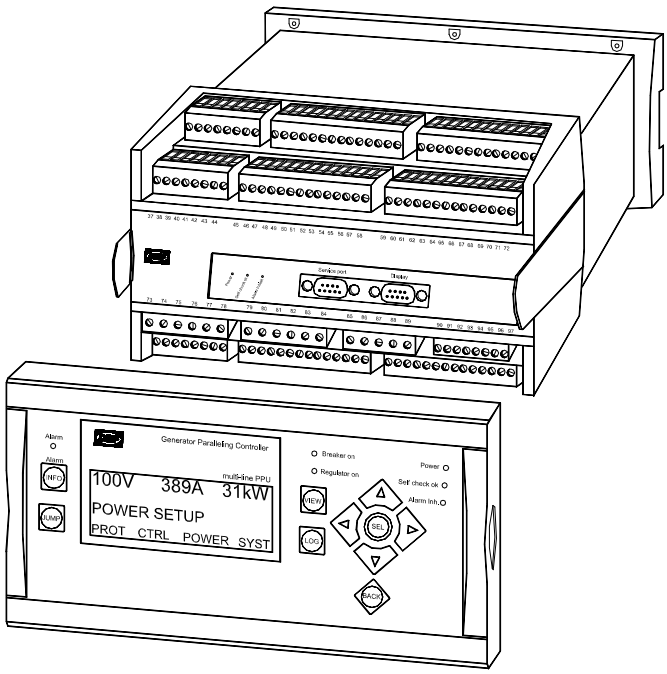
DEIF A/S

Description of options

Option H1
Serial communication – CAN open

4189340277G
SW version 2.42.X



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This manual is valid for standard multi-line 2 PPU/GPC/GPU units with firmware version 2.42.1 or later.

1. Warnings and legal information

Legal information and responsibility

DEIF takes no responsibility for installation or operation of the generator set. If there is any doubt about how to install or operate the generator set controlled by the unit, the company responsible for the installation or the operation of the set must be contacted.

The units are not to be opened by unauthorised personnel. If opened anyway, the warranty will be lost.

Electrostatic discharge awareness

Sufficient care must be taken to protect the terminals against static discharges during the installation. Once the unit is installed and connected, these precautions are no longer necessary.

Safety issues

Installing the unit implies work with dangerous currents and voltages. Therefore, the installation should only be carried out by authorised personnel who understand the risks involved in working with live electrical equipment.

Be aware of the hazardous live currents and voltages. Do not touch any AC measurement inputs as this could lead to injury or death.

Definitions

Throughout this document a number of notes and warnings will be presented. To ensure that these are noticed, they will be highlighted in order to separate them from the general text.

Notes

The notes provide general information which will be helpful for the reader to bear in mind.

Warning

The warnings indicate a potentially dangerous situation which could result in death, personal injury or damaged equipment, if certain guidelines are not followed.

2. Description of options

This document describes the functionality of the CAN open communication for the GPU, GPC and PPU.

Function	ANSI no.
CAN open communication	-

Terminal description

Term.	Function	Description
29	CAN-H	The CAN is based on CAN open
30	GND	
31	CAN-L	
32	CAN-H	
33	GND	
34	CAN-L	
35	Not used	
36	Not used	

Terminals 29 and 32 are internally connected (CAN-H).
Terminals 30 and 33 are internally connected (CAN-L).
Terminals 31 and 34 are internally connected (GND).

For wiring diagrams, please refer to the installation instructions.

3. Functional description

General introduction

This document describes the CAN bus based serial interface to the multi-line 2 GPU, GPC and PPU. The CAN protocol implementation is based on the “CAN open Application Layer” and “Communication Profile Specification CiA Draft Standard 301 Version 4.01”.

This protocol does not describe all functionalities of the CAN open communication, which have been implemented and are running in accordance with the CAN open standards and therefore require no consideration from the user. Please visit **http://www.can-cia.com** to download a detailed explanation of the CAN open description.

Transfer types

The transfer types are described shortly.

PDO transfer

Process Data Objects (PDO) provide direct access to application objects within a device, e.g. the Multi-line 2. The application objects for PDO transfer are the measurement values which can be seen in the table “Application objects for SDO/PDO transfer”, p. 9.

PDOs are used to performing real-time transfers of short blocks of high priority data. Each PDO telegram must contain one COB-ID (Communication Object-Identifier) and maximum eight bytes of data (the application objects).

PDO telegrams are used for transfer of measurement values in this protocol (e.g. UL1-L2, UL2-L3, UL3-L1, UL1-N) from a slave device (multi-line 2 unit) to the master (PLC).

SDO transfer

Service Data Object (SDO) can be used for access with read/write attributes of all application objects (some objects can only be accessed with reading or writing attribute) implemented in the multi-line 2 regarding CAN open.

SDO telegrams are used for transfer of measurement data from a slave device (multi-line 2 unit) to the master (PLC) and they are used for transferring commands from the master device (PLC) to the slave device (Multi-line 2 unit).

NMT transfer

Network Management (NMT) transfer is used to control the application in the slave device from the master.

Communication speed

The table shows the communication speed that is supported.

Bit rates	Bus length	Comment
125 kbit/s	500 m	Factory setting
50 kbit/s	1000 m	
20 kbit/s	2500 m	
10 kbit/s	5000 m	

When the bit rate is changed the multi-line 2 must be reset (powered down) to activate the new communication speed.

PDO transfer

PDO triggering mode

The transmission type 5 to 240 is supported in the multi-line 2 units. (Default value is 5 in the EDS file).

Each time the multi-line 2 unit has received 5 synchronisation objects (sync. telegrams with the COB-ID 0x80) from the master, the slave device is trigged to a response with all PDO telegrams using the transmission type 5 as trigging mode.

It is recommended to use the same transmit type for all the PDOs' telegrams in this protocol.

PDO static mapping

It is not possible to change the address ranges of the values used for PDO transfer. Therefore, the values map in each PDO is static. (See page 9 for application objects used for PDO transfer).

PDO configuration and allocation of COB-ID

In this application for CAN open there is room for 8 transmit PDOs, all PDOs are used for transfer of measurement values.

The configuration of a PDO consists of setting the communication parameters of each PDO itself, the COB-ID and the transmission type. This protocol supports 11 bit identifiers meaning the possibility of 2047 different COB-IDs.

Do not use COB-IDs for PDO transfer which is used for other communication processes in CAN open.

Each multi-line 2 unit must have a unique node-ID, which is configured in the display or in the PC utility software.

COB-IDs used for PDO transfer

The tables show the default selected COB-IDs (communication object identifiers) which are used for PDO transfer.

Default COB-ID, node 1

COB-ID		PDO telegram No.
Dec.	Hex.	
259	0x103	1
386	0x182	2
514	0x202	3
642	0x282	4
770	0x302	5
898	0x382	6
1026	0x402	7
1154	0x482	8

Default COB-ID, node 2

COB-ID		PDO telegram No.
Dec.	Hex.	
260	0x104	1
387	0x183	2
515	0x203	3
643	0x283	4
771	0x303	5
899	0x383	6
1027	0x403	7
1155	0x483	8

Example of PDO telegram

Examples of transmitting PDO telegrams from slave device to master device with node-ID number 1:

Field name	Example
COB-ID	0x103
U_{L1-L2}	2 bytes
U_{L2-L3}	2 bytes
U_{L3-L1}	2 bytes
U_{L1-N}	2 bytes

Identifier allocation

In networks where the identifier allocation is to be altered by a configuration tool using SDOs there are some recommendations which should be taken into account. SDO transfer is used to access all objects implemented in the multi-line 2 unit regarding CAN open.

Be aware of the allocation of the COB-ID for PDO transfer because some COB-IDs are pre-defined for other communication processes in CAN open.

Object	Resulting identifiers (COB-ID)
NMT module control	0
Synchronisation object	128(0x80)
SDO (transmit)	1409-1535(0x581-0x5FF)
SDO (receive)	1537-1663(0x601-0x67F)
NMT error control and boot-up service	1793-1919(0x701-0x77F)

If the configuration tools cannot read the default values for the COB-ID for PDOs from the eds-file, the COB-IDs have to be allocated manually.

Additional information

Please note the below-mentioned important information regarding CAN open features. These points must be taken into consideration when using CAN open.

1. This protocol does not support any device profile.

2. Object index 1000 and sub index 0 for device profile is implemented with the value 0x00.

3. Object index 100C and sub index 0 for guard time is implemented with the value 0x1000.

4. The guarding time must be 1000 ms as a minimum.

Please also refer to www.can-cia.com for details.

4. Tables

Application objects for PDO/SDO transfer

Table for measurement values used for PDO telegrams.

Content	Type	PDO no.
U_{L1-L2}	Generator voltage. Measured in [V]	1
U_{L2-L3}	Generator voltage. Measured in [V]	1
U_{L3-L1}	Generator voltage. Measured in [V]	1
U_{L1-N}	Generator voltage. Measured in [V]	1
U_{L2-N}	Generator voltage. Measured in [V]	2
U_{L3-N}	Generator voltage. Measured in [V]	2
F_{GEN}	Generator frequency. Measured in [Hz/100]	2
Cos-phi	-99...0...100 Generator cosinus-phi. Measured in cos-phi:100 Negative value means capacitive cos-phi	2
I_{L1}	Generator current. Measured in [A]	3
I_{L2}	Generator current. Measured in [A]	3
I_{L3}	Generator current. Measured in [A]	3
P_{GEN}	Generator active power. Measured in [W]. Negative value means reverse power	3
Q_{GEN}	Generator reactive power. Measured in [var]. Positive value means generated inductive reactive power	4
S_{GEN}	Generator seeming power. Measured in [VA]	4
[HI] E_{GEN}	Energy counter. Measured in [kWh]. Max. 300000 MWh	4
[LO] E_{GEN}	Energy counter. Measured in [kWh]. Max. 300000 MWh	4
Alarms	Bit 0 1010. Reverse power Bit 1 1020. Overcurrent step 1 Bit 2 1030. Overcurrent step 2 Bit 3 1060. Overcurrent inverse Bit 4 1070. Fast overcurrent Bit 5 1080. High overcurrent Bit 6 Reserved Bit 7 1100. U-DG high step 1 Bit 8 1110. U-DG high step 2 Bit 9 1120. U-DG low step 1 Bit 10 1130. U-DG low step 2 Bit 11 1140. f-DG high step 1 Bit 12 1150. f-DG high step 2 Bit 13 1160. f-DG low step 1 Bit 14 1170. f-DG low step 2 Bit 15 1180. U-BB high step 1	5

Content	Type		PDO no.
Alarms	Bit 0	1190. U-BB high step 2	5
	Bit 1	1200. U-BB low step 1	
	Bit 2	1210. U-BB low step 2	
	Bit 3	1220. f-BB high step 1	
	Bit 4	1230. f-BB high step 2	
	Bit 5	1240. f-BB low step 1	
	Bit 6	1250. f-BB low step 2	
	Bit 7	1260. Overload step 1	
	Bit 8	1270. Overload step 2	
	Bit 9	1280. Unbalance current	
	Bit 10	1290. Unbalance voltage	
	Bit 11	1300. Q import	
	Bit 12	1310. Q export	
	Bit 13	1320. Gen. neg. sequence current	
	Bit 14	1330. Gen. neg. sequence voltage	
	Bit 15	1390. Overload step 3	
Alarms	Bit 0	1350. df/dt (ROCOF)	5
	Bit 1	1360. Vector jump	
	Bit 2	3010. 4-20 mA input no. 1	
	Bit 3	3020. 4-20 mA input no. 2	
	Bit 4	3030. 4-20 mA input no. 3	
	Bit 5	3040. 4-20 mA input no. 4	
	Bit 6	3050. 4-20 mA input no. 5	
	Bit 7	3060. 4-20 mA input no. 6	
	Bit 8	3070. 4-20 mA input no. 7	
	Bit 9	3080. 4-20 mA input no. 8	
	Bit 10	3090. Pt100 no. 1	
	Bit 11	3100. Pt100 no. 2	
	Bit 12	3110. Overspeed (tacho)	
	Bit 13	3120. Dig. input term. 23	
	Bit 14	3130. Dig. input term. 24	
	Bit 15	3140. Dig. input term. 25	
Alarms	Bit 0	3150. Dig. input term. 26	5
	Bit 1	3160. Dig. input term. 27	
	Bit 2	3170. Dig. input term. 43	
	Bit 3	3180. Dig. input term. 44	
	Bit 4	3190. Dig. input term. 45	
	Bit 5	3200. Dig. input term. 46	
	Bit 6	3210. Dig. input term. 47	
	Bit 7	3220. Dig. input term. 48	
	Bit 8	3230. Dig. input term. 49	
	Bit 9	3240. Dig. input term. 50	
	Bit 10	3250. Dig. input term. 51	
	Bit 11	3260. Dig. input term. 52	
	Bit 12	3270. Dig. input term. 53	
	Bit 13	3280. Dig. input term. 110	
	Bit 14	3290. Dig. input term. 111	
	Bit 15	3300. Dig. input term. 112	

Content	Type		PDO no.
Alarms	Bit 0	3310. Dig. input term. 113	6
	Bit 1	3320. Dig. input term. 114	
	Bit 2	3330. Dig. input term. 115	
	Bit 3	3340. Dig. input term. 116	
	Bit 4	3350. Dig. input term. 117	
	Bit 5	3360. Dig. input term. 118	
	Bit 6	3370. Dig. input term. 127	
	Bit 7	3380. Dig. input term. 128	
	Bit 8	3390. Dig. input term. 129	
	Bit 9	3400. Dig. input term. 130	
	Bit 10	3410. Dig. input term. 131	
	Bit 11	3420. Dig. input term. 132	
	Bit 12	3430. Dig. input term. 133	
	Bit 13	3440. Oil pressure (VDO sensor 1)	
	Bit 14	3450. Water temperature (VDO sensor 2)	
	Bit 15	3460. Fuel level (VDO sensor 3)	
System alarms/status	Bit 0	Sync. fail. alarm	6
	Bit 1	Generator breaker ON	
	Bit 2	Generator breaker OFF	
	Bit 3	Generator breaker position fail. alarm	
	Bit 4	Phase sequence error alarm	
	Bit 5	Governor regulator fail. alarm	
	Bit 6	AVR regulator fail. alarm	
	Bit 7	Battery voltage alarm	
	Bit 8	Sync. timer runout	
	Bit 9	Reserved	
	Bit 10	Reserved	
	Bit 11	Start attempt alarm	
Alarm relay status	Bit 0	Relay 0	6
	Bit 1	Relay 1	
	Bit 2	Relay 2	
	Bit 3	Relay 3	
	Bit 4	Relay 4	
	Bit 5	Relay 5	
	Bit 6	Relay 6	
	Bit 7	Relay 7	
	Bit 8	Relay 8	
	Bit 9	Relay 9 (stop engine)	
	Bit 10	Relay 10	
	Bit 11	Relay 11	
	Bit 12	Relay 12	
	Bit 13	Relay 13	

Content	**Type**	**PDO no.**
Status	Bit 0 Mode 1 Bit 1 Mode 2 Bit 2 Mode 3 Bit 3 Mode 4 Bit 4 Mode 5 Bit 5 Mode 6 Bit 6 De-load Bit 7 Start sync./reg. Bit 8 Alarm inhibit Bit 9 Breaker position ON Bit 10 Synchronising	6
U_{DG-Max}	Generator max. voltage. Measured in [V]	7
U_{DG-Min}	Generator min. voltage. Measured in [V]	7
U_{SUPPLY}	Supply voltage. Measured in [V/10]	7
F_{BB}	Busbar frequency. Measured in [Hz/100]	7
	Number of alarms	8
	Number of unacknowledged alarms	8
$U_{BBL1-L2}$	Busbar. Measured in [V]	8
U_{BBL1-N}	Busbar voltage. Measured in [V]	8

Application objects for SDO transfer

These values can ONLY be accessed with SDO transfer.

Control register table

Index	Sub index	Content	Description
200F	0	Power regulator set point	0...100% of nominal power Activated in menu 4051
2010	0	PF regulator set point	60...100 stated as PF value/100. The value 100 means PF = 1 Activated in menu 4055
2011	0	Control command	Bit 0 This bit must be 1 when writing the command word. If the bit is 0, the control command is ignored. Bit 1 Mode 1 Bit 2 Mode 2 Bit 3 Mode 3 Bit 4 Mode 4 Bit 5 Mode 5 Bit 6 Mode 6 Bit 7 De-load Bit 8 Start sync./control Bit 9 Alarm inhibit Bit 10 Alarm ack. This bit is automatically reset in multi-line 2 Bit 11 Second set point (protection functions) Bit 12 Remote mode (option M1/M2) * Bit 13 Local mode (option M1/M2)*
2012	0	Frequency regulator set point	-50...50Hz/10. Based on nominal frequency Activated in menu 4042
2013	0	Voltage regulator set point	-100...100%/10 of nominal voltage Activated in menu 4043
2014	0	Reactive power regulator set point	-100...100% of nominal power. A negative value means capacitive reactive power and a positive value means inductive reactive power

Measurement table

Index	Sub index	Content	SDO transfer only
2000	0		Application version
2001	1	U_{L1-L2}	Generator voltage. Measured in [V]
2001	2	U_{L2-L3}	Generator voltage. Measured in [V]
2001	3	U_{L3-L1}	Generator voltage. Measured in [V]
2001	4	U_{L1-N}	Generator voltage. Measured in [V]
2001	5	U_{L2-N}	Generator voltage. Measured in [V]
2001	6	U_{L3-N}	Generator voltage. Measured in [V]
2002	1	F_{GEN}	Generator frequency. Measured in [Hz/100]
2002	2	Cos-phi	-99...0...100 Generator cosinus-phi. Measured in cos-phi:100. Negative value means capacitive cos-phi
2002	3	P_{GEN}	Generator active power. Measured in [kW]. Negative value means reverse power

Index	Sub index	Content	SDO transfer only
2002	4	Q_{GEN}	Generator reactive power. Measured in [kvar]. Positive value means generated inductive reactive power
2003	1	I_{L1}	Generator current. Measured in [A]
2003	2	I_{L2}	Generator current. Measured in [A]
2003	3	I_{L3}	Generator current. Measured in [A]
2004	1	$U_{BBL1-L2}$	Busbar. Measured in [V]
2004	2	F_{BB}	Busbar frequency L1. Measured in [Hz/100]
2005	1	[HI] R_{GEN}	Reactive energy counter. Measured in [kvarh]. Max. 300000 Mvarh
2005	2	[LO] R_{GEN}	Reactive energy counter. Measured in [kvarh]. Max. 300000 Mvarh
2005	3	[HI] E_{GEN}	Energy counter. Measured in [kWh]. Max. 300000 MWh
2005	4	[LO] E_{GEN}	Energy counter. Measured in [kWh]. Max. 300000 MWh
2006	1	Alarms	Bit 0 1010. Reverse power Bit 1 1020. Overcurrent step 1 Bit 2 1030. Overcurrent step 2 Bit 3 1060. Overcurrent inverse Bit 4 1070. Fast overcurrent Bit 5 1080. High overcurrent Bit 6 Reserved Bit 7 1100. U-DG high step 1 Bit 8 1110. U-DG high step 2 Bit 9 1120. U-DG low step 1 Bit 10 1130. U-DG low step 2 Bit 11 1140. f-DG high step 1 Bit 12 1150. f-DG high step 2 Bit 13 1160. f-DG low step 1 Bit 14 1170. f-DG low step 2 Bit 15 1180. U-BB high step 1
2006	2	Alarms	Bit 0 1190. U-BB high step 2 Bit 1 1200. U-BB low step 1 Bit 2 1210. U-BB low step 2 Bit 3 1220. f-BB high step 1 Bit 4 1230. f-BB high step 2 Bit 5 1240. f-BB low step 1 Bit 6 1250. f-BB low step 2 Bit 7 1260. Overload step 1 Bit 8 1270. Overload step 2 Bit 9 1280. Unbalance current Bit 10 1290. Unbalance voltage Bit 11 1300. Q import Bit 12 1310. Q export Bit 13 1320. Gen. neg. sequence current Bit 14 1330. Gen. neg. sequence voltage Bit 15 1390. Overload step 3
2006	3	Alarms	Bit 0 1350. df/dt (ROCOF) Bit 1 1360. Vector jump Bit 2 3010. 4-20 mA input no. 1 Bit 3 3020. 4-20 mA input no. 2 Bit 4 3030. 4-20 mA input no. 3 Bit 5 3040. 4-20 mA input no. 4 Bit 6 3050. 4-20 mA input no. 5 Bit 7 3060. 4-20 mA input no. 6 Bit 8 3070. 4-20 mA input no. 7

Index	Sub index	Content	SDO transfer only	
			Bit 9	3080. 4-20 mA input no. 8
			Bit 10	3090. Pt100 no. 1
			Bit 11	3100. Pt100 no. 2
			Bit 12	3110. Overspeed (tacho)
			Bit 13	3120. Dig. input term. 23
			Bit 14	3130. Dig. input term. 24
			Bit 15	3140. Dig. input term. 25
2006	4	Alarms	Bit 0	3150. Dig. input term. 26
			Bit 1	3160. Dig. input term. 27
			Bit 2	3170. Dig. input term. 43
			Bit 3	3180. Dig. input term. 44
			Bit 4	3190. Dig. input term. 45
			Bit 5	3200. Dig. input term. 46
			Bit 6	3210. Dig. input term. 47
			Bit 7	3220. Dig. input term. 48
			Bit 8	3230. Dig. input term. 49
			Bit 9	3240. Dig. input term. 50
			Bit 10	3250. Dig. input term. 51
			Bit 11	3260. Dig. input term. 52
			Bit 12	3270. Dig. input term. 53
			Bit 13	3280. Dig. input term. 110
			Bit 14	3290. Dig. input term. 111
			Bit 15	3300. Dig. input term. 112
2006	5	Alarms	Bit 0	3310. Dig. input term. 113
			Bit 1	3320. Dig. input term. 114
			Bit 2	3330. Dig. input term. 115
			Bit 3	3340. Dig. input term. 116
			Bit 4	3350. Dig. input term. 117
			Bit 5	3360. Dig. input term. 118
			Bit 6	3370. Dig. input term. 127
			Bit 7	3380. Dig. input term. 128
			Bit 8	3390. Dig. input term. 129
			Bit 9	3400. Dig. input term. 130
			Bit 10	3410. Dig. input term. 131
			Bit 11	3420. Dig. input term. 132
			Bit 12	3430. Dig. input term. 133
			Bit 13	3440. Oil pressure (VDO sensor 1)
			Bit 14	3450. Water temperature (VDO sensor 2)
			Bit 15	3460. Fuel level (VDO sensor 3)
2006	6	System alarms/ status	Bit 0	Sync. fail. alarm
			Bit 1	Generator breaker ON
			Bit 2	Generator breaker OFF
			Bit 3	Generator breaker position fail. alarm
			Bit 4	Phase sequence error alarm
			Bit 5	Governor regulator fail. alarm
			Bit 6	AVR regulator fail. alarm
			Bit 7	Battery voltage alarm
			Bit 8	Sync. timer runout
			Bit 9	Reserved
			Bit 10	Reserved
			Bit 11	Start attempt alarm

Index	Sub index	Content	SDO transfer only
2006	7	Alarm relay status	Bit 0 Relay 0 Bit 1 Relay 1 Bit 2 Relay 2 Bit 3 Relay 3 Bit 4 Relay 4 Bit 5 Relay 5 Bit 6 Relay 6 Bit 7 Relay 7 Bit 8 Relay 8 Bit 9 Relay 9 (stop engine) Bit 10 Relay 10 Bit 11 Relay 11 Bit 12 Relay 12 Bit 13 Relay 13
2007	0	Status	Bit 0 Mode 1 Bit 1 Mode 2 Bit 2 Mode 3 Bit 3 Mode 4 Bit 4 Mode 5 Bit 5 Mode 6 Bit 6 De-load Bit 7 Start sync./reg. Bit 8 Alarm inhibit Bit 9 Breaker position ON Bit 10 Synchronising
2008	1		Number of alarms
2008	2		Number of unacknowledged alarms
2009	1	U_{DG-Max}	Generator max. voltage. Measured in [V]
2009	2	U_{DG-Min}	Generator min. voltage. Measured in [V]
2009	3	$U_{BBL2-L3}$	Busbar voltage. Measured in [V]
2009	4	$U_{BBL3-L1}$	Busbar voltage. Measured in [V]
200A	1	U_{BB-Max}	Busbar max. voltage. Measured in [V]
200A	2	U_{BB-Min}	Busbar min. voltage. Measured in [V]
200A	3	U_{BBL1-N}	Busbar voltage. Measured in [V]
200A	4	U_{BBL2-N}	Busbar voltage. Measured in [V]
200A	5	U_{BBL3-N}	Busbar voltage. Measured in [V]
200B	0	S_{GEN}	Generator seeming power. Measured in [kVA]
200C	1	VDO 1	Oil pressure in [bar]/10
200C	2	VDO 2	Water temp. in [^{o}C]
200C	3	VDO 3	Fuel level in [%]
200C	4	$PHI_{BBL3-L1}$	0…359 Busbar phase angle. Measured in [deg]
200C	5	$PHI_{BBL1-DGL1}$	0…359 Busbar/generator phase angle. Measured in [deg]
200D	0		Spare
200E	0	U_{SUPPLY}	Supply voltage. Measured in [V/10]
2015	1	Pt100	-40 . 250 temperature in deg. (engine interface)
2015	2	Pt100	-40 . 250 temperature in deg. (engine interface)
2016	1		Control register table address 0
2016	2		Control register table address 1
2016	3		Control register table address 3
2016	4		Control register table address 4
2016	5		Control register table address 5

Index	Sub index	Content	SDO transfer only
2017	1		Analog input engine interface no. 1 (scaled)
2017	2		Analog input engine interface no. 2 (scaled)
2017	3		Analog input engine interface no. 3 (scaled)
2017	4		Analog input engine interface no. 4 (scaled)
2017	5		Analog input engine interface no. 5 (scaled)
2017	6		Analog input engine interface no. 6 (scaled)
2017	7		Analog input engine interface no. 7 (scaled)
2017	8		Analog input engine interface no. 8 (scaled)
2018	0	Running time	Hour
2019	0	RPM	RPM
201A	0	CB_{oper}	Circuit beaker operations counter

EDS-file

The EDS-file (ELECTRONIC DATA SHEETS) is used for configuration tools to read the implementation of the CAN open features supported in the multi-line 2 unit. The EDS file contains the object dictionary.

The object dictionary describes all data types, communication objects and application objects implemented in multi-line 2 units regarding CAN open. All objects can be accessed with SDO transfer. The object dictionary is similar to the EDS file, and to see the entire object dictionary please refer to this file.

It can be downloaded from www.deif.com and can be opened in the program Notepad.

5. Parameter list

The setup of parameters is done via the display or the PC utility software (USW).

For further information about menu structure, see the Designer's Reference Handbook.

Communication control

4050 Communication control

This selection enables/disables the CAN bus control of the parameters:

No.	Setting		Min. setting	Max. setting	Factory setting
4051	Comm. control	Power	OFF	ON	OFF
4052	Comm. control	Frequency	OFF	ON	OFF
4053	Comm. control	Voltage	OFF	ON	OFF
4054	Comm. control	VAr	OFF	ON	OFF
4055	Comm. control	PF	OFF	ON	OFF

Selecting communication control ON will overrule external and internal settings.

4060 External communication control

No.	Setting		Min. setting	Max. setting	Factory setting
4060	External comm.	Selection display	-	-	-
4061	External comm.	ID	1	50	1
4062	External comm.	Baud rate	10000	125000	125000

4090 External communication error

No.	Setting		Min. setting	Max. setting	Factory setting
4091	Ext. comm. error	Delay	1.0 s	100.0 s	10.0 s
4092	Ext. comm. error	Relay output A	R0 (none)	Option dependent	R0 (none)
4093	Ext. comm. error	Relay output B	R0 (none)		R0 (none)
4094	Ext. comm. error	Enable	OFF	ON	OFF

CAN bus alarms

- "Failed CAN transmit": E.g. noise disturbances or CAN bus line not connected
- "Failed CANBUS OFF": E.g. noise disturbances or CAN bus line short-circuited