MOSAIC

MODULAR SAFETY INTEGRATED CONTROLLER



Error Codes / Diagnostic

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GENERIC ERRORS

Microcontroller failures

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
0	0	MICROCONTROLLER ERROR	Restart the system / Replace module for repair
0	0	INITIAL RAM TEST FAILED = 0	
1	1	REDUNDANT MICROCONTROLLER FAILURE	
2	2	FUSE TEST FAILED	
3	3	INITIAL WD TEST FAILED	
4	4	REGISTERS TEST FAILED	
5	5	INSTRUCTIONS TEST FAILED	
6	6	ROM TEST FAILED	
7	7	OFF LINE TESTS NOT IN SEQUENCE	
8	8	OFF LINE TESTS NOT EXECUTED	
9	9	MEMORY CORRUPTED	
10	A	END OF CODE MEM REACHED	
11	B	TIMERS TEST FAILED	
12	C	INTERRUPT TEST FAILED	
13	D	INITIAL COMMUNICATION TIMEOUT	
14	E	COMMUNICATION MISSING	
15	F	RAM TEST FAILED	
16	10	SEQUENCE FAILED	
17	11	EEROM CORRUPTED	
18	12	EEROM STUCKED	
19	13	EXCHANGE FAILURE	Check backplane and MCT connection / restart the system
20	14	SERIAL PERIPHERAL INTERFACE TIMEOUT EXPIRED	Restart the system / Replace module for repair
21	15	ASYNCHRONOUS SERIAL DATA FAILURE	
22	16	CLOCK FAILURE	
23	17	AD CONVERTER FAIL	
24	18	BAND-GAP VOLTAGE REFERENCE FAIL	
25	19	HW STACK OVERFLOW	
26	1A	SW STACK OVERFLOW	

Board failures

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
32	20	ERROR BOARD	Restart the system / Replace module for repair
32	20	REDUNDANT MICROCONTROLLER FAILURE	
33	21	INITIAL UNDERVOLTAGE TEST FAILED	
34	22	INITIAL START INCONGRUENCY	
35	23	INTERNAL BUS FAILED	
36	24	INPUT FEEDBACK CHANNEL TEST FAILED	
37	25	INPUT TEST FAILED	
38	26	MICROCONTROLLER ID FAILURE	
39	27	PROFET FAILURE	
40	28	NODE NUMBER ACQUISITION FAILURE	
41	29	NETWORK CONTROLLER HW FAILURE	
42	2A	NETWORK CONTROLLER SW FAILURE	
43	2B	NETWORK CONTROLLER CORE FAILURE	
44	2C	NODE INPUT TEST FAILED	
45	2D	STATUS REGISTER FAIL	
46	2E	NETWORK CONTROLLER MISSING	
47	2F	NETWORK CONTROLLER WRONG	
48	30	NETWORK CONTROLLER CONFIG ERROR	
49	31	SERIAL PERIPHERAL INTERFACE FLASH FAILURE	
50	32	SERIAL PERIPHERAL INTERFACE FLASH CORRUPTED	
51	33	MOSFET FAILURE	

Backplane communication failures

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
64	40	BACKPLANE ERROR	Check backplane connection
64	40	REDUNDANT BACKPLANE ERROR	
65	40	NO BACKPLANE SELECTION	
66	41	DOUBLE NODE SELECTION	Check node selection
67	42	WRONG ANSWER	Restart the system / Replace module for repair
68	43	TOO MUCH SLAVE MODULES	Check number of slaves
69	44	SLAVE ERROR	Check/replace slave in fail
70	45	NODE SELECTION ERROR	Check node selection
71	46	COMMAND NOT EXECUTED	Check backplane connection / restart the system
72	47	CONFIGURATION ERROR	Verify connections and project
73	48	SLAVE ERROR	Check / Replace slave in fail
74	49	INTERNAL ERROR	Restart the system / Replace module for repair
75	4A	INTERNAL ERROR	
76	4B	BUS GENERIC ERROR	Check backplane connection

Memory module (MCM) failures

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
96	60	MCM ERROR	Replace MCM
96	60	REDUNDANT MCM FAILURE	
97	61	MCM FAILURE	
98	62	MCM NOT COMPATIBILE	
99	63	MCM NOT RESPONDING	
100	64	MCM NOT WRITING	
101	65	MCM NOT WORKING	

SPECIFIC ERRORS

M1S / M1S COM / MI8O4 / MO4L OSSD failures

DECIMAL	HEX	ERROR		CORRECTIVE ACTION
128	80	FBK_COMANDI_FAILURE		Restart the system / Replace module for repair
129	81	CORRENTE_OFF_FAIL1	OSSD1	Restart the system / Replace module for repair
130	82	INI_OSSDS_FOUND_ON1	OSSD1	Check OSSD1 connection
131	83	INT_FBK_INCONGRUENCY1	OSSD1	Restart the system / Replace module for repair
132	84	INI_OSSD_FAILURE1	OSSD1	Restart the system / Replace module for repair
133	85	DYN_OSSD_FBK_OUT_FAILURE1	OSSD1	Restart the system / Replace module for repair
134	86	DYN_OSSD_FBK_OUT_H_FAILURE1	OSSD1	Restart the system / Replace module for repair
135	87	DYN_SLAVE_OSSDS_SEQUENCE1	OSSD1	Restart the system / Replace module for repair
136	88	DYN_TEST_ON_MASTER_FAILED1	OSSD1	Check OSSD1 connection
137	89	DYN_TEST_ON_INTERFERENCE_FAILURE1	OSSD1	Restart the system / Replace module for repair
138	8A	DYN_TEST_ON_SLAVE_FAILED1	OSSD1	Check OSSD1 connection
139	8B	DYN_TEST_OFF_MASTER_FAILED1	OSSD1	Check OSSD1 connection
140	8C	DYN_TEST_OFF_INTERFERENCE_FAILURE1	OSSD1	Restart the system / Replace module for repair
141	8D	DYN_TEST_OFF_SLAVE_FAILED1	OSSD1	Check OSSD1 connection
142	8E	DYN_OVERCURRENT_FAILURE1	OSSD1	Check OSSD1 connection: overload
143	8F	SECOND_OSSDS_FAILURE1	OSSD1	Restart the system / Replace module for repair
144	90	CORRENTE_OFF_FAIL2	OSSD2	Restart the system / Replace module for repair
145	91	INI_OSSDS_FOUND_ON2	OSSD2	Check OSSD2 connection
146	92	INT_FBK_INCONGRUENCY2	OSSD2	Restart the system / Replace module for repair
147	93	INI_OSSD_FAILURE2	OSSD2	Restart the system / Replace module for repair
148	94	DYN_OSSD_FBK_OUT_FAILURE2	OSSD2	Restart the system / Replace module for repair
149	95	DYN_OSSD_FBK_OUT_H_FAILURE2	OSSD2	Restart the system / Replace module for repair
150	96	DYN_SLAVE_OSSDS_SEQUENCE2	OSSD2	Restart the system / Replace module for repair
151	97	DYN_TEST_ON_MASTER_FAILED2	OSSD2	Check OSSD2 connection
152	98	DYN_TEST_ON_INTERFERENCE_FAILURE2	OSSD2	Restart the system / Replace module for repair
153	99	DYN_TEST_ON_SLAVE_FAILED2	OSSD2	Check OSSD2 connection
154	9A	DYN_TEST_OFF_MASTER_FAILED2	OSSD2	Check OSSD2 connection
155	9B	DYN_TEST_OFF_INTERFERENCE_FAILURE2	OSSD2	Restart the system / Replace module for repair
156	9C	DYN_TEST_OFF_SLAVE_FAILED2	OSSD2	Check OSSD2 connection
157	9D	DYN_OVERCURRENT_FAILURE2	OSSD2	Check OSSD2 connection: overload
158	9E	SECOND_OSSDS_FAILURE2	OSSD2	Restart the system / Replace module for repair
159	9F	CORRENTE_OFF_FAIL3	OSSD3	Restart the system / Replace module for repair
160	A0	INI_OSSDS_FOUND_ON3	OSSD3	Check OSSD3 connection
161	A1	INT_FBK_INCONGRUENCY3	OSSD3	Restart the system / Replace module for repair
162	A2	INI_OSSD_FAILURE3	OSSD3	Restart the system / Replace module for repair
163	A3	DYN_OSSD_FBK_OUT_FAILURE3	OSSD3	Restart the system / Replace module for repair
164	A4	DYN_OSSD_FBK_OUT_H_FAILURE3	OSSD3	Restart the system / Replace module for repair
165	A5	DYN_SLAVE_OSSDS_SEQUENCE3	OSSD3	Restart the system / Replace module for repair

DECIMAL	HEX	ERROR		CORRECTIVE ACTION
166	A6	DYN_TEST_ON_MASTER_FAILED3	OSSD3	Check OSSD3 connection
167	A7	DYN_TEST_ON_INTERFERENCE_FAILURE3	OSSD3	Restart the system / Replace module for repair
168	A8	DYN_TEST_ON_SLAVE_FAILED3	OSSD3	Check OSSD3 connection
169	A9	DYN_TEST_OFF_MASTER_FAILED3	OSSD3	Check OSSD3 connection
170	AA	DYN_TEST_OFF_INTERFERENCE_FAILURE3	OSSD3	Restart the system / Replace module for repair
171	AB	DYN_TEST_OFF_SLAVE_FAILED3	OSSD3	Check OSSD3 connection
172	AC	DYN_OVERCURRENT_FAILURE3	OSSD3	Check OSSD3 connection: overload
173	AD	SECOND_OSSDS_FAILURE3	OSSD3	Restart the system / Replace module for repair
174	AE	CORRENTE_OFF_FAIL4	OSSD4	Restart the system / Replace module for repair
175	AF	INI_OSSDS_FOUND_ON4	OSSD4	Check OSSD4 connection
176	B0	INT_FBK_INCONGRUENCY4	OSSD4	Restart the system / Replace module for repair
177	B1	INI_OSSD_FAILURE4	OSSD4	Restart the system / Replace module for repair
178	B2	DYN_OSSD_FBK_OUT_FAILURE4	OSSD4	Restart the system / Replace module for repair
179	B3	DYN_OSSD_FBK_OUT_H_FAILURE4	OSSD4	Restart the system / Replace module for repair
180	B4	DYN_SLAVE_OSSDS_SEQUENCE4	OSSD4	Restart the system / Replace module for repair
181	B5	DYN_TEST_ON_MASTER_FAILED4	OSSD4	Check OSSD4 connection
182	B6	DYN_TEST_ON_INTERFERENCE_FAILURE4	OSSD4	Restart the system / Replace module for repair
183	B7	DYN_TEST_ON_SLAVE_FAILED4	OSSD4	Check OSSD4 connection
184	B8	DYN_TEST_OFF_MASTER_FAILED4	OSSD4	Check OSSD4 connection
185	B9	DYN_TEST_OFF_INTERFERENCE_FAILURE4	OSSD4	Restart the system / Replace module for repair
186	BA	DYN_TEST_OFF_SLAVE_FAILED4	OSSD4	Check OSSD4 connection
187	BB	DYN_OVERCURRENT_FAILURE4	OSSD4	Check OSSD4 connection: overload
188	BC	SECOND_OSSDS_FAILURE4	OSSD4	Restart the system / Replace module for repair

M1 / MI8O2 / MO2 / MO4 OSSD failures

DECIMAL	HEX	ERROR		CORRECTIVE ACTION
192	C0	INI_OSSD_FEEDBACK_TEST_FAILED	OSSD1	Restart the system / Replace module for repair
193	C1	INI_MONOSTABLE_CHECK_FAILED	OSSD1	Restart the system / Replace module for repair
194	C2	INI_OSSD_FOUND_ON	OSSD1	Check OSSD1 connection
195	C3	INI_FBK_P_CHECK_FAILED	OSSD1	Restart the system / Replace module for repair
196	C4	DYN_FBK_P_CHECK_FAILED	OSSD1	Restart the system / Replace module for repair
197	C5	DYN_MASTER_OSSD_ON_TEST_FAILED	OSSD1	Check OSSD1 connection
198	C6	DYN_OSSD_SHORTED	OSSD1	Check OSSD1 connection
199	C7	DYN_SLAVE_OSSD_ON_TEST_FAILED	OSSD1	Check OSSD1 connection
200	C8	DYN_SLAVE_OSSD_ON_SEQUENCE	OSSD1	Restart the system / Replace module for repair
201	C9	DYN_OSSD_OFF_TEST_FAILED	OSSD1	Check OSSD1 connection
202	CA	DYN_OSSD_ON_TEST_FAILED	OSSD1	Check OSSD1 connection
203	CB	DYN_OSSD_NOT_ALIGNED	OSSD1	Restart the system / Replace module for repair
204	CC	DYN_MONO_CHECK_FAILED	OSSD1	Restart the system / Replace module for repair
205	CD	SECOND_OSSD_FAILURE	OSSD1	Restart the system / Replace module for repair
206	CE	INI_OSSD_FEEDBACK_TEST_FAILED2	OSSD2	Restart the system / Replace module for repair

DECIMAL	HEX	ERROR		CORRECTIVE ACTION
207	CF	INI_MONOSTABLE_CHECK_FAILED2	OSSD2	Restart the system / Replace module for repair
208	D0	INI_OSSD_FOUND_ON2	OSSD2	Check OSSD2 connection
209	D1	INI_FBK_P_CHECK_FAILED2	OSSD2	Restart the system / Replace module for repair
210	D2	DYN_FBK_P_CHECK_FAILED2	OSSD2	Restart the system / Replace module for repair
211	D3	DYN_MASTER_OSSD_ON_TEST_FAILED2	OSSD2	Check OSSD2 connection
212	D4	DYN_OSSD_SHORTED2	OSSD2	Check OSSD2 connection
213	D5	DYN_SLAVE_OSSD_ON_TEST_FAILED2	OSSD2	Check OSSD2 connection
214	D6	DYN_SLAVE_OSSD_ON_SEQUENCE2	OSSD2	Restart the system / Replace module for repair
215	D7	DYN_OSSD_OFF_TEST_FAILED2	OSSD2	Check OSSD2 connection
216	D8	DYN_OSSD_ON_TEST_FAILED2	OSSD2	Check OSSD2 connection
217	D9	DYN_OSSD_NOT_ALIGNED2	OSSD2	Restart the system / Replace module for repair
218	DA	DYN_MONO_CHECK_FAILED2	OSSD2	Restart the system / Replace module for repair
219	DB	SECOND_OSSD_FAILURE2	OSSD2	Restart the system / Replace module for repair
220	DC	INI_OSSD_FEEDBACK_TEST_FAILED3	OSSD3	Restart the system / Replace module for repair
221	DD	INI_MONOSTABLE_CHECK_FAILED3	OSSD3	Restart the system / Replace module for repair
222	DE	INI_OSSD_FOUND_ON3	OSSD3	Check OSSD3 connection
223	DF	INI_FBK_P_CHECK_FAILED3	OSSD3	Restart the system / Replace module for repair
224	E0	DYN_FBK_P_CHECK_FAILED3	OSSD3	Restart the system / Replace module for repair
225	E1	DYN_MASTER_OSSD_ON_TEST_FAILED3	OSSD3	Check OSSD3 connection
226	E2	DYN_OSSD_SHORTED3	OSSD3	Check OSSD3 connection
227	E3	DYN_SLAVE_OSSD_ON_TEST_FAILED3	OSSD3	Check OSSD3 connection
228	E4	DYN_SLAVE_OSSD_ON_SEQUENCE3	OSSD3	Restart the system / Replace module for repair
229	E5	DYN_OSSD_OFF_TEST_FAILED3	OSSD3	Check OSSD3 connection
230	E6	DYN_OSSD_ON_TEST_FAILED3	OSSD3	Check OSSD3 connection
231	E7	DYN_OSSD_NOT_ALIGNED3	OSSD3	Restart the system / Replace module for repair
232	E8	DYN_MONO_CHECK_FAILED3	OSSD3	Restart the system / Replace module for repair
233	E9	SECOND_OSSD_FAILURE3	OSSD3	Restart the system / Replace module for repair
234	EA	INI_OSSD_FEEDBACK_TEST_FAILED4	OSSD4	Restart the system / Replace module for repair
235	EB	INI_MONOSTABLE_CHECK_FAILED4	OSSD4	Restart the system / Replace module for repair
236	EC	INI_OSSD_FOUND_ON4	OSSD4	Check OSSD4 connection
237	ED	INI_FBK_P_CHECK_FAILED4	OSSD4	Restart the system / Replace module for repair
238	EE	DYN_FBK_P_CHECK_FAILED4	OSSD4	Restart the system / Replace module for repair
239	EF	DYN_MASTER_OSSD_ON_TEST_FAILED4	OSSD4	Check OSSD4 connection
240	F0	DYN_OSSD_SHORTED4	OSSD4	Check OSSD4 connection
241	F1	DYN_SLAVE_OSSD_ON_TEST_FAILED4	OSSD4	Check OSSD4 connection
242	F2	DYN_SLAVE_OSSD_ON_SEQUENCE4	OSSD4	Restart the system / Replace module for repair
243	F3	DYN_OSSD_OFF_TEST_FAILED4	OSSD4	Check OSSD4 connection
244	F4	DYN_OSSD_ON_TEST_FAILED4	OSSD4	Check OSSD4 connection
245	F5	DYN_OSSD_NOT_ALIGNED4	OSSD4	Restart the system / Replace module for repair
246	F6	DYN_MONO_CHECK_FAILED4	OSSD4	Restart the system / Replace module for repair
247	F7	SECOND_OSSD_FAILURE4	OSSD4	Restart the system / Replace module for repair

Fieldbus modules failures

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
128	80	FIELDBUS RESTART	Restart the system / Replace module for repair
129	81	MISSING FIELDBUS	Restart the system / Replace module for repair
130	82	FIELDBUS CONFIGURATION ERROR	Check fieldbus configuration
131	83	FIELDBUS WRONG MODULE	Restart the system / Replace module for repair
132	84	COMMUNICATION ERROR	Restart the system / Replace module for repair
133	85	DUMMY ERROR	Restart the system / Replace module for repair
134	86	BACKWARD CONFIG. IS NOT POSSIBLE	Check BUS firmware version / configuration
135	87	FIELDBUS TIMEOUT	Restart the system / Replace module for repair
136	88	FIELDBUS CET (TIME ZONE) CONFIG. ERROR	Restart the system / Replace module for repair
137	89	ERROR MANAGEMENT	Restart the system / Replace module for repair
138	8A	FIELDBUS FACTORY RESET ERROR	Restart the system / Replace module for repair
139	8B	REPROGRAMMING NOT CORRECT	Reprogram module / Replace module for repair
140	8C	MICRON CONFIGURATION ERROR	Check MICRON configuration

MA2/MA4 failures

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
128	80	TIMEOUT TOKEN	Restart the system / Replace module for repair
129	81	WRONG MEASURES	
130	82	CH1 INITIAL FAILURE	
131	83	CH2 INITIAL FAILURE	
132	84	CH3 INITIAL FAILURE	
133	85	CH4 INITIAL FAILURE	
134	86	CH1 FAILURE	
135	87	CH2 FAILURE	
136	88	CH3 FAILURE	
137	89	CH4 FAILURE	
138	8A	CH1 POWER SUPPLY FAILURE	
139	8B	CH2 POWER SUPPLY FAILURE	
140	8C	CH3 POWER SUPPLY FAILURE	
141	8D	CH4 POWER SUPPLY FAILURE	
142	8E	REDUNDANT MICROCONTROLLER CH1 FAILURE	
143	8F	REDUNDANT MICROCONTROLLER CH2 FAILURE	
144	90	REDUNDANT MICROCONTROLLER CH3 FAILURE	
145	91	REDUNDANT MICROCONTROLLER CH4 FAILURE	
146	92	M1S WRONG FIRMWARE	
147	93	SERIAL PERIPHERAL INTERFACE PROGRAMMING FAILURE	
148	94	WRONG BOARD ASSEMBLY	

MV0/MV1/MV2 errors

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
128	80	COMMON TEST ENCODER ERROR	Restart the system / Replace module for repair
129	81	PROXY COMMON TEST ERROR	
130	82	ERROR EXCHANGED MEASURES	
131	83	DIRECT MEMORY ACCESS FAILURE	
132	84	PROXY1 TEST ERROR	
133	85	PROXY1 DISCARDED MEASURE	Check proxy signals
134	86	INITIAL IDENTIFICATION MODULE1 INCORRECT	Restart the system / Replace module for repair
135	87	ERROR TEST ENCODER1 INTERFACE	
136	88	ENCODER1 INTEGRITY TEST ERROR	Check ENCODER signals
137	89	REDUNDANT ENCODER1 FAILURE	Restart the system / Replace module for repair
138	8A	ENCODER1 DISCARDED MEASURE	Check ENCODER signals
139	8B	PROXY2 TEST ERROR	Restart the system / Replace module for repair
140	8C	PROXY2 DISCARDED MEASURE	Check proxy signals
141	8D	INITIAL IDENTIFICATION MODULE2 INCORRECT	Restart the system / Replace module for repair
142	8E	ERROR TEST ENCODER2 INTERFACE	
143	8F	ENCODER2 INTEGRITY TEST ERROR	Check ENCODER signals
144	90	REDUNDANT ENCODER2 FAILURE	Restart the system / Replace module for repair
145	91	ENCODER2 DISCARDED MEASURE	Check ENCODER signals
146	92	ERROR EXCHANGED MEASURES	Restart the system / Replace module for repair
147	93	UNDERVOLTAGE POWER SUPPLY ERROR PROXY1	Check power supply
148	94	UNDERVOLTAGE POWER SUPPLY ERROR PROXY2	
149	95	OVERLOAD PROXY1	Check proxy signals
150	96	OVERLOAD PROXY2	

MOR4/MOR4S8 errors

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
128	80	RELAY1 SUPPLY FAIL	Check module power supply
129	81	RELAY1 FEEDBACK WRONG	Restart the system / Replace module for repair
130	82	INTERNAL CONTACT FEEDBACK WRONG	
131	83	RELAY1 OFF TEST FAILED	
132	84	RELAY1 ON TEST FAILED	
133	85	RELAY1 OFF TEST FAILED	
134	86	RELAY1 ON TEST FAILED	
135	87	RELAY1 OFF SEQUENCE	
136	88	RELAY1 ON SEQUENCE	
137	89	SPARE FAULT	
138	8A	REDUNDANT RELAY1 FAILURE	
139	8B	RELAY2 FEEDBACK WRONG	
140	8C	INTERNAL CONTACT FEEDBACK2 WRONG	
141	8D	RELAY2 OFF TEST FAILED	
142	8E	RELAY2 ON TEST FAILED	
143	8F	RELAY2 OFF TEST FAILED	
144	90	RELAY2 ON TEST FAILED	
145	91	RELAY2 OFF SEQUENCE FAILED	
146	92	RELAY2 ON SEQUENCE FAILED	
147	93	SPARE FAULT2	
148	94	REDUNDANT RELAY2 FAILURE	
149	95	RELAY3 FEEDBACK WRONG	
150	96	INTERNAL CONTACT FEEDBACK3 WRONG	
151	97	RELAY3 OFF TEST FAILED	
152	98	RELAY3 ON TEST FAILED	
153	99	RELAY3 OFF TEST FAILED	
154	9A	RELAY3 ON TEST FAILED	
155	9B	RELAY3 OFF SEQUENCE	
156	9C	SPARE FAULT3	
157	9D	REDUNDANT RELAY3 FAILURE	
158	9E	RELAY4 FEEDBACK WRONG	
159	9F	INTERNAL CONTACT FEEDBACK4 WRONG	
160	A0	RELAY4 OFF TEST FAILED	

MOS8/MOS16 errors

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
128	80	FAILURE PROFET 1…8	Restart the system / Replace module for repair
129	81	FAILURE PROFET 9…16	
130	82	REDUNDANT PROFET FAILURE	

MO4LHCS8 errors

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
128	80	LOG FEEDBACK COMMANDS FAILURE	Restart the system / Replace module for repair
129	81	OSSD1 / STATUS OFF CURRENT FAIL	Restart the system / Replace module for repair
130	82	OSSD1 FOUND ON AT STARTUP	Check OSSD1 connection
131	83	OSSD1 FEEDBACK SIGNALS INCONGRUENT	Restart the system / Replace module for repair
132	84	OSSD1 FEEDBACK OUT FAILURE	Restart the system / Replace module for repair
133	85	OSSD1 FEEDBACK OUT FAILURE	Restart the system / Replace module for repair
134	86	OSSD1 ON SEQUENCE	Restart the system / Replace module for repair
135	87	OSSD1 TEST ON FAILED	Check OSSD1 connection
136	88	OSSD1 TEST ON INTERFERENCE FAILURE	Restart the system / Replace module for repair
137	89	OSSD1 TEST ON FAILED	Check OSSD1 connection
138	8A	OSSD1 TEST OFF FAILED	Check OSSD1 connection
139	8B	OSSD1 TEST OFF INTERFERENCE FAILURE	Restart the system / Replace module for repair
140	8C	OSSD1 TEST OFF FAILED	Check OSSD1 connection
141	8D	OSSD1 OVERCURRENT FAILURE	Check OSSD1 overload
142	8E	REDUNDANT OSSD4 FAILURE	Restart the system / Replace module for repair
143	8F	OSSD2 / STATUS OFF CURRENT FAIL	Restart the system / Replace module for repair
144	90	OSSD2 FOUND ON AT STARTUP	Check OSSD2 connection
145	91	OSSD2 FEEDBACK SIGNALS INCONGRUENT	Restart the system / Replace module for repair
146	92	OSSD2 FEEDBACK OUT FAILURE	Restart the system / Replace module for repair
147	93	OSSD2 FEEDBACK OUT FAILURE	Restart the system / Replace module for repair
148	94	OSSD2 ON SEQUENCE FAILURE	Restart the system / Replace module for repair
149	95	OSSD2 TEST ON FAILED	Check OSSD2 connection
150	96	OSSD2 TEST ON INTERFERENCE FAILURE	Restart the system / Replace module for repair
151	97	OSSD2 TEST ON FAILED	Check OSSD2 connection
152	98	OSSD2 TEST OFF FAILED2	Check OSSD2 connection
153	99	OSSD2 TEST OFF INTERFERENCE FAILURE	Restart the system / Replace module for repair
154	9A	OSSD2 TEST OFF FAILED	Check OSSD2 connection
155	9B	OSSD2 OVERCURRENT FAILURE	Check OSSD2 overload
156	9C	REDUNDANT OSSD2 OSSDs FAILURE	Restart the system / Replace module for repair
157	9D	OSSD3 / STATUS OFF CURRENT FAIL	Restart the system / Replace module for repair
158	9E	OSSD3 FOUND ON AT STARTUP	Check OSSD3 connection
159	9F	OSSD3 FEEDBACK SIGNALS INCONGRUENT	Restart the system / Replace module for repair
160	A0	OSSD3 FEEDBACK OUT FAILURE	Restart the system / Replace module for repair
161	A1	OSSD3 FEEDBACK OUT FAILURE	Restart the system / Replace module for repair

DECIMAL	HEX	ERROR	CORRECTIVE ACTION
162	A2	OSSD3 SLAVE OSSDs ON SEQUENCE	Restart the system / Replace module for repair
163	A3	OSSD3 TEST ON MASTER FAILED	Check OSSD3 connection
164	A4	OSSD3 TEST ON INTERFERENCE FAILURE	Restart the system / Replace module for repair
165	A5	OSSD3 TEST ON SLAVE FAILED	Check OSSD3 connection
166	A6	OSSD3 TEST OFF MASTER FAILED	Check OSSD3 connection
167	A7	OSSD3 TEST OFF INTERFERENCE FAILURE	Restart the system / Replace module for repair
168	A8	OSSD3 TEST OFF SLAVE FAILED	Check OSSD3 connection
169	A9	OSSD3 OVERCURRENT FAILURE	Check OSSD3 overload
170	AA	REDUNDANT OSSD3 FAILURE	Restart the system / Replace module for repair
171	AB	OSSD4 / STATUS OFF CURRENT FAIL	Restart the system / Replace module for repair
172	AC	OSSD4 FOUND ON AT STARTUP	Check OSSD4 connection
173	AD	OSSD4 FEEDBACK SIGNALS INCONGRUENT	Restart the system / Replace module for repair
174	AE	OSSD4 FEEDBACK OUT FAILURE	Restart the system / Replace module for repair
175	AF	OSSD4 FEEDBACK OUT FAILURE	Restart the system / Replace module for repair
176	B0	OSSD4 OSSDS ON SEQUENCE	Restart the system / Replace module for repair
177	B1	OSSD4 TEST ON MASTER FAILED	Check OSSD4 connection
178	B2	OSSD4 TEST ON INTERFERENCE FAILURE	Restart the system / Replace module for repair
179	B3	OSSD4 TEST ON SLAVE FAILED	Check OSSD3 connection
180	B4	OSSD4 TEST OFF MASTER FAILED	Check OSSD3 connection
181	B5	OSSD4 TEST OFF INTERFERENCE FAILURE	Restart the system / Replace module for repair
182	B6	OSSD4 TEST OFF SLAVE FAILED	Check OSSD4 connection
183	B7	OSSD4 OVERCURRENT FAILURE	Check OSSD4 overload
184	B8	REDUNDANT OSSD4 FAILURE	Restart the system / Replace module for repair

DIAGNOSTIC CODES

INPUT diagnostics

CODE		MEANING
DECIMAL	HEX	
1	1	Input not restored
2	2	Missing Simultaneity
3	3	Missing Simultaneity
4	4	Missing Simultaneity
7	7	MOD-SEL incoherent
8	8	MOD-SEL disconnected
10	A	OutTest Error
11	B	Detected input fault
13	D	OutTest connected to other inputs
14	E	OutTest OK but input to 24V
15	F	Photocell short circuit
16	10	Photocell is not responding
17	11	Short between Photocell
18	12	S-MAT disconnected
19	13	OutTest shorted
20	14	Wrong OutTest connection
21	15	OutTest shorted to 24V
22	16	Detected Test output fault
23	17	Configured Proximity missing
24	18	Configured Encoder missing
25	19	Encoder (or Proximity) missing
26	1A	One or both Proximity missing
27	1B	One or both Encoders missing
28	1C	Wrong frequency ratio detected
29	1D	Wrong Encoder supply
30	1E	Detected Encoder signals anomaly
31	1F	The selected threshold does not exist
32	20	Over-frequency detected on Encoder1 input
33	21	Over-frequency detected on Encoder2 input
34	22	Over-frequency detected on Proximity1 input
35	23	Over-frequency detected on Proximity2 input
36	24	Detected inconsistency of 4-wires Proximity inputs
37	25	Detected inconsistency of 4-wires Proximity2 inputs
38	26	Configured Proximity2 missing
39	27	Detected interleaved Proximity inputs inconsistency
40	28	Sensor current below the minimum allowed value
41	29	Sensor current exceeds the maximum allowed value
42	2A	Unconnected sensor
43	2B	Sensor supply overload
44	2C	Current value at sensor input too high
53	35	Mismatch between redundant channels readings
54	36	Sensor current below the minimum allowed value

CODE		MEANING
DECIMAL	HEX	
55	37	Sensor current exceeds the maximum allowed value
56	38	Sensor1 current exceeds the maximum allowed value
57	39	Sensor2 current exceeds the maximum allowed value
58	3A	Unconnected sensor1
59	3B	Unconnected sensor2
60	3C	Sensor1 supply overload
61	3D	Sensor2 supply overload
62	3E	Current value at sensor1 input too high
63	3F	Current value at sensor2 input too high
72	48	Configured Encoder2 missing
73	49	Detected Encoder2 signals anomaly
74	4A	Wrong Encoder2 supply
75	4B	R-Safe RFID: line state unknown
76	4C	R-Safe RFID: wrong number of elements in cascade
128	80	Diagnostic input OK
133	85	Two hands are not contemporaneous
134	86	Missing StartUp Test
137	89	Waiting for Restart

OUTPUT STATUS diagnostics

CODE		MEANING
DECIMAL	HEX	
0	0	DIAGNOSTICS STATUS OK
1	1	PROFET OVERLOAD
2	2	PROFET POWER SUPPLY MISSING
3	3	STATUS ENABLE MISSING

OSSD OUTPUT diagnostics

CODE		MEANING
DECIMAL	HEX	
0	0	DIAGNOSTICS OSSD OK
1	1	ENABLE MISSING
2	2	WAITING RESTART
3	3	FBK K1-K2 MISSING
4	4	EVALUATION OUTPUT STATE
5	5	OSSD SUPPLY MISSING
6	6	RESTART POSITIVE PULSE DURATION EXCEEDS THE MAXIMUM ALLOWED VALUE
7	7	EXTERNAL K1_K2 FEEDBACK NOT CONGRUENT WITH THE COMMANDED STATE
8	8	FB K1-K2 MISSING
9	9	OSSD OVERLOAD
10	A	OSSD WITH LOAD CONNECTED TO 24V!