx 21 = V/f CHARACTER. 22 = V/f & DC BRAKING
8575.0	217F	701	Operating mode 2	–	0	0	N/S/RW	0	0 = VFC 2 1 = VFC 2 & GROUP 2 = VFC 2 & HOIST 3 = VFC 2 & DC BRAKE 4 = VFC 2 & FLYING START 5 – 20 = RESERVED 21 = V/f CHARACTER. 22 = V/f & DC BRAKING
8576.0	2180	710	Standstill current 1	%	24	–3	N/S/RW	0	0 – 50000, Step 1000
8577.0	2181	711	Standstill current 2	%	24	–3	N/S/RW	0	0 – 50000, Step 1000
8578.0	2182	720	Setpoint stop function 1	–	0	0	N/S/RW	0	See parameter 152 or index 8488
8579.0	2183	721	Stop setpoint 1	1/s	11	66	N/S/RW	30000	0 – 500000, Step 200
8580.0	2184	722	Start offset 1	1/s	11	66	N/S/RW	30000	0 – 500000, Step 200
8581.0	2185	723	Setpoint stop function 2	–	0	0	N/S/RW	0	See parameter 152 or index 8488
8582.0	2186	724	Stop setpoint 2	1/s	11	66	N/S/RW	30000	0 – 500000, Step 200
8583.0	2187	725	Start offset 2	1/s	11	66	N/S/RW	30000	0 – 500000, Step 200
8584.0	2188	730	Brake function 1	–	0	0	N/S/RW	1	See parameter 152 or index 8488
8585.0	2189	732	Brake application time 1	s	4	–3	N/S/RW	200	0 – 2000, Step 1
8586.0	218A	733	Brake function 2	–	0	0	N/S/RW	1	See parameter 152 or index 8488
8587.0	218B	735	Brake application time 2	s	4	–3	N/S/RW	200	0 – 2000, Step 1
8588.0	218C	740	Skip window center 1	1/s	11	66	N/S/RW	150000	0 – 6000000, Step 200
8589.0	218D	741	Skip width 1	1/s	11	66	N/S/RW	0	0 – 300000, Step 200
8590.0	218E	742	Skip window center 2	1/s	11	66	N/S/RW	150000	0 – 6000000, Step 200
8591.0	218F	743	Skip width 2	1/s	11	66	N/S/RW	0	0 – 300000, Step 200

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8592.0	2190	750	Slave setpoint	–	0	0	N/S/RW	0	0 = MASTER-SLAVE OFF 1 = SPEED (RS485) 2 = SPEED (SBUS1) 3 = SPEED (485+SBUS1) 4 = TORQUE (RS485) 5 = TORQUE (SBUS1) 6 = TORQUE (485+SBUS1) 7 = LOAD SHARE (RS485) 8 = LOAD SHARE (SBUS1) 9 = LOAD SHARE (485+SBUS1)
8593.0	2191	751	Scaling slave setpoint	–	0	–3	N/S/RW	1000	–10000 – 0, Step 1 0 – 10000, Step 1
8594.0	2192	802	Factory setting	–	0	0	N/R/S/ RW	0	0 = NO 1 = DEFAULT 2 = DELIVERY STATUS
8595.0	2193	803	Parameter lock	–	0	0	N/S/RW	0	See parameter 152 or index 8488
8596.0	2194	804	Reset statistics data	–	0	0	N/S/RW	0	0 = NO 1 = ERROR MEMORY 2 = KWH COUNTER 3 = OPERATING HOURS
8597.0	2195	810	RS485 address	–	0	0	N/S/RW	0	0 – 99, Step 1
8598.0	2196	811	RS485 group address	–	0	0	N/S/RW	100	100 – 199, Step 1
8599.0	2197	812	RS485 timeout interval	s	4	–3	N/S/RW	0	0 – 650000, Step 10
8600.0	2198	881	SBus 1 address	–	0	0	N/S/RW	0	0 – 63, Step 1
8601.0	2199	882	Group address SBus 1	–	0	0	N/S/RW	0	0 – 63, Step 1
8602.0	219A	883	Timeout interval SBus 1	s	4	–3	N/S/RW	0	0 – 650000, Step 10
8603.0	219B	884	Baud rate SBus 1	–	0	0	N/S/RW	2	0 = 125 1 = 250 2 = 500 3 = 1000
8604.0	219C	885	SBus 1 synchronization ID	–	0	–3	N/S/RW	0	0 – 2047000, Step 1000
8606.0	219E	819	Fieldbus timeout interval	s	4	–3	N/S/RW	500	0 – 650000, Step 1
8607.0	219F	820	4-quadrant operation 1	–	0	0	N/S/RW	1	See parameter 152 or index 8488
8608.0	21A0	821	4-quadrant operation 2	–	0	0	N/S/RW	1	See parameter 152 or index 8488
8609.0	21A1	830	Response EXT. ERROR	–	0	0	N/S/RW	3	See parameter 540 or index 9284
8610.0	21A2	831	Response FIELDBUS TIMEOUT	–	0	0	N/S/RW	7	0 = NO RESPONSE 1 = DISPLAY ERROR 2 = IMM. STOP/FAULT 3 = EMERG.STOP/FAULT 4 = RAPID STOP/FAULT 5 = IMM. STOP/WARN. 6 = EMERG.STOP/WARN. 7 = RAPID STOP/WARN. 8 = RESERVED 9 = RESERVED 10 = PO DATA = 0/WARN.

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8611.0	21A3	832	Response MOTOR OVERLOAD	–	0	0	N/S/RW	3	See parameter 540 or index 9284
8612.0	21A4	833	Response RS485 TIMEOUT	–	0	0	N/S/RW	7	See parameter 540 or index 9284
8613.0	21A5	834	LAG ERROR response	–	0	0	N/S/RW	3	See parameter 540 or index 9284
8615.0	21A7	836	TIMEOUT SBUS1 response	–	0	0	N/S/RW	3	See parameter 540 or index 9284
8616.0	21A8	835	TF SIGNAL response	–	0	0	N/S/RW	0	See parameter 540 or index 9284
8617.0	21A9	840	Manual reset	–	0	0	N/S/RW	0	See parameter 138 or index 8794
8618.0	21AA	841	Auto reset	–	0	0	N/S/RW	0	See parameter 152 or index 8488
8619.0	21AB	842	Restart time	s	4	–3	N/S/RW	3000	1000 – 30000, Step 1000
8620.0	21AC	860	PWM frequency 1 VFC	–	0	0	N/S/RW	0	0 = 2.5 1 = 4 2 = 8 3 = 12 4 = 16
8621.0	21AD	861	PWM frequency 2 VFC	–	0	0	N/S/RW	0	See parameter 860 or index 8620
8622.0	21AE	876	PO data enable	–	0	0	N/S/RW	1	See parameter 152 or index 8488
8623.0	21AF	900	Reference offset	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
8624.0	21B0	901	Reference speed 1	1/s	11	66	N/S/RW	200000	0 – 6000000, Step 200
8625.0	21B1	902	Reference speed 2	1/s	11	66	N/S/RW	50000	0 – 6000000, Step 200
8626.0	21B2	903	Reference travel type	–	0	0	N/S/RW	0	0 – 8, Step 1
8627.0	21B3	910	Gain X controller	1/s	11	–3	N/S/RW	500	0 – 32000, Step 10
8628.0	21B4	911	Positioning ramp 1	s	4	–3	N/S/RW	1000	10 – 500, Step 1 500 – 2000, Step 10 2000 – 10000, Step 200 10000 – 20000, Step 1000
8629.0	21B5	913	Travel speed CW	1/s	11	66	N/S/RW	1500000	0 – 6000000, Step 200
8630.0	21B6	914	Travel speed CCW	1/s	11	66	N/S/RW	1500000	0 – 6000000, Step 200
8631.0	21B7	915	Velocity precontrol	–	0	–3	N/S/RW	100000	–199990 – 0, Step 10 0 – 199990, Step 10
8632.0	21B8	916	Ramp type	–	0	0	N/R/S/RW	0	0 = LINEAR 1 = SINE 2 = SQUARE 3 = BUS RAMP 4 = JERK LIMITED 5 = ELECTRONIC CAM 6 = I SYNCHRONOUS OPERATION 7 = CROSS CUTTER 8 = INTERPOLATION SPEED 9 = POS. INTERPOL. 12BIT 10 = POS. INTERPOL 16BIT

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8633.0	21B9	920	SW limit switch RIGHT	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
8634.0	21BA	921	SW limit switch LEFT	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
8635.0	21BB	922	Position window	–	0	0	N/S/RW	50	0 – 1073741824, Step 1
8636.0	21BC	923	Lag error window	–	0	0	N/S/RW	5000	0 – 2147483647, Step 1
8637.0	21BD	930	Override	–	0	0	N/S/RW	0	See parameter 152 or index 8488
8688.0	21F0	304	Torque limit	%	24	–3	N/S/RW	0	0 – 200000, Step 1000
8696.0	21F8	912	Positioning ramp 2	s	4	–3	N/S/RW	1000	10 – 500, Step 1 500 – 2000, Step 10 2000 – 10000, Step 200 10000 – 20000, Step 1000
8729.0	2219	941	Actual position source	–	0	0	N/S/RW	0	See parameter 557 or index 9315
8747.0	222B	850	Scaling factor numerator	–	0	0	N/S/RW	1	1 – 65535, Step 1
8748.0	222C	851	Scaling factor denominator	–	0	0	N/S/RW	1	1 – 65535, Step 1
8749.0	222D	731	Brake release time 1	s	4	–3	N/S/RW	0	0 – 2000, Step 1
8750.0	222E	734	Brake release time 2	s	4	–3	N/S/RW	0	0 – 2000, Step 1
8751.0	222F	862	PWM fix 1	–	0	0	N/S/RW	0	See parameter 152 or index 8488
8752.0	2230	863	PWM fix 2	–	0	0	N/S/RW	0	See parameter 152 or index 8488
8753.0	2231	521	Mains OFF response	–	0	0	N/S/RW	0	0 = CONTROLLER INHIBIT 1 = EMERGENCY STOP
8772.0	2244	852	User-defined unit	–	0	0	N/S/RW	1768763185	0 – 4294967295, Step 1
8774.0	2246	942	Encoder factor numerator	–	0	0	N/S/RW	1	1 – 32767, Step 1
8775.0	2247	943	Encoder factor denominator	–	0	0	N/S/RW	1	1 – 32767, Step 1

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8776.0	2248	951	Counting direction	–	0	0	N/R/S/ RW	0	See parameter 946 or index 8894
8777.0	2249	950	Encoder type	–	0	0	N/R/S/ RW	0	0 = NO ENCODER 1 = VISOLUX EDM 2 = T&R CE65, CE58, CE100MSSI 3 = T&R LE100, LE200 4 = T&R LA66K 5 = AV1Y/ROQ424 6 = STEGMANN AG100 MSSI 7 = SICK DME-3000-111 8 = STAHL WCS2-LS311 9 = STEGM.AG626/SICK ATM60 10 = IVO GM401, GXMMW A202PA2 11 = STAHL WCS3 12 = LEUZE OMS1, OMS2 13 = T&R ZE65M 14 = LEUZE BPS37 15 = SICK DME4000, DME5000 16 = SICK POMUX KH53 17 = KÜBLER 9081 18 = LEUZE AMS200 19 = MTS TEMPOSONICS RP 20 = AV2Y/P+F AVM58X-1212 21 = AH7Y/HÜBNER HMG161 22 = BALLUFF BTL5-S112B-M1500 23 = T&R LA41K 24 = ELGO LIMAX2 25 = STAHL WCS3B (CANopen) 26 = T&R CE58M (CANopen) 27 = T&R LE200 (CANopen) 28 = SICK DME 4000 (CANopen) 29 = AS7Y/HÜBNER AMG73 SSI 30 = AG7Y/HÜBNER AMG83 SSI 31 = P+F VDM100-150
8778.0	224A	952	Clock rate	%	24	–3	N/R/S/ RW	100000	1000 – 200000, Step 100
8779.0	224B	953	Position offset	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
8781.0	224D	954	Zero point offset	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
8784.0	2250	955	Encoder scaling	–	0	0	N/R/S/ RW	0	See parameter 944 or index 8787
8786.0	2252	207	Load precontrol VFC	%	24	–3	N/S/RW	200000	–200000 – 0, Step 1000 0 – 200000, Step 1000

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8787.0	2253	944	Encoder scaling ext. encoder	–	0	0	N/R/S/ RW	0	0 = x 1 1 = x 2 2 = x 4 3 = x 8 4 = x 16 5 = x 32 6 = x 64
8794.0	225A	138	Ramp limit VFC	–	0	0	N/R/S/ RW	1	0 = NO 1 = YES
8798.0	225E	760	Lockout run/stop keys	–	0	0	N/R/S/ RW	0	See parameter 138 or index 8794
8827.0	227B	864	PWM CFC	–	0	0	N/S/RW	0	0 = 2.5 1 = 4 2 = 8 3 = 12 4 = 16
8832.0	2280	504	Encoder monitoring motor	–	0	0	N/R/S/ RW	0	See parameter 138 or index 8794.0
8835.0	2283	960	Modulo function	–	0	0	N/S/RW	0	0 = OFF 1 = SHORT 2 = CW 3 = CCW
8836.0	2284	961	Modulo numerator	–	0	0	N/S/RW	1	1 – 2147483647, Step 1
8837.0	2285	962	Modulo denominator	–	0	0	N/S/RW	1	1 – 2147483647, Step 1
8838.0	2286	963	Modulo encoder resolution	–	0	0	N/S/RW	4096	1 – 65535, Step 1
8839.0	2287	904	Reference travel to zero pulse	–	0	0	N/S/RW	0	0 = YES 1 = NO
8840.0	2288	102	Frequency scaling	Hz	28	0	N/S/RW	10000	100 – 65000, Step 10
8878.0	22AE	078	Technology function	–	0	0	N/R/S/ RW	0	0 – 5, Step 1
8888.0	22B8	938	Speed task 1	–	0	0	N/S/RW	0	0 = 0 1 = 1 2 = 2 3 = 3 4 = 4 5 = 5 6 = 6 7 = 7 8 = 8 9 = 9
8890.0	22BA	079	Device variant	–	0	0	N/R/S/ RW	0	0 = Standard 1 = Application
8891.0	22BB	945	Distance encoder type (X14)	–	0	0	N/R/S/ RW	0	0 = TTL 1 = SIN/COS 2 = HTL 3 = HIPERFACE/RS485
8894.0	22BE	946	Distance encoder counting direction (X14)	–	0	0	N/R/S/ RW	0	0 = NORMAL 1 = INVERTED
8895.0	22BF	947	Hiperface®-Offset X14	–	0	0	N/R/S/ RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
8896.0	22C0	905	Hiperface® offset X15	–	0	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
8903.0	22C7	505	Distance encoder monitoring	–	0	0	N/S/RW	0	See parameter 138 or index 8794.0

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8904.0	22C8	530	Sensor type 1	–	0	0	N/R/S/RW	0	0 = NO SENSOR 1 = TF/TH 2 = KTY 3 = TF/TH DEU 4 = KTY DEU
8905.0	22C9	531	Sensor type 2	–	0	0	N/R/S/RW	0	0 = NO SENSOR 1 = TF/TH 2 = KTY
8906.0	22CA	933	Jerk time	s	4	–3	N/S/RW	5	5 – 2000, Step 1
8907.0	22CB	344	Interval for motor protection	s	4	–3	N/S/RW	4000	100 – 20000, Step 1
8915.0	22D3	233	Distance encoder resolution	–	0	0	N/S/RW	3	0 = 128 1 = 256 2 = 512 3 = 1024 4 = 2048
8916.0	22D4	053	Binary output DOØ3	–	0	0	N/S/RW	21	0 – 32, Step 1
8917.0	22D5	054	Binary output DOØ4	–	0	0	N/S/RW	21	0 – 32, Step 1
8917.0	22D5	623	Binary output DOØ4	–	0	0	N/S/RW	21	See parameter 620 or index 8350.0
8918.0	22D6	055	Binary output DOØ5	–	0	0	N/S/RW	21	0 – 32, Step 1
8918.0	22D6	624	Binary output DOØ5	–	0	0	N/S/RW	21	See parameter 620 or index 8350.0
8919.0	22D7	036	Binary input DIØ6	–	0	0	N/R/S/RW	0	0 – 36, Step 1
8919.0	22D7	605	Binary input DIØ6	–	0	0	N/R/S/RW	0	See parameter 600 or index 8335.0
8920.0	22D8	037	Binary input DIØ7	–	0	0	N/R/S/RW	0	0 – 36, Step 1
8920.0	22D8	606	Binary input DIØ7	–	0	0	N/R/S/RW	0	See parameter 600 or index 8335.0
8921.0	22D9	917	Ramp mode	–	0	0	N/S/RW	0	0 = MODE 1 1 = MODE 2
8925.0	22DD	770	Energy-saving function	–	0	0	N/R/S/RW	0	See parameter 152 or index 8488
8927.0	22DF	522	Phase failure monitoring	–	0	0	N/S/RW	0	See parameter 152 or index 8488.0
8928.0	22E0	139	Ramp monitoring 1	–	0	0	N/S/RW	0	See parameter 138 or index 8794.0
8929.0	22E1	149	Ramp monitoring 2	–	0	0	N/S/RW	0	See parameter 138 or index 8794.0
8930.0	22E2	072	Encoder slot option	–	0	0	N/RO	0	–
8931.0	22E3	072	Firmware encoder slot	–	0	0	N/RO	0	–
8932.0	22E4	891	SBus 2 address	–	0	0	N/S/RW	0	0 – 63, Step 1
8933.0	22E5	892	Group address SBus 2	–	0	0	N/S/RW	0	0 – 63, Step 1
8934.0	22E6	893	Timeout interval SBus 2	s	4	–3	N/S/RW	0	0 – 650000, Step 10
8935.0	22E7	895	SBus 2 synchronization ID	–	0	–3	N/S/RW	0	0 – 2047000, Step 1000
8936.0	22E8	837	TIMEOUT SBUS2 response	–	0	0	N/S/RW	3	See parameter 540 or index 9284
8937.0	22E9	880	Protocol SBus 1	–	0	0	N/S/RW	0	0 = SBUS MOVILINK 1 = CANopen 2 = DCS protocol
8938.0	22EA	890	Protocol SBus 2	–	0	0	N/S/RW	0	See parameter 880 or index 8937

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
8939.0	22EB	894	Baud rate SBus 2	–	0	0	N/S/RW	2	See parameter 884 or index 8603
8958.0	22FE	838	SW LIMIT SWITCH response	–	0	0	N/S/RW	3	See parameter 540 or index 9284
8962.0	2302	939	IPOS speed task 2	–	0	0	N/S/RW	0	See parameter 938 or index 8888
8964.0	2304	887	Synchronization ext. controller	–	0	0	N/R/S/ RW	0	See parameter 152 or index 8488
8989.0	231D	886	CANopen 1 address	–	0	0	N/S/RW	0	1 – 127, Step 1
8990.0	231E	896	CANopen 2 address	–	0	0	N/S/RW	0	1 – 127, Step 1
8991.0	231F	888	Synchronization time	s	4	–3	N/R/S/ RW	0	1 – 10, Step 1
8992.0	2320	780	IP address	–	0	0	N/S/RW	3232238084	0 – 4294967295, Step 1
8993.0	2321	781	Subnet mask	–	0	0	N/S/RW	4294967040	0 – 4294967295, Step 1
8994.0	2322	782	Standard gateway	–	0	0	N/S/RW	0	0 – 3758096383, Step 1
8995.0	2323	784	MAC address	–	0	0	N/S/RW	0	0 – 4294967295, Step 1
8997.0	2325	783	Baud rate [MBaud]	1/s	11	6	N/S/RW	0	0 – 4294967295, Step 1
9006.0	232E	260	Operating mode	–	0	0	N/S/RW	0	0 = CONTROLLER OFF 1 = CONTROL 2 = STEP RESPONSE
9007.0	232F	261	Cycle time	s	4	–3	N/S/RW	5	0 = 1 1 = 5 2 = 10
9008.0	2330	262	Interruption	–	0	0	N/S/RW	0	0 = UNCONSIDERED 1 = MOVE CLOSER TO SET-POINT
9009.0	2331	263	Factor K_P	–	0	–3	N/S/RW	1000	0 – 32767, Step 1
9010.0	2332	264	Integrative time T_n	s	4	–3	N/S/RW	0	0 – 65535, Step 1
9011.0	2333	265	Derivative time T_V	s	4	–3	N/S/RW	0	0 – 30, Step 1
9012.0	2334	266	Precontrol	–	0	0	N/S/RW	0	–32767 – 0, Step 1 0 – 32767, Step 1
9013.0	2335	270	Setpoint source	–	0	0	N/S/RW	0	0 = PARAMETER 1 = IPOS VARIABLE 2 = ANALOG1 3 = ANALOG2
9014.0	2336	271	Setpoint	–	0	0	N/S/RW	0	–32767 – 0, Step 1 0 – 32767, Step 1
9015.0	2337	272	IPOS setpoint address	–	0	0	N/S/RW	0	0 – 1023, Step 1
9016.0	2338	273	Time constant	s	4	–3	N/S/RW	0	0 – 1000, Step 1000 1000 – 10000, Step 100 10000 – 100000, Step 1000 100000 – 2000000, Step 10000
9017.0	2339	274	Scaling setpoints	–	0	–3	N/S/RW	1000	–32767 – 0, Step 1 0 – 32767, Step 1
9018.0	233A	275	Actual value source	–	0	0	N/S/RW	0	0 = ANALOG 1 1 = ANALOG 2 2 = IPOS VARIABLE
9019.0	233B	276	IPOS actual value address	–	0	0	N/S/RW	0	0 – 1023, Step 1
9020.0	233C	277	Actual value scaling factor	–	0	–3	N/S/RW	1000	–32767 – 0, Step 1 0 – 32767, Step 1

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
9021.0	233D	278	Actual offset value	–	0	0	N/S/RW	0	–32767 – 0, Step 1 0 – 32767, Step 1
9022.0	233E	279	Time constant actual value	s	4	–6	N/S/RW	0	0 – 200000, Step 1000 20000 – 250000, Step 2000 250000 – 450000, Step 5000 450000 – 500000, Step 10000
9023.0	233F	280	Minimum offset + actual value	–	0	0	N/S/RW	0	–32767 – 0, Step 1 0 – 32767, Step 1
9024.0	2340	281	Maximum offset + actual value	–	0	0	N/S/RW	10000	–32767 – 0, Step 1 0 – 32767, Step 1
9025.0	2341	282	Minimum output PID controller	–	0	0	N/S/RW	–1000	–32767 – 0, Step 1 0 – 32767, Step 1
9026.0	2342	283	Maximum output PID controller	–	0	0	N/S/RW	10000	–32767 – 0, Step 1 0 – 32767, Step 1
9027.0	2343	284	Minimum output process controller	–	0	0	N/S/RW	0	–32767 – 0, Step 1 0 – 32767, Step 1
9028.0	2344	285	Maximum output process controller	–	0	0	N/S/RW	7500	–32767 – 0, Step 1 0 – 32767, Step 1
9114.0	239A	345	I_N UL monitoring 1	A	22	–3	N/S/RW	0	100 – 500000, Step 100
9115.0	239B	346	I_N UL monitoring 2	A	22	–3	N/S/RW	0	100 – 500000, Step 100
9219.0	2403	018	KTY utilization 1	%	24	–3	N/R/RO	0	–
9220.0	2404	019	KTY utilization 2	%	24	–3	N/R/RO	0	–
9225.0	2409	970	DPRAM synchronization	–	0	0	N/S/RW	0	See parameter 138 or index 8794
9226.0	240A	971	Synchronization phase	s	4	–6	N/S/RW	0	–2000 – 0, Step 1 0 – 2000, Step 1
9233.0	2411	785	EtherNet/IP startup configuration	–	0	0	N/S/RW	2	0 = STORED IP PARA. 1 = DHCP
9259.0	242B	516	X41 Encoder monitoring	–	0	0	N/R/S/ RW	0	See parameter 138 or index 8794.0
9260.0	242C	517	X41 Pulse count monitoring	–	0	0	N/R/S/ RW	0	See parameter 138 or index 8794.0
9261.0	242D	518	X42 Encoder monitoring	–	0	0	N/R/S/ RW	0	See parameter 138 or index 8794.0
9262.0	242E	519	X42 Pulse count monitoring	–	0	0	N/R/S/ RW	0	See parameter 138 or index 8794.0
9263.0	242F	234	Master encoder resolution	–	0	0	N/R/S/ RW	3	0 = 128 1 = 256 2 = 512 3 = 1024 4 = 2048
9266.0	2432	889	Parameter channel 2	–	0	0	N/R/S/ RW	0	See parameter 138 or index 8794
9267.0	2433	899	Parameter channel 2	–	0	0	N/R/S/ RW	0	See parameter 138 or index 8794
9284.0	2444	540	Response to drive vibration/ warning	–	0	0	N/S/RW	1	0 = NO RESPONSE 1 = DISPLAY ERROR 2 = IMM. STOP/FAULT 3 = EMERG. ST/FAULT 4 = RAPID STOP/FAULT 5 = IMM. STOP/WARN. 6 = EMERG.STOP/WARN. 7 = RAPID STOP/WARN.

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
9285.0	2445	541	Response to drive vibration/ fault	–	0	0	N/S/RW	7	See parameter 540 or index 9284.0
9286.0	2446	542	Response to oil aging/ warning	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
9287.0	2447	543	Response to oil aging/error	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
9288.0	2448	544	Response to oil aging/ overtemperature	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
9289.0	2449	545	Response to oil aging/ready	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
9290.0	244A	549	Response to brake wear	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
9292.0	244C	550	DCS safety monitor status	–	0	0	N/RO	0	–
9293.0	244D	560	Ex-e motor current limit	–	0	0	N/R/S/ RW	0	See parameter 152 or index 8488.0
9294.0	244E	561	Frequency A	Hz	28	–3	N/R/S/ RW	5000	0 – 60000, Step 1000
9295.0	244F	562	Current limit A	%	24	–3	N/S/RW	50000	0 – 150000, Step 1000
9296.0	2450	563	Frequency B	Hz	28	–3	N/R/S/ RW	10000	0 – 104000, Step 1000
9297.0	2451	564	Current limit B	%	24	–3	N/S/RW	80000	0 – 200000, Step 1000
9298.0	2452	565	Frequency C	Hz	28	–3	N/R/S/ RW	25000	0 – 104000, Step 1000
9299.0	2453	566	Current limit C	%	24	–3	N/S/RW	100000	0 – 200000, Step 1000
9302.0	2456	553	Serial number DCS	–	0	0	N/S/RW	0	0 – 4294967295, Step 1
9303.0	2457	554	CRC DCS	–	0	0	N/S/RW	0	0 – 4294967295, Step 1
9304.0	2458	080	Suberror code t-0	–	0	0	N/R/RO	0	–
9305.0	2459	081	Suberror code t-1	–	0	0	N/R/RO	0	–
9306.0	245A	082	Suberror code t-2	–	0	0	N/R/RO	0	–
9307.0	245B	083	Suberror code t-3	–	0	0	N/R/RO	0	–
9308.0	245C	084	Suberror code t-4	–	0	0	N/R/RO	0	–
9309.0	245D	551	Binary inputs DCS 1 ... 8	–	0	0	N/RO	0	–
9310.0	245E	552	Binary outputs DCS DO0_P – DO2_M	–	0	0	N/RO	0	–
9313.0	2461	555	Fault response DCS	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
9314.0	2462	556	DCS alarm response	–	0	0	N/S/RW	1	See parameter 540 or index 9284.0
9315.0	2463	557	Actual position source DCS	–	0	0	N/S/RW	0	0 = MOTOR ENCODER (X15) 1 = EXT. ENCODER (X14) 2 = ABSOLUTE ENC. (X62)
9316.0	2464	702	Motor category	–	0	0	N/R/S/ RW	0	0 = ROTATORY 1 = LINEAR
10416.0	28B0	105	Fault response to wire breakage AI1	–	0	0	N/S/RW	0	0 = No response 1 = Immediate stop/fault 2 = Rapid stop/fault 3 = Rapid stop/warning
10416.0	28B0	839	POSTIONING INTERRUP-TION response	–	0	0	N/S/RW	6	See parameter 540 or index 9284
10432.0	28C0	074	Encoder data	–	0	0	N/RO	0	–
10432.0	28C0	079	Encoder data	–	0	0	N/RO	0	–

Index		Par. no.	Parameter	Unit/factor			Access	Default	Meaning/value range
Dec	Hex			Abbr.	Val.	Conv.			
10432.0	28C0	948	Automatic encoder replacement detection	–	0	0	N/S/RW	1	See parameter 152 or index 8488
10455.0	28D7	906	Cam distance	Inc	32	0	N/S/RW	0	–2147483647 – 0, Step 1 0 – 2147483647, Step 1
10477.0	28ED	956	CAN encoder baud rate	–	0	0	N/S/RW	2	0 = 125 kBaud 1 = 250 kBaud 2 = 500 kBaud 3 = 1 MBaud
10493.0	28FD	924	Positioning interruption detection	–	0	0	N/R/S/ RW	0	See parameter 152 or index 8488

1.4 Value and conversion index

1.4.1 Value and conversion index from the PNO sensor/actuator profile

Physical value	Value index	Unit	Abbreviation	Conversion index
	0	Without dimension		0
Length	1	Meter Millimeter Kilometer Micrometer	m mm km mm	0 –3 3 –6
Surface	2	Square meter Square millimeter Square kilometer	m^2 mm^2 km^2	0 –6 6
Volume	3	Cubic meter Liter	m^3 l	0 –3
Time	4	Second Minute Hour Day Millisecond Microsecond	Second min h d ms ms	0 70 74 77 –3 –6
Force	5	Newton Kilonewton Meganewton	N kN MN	0 3 6
Pressure	6	Pascal Kilopascal Millibar Bar	Pa kPa mbar bar	0 3 2 5
Weight	7	Kilogramm Gram Milligram Ton	kg g mg t	0 –3 –6 3
Energy, work	8	Joule Kilojoule Megajoule Watt hour Kilowatt hour Megawatt hour	J kJ MJ Wh kWh MWh	0 3 6 74 75 76
Effective power	9	Watt Kilowatt Megawatt Milliwatt	W kW MW mW	0 3 6 –3
Apparent power	10	Voltampere Kilovoltampere Megavoltampere Millivoltampere	VA kVA MVA mVA	0 3 6 –3
Speed	11	1/second 1/minute 1/hour	s^{-1} min^{-1} h^{-1}	0 67 72
Angle	12	Radiant Second Minute Degree Gon	rad " ' o g	0 79 78 80 81

Physical value	Value index	Unit	Abbreviation	Conversion index
Velocity	13	Meter/second Millimeter/second Millimeter/minute Meter/minute Kilometer/minute Millimeter/hour Meter/hour Kilometer/hour	m/s mm/s mm/min m/min km/min mm/h m/h km/h	0 –3 66 67 68 71 72 73
Flow rate	14	Cubic meter/second Cubic meter/minute Cubic meter/hour Liter/second Liter/minute Liter/hour	m3/s m3/min m3/h l/s l/min l/h	0 67 72 –3 66 71
Mass flow	15	Kilogram/second Gram/second Ton/second Gram/minute Kilogram/minute Ton/minute Gram/hour Kilogram/hour Ton/hour	kg/s g/s t/s g/min kg/min t/min g/h kg/h t/h	0 –3 3 66 67 68 71 72 73
Torque	16	Newton meter Kilonewton meter Meganewton meter	Nm kNm MNm	0 3 6
Temperature	17	Kelvin Degree Celsius Degree Fahrenheit	K °C °F	0 100 101
Temp. difference	18	Kelvin	K	0
Entropy	19	Joule/(Kelvin × kg) kJ/(K × kg) MJ/(K × kg)	J/(K × kg) kJ/(K × kg) MJ/(K × kg)	0 3 6
Enthalpy	20	Joule/kilogram Kilojoule/kilogram Megajoule/kilogram	J/kg kJ/kg MJ/kg	0 3 6
Electrical voltage	21	Volt Kilovolt Millivolt Microvolt	V kV mV mV	0 3 –3 –6
Electrical current	22	Ampere Milliampere Kiloampere Microampere	A mA kA mA	0 –3 3 –6
Electrical resistance	23	Ohm Milliohm Kiloohm Megaohm	W mW kW MW	0 –3 3 6
Ratio	24	Percent	%	0
Relative humidity	25	Percent	%	0
Absolute humidity	26	Gram/kilogram	g/kg	–3
Relative change	27	Percent	%	0
Frequency	28	Hertz Kilohertz Megahertz Gigahertz	Hz kHz MHz GHz	0 3 6 9

Conversion index	A (conversion factor)	1/A (reciprocal conversion factor)	B (offset)
0	1.E+0	1.E+0	0
1	10 = 1.E+1	1.E–1	0
2	100 = 1.E+2	1.E–2	0
3	1000 = 1.E+3	1.E–3	0
etc.			
–1	0.1 = 1.E–1	1.E+1	0
–2	0.01 = 1.E–2	1.E+2	0
–3	0.001 = 1.E–3	1.E+3	0
etc.			
66	1.E–3/60 = 1.667 E–5	6.000 E+4	0
67	1/60 = 1.667 E–2	6.000 E+1	0
68	1.E+3/60 = 1.667 E+1	6.000 E–2	0
69			0
70	60	1.667 E–2	0
71	1.E–3/3600 = 2.778 E–7	3.6 E+6	0
72	1/3600 = 2.778 E–4	3.6 E+3	0
73	1.E+3/3600 = 2.778 E–1	3.6	0
74	3600	1/3600 = 2.778 E–4	0
75	3600 × 1.E+3 = 3.600 E+6	2.778 E–7	0
76	3600 × 1.E+6 = 3.600 E+9	2.778 E–10	0
77	86 400	1/86 400 = 1.157 E–5	0
78	p / 10 800 = 2.909 E–4	3.438 E+3	0
79	p / 648 000 = 4.848 E–6	2.063 E+5	0
80	p / 180 = 1.745 E–2	5.730 E+1	0
81	p / 200 = 1.571 E–2	6.366 E+1	0
100	1	1	273.15 K
101	5/9 = 0.5556	1.8	255.37 K

1.4.2 Example

The conversion values should be used as follows:

(Physical value as multiples or fractions of the unit) =

(transferred value × unit) × A + B

Example:

Transferred via bus:

Numerical value	Value index	Conversion index
1500	4	–3

To these values, the receiver assigns the following values:

4 → Measured quantity "Time"

–3 → Unit of measurement "Milliseconds"

→ 1500 ms = 1500 s × A + B = 1500 s × 0.001 + 0 s = 1.5 s

Conversion indices exceeding +64 generally have a special meaning, which has to be determined from the above table. Such units are, for example, those for day, hour, minute, as well as non-SI compatible units, such as Fahrenheit, etc.

2 Operating Displays

2.1 7-segment Display

The 7-segment display shows the operating condition of MOVIDRIVE® and, in the event of an error, an error or warning code.

7-segment display	Unit status (high byte in status word 1)	Meaning
0	**0**	24 V operation (inverter not ready)
1	**1**	Controller inhibit active
2	**2**	No enable
3	**3**	Standstill current
4	**4**	Enable
5	**5**	n-control
6	**6**	M-control
7	**7**	Hold control
8	**8**	Factory setting
9	**9**	Limit switch contacted
A	**10**	Technology option
c	**12**	IPOS$^{plus®}$ reference travel
d	**13**	Flying start
E	**14**	Calibrate encoder
F	**Error number**	Error indicator (flashing)
H	**Status display**	Manual mode
t	**16**	Inverter is waiting for data
U	**17**	"STO" active
² (blinking dot)	-	IPOS$^{plus®}$ program is running
Flashing display	-	STOP via DBG60B
⊐1 ...⊐9	-	RAM defective

⚠ WARNING

Incorrect interpretation of display U = "STO" active.

Severe or fatal injuries.

The display U = "STO" is not safety-related and must not be used as a safety function.

2.2 DC link voltage display of size 7

	INFORMATION
	The DC link voltage display goes out about 20 seconds after the power off.

2.3 DBG60B keypad

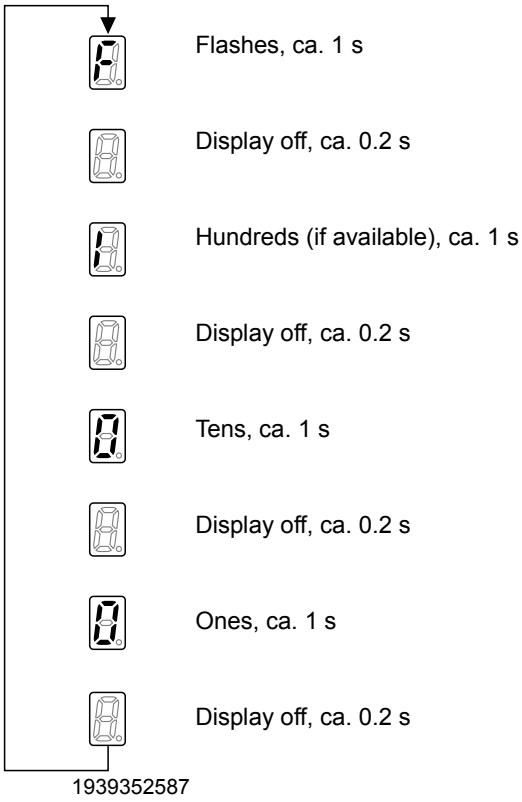
Basic displays:

0.00rpm 0.000Amp CONTROLLER INHIBIT	Display when X13:1 (DIØØ "/CONTROL.INHIBIT") = "0".
0.00rpm 0.000Amp NO ENABLE	Display when X13:1 (DIØØ "/CONTROL.INHIBIT") = "1" and inverter is not enabled ("ENABLE/STOP" = "0").
950.00rpm 0.990Amp ENABLE (VFC)	Display for enabled inverter.
NOTE 6: VALUE TOO HIGH	Information message
(DEL)=Quit ERROR 9 STARTUP	Error display

3 Error Messages and List of Errors

3.1 Error message via 7-segment display

The fault code is shown in a 7-segment display. The following display sequence is used (e.g. fault code 100):



Following a reset or if the error code resumes the value "0", the display switches to the operating display.

3.2 Suberror code – display

The suberror code is displayed in MOVITOOLS® MotionStudio (as of version 4.50) or in the DBG60B keypad.

3.3 Error list

The factory set error response is listed in the "Response P" column. (P) indicates that the response is programmable (via *P83_error response* or with IPOS$^{plus®}$). In the event of error 108, (P) indicates that the response can be programmed via *P555 DCS error response* In the event of error 109, (P) indicates that the response can be programmed via *P556 DCS alarm response*

Error			Suberror			
Code	**Designation**	**Response (P)**	**Code**	**Designation**	**Possible cause**	**Measure**
00	No error					
01	Overcurrent	Immediate disconnection	0	Output stage	• Short circuit at output • Motor too large • Defective output stage • Power supply Current converter • Ramp limit is deactivated and set ramp time is too short • Defective phase module • Supply voltage 24 V or 24V generated from it is instable • Interruption or short circuit on the signal lines from the phase modules	• Rectify the short circuit • Connect a smaller motor • Contact SEW Service for advice if the output stage is defective. • Activate P138 and/or increase ramp time
			1	V_{CE} monitoring or undervoltage monitoring of the gate driver		
			5	Inverter remains in hardware current limit		
			6	V_{CE} monitoring or undervoltage monitoring of the gate driver or overcurrent of the current converter. ..Phase U		
			7	..Phase V		
			8	..Phase W		
			9	..Phases U and V		
			10	..Phases U and W		
			11	..Phases V and W		
			12	..Phases U and V and W		
			13	Voltage supply Current converter in mains operation		
			14	MFE signal lines		
03	Ground fault	Immediate disconnection	0	Ground fault	Ground fault • in the motor lead • in the inverter • in the motor	• Eliminate ground fault • Consult SEW Service
04	Brake chopper	Immediate disconnection	0	DC link voltage too high in 4Q operation	• Too much regenerative power • Braking resistor circuit interrupted • Short circuit in the braking resistor circuit • Brake resistance too high • Brake chopper is defective	• Extend deceleration ramps • Check supply cable to braking resistor • Check technical data of braking resistor • Replace MOVIDRIVE® if the brake chopper is defective
			1			
06	Line phase failure	Immediate disconnection	0	DC link voltage periodically too low	• Phase failure • Inadequate line voltage quality	• Check the line cable • Check configuration of the supply system. • Check supply (fuses, contactor)
			3	Line frequency fault		
			4	-		
07	DC link overvoltage	Immediate disconnection	0	DC link voltage too high in 2Q operation	DC link voltage too high	• Extend deceleration ramps • Check supply cable to the braking resistor • Check technical data of braking resistor
			1			
			2	DC link voltage too high in 4Q operation .. .. Phase U		
			3	.. Phase V		
			4	.. Phase W		

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
08	Speed monitoring	Immediate disconnection (P)	0	Inverter in current limit or in slip limit	• Speed controller or current controller (in VFC operating mode without encoder) operating at setting limit due to mechanical overload or phase failure in the power supply or motor. • Encoder not connected correctly or incorrect direction of rotation. • n_{max} is exceeded during torque control. • In operating mode VFC: Output frequency ≥ 150 Hz • In operating mode V/f: Output frequency ≥ 600 Hz	• Reduce load • Increase deceleration time (P501 or P503). • Check encoder connection, swap A/A and B/B pairs if necessary • Check encoder voltage supply • Check current limitation • Extend ramps if necessary • Check motor cable and motor • Check line phases
			3	"Actual speed" system limit exceeded. Speed difference between ramp setpoint and actual value for 2×ramp time higher than expected slip.		
			4	Maximum rotating field speed exceeded. Maximum rotating field frequency (with VFC max 150 Hz and V/f max 600 Hz) exceeded.		
09	Startup	Immediate disconnection	0	Startup missing	Inverter has not been started up for the selected operating mode.	Perform startup for the required operating mode.
			1	Wrong operating mode selected		
			2	Wrong encoder type or defective encoder card		
10	IPOS-ILLOP	Emergency stop	0	Invalid IPOS command	• Incorrect command detected during IPOS$^{plus®}$ program execution. • Incorrect conditions during command execution.	• Check the content of the program memory and, if necessary, correct. • Load the correct program into the program memory. • Check program sequence (→ IPOS$^{plus®}$ manual)
11	Over-temperature	Emergency stop (P)	0	Heat sink temperature too high or temperature sensor defective	• Thermal overload of inverter • Temperature sensor of a phase module faulty. (size 7)	• Reduce load and/or ensure adequate cooling. • Check fan. • If F-11 is issued even though the temperatures is obviously not too high, this indicates a faulty temperature sensor of the phase module. Replace the phase module (Size 7)
			3	Overtemperature switched-mode power supply		
			6	Heat sink temperature too high or temperature sensor defective. ..Phase U (size 7)		
			7	..Phase V (size 7)		
			8	..Phase W (size 7)		
13	Control signal source	Immediate disconnection	0	Control signal source not available, e.g. control signal source fieldbus without fieldbus card	Control signal source not defined or defined incorrectly.	Set correct control signal source (P101).

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
14	Encoder	Immediate disconnection	0	Encoder not connected, defective encoder, defective encoder cable	• Encoder cable or shield not connected correctly • Short circuit/broken encoder wire • Encoder defective	Check encoder cable and shield for correct connection, short circuit and broken wire.
			25	Encoder error X15 – Speed range exceeded. Encoder at X15 turns faster than 6542 rpm.		
			26	Encoder error X15 – Card is defective. Error in the quadrant evaluation.		
			27	Encoder error – encoder connection or encoder is defective		
			28	Encoder error X15 – Communication error RS485 channel.		
			29	Encoder error X14 – Communication error RS485 channel.		
			30	Unknown encoder type at X14/X15		
			31	Plausibility check error Hiperface® X14/X15 Increments have been lost.		
			32	Encoder error Hiperface® X15 Hiperface® encoder at X15 signals error		
			33	Encoder error Hiperface® X14 Hiperface® encoder at X14 signals error		
			34	Encoder error X15 resolver. Encoder connection or encoder is defective.		
17	System malfunction	Immediate disconnection	0	"Stack overflow" error	Inverter electronics disrupted, possibly due to effect of EMC.	• Check grounding and shielding and improve, if necessary. • Consult SEW Service if the error reoccurs.
18			0	"Stack underflow" error		
19			0	"External NMI" error		
20			0	"Undefined opcode" error		
21			0	"Protection fault" error		
22			0	"Illegal word operand access" error		
23			0	"Illegal instruction access" error		
24			0	"Illegal external bus access" error		
25	EEPROM	Rapid stop	0	Read or write error on EEPROM power section	Access to the EEPROM of the memory card has failed	• Activate factory settings, perform reset and reset parameters. • Contact SEW service if the error occurs again. • Replace memory card.
			11	NV memory read error NV-RAM inside the unit		
			13	NV memory chip card System module defective		
			14	NV memory chip card Memory card defective		
			16	NV memory initialization error		
26	External terminal	Emergency stop (P)	0	External terminal	Read in external error signal via programmable input.	Eliminate respective cause; reprogram terminal if necessary.

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
27	No limit switches	Emergency stop	0	Both limit switches missing or open circuit	• Open circuit/both limit switches missing. • Limit switches are swapped over in relation to direction of rotation of motor	• Check wiring of limit switches. • Swap over limit switch connections. • Reprogram terminals
			2	Limit switch reversed		
			3	Both limit switches are active simultaneously		
28	Fieldbus Timeout	Rapid stop (P)	0	"Fieldbus timeout" error	No communication between master and slave within the projected response monitoring.	• Check communications routine of the master • Extend fieldbus timeout time (P819) or deactivate monitoring
			2	Fieldbus card does not boot		
29	Limit switch contacted	Emergency stop	0	Hardware limit switch approached	A limit switch was reached in IPOS$^{plus®}$ operating mode.	• Check travel range. • Correct user program.
30	Emergency stop Timeout	Immediate disconnection	0	Time violation stop emergency stop rate	• Drive overloaded • Emergency stop ramp too short.	• Check configuration • Extend emergency stop ramp
31	TF/TH sensor tripped	No response (P)	0	Thermal motor protection error	• Motor too hot, TF/TH has triggered • TF/TH of the motor not connected or connected incorrectly • MOVIDRIVE® connection and TF/TH connection on motor interrupted	• Let motor cool off and reset error • Check connections/link between MOVIDRIVE® and TF/TH. • If a TF/TH is not connected: Jumper X10:1 with X10:2. • Set P835 to "No response".
32	IPOS index overflow	Emergency stop	0	IPOS program defective	Programming principles violated leading to system internal stack overflow	Check and correct the IPOS$^{plus®}$ user program (see IPOS$^{plus®}$ manual).
33	Setpoint source	Immediate disconnection	0	Setpoint source not available, e.g. control signal source fieldbus without fieldbus card	Setpoint source not defined or defined incorrectly.	Set correct setpoint source (P100).
34	Ramp timeout	Immediate disconnection	0	Time violation rapid stop ramp	Time of downward ramps exceeded, e.g. due to overload.	• Extend the downwards ramps • Eliminate overload
35	Operating mode	Immediate disconnection	0	Operating mode not available	• Operating mode not defined or defined incorrectly • P916 was used to set a ramp function that is needed by a MOVIDRIVE® unit in technology version. • P916 was used to set a ramp type that does not match the selected technology function. • P916 was used to set a ramp type that does not match the selected synchronization time (P888).	• Use P700 or P701 to set correct operating mode. • Use MOVIDRIVE® in technology version (..OT). • From the "Startup → Select technology function..." menu, select the technology function that matches P916. • Check the settings of P916 and P888
			1	Wrong assignment operating mode - hardware		
			2	Wrong assignment operating mode - technology function		
36	Option missing	Immediate disconnection	0	Hardware is missing or not permitted.	• Type of option card not allowed • Setpoint source, control signal source or operating mode not permitted for this option card • Incorrect encoder type set for DIP11B.	• Use correct option card • Set correct setpoint source (P100) • Set correct control signal source (P101) • Set correct operating mode (P700 or P701) • Set the correct encoder type
			2	Encoder slot error.		
			3	Fieldbus slot error.		
			4	Expansion slot error.		
37	System watchdog	Immediate disconnection	0	Error "watchdog overflow system"	Error while executing system software	Consult SEW Service.
38	System software	Immediate disconnection	0	"System software" error	System malfunction	Consult SEW Service.

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
39	Reference travel	Immediate disconnection (P)	0	"Reference travel" error	• The reference cam is missing or does not switch • Limit switches are connected incorrectly • Reference travel type was changed during reference travel	• Check reference cam • Check limit switch connection • Check reference travel type setting and required parameters.
40	Boot synchronization	Immediate disconnection	0	Timeout at boot synchronization with option.	• Error during boot synchronization between inverter and option. • Synchronization ID not/ incorrectly transmitted	Install a new option card if this error reoccurs.
41	Watchdog option	Immediate disconnection	0	Error – Watchdog timer from/to option.	• Error in communication between system software and option software • Watchdog in the IPOS$^{plus®}$ program • An application module without the application version has been loaded in a MOVIDRIVE® B unit • The wrong technology function has been set if an application module is used	• Consult SEW Service. • Check IPOS program • Check whether the unit has been activated for the application version (P079) • Check the selected technology function (P078)
			17	Watchdog IPOS error.		
42	Lag error	Immediate disconnection (P)	0	Positioning lag error	• Encoder connected incorrectly • Acceleration ramps too short • P component of positioning controller too small • Incorrectly set speed controller parameters • Value of lag error tolerance too small	• Check encoder connection • Extend ramps • Set P component to higher value • Reset speed controller parameters • Increase lag error tolerance • Check wiring of encoder, motor and line phase. • Check whether mechanical system components can move freely or if they are blocked
43	RS485-Timeout	Rapid stop (P)	0	Communication timeout at RS485 interface.	Error during communication via interface RS485	Check RS485 connection (e.g. inverter - PC, inverter - DBG60B). If necessary, contact SEW Service.
44	Unit utilization	Immediate disconnection	0	Unit utilization error	• Unit utilization (IxT value) > 125%	• Decrease power output • Extend ramps • If suggested actions not possible, use larger inverter. • Reduce load
			8	UL monitoring error		
45	Initialization	Immediate disconnection	0	General error during initialization	• No parameters set for EEPROM in power section, or parameters set incorrectly. • Option card not in contact with backplane bus.	• Restore factory settings Consult SEW Service if the error still cannot be reset. • Insert the option card correctly.
			3	Data bus error during RAM check		
			6	CPU clock error.		
			7	Error in the current evaluation.		
			10	Error when setting flash protection		
			11	Data bus error during RAM check		
			12	Parameter setting error synchronous operation (internal synchronous operation)		

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
46	System bus 2 timeout	Rapid stop (P)	0	Timeout system bus CAN2	Error during communication via system bus 2.	Check system bus connection.
47	System bus 1 timeout	Rapid stop (P)	0	Timeout system bus CAN1	Error during communication via system bus 1.	Check system bus connection.
48	Hardware DRS	Immediate disconnection	0	Hardware synchronous operation	**Only with DRS11B:** • Encoder signal from master/ synchronous encoder faulty. • Hardware required for synchronous operation is faulty.	• Check encoder signals of master/synchronous encoder. • Check encoder wiring. • Replace synchronous operation card.
57	"TTL encoder"	Immediate disconnection	512	X15: Error in amplitude control	• Encoder cable or shield not connected correctly • Short circuit/broken encoder wire • Encoder defective • EMC interference	• Check encoder cable and shield for correct connection, short circuit and broken wire. • Replace the encoder • Providing for EMC measures
			16896	X14: Error in amplitude control		
			514	X15: Incorrectly set numerator/denominator values	Incorrect numerator/denominator values	Correct the numerator/denominator values
			16898	X14: Incorrectly set numerator/denominator values		
58	"Sin/cos encoder"	Immediate disconnection	512	X15: Error in amplitude control	• Encoder cable or shield not connected correctly • Short circuit/broken encoder wire • Encoder defective • EMC interference	• Check encoder cable and shield for correct connection, short circuit and broken wire. • Replace the encoder • Providing for EMC measures
			514	X15: Track signal error		
			16896	X14: Error in amplitude control		
			16897	X14: Initialization		
			16898	X14: Track signal error		
			513	X15: Initialization	Encoder defective	Replace the encoder
			515	X15: Incorrectly set numerator/denominator values	Incorrect numerator/denominator values	Correct the numerator/denominator values
			16899	X:14 Incorrect numerator/ denominator values		
59	"Encoder communication"	Rapid stop	1	X15: Track signal error	• Encoder cable or shield not connected correctly • Short circuit/broken encoder wire • Encoder defective • EMC interference	• Check encoder cable and shield for correct connection, short circuit and broken wire. • Replace the encoder • Providing for EMC measures
			16	X15: Data line fault		
			64 – 576	X15: RS485 communication		
			1088 – 1388	X15: EnDat communication		
			16385	X14: Track signal error		
			16400	X14: Data line fault		
			16448 – 16832	X14: RS485 communication		
			17472 – 17772	X14: EnDat communication		
			2	X15: Incorrect calibration of encoder	Incorrect encoder calibration or mechanical offset to motor	Delivery condition + new startup
			16386	X15: Incorrect calibration of encoder		
			1024	X15: Clocking and/or data line not connected	Clocking and/or data line not connected	Connect clocking and/or data line
			17408	X14: Clocking and/or data line not connected		
77	IPOS control word	No response (P)	0	Invalid control word IPOS	**Only in IPOS$^{plus®}$ operating mode:** • An attempt was made to set an invalid automatic mode (via external controller). • P916 = BUS RAMP is set.	• Check serial connection to external control. • Check write values of external control. • Set correct value for P016.

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
78	IPOS SW limit switch	No response (P)	0	Software limit switch reached	**Only in IPOS$^{plus®}$ operating mode:** Programmed target position is outside travel range delimited by software limit switches.	• Check the user program • Check position of the software limit switches
79	Hardware configuration	Immediate disconnection	0	Deviating hardware configuration when replacing the memory card	The following items do not match anymore after having replaced the memory card: • Power • Nominal voltage • Variant identification • Unit series • Application or standard version • Option cards	Ensure identical hardware or restore factory setting (parameter = factory setting).
80	RAM test	Immediate disconnection	0	"RAM test" error	Internal unit fault, RAM defective.	Consult SEW Service.
81	Start condition	Immediate disconnection	0	Start condition error with VFC hoist	**Only in "VFC hoist" operating mode:** The motor could not be supplied with the correct amount of current during the premagnetizing time: • Rated motor power too small in relation to rated inverter power. • Motor cable cross section too small. **Only for operation with a linear motor (as of firmware 18):** • The drive has been set to "Enable" although the commutation offset between linear motor and linear encoder is not known. This means that the inverter cannot set the current indicator correctly.	• Check startup data and perform new startup, if necessary. • Check connection between inverter and motor. • Check cross section of motor cable and increase if necessary. • Perform commutation travel in the "No enable" state and then switch to "Enable" once the inverter has acknowledged in status word bit 25 that commutation was successful.
82	Open output	Immediate disconnection	0	Output open with VFC hoist	**Only in "VFC hoist" operating mode:** • Two or all output phases interrupted. • Rated motor power too small in relation to rated inverter power.	• Check connection between inverter and motor. • Check startup data and perform new startup, if necessary.
84	Motor protection	Emergency stop (P)	0	"Motor temperature simulation" error	• Motor utilization too high. • I_N-U_L monitoring 1 triggered • P530 set later to "KTY"	• Reduce load. • Extend ramps. • Observe longer pause times. • Check P345/346 • Select a larger motor
			2	Temperature sensor wire breakage		
			3	No thermal motor model available		
			4	UL monitoring error		
			11	Temperature sensor short circuit		
86	Memory module	Immediate disconnection	0	Error in connection with memory module	• No memory card • Memory card defective	• Tighten knurled screw • Insert and secure memory card • Replace memory card • Load delivery condition and parameter set
			2	Hardware card detection wrong memory card		
87	Technology function	Immediate disconnection	0	Technology function selected with standard unit	A technology function was activated in a standard version.	Disable technology function

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
88	Flying start	Immediate disconnection	0	"Flying start" error	**Only in VFC n-CTRL operating mode:** Actual speed > 6000 rpm with the inverter enabled.	Inverter not enabled before actual speed is ≤ 6000 rpm.
92	DIP encoder problem	Error display (P)	1	Stahl WCS3 dirt problem	Encoder signals a fault	Possible cause: Encoder is dirty → clean encoder
93	DIP encoder error	Emergency stop (P)	0	Fault "Absolute encoder"	The encoder signals an error, e.g. power failure. • Connection cable between the encoder and DIP11B does not meet the requirements (twisted pair, shielded). • Cycle frequency for cable length too high. • Permitted max. speed/ acceleration of encoder exceeded. • Encoder defective.	• Check absolute encoder connection. • Check connection cables. • Set correct cycle frequency. • Reduce maximum traveling velocity or ramp. • Replace absolute encoder.
94	EEPROM checksum	Immediate shut-off	0	Power section parameters	Inverter electronics disrupted, possibly due to effect of EMC or a defect.	Send unit in for repair.
			5	Control unit data		
			6	Power section data		
			7	Invalid version of the configuration data set		
95	DIP plausibility error	Emergency stop (P)	0	Validity check of absolute position	No plausible position could be determined. • Incorrect encoder type set. • IPOS$^{plus®}$ travel parameter set incorrectly. • Numerator/denominator factor set incorrectly. • Zero adjustment performed. • Encoder defective.	• Set the correct encoder type. • Check IPOS$^{plus®}$ travel parameters. • Check traveling velocity. • Correct numerator/ denominator factor. • After zero adjustment reset. • Replace absolute encoder.
97	Copy error	Immediate disconnection	0	Parameter set upload is/ was faulty	• Memory card cannot be written or read. • Error during data transmission	• Repeat copying process • Restore default setting (P802) and repeat copying process
			1	Download of parameter set to unit cancelled.		
			2	Not possible to adopt parameters. Not possible to adopt parameters from memory card.		
98	CRC error	Immediate disconnection	0	"CRC via internal flash" error	Internal unit error Flash memory defective	Send unit in for repair.
99	IPOS ramp calculation	Immediate disconnection	0	"Ramp calculation" error	**Only in IPOS$^{plus®}$ operating mode:** Positioning ramp is sinusoidal or square and an attempt is made to change ramp times and traveling velocities with enabled inverter.	Rewrite the IPOS$^{plus®}$ program so that ramp times and traveling velocities can only be altered when the inverter is inhibited.
100	Vibration warning	Display error (P)	0	Vibrations diagnostics warning	Vibration sensor warning (→ "DUV10A" operating instructions).	Determine cause of vibrations. Continue operation until F101 occurs.
101	Vibration error	Rapid stop (P)	0	Vibration diagnostics error	Vibration sensor reports error.	SEW-EURODRIVE recommends that you remedy the cause of the vibrations immediately
102	Oil aging warning	Display error (P)	0	Oil aging warning	Error message from the oil aging sensor	Schedule oil change.
103	Oil aging error	Display error (P)	0	Oil aging error	Error message from the oil aging sensor	SEW-EURODRIVE recommends that you change the gear unit oil immediately.

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
104	Oil aging overtemperature	Display error (P)	0	Oil aging overtemperature	Overtemperature signal from the oil aging sensor	• Let oil cool down • Check if the gear unit cools properly
105	Oil aging ready signal	Display error (P)	0	Oil aging ready signal	Oil aging sensor is not ready for operation	• Check voltage supply of oil aging sensor • Check and, if necessary, replace the oil aging sensor
106	Brake wear	Display error (P)	0	Brake wear error	Brake lining worn	Replace brake lining (→ "Motors" operating instructions).
107	Line components	Immediate disconnection	1	For regeneration only: No feedback signal from main contactor.	Defective main contactor	• Check main contactor • Check control cables.
108	DCS error	Immediate stop/malfunction (P)	0	DCS error		
			1	Error during transfer of configuration data to the monitoring unit.	Interruption in connection during program download	Send the configuration files again
			2	Configuration data for software version of the subassembly is invalid.	Subassembly configured with incorrect software version of the programming interface.	Configure subassembly with permitted version of the programming interface. Then switch subassembly off and on again.
			3	Unit was programmed with incorrect programming interface.	Program or configuration data was loaded into the unit with an incorrect programming interface.	Check the design of the subassembly. Configure again with a valid programming interface. Then switch the unit off and on again.
			4	Faulty reference voltage.	• Supply voltage of the subassembly is defective. • Faulty component in the subassembly	• Check supply voltage • Switch unit off and on again
			5			
			6	Faulty system voltage.		
			7			
			8	Faulty test voltage		
			9			
			10	Faulty DC 24 V voltage supply		
			11	Ambient temperature of the unit is not in the defined range.	Temperature at the place of operation is not in the permitted range.	Check the ambient temperature.
			12	Plausibility error for position changeover	For the position changeover, ZSC, JSS or DMC is permanently activated.	• Check ZSC activation • Check JSS activation • Check DMC activation (only for monitoring via position)
			13	Faulty switching of the LOSIDE driver DO02_P / DO02_M	Short circuit of the output.	Check wiring at the output.
			14	Faulty switching of the HISIDE driver DO02_P / DO02_M		
			15	Faulty switching of the LOSIDE driver DO0_M		
			16	Faulty switching of the HISIDE driver DO0_P		
			17	Faulty switching of the LOSIDE driver DO01_M		
			18	Faulty switching of the HISIDE driver DO01_P		

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
109	DCS alarm	Rapid stop/ warning (P)	0	DCS alarm		
			1	Communication error at the CAN interface of the inverter	The DCS21B/31B option does not receive any valid data from the inverter.	• Check hardware connection to the inverter • Check version of the inverter
			2 3	Plausibility error digital input at pulse P1	No pulse1 voltage present at binary input DI1	• Check configuration of the DI1 digital input according to configuration and wiring diagram • Check wiring
			4 5	Plausibility error digital input at pulse P2		• Check configuration of the DI2 binary input according to configuration and wiring diagram • Check wiring
			6 7	Pulse 1 plausibility error at binary input DI3		• Check configuration of the DI3 binary input according to configuration and wiring diagram • Check wiring
			8 9	Pulse 1 plausibility error at binary input DI4		• Check configuration of the DI4 binary input according to configuration and wiring diagram • Check wiring
			10 11	Pulse 1 plausibility error at binary input DI5		• Check configuration of the DI5 binary input according to configuration and wiring diagram • Check wiring
			12 13	Pulse 1 plausibility error at binary input DI6		• Check configuration of the DI6 binary input according to configuration and wiring diagram • Check wiring
			14 15	Pulse 1 plausibility error at binary input DI7		• Check configuration of the DI7 binary input according to configuration and wiring diagram • Check wiring
			16 17	Pulse 1 plausibility error at binary input DI8		• Check configuration of the DI8 binary input according to configuration and wiring diagram • Check wiring

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
109	DCS alarm	Rapid stop/ warning (P)	18 19	Pulse 2 plausibility error at binary input DI1	No pulse 2 voltage present at binary input DI1.	• Check configuration of the DI1 digital input according to configuration and wiring diagram • Check wiring
			20 21	Pulse 2 plausibility error at binary input DI2		• Check configuration of the DI2 binary input according to configuration and wiring diagram • Check wiring
			22 23	Pulse 2 plausibility error at binary input DI3		• Check configuration of the DI3 binary input according to configuration and wiring diagram • Check wiring
			24 25	Pulse 2 plausibility error at binary input DI4		• Check configuration of the DI4 binary input according to configuration and wiring diagram • Check wiring
			26 27	Pulse 2 plausibility error at binary input DI5		• Check configuration of the DI5 binary input according to configuration and wiring diagram • Check wiring
			28 29	Pulse 2 plausibility error at binary input DI6		• Check configuration of the DI6 binary input according to configuration and wiring diagram • Check wiring
			30 31	Pulse 2 plausibility error at binary input DI7		• Check configuration of the DI7 binary input according to configuration and wiring diagram • Check wiring
			32 33	Pulse 2 plausibility error at binary input DI8		• Check configuration of the DI8 binary input according to configuration and wiring diagram • Check wiring
			34 35	Plausibility error in the speed recording	The difference between the two speed sensors is higher than the configured speed cut-off threshold.	• Check track again with the data of the encoder configuration. • Check the velocity sensor • Use the SCOPE function to set speed signals so that they are congruent
			36 37	Plausibility error in the position acquisition	The difference between the two position sensors is higher than the configured value.	• Check track with the configured data of the encoder setting • Check position signal • Are all signals connected correctly to the 9-pin encoder connector? • Check the encoder connector for correct wiring. Is the jumper between pin 1 and pin 2 on the 9-pin encoder connector closed (SSI absolute encoder)? • Use the SCOPE function to set positions signals so that they are congruent

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
109	DCS alarm	Rapid stop/ warning (P)	38 39	Plausibility error incorrect position range	The current position is outside the configured range.	• Check track with the configured data of the encoder setting • Check position signal, correct offset if necessary • Use the SCOPE function to read off the position and set in ratio to the configured values
			40 41	Plausibility error incorrect speed.	The current speed exceeds the configured maximum speed.	• The drive moves outside the permitted and configured speed range • Check configuration (set max. velocity) • Analyze the speed development using the SCOPE function
			42 43	Configuration error: Acceleration	The current acceleration is outside the configured acceleration range.	• Check encoder type and configuration (SSI/incremental) • Check the encoder connection/wiring • Check polarity of the encoder data • Check function of the encoder
			44 45	Plausibility error in encoder interface (A3401 = encoder 1 and A3402 = encoder 2).	The wiring of the encoder does not correspond to the configured data.	• Check encoder type and configuration (SSI/incremental) • Check the encoder connection/wiring • Check polarity of the encoder data • Check function of the encoder
			46 47	Encoder supply voltage error (A3403 = encoder 1 and A3404 = encoder 2)	Encoder voltage supply is outside the defined range (min. DC 20 V / max. DC 29 V).	• Overload in the supply voltage of the encoder; internal fuse has triggered • Check supply voltage of the DCS21B/31B option
			48 49	Reference voltage error	The reference voltage input of the encoder system is outside the defined range.	Check reference voltage input of the encoder system.
			50 51	Difference level RS485 driver 1 (error INC_B or SSI_CLK) faulty	No encoder connection, incorrect encoder type.	Check the encoder connection.
			52 53	Difference level RS485 driver 2 (error INC_A or SSI_DATA) faulty.		
			54 55	Incremental counter deviation		
			56 57	Plausibility error in encoder interface (A3401 = encoder 1 and A3402 = encoder 2)	The wiring of the encoder does not correspond to the configured data.	• Check encoder type and configuration (SSI/incremental) • Check the encoder connection/wiring • Check polarity of the encoder data • Check function of the encoder

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
109	DCS alarm	Rapid stop/ warning (P)	58	Plausibility error SIN/COS encoder connection.	Incorrect encoder type connected.	• Check encoder connection • Check the encoder connection (jumper between pin 1 and pin2)
			59			
			60	Plausibility error SSI encoder connection	Phase error of the incremental or sin/cos encoder.	• Check encoder connection • Replace the defective encoder
			61			
			62			
			63			
			64	Plausibility error - SSI encoder connection.	Connected encoder type does not correspond to the configuration.	• Check encoder connection • Check connected encoder
			65			
			66	Plausibility error - SSI listener encoder connection		
			67			
			68	Faulty switching of the LOSIDE driver DO2_M	DC 0 V short circuit at the output.	Check wiring at the output.
			69	Faulty switching of the HISIDE driver DO2_P		
			70	Faulty switching of the LOSIDE driver DO0_M		
			71	Faulty switching of the HISIDE driver DO0_P		
			72	Faulty switching of the LOSIDE driver DO1_M		
			73	Faulty switching of the HISIDE driver DO1_P		
			74	Undervoltage test watchdog for LOSIDE driver	DC 0 V short circuit at on of the DC 0 V outputs.	Check wiring at the outputs.
			75	Undervoltage test watchdog for HISIDE driver	DC 24 V short circuit at on of the DC 24 V outputs.	
			76	CCW and CW monitoring (in DMC module) activated simultaneously	Multiple activation.	Only one direction of rotation can be activated in the DMC module.
			77			
			78	CCW and CW monitoring range of the OLC activated simultaneously		
			79			
			80	CCW and CW monitoring (in JSS module) was activated simultaneously		
			81			
			82	Timeout error MET.	Input element with time monitoring is faulty.	• Check wiring of input element • Input element faulty
			83	Time monitoring start signal for confirmation button.		
			84	Timeout error MEZ.	Two-hand operation with time monitoring is faulty.	
			85	Time monitoring for two-hand button.		
			86	EMU1 monitoring error	Faulty monitoring of the external disconnection channel	• Check hardware connections • Pick-up or release time too short • Check switching contacts
			87			
			88	EMU2 monitoring error		
			89			

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
110	"Ex-e protection" error	Emergency stop	0	Duration of operation below 5 Hz exceeded	Duration of operation below 5 Hz exceeded	• Check configuration • Shorten duration of operation below 5 Hz
113	Analog input open circuit	No response (P)	0	AI1 analog input open circuit	AI1 analog input open circuit	Check wiring
116	"Timeout MOVI-PLC" error	Rapid stop/ warning	0	MOVI-PLC® communication timeout		• Check startup • Check wiring
123	Positioning interruption	Emergency stop (P)	0	Error "Positioning/ Positioning interruption"	Target monitoring when interrupted positioning process is resumed. Target would be overrun.	Perform positioning process without interruption until it is complete.
124	Ambient conditions	Emergency stop (P)	1	Permitted ambient temperature exceeded	Ambient temperature > 60°C	• Improve ventilation and cooling conditions • Improve air supply to the control cabinet; check filter mats.
196	Power section	Immediate disconnection	1	Discharge resistor	Discharge resistor overload	Observe waiting time for power on/off
			2	Hardware ID precharge/ discharge control	Incorrect precharge/discharge control variant	• Consult SEW Service • Replace precharge/discharge control
			3	Inverter coupling PLD Live	Defective inverter coupling	• Consult SEW Service • Replace inverter coupling
			4	Inverter coupling reference voltage	Defective inverter coupling	• Consult SEW Service • Replace inverter coupling
			5	Power section configuration	Different phase modules installed in the unit	• Inform SEW service. • Check and replace phase modules
			6	Control unit configuration	Control unit line inverter or motor inverter incorrect	Replace or correctly assign the control unit of line and motor inverter.
			7	Communication power section control unit	No communication	Check control unit installation.
			8	Communication precharge/discharge control inverter coupling	No communication	• Check wiring • Consult SEW Service
			10	Communication power section control unit	The inverter coupling does not support protocol	Replace inverter coupling
			11	Communication power section control unit	Faulty communication with inverter coupling at power-up (CRC error).	Replace inverter coupling
			12	Communication power section control unit	Inverter coupling uses protocol that does not match control unit	Replace inverter coupling
			13	Communication power section control unit	Faulty communication with inverter coupling during operation: More than once per second a CRC error.	Replace inverter coupling
			14	Control unit configuration	Missing PLD functionality for EEPROM data set size 7.	Replace control unit
			15	Inverter coupling error	Inverter coupling processor has signaled internal error.	• Consult SEW service if the error reoccurs • Replace inverter coupling
			16	Inverter coupling error: PLD version incompatible		Replace inverter coupling
			17	Precharge/discharge control error	Precharge/discharge control processor has signaled internal error	• Consult SEW service if the error reoccurs • Replace precharge/discharge control

Error			Suberror			
Code	Designation	Response (P)	Code	Designation	Possible cause	Measure
			18	Defective DC link fan	The DC link fan is faulty.	• Consult SEW Service • Check whether DC link choke fan is connected or faulty
			19	Communication power section control unit	Faulty communication with inverter coupling during operation: More than once per second an internal error.	• Consult SEW Service if the error reoccurs. • Replace inverter coupling
			20	Communication power section control unit	The control unit has not sent any messages to the inverter coupling for a while.	• Consult SEW Service if the error reoccurs. • Replace inverter coupling
			21	Uz measurement implausible phase R	Defective phase module	Consult SEW service if the error reoccurs
			22	Uz measurement implausible phase S		
			23	Uz measurement implausible phase T		
197	Power supply	Immediate disconnection	1	Line overvoltage (motor inverter only at start of precharging process)	Inadequate line voltage quality.	• Check supply (fuses, contactor) • Check configuration of the supply system
			2	Line undervoltage (only with line inverter)		
199	DC link charging	Immediate disconnection	4	Precharging was aborted	Unable to charge DC link.	• Precontrol overload • Connected DC link capacity too high • Short circuit in the DC link; check DC link connection in case of several units.

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