AMK

AMKASYN
VARIABLE SPEED DRIVES

AMKASYN

Programmable Control PS

Diagnostic Messages

Version AZ-PSx V02.14

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Contents

Abbreviations and terms used:

ADPS	AMK digital parallel interface
allocate	Request Heap memory
APROS	AMK PS programming software
AWL	Instruction list
AZR	AMKASYN central computer module
BE	Block end (AWL command)
CAN	Controller area network
DB	Data block
deallocate	release Heap memory
DV	Data management
DW	Data word
E DB x	Generate/delete data block (AWL command)
EF	Receive mailbox
FB	Function block
FIFO	First-In-First-Out memory
HEAP	Dynamically managed RAM memory area
ID	Ident parameter of the basic system
KMD	Commanding
NC	Numerical Control
O	OR logic operation before AND logic operation (AWL command)
OB	Organization block
PAA	Process output image updating
PAE	Process input image updating
PB	Program block
PDU	Protocol data unit
PIP	Program interpreter
PS	Programmable controller
RAM	Random access memory
SBE	Receive control byte
SBS	Send control byte
SBUS	AMK-specific communication interface
SF	Fast function
SF	Send mailbox (in connection with FB 204..206)
STP	Stop at cycle end (AWL command)
STS	Stop immediately (AWL command)

1 General notes concerning the diagnosis description

The following summary provides an overview of the error numbers of APROS stated in the PS status line. Each error must be identified unequivocally by the module number as well as the error number:

- The module number facilitates a rough assignment of the problem to a system software module.
- The error number enables the cause of the problem to be identified within the module.

Moreover a classification is made regarding the effect of the error or also the cause of error by assessing the problem as (S)ystem error, (U)ser error or (W)arning.

- System errors indicate as a rule fundamental problems in the system software or storage space or computing power problems, due for instance to more extensive application requirements.
- User errors result from program errors of the user which are not detected until the running time of the user program.
- Warnings are used to identify special user program statuses (e.g. stop by AWL instruction) or if appropriate tolerable program discrepancies (e.g. ADPS default DB is defined by user AWL DB).

Overview of the module numbers used

Module number	Module name
101	Line interpreter
102	PS basic functions (general)
103	SBUS functions
104	AWL loading module
105	Display request module
106	Display deletion module
107	Display transmission module
108	Display change module
109	Extended display module
110	ADPS module
111	Table initialization module (FB210)
112	SF module (fast functions)
113	FB diagnosis (FB 212)
114	NC function block
115	PS basic functions (extensions)
116	File management
119	Option module (CAN)
120	System basic functions

2 Module number related diagnosis description

2.1 Diagnostic messages of the line interpreter

Error number	Error description for Module No.: 101	Error category
001	Set first scan in separate OR command (no valid VKE)	U
002	Too many brackets opened ("U(" or "O(" commands)	U
003	Too many brackets closed (")" commands)	U
004	STS command "Stop immediately" processed	U
005	Too high counter value selected	U
006	Generate DB not possible (DB No. > max. DB number or DB length too large)	U
007	Activate DB not possible (DB No. > max. DB number or DB not created)	U
008	Loading or transf. DR, DL, DW or DD not possible (DB not long enough)	U
009	Periphery byte address too large: Loading command	U
010	Periphery byte address too large: Transfer command	U
011	Faulty processing command ("B") parameter value	U
012	Last block line exceeded (BE command missing)	U
013	Branch to mark beyond block end (in effective "B" command)	U
100	Undefined Opcode Group0	S
101	Undefined Opcode Group1 (binary logic operations)	S
102	Undefined Opcode Group2 (memory operations)	S
103	Undefined Opcode Group3 (logic operat., binary with brackets)	S
104	Undefined Opcode Group4 (time operations)	S
105	Undefined Opcode Group5 (counting operations)	S
106	Undefined Opcode Group6 (loading operations E/A/M)	S
107	Undefined Opcode Group7 (loading operations data)	S
108	Undefined Opcode Group8 (loading operations periphery)	S
109	Undefined Opcode Group9 (transfer operations E/A/M)	S
110	Undefined Opcode Group10 (transfer operations data)	S
111	Undefined Opcode Group11 (transfer operations periphery)	S
112	Undefined Opcode Group12 (loading operations constant)	S
113	Undefined Opcode Group13 (loading op. current times of timers)	S
114	Undefined Opcode Group14 (loading op. current reading of counters)	S
115	Undefined Opcode Group15 (arithmetic operations)	S
116	Undefined Opcode Group16 (comparison operations)	S
117	Undefined Opcode Group17 (branching operations to blocks)	S
118	Undefined Opcode Group18 (activate/generate operations of DB´s)	S
119	Undefined Opcode Group19 (block end operations)	S
120	Undefined Opcode Group20 (NOP operations)	S
121	Undefined Opcode Group21 (stop operations)	S
122	Undefined Opcode Group22 (empty line operations)	S
123	Undefined Opcode Group23 (complement operations)	S
124	Undefined Opcode Group24 (digital logic operations)	S
125	Undefined Opcode Group25 (shift operations)	S
126	Undefined Opcode Group26 (branching operations to marks)	S
127	Undefined Opcode Group27 (conversion operations)	S
128	Undefined Opcode Group28 (editing operations)	S
140	Undefined Opcode Group (> Group 28)	S

Error number	Error description for Module No.: 101	Error category
200	Error memory enable on deletion of DB x	S
201	Error memory initialization on generating DB x	S
202	Error in subroutine call	S
203	Error in block end	S
204	Error in branching command	S
210	Error in branching commands to blocks (finds no starting address of the 1st AWL line of the calling block)	S

2.2 General PS basic function messages

Error number	Error description for Module No.: 102	Error category
001	FB 201 "Drive commanding" or FB 211 "Floating point arithmetic": Inadmissible DB, DB length not correct	U
002	FB 201 "Drive commanding": Undefined drive No. in DB	U
003	FB 200 "Updating drive status": Undefined drive No. in DB	U
004	Error in command transfer to drive	U
005	Error in command transfer to drive (invalid or momentarily unallowed order)	U
006	FB 201:Warning on command transfer to drive (warning from AZ)	W
007	Warning on command transfer to drive (warning from AZ to FB201)	W
008	Current status of the PS can not be set to STOP	U
009	Current status of the PS can not be set to IDLE	U
010	Current status of the PS can not be set to RUN	U
011	Block end (BE) of the error block OB17 reached	U
012	FB 200: "Updat. drive status" ended with error (undef. drive No. in DB)	U
013	FB 201:AMK-spec. FB command ended with error (error from AZ)	U
014	PS was started anew despite existing error (without triggering error deletion on AZ operator panel)	U
015	STP-STOP command recognized	W
016	STS-STOP command recognized	U
017	Undef. mode for non-acc./acceptance of the periphery image of the inputs	U
018	Undef. mode for non-transfer / transfer of the periphery image of the outputs	U
019	FB 202: "Write/read drive parameters": inadmiss. DB, DB length too small	U
020	FB 202: " Write/read drive parameters ": Undef. drive No. in DB	U
021	AMK-specific FB parameter change online ended with error	U
022	FB 202: " Write/read drive parameters ", drive 1: Undef. param. type or preceding selection of FB 202 not yet completed	U
023	Like error No. 22, only drive 2	U
024	Like error No. 22, only drive 3	U
025	Like error No. 22, only drive 4	U
026	Like error No. 22, only drive 5	U
027	Like error No. 22, only drive 6	U
028	Like error No. 22, only drive 7	U

Error number	Error description for Module No.: 102	Error category
029	Like error No. 22, only drive 8	U
030	FB 203: "Read/write user list 1" (Inadmiss. DB, DB length too small)	U
031	FB 203: " Read/write user list 1" (Preceding selection of the FB 203 not yet completed)	U
032	AMK-specific FB read/write user list 1 ended with error	U
033	FB 203: " Read/write user list 1" (Write test identifier for user list 1 in DB, DW 1 unequal 5555Hex)	U
034	AZR error (error or warning in the basic drive system and no OB20 available)	U
035	Cycle time exceeded (max. PS cycle time > cycle monitoring time)	U
036	AMK-specific FB "SF initializing" (FB207) ended with error	U
037	AMK-specific FB "SF commanding" (FB208) ended with error	U
038	AMK-specific FB "ADPS initializing" (FB220) ended with error	U
039	AMK-specific FB "Table value calculation" (FB210) ended with error	U
040	Option place address in DB0; DR4 inadmissible (unequal 0 to 4)	U
041	FB 203: "Read/write user list 1" (Maximum length user list 1 in AZ computer (ID32798; 2ndword) unequal length in current read DB)	U
042	FB 201: "Drive commanding", drive 1 (preceding selection of the FB 201 not yet completed)	U
043	Like error No. 42, only drive 2	U
044	Like error No. 42, only drive 3	U
045	Like error No. 42, only drive 4	U
046	Like error No. 42, only drive 5	U
047	Like error No. 42, only drive 6	U
048	Like error No. 42, only drive 7	U
049	Like error No. 42, only drive 8	U
050	FB 204 "Activate serial interface": Inadmissible SF or EF number	U
051	FB 204 "Activate serial interface": Send or receive mailbox not created	U
052	FB 204 "Activate serial interface": Inadmissible DB, or DB length too small	U
053	FB 204 "Activate serial interface": Inadmissible mode	U
054	FB 204 "Activate serial interface": Inadmissible parity	U
055	FB 204 "Activate serial interface": Inadmissible data bits	U
056	FB 204 "Activate serial interface": Inadmissible stop bits	U
057	FB 204 "Activate serial interface": Inadmissible baud rate	U
058	FB 204 "Activate serial interface": Plausibility error	S
059	FB 205 "Sending through serial interface": No access right or error bit in SBS (send control byte)	U
060	FB 205 "Sending through serial interface": SF length or SF DB length not correct or SF DB not created	U
061	FB 205 "Sending through serial interface": send mailbox length not suitable for useful data length	U
062	FB 206 "Reception through serial interface": No access right or error bit in SBE (reception control byte)	U
063	FB 206 " Reception through serial interface ": EF length or EF DB length not correct or EF DB not created	U
064	FB 206 " Reception through serial interface ": Receive mailbox length not suitable for useful data length	U
065	FB 201 "Drive commanding": e.g. in cmd. "Command value determining" DB for reading back the command variable not available or too small	U

Error number	Error description for Module No.: 102	Error category
070	FB 207 "Initializing fast function": Inadmissible DB length	U
071	FB 207 "Initializing fast function": Inadmissible SF type	U
072	FB 207 "Initializing fast function": Inadmissible SF source offset	U
073	FB 207 "Initializing fast function": Inadmissible SF sink offset	U
074	FB 207 "Initializing fast function": Inadmissible SF source channel	U
075	FB 207 "Initializing fast function": Inadmissible SF sink channel	U
076	FB 207 "Initializing fast function": Inadmissible SF Input offset	U
077	FB 207 "Initializing fast function": Inadmissible SF output offset	U
078	FB 207 "Initializing fast function": Inadmissible SF input Byte	U
079	FB 207 "Initializing fast function": Inadmissible SF output Byte	U
080	FB 207 "Initializing fast function": SF tables DB not created	U
081	No DB0 available	U
082	FB 207 "Initializing fast function": Memory initialization for SF Infoblock not possible (system RAM initialization error)	S
083	FB 207 "Initializing fast function": Memory initialization for SF variable structure not possible (system RAM initialization error)	S
084	FB 207 "Initializing fast function": Memory enable for SF Infoblock not possible (system RAM enable error)	S
085	FB 207 "Initializing fast function": Memory enable for SF variable structure not possible (system RAM enable error)	S
086	FB 208 "Commanding fast function": Inadmissible DB length	U
087	FB 208 "Commanding fast function": Inadmissible SF number	U
088	FB 208 "Commanding fast function": Preceding selection of the FB 208 was not yet completed	U
089	FB 208 "Commanding fast function": inadmissible SFKMD Code (e.g. "START" in the "Started" state or "VALUE NEW" in the "Reset" state; applies only for last triggered SF number)	U
090	SF commanding with SERVERWARNING ended	W
091	FB 208 "Commanding fast function": SF commanded, although SF with corresponding SF number is not yet initialized	U
092	No SF commanding DB available any longer	U
093	FB 207 "Initializing fast function": Inadmissible SF number in DB	U
094	Inadmissible SF command function in SF commanding DB	U
095	FB 207 "Initializing fast function": SF No. already SF initialized	U
097	Inadmissible source code in SF commanding DB	U
098	FB 207 "Initializing fast function": SF deinitializing not possible, since SFKMD still active	U
099	FB 207 "Initializing fast function": AW1 was assigned a SF No. with > 7 as sink	U
100	Undefined current command state of the PS (plausibility error SBUS control image)	S
101	Undefined PIP module code (plausibility error of progr. interpreter)	S
102	Undefined restart mode (plausibility error, no defined OB)	S
103	Undefined current status the PS (plausibility error)	S
104	Exceeding or falling short of the AWL program stack (on stack filling)	S
105	Exceeding or falling short of the AWL program stack (on stack emptying)	S
106	Undefined block type (plausibility error)	S
107	Current DB in DB table not found (on AMK-specif. FB selections or SF commanding)	S

Error number	Error description for Module No.: 102	Error category
108	Reading user list 1 PDU not loadable in send FIFO	S
109	Writing user list 1 PDU not loadable in send FIFO	S
110	Memory initialization for reading user list 1 PDU not possible (system RAM initialization error)	S
111	Memory initialization for writing user list 1 PDU not possible (system RAM initialization error)	S
112	Memory enable for DB intermediate buffer not possible on selection of FB 202, FB 203 or FB 212 (system RAM enable error)	S
113	General memory enable (on AMK-specific FB selections or SF commanding) not possible (system RAM enable error)	S
114	Wrong SERCOS ID No. or wrong SERCOS Element No. in Return PDU (reading user list 1)	S
115	No memory initialization DB intermediate buffer, since memory already available for this (on selection of FB 202, FB 203 or FB 212)	S
116	Memory initialization for DB intermediate buffer not possible on selection of FB 202, FB 203 or FB 212 (system RAM initialization error)	S
117	DB intermediate buffer user list 1 not yet available, although continuation PDU was received (reading user list 1)	S
118	DB intermediate buffer user list 1 not yet available, although continuation PDU has to be transmitted (writing user list 1)	S
119	Useful data length of the received user list 1 read following PDU not longer fits in DB intermediate buffer	S
120	Current DB for reading user list 1 not created, or DB length too small	S
121	Wrong PDU sequence on reading user list 1 (FB 202, FB 203 or FB 212)	S
122	Wrong PDU sequence on reading user list 1 and send abort (FB 202, FB 203 or FB 212)	S
123	Wrong PDU sequence on writing user list 1 (FB 202, FB 203 or FB 212)	S
124	Undefined read matrix value (FB 202, FB 203 or FB 212)	S
125	Undefined write matrix value (FB 202, FB 203 or FB 212)	S
126	Received PDU is not legible (FB 202, FB 203 or FB 212)	S
127	In previously sent PDU comd. code was undef. (FB 202, FB 203 or FB 212)	S
128	Undefined return PDU received (FB 202, FB 203 or FB 212)	S
129	Current state of the PS should be set ERROR, although there is no such PDU instruction (SBUS control image)	S
130	Inadmissible AMK specific FB in the machine code (wrong FB No.)	S
131	FB 202 "Write / read drive parameters": Parameter change PDU not loadable in send FIFO	S
132	FB 202 "Write / read drive parameters": memory initialization for parameter change PDU not possible (system RAM initialization error)	S
133	Undefined drive No. in parameter change online return PDU received	S
134	Memory area for parameter change return PDU not deallocated correctly (system RAM enable error)	S
135	User list 1 cannot be written correctly according to received PDU	S
136	User stack error for SF	S
137	User stack error	S
138	System stack error	S
139	Stack error	S

Error number	Error description for Module No.: 102	Error category
140	Time plane overflow (e.g. by too many SF, or too small SERCOS cycle time)	S
141	Time plane overflow of time plane 1 (e.g. by too many SF, or too small SERCOS cycle time)	S
142	Time plane overflow of time plane 2 (e.g. by too many SF, or too small SERCOS cycle time)	S
143	Time plane overflow of time plane 3 (e.g. by too many SF, or too small SERCOS cycle time)	S
144	Time overflow PS SF (The duration of all SF is greater than by ID2 maximum input. (U))	S
145	FB 208 "Commanding fast function": SF commanding with inadmissible return code ended (handshake plausibility error)	S
146	Battery error in AZ PS4 (battery voltage too low on "power on")	U
147	RAM check sum error in AZ PS4	U
148	EPROM check sum error in AZ PS4	U
149	Processor error in AZ PS4	U
150	FB 211: Floating point arithmetic ended with error	U
151	FB 211 "Floating point arithmetic": Undefined operator in active DB	U
152	FB 211: Error acknowledgement in active DB	U
153	FB 211 "Floating point arithmetic": Operator "=" missing in active DB	U
154	FB 211 "Floating point arithmetic": Operand number too small in active DB	U
155	FB 211: Inadmissible real value (min / max value)	U
156	FB 211 "Floating point arithmetic": Maximum nesting depth exceeded	U
157	FB 211 "Floating point arithmetic": Number of opening and closing brackets is inconsistent	U
158	FB 211 "Floating point arithmetic": Inadmissible operator in connection with "("	U
160	FB 212 "Diagnosis": Undefined mode in active DB	U
161	FB 212 "Diagnosis": Preceding selection (FB 212) not yet completed	U
162	FB 212 "Diagnosis": Length for active DB in error stack reading too small	U
163	FB 212 "Diagnosis": Length for active DB on error stack writing too small	U
164	FB 212 "Diagnosis": memory initialization for error stack request PDU not possible (allocation error)	S
165	FB 212 "Diagnosis": Error stack request PDU not loadable in send FIFO	S
166	FB 212 "Diagnosis": Inadmissible PDU acknowledgement received, cancel PDU sent	S
167	FB 212 "Diagnosis": Undefined PDU received, PDU communication ended	S
168	FB 212 "Diagnosis": DB intermediate buffer for following PDU not yet available	S
169	FB 212 "Diagnosis": Following PDU does not fit in DB intermediate buffer	S
170	FB 212 "Diagnosis": DB, in which the error stack / diagnostic info should be read, is not available or too small	S
171	FB 212 "Diagnosis": DB length (read diagnostic info) too small	U
172	FB 212 "Diagnosis": DB length (read error list) too small	U
180	FB 213 "Send / receive SBUS PDU´s": Selection of the FB 213	U

Error number	Error description for Module No.: 102	Error category
	without send mailbox access right, or on active send error	
181	FB 213 "Send / receive SBUS PDU´s": Selection of the FB 213 without receive mailbox access right, or on active receive error	U
182	FB 213 "Send / receive SBUS PDU´s": Send mailbox DB not available, or too small	U
183	FB 213: Receive mailbox DB not available, or too small	U
184	FB 213 "Send / receive SBUS PDU´s": PDU length not suitable for SBUS or send mailbox DB	U
185	FB 213 "Send / receive SBUS PDU´s": Receive mailbox DB not available or not large enough	U
186	FB 213 "Send / receive SBUS PDU´s": memory initialization for PDU not possible (system RAM initialization error)	S
200	FB 204 "Inadmissible Modbus slave address"	U

2.3 SBUS messages

Error number	Error description for Module No.: 103	Error category
001	PDU send display received from unauthorized orderer (phys. subscriber)	U
002	PDU HW Reset received from unauthorized orderer (phys. subscriber)	U
003	PDU Reset received from unauthorized orderer (phys. subscriber)	U
004	PDU Run received from unauthorized orderer (phys. subscriber)	U
005	PDU Stop received from unauthorized orderer (phys. subscriber)	U
006	PDU Step1 received from unauthorized orderer (phys. subscriber)	U
007	PDU Step2 received from unauthorized orderer (phys. subscriber)	U
008	PDU Cycle received from unauthorized orderer (phys. subscriber)	U
009	PDU Idle received from unauthorized orderer (phys. subscriber)	U
010	PDU Debug received from unauthorized orderer (phys. subscriber)	U
011	PDU Set breakpoint received from unauthorized orderer (phys. subscriber)	U
012	Breakpoint list full	U
013	Invalid breakpoint No., e.g. only comment line (without AWL command)	U
014	Break already available under other breakpoint No.	U
015	Breakpoint No. available on another break	U
016	PDU Clr breakpoint received from unauthorized orderer (phys. subscriber)	U
017	No breakpoint to be deleted found	U
018	PDU dry run received from unauthorized orderer (phys. subscriber)	U
019	PDU change received from unauthorized orderer (phys. subscriber)	U
020	PDU clear received from unauthorized orderer (phys. subscriber)	U
021	Undefined PDU received from unauthorized orderer (phys. subscriber)	U
022	Not loadable (incomplete or undefined) program in program memory	U
023	Previous SBUS subscriber access not yet enabled	U
024	PDU extended display received from unauthorized orderer (phys. subscriber)	U
025	PDU get version received from unauthorized orderer (phys. subscriber)	U
026	Inadmissible password for SBUS access	U

Error number	Error description for Module No.: 103	Error category
027	Step1, Step2 or Cycle PDU recp. U. PS reset switch not in the "RUN status"	U
100	Loading PDU not loadable in send FIFO	S
101	Memory initialization for loading PDU not possible (system RAM initialization error)	S
102	Memory enable positive loading acknowledgement PDU not possible (system RAM enable error)	S
103	Memory enable negative loading acknowledgement PDU not possible (system RAM enable error)	S
104	After sent loading PDU (loading ack. PDU expected), memory enable for receive PDU, e.g. from interface, not possible (system RAM enable error)	S
105	After sent loading PDU (loading ack. PDU expected), ack. PDU header, e.g. negative ack. PDU to the interface, not loadable in send FIFO	S
106	After sent loading PDU (loading ack. PDU expected) and receive PDU e.g. from interface, memory initialization for ack. PDU header (for neg. ack.) not possible (system RAM initialization error)	S
107	Undef. value for identifier. "Load attribute type in flag PDU header" (plausibility error)	S
108	Undefined value for identifier "Start processed PDU" (plausibility error)	S
109	Undef. value for identifier "Take over SBUS control image" (plausibility error)	S
110	Undef. value for identifier "RESET error" (plausibility error) on HW RESET	S
111	Undefined test mode (plausibility error) on HW RESET	S
112	Undefined value for identifier "RESET error" (plausibility error) on RESET	S
113	Undefined test mode (plausibility error) on RESET	S
114	Undefined test mode (plausibility error) on RUN	S
115	Undefined test mode (plausibility error) on STOP	S
116	Undefined test mode (plausibility error) on STEP1	S
117	Undefined test mode (plausibility error) on STEP2	S
118	Undefined test mode (plausibility error) on CYCL	S
119	Undefined test mode (plausibility error) on IDLE	S
120	Undef. value for identifier "Switch test mode on/off" (plausibility error), (according to attribute from flag PDU header) on DEBUG	S
121	Undefined test mode (plausibility error) on SET_BREAKPOINT	S
122	Undefined test mode (plausibility error) on CLR_BREAKPOINT	S
123	Undefined test mode (plausibility error) on DRY_RUN	S
124	Undefined test mode (plausibility error) on undefined PDU	S
125	Memory enable of a receive PDU (before sending the acknowledgement PDU) not possible (system RAM enable error)	S
126	Ack. PDU header not loadable in send FIFO	S
127	Memory initialization for ack. PDU not possible (system RAM initialization error)	S
128	Breakpoint Ret PDU not loadable in send FIFO	S
129	Memory initialization for breakpoint Ret PDU not possible (system RAM initialization error)	S
130	Get version PDU on real time run received (no test run)	S

Error number	Error description for Module No.: 103	Error category
131	Memory enable for received Get version PDU not possible (system RAM enable error)	S
132	Send PS Version PDU not loadable in send FIFO	S
133	Memory initialization for send PS Version PDU not possible (system RAM initialization error)	S
134	Undefined test mode (plausibility error) on GET VERSION	S
135	HW Reset PDU received in real time run (no test run)	S
136	RESET error, faulty initialization on HW RESET	S
137	Reset PDU received in real time run (no test run)	S
138	RESET error, faulty initialization on RESET	S
139	Run PDU received in real time run (no test run)	S
140	Stop PDU received in real time run (no test run)	S
141	Step1 PDU received in real time run (no test run)	S
142	Step2 PDU received in real time run (no test run)	S
143	Cycle PDU received in real time run (no test run)	S
144	Idle_PDU received in real time run (no test run)	S
145	Set breakpoint PDU received in real time run (no test run)	S
146	Clr breakpoint PDU received in real time run (no test run)	S
147	Dry Run PDU received in real time run (no test run)	S
148	Undefined PDU (undefined PDU command code) received	S
149	Undefined PDU received in real time run (no test run)	S
150	Memory initialization for HW Reset PDU (is sent in the error bit bar deletion in the test run to an own physical and logical address) not possible (allocation error)	S
151	HW reset PDU (is sent in the error bit bar deletion in the test run to an own physical and logical address) not loadable in send FIFO	S
152	Memory enable for received ack. HW Reset PDU (after error bit bar deletion in the test run) not possible (deallocation error)	S

2.4 AWL loading module messages

Error number	Error description for Module No.: 104	Error category
001	Memory initialization for OB , PB or FB list not possible (allocation error)	S
002	No space for block	S
003	Undefined loading type (plausibility error), neither single block, all blocks nor DB´s	S
004	Block number > maximum permitted OB , PB , FB or DB No.	S
005	Block length unequal multiples of the line interpreter structure (6 bytes) or block length greater than max. block length of AMK specific FB´s or loading file length unequal total length of the individual loading and block structure components	S
006	Undefined block type (plausibility error) or on loading additional DB´s block type unequal DB type or project name in block header unequal already loaded current project	S
007	Block line number (AWL commands) > max. line number per block	S
008	No OB1 in the program available	S
009	Undefined value for loading error (plausib. error) after ending loading	S

Error number	Error description for Module No.: 104	Error category
010	Memory initialization for OB , PB or FB list not possible (allocation error) or undef. value for identifier "Block already available / not yet available" (plausibility error)	S
011	Block to be loaded does not belong to called project	S
012	Memory initialization for send PDUs not possible (system RAM initialization error)	S
013	One of the PDU types to be sent in the loading process is not loadable in send FIFO	S
014	Memory enable of a received PDU in the loading process not possible	S
015	Internal file number (taken over on Open File) not correct not on reading the loader file data	S
016	No answer PDU received in the specified time	S
017	Memory initialization for loader file, additional file (DB) or program not possible (system RAM initialization error)	S
018	Wanted file cannot be opened	S
019	Wanted file cannot be closed	S
020	There is no valid PS program in the memory	S
021	Data end reported for wrong file	S
022	Undef. commanding code in receive FIFO (plausibility error)	S
023	Program outside the specified memory area	S
024	An unexpected commanding code stands in the receive FIFO of the loader (wrong PDU sequence)	S
025	Memory enable program area not possible (deallocation error)	S
026	Memory enable OB list not possible (system RAM enable error)	S
027	Memory enable PB list not possible (system RAM enable error)	S
028	Memory enable FB list not possible (system RAM enable error)	S
029	Length of program to be loaded too large	S
030	Check sum through program wrong	S
031	length of program to be loaded too small	S
032	Memory enable DB list not possible (system RAM enable error)	S
033	Too many additional files (*.sps) in the file management	U
034	Additional file (*.sps) too short (smaller than header structure + zero header)	U
035	DB deletion within the scope of enabling of dynamically managed memory not possible (e.g. on PS reset)	S

2.5 Display messages

Error number	Error description for Module No.: 105 "Display request", 106 "Display deletion", 107 "Send display", 108 "Display change",.109 "Extended display"	Error category
001	Timeout error (enable for display PDU summary too late, preceding display editing not yet ended) only for M:105 to 107	S
002	Memory initialization for PDUs or display memory management not possible (allocation error), not for M:106	S
003	PDU display request. Or display deletion of unauthorized orderer (physical subscriber) received, only for M:105 and 106	S
004	Undefined display type (plausibility error), not for M:106	S
005	Mode = 0	S
006	No display data	S

Error number	Error description for Module No.: 105 "Display request", 106 "Display deletion", 107 "Send display", 108 "Display change",.109 "Extended display"	Error category
007	Memory enable (management structure, data sets or PDUs) not possible, not for M:105	S
008	Change request of unauthorized orderer, only for M:108	S
009	Protocol error (PDU length) on change request, only for M:108	S
010	Undef. PDU Code rec. In extended. display (plaus. error), only for M:109	S
011	Answer PDU in display change. Or extended display not loadable in send FIFO, only for M:108 and 109	S

2.6 ADPS messages

Error number	Error description for Module No.: 110	Error category
001	Transmission error on sending : higher level system -> AMKASYN	U
002	Timeout on deactivating the strobe signal in the send process for higher level systems -> AMKASYN	U
003	Timeout on activating the strobe signal on reception (higher level system <- AMKASYN)	U
004	Timeout on activating the error signals for ack. a transmission error on reception (higher level system <- AMKASYN)	U
005	Transmission error on reception (higher level system <- AMKASYN)	U
006	Timeout on deactivating the strobe signal on reception (higher level system <- AMKASYN)	U
010	Memory initialization for write list or DB not possible (allocation error)	S
011	Memory enable for list or DB not possible (deallocation error)	S
012	ADPS KMD: DB for commanding does not exist	U
013	ADPS TMPPAR: DB for temporary parameter access does not exist	U
014	Undefined function code in received PDU (plausibility error)	U
015	Function code error in first cycle of a transmission	U
016	Write function code error in following or last value	U
017	Invalid address on writing	U
018	Invalid address on reading	U
019	Invalid Init DB length	U
020	Invalid EA number Init DB	U
021	Wrong length on access to user list 1	U
022	Standard DB for KMD can not be created via ADPS, since DB already available	W
023	Error on start of a FB (e.g. FB not available)	U
024	DB for "Read error list" too small	U

2.7 Table value calculation messages

Error number	Error description for Module No.: 111	Error category
001	Invalid Init DB length	U
002	DB for table does not exist	U
003	Parameter number element too small	U
004	DB length for table too small	U

Error number	Error description for Module No.: 111	Error category
005	Encoder resolution (master or slave) too large or too small	U
006	Memory initialization for local variable not possible (system RAM initialization error)	S
007	Memory enable of the local variable not possible (system RAM enable error)	S
008	Resulting point distance too large (e.g. because of too small point number)	U
009	Undefined table type (plausibility error)	U
010	Error on entry of parameter 1	U
011	Error on entry of parameter 2	U
012	Error on entry of parameter 3	U
013	Error on entry of parameter 4	U
014	Only Y or XY tables are permitted (Tab. type = 0 or 1)	U
020	Parameter error, synchronous command value angle too small/large; init type 0/2; infringement of the condition 1 (cf. docu FB 210)	U
021	Parameter error, synchronous command value angle too small/large; init type 0/2; infringement of the condition 2 (cf. docu FB 210)	U
022	Parameter error, synchronous command value angle too small/large; init type 0/2; infringement of the condition 3 (cf. docu FB 210)	U
023	Parameter error, coupling command value angle too small/large; init type 1; infringement of the condition 1 (cf. docu FB 210)	U
024	Parameter error, coupling command value angle too small/large; init type 1; infringement of the condition 2 (cf. docu FB 210)	U
025	Parameter error, decoupling command value angle too small/large; init type 0/2; infringement of the condition 1 (cf. docu FB 210)	U
026	Parameter error, decoupling command value angle too small/large; init type 0/2; infringement of the condition 2 (cf. docu FB 210)	U
027	Parameter error, decoupling command value angle too small/large; init type 0/2; infringement of the condition 3 (cf. docu FB 210)	U
028	Parameter error, brake command value angle too small/large; init type 1; infringement of the condition 1 (cf. docu FB 210)	U
029	Parameter error, brake command value angle too small/large; init type 1; infringement of the condition 2 (cf. docu FB 210)	U
030	Parameter error, sine start command value angle too small/large	U
031	Parameter error, velocity vmax too small	U
032	Parameter error, acceleration amax too small	U

2.8 SF Diagnostic messages

Error number	Error description for Module No.: 112	Error category
001[1]	Parameter1 error (less significant word)	U
002[1]	Parameter1 error (more significant word)	U
003[1]	Parameter2 error (less significant word)	U
004[1]	Parameter2 error (more significant word)	U
005[1]	Parameter3 error (less significant word)	U
006[1]	Parameter3 error (more significant word)	U
007[1]	Parameter4 error (less significant word)	U
008[1]	Parameter4 error (more significant word)	U

Error number	Error description for Module No.: 112	Error category
009[1]	Parameter5 error (less significant word)	U
010[1]	Parameter5 error (more significant word)	U
011[1]	Parameter6 error (less significant word)	U
012[1]	Parameter6 error (more significant word)	U
013[1]	Parameter7 error (less significant word)	U
014[1]	Parameter7 error (more significant word)	U
015[1]	Parameter8 error (less significant word)	U
016[1]	Parameter8 error (more significant word)	U
017[1]	Parameter9 error (less significant word)	U
018[1]	Parameter9 error (more significant word)	U
019[1]	Parameter10 error (less significant word)	U
020[1]	Parameter10 error (more significant word)	U
021[1]	Parameter11 error (less significant word)	U
022[1]	Parameter11 error (more significant word)	U
023[1]	Parameter12 error (less significant word)	U
024[1]	Parameter12 error (more significant word)	U
025[1]	Parameter13 error (less significant word)	U
026[1]	Parameter13 error (more significant word)	U
027[1]	Parameter14 error (less significant word)	U
028[1]	Parameter14 error (more significant word)	U
029[1]	Parameter15 error (less significant word)	U
030[1]	Parameter15 error (more significant word)	U
031[1]	Parameter16 error (less significant word)	U
032[1]	Parameter16 error (more significant word)	U
033[1]	General parameter error in a SF of SF type 1 and 2	U
034[2]	Timeout in SF: Error distinction by means of error number in MB 233 (SF error) of the last commanded SF	S
041[1]	XFIPW: Points of Table0 with not increasing X position	U
042[1]	XFIPW: Points of Table1 with not increasing X position	U
043[1]	XFIPW: Points of Table2 with not increasing X position	U
044[1]	XFIPW: Points of Table3 with not increasing X position	U
045[1]	XFIPW: Points of Table4 with not increasing X position	U
046[1]	XFIPW: Points of Table5 with not increasing X position	U
047[1]	XFIPW: Points of Table6 with not increasing X position	U
048[1]	XFIPW: Points of Table7 with not increasing X position	U
049[1]	XFIPW: Table DB not available	U
050[1]	XFIPW: Number of the table points is too large	U
052[1]	XFIPW: Inadmissible flag address for ext. synchronization	U
053[1]	XFIPW: "Setting on" function is not possible in this operating mode	U
054[1]	XFIPW: Table end value (abscissa) not permitted	U
060[1]	BINEA: Inadmissible point number	U
061[1]	BINEA: Inadmissible point values	U
062[1]	BINEA: Not monotonously rising point order	U
063[1]	BINEA: Inadmissible output time value	U
064[1]	BINEA: Inadmissible track number; taking account of the input or output offset of Spur0	U
065[1]	BINEA: Output tab. DB not available	U
	NOCKE: Cam table not available	U

Error number	Error description for Module No.: 112	Error category
066[1]	BINEA: Output tab. DB length too small	U
	NOCKE: Cam table too small (> 32 data words + 4 data words per cam)	U
067[1]	BINEA: Inadmissible initialization state	S
	CAM: Cycle time error (BA time: Cycle time < SF cycle time)	U
080..087 [1]	COPY: Negative divider AW1 .. 8, in Tab0 DB	U
100[1]	NC-SF: Error on allocating memory	S
101[1]	NC-SF: Inadmissible DB number for SF commanding	U
102[1]	NC-SF: Inadmissible SF number for SF commanding	U
103[1]	NC-SF: Parameter error on SF commanding	U
104[1]	NC-SF: Inadmissible state (default)	S
200[2]	O command on first scan inadmissible	U
201[2]	Too many brackets opened	U
202[2]	Too many brackets closed	U
203[2]	DB number or word number > maximum permitted value	U
204[2]	DB change not possible	U
205[2]	DB not long enough	U
206[2]	Periphery direct access with (L)oad command on this address not permitted	U
207[2]	Periphery direct access with (T)ransfer command on this address not permitted	U
208[2]	Inadmissible command parameter value after logic operation with processing command cell (MWx/DWx	U
209[2]	Last block line exceeded	U
210[2]	Branch beyond last block line	U
211[2]	Not defined AWL command group	S
212[2]	Accu1 value in "S Z x" command too large	U
220[2]	SF APSF: Error with statement of the command line in the additional diagnostic information	U
230[2]	SF XFIPW: Timeout in the interpolation point interpolation (e.g. because of inadmissible interpolation sequence)	
252[2]	Value exceeded in the range of the reference input variable monitoring (e.g. too large reference speed)	U
253[2]	Not correctable parameter error	U
254[2]	Parameter error in active DB for SF initialization	U
255[2]	SF system error	S

[1] Error number is displayed for the last commanded SF in MB 233 (SF error); there is **no** error OB selection; the PS does not go into the error state!

[2] Timeout in sequence of errors with an error number $\geq$ 200; there is **one** error OB17 call; the PS goes into the error state!

Error number	Error description for SF Error No.: 34 (Module No.: 112)	Error category
252[1]	Value exceeded in the range of reference input variable monitoring (e.g. too large reference speed)	U
253[1]	Not correctable parameter error	U
254[1]	Parameter error in active DB for SF initialization	U
255[1]	SF system error (plausibility error)	S
[1] Error number is displayed for the last commanded SF in MB 233 (SF error)		

2.9 Diagnostic module messages

Error number	Error description for Module No.: 113	Error category
0.255	Can be generated by user by means of FB 212 (cf. docu. FB 212)	[1]
[1] corresponding to the entry under "error class" in the active DB		

2.10 NC function block messages (FB247 .. FB250)

Error number	Error description for Module No.: 114	Error category
001	No system RAM memory is available for the data set to be copied. The system is overloaded.	S
002	A data telegram could not be transferred to the internal distributor. Check the external communication interface.	S
003	No NCxx.CFG program could be found in the file management for this NC address or the NC channel.	S
004	The subroutine could not be found in the file management.	S
005	A configuration file could not be opened in the file management.	S
006	A temporary system file of the FB could not be created in the system heap. The system is overloaded.	S
007	The interne file number of a file from the file management does not agree with the file to be read. A check of the file management is required.	S
008	A file could not be read from the file management. It must be checked whether all used files (e.g. subroutines) are also available in the file management.	S
009	An already opened file could no longer be closed. A check of the file management is required.	S
010	A system error has occurred.	S
011	NC program could not be started.	W
012	NC program could not be aborted.	W
013	NC program could not be stopped.	W
014	NC program could not be continued.	W
015	The initialization function of the FB 250 was not yet started. No NC commands can still be sent.	U
016	A NC program could not be opened. File in the DV not available.	U
017	The length of the data block does not correspond to the one specified for this FB.	U
018	The axis name is not known. Check your configuration file.	U
019	The handwheel function could not be stopped	W

Error number	Error description for Module No.: 114	Error category
020	The homing cycle could not be triggered.	W
021	The STEP command could not be executed.	W
022	The JOG command could not be executed.	W
023	The handwheel function could not be switched on.	W
024	The handwheel function could not be switched off.	W
025	A NC RESET could not be triggered.	W
026	The feed override could not be set.	W
027	The axis name was not defined as spindle in the configuration file.	U
028	The spindle override could not be set.	W
029	A movement-influencing bit could not be set or reset.	W
030	The subroutine in which the R parameters should be read or written is still active.	U
031	A temporary memory are for the subroutine in which the R parameters should be changed, could not be created in the system heap. The system is overloaded.	S
032	The R parameter number could not be found in the subroutine.	W
033	The changed subroutine could not be written again in the file management. A check of the file management is required.	S
034	An internally created temporary file could not be deleted. A check of the file management is required.	S
035	An internally created temporary intermediate file could not be renamed in the new subroutine after R parameter writing. A check of the file management is required.	S
036	The data block used on commanding the FB is no longer active.	U
037	The spindle speed limitation could not be activated or switched off.	W
038	The PS is not logged on as operator panel on the NC.	U
039	The PS could not log off and operator panel on the NC.	W
040	TIMEOUT: The NC channel not acknowledged a command within 4 seconds.	W
041	This axis type can not be set on homing.	U
042	The HOMING command could not be executed.	W
043	The NC core delivers no display data.	W
044	The display type is unknown.	U
045	The NC channel is unknown.	U
050	KMD code faulty	U
051	KMD function faulty	U
052	Parameter valid faulty	U
054	Parameter 1: Low word faulty	U
055	Parameter 1: High word faulty	U
056	Parameter 2: Low word faulty	U
057	Parameter 2: High word faulty	U
058	Parameter 3: Low word faulty	U
059	Parameter 3: High word faulty	U
060	Parameter 4: Low word faulty	U
061	Parameter 4: High word faulty	U
062	Parameter 5: Low word faulty	U no
063	Parameter 5: High word faulty	U
064	Parameter 6: Low word faulty	U
065	Parameter 6: High word faulty	U
066	Parameter 7: Low word faulty	U

Error number	Error description for Module No.: 114	Error category
067	Parameter 7: High word faulty	U
068	Parameter 8: Low word faulty	U no
069	Parameter 8: High word faulty	U
100	Error on creating the transfer DB	U

2.11 Extended PS basic function messages

Error number	Error description for Module No.: 115	Error category
001	Server: Invalid order code	U
002	Server: DB does not exist	U
003	Server: Offset in the order telegram too large	U
004	Server: Length in the order telegram too large	U
005	Server: Receive PDU can not be deallocated (system RAM enable error)	S

2.12 Diagnostic messages of the file management

Error number	Error description for Module No.: 116	Error category
001	Inadmissible order code	S
002	Inadmissible initialization state	S
003	Enable of dynamic receive memory area not possible	S
004	Enable of dynamic send memory area not possible	S
005	Inadmissible write order code	S
006	Inadmissible byte number	U
007	Inadmissible file number	U
008	Faulty RAM disk configuration	S
009	Internal DV error	S
010	Internal DV error (fatal)	S
011	CRC check sum error	S

2.13 Option module messages

Error number	Error description for Module No.: 119	Error category
	Diagnostic information according to the corresponding option module (e.g. CAN diagnostic information)	

2.14 System basic function messages

Error number	Error description for Module No.: 120	Error category
001	Battery error of the additional card (battery voltage too low on "power on")	S
002	RAM check sum error of the additional card on "power on"	S
003	EPROM check sum error of the additional card on "power on"	S
004	Processor error of the additional card	S
005	Remanent data area inconsistent on "power on"	S
006	Hardware initialization of the ARCNET module faulty	S
007	Nonmaskable Interrupt (NMI; return address according to additional info)	W
008	Hardware initialization of the CAN module faulty (handshake PS/CNS not occurred)	S
		s
020	Overflow of PGT Interrupt (e.g. by too many SF, or too small SERCOS cycle time)	S
021	Overflow of the time plane 1 (e.g. by too many SF, or too small SERCOS cycle time)	W
022	Overflow of the time plane 2 (e.g. by too many SF, or too small SERCOS cycle time)	W
023	Overflow of the time plane 3 (e.g. by too many SF, or too small SERCOS cycle time)	W

3 Impressum

Title   **Diagnostic messages PS**

Objective   **Diagnostic messages**

Part-Number   **25805**

History

Date
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