DEIF

-power in control

CE

PARAMETER LIST



Automatic Load Controller, ALC-4

- Parameter list

DEIF A/S · Frisenborgvej 33 · DK-7800 Skive
Tel.: +45 9614 9614 · Fax: +45 9614 9615
info@deif.com · www.deif.com

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1. General information

2. Parameter list

1. General information

1.1 Warnings, legal information and safety

1.1.1 Warnings and notes

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

Warnings

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

Notes

Notes provide general information, which will be helpful for the reader to bear in mind.

1.1.2 Legal information and disclaimer

DEIF takes no responsibility for installation or operation of the generator set. If there is any doubt about how to install or operate the engine/generator controlled by the Multi-line 2 unit, the company responsible for the installation or the operation of the set must be contacted.

The Multi-line 2 unit is not to be opened by unauthorised personnel. If opened anyway, the warranty will be lost.

Disclaimer

DEIF A/S reserves the right to change any of the contents of this document without prior notice.

The English version of this document always contains the most recent and up-to-date information about the product. DEIF does not take responsibility for the accuracy of translations, and translations might not be updated at the same time as the English document. If there is a discrepancy, the English version prevails.

1.1.3 Safety issues

Installing and operating the Multi-line 2 unit may imply 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.

1.1.4 Electrostatic discharge awareness

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

1.1.5 Factory settings

The Multi-line 2 unit is delivered from factory with certain factory settings. These are based on average values and are not necessarily the correct settings for matching the engine/generator set in question. Precautions must be taken to check the settings before running the engine/generator set.

1.2 About the parameter list

1.2.1 General purpose of the parameter list

This document is a complete parameter list including all parameters, which means that some of the option parameters included may not be accessible in the system in question.

The document includes a complete standard alarm list and a complete standard parameter list for setup. Therefore, this document is to be used for reference, when information about specific alarms and parameters is needed.

Please make sure to read this document before starting to work with the Multi-line 2 unit and the genset to be controlled. Failure to do this could result in human injury or damage to the equipment.

1.2.2 Intended users of the parameter list

This Parameter List is mainly intended for the person responsible for the unit parameter setup. In most cases, this would be a panel builder designer. Naturally, other users might also find useful information here.

1.2.3 Contents and overall structure

This document is divided into chapters, and in order to make the structure simple and easy to use, each chapter will begin from the top of a new page.

2. Parameter list

2.1 Protection parameters

2.1.1 Protection parameters

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
External trip alarm (1-3)							
1971	Load group 1 Ext. trip	Enable	OFF - ON	OFF			
1972	Load group 1 Ext. trip	Fail class	Warning - Trip all	Warning			
1973	Load group 2 Ext. trip	Enable	OFF - ON	OFF			
1974	Load group 2 Ext. trip	Fail class	Warning - Trip all	Warning			
1975	Load group 3 Ext. trip	Enable	OFF - ON	OFF			
1976	Load group 3 Ext. trip	Fail class	Warning - Trip all	Warning			
External trip alarm (4-6)							
1981	Load group 4 Ext. trip	Enable	OFF - ON	OFF			
1982	Load group 4 Ext. trip	Fail class	Warning - Trip all	Warning			
1983	Load group 5 Ext. trip	Enable	OFF - ON	OFF			
1984	Load group 5 Ext. trip	Fail class	Warning - Trip all	Warning			
1985	Load group 6 Ext. trip	Enable	OFF - ON	OFF			
1986	Load group 6 Ext. trip	Fail class	Warning - Trip all	Warning			
External trip alarm (7-8)							
1991	Load group 7 Ext. trip	Enable	OFF - ON	OFF			
1992	Load group 7 Ext. trip	Fail class	Warning - Trip all	Warning			
1993	Load group 8 Ext. trip	Enable	OFF - ON	OFF			
1994	Load group 8 Ext. trip	Fail class	Warning - Trip all	Warning			

2.2 Control parameters

2.2.1 Sync parameters

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
2100 Synchronisation blackout							
2101	Synchronisation blackout	dfMax	0.0 Hz - 5.0 Hz	3.0 Hz			
2102	Synchronisation blackout	dUMax	2 % - 10 %	5 %			
2110 Load Group 1 Open fail							
2111	Load Group 1 Open fail	Timer	1.0 s 10.0 s	2.0 s			
2112	Load Group 1 Open fail	Relay output A	Not used - Option-dep.	Not used			
2113	Load Group 1 Open fail	Relay output B	Not used Option-dep.	Not used			
2114	Load Group 1 Open fail	Enable	OFF - ON	ON			
2115	Load Group 1 Open fail	Fail class	Warning - Trip all	Warning			
2120 Load Group 1 Close fail							
2121	Load Group 1 Close fail	Timer	1.0 s 10.0 s	2.0 s			
2122	Load Group 1 Close fail	Relay output A	Not used - Option-dep.	Not used			
2123	Load Group 1 Close fail	Relay output B	Not used Option-dep.	Not used			
2124	Load Group 1 Close fail	Enable	OFF - ON	ON			
2125	Load Group 1 Close fail	Fail class	Warning - Trip all	Warning			
2130 Load Group 1 position fail							
2131	Load Group 1 position fail	Timer	1.0 s 10.0 s	2.0 s			
2132	Load Group 1 position fail	Relay output A	Not used - Option-dep.	Not used			
2133	Load Group 1 position fail	Relay output B	Not used Option-dep.	Not used			
2134	Load Group 1 position fail	Enable	OFF - ON	ON			

No.	Setting		Min. Max.	Factory set-ting	Notes	Ref.	Descrip-tion
2135	Load Group 1 position fail	Fail class	Warning - Trip all	Warning			
2140 Load Group 2 Open fail							
2141	Load Group 2 Open fail	Timer	1.0 s 10.0 s	2.0 s			
2142	Load Group 2 Open fail	Relay output A	Not used - Option-dep.	Not used			
2143	Load Group 2 Open fail	Relay output B	Not used Option-dep.	Not used			
2144	Load Group 2 Open fail	Enable	OFF - ON	ON			
2145	Load Group 2 Open fail	Fail class	Warning - Trip all	Warning			
2150 Load Group 2 Close fail							
2151	Load Group 2 Close fail	Timer	1.0 s 10.0 s	2.0 s			
2152	Load Group 2 Close fail	Relay output A	Not used - Option-dep.	Not used			
2153	Load Group 2 Close fail	Relay output B	Not used Option-dep.	Not used			
2154	Load Group 2 Close fail	Enable	OFF - ON	ON			
2155	Load Group 2 Close fail	Fail class	Warning - Trip all	Warning			
2160 Load Group 2 Position fail							
2161	Load Group 2 Position fail	Timer	1.0 s 10.0 s	2.0 s			
2162	Load Group 2 Position fail	Relay output A	Not used - Option-dep.	Not used			
2163	Load Group 2 Position fail	Relay output B	Not used Option-dep.	Not used			
2164	Load Group 2 Position fail	Enable	OFF - ON	ON			
2165	Load Group 2 Position fail	Fail class	Warning - Trip all	Warning			
2170 Load Group 3 Open fail							
2171	Load Group 3 Open fail	Timer	1.0 s 10.0 s	2.0 s			
2172	Load Group 3 Open fail	Relay output A	Not used - Option-dep.	Not used			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
2173	Load Group 3 Open fail	Relay output B	Not used Option-dep.	Not used			
2174	Load Group 3 Open fail	Enable	OFF - ON	ON			
2175	Load Group 3 Open fail	Fail class	Warning - Trip all	Warning			
2180 Load Group 3 Close fail							
2181	Load Group 3 Close fail	Timer	1.0 s 10.0 s	2.0 s			
2182	Load Group 3 Close fail	Relay output A	Not used - Option-dep.	Not used			
2183	Load Group 3 Close fail	Relay output B	Not used Option-dep.	Not used			
2184	Load Group 3 Close fail	Enable	OFF - ON	ON			
2185	Load Group 3 Close fail	Fail class	Warning - Trip all	Warning			
2190 Load Group 3 Position fail							
2191	Load Group 3 Position fail	Timer	1.0 s 10.0 s	2.0 s			
2192	Load Group 3 Position fail	Relay output A	Not used - Option-dep.	Not used			
2193	Load Group 3 Position fail	Relay output B	Not used Option-dep.	Not used			
2194	Load Group 3 Position fail	Enable	OFF - ON	ON			
2195	Load Group 3 Position fail	Fail class	Warning - Trip all	Warning			
2200 Load Group 4 Open fail							
2201	Load Group 4 Open fail	Timer	1.0 s 10.0 s	2.0 s			
2202	Load Group 4 Open fail	Relay output A	Not used - Option-dep.	Not used			
2203	load group 4 Open fail	Relay output B	Not used Option-dep.	Not used			
2204	load group 4 Open fail	Enable	OFF - ON	ON			
2205	load group 4 Open fail	Fail class	Warning - Trip all	Warning			
2210 load group 4 Close fail							

No.	Setting		Min. Max.	Factory set-ting	Notes	Ref.	Descrip-tion
2211	load group 4 Close fail	Timer	1.0 s 10.0 s	2.0 s			
2212	load group 4 Close fail	Relay output A	Not used - Option-dep.	Not used			
2213	load group 4 Close fail	Relay output B	Not used Option-dep.	Not used			
2214	load group 4 Close fail	Enable	OFF - ON	ON			
2215	load group 4 Close fail	Fail class	Warning - Trip all	Warning			
2220 load group 4 Position fail							
2221	load group 4 Position fail	Timer	1.0 s 10.0 s	2.0 s			
2222	load group 4 Position fail	Relay output A	Not used - Option-dep.	Not used			
2223	load group 4 Position fail	Relay output B	Not used Option-dep.	Not used			
2224	load group 4 Position fail	Enable	OFF - ON	ON			
2225	load group 4 Position fail	Fail class	Warning - Trip all	Warning			
2230 Load group 5 Open fail							
2231	Load group 5 Open fail	Timer	1.0 s 10.0 s	2.0 s			
2232	Load group 5 Open fail	Relay output A	Not used - Option-dep.	Not used			
2233	Load group 5 Open fail	Relay output B	Not used Option-dep.	Not used			
2234	Load group 5 Open fail	Enable	OFF - ON	ON			
2235	Load group 5 Open fail	Fail class	Warning - Trip all	Warning			
2240 Load group 5 Close fail							
2241	Load group 5 Close fail	Timer	1.0 s 10.0 s	2.0 s			
2242	Load group 5 Close fail	Relay output A	Not used - Option-dep.	Not used			
2243	Load group 5 Close fail	Relay output B	Not used Option-dep.	Not used			
2244	Load group 5 Close fail	Enable	OFF - ON	ON			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
2245	Load group 5 Close fail	Fail class	Warning - Trip all	Warning			
2250 Load group 5 position fail							
2251	Load group 5 position fail	Timer	1.0 s 10.0 s	2.0 s			
2252	Load group 5 position fail	Relay output A	Not used - Option-dep.	Not used			
2253	Load group 5 position fail	Relay output B	Not used Option-dep.	Not used			
2254	Load group 5 position fail	Enable	OFF - ON	ON			
2255	Load group 5 position fail	Fail class	Warning - Trip all	Warning			
2260 Load group 6 Open fail							
2261	Load group 6 Open fail	Timer	1.0 s 10.0 s	2.0 s			
2262	Load group 6 Open fail	Relay output A	Not used - Option-dep.	Not used			
2263	Load group 6 Open fail	Relay output B	Not used Option-dep.	Not used			
2264	Load group 6 Open fail	Enable	OFF - ON	ON			
2265	Load group 6 Open fail	Fail class	Warning - Trip all	Warning			
2270 Load group 6 Close fail							
2271	Load group 6 Close fail	Timer	1.0 s 10.0 s	2.0 s			
2272	Load group 6 Close fail	Relay output A	Not used - Option-dep.	Not used			
2273	Load group 6 Close fail	Relay output B	Not used Option-dep.	Not used			
2274	Load group 6 Close fail	Enable	OFF - ON	ON			
2275	Load group 6 Close fail	Fail class	Warning - Trip all	Warning			
2280 Load group 6 position fail							
2281	Load group 6 position fail	Timer	1.0 s 10.0 s	2.0 s			
2282	Load group 6 position fail	Relay output A	Not used - Option-dep.	Not used			

No.	Setting		Min. Max.	Factory set-ting	Notes	Ref.	Descrip-tion
2283	Load group 6 position fail	Relay output B	Not used Option-dep.	Not used			
2284	Load group 6 position fail	Enable	OFF - ON	ON			
2285	Load group 6 position fail	Fail class	Warning - Trip all	Warning			
2290 Load group 7 Open fail							
2291	Load group 7 Open fail	Timer	1.0 s 10.0 s	2.0 s			
2292	Load group 7 Open fail	Relay output A	Not used - Option-dep.	Not used			
2293	Load group 7 Open fail	Relay output B	Not used Option-dep.	Not used			
2294	Load group 7 Open fail	Enable	OFF - ON	ON			
2295	Load group 7 Open fail	Fail class	Warning - Trip all	Warning			
2300 Load group 7 Close fail							
2301	Load group 7 Close fail	Timer	1.0 s 10.0 s	2.0 s			
2302	Load group 7 Close fail	Relay output A	Not used - Option-dep.	Not used			
2303	Load group 7 Close fail	Relay output B	Not used Option-dep.	Not used			
2304	Load group 7 Close fail	Enable	OFF - ON	ON			
2305	Load group 7 Close fail	Fail class	Warning - Trip all	Warning			
2310 Load group 7 position fail							
2311	Load group 7 position fail	Timer	1.0 s 10.0 s	2.0 s			
2312	Load group 7 position fail	Relay output A	Not used - Option-dep.	Not used			
2313	Load group 7 position fail	Relay output B	Not used Option-dep.	Not used			
2314	Load group 7 position fail	Enable	OFF - ON	ON			
2315	Load group 7 position fail	Fail class	Warning - Trip all	Warning			
2320 Load group 8 Open fail							

No.	Setting		Min. Max.	Factory set-ting	Notes	Ref.	Descrip-tion
2321	Load group 8 Open fail	Timer	1.0 s 10.0 s	2.0 s			
2322	Load group 8 Open fail	Relay output A	Not used - Option-dep.	Not used			
2323	Load group 8 Open fail	Relay output B	Not used Option-dep.	Not used			
2324	Load group 8 Open fail	Enable	OFF - ON	ON			
2325	Load group 8 Open fail	Fail class	Warning - Trip all	Warning			
2330 Load group 8 Close fail							
2331	Load group 8 Close fail	Timer	1.0 s 10.0 s	2.0 s			
2332	Load group 8 Close fail	Relay output A	Not used - Option-dep.	Not used			
2333	Load group 8 Close fail	Relay output B	Not used Option-dep.	Not used			
2334	Load group 8 Close fail	Enable	OFF - ON	ON			
2335	Load group 8 Close fail	Fail class	Warning - Trip all	Warning			
2340 Load group 8 position fail							
2341	Load group 8 position fail	Timer	1.0 s 10.0 s	2.0 s			
2342	Load group 8 position fail	Relay output A	Not used - Option-dep.	Not used			
2343	Load group 8 position fail	Relay output B	Not used Option-dep.	Not used			
2344	Load group 8 position fail	Enable	OFF - ON	ON			
2345	Load group 8 position fail	Fail class	Warning - Trip all	Warning			

2.3 Input/output parameters - binary input setup

2.3.1 Digital input 23-27 setup

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
3000 Digital input 23							
3001	Dig. input 23	Timer	0.0 s 100.0 s	10.0 s		Designer's Reference Handbook	The input is configurable and can have different functions in different units. Inputs 24-27 are by default used for breaker feedback. These inputs are only available if no MB or TB is present in the application.
3002	Dig. input 23	Relay output A	Not used Option-dep.	Not used			
3003	Dig. input 23	Relay output B	Not used Option-dep.	Not used			
3004	Dig. input 23	Enable	OFF ON	OFF			
3005	Dig. input 23	Fail class	Warning - Trip all	Warning			
3006	Dig. input 23	High Alarm	OFF ON	ON			

The same settings apply to inputs 24-27, menus 3010 to 3040.

2.3.2 Digital input 43-55 setup

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
3130 Digital input 43							
3131	Dig. input 43	Timer	0.0 s 100.0 s	10.0 s		Option M12	The input is configurable and can have different functions in different units.
3132	Dig. input 43	Relay output A	Not used Option-dep.	Not used			
3133	Dig. input 43	Relay output B	Not used Option-dep.	Not used			
3134	Dig. input 43	Enable	OFF ON	OFF			
3135	Dig. input 43	Fail class	Warning - Trip all	Warning			
3136	Dig. input 43	High Alarm	OFF ON	ON			

The same settings apply to inputs 44-55, menus 3140 to 3250.

2.3.3 Digital input 91-97 setup

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
3330 Digital input 91							
3331	Dig. input 91	Timer	0.0 s 100.0 s	10.0 s		Option M13.6	The input is configurable and can have different functions in different units.
3332	Dig. input 91	Relay output A	Not used Option-dep.	Not used			
3333	Dig. input 91	Relay output B	Not used Option-dep.	Not used			
3334	Dig. input 91	Enable	OFF ON	OFF			
3335	Dig. input 91	Fail class	Warning - Trip all	Warning			
3336	Dig. input 91	High Alarm	OFF ON	ON			

The same settings apply to inputs 92-97, menus 3340 to 3390.

2.3.4 Digital input 102-108 setup

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
3400 Digital input 102							
3401	Wire fail 102	Enable	OFF ON	OFF		Designer's Reference Handbook	The input is configurable and can have different functions in different units. (Only available if multi-input 102 is configured to "binary" in menu 10980).
3402	Dig. input 102	Timer	0.0 s 100.0 s	10.0 s			
3403	Dig. input 102	Relay output A	Not used Option-dep.	Not used			
3404	Dig. input 102	Relay output B	Not used Option-dep.	Not used			
3405	Dig. input 102	Enable	OFF ON	OFF			
3406	Dig. input 102	Fail class	Warning - Trip all	Warning			
3410 Digital input 105							
3411	Wire fail 105	Enable	OFF ON	OFF		Designer's Reference Handbook	The input is configurable and can have different functions in different units. (Only available if multi-input 105 is configured to "binary" in menu 10990).
3412	Dig. input 105	Timer	0.0 s 100.0 s	10.0 s			
3413	Dig. input 105	Relay output A	Not used Option-dep.	Not used			
3414	Dig. input 105	Relay output B	Not used Option-dep.	Not used			
3415	Dig. input 105	Enable	OFF ON	OFF			
3416	Dig. input 105	Fail class	F1…F8	Warning (F2)			
3420 Digital input 108							

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
3421	Wire fail 108	Enable	OFF ON	OFF		Designer's Reference Handbook	The input is configurable and can have different functions in different units. (Only available if multi-input 108 is configured to "binary" in menu 11000).
3422	Dig. input 108	Timer	0.0 s 100.0 s	10.0 s			
3423	Dig. input 108	Relay output A	Not used Option-dep.	Not used			
3424	Dig. input 108	Relay output B	Not used Option-dep.	Not used			
3425	Dig. input 108	Enable	OFF ON	OFF			
3426	Dig. input 108	Fail class	F1…F8	Warning (F2)			

2.3.5 Digital input 112-117 setup

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
3430 Digital input 112							
3431	Dig. input 112	Timer	0.0 s 100.0 s	10.0 s		Designer's Reference Handbook	The input is configurable and can have different functions in different units.
3432	Dig. input 112	Relay output A	Not used Option-dep.	Not used			
3433	Dig. input 112	Relay output B	Not used Option-dep.	Not used			
3434	Dig. input 112	Enable	OFF ON	OFF			
3435	Dig. input 112	Fail class	Warning - Trip all	Warning			
3436	Dig. input 112	High Alarm	OFF ON	ON			

The same settings apply to inputs 113-117, menus 3440 to 3480.

2.3.6 Emergency stop

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
3490 Emergency stop							
3491	Emer. stop	Timer	0.0 s 60.0 s	0.0 s		Designer's Reference Handbook	Emergency stop input is intended for a normally closed contact.
3492	Emer. stop	Relay output A	Not used Option-dep.	Not used			
3493	Emer. stop	Relay output B	Not used Option-dep.	Not used			
3494	Emer. stop	Enable	OFF ON	ON			
3495	Emer. stop	Fail class	Warning - Trip all	Warning			

2.3.7 Digital input 127-133 setup

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
3500 Digital input 127							
3501	Dig. input 127	Timer	0.0 s 100.0 s	10.0 s		Option M13.8	The input is configurable and can have different functions in different units.
3502	Dig. input 127	Relay output A	Not used Option-dep.	Not used			
3503	Dig. input 127	Relay output B	Not used Option-dep.	Not used			
3504	Dig. input 127	Enable	OFF ON	OFF			
3505	Dig. input 127	Fail class	Warning - Trip all	Warning			
3506	Dig. input 127	High Alarm	OFF ON	ON			

The same settings apply to inputs 128-133, menus 3510 to 3560.

2.3.8 M-Logic alarm 1-5 setup

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
3570 Mlogic alarm 1							
3570	Mlogic alarm 01	Timer	0.0 s 100.0 s	10.0 s		Designer's Reference Handbook	The Input is configurable in M-Logic
3571	Mlogic alarm 01	Relay output A	Not used Option-dep.	Not used			
33572	Mlogic alarm 01	Relay output B	Not used Option-dep.	Not used			
3573	Mlogic alarm 01	Enable	OFF ON	OFF			
3574	Mlogic alarm 01	Fail class	Warning - Trip all	Warning			
3575	Mlogic alarm 01	High Alarm	OFF ON	ON			

The same settings apply to alarm inputs 2-5, menus 3580 to 3610.

2.4 Input/output parameters - analogue input setup

2.4.1 Analogue input setup (option M15.6)

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4000 4-20 mA 91.1							
4001	4-20 mA 91.1	Set point	4 mA 20 mA	10 mA		Option M15.6: 4 x 4-20 mA inputs	Configurable analogue input.
4002	4-20 mA 91.1	Timer	0.0 s 600.0 s	120.0 s			
4003	4-20 mA 91.1	Relay output A	Not used Option-dep.	Not used			
4004	4-20 mA 91.1	Relay output B	Not used Option-dep.	Not used			
4005	4-20 mA 91.1	Enable	OFF ON	OFF			
4006	4-20 mA 91.1	Fail class	Warning - Trip all	Warning			
4010 4-20 mA 91.2							
4011	4-20 mA 91.2	Set point	4 mA 20 mA	10 mA		Option M15.6: 4 x 4-20 mA inputs	Configurable analogue input.
4012	4-20 mA 91.2	Timer	0.0 s 600.0 s	120.0 s			
4013	4-20 mA 91.2	Relay output A	Not used Option-dep.	Not used			
4014	4-20 mA 91.2	Relay output B	Not used Option-dep.	Not used			
4015	4-20 mA 91.2	Enable	OFF ON	OFF			
4016	4-20 mA 91.2	Fail class	Warning - Trip all	Warning			
4020 Wire fail 4-20 mA 91							
4021	W. fail ana 91	Relay output A	Not used Option-dep.	Not used		Option M15.6: 4 x 4-20 mA inputs	The wire fault will detect if the current drops below 2 mA or exceeds 22 mA. In both cases, the alarm will be activated.
4022	W. fail ana 91	Relay output B	Not used Option-dep.	Not used			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4023	W. fail ana 91	Enable	OFF ON	OFF			
4024	W. fail ana 91	Fail class	Warning - Trip all	Warning			
4030 4-20 mA 93.1							
4031	4-20 mA 93.1	Set point	4 mA 20 mA	10 mA		Option M15.6: 4 x 4-20 mA inputs	Configurable analogue input.
4032	4-20 mA 93.1	Timer	0.0 s 600.0 s	120.0 s			
4033	4-20 mA 93.1	Relay output A	Not used Option-dep.	Not used			
4034	4-20 mA 93.1	Relay output B	Not used Option-dep.	Not used			
4035	4-20 mA 93.1	Enable	OFF ON	OFF			
4036	4-20 mA 93.1	Fail class	Warning - Trip all	Warning			
4040 4-20 mA 93.2							
4041	4-20 mA 93.2	Set point	4 mA 20 mA	10 mA		Option M15.6: 4 x 4-20 mA inputs	Configurable analogue input.
4042	4-20 mA 93.2	Timer	0.0 s 600.0 s	120.0 s			
4043	4-20 mA 93.2	Relay output A	Not used Option-dep.	Not used			
4044	4-20 mA 93.2	Relay output B	Not used Option-dep.	Not used			
4045	4-20 mA 93.2	Enable	OFF ON	OFF			
4046	4-20 mA 93.2	Fail class	Warning - Trip all	Warning			
4050 Wire fail 4-20 mA 93							
4051	W. fail ana 93	Relay output A	Not used Option-dep.	Not used		Option M15.6: 4 x 4-20 mA inputs	The wire fault will detect if the current drops below 2 mA or exceeds 22 mA. In both cases, the alarm will be activated.
4052	W. fail ana 93	Relay output B	Not used Option-dep.	Not used			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4053	W. fail ana 93	Enable	OFF ON	OFF			
4054	W. fail ana 93	Fail class	Warning - Trip all	Warning			
4060 4-20 mA 95.1							
4061	4-20 mA 95.1	Set point	4 mA 20 mA	10 mA		Option M15.6: 4 x 4-20 mA inputs	Configurable analogue input.
4062	4-20 mA 95.1	Timer	0.0 s 600.0 s	120.0 s			
4063	4-20 mA 95.1	Relay output A	Not used Option-dep.	Not used			
4064	4-20 mA 95.1	Relay output B	Not used Option-dep.	Not used			
4065	4-20 mA 95.1	Enable	OFF ON	OFF			
4066	4-20 mA 95.1	Fail class	Warning - Trip all	Warning			
4070 4-20 mA 95.2							
4071	4-20 mA 95.2	Set point	4 mA 20 mA	10 mA		Option M15.6: 4 x 4-20 mA inputs	Configurable analogue input.
4072	4-20 mA 95.2	Timer	0.0 s 600.0 s	120.0 s			
4073	4-20 mA 95.2	Relay output A	Not used Option-dep.	Not used			
4074	4-20 mA 95.2	Relay output B	Not used Option-dep.	Not used			
4075	4-20 mA 95.2	Enable	OFF ON	OFF			
4076	4-20 mA 95.2	Fail class	Warning - Trip all	Warning			
4080 Wire fail 4-20 mA 95							
4081	W. fail ana 95	Relay output A	Not used Option-dep.	Not used		Option M15.6: 4 x 4-20 mA inputs	The wire fault will detect if the current drops below 2 mA or exceeds 22 mA. In both cases, the alarm will be activated.
4082	W. fail ana 95	Relay output B	Not used Option-dep.	Not used			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4083	W. fail ana 95	Enable	OFF ON	OFF			
4084	W. fail ana 95	Fail class	F1…F8	Warning			
4090 4-20 mA 97.1							
4091	4-20 mA 97.1	Set point	4 mA 20 mA	10 mA		Option M15.6: 4 x 4-20 mA inputs	Configurable analogue input.
4092	4-20 mA 97.1	Timer	0.0 s 600.0 s	120.0 s			
4093	4-20 mA 97.1	Relay output A	Not used Option-dep.	Not used			
4094	4-20 mA 97.1	Relay output B	Not used Option-dep.	Not used			
4095	4-20 mA 97.1	Enable	OFF ON	OFF			
4096	4-20 mA 97.1	Fail class	Warning - Trip all	Warning			
4100 4-20 mA 97.2							
4101	4-20 mA 97.2	Set point	4 mA 20 mA	10 mA		Option M15.6: 4 x 4-20 mA inputs	Configurable analogue input.
4102	4-20 mA 97.2	Timer	0.0 s 600.0 s	120.0 s			
4103	4-20 mA 97.2	Relay output A	Not used Option-dep.	Not used			
4104	4-20 mA 97.2	Relay output B	Not used Option-dep.	Not used			
4105	4-20 mA 97.2	Enable	OFF ON	OFF			
4106	4-20 mA 97.2	Fail class	Warning - Trip all	Warning			
4110 Wire fail 4-20 mA 97							
4111	W. fail ana 97	Relay output A	Not used Option-dep.	Not used		Option M15.6: 4 x 4-20 mA inputs	The wire fault will detect if the current drops below 2 mA or exceeds 22 mA. In both cases, the alarm will be activated.
4112	W. fail ana 97	Relay output B	Not used Option-dep.	Not used			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4113	W. fail ana 97	Enable	OFF ON	OFF			
4114	W. fail ana 97	Fail class	Warning - Trip all	Warning			

2.5 Input/output parameters - multi-functional analogue input setup

2.5.1 Multi-input no. 102

The available menus for multi-input no. 102 depend on the input type configured in the PC utility software (menu 10980).

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4120 4-20 mA 102.1							
4121	4-20 mA 102.1	Set point	4 mA 20 mA	10 mA		Designer's Reference Handbook	The multi-input 102 has been configured as 4-20 mA.
4122	4-20 mA 102.1	Timer	0.0 s 999.0 s	120.0 s			
4123	4-20 mA 102.1	Relay output A	Not used Option-dep.	Not used			
4124	4-20 mA 102.1	Relay output B	Not used Option-dep.	Not used			
4125	4-20 mA 102.1	Enable	OFF ON	OFF			
4126	4-20 mA 102.1	Fail class	Warning - Trip all	Warning			
4130 4-20 mA 102.2							
4131	4-20 mA 102.2	Set point	4 mA 20 mA	10 mA		Designer's Reference Handbook	The multi-input 102 has been configured as 4-20 mA.
4132	4-20 mA 102.2	Timer	0.0 s 999.0 s	120.0 s			
4133	4-20 mA 102.2	Relay output A	Not used Option-dep.	Not used			
4134	4-20 mA 102.2	Relay output B	Not used Option-dep.	Not used			
4135	4-20 mA 102.2	Enable	OFF ON	OFF			
4136	4-20 mA 102.2	Fail class	Warning - Trip all	Warning			
4140 V DC 102.1							
4141	V DC 102.1	Set point	0.0 V DC 40.0 V DC	20.0 V DC		Designer's Reference Handbook	The multi-input 102 has been configured as V DC.

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4142	V DC 102.1	Timer	0.2 s 999.0 s	10.0 s			
4143	V DC 102.1	Relay output A	Not used Option-dep.	Not used			
4144	V DC 102.1	Relay output B	Not used Option-dep.	Not used			
4145	V DC 102.1	Enable	OFF ON	OFF			
4146	V DC 102.1	Fail class	Warning - Trip all	Warning			
4150 V DC 102.2							
4151	V DC 102.2	Set point	0.0 V DC 40.0 V DC	20.0 V DC		Designer's Reference Handbook	The multi-input 102 has been configured as V DC.
4152	V DC 102.2	Timer	0.2 s 999.0 s	10.0 s			
4153	V DC 102.2	Relay output A	Not used Option-dep.	Not used			
4154	V DC 102.2	Relay output B	Not used Option-dep.	Not used			
4155	V DC 102.2	Enable	OFF ON	OFF			
4156	V DC 102.2	Fail class	Warning - Trip all	Warning			
4160 Pt100 102.1							
4161	PT 102.1	Set point	-49 482	80		Designer's Reference Handbook	The multi-input 102 has been configured as Pt100. Pt100 set point can be in deg. C or Fahrenheit, dependent on the unit selection (menu 10970).
4162	PT 102.1	Timer	0.0 s 999.0 s	5.0 s			
4163	PT 102.1	Relay output A	Not used Option-dep.	Not used			
4164	PT 102.1	Relay output B	Not used Option-dep.	Not used			
4165	PT 102.1	Enable	OFF ON	OFF			
4166	PT 102.1	Fail class	Warning - Trip all	Warning			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4170 Pt100 102.2							
4171	PT 102.2	Set point	-49 482	80		Designer's Reference Handbook	The multi-input 102 has been configured as Pt100. Pt100 set point can be in deg. C or Fahrenheit, dependent on the unit selection (menu 10970).
4172	PT 102.2	Timer	0.0 s 999.0 s	10.0 s			
4173	PT 102.2	Relay output A	Not used Option-dep.	Not used			
4174	PT 102.2	Relay output B	Not used Option-dep.	Not used			
4175	PT 102.2	Enable	OFF ON	OFF			
4176	PT 102.2	Fail class	Warning - Trip all	Warning			
4240 Wire fail 102							
4241	W. fail 102	Relay output A	Not used Option-dep.	Not used		Designer's Reference Handbook	The wire break fault detection is activated.
4242	W. fail 102	Relay output B	Not used Option-dep.	Not used			
4243	W. fail 102	Enable	OFF ON	OFF			
4244	W. fail 102	Fail class	Warning - Trip all	Warning			

2.5.2 Multi-input no. 105

The available menus for multi-input no. 105 depend on the input type configured in the PC utility software (menu 10990).

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4250 4-20 mA 105.1							
4251	4-20 mA 105.1	Set point	4 mA 20 mA	10 mA		Designer's Reference Handbook	The multi-input 105 has been configured as 4-20 mA.
4252	4-20 mA 105.1	Timer	0.0 s 999.0 s	120.0 s			
4253	4-20 mA 105.1	Relay output A	Not used Option-dep.	Not used			
4254	4-20 mA 105.1	Relay output B	Not used Option-dep.	Not used			
4255	4-20 mA 105.1	Enable	OFF ON	OFF			
4256	4-20 mA 105.1	Fail class	Warning - Trip all	Warning			
4260 4-20 mA 105.2							
4261	4-20 mA 105.2	Set point	4 mA 20 mA	10 mA		Designer's Reference Handbook	The multi-input 105 has been configured as 4-20 mA.
4262	4-20 mA 105.2	Timer	0.0 s 999.0 s	120.0 s			
4263	4-20 mA 105.2	Relay output A	Not used Option-dep.	Not used			
4264	4-20 mA 105.2	Relay output B	Not used Option-dep.	Not used			
4265	4-20 mA 105.2	Enable	OFF ON	OFF			
4266	4-20 mA 105.2	Fail class	Warning - Trip all	Warning			
4270 V DC 105.1							
4271	V DC 105.1	Set point	0.0 V DC 40.0 V DC	20.0 V DC		Designer's Reference Handbook	The multi-input 105 has been configured as V DC.
4272	V DC 105.1	Timer	0.2 s 999.0 s	10.0 s			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4273	V DC 105.1	Relay output A	Not used Option-dep.	Not used			
4274	V DC 105.1	Relay output B	Not used Option-dep.	Not used			
4275	V DC 105.1	Enable	OFF ON	OFF			
4276	V DC 105.1	Fail class	Warning - Trip all	Warning			
4280 V DC 105.2							
4281	V DC 105.2	Set point	0.0 V DC 40.0 V DC	20.0 V DC		Designer's Reference Handbook	The multi-input 105 has been configured as V DC.
4282	V DC 105.2	Timer	0.2 s 999.0 s	10.0 s			
4283	V DC 105.2	Relay output A	Not used Option-dep.	Not used			
4284	V DC 105.2	Relay output B	Not used Option-dep.	Not used			
4285	V DC 105.2	Enable	OFF ON	OFF			
4286	V DC 105.2	Fail class	Warning - Trip all	Warning			
4290 Pt100 105.1							
4291	PT 105.1	Set point	-49 482	80		Designer's Reference Handbook	The multi-input 105 has been configured as Pt100. Pt100 set point can be in deg. C or F, dependent on the unit selection (menu 10970).
4292	PT 105.1	Timer	0.0 s 999.0 s	5.0 s			
4293	PT 105.1	Relay output A	Not used Option-dep.	Not used			
4294	PT 105.1	Relay output B	Not used Option-dep.	Not used			
4295	PT 105.1	Enable	OFF ON	OFF			
4296	PT 105.1	Fail class	Warning - Trip all	Warning			
4300 Pt100 105.2							

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4301	PT 105.2	Set point	-49 482	80		Designer's Reference Handbook	The multi-input 105 has been configured as Pt100. Pt100 set point can be in deg. C or F, dependent on the unit selection (menu 10970).
4302	PT 105.2	Timer	0.0 s 999.0 s	10.0 s			
4303	PT 105.2	Relay output A	Not used Option-dep.	Not used			
4304	PT 105.2	Relay output B	Not used Option-dep.	Not used			
4305	PT 105.2	Enable	OFF ON	OFF			
4306	PT 105.2	Fail class	Warning - Trip all	Warning			
4370 Wire fail 105							
4371	W. fail 105	Relay output A	Not used Option-dep.	Not used		Designer's Reference Handbook	The wire break fault detection is activated.
4372	W. fail 105	Relay output B	Not used Option-dep.	Not used			
4373	W. fail 105	Enable	OFF ON	OFF			
4374	W. fail 105	Fail class	Warning - Trip all	Warning			

2.5.3 Multi-input no. 108

The available menus for multi-input no. 108 depend on the input type configured in the PC utility software (menu 11000).

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4380 4-20 mA 108.1							
4381	4-20 mA 108.1	Set point	4 mA 20 mA	10 mA		Designer's Reference Handbook	The multi-input 108 has been configured as 4-20 mA.
4382	4-20 mA 108.1	Timer	0.0 s 999.0 s	120.0 s			
4383	4-20 mA 108.1	Relay output A	Not used Option-dep.	Not used			
4384	4-20 mA 108.1	Relay output B	Not used Option-dep.	Not used			
4385	4-20 mA 108.1	Enable	OFF ON	OFF			
4386	4-20 mA 108.1	Fail class	Warning - Trip all	Warning			
4390 4-20 mA 108.2							
4391	4-20 mA 108.2	Set point	4 mA 20 mA	10 mA		Designer's Reference Handbook	The multi-input 108 has been configured as 4-20 mA.
4392	4-20 mA 108.2	Timer	0.0 s 999.0 s	120.0 s			
4393	4-20 mA 108.2	Relay output A	Not used Option-dep.	Not used			
4394	4-20 mA 108.2	Relay output B	Not used Option-dep.	Not used			
4395	4-20 mA 108.2	Enable	OFF ON	OFF			
4396	4-20 mA 108.2	Fail class	Warning - Trip all	Warning			
4400 V DC 108.1							
4401	V DC 108.1	Set point	0.0 V DC 40.0 V DC	20.0 V DC		Designer's Reference Handbook	The multi-input 108 has been configured as V DC.
4402	V DC 108.1	Timer	0.2 s 999.0 s	10.0 s			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4403	V DC 108.1	Relay output A	Not used Option-dep.	Not used			
4404	V DC 108.1	Relay output B	Not used Option-dep.	Not used			
4405	V DC 108.1	Enable	OFF ON	OFF			
4406	V DC 108.1	Fail class	Warning - Trip all	Warning			
4410 V DC 108.2							
4411	V DC 108.2	Set point	0.0 V DC 40.0 V DC	20.0 V DC		Designer's Reference Handbook	The multi-input 108 has been configured as V DC.
4412	V DC 108.2	Timer	0.2 s 999.0 s	10.0 s			
4413	V DC 108.2	Relay output A	Not used Option-dep.	Not used			
4414	V DC 108.2	Relay output B	Not used Option-dep.	Not used			
4415	V DC 108.2	Enable	OFF ON	OFF			
4416	V DC 108.2	Fail class	Warning - Trip all	Warning			
4420 Pt100 108.1							
4421	PT 108.1	Set point	-49 482	80		Designer's Reference Handbook	The multi-input 108 has been configured as Pt100. Pt100 set point can be in deg. C or F, dependent on the unit selection (menu 10970).
4422	PT 108.1	Timer	0.0 s 999.0 s	5.0 s			
4423	PT 108.1	Relay output A	Not used Option-dep.	Not used			
4424	PT 108.1	Relay output B	Not used Option-dep.	Not used			
4425	PT 108.1	Enable	OFF ON	OFF			
4426	PT 108.1	Fail class	Warning - Trip all	Warning			
4430 Pt100 108.2							

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4431	PT 108.2	Set point	-49 482	80		Designer's Reference Handbook	The multi-input 108 has been configured as Pt100. Pt100 set point can be in deg. C or F, dependent on the unit selection (menu 10970).
4432	PT 108.2	Timer	0.0 s 999.0 s	10.0 s			
4433	PT 108.2	Relay output A	Not used Option-dep.	Not used			
4434	PT 108.2	Relay output B	Not used Option-dep.	Not used			
4435	PT 108.2	Enable	OFF ON	OFF			
4436	PT 108.2	Fail class	Warning - Trip all	Warning			
4500 Wire fail 108							
4501	W. fail 108	Relay output A	Not used Option-dep.	Not used		Designer's Reference Handbook	The wire break fault detection is activated.
4502	W. fail 108	Relay output B	Not used Option-dep.	Not used			
4503	W. fail 108	Enable	OFF ON	OFF			
4504	W. fail 108	Fail class	Warning - Trip all	Warning			

2.5.4 Differential measurement

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4600 Delta analogue inputs 1, 2, 3							
4601	Delta Ana1 inpA	Input	Multi-input 102 - Multi-input 108	Multi-input 102		Designer's reference Handbook	
4602	Delta Ana1 inpB	Input	Multi-input 102 - Multi-input 108	Multi-input 102			
4603	Delta Ana2 inpA	Input	Multi-input 102 - Multi-input 108	Multi-input 102			
4604	Delta Ana2 inpB	Input	Multi-input 102 - Multi-input 108	Multi-input 102			
4605	Delta Ana3 inpA	Input	Multi-input 102 - Multi-input 108	Multi-input 102			
4606	Delta Ana3 inpB	Input	Multi-input 102 - Multi-input 108	Multi-input 102			
4610 Delta analogue 1.1							
4611	Delta Ana1.1	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 1.1
4612	Delta Ana1.1	Timer	0.0 s - 999.0 s	5.0 s			
4613	Delta Ana1.1	Relay output A	Not used - Option- dep.	Not used			
4614	Delta Ana1.1	Relay output B	Not used - Option- dep.	Not used			
4615	Delta Ana1.1	Enable	OFF - ON	OFF			
4616	Delta Ana1.1	Fail class	Warning - Trip all	Warning			
4620 Delta analogue 1.2							

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4621	Delta Ana1.2	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 1.2
4622	Delta Ana1.2	Timer	0.0 s - 999.0 s	5.0 s			
4623	Delta Ana1.2	Relay output A	Not used - Option- dep.	Not used			
4624	Delta Ana1.2	Relay output B	Not used - Option- dep.	Not used			
4625	Delta Ana1.2	Enable	OFF - ON	OFF			
4626	Delta Ana1.2	Fail class	Warning - Trip all	Warning			
4630 Delta analogue 2.1							
4631	Delta Ana2.1	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 2.1
4632	Delta Ana2.1	Timer	0.0 s - 999.0 s	5.0 s			
4633	Delta Ana2.1	Relay output A	Not used - Option- dep.	Not used			
4634	Delta Ana2.1	Relay output B	Not used - Option- dep.	Not used			
4635	Delta Ana2.1	Enable	OFF - ON	OFF			
4636	Delta Ana2.1	Fail class	Warning - Trip all	Warning			
4640 Delta analogue 2.2							
4641	Delta Ana2.2	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 2.2
4642	Delta Ana2.2	Timer	0.0 s - 999.0 s	5.0 s			
4643	Delta Ana2.2	Relay output A	Not used - Option- dep.	Not used			
4644	Delta Ana2.2	Relay output B	Not used - Option- dep.	Not used			
4645	Delta Ana2.2	Enable	OFF - ON	OFF			
4646	Delta Ana2.2	Fail class	Warning - Trip all	Warning			
4650 Delta analogue 3.1							

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4651	Delta Ana3.1	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 3.1
4652	Delta Ana3.1	Timer	0.0 s - 999.0 s	5.0 s			
4653	Delta Ana3.1	Relay output A	Not used - Option- dep.	Not used			
4654	Delta Ana3.1	Relay output B	Not used - Option- dep.	Not used			
4655	Delta Ana3.1	Enable	OFF - ON	OFF			
4656	Delta Ana3.1	Fail class	Warning - Trip all	Warning			
4660 Delta analogue 3.2							
4661	Delta Ana3.2	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 3.2
4662	Delta Ana3.2	Timer	0.0 s - 999.0 s	5.0 s			
4663	Delta Ana3.2	Relay output A	Not used - Option- dep.	Not used			
4664	Delta Ana3.2	Relay output B	Not used - Option- dep.	Not used			
4665	Delta Ana3.2	Enable	OFF - ON	OFF			
4666	Delta Ana3.2	Fail class	Warning - Trip all	Warning			
4600 Delta analogue inputs							
4671	Delta Ana4 inpA	Input	Multi-input 102 - Multi-input 108	Multi-input 102		Designer's reference Handbook	
4672	Delta Ana4 inpB	Input	Multi-input 102 - Multi-input 108	Multi-input 102			
4673	Delta Ana5 inpA	Input	Multi-input 102 - Multi-input 108	Multi-input 102			
4674	Delta Ana5 inpB	Input	Multi-input 102 - Multi-input 108	Multi-input 102			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4675	Delta Ana6 inpA	Input	Multi-input 102 - Multi-input 108	Multi-input 102			
4676	Delta Ana6 inpB	Input	Multi-input 102 - Multi-input 108	Multi-input 102			
4680 Delta analogue 4.1							
4681	Delta Ana4.1	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 4.1
4682	Delta Ana4.1	Timer	0.0 s - 999.0 s	5.0 s			
4683	Delta Ana4.1	Relay output A	Not used - Option- dep.	Not used			
4684	Delta Ana4.1	Relay output B	Not used - Option- dep.	Not used			
4685	Delta Ana4.1	Enable	OFF - ON	OFF			
4686	Delta Ana4.1	Fail class	Warning - Trip all	Warning			
4690 Delta analogue 4.2							
4691	Delta Ana4.2	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 4.2
4692	Delta Ana4.2	Timer	0.0 s - 999.0 s	5.0 s			
4693	Delta Ana4.2	Relay output A	Not used - Option- dep.	Not used			
4694	Delta Ana4.2	Relay output B	Not used - Option- dep.	Not used			
4695	Delta Ana4.2	Enable	OFF - ON	OFF			
4696	Delta Ana4.2	Fail class	Warning - Trip all	Warning			
4700 Delta analogue 5.1							
4701	Delta Ana5.1	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 5.1
4702	Delta Ana5.1	Timer	0.0 s - 999.0 s	5.0 s			
4703	Delta Ana5.1	Relay output A	Not used - Option- dep.	Not used			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4704	Delta Ana5.1	Relay output B	Not used - Option- dep.	Not used			
4705	Delta Ana5.1	Enable	OFF - ON	OFF			
4706	Delta Ana5.1	Fail class	Warning - Trip all	Warning			
4710 Delta analogue 5.2							
4711	Delta Ana5.2	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 5.2
4712	Delta Ana5.2	Timer	0.0 s - 999.0 s	5.0 s			
4713	Delta Ana5.2	Relay output A	Not used - Option- dep.	Not used			
4714	Delta Ana5.2	Relay output B	Not used - Option- dep.	Not used			
4715	Delta Ana5.2	Enable	OFF - ON	OFF			
4716	Delta Ana5.2	Fail class	Warning - Trip all	Warning			
4720 Delta analogue 6.1							
4721	Delta Ana6.1	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 6.1
4722	Delta Ana6.1	Timer	0.0 s - 999.0 s	5.0 s			
4723	Delta Ana6.1	Relay output A	Not used - Option- dep.	Not used			
4724	Delta Ana6.1	Relay output B	Not used - Option- dep.	Not used			
4725	Delta Ana6.1	Enable	OFF - ON	OFF			
4726	Delta Ana6.1	Fail class	Warning - Trip all	Warning			
4730 Delta analogue 6.2							
4731	Delta Ana6.2	Set point	-9999 - 9999	10		Designer's Reference Handbook	Delta analogue alarm set- ting 6.2
4732	Delta Ana6.2	Timer	0.0 s - 999.0 s	5.0 s			
4733	Delta Ana6.2	Relay output A	Not used - Option- dep.	Not used			
4734	Delta Ana6.2	Relay output B	Not used - Option- dep.	Not used			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4735	Delta Ana6.2	Enable	OFF - ON	OFF			
4736	Delta Ana6.2	Fail class	Warning - Trip all	Warning			

2.5.5 Analogue input setup (option M15.8)

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4800 4-20 mA 127.1							
4801	4-20 mA 127.1	Set point	4 mA 20 mA	10 mA		Option: 4 x 4-20 mA inputs (M15.8)	Configurable analogue input.
4802	4-20 mA 127.1	Timer	0.0 s 600.0 s	120.0 s			
4803	4-20 mA 127.1	Relay output A	Not used Option-dep.	Not used			
4804	4-20 mA 127.1	Relay output B	Not used Option-dep.	Not used			
4805	4-20 mA 127.1	Enable	OFF ON	OFF			
4806	4-20 mA 127.1	Fail class	Warning - Trip all	Warning			
4810 4-20 mA 127.2							
4811	4-20 mA 127.2	Set point	4 mA 20 mA	10 mA		Option: 4 x 4-20 mA inputs (M15.8)	Configurable analogue input.
4812	4-20 mA 127.2	Timer	0.0 s 600.0 s	120.0 s			
4813	4-20 mA 127.2	Relay output A	Not used Option-dep.	Not used			
4814	4-20 mA 127.2	Relay output B	Not used Option-dep.	Not used			
4815	4-20 mA 127.2	Enable	OFF ON	OFF			
4816	4-20 mA 127.2	Fail class	Warning - Trip all	Warning			
4820 wire fail 4-20 mA 127							
4821	W. fail ana 127	Relay output A	Not used Option-dep.	Not used		Option: 4 x 4-20 mA inputs (M15.8)	The wire fault will detect if the current drops below 2 mA or exceeds 22 mA. In both cases, the alarm will be activated.
4822	W. fail ana 127	Relay output B	Not used Option-dep.	Not used			
4823	W. fail ana 127	Enable	OFF ON	OFF			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4824	W. fail ana 127	Fail class	Warning - Trip all	Warning			
4830 4-20 mA 129.1							
4831	4-20 mA 129.1	Set point	4 mA 20 mA	10 mA		Option: 4 x 4-20 mA inputs (M15.8)	Configurable analogue input.
4832	4-20 mA 129.1	Timer	0.0 s 600.0 s	120.0 s			
4833	4-20 mA 129.1	Relay output A	Not used Option-dep.	Not used			
4834	4-20 mA 129.1	Relay output B	Not used Option-dep.	Not used			
4835	4-20 mA 129.1	Enable	OFF ON	OFF			
4836	4-20 mA 129.1	Fail class	Warning - Trip all	Warning			
4840 4-20 mA 129.2							
4841	4-20 mA 129.2	Set point	4 mA 20 mA	10 mA		Option: 4 x 4-20 mA inputs (M15.8)	Configurable analogue input.
4842	4-20 mA 129.2	Timer	0.0 s 600.0 s	120.0 s			
4843	4-20 mA 129.2	Relay output A	Not used Option-dep.	Not used			
4844	4-20 mA 129.2	Relay output B	Not used Option-dep.	Not used			
4845	4-20 mA 129.2	Enable	OFF ON	OFF			
4846	4-20 mA 129.2	Fail class	Warning - Trip all	Warning			
4850 Wire fail 4-20 mA 129.2							
4851	W. fail ana 129	Relay output A	Not used Option-dep.	Not used		Option: 4 x 4-20 mA inputs (M15.8)	The wire fault will detect if the current drops below 2 mA or exceeds 22 mA. In both cases, the alarm will be activated.
4852	W. fail ana 129	Relay output B	Not used Option-dep.	Not used			
4853	W. fail ana 129	Enable	OFF ON	OFF			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4854	W. fail ana 129	Fail class	Warning - Trip all	Warning			
4860 4-20 mA 131.1							
4861	4-20 mA 131.1	Set point	4 mA 20 mA	10 mA		Option: 4 x 4-20 mA inputs (M15.8)	Configurable analogue input.
4862	4-20 mA 131.1	Timer	0.0 s 600.0 s	120.0 s			
4863	4-20 mA 131.1	Relay output A	Not used Option-dep.	Not used			
4864	4-20 mA 131.1	Relay output B	Not used Option-dep.	Not used			
4865	4-20 mA 131.1	Enable	OFF ON	OFF			
4866	4-20 mA 131.1	Fail class	Warning - Trip all	Warning			
4870 4-20 mA 131.2							
4871	4-20 mA 131.2	Set point	4 mA 20 mA	10 mA		Option: 4 x 4-20 mA inputs (M15.8)	Configurable analogue input.
4872	4-20 mA 131.2	Timer	0.0 s 600.0 s	120.0 s			
4873	4-20 mA 131.2	Relay output A	Not used Option-dep.	Not used			
4874	4-20 mA 131.2	Relay output B	Not used Option-dep.	Not used			
4875	4-20 mA 131.2	Enable	OFF ON	OFF			
4876	4-20 mA 131.2	Fail class	Warning - Trip all	Warning			
4880 Wire fail 4-20 mA 131							
4881	W. fail ana 131	Relay output A	Not used Option-dep.	Not used		Option: 4 x 4-20 mA inputs (M15.8)	The wire fault will detect if the current drops below 2 mA or exceeds 22 mA. In both cases, the alarm will be activated.
4882	W. fail ana 131	Relay output B	Not used Option-dep.	Not used			
4883	W. fail ana 131	Enable	OFF ON	OFF			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4884	W. fail ana 131	Fail class	Warning - Trip all	Warning			
4890 4-20 mA 133.1							
4891	4-20 mA 133.1	Set point	4 mA 20 mA	10 mA		Option: 4 x 4-20 mA inputs (M15.8)	Configurable analogue input.
4892	4-20 mA 133.1	Timer	0.0 s 600.0 s	120.0 s			
4893	4-20 mA 133.1	Relay output A	Not used Option-dep.	Not used			
4894	4-20 mA 133.1	Relay output B	Not used Option-dep.	Not used			
4895	4-20 mA 133.1	Enable	OFF ON	OFF			
4896	4-20 mA 133.1	Fail class	Warning - Trip all	Warning			
4900 4-20 mA 133.2							
4901	4-20 mA 133.2	Set point	4 mA 20 mA	10 mA		Option: 4 x 4-20 mA inputs (M15.8)	Configurable analogue input.
4902	4-20 mA 133.2	Timer	0.0 s 600.0 s	120.0 s			
4903	4-20 mA 133.2	Relay output A	Not used Option-dep.	Not used			
4904	4-20 mA 133.2	Relay output B	Not used Option-dep.	Not used			
4905	4-20 mA 133.2	Enable	OFF ON	OFF			
4906	4-20 mA 133.2	Fail class	Warning - Trip all	Warning			
4910 Wire fail 4-20 mA 133							
4911	W. fail ana 133	Relay output A	Not used Option-dep.	Not used		Option: 4 x 4-20 mA inputs (M15.8)	The wire fault will detect if the current drops below 2 mA or exceeds 22 mA. In both cases, the alarm will be activated.
4912	W. fail ana 133	Relay output B	Not used Option-dep.	Not used			
4913	W. fail ana 133	Enable	OFF ON	OFF			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4914	W. fail ana 133	Fail class	Warning - Trip all	Warning			

2.5.6 Aux. supply setup

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4960 U< auxiliary power supply terminal 1							
4961	U< aux. term. 1	Set point	8.0 V DC 32.0 V DC	18.0 V DC		Designer's Reference Handbook	The power supply on terminal 1 and 2 has been continuously below the adjusted set point during the programmed delay.
4962	U< aux. term. 1	Timer	0.0 s 999.0 s	1.0 s			
4963	U< aux. term. 1	Relay output A	Not used Option-dep.	Not used			
4964	U< aux. term. 1	Relay output B	Not used Option-dep.	Not used			
4965	U< aux. term. 1	Enable	OFF ON	ON			
4966	U< aux. term. 1	Fail class	Warning - Trip all	Warning			
4970 U> auxiliary power supply terminal 1							
4971	U> aux. term. 1	Set point	12.0 V DC 36.0 V DC	30.0 V DC		Designer's Reference Handbook	The power supply on terminal 1 and 2 has been continuously above the adjusted set point during the programmed delay.
4972	U> aux. term. 1	Timer	0.0 s 999.0 s	1.0 s			
4973	U> aux. term. 1	Relay output A	Not used Option-dep.	Not used			
4974	U> aux. term. 1	Relay output B	Not used Option-dep.	Not used			
4975	U> aux. term. 1	Enable	OFF ON	ON			
4976	U> aux. term. 1	Fail class	Warning - Trip all	Warning			
4980 U< auxiliary power supply terminal 98							
4981	U> aux. term. 98	Set point	8.0 V DC 32.0 V DC	18.0 V DC		Designer's Reference Handbook	The power supply on terminal 98 and 99 has been continuously below the adjusted set point during the programmed delay.
4982	U> aux. term. 98	Timer	0.0 s 999.0 s	1.0 s			
4983	U> aux. term. 98	Relay output A	Not used Option-dep.	Not used			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
4984	U> aux. term. 98	Relay output B	Not used Option-dep.	Not used			
4985	U> aux. term. 98	Enable	OFF ON	ON			
4986	U> aux. term. 98	Fail class	Warning - Trip all	Warning			
4990 U> auxiliary power supply terminal 98							
4991	U> aux. term. 98	Set point	12.0 V DC 36.0 V DC	30.0 V DC		Designer's Reference Handbook	The power supply on terminal 98 and 99 has been continuously above the adjusted set point during the programmed delay.
4992	U> aux. term. 98	Timer	0.0 s 999.0 s	1.0 s			
4993	U> aux. term. 98	Relay output A	Not used Option-dep.	Not used			
4994	U> aux. term. 98	Relay output B	Not used Option-dep.	Not used			
4995	U> aux. term. 98	Enable	OFF ON	ON			
4996	U> aux. term. 98	Fail class	Warning - Trip all	Warning			

2.6 Input/output parameters - digital outputs

2.6.1 Digital outputs

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
5000 Relay 05							
5001	Relay 05	Function	Alarm relay ND Alarm relay NE	Horn relay		Designer's Reference Handbook	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5002	Relay 05	OFF delay	0.0 s 999.9 s	5.0 s			
5010 Relay 08							
5011	Relay 08	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Designer's Reference Handbook	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5012	Relay 08	OFF delay	0.0 s 999.9 s	5.0 s			
5020 Relay 11							
5021	Relay 11	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Designer's Reference Handbook	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5022	Relay 11	OFF delay	0.0 s 999.9 s	5.0 s			
5030 Relay 14							
5031	Relay 14	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Designer's Reference Handbook	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5032	Relay 14	OFF delay	0.0 s 999.9 s	5.0 s			
5040 Relay 17							
5041	Relay 17	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option G4 and G5	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5042	Relay 17	OFF delay	0.0 s 999.9 s	5.0 s			
5050 Relay 20							

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
5051	Relay 20	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Designer's Reference Handbook	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE This relay is only available if "Relay" is selected in menu 5271.
5052	Relay 20	OFF delay	0.0 s 999.9 s	5.0 s			
5060 Relay 21							
5061	Relay 21	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Designer's Reference Handbook	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE This relay is only available if "Relay" is selected in menu 5272.
5062	Relay 21	OFF delay	0.0 s 999.9 s	5.0 s			
5070 Relay 29							
5071	Relay 29	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.2	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5072	Relay 29	OFF delay	0.0 s 999.9 s	5.0 s			
5080 Relay 31							
5081	Relay 31	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.2	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5082	Relay 31	OFF delay	0.0 s 999.9 s	5.0 s			
5090 Relay 33							
5091	Relay 33	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.2	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5092	Relay 33	OFF delay	0.0 s 999.9 s	5.0 s			
5100 Relay 35							
5101	Relay 35	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.2	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
5102	Relay 35	OFF delay	0.0 s 999.9 s	5.0 s			
5110 Relay 57							
5111	Relay 57	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M12	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5112	Relay 57	OFF delay	0.0 s 999.9 s	5.0 s			
5120 Relay 59							
5121	Relay 59	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M12	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5122	Relay 59	OFF delay	0.0 s 999.9 s	5.0 s			
5130 Relay 61							
5131	Relay 61	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M12	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5132	Relay 61	OFF delay	0.0 s 999.9 s	5.0 s			
5140 Relay 63							
5141	Relay 63	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M12	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5142	Relay 63	OFF delay	0.0 s 999.9 s	5.0 s			
5150 Relay 65							
5151	Relay 65	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Designer's Reference Handbook	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5152	Relay 65	OFF delay	0.0 s 999.9 s	5.0 s			
5160 Relay 67							
5161	Relay 67	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Designer's Reference Handbook	Function selections: - Alarm relay ND - Limit relay - Horn relay

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
5162	Relay 67	OFF delay	0.0 s 999.9 s	0.0 s			- Alarm relay NE
5170 Relay 69							
5171	Relay 69	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Designer's Reference Handbook	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5172	Relay 69	OFF delay	0.0 s 999.9 s	5.0 s			
5180 Relay 71							
5181	Relay 71	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Designer's Reference Handbook	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5182	Relay 71	OFF delay	0.0 s 999.9 s	5.0 s			
5190 Relay 90							
5191	Relay 90	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.6: 4 x relay output, slot 6	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5192	Relay 90	OFF delay	0.0 s 999.9 s	5.0 s			
5200 Relay 92							
5201	Relay 92	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.6: 4 x relay output, slot 6	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5202	Relay 92	OFF delay	0.0 s 999.9 s	5.0 s			
5210 Relay 94							
5211	Relay 94	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.6: 4 x relay output, slot 6	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5212	Relay 94	OFF delay	0.0 s 999.9 s	5.0 s			
5220 Relay 96							
5221	Relay 96	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.6: 4 x relay output, slot 6	Function selections: - Alarm relay ND - Limit relay - Horn relay

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
5222	Relay 96	OFF delay	0.0 s 999.9 s	5.0 s			- Alarm relay NE
5230 Relay 126							
5231	Relay 126	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.8: 4 x relay output, slot 8	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5232	Relay 126	OFF delay	0.0 s 999.9 s	5.0 s			
5240 Relay 128							
5241	Relay 128	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.8: 4 x relay output, slot 8	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5242	Relay 128	OFF delay	0.0 s 999.9 s	5.0 s			
5250 Relay 130							
5251	Relay 130	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.8: 4 x relay output, slot 8	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5252	Relay 130	OFF delay	0.0 s 999.9 s	5.0 s			
5260 Relay 132							
5261	Relay 132	Function	Alarm relay ND Alarm relay NE	Alarm relay ND		Option M14.8: 4 x relay output, slot 8	Function selections: - Alarm relay ND - Limit relay - Horn relay - Alarm relay NE
5262	Relay 132	OFF delay	0.0 s 999.9 s	5.0 s			
5270 Transistor output setup							
5271	Transistor 20	T20	kWh pulse Relay	kWh pulse		Designer's Reference Handbook	The transistor outputs on terminals 21 and 22 can be configured as relay outputs or pulse signals. If "Relay" is selected, the relays 20 and 21 will be available. If set to "Relay", external relays are needed due to limited current output. Max. 10 mA.
5272	Transistor 21	T21	kVArh pulse Relay	kVArh pulse			

2.7 System parameters - general setup

2.7.1 General setup

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
6050 Busbar settings 1							
6051	BB Setting 1	U primary	100 V 25000 V	400 V		Designer's Reference Handbook	If no voltage transformer is present, the primary and secondary side values are set to busbar nominal value.
6052	BB Setting 1	U secondary	100 V 690 V	400 V			
6053	BB Setting 1	Nominal U	100 V 250 kV	400 V			
6054	BB Setting 1	Bus.Nominal f	48 Hz- 62 Hz	50 Hz			
6055	BB Setting 1	Bus.Nominal set	Param set 1- Param set 2	Param set 1			
6060 Busbar settings 2							
6061	BB Setting 2	U primary	100 V 25000 V	400 V		Designer's Reference Handbook	If no voltage transformer is present, the primary and secondary side values are set to busbar nominal value.
6062	BB Setting 2	U secondary	100 V 690 V	400 V			
6063	BB Setting 2	Nominal U	100 V 250 kV	400 V			
6064	BB Setting 2	Bus.Nominal f	48 Hz- 62 Hz	50 Hz			
6080 Language							
6081	Language		English Language 11	English		Designer's Reference Handbook	The master language is English. Additionally, 11 different languages can be configured with the PC utility software.
6090 Date and time							
6091	Date and time	Year	2001 2100	2008		Designer's Reference Handbook	Used to set up the clock in the unit. Only available from the display.
6092	Date and time	Month	1 12	1			
6093	Date and time	Date	1 31	1			
6094	Date and time	Week day	1 7	1			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
6095	Date and time	Hour	0 23	3			
6096	Date and time	Minute	0 59	5			

2.7.2 Alarm horn

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
6130 Alarm horn							
6131	Alarm horn	ON time	0.0 sec 990.0 sec	20.0 sec		Designer's Reference Handbook	If the setting is adjusted to 0 s, the horn relay will be activated continuously until the alarm is acknowledged.

2.7.3 Not in auto

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
6540 Not in auto							
6541	Not in auto	Timer	10.0 s 900.0 s	300.0 s		Designer's Reference Handbook	
6542	Not in auto	Relay output A	Not used Option-dep.	Not used			
6543	Not in auto	Relay output B	Not used Option-dep.	Not used			
6544	Not in auto	Enable	OFF ON	OFF			
6545	Not in auto	Fail class	Warning - Trip all	Warning			

2.7.4 Alarm jump

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
6900 Alarm jump							
6901	Alarm jump	Enable	OFF ON	ON		Designer's Reference Handbook	Selection of jump to alarm list view on the display if an alarm appears (ON), or stay at present view (OFF).

2.7.5 Command timers

There are four identical command timers in the unit, menu 6960-6996, but only command timer 1 is displayed in this manual.

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
6960 Command start/stop timer 1							
6961	start timer 1 days	Set point	OFF MO-TU-WE-TH-FR-SA-SU	OFF		Designer's Reference Handbook	Selections are: OFF MO TU WE TH FR SA SU MO-TU-WE-TH MO-TU-WE-TH-FR SA-SU MO-TU-WE-TH-FR-SA-SU
6962	start timer 1 hours	Set point	0 23	10			
6963	start timer 1 min	Set point	0 59	0			
6964	Stop timer 1 days	Set point	OFF MO-TU-WE-TH-FR-SA-SU	OFF			Selections are: OFF MO TU WE TH FR SA SU MO-TU-WE-TH MO-TU-WE-TH-FR SA-SU MO-TU-WE-TH-FR-SA-SU
6965	stop timer 1 hour	Set point	0 23	10			
6965	stop timer 1 min	Set point	0 59	0			

Start/stop timers can be used in M-Logic

2.8 System parameters - external communication

2.8.1 External communication

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
7510 External communication							
7511	Ext. com-munication	ID	1 247	1		Option H2 or H3: Modbus or Profibus	The mode ASCII is used for modem communication (ASCII: 7 data bit, RTU: 8 data bit).
7512	Ext. com-munication	Baud rate	9600 19200	9600		Option H2: Modbus	
7513	Ext. com-munication	Mode	RTU ASCII	RTU		Option H2: Modbus	
7520 External communication error							
7521	Ext. comm. error	Delay	1.0 s 100.0 s	10.0 s		Option: Modbus (H2) Profibus (H3)	Supervision of the external communication line. The alarm will occur when there has not been any communication during the time delay.
7522	Ext. comm. error	Relay output A	Not used Option-dep.	Not used			
7523	Ext. comm. error	Relay output B	Not used Option-dep.	Not used			
7524	Ext. comm. error	Enable	OFF ON	OFF			
7525	Ext. comm. error	Fail class	Warning - Trip all	Warning			

2.9 System parameters - power management internal communication

2.9.1 Power management internal communication

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
7530 Internal communication ID							
7531	Int. comm. ID	ID	33 40	33		Designer's Reference Handbook	The mode decides the reaction of the power management system in case of different errors on the CAN communication lines. Mode: Semi auto - No mode change
7532	Int. comm. ID	CAN fail. mode	No mode change - Semi	No mode change			
7533	Int. comm. ID	Missing All units	Warning - Trip all	Warning			
7534	Int. comm. ID	Fatal CAN error	Warning - Trip all	Warning			
7535	Int. comm. ID	Any DG miss.	Warning - Trip all	Warning			
7536	Int. comm. ID	Any mains miss.	Warning - Trip all	Warning			
7840 CAN select							
7841	CAN A		OFF PMS Secondary	PMS Primary			
7842	CAN A		OFF PMS Secondary	PMS Secondary			
7870 Any BTB missing/Appl hazard							
7841	Appl hazard	Enable	OFF - ON	ON		Designer's Reference Handbook	The "Any xxx missing" alarm is activated if the communication to any xxx unit failed. The application hazard alarm is activated if different applications are installed in the controllers.
7842	Appl hazard	Fail class	Warning - Trip all	Warning			
7843	Any BTB missing	Fail class	Warning - Trip all	Warning			
7844	Any LG missing	Fail class	Warning - Trip all	Warning			

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
7845	Any PV missing	Fail class	Warning - Trip all	Warning			

2.10 System parameters - power management setup

2.10.1 Power management setup

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
8000 Load group 1 settings							
8001	Load group 1	Power	1 kW 10000 kW	400 kW		Designer's Reference Handbook	
8002	Load group 1	Input	Option- dep.	Analog 102			
8003	Load group 1	Enable	OFF - ON	OFF	Enable Analogue input		
8004	Load group 1	Disconnect	5 % - 500 %	100 %			
8005	Load group 1	Timer	0.1 s - 100 s	5 s	Timer for disconnect		
8006	Load group 1	Enable	OFF - ON	OFF	Enable load group		

Same for group 2-8, menues 8010 - 8070.

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
8080 Priority (1-5)							
8081	priority 1	ID	1-64	1		Designer's Reference Handbook	Priorities need to be set at every single controller, no broadcast is available.
8082	priority 2	ID	1-64	2			
8083	priority 3	ID	1-64	3			
8084	priority 4	ID	1-64	4			
8085	priority 5	ID	1-64	5			
8090 Priority (6-11)							
8091	priority 6	ID	1-64	6		Designer's Reference Handbook	Priorities need to be set at every single controller, no broadcast is available.
8092	priority 7	ID	1-64	7			
8093	priority 8	ID	1-64	8			
8094	priority 9	ID	1-64	9			
8095	priority 10	ID	1-64	10			
8096	priority 11	ID	1-64	11			

Same for priority 12-64, menues 8100 - 8200.

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
8250 Overload Alarm 1							
8251	DG Overload	Set point	0.0 % - 200.0 %	125.0 %		Designer's Reference Handbook	
8252	DG Overload	Timer	0.0 s 100.0 s	10.0 s			
8253	DG Overload	Relay output A	Not used Option-dep.	Not used			
8254	DG Overload	Relay output B	Not used Option-dep.	Not used			
8255	DG Overload	Enable	OFF ON	OFF			
8256	DG Overload	Fail class	Warning - Trip all	Warning			

Same for Overload Alarm 2-5, menues 8260 - 8290.

2.11 System parameters - jump menus

2.11.1 Jump menus

A number of menus can only be entered using the jump menu:

2.11.2 9000 Software version

Information about the application software version downloaded to the unit. Please check this before contacting DEIF regarding service and support matters. Option N: "W1" displays the IP address and subnet mask, and "W2" displays the gateway address and software image version.

2.11.3 9010 Display character test

Shows a test print of the character set in the display.

2.11.4 9020 Service port

The service port can be set up to use the ASCII communication. The ASCII communication is used when the utility software is connected through a modem.

Selection "0" must be used for cable connection between the AGC and the PC.
Selection "1" must be used for modem connection between the AGC and the PC.

2.11.5 9070 M4 SW version

Information about the software version in the engine I/F PCB placed in slot 8.

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
911x Password							
9116	User password	Setting	0 32000	2000		Designer's Reference Handbook	It is recommended to change the password levels of the user, service and master password if access to parameter settings must be restricted.
9117	Service password	Setting	0 32000	2001			
9118	Master password	Setting	0 32000	2002			

2.11.6 9120 Service menu

The service menu can only be entered using the "JUMP" push-button. This menu is used in service situations.

In the alarm selection, you can see all the alarm timers and their remaining time if they are counting.

The input and output selections show the present status of the inputs and outputs. For example mode inputs, relay outputs and load sharing lines.

No.	Setting		Description
912x Service menu			
	Service menu	Timers	Shows remaining alarm delay time
	Service menu	Digital inputs	Shows digital input status
	Service menu	Digital outputs	Shows digital output status
	Service menu	Miscellaneous	Shows misc. information

2.11.7 9130 AC config.

This menu is used to choose the AC configuration.

No.	Setting		Description
9130 AC config.			
9130	AC config.	Setting	Selections: - 3 phase L1L2L3

Phase angles: L1L2L3: 120 degrees with neutral.

2.11.8 9150 Backlight dim

This menu is for setting the backlight level of the display.

No.	Setting	Min. Max.	Factory setting	Notes	Ref.	Description
9150 Backlight dim						
9150	Backlight dim					Sets the light intensity for the display.

2.11.9 9160 Plant application

This menu is for Changing between application 1-4.

No.	Setting	Min. Max.	Factory setting	Notes	Ref.	Description
9160 Application						
9160	Application	Appl 1 Appl 4	Appl 1		Designer's Reference Handbook.	

2.11.10 9170 Internal CAN protocol

This menu is used to make it possible to interface to AGC units using application SW version 3.20.x or earlier.

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
9170 Internal CAN protocol							
9170	Application	Application	Protocol 1 Protocol 2	Protocol 2		Designer's Reference Handbook	

2.11.11 9190 Application broadcast

This menu makes it possible to broadcast an application between all AGC units connected on the CAN A or CAN B line.

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
9190 Application broadcast							
9190	Application broadcast	Enable	OFF Broadcast Broadcast + activate	OFF			
9190	Application broadcast	Application	Application 1 Application 2 Application 3 Application 4	Application 1			

2.11.12 9230 Memory backup

This menu makes it possible to back-up the memory before changing the internal battery. For additional information, please refer to the designer's reference handbook.

No.	Setting	Description
9230 Memory backup		
9231	Backup memory	This function stores the memory
9232	Restore memory	This function restores the memory

The unit will reboot after loading of an image.

2.12 System parameters - utility software

2.12.1 Multi-input selections

No.	Setting	Min. Max.	Factory setting	Notes	Ref.	Description
10970 Engineering units						
10970	Engineering units	Bar/Celsius Psi/Fahrenheit	Bar/Celsius			
10980 Multi-input configuration 102						
10980	Multi-inp. conf. 102	4-20 mA Binary	0-40 V DC			Possible selections: 4-20 mA 0-40 V DC Pt100 Pt1000 Binary
10990 Multi-input configuration 105						
10990	Multi-inp. conf. 105	4-20 mA Binary	0-40 V DC			Possible selections: 4-20 mA 0-40 V DC Pt100 Pt1000 Binary
11000 Multi-input configurable 108						
11000	Multi-inp. conf. 108	4-20 mA Binary	0-40 V DC			Possible selections: 4-20 mA 0-40 V DC Pt100 Pt1000 Binary

2.12.2 4-20 mA input scaling

No.	Setting		Min. Max.	Factory setting	Notes	Ref.	Description
11010 4-20 mA input scale 102							
	4-20 mA input scale 102	Set point	No decimal Two decimal	No decimal			Selecting "Enable" and writing the new set point will scale the associated min., max. and value automatically.
	4-20 mA input scale 102	Enable	OFF ON	OFF			

The same settings apply to menus 11020-11110.