Thysseen Elevator Service

MC2 Manual

Type PT For ThyssenKrupp elevator Inverter

CPI Series Test

CPIK Series Test

Type Diagnostic Unit 1 For ThyssenKrupp

TCM Series (MC1,MC2 MAIN Board) Test

F5 Door Operator Test

Shaanxi Sanjin Elevator Fittings Co., Ltd.

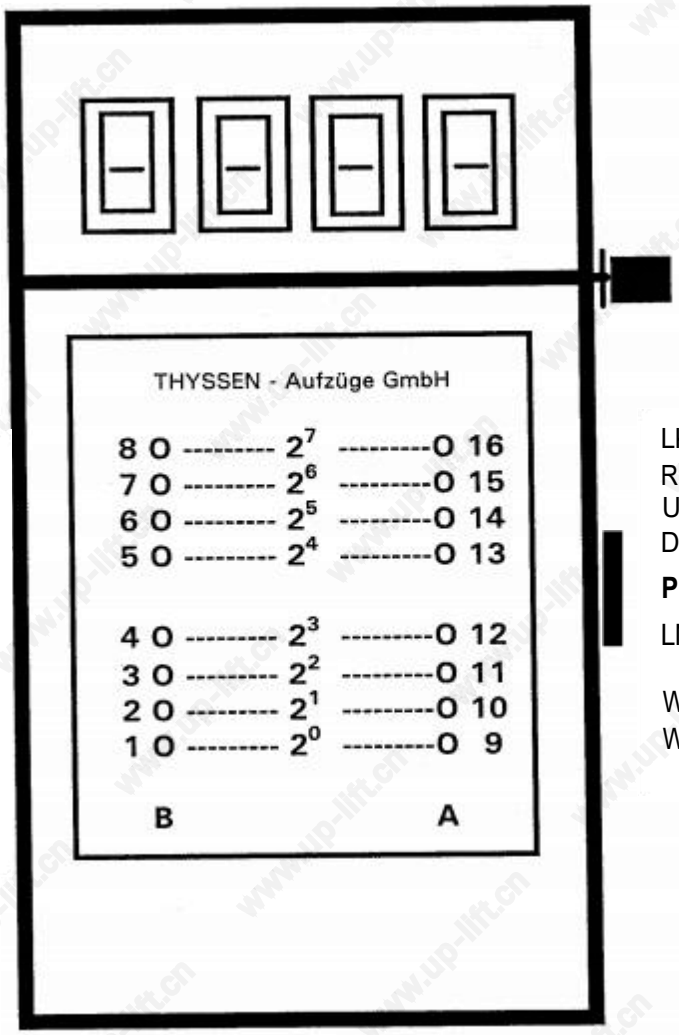
Address: 3F, NO.138, Daxing Road, Lianhu District, Xi'an, Shaanxi Province, China

Homepage: https://www.sjelevator-parts.com

Call us & What's App: +86 15389448152

E-mail: sanjin.elevatorparts@westdt.com

DIAGNOSTIC UNIT I



Seven-segment-function display flashing[1])

Start/Stop button

Pulses

Check-back SR module

Safety circuit EK
HK
TK
KT

LK sensor
Run: IS/RS [2])
UP direction with IS
DOWN direction with IS

Program selector wheel

LN sensor

W/W1 contactor
WO/WU Schütz

Altogether 16 functions can be interrogated or handled with diagnostic unit I. The individual functions can be set with the program selector wheel. The selected function appears in the seven-segment display (flashing display).

All functions will be described on the following pages:

TCI/TCM	1) Functions	Functions	0100 to 1400	Pages 1...45	(green)
	2) Memory locations	Function	0000	Pages 1...23	(yellow)
	3) Teach-in short instructions Control[3])	Function	1500	Pages 1...5	(orange)
	Door operators	Function	0100, 1400, 1500	Pages 1...4	(orange)
	Load-weighing device	Function	1300, 1400, 1500	Page 1	(orange)

[1]) With the 7-segement display flashing, the functions shown on the sides will be displayed by the light-emitting diodes in rows A and B.
[2]) IS ... Inspection operation, RS ... emergency electrical operation
[3]) For detailed description of teach-in control functions please see MA part 13 6510.046.

Diagnostic unit I for lift control TCI and TCM

Functions selectable for TCI with work program from version 04.86/3 for TCM with MC, MC1 and TCM-MC2 control.

Function	Designation	Description	Page
Part 1	**Functions**	(green pages)	
01 00	Error stack	Reading out error stack and event stack	3
02 00	Order number display	Possible from work program version 06.88/6	23
03 00	Position display	Car position indicator on 7-segment-display; LEDs are of no significance.	23
04 00	Operation phase	The respective operation phase is indicated on 7-segment display and through LEDs.	24
05 00	Memory locations	Display of important memory locations (car) through LEDs in rows A and B.	26
06 00	Door locking device	Main door: display by LEDs in rows A and B	42
07 00	Door locking device	Rear door: display by LEDs in rows A and B	42
07 00	CPI parameter	Display of parameters CPI controller (only with TCM control)	42
08 00	Car call	Giving car call for main door landings	44
09 00	Landing calls	Giving DOWN calls (TU) – main door side	44
10 00	Landing calls	Giving UP calls (TO) – main door side	44
11 00	Car call	Giving car calls for rear door landings	44
12 00	Landing calls	Giving DOWN calls (TU) – rear door side	44
13 00	Landing calls	Giving UP calls (TO) - rear door side	44
14 00	Version display and marking flag	Display of CPU work program version and display of issue date. Display of MW1 work program version Enter marking flag in error stack	44
Part 2 00 00	**Memory locations**	(yellow pages) Interrogation or display of specific memory locations	1-23
Part 3 15 00	**Teach-in short instructions** Control TCI/TCM	(orange pages) (for complete teach-in instructions please see MA part 13)	1-5
15 00	Door operator F2/1, F3, F4, F5, D6.C	(orange pages) Teach-in, event or error stack	1-4
15 00	Load-weighing device LMS1	(orange pages) Teach-in	1

Handling

- Plug the diagnostic unit I into respective board (CPU, door control, LMS1, etc.), a function display (flashing) must appear. Select the desired function with the program selector wheel.
- Switching from one function to another is only possible, if the seven-segment display is flashing.
- Aborting a selected function: turn program selector wheel by one step and then press start/stop button >2 s.
- In the teach-in function it is possible to abort teach-in through AF 00 (dF 00, bF 00) or by turning the main switch off and on.
- The following explanations and functional descriptions of diagnostic unit I apply to all work program versions from 04.86/3. The valid work programs applying to TCI/TCM control are specified in the respective Urgent Information.

Function 01 00 Display of error stack as per: 05.00

1) Select function 01 00 with program selector wheel

2) Press start/stop button; the code number of the error that occured last will appear on the 7-display.
3) Pressing the start/stop buttton consecutively will cause the code number of the last-but-one, last-but-two error, etc. to be displayed.
4) To abort this function, turn program selector wheel one step further and press button longer than 2 s.
5) Set marking flag, if necessary (see function 14 00).

Example:

Error **Explanation** **Weighting BW**

14 03

AA job-specific error message
XX landing
YY undefined
NN explanations from page 21
ZZ Number of marking flag
..B operation phase

Error code number

N emergency stop
S stopping
M spontaneous message
B lift blocked

Significance: Frequency levels of error:

Level 1 infrequent
Level 10 frequent

Error	Error description	Causes, remedy or instructions	BW
01 XX	Interlock contact RK or RKD is jamming in landing XX.	Check interlock contact or mechanical parts of door in landing XX. A correct door type must be programmed in the job-specific program.	6
02 01	Calls inhibited via monitoring	An 8-kbyte RAM is required in CPU.	1
02 02	Quasi ZSE in lift-specific program released, but Siemens CPU still used.	Use Thyssen CPU with battery-backed RAM chip (storage of position in the event of power failure or if HS is switched off).	1
02 03	TCM control	8 k-RAM not recognized; F8 00 will follow	1
02 04	TCM control	8 k-EPROM not recognized; F8 00 will follow	1
02 80	Undefined or wrong operation phase		1
03 01	No provision has been madefor disconnect landing in lift-specific program.	Disconnect landing not programmed (check data sheet) or incorrect order number on lift-specific EPROM.	1
03 02	No provision has been made for parking landing in lift-specific program.	Parking landing not programmed, etc., same as for error 03 01.	
03 03	No provision has been made for fireman's landing in lift specific program.	Fireman's landing not programmed, etc., same as for error 03 01.	
04 NN	TCI: error caused by solenoid switch ZSE.	TCI: CPU checks whether more than one ZSE switch is actuated. If so, the lift will be stopped and error 04 NN stored four times in succession. Check ZSE solenoid switch. Also see explanations from page 21.	SM3
04 XX	TCM: error caused by soldenoid switch ZSE.	CPU checks whether more than one ZSE switch is actuated. All landings XX with ZSE actuated will be	

		displayed. Check ZSE solenoid switch, for example fireman's lift.	
05 YY	Incorrect computer request by group (circuit board MG defective or fault in group connection).	TCI: Check circuit board MG or group connection (round cable or flat cable). TCM: check group bus (MZ1 circuit board) Software error: identify work program version and subidentification (YY) and inform Thyssen Aufzugswerke department VTS !	2
	Error of TCM lift controls		
05 XX	Special program error messages from TCM group. Will be output after errors indicated below !	Inform TU or VTS as soon as this error occurs. XX = Data for detailed error description	-
05 42	Number of lifts of group and/or number of landings of group unacceptable.		-
05 53	Run telegram in incorrect group phase; 05 XX follows	Poor group connection of lift XX XX = lift number	-
05 A0	Group protocol incompatible	Same program version for all MZ1 circuit boards of the group.	-
05 A8	Group protocol and group control computer are not compatible	Check program version of MZ1 circuit board and group control computer	
	Error of TCM with destination selection control (DCS)		
05 b0	DCS reset, : 05 XX will follow ZES = destination entry terminal	ZES always performs. Check voltage supply and CAN connection to respective ZSE. XX = concerned landing	-
05 b1	Unexpected response from DCS: Hallo (= initialization program: 05 XX follows	XX = concerned landing	-
05 b2	DCS send unexpected ready message (= initialization terminated); 05 XX will follow	XX = concerned landing	-
05 b3	DCS initialization time-out, table start: 05 XX will follow	Failure to initialize destination selection control DSC. Check voltage supply and CAN connection to respective ZSE. XX = concerned landing	-
05 b4	DSC initialization time-out, table end		-
05 b5	DSC-life-time-out; 05 XX will follow	No cyclical response from DSC. Check voltage supply and CAN connection to respective ZSE. XX = concerned landing	-
05 C0	Special run-RESET	RESETdue to timeout	-
	General errors		
06 XX	Emergency stop after 3 unsuccessful locking attempts in landing XX.	Check interlock contact or mechanical parts of door in landing . XX (foreign objects). See also explanations on page 21.	M2
07 01	TSO error – main door: TSO switch not actuated within 30 s after giving TO command. TSO signal will then be simulated by CPU, so that door can re-close after expiry of normal dwell time.	TSO switch defective or incorrectly adjusted. Check ! Message that car door is unlocked is missing in lifts with car locking device. Error may also be caused by door control, if TO command is not executed.	3

07 02	TSO error – main door (also see 0b 04)	TSO signals car main door open, although TK (door contact) is closed. Results in RESET.	N1
08 01	TSOD error – rear door	TSOD switch defective or incorrectly adjusted (same as error 07 01).	1
08 02	TSOD error – rear door	TSOD signals car rear door open, although TK TK (door contact) is closed.	N3
09 NN	Blocking > 4 min: car is in a landing and fails to start within 4 min. although commands or calls are present.	Problem with door re-opening device; see function 05 00 column 0d. The safety switch of hydraulic lifts may be tripped in governors with anti-creep device if the car lowers or the governor sheave is sluggish. (Explanations from page 21).	M3
0A 2F	Slack rope		
0A 30	Strop outside doorzone		
0A 31	Car door not closed		
0A 32	Landing door not locked		
0A 33	Oiltemperature over 70°C		
0A 34	Oil level monitoring		
0A 46	Maintenance switch ON		
0A 47	Maintenance switch OFF		
0A AA 0A XX	Job-specific error Teach-in error (shaft teach-in main door side; 0b XX for rear side) Also see operating instructions for teach-in (MA 13 6510.046)	Error envisaged by order processing clerk as possible. AA = error described in a list (erors to be clarified with processing clerk). If this error occurs during teach-in function AF0d or AF0C, error 0A XX or 0b xx means that at landing XX the landing number of MS2 board cannot be assigned.	2
0b 01	Error in light barrier – main door	Light barrier interrupted longer than time specified in lift-specific EPROM; it prevents error 09 00 (error is possible on disconnect control and light and TCI program version up to 06.95).	M2
0b 02	Error in light barrier – rear door	See error 0b 01	M2
0b 03	Lift for group operation faulty for more than 1 hour	Error can only be entered for groups, if lift is not involved in landing call answering. E.g. in priority, occupied, etc. (software error; use TCI program version from 06.95).	M2
0b 04	TSO error – main door	TSO switch signals car main door open after three resets, although door is closed.	SM2
0b 05	TSOD error – rear door	TSOD switch signals car rear door open, although door is closed.	SM2
0b 06	Earthquake active	Only with CPU MCx	SM1
TCM-(CAN) error (events) which are tripped by CPU (E60)			
0C 01	CPU: MZ1 failed to understand table	Connection problems CPU to MZ1	S1
0C 02	CPU: MZ1 failed to understand table		S1
0C 03	CPU: MZ1 failed to understand table		S1

0C 04	CPU: Initialization of car reference ≠ actual	a) Lift-specific program not correct b) Poor contact at bus plugs. Check lift-specific EPROM (addresses)	-
0C 05	CPU: Initial. of MP reference 1 ≠ actual 1	a) Number of MP boards wrong b) MP boards not coded correctly- c) Bus connection faulty Check lift-specific EPROM (addresses)	-
0C 06	CPU: Initial. of MP reference 2 ≠ actual 2		-
0C 07	CPU: Initial. of local bus ref. 1 ≠ actual 1	Same as error 0C 05 a) and c)	-
0C 08	CPU: Initialization of local bus ref.2 ≠ act.2		-
0C 09	CPU: Initial. of MF4 ref.1 ≠ act. 1	No acknowledge received from MF4 board, but MF4 is correct !	-
0C 0A	CPU: Initial. of MF4 ref.2 ≠ act. 2		-
0C 0b	CPU: Initial. of MF4 ref.3 ≠ act. 3		-
0C 0C	CPU: Initial. of MF4 ref.4 ≠ act. 4		-
0C 0d	CPU: Initial. of FKZ ref.1 ≠ act.1	FKZ = car accessories (e.g. door drive, load-weighing device)	-
0C 0E	CPU: Initial. of FKZ ref2 ≠ act2		-
0C 10	CPU: timing error initialization of MZ1	No acknowledge received from MZ1	S1
0C 11	CPU: timing error initialization of MZ1	Neither acknowledgement nor initial. finished received	S1
0C 12	CPU: timing error initial. of MF1	Initial. finished not received after 20 s	S1
0C 13	CPU: Reset received from MZ1	MZ1 error, use program from V10	N1
0C 1C	CPU: No CPI connection	Error F3 1C will follow	
CAN events from MZ1 concerning shaft/car			
0C 20	MZ1: Shaft buffer overflow	Data for shaft/car cannot be read in. There may be connection problems MZ1 – terminal block shaft bus – car bus	-
0C 21	MZ1: Shaft buffer overflow		-
0C 22	MZ1: Shaft buffer overflow		-
0C 23	MZ1: Shaft buffer overflow		-
0C 24	MZ1: Shaft buffer overflow		-
0C 25	MZ1: Shaft buffer overflow		-
0C 30	MZ1: Shaft bus faulty	New initialization through MZ1	N1
0C 31	MZ1: Transmission error in shaft bus	MZ1 detects error to shaft	-
0C 32	MZ1: Overflow error in shaft bus		-
0C 3A	MZ1: Telegram from MF3D lost		-
0C 3b	MZ1: Telegram from MF3 lost		-
0C 3C	MZ1 MF3 fails to answer	Connection/plug problem MZ1 - terminal block – car bus - MF3	-
0C 3d	MZ1 MF3D fails to answer		-
CAN events from MZ1 concerning the local bus			
0C 40	MZ1: Local buffer overflow	More data has been read in than MF1 could process	-
0C 42	MZ1: Local buffer overflow		-
0C 43	MZ1: Local buffer overflow		-
0C 45	MZ1: Local buffer overflow		-
0C 50	MZ1: Local bus faulty	New initialization through MZ1	-
0C 51	MZ1: Transmission error in local bus		-
0C 52	MZ1: Overflow error in local bus		
0C 53	MZ1: Reset request in local bus		
0C 60	MZ1: Clock divider tumbled down	CAN test	
CAN events MC1/MC2/MC3 interface (CANL = local bus)			
0C 70	CANL test: Clock divider tumbled down	CAN controller is being initialized	-
0C 73	CANL test: RESET request from CAN controller	CAN controller is being initialized	-
OC 74	CANL test: error in status register (EMC)	CAN controller is being initialized	-
0C 75	CANL test: Output buffer overflow		-

0C 76	CANL test: Output buffer overflow		-
	CAN events MC3 interface (CANS = shaft bus)		
0C 78	CANS test: Clock divider tumbled down	CAN controller is being initialized	-
0C 7A	CANS test: Overflow error shaft bus		-
0C 7b	CANS test: Reset request in shaft bus	CAN controller is being initialized	-
0C 7C	CANS test: Error in status register	EMC	-
	CAN events from MF3 or MF3D board (main or rear side)		
0C 80	MF3: Reset from MF3		-
0C 81	MF3: Telegram from MZ1 lost		-
0C 85	MF3: Overflow error in shaft bus	More data read in than MF3 could process	-
0C 86	MF3: Transmission error in shaft bus	MF3-CAN controller records faulty transmission	-
0C 87	MF3: Shaft bus faulty		-
0C 88	MF3: Acknowledge with MF2 not possible	>56 HS with MF2 circuit boards; check!!	-
0C 89	MF3: CAN chip tumbled down	Reset request or Clock divider	-
0C 8A	MF3: Initialization error MF3		
0C A0	MF3D: Reset from MF3D		-
0C A1	MF3D: Telegram from MZ1 lost		-
0C A5	MF3D: Overflow error in shaft bus	More data read in than MF3D could process	-
0C A6	MF3D: Transmission error shaft bus	MF3D controller records faulty transmissions	-
0C A7	MF3D: Shaft bus faulty		-
0C A8	MF3D: Acknowledge with MF2 not possible	>56 HS with MF2 boards; check!!	-
0C A9	MF3D: CAN chip tumbled down	Reset request or clock divider	-
0C AA	MF3D: Initialisation error MF3D		-
	Door drive main side		
0C d0	RESET		
0C d2	Error overflow of memory		
0C d3	Bus error		
0C d4	Bus interruption		
0C d5	Incomplete transmission		
0C d8	Run time error		
0C d9	Watchdog		
0C dA	Overcurrent		
0C db	Overvoltage		
0C dC	Overtemperature heat sink		
0C dd	Overtemperature door motor		
0C dE	No controller enable		
0C dF	F2/1: overtemperature housing		
	Door drive rear side		
0C E0	RESET		
0C E2	Error overflow of memory		
0C E3	Bus error		
0C E4	Bus interruption		
0C E5	Incomplete transmission		
0C E8	Run time error		
0C E9	Watchdog		
0C EA	Overcurrent		
0C Eb	Overvoltage		
0C EC	Overtemperature heat sink		
0C Ed	Overtemperature door motor		
0C EE	No governor enable		
0C EF	F2/1: overtemperature housing		

	MZ1/CPU		
0C FF	CPU: unknown command from MZ1	If this error occurs read out memory locations dE2F to dE3F by diagnostic unit 1 and send them to department VTS or QMS together with error stack. Attention: the specified memory locations will be cancelled with RESET !	-
	Reference-to-actual value monitoring [1])		
0d 1B	Reference-to-actual value monitoring MW1 (B=operating phase, applies to all 0d errors))	Pulses are missing (only in inspection or emergency electrical operation); CPU fails to detect pulses.	N
0d 2B	Pulse sequence monitoring: Channel A before B on UP run	Pulses channel A and channel B mixed up. Correct pulse sequence is indicated on circuit board ESA (Iso 60) or NIM (Iso 25M).	N
0d 3B	Reference-to-actual value monitoring MW1 $v_{IST} > v_{SOLL}$ (+10% with v_N; +100% with v_I; +80% with v_J; +50% with v_{NS})	Error may occur as a consequence of a pre-ceding error, if the reference value is already 0 on emergency stopping and the actual value is still available.	N
0d 4B	Reference-to-actual-value monitoring MW1 $v_{IST} < v_{SOLL}$ (-10% with v_N; -100% with v_I; -80% with v_J; -50% with v_{NS})	Error may occur in the event of bolt contact interruption (without 14 XX), with pulses missing, with reference-value voltage on board MW1 >9.8 V, with acceleration too steep (actual value cannot follow), with control too sluggish; I-component to be increased, as the case may be.	N
0d 5B	Reference-actual-value monitoring $v_{IST} > v_{SOLL}$	Error, if $v_{IST} > v_N$ + 10 %	N
0d 6B	Controller amplifier at stop (with analog control only (e.g. Isostop 25M); not with digital control.	Set drive to within control range (not with digital control) Acceleration setting may be too steep, motor switched incorrectly, oil too cold!	N
0d 7B	Reference-value generator (MW1) non-level internally	Error occurs, if MW1 detects a non-level condition >3mm in terms of computation. It is possible that an error message will be produced, although car is level (software error up to 12.95). This occurs frequently as a consequence of a preceding error.	N
0d 8B	Reference-value generator (MW1) zero-speed control v_{IST} > 0.25 m/s	Board MW1 records a speed >0.25 m/s at standstill-cause: pulse generator also supplies pulses at standstill; interference signals on pulse line (screening).	N
	TCI/TCM General errors (continuation)		
0E 00	Faulty transmission from MW1 to CPU		1
0F 0A	Marking flag test switch ON	Test switch on circuit board MZor MZ1	-
0F 0b	Evolution lift	Maintenance platform open	Reset
0F 0C	Marking flag TELEservice	Service operation switched on	-
0F 0d	Marking flag TELEservice	Service operation switched off	
0F 0E	Marking flag test switch OFF	Test switch on circuit board MZ or MZ1	-
0F 0F	Evolution lift	Maintenance platform closed	Reset
0F ZZ	Marking flag set	ZZ = Flag No. (0 ... 9 possible numbers)	-
10 YY	Fault in CPU boards	RESET will follow	N

[1]) can be suppressed with switch 6S1 on circuit board MZ or with switch S5 on circuit board MZ1.

11 YY	Fault in MG board	Group input/output chip is faulty.	1
11 01	TCM: Fault in group CAN bus	Group CAN bus on MZ1 missing. Use MZ1 with group CAN bus.	
12 XX	Logical position is unequal to physical car position.	Error not in LK sensor. Error is in floor counter program in operation phase STOP.	3
13 XX	Position determined is unequal to actual car position.	See error 12 XX	3
14 XX	Bolt contact RK open in landing XX	Bolt contact RK was interrupted during run. Cause: door opening with emergency unlocking key; TSM or bolt magnet fails to push through fully; cam motor not adjusted correctly; cam or bolt cam grazing on by-passing.	N8
15XX	Logical position is unequal to physical position.	Error in floor counter program in operation phase STANDSTILL BEFORE RUN.	2
16 YY	MW/MW1 board: discrepancy as to position	Error occurs only in lifts with running-characteristic computer (circuit board MW/MW1).	3
17 YY	CPU error – MW/MW1	Error only in lifts with circuit board MW/MW1 (storage overfilled)	N1
18 XX	Bolt contact RKD open in rear entrance landing XX	Bolt contact RKD was interrupted during run (same as error 14 XX).	N8
19 NN	Door zone not recognized (CPU fails to recognize landing vane, but stopping has been initiated).	Selector fails to signal door zone in operation phase STOP. Corresponds to representation of function 05 00, column 05 (see explanations on page 25).	N2
1A YY	Selector read error: LK sensor indicates incorrect synchronization: Should-be: DARK Actual: BRIGHT	Problems with LK sensor or landing vanes. Error may also occur with rope slip or controller vibrations! Pulse generator may be defective!	N8
1bYY	Selector read error: LK sensor indicates incorrect synchronization: Should-be: BRIGHT Actual: DARK	Problems with LK sensor or landing vanes. Error may also occur with rope slip or controller vibrations!	N5
1C NN	Undefined run	Run was initiated with no direction present.	4
1d YY	Emergency stop (incorrect run direction)	No or both run directions produced (see explanations on page 22).	N3
1E NN	On bypassing marked terminal landing vanes or inspection limit switches IFO/IFU not delayed	Bit 2^0 up to 2^5 car position; Bit 2^6 (1) IFU actuated Bit 2^7 (1) IFO actuated NN is displayed in hexadecimal (see explanations on page 22).	3

	Circuit board 0MP		
1F 00	Local bus interrupted		-
1F 01	Local bus error		-
1F 02	Local bus overflow		-
1F 03	Input buffer overflow		-
1F 04	Circuit board overflow (reset) [1])		-
1F 05	No handshake telegram		-
	Circuit board 1MP		
1F 08	Local bus interrupted		-
1F 09	Local bus error		-
1F 0A	Local bus overflow		-
1F 0b	Input buffer overflow		-
1F 0C	Circuit board overflow (reset) [1])		-
1F 0d	No handshake telegram)[2])		-
	Circuit board 2MP up to 15MP		
	Errors of MP boards 2MP up to 15MP are equivalent to QMP and 1MP errors indicated:		-
	2MP => 1F 10 up to 1F 15		-
	3MP => 1F 18 up to 1F 1d		-
	4MP => 1F 20 up to 1F 26		-
	5MP => 1F 28 up to 1F 2d		-
	6MP => 1F 30 up to 1F 35		-
	7MP => 1F 38 up to 1F 3d		-
	8MP => 1F 40 up to 1F 45		-
	9MP => 1F 48 up to 1F 4d		-
	10MP => 1F 50 up to 1F 55		-
	11MP => 1F 58 up to 1F 5d		-
	12MP => 1F 60 up to 1F 65		-
	13MP => 1F 68 up to 1F 6d		-
	14MP => 1F 70 up to 1F 75		-
	15MP => 1F 78 up to 1F 7d		-
	FIS interface circuit board TCM control - controller (in controllerAPI)		
1F 80	Local bus interrupted		-
1F 81	Local bus error		-
1F 82	Local bus overflow		-
1F 83	Input buffer overflow		-
1F 84	FIS: Reset	Emergency stop and RESET will be triggered (MC1)	N1
1F 85	FIS: external contactors 2 x loss of handshake[2])		-
1F 86	FIS: external contactors failure of cyclical telegram		N1
1F 87	FIS: internal error		-

[1]) Dependenton the function involved, reset can either mean emergency stop following by adjusting run or stopping of the lift installation

[2]) Handshake is defined as cyclical data exchange (telegram) between two data carriers.

	Events from ME1/MQ1 circuit board		
1F 88	ME1: Local bus interrupted		-
1F 89	ME1: Local bus error		-
1F 8A	ME1: Local bus overflow		-
1F 8b	ME1: Input buffer overflow		-
1F 8C	ME1: Reset		-
1F 90	MQ1: Local bus interrupted		-
1F 91	MQ1: Local bus error		-
1F 92	MQ1: Local bus overflow		-
1F 93	MQ1: Input buffer overflow		-
1F 94	MQ1: Reset		-
	Events on MH3 circuit board		
1F A0	MH3: Local bus interrupted		-
1F A1	MH3: Local bus error		-
1F A2	MH3: Local bus overflow		-
1F A3	MH3: Input buffer overflow		-
1F A4	MH3: Reset		-
1F A5	MH3: 2 x wrong handshake from MH3[2]		-
1F A6	MH3: failure of cyclical telegram from controller to MC1/MC3 board		-
1F A7	MH3: Internal error in MH3 board		-
1F A8	MH3: Reset after safe state		-
	Error stack TCI/TCM control		
20 TT	SR module error	Check-back time to CPU, if bridging is activated. TT=hexadecimal number multiplied by 50ms Same as error 23 00.	-
21 00	EEPROM error (chip 28C64)	Memory locations defective in EEPROM chip	S1
22 00	SR module error (resolution >100 ms)	Error SR module resolution : 100 ms after interruption of channel I by CPU, the check-back from SR module to CPU still exists.	N4
23 00	SR module error [1])	Same as error 43 00, but without stopping (not permissible in Germany).	8
24 00	CPU: EEPROM defective	Memory locations in EEPROM defective. Replace EEPROM or CPU.n	SM3
	Button check		
25 02	Landing call button defective	DOWN call main side blocked	-
25 04	Landing call button defective	UP call main side blocked	-
25 20	Landing call button defective	DOWN call rear side blocked	-
25 40	Landing call button defective	UP call rear side blocked	-
	Evolution lift (lift without machine room)		
26 04	Evolution lift Maintenance platform open and travel limiter closed	Travel limiter is jamming or input maintenance platform is defective. No run command possible ; error message after 3 s. Lift will be stopped in all operating phases except for inspection.	MS
26 05	Evolution lift Maintenancde platform closed and travel limiter neither open nor closed:	Travel limiter and counterweight collide or travel limiter is being closed; only emergency electrical operation DOWN is permissible. Error message after 3 s.	MS

[1]) SR module can be masked out via teach-in mode function AF 0d. Running-open operation and re-levelling with door open is not possible.

26 06	Evolution lift Maintenance platform open, travel limiter neither open nor closed	Transition state, travel limiter opens or travel limiter switch defective; no run commands possible. Lift will be stopped in all operating phases except for inspection.	MS
26 07	Evolution lift Maintenance platform open and travel limiter open **and** closed	Switch defective; no run commands possible. Error message after 3 s and the lift will be stopped.	MS
26 08	Evolution lift Maintenance platform open and travel limiter open **and** closed	Switch defective; no run commands possible. Error message after 3 s and the lift will be stopped.	MS
26 09	Evolution lift	Check-back to SR1 module activated despite normal lift operation	MS
26 0A	Evolution lift	Check-back to SR1 module is missing if topmost landing cannot be reached (travel limiter active)	
	Circuit board MC1/MC2/MC3		
27 XX	Error only with TCM lift controls with MC1 or MC2 circuit board (XX=meaning see supplementary description flat pit MA12 6510.062)	Monitoring input or RFS module (relay flat pit) defective	MS
28 00	Fault during underrun		N
28 4X	Underrun longer than 30 s		N
28 8X	Underrun UP longer than 30 s		N
29 XX	Collapsible car apron defective		MS
29 00	Car apron folded although safety circuit is open		MS
29 10	Unsuccessful underrun activation three times in succession		MS
2A 00	TMI contactor acknowledge	New-old: 00 00	
2A 11	TMI contactor acknowledge	New-old: 01 01	
2A 12	TMI contactor acknowledge	New-old: 01 10	
2A 20	TMI contactor acknowledge	New-old: 10 00	
2A 21	TMI contactor acknowledge	New-old: 10 01	
2A 22	TMI contactor acknowledge	New-old: 10 10	
2A 32	TMI contactor acknowledge	New-old: 11 10	
2A 33	TMI contactor acknowledge	New-old: 11 11	
2b 00	Start interlocking in operating phase STANDSTILL for longer than 60 s		
	Error 2C 00 to 2F 00 with MC1 sub-code position XX		
2C 00	Error in plausibility check (LK/LN sensors on re-levelling)	The states of sensors LK and LN will be checked on re-levelling. The constellation LK = bright and LN = dark in the UP direction and LK = dark and LN = bright in the DOWN direction must not occur. Causes: excessive re-levelling speed; LK/LN spacing too small (new teach-in required, if a change is made).	5
2d 00	Fault in SR module	Check-back to CPU is faulty during re-levelling. Causes: check zone switch ZS; check KTK!	N2
2E 00	Re-levelling time >7s (increased to ≤ 20s from work program 02.96/26)	Cause: re-levelling speed too low; basic volume set incorrectly with hydraulic lifts, it takes too long until car starts moving.	N2

2F 00	Re-levelling distance >4 raster units	Re-levelling distance is too long (4 raster units with standard landing vane = 8cm).	N1
30 00	Selector read error (emergency stop during adjusting run)	Cause: code of landing vane not recognized during adjustment. Teach-in required (shaft teach-in).	N2
31 00	LK sensor error [1])	Check LK sensor	-
32 00	LK sensor error[1])	Check LK sensor	-
33 00	LK sensor error[1])	Check LK sensor	-
34 00	LK sensor error[1])	Check LK sensor	-
35 00	Ex selector error[2]) 04.98	Landing vane departure hook not recognized (check LK sensor).	2
36 00	Ex selector error [2])	Level window sensing is dark (check LK sensor and landing vane – selector with proximity initiators).	2
37 00	Ex selector error	ZSE switch is not actuated in STOP operation phase.	2
3b 00	Level window errror (in landing vane) [2])		-
3C 00	LK sensor error (read error)	Landing vane code does not agree with value taught in teach-in. Emergency stop only on levelling, no emergency stop on by-passing. Causes: LK sensor bounces; traction too low (ropes slipl over traction sheave); slip in pulse generator (hydraulic lifts); disturbing pulses on LK line; landing vane dirty.	N4
3d 00	LK sensor error (landing vane)	Arrival code is unequal to departure code in landing vanes (error can only occur on by-passing)	-
3E 00	Fault in anti-creeep device (governor enable)	MAS magnet picks up, but switch on governor fails to open. Cause: switch on governor defective; locking pawl on governor is jamming (if engaging lever rests on ratchet wheel, the stroke of the magnet is relatively small). Remedy: place two washers each (6 mm) between magnet and mounting plate. With MC1: error occured after switching on. Error eliminated from version V46.06.	SM3
3F 00	Fault in anti-creep device (governor inhibit)	Magnet is deactivated,, but switch fails to open. Cause: switch is defective; timing block contactor ZSP setting is too long, governor fails to block.	SM3
40 00	Alarm actuated	Release is job-specific.	-
41 00	Fault in run monitoring device (missing pulses)	Run monitoring device of CPU is tripped (absence of pulses >4 s in traction lifts and >8 s in hydraulic lifts). Causes: pulse generator defective; check pulses with Iso16M (with diagnostic unit); basic volume may be incorrectly set with hydraulic lifts.	SM1

42 00	Run time monitoring	Too long creep at levelling and adjusting run speed: no bright and dark change in LK sensor for >20s with v_N and >45s with v_J.	SM3
43 00	Fault in SR module (no bridging of locking device	Check-back to CPU faulty. Causes: SR module defective, ZS switch defective; penetration depth of	SM8

[1]) Error from TCI work program 03.89/7 – no longer used.
[2]) Error 35 00 and 3b 00 can no longer occur from work program 02.87/4 and error 36 00 can no longer occur from 06.95/25.

	switches) [1])	ZS switch and/or LK sensor into landing vane not correct.	
44 00	Fault in SR module (stopping only in lowest landing with hydraulic lifts)	Same as 43 00 and 44 00 if error occurs in upper landings; 44 00 only if error occurs in lowest landing. Reason: as soon as an error occurs in hydraulic lifts, a return to the lowest landing must follow.	SM2
45 00	Emergeny stop button operated	In Norway version only (see data sheet).	N
46 00	Repair switch ON	Available only to customer's specification (data sheet)	-
47 00	Repair switch OFF	Available only to customer's specification (data sheet)	-
48 00	Ready-again message	Lift is ready for operation again after spontaneous message.	N
49 00	Operation phase ADJUSTING RUN longer than default value (5 min)	Check why adjusting run cannot be performed within 5 min.	M2
4A 00	Communication between CPU and MW or MW1 faulty	Circuit board MW/MW1 (path computer) in higher-quality drives is defective.	N2
4b 00	Path computer MW/MW1: logical car position unequal to real position	Circuit board MW/MW1 failed to recognize an identification hook. Cause: run following an emergency stop was a normal run (not adjusting run).	N2
4C 00	Path computer MW/MW1: in test mode	Close bridge S9 on circuit board MW/MW1.	-
4d 00	Path computer MW/MW1: not ready for use	Circuit board MW/MW1 requires RESET from CPU.	N2
4E 00	Path computer MW/MW1:	Communication (RST 5.5) to path computer defective	-
4F 00	Contactor check-back to CPU (reference-to-actual comparison of contactors)	Wrong contactor check-back on adjusting run or number of unsuccessful adjusting run attempts.	SM2
50 00	Collective error for stopping with revival with TCM control	Causes: TCM errors 0C 01, 0C 02, 0C 03, 0C 04[2]), 0C 11, 0C12 occur (problems with initialization).	SM2
51 00	Run monitoring	Absence of pulses >4 s	N2
52 00	Adjusting run after emergency stop	Adjusting run followed emergency stop without RESET	-
53 00	Run following adjusting run	Run followed adjusting run (emergency stop).	-
54 00	Fault CPU (interrupt watchdog)	Computer fault CPU	-
55 00	RESET (=re-start))	RESET causes program re-start (after main switch OFF/ON or after power-supply-induced voltage interruption). Causes: % V voltage not correctyl set; power supply voltage not stable, etc.	-
55 01	Re-start MC2 group	24 V DC was disconnected	

	Processor failures ofMC1/MC2 circuit board (CPU)		
56 ...	Non-defined interrupt		N
56 00	Divide error exception		
56 01	Trace interrupt		N
56 02	Non maskable interrupt		N
56 03	Breakpoint Interrupt		N

[1]) SR module can be masked out through teach-in-mode function AF 0d. N Runnin-open operation and re-levelling with open door not possible.
[2]) 0C 04 to 0C 0C leads also to stopping, if not provided otherwise in the lift-specific EPROM !

56 04	INTO dedected overflow exception	**ATTENTION!!** **Error codes 56 00 to 56 FF** **Processor-fault messages acc. to data sheet** **Replace CPU and inform department** **VTS or QMS**	N
56 05	Array bounds exception		N
56 06	Unused opcode exception (4 x error 89 00 will follow)		N
56 07	Escape opcode exception		N
56 08	Timer 0 inerrupt		N
56 09	AMD reserved interrupt		N
56 0A	DMA0 or INT5		N
56 0b	DMA1 or INT6		N
56 0C	INT0		N
56 0d	INT1		N
56 0E	INT2		N
56 0F	INT3		N
56 10	INT4		N
56 11	Asynchronus serial port 0 interrupt		N
56 12	Timer 1 interrupt		N
56 13	Timer 2 interrupt		N
56 14	Asynchronus serial port 1 interrupt		N
56 FF	Undefined software interrupt (56 20 to 56 FF)		N
	Processor failures ofMC circuit board (CPU E60)		
56 00	Fault CPU (TRAP)	Computer fault CPU	-
57 00	ADJUSTING RUN	Adjusting run entry made after emergency stop and a preceding error.	-
58 00	EMERGENCY STOP	Emergency stop after certain errors	-
59 00	STOPPING in the event of EMERGENCY STOP	Lift will be stopped, if the error which leads to EMERGENCY STOP is entered in the lift-specific program. Addresses: A570 to A57F (16 error codes can be entered; also compare part 3 memory locations)	SM1
	CPU MW/MW1 circuit board communication		
5A 00	CPU MW/MW1 error	MW/MW1: fails to signal readiness for service	SM2
5b 00	CPU – MW/MW1 error	MW/MW1: fails to request telegrams after TCI RESET	SM2
5C 00	CPU MW/MW1 error	MW/MW1: no read port interrupt after telegram transmission	SM2
5d 00	CPU MW/MW1 error	MW/MW1: telegram not understood once (repetition)	-
5E 00	CPU – MW/MW1 error	MW/MW1: telegram not understood twice (no repetition)	SM2
5F 00	EK error (EK=limit stop contact)	Stopping in lowest landing will follow after EK error	MB

	Safety-circuit		
60 00	Safety circuit: terminal EK open	Cause: EK is interrupted during run (not with adjusting run). In some devices, e.g. Isostop 60 (API) also on release of controller monitor, because monitoring contact lies before EK.	MN
61 00	Safety circuit: terminal HK open	Locking contact HK or safety-gear contact FK open	N
62 00	Safety circuit: terminal TK open	Car door contact KTK or KTKD was interrupted	N

		during run.	
63 00	Safety circuit: terminal KT open	Bolt contact RK or RkD was interrupted during run.	N
64 00	Response of temperature monitoring device of drive motor	PTC thermistor or PTC thermistor connector (thermal contact) tripped. Check!	MN
	Sensing the state of the power contactors picked up/dropped out[1])		

	Contactorstate		**Explanations: state ofcontactors**	
	REF.	**ACT.**	**REFERENCE – ACTUAL**	NSM4
65 00*	00	00	**0 0 1 1**	
66 00	00	01		
67 00	00	10	Run contactors Run contactors	
68 00	00	11		
69 00	01	00		
6A 00*	01	01		
6b 00	01	10	Directional contactors Directional contactors	
6C 00	01	11		
6d 00	10	00	The reference state of the contactors is output by the CPU.	
6E 00	10	01	The ACTUAL state of contactors must assume the REFERENCE state of	
6F 00*	10	10	contactors within 500 ms; if not emergency stop will follow.	
70 00	10	11		
71 00	11	00	Meaning: 0 contactor dropped out	
72 00	11	01	1 contactor picked up	
73 00	11	10	* no error (REF. = ACTUAL)	
74 00*	11	11	(also see error 4F 00)	

	MQ circuit board		
75 00	Interrogation sensor KT defective	Applies to errors 75 00 to 78 00: Check respective sensors and/or MQ/MQ1-circuit boards and, if necessary, replace them. Check function 05 00 with diagnostic unit I !	2
76 00	Interrogation sensor TK defective		
77 00	Interrogation sensor HK defective		
78 00	Interrogation sensor EK defective		
	MZ circuit boards (TCI) and MZ1 (TCM)		
79 00	Temperatue sensor defective	Check temperature monitoring sensor; replace MZ board, if necessary.	-
7A 00	Monitoring sensor of controller defective	Check monitoring sensor; replace MZ board if necessary.	-
7b 00	Failure of 24 V DC voltage supply	Check voltage supply (also on MQ circuit board).	MBS
7C 00	CPI controller disconnects although run command exists.	Error only with CPI controller with external reference setting (check inernal monitoring functions of controller)	N5
	Events in CPI controller		
7d xx	CPI: event xx		
7d 00*	CPI: no error		
7d 01	CPI: control voltage ON		
7d 02	CPI: watchdog error		
7d 03	CPI: SMR failure		
7d 04	CPI: SMR to TCM control		
7d 05	CPI: EEPROM error		

[1]) If errors 65 00 to 74 00 occur more than 3 times, error 4F 00 will follow afterwards, which leads to spontaneous message and stopping

7d 06	CPI: overtemperature heat sink		
7d 07	CPI: overtemperature drive motor		
7d 08	CPI: earth fault message		
7d 09	CPI: power part not recognized		
7d 0A	CPI: ZK undervoltage (ZK = DC link)	Inquiry through parameter-entry panel	
7d 0b	CPI: pulse enable of power part effective		
7d 0C	CPI: ZK overvoltage (ZK = DC link)		
7d 0d	CPI: Error stack deleted		
7d 0E	CPI: overcurrent		
7d 0F	CPI: mains overvoltage		
7d 10	CPI: time error in DSP [1)]		
7d 11	CPI: ±15V or 24 V undervoltage		
7d 12	CPI: error No. 18 (not used currently)		
7d 13	CPI: CAN bus error		
7d 14	CPI: v_{act} unequal v_{ref} ± 10 %		
7d 15	CPI: error of current controller DSP [1)]		
7d 16	CPI: DSP reset [1)]		
7d 17	CPI: unknown signal to DSP [1)]		
7d 18	CPI: wrong No. of reference-value telegram		
7d 19	CPI: run contactor problems		
7d 1A	CPI: vane set		
7d 1b	CPI: error during pulse generator calibration		
7d 1C	CPI: pulse generator failure		
7d 1d	CPI: successful pulse generator calibration		
7d 1E	CPI: brake error		
7d 1F	CPI: overtemperature motor or brake		
7d 20	CPI: error of sin-cos-generator		
7d 21	CPI: regeneration unit not ready		
7d 84	MC3: CPI controller reset		N1
7d 85	MC3: 2x loss of handshake[2)] from CPI controller		
7d 86	MC3: failure of cyclical telegram to CPI		N1
7E xx	MH3: internal error from MH3, if xx = 00...7F MC3: MH3 error recognized by MC3, if xx = 80...FF		

7E 01	MH3: error during writing to EEPROM	**Reset request from MH3 to MC3**. Send error stack (incl. identification) to department VTS at Thyssen Aufzugswerke Neuhausen, if these errors often arise !!!	
7E 02	MH3: modem not recognized during connection setup		
7E 03	MH3: search for modem repeated		
7E 04	MH3: switching over from slave to master		
7E 05	MH3: error during writing to EEPROM		

1) DSP is the digital signal processor in the CPI controller
2) Handshake is defined as cyclical data exchange (telegram) between two data carriers.

7E 06	MH3: error during writing to EEPROM		
7E 07	MH3: error during writing to EEPROM		
7E 08	MH3: DOS download request		
7E 09	MH3: re-set of original state		
7E 0A	MH3: error during writing to EEPROM		
7E A4	MC3: reset from MH3		N1
7E A5	MC3: 2x wrong handshake[1)] from MH3		
7E A6	MC3: failure of cyclical telegram to MH3		N1
7E A7	MC3: reset after save state	Through request from MH3	N1
80 00	Wrong car command	Command DOWN with car positioned in lowest landing.	N1
81 00*	Wrong car command	Command UP with car positioned in upper landing.	N1
82 00*	Undefined car position	* New teach-in required; if unsuccessful check 5 V voltage supply of CPU EEPROM on CPU may be defective.	N3
83 00*	Undefinied car position		
84 00*	Undefined car position		
85 00*	Undefined car position		
86 00	Brake checking circuit tripped (from TCI work program 06.95/25)	Check setting of brake checking sensors. Monitoring can be masked out via teach-in function 15 00 (via AF 0d in teach-in mode). Automatic monitoring release if switch is disconnted.	MNS
86 01	Brake to be disconnected through safety circuit	defective.	MNS
	TCI/TCM New errors from 12.08.96		
87 PP	Parameters with default values in the lift-specific program not permissible for the path computer MW1. The respective (wrong) parameters can be determined on the basis of the variables PP (e.g. 87 04 = deceleration; momentary value non-permissible).		
87 01	Rated speed v_N	**Explanation:** The memory locations for deceleration etc. are not programmed or not programmed correctly. In this case, the lift-specific program must be made available by the order processing department in re-programmable form, stating the error code number. The memory locations concerned can be interrogated on the spot in the lift-specific program with diagnostic unit I. Also see 4) MEMORY LOCATIONS Diagnostic function 00 00.	-
87 02	Maximum speed v_{CON}		-
87 03	Acceleration a		-
87 04	Deceleration a		-
87 05	Jerk		-
87 06	Jerk 1		-
87 07	Jerk 2		-
87 08	Jerk 3		-
87 09	Jerk 4		-
87 0A	Adjusting run speed v_J		-
87 0b	Re-adjusting speed v_{NA}		-
87 0C	Inspection speed v_I		-
88 00	Brake disk does not run true	Response of monitoring circuit for running true	SM1

	Error with CPU circuit board MC1		
89	Wrong operation code 1. Byte: code segment high 2. Byte: code segment low 3. Instructions Pointer high 4. Instructions Pointer low	Will follow error code number 56 xx and will be stored 4x in succession. Read out error stack with sub-code xx and contact department VTS or QMS (Thyssen Aufzugswerke).	SM1
8A ...	Parameter provided for MW1 circuit board are outside of permissible range.	Error can only occur during initialization.	-

8A 01	Acceleration		-
8A 02	Deceleration		-
8A 03	Brake application time		-
8A 04	Jerk (general)		-
8A 05	1. jerk		-
8A 06	2. jerk		-
8A 07	3. jerk		-
8A 08	4. jerk		-
8A 09	Acceleration pre-control		-
8A 0A	Gain factor		-
8A 0b	Rated speed		-
8A 0C	Inspection speed		-
8A 0d	Adjusting run speed		-
8A 0E	Re-levelling speed		-
8A 0F	Reduced overtravel upper threshold		-
8A 10	Reduced overtravel lower threshold		-
8A 11	Creeping speed		-
8A 12	Creep distance		-
	TCI/TCM errors (cont'd from page 17)		
90 00	Speed >0,5 m/s with safety circuit bridged	Explanation: Safety circuit is bridged by SR module and CPU detects v >0,5 m/s. Possible cause: pulse generator, at standstill, supplies pulses which wrongly pretend a run.	N2
91 00	Car is not positioned within a zone with safety circuit bridged	Explanation: Safety circuit is bridged by SR module and CPU detects that the floor vane zone is missing. Possible causes: by seesaw movement of car with hydraulic lifts; if car comes to stop short of the zone (e.g. rope slip) or in case of overtravel.	N2-
92 00	V >0,3 m/s in operation phase STOP or STANDSTILL	Possible causes: Pulse generator, particularly type Wachendorf, supplies pulses at standstill. Pulse generator improved from 11.95. Speed will not longer be monitored at standstill from TCI work program 06.95.	N6
93 00	Re-levelling speed >0,2 m/s	Re-levelling speed is > 0.2 m/s in operation phase STOP or STANDSTILL	N6
94 00	Tripping of speed monitoring device	Monitor responds at v_N +10%; job-specific activation is also possible (instead of 10% switch on governor).	SM1

95 00	Response of monitoring device of controller (Isostop 16M, Isostop 25M, Isostop 60 (API/CPI), variable-speed hydraulic lift with Beringer valve block)	Fault in controller: – Temperature monitoring – Phase sequence and phase failure monitoring device – Ref./actual-value monitoring device (Beringer) – Controller at stop, etc. – API/CPI see error stack parameter entry panel.	MN2
99 00	Path computer MW1: speed monitoring	Operation phase errors 00, 01 and 04, if v >0,3 m/s.	N1

9A 00	Safety circuit is bridged by SR module and v >0.5 m/s is signalled to circuit board MW1.	Operating phase error 03, if v >0.5 m/s.	N1
9b 00	Monitoring of inspection / electrical recall speed	Operating phase error 07, if v >0,63 m/s (EN81) v >0,4 m/s (Russia).	N1
9E 00	Deceleration monitoring third track: Light barrier defective	Check light barrier	MS1
9F 00	Deceleration monitoring third track: Deceleration monitoring tripped	Used in high-speed lifts with buffers with reduced buffer stroke	N1
b0 00	Operation phase error	Selector failed to find a correct operation phase.	N3
	Codes for correct sequence checking between circuit boards MD/MD1 and CPU		
C0 00 d0 00	Acceleration/deceleration too steep in near landingsl	Set acceleration/deceleration less steep on MD / MD1 board. Teach-in!!	N1
C1 00 d1 00	Changed installation response	Deceleration point is near the landing vane identification hook. Set acceleration / deceleration less steep. Teach-in!!	N1
C2 00 d2 00	Changed installation response	Discontinuation of acceleration is not within the acceleration range. Same as error C1 00/d1 !	N1
C3 00 d3 00	Changed installation response	Reference/actual deviation too large (car too fast ?) Same as error C1 00/d1 00!	N1
C4 00 d4 00	Changed installation response	Same as error C3 00/d3 00!	N1
C5 00 d5 00	MD/MD1-CPU signal exchange error	Fictitious acceleration discontinuation point, deceleration point or stopping point already passed. Pulse generator defective or slip; reduce acceleration. Teach-in.	N1
C6 00 d6 00	MD/MD1-CPU signal exchange error	Car between two zones. Fictitious points in the zone left last. Error same as C5 00/d5 00.	N1
C7 00 d7 00	MD/MD1-CPU signal exchange error	Path actual value correction has been made. Same as error C5 00/d5 00!	-
C8 00 d8 00	Range of values exceeded, if AF13 and AF20 not programmed in teach-in mode.	Perform teach-in !	-
	TCM control - MD1 circuit board		
C9 00 d9 00	DOWN/no run direction UP		N N
CA 00 dA 00	DOWN/no run direction UP		N N
Cb 00 db 00	DOWN/no run direction UP		N N
CC 00 dC 00	DOWN/no run direction UP		N N
Cd 00 dd 00	DOWN/no run direction UP		N N
CE 00 dE 00	DOWN/no run direction UP		N N
	Power-up test (errors which are interrogated only on powering on the control)		
E0 00 E1 00	Error on reading back	EEPROM on CPU defective; replace it; check 5 V voltage supply	SM1
E2 00	Test of cross-checksum not correct (BCC original – BCC backup)	Replace EEPROM; perform new teach-in.	SM1
E3 00	Test of cross-checksum not correct (BCC original	Replace EEPROM; perform new teach-in.	SM1

	- BCC copy correct but different)		
E4 00	Storage error	RAM in CPU is defective	-
E5 00	Backup block: cross-checksum test incorrect – backup block restored.		-
E6 00	Original block: cross-checksum test incorrect – backup block restored.		-
E7 00	Current test of cross-checksum - RAM incorrect.		N1
E8 00	Uppermost landing ist reduziert auf die unterste Haltestelle	Maintenance platform open with lift with 2 landings.	S1
E8 01	Top landing is ZERO	Perform teach-in AF10; number of landings must be stored in job-specific program (dummy landings, too).	S1
E9 00	Overflow error	Calculation of AF71 (reduced overtravel) or AF74 (advance speed disconnection) leads to overflow of memory locations in memory chip. Remedy: perform teach-in AF10, AF19, AF0d, AF71 and AF73.	S1
EA xx	MC3: unknown error xx to peripheral equipment		
EE yy EE xx	Memory locations xxyy in EEPROM defective	Insert new EEPROM on CPU.	-
F0 00	Communication error MZ1 CPU	Tripped by errors: 0C 01, 0C 02, 0C 03, 0C 10, 0C 11, 0C 12	MS1-
F1 00	Communication error MZ1 car e.g. MF3/MF4 circuit board	Tripped by errors: 0C 04, 0C 09, 0C 0A, 0C 0b, 0C 0C	MS1
F2 00	Communication error MZ1 car-accessories e.g. LSM1, F2	Tripped by errors: 0C 0d, 0C 0E,	MS1
F3 00	Communication error MZ1 local bus e.g. ..MP board	Tripped by errors: 0C 05, 0C 06, 0C 07, 0C 08	MS1
F4 00	0C ..-error with stopping	Errors which are not defined in F0 00 ... F3 00.	MS1
F8 00	8k RAM/EEPROM not detected	Early error 02.03 or 02 04	MS1
Fb 00	Teleservice code	Message generated by Teleservice device (not included in TCI/TCM error stack)	
Fd 00	MC1: Flash data error (BCC-Checksumme)	Teach-in-data in RAM copy range are OK.	-
Fd 01	MC1: RAM- error of copied data	Teach-in-data in flash memory are OK.	
Fd 0F	Flash data error	Error in lift-specific data range	-
Fd FA	Order-specifc EPROM not present	Lift-specific program to be loaded !	
FE 00	MC1: Flash data error (BCC checksum)	Teach-in-data lost; completely new teach-in required !!!	MS1
ATTENTION!	**Error codes not contained in the list are undefined !!**		

Explanations of the existing error code numbers

04 NN TCI control – Interrogation ofZSE solenoid switches

NN is represented as a hexadecimal number; in the event of errors, it indicates the number of ZSE switches (no other than the ZSE switch of the car position may be actuated).

04 00 applies to ZSE 25 to ZSE 31
04 00 applies to ZSE 17 to ZSE 24
04 00 applies to ZSE 9 to ZSE 16

04 0C applies to ZSE 1 to ZSE 8

Example: **0 4 0 C**

Hexadecimal number			**0**				**C**	
Binary number	0	0	0	0	1	1	0	0
assigned ZSE switch	8	7	6	5	4	3	2	1

The example shows that ZSE switches ZSE3 and ZSE4 (in 3. and 4. landing) have been activated. (Also compare hexadecimal code in part 4, page 2)

04 NN TCM control – Interrogation ofZSE solenoid switches

If ZSE switches are closed in the third and fourth landing, the TCM control will file two errors: 04 03 und 04 04

06 XX TCI control – Door locking not possible (from work program version 08.91/9)

The lift will be put out of service for 15 min. after 3 unsuccessful door locking attempts. A new locking attempt will be initiated after expiry of this period of time.
XX = Standort

Door variant – hinged door:
A new locking attempt will also be made within these 15 min. after opening of the landing door (TK open) and closingit again (TK closed).

Door variant D4 (with mechanical locking device)
A start attempt will be enabled within 15 min., as soon as the control receives the bolt contact.

06 XX TCM control – Door locking not possible

If open bolt contact is recognized in the command chain preceding the position the following error will follow
14 XX (XX = bolt contact main side)
18 XX (XX = bolt contact rear side)

09 NN Car will be blocked in the landing >4 min

Example **0 9 3 1** LED Signal name (LED display on diagnostic unit I row A)

0	KKD	
0	LSD	
1	KK	O.K.
1	LS	O.K.
0	TSUD	
0	TSOD	

0	TSU	
1	TSO	activated

For LEDs and signal names see Operating Instructions of Diagnostic Unit I, function 05 00, column 0d (display of predefined memory locations, from page 25).

19 NN Door zone not detected

Example **1 9 C 8**

1	VR	
1	A5A	
0	TO	
0	TU	
1	FL	
0	FS	
0	FO	
0	FU	

In the operation phase STOP (lift at standstill), the CPU recognizes that the door zone calculated from the landing vanes was left.
For LEDs and signal names see Operating Instructions Diagnostic Unit I function 05 00, column 05 (display of predefined memory locations,from page 25)

1d NN Emergeny stop (wrong run direction)

No run direction or both run directions were produced with the run contactor activated and the brake disengaged.
For LEDs and signal names see Operating Instructions, Diagnostic Unit I, function 05 00, column 05 (display of predefined memory locations from page 25).

In case of error 1d C8 the processor outputs the signals VR, A5A and FL (but without run directions); compare above representation of error 19 NN

1E NN Deceleration not effective
Binary display ofcarposition

It will be examined whether deceleration has been initiated already on reaching the marked terminal landing vanes.
The position is indicated by the five bitst 2^0 to 2^5 as binary number.

Example: **1 E 9 d**

0	2^7	FO (run direction UP)
1	2^6	FU activated (run direction DOWN)
0	2^5	
1	2^4	
1	2^3	Position (hexadecimal number converted into
1	2^2	binary number)

0 2^1
1 2^0

1 E **9 d**: bits 2^0 to 2^7 stand for landing 29, therefore only run direction UP exists, since $2^6 = 0$ and $2^7 = 1$, and consequently **9 d** will follow.

Function 02 00 Display of order number (fromTCI work program version 06.88/6 and with TCM)

1) Select function 02 00 with program selector wheel.
2) Press button: the first four figures of the order number will appear on the 7-segment display; LED 5 in row B and LED 12 in row A will light simultaneously.
3) Shift the order number to the left by operating the program selector wheel until the next four figures appear; LED 3 in row B and LED 10 in row A will light.
4) Operate program selector wheel for further shifting to the left until the last four figures of the order number appear; LED 1 in row B will light simultaneously .
5) Exit: press start-stop button for longer than 2 s.

Example: Order No.: 27 70 06 42 10

LED 5 12 3 10 1

Function 03 00 Position indicator (decimal)

1) Select function 03 00 with program selector wheel.
2) The respective car position will be displayed as a decimal number.
3) Exit: press start-stop button for longer than 2 s.

Function 04 00 Operation phase

1) Select function 04 00 with program selector wheel and press start-stop button
2) The 7-segment display will indicate:

XX		**Operation phase**
	XX	Operation phase check word
00		**Operation phase POSITION**
00	00	O.K.
00	01	No destination available
00	02	Door not closed
00	03	Door unlocked
00	04	Operation phase after stop
00	05	Operation phase stop
00	06	Safety circuit bridged
00	07	Start interlock (start interlocking)
00	08	M3TK door open
00	09	Doors are closing
00	0A	MZ-/MZ1 test switch on, prior to error 0F 0A, see page 8
00	0b	Governor free
00	0C	Re-levelling operation is active
00	0d	Temperature monitoring responded
00	0E	Monitoring of controller responded
00	0F	Maintenance platform /travel limiter responded (Evolution)
00	10	Hydrauliic lift in limit switch

00	11	Reduced pit: collapsible apron to be folded up by activated underrun
00	12	Lift at standstill and blocked by additional functions (such as cleaners (in case of selection control ZWS))
01		**Operation phase POSITION BEFORE RUN**
	00	O.K.
02		**Operation phase RUN**
02	00	O.K. (normal run)
02	01	Parking run interrupted
02	02	Parking run
03		**Operation phase DECELERATION**
03	00	O.K.
03	01	Program run
03	02	Parking call present
03	03	No call or command present
04		**Operation phase STOP**
04	00	O.K.
04	01	Main door not lockable
04	02	Door contact TK open
04	03	Rear entrance door not lockable
04	04	Door X not lockable
04	05	Main door is opening
04	06	Rear entrance door is opening
04	07	Run direction is reserved
04	08	Minimum dwell time
04	09	Anti-creep device cannot be activated
04	0A	Slip opening active
05		**Operation phase EMERGENCY STOP**
05	YY	Operation phase check word (not defined)
06		**Operation phase ADJUSTING RUN**
06	00	Control has been re-started and, thus, all memories set to 00
07		**Operation phase INSPECTION OPERATION**
07	00	Inspection operation or emergency electrical operation switch was actuated
07	01	No inspection operation button (UP or DOWN) has been pressed
07	02	Inspection or emergency electrical operation switch is not actuated
07	03	Safety circuit HK nodal point signals O.K.
08		**Operation phase STOPPING**
08	YY	Operation phase check word (not defined)
09		**Operation phase UNDEFINED POSITION**
09	YY	Operation phase check word (not defined)

Function 05 00 Display of specified memory locations

1) Set function 05 00 with program selector wheel
2) Press start-stop button
3) Select desired column in 7-segment display with program selector wheel
   Example: Column 0d is desired. For example, select 0C 0d in 7-segment display, then left LED row B applies to column 0C and right LED row A applies to column 0d, etc.
4) Interrogate LED display (compare overview and signal description)

5) Exit: press start-stop button for longer than 2 s.

The LEDs listed in the table will light on selecting the respective column (Col) :
(Attention: free positions are not assigned)

Col	LED	Signal	Inputs/Outputs and States	Notes
01			**Not assigned**	
02			**Zone**	SRTUEV
	2^7	SW	Software zone	
	2^6			
	2^5	v<0,5m/s	Less than speed threshold v = 0,5 m/s	
	2^4			
	2^3	v<0,3m/s	Less than speed threshold v = 0,3 m/s	
	2^2			
	2^1			
	2^0	SR-Modul	Output channel 1 SR module	
03			**Adjusting run (only displayed with FV drive)**	JUFAN
	2^7			
	2^6			
	2^5			
	2^4			
	2^3	JFL	Contactor L picked up	
	2^2	JFS	Contactor S picked up	
	2^1	JFO	UP-contactor picked up	
	2^0	JFU	DOWN-contactor picked up	
04			**Stored run direction**	FARI
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1	FO1	Stored run directionUP	
	2^0	FU1	Stored run direction DOWN	
05			**Power part output word 1**	FARIL
	2^7	VR/VRR	Bolt magnet (TSM) picked up	
	2^6	A5A	Flashing indicator (will not be evaluated)	
	2^5	TO	Door-open command main door (will turn off, if door-open time has elapsed)	
	2^4	TU	Door closing command main door (will turn off, if RK contact is closed)	
	2^3	FL	Contactor L (FV)/W contactor (controlled drives) activated	
	2^2	FS/VRB	Contactor S (FV)/brake magnet (Isostop 16M) activated	
	2^1	FO	Current run direction UP	
	2^0	FU	Current run direction DOWN	
06			**Power part output word 2**	
	2^7	AL	Disconnection of control and light (effective after all car command have been answered)	
	2^6			
	2^5	TOD	Door-open command rear entrance door (will turn off, if door-open time has elapsed)	
	2^4	TUD	Door closing command rear entrance door (RKD contact – same as for TU with main door)	

	2^3	NS	Selection of emergency power relay	
	2^2	NAV	Selection of start interlocking relay	
	2^1			
	2^0	v<0,3m/s	Output channel 1 SR module	
07			**Door time**	INFBI
	2^7			
	2^6			
	2^5			
	2^4	TOZ	Total door opening time (from beginning of opening to end of closing operation)	
	2^3			
	2^2			
	2^1			
	2^0			
08			**Car**	INFB2
	2^7			
	2^6			
	2^5			
	2^4			
	2^3	BE	Car occupied (effective only with control type 6510/..	
	2^2			
	2^1			
	2^0			
09			**Fireman's functions**	INFB3
	2^7			
	2^6			
	2^5			
	2^4			
	2^3	FWI	Fireman's operation car call was given	
	2^2	FW	Additional feature fireman's control is active (fire sevice)	
	2^1			
	2^0			
0A			**Not assigned**	INFB4
0b				
	2^7	TSP	Door locked (door locking switch on circuit board MZ.. operated)	
	2^6	THE	Temperature monitoring main motor O.K. (1 = OK)	
	2^5	AL1	Switch input disconnection control and light actuated	
	2^4	SWG	Collecting fault signalling - controller (1 = OK)	
	2^3	RU	Car call given to lowest landing	
	2^2	V	Priority switch on MZ/MZ1 activated	
	2^1	RO	Car call given to uppermost landing	
	2^0	Z(D)	Test switch MZ/MZ1 activated	

0C				KBEW1
	2^7	UT	Door closing button main side (TCM only)	
	2^6	FW	Additional feature fireman's control is active (fire service)	
	2^5	ZTK	Intermediate door contact closed (TCI only)	
	2^4	ÜB	Overload device activated	
	2^3	KL	Car empty (load <5% with load-weighing device)	

	2^2	OT	Door-open button actuated for main door (in car)	
	2^1	B	Car occupied (response of occupied device)	
	2^0	V	Priority switch in car activated	
0d				KBEW2
	2^7	KKD	Articulated lever contact rear entrance door - closed	
	2^6	LSD	Light barrier etc. rear entrance door (turns off on interruption)	
	2^5	KK	Articulated lever contact main door - closed	
	2^4	LS	Light barrier, protective edge, pressure-wave contact main door (turns off on interruption)	
	2^3	TSUD	Door-closed acceptance rear entrance door	
	2^2	TSOD	Door-open acceptance rear entrance door	
	2^1	TSU	Door-closed acceptance main door	
	2^0	TSO	Door-open acceptance main door	
0E				KBEWD1
	2^7	UT	Specific additional features have been actuated with TCI (with TCM: UTD): – Key switch actuated for barring specific landings – Door closing button actuated – Peak traffic switch operated	
	2^6	FW	Additional feature fireman's control is active (fire service)	
	2^5	ZTK	Intermediate door contact closed	
	2^4	ÜB	Overload device actuated	
	2^3	KL	Car empty (load <5% with load weighing device)	
	2^2	OTD	Door-open button actuated for rear entrance door (in car)	
	2^1	B	Car occupied (response of occupied device)	
	2^0	VD	Priority switch in car activated in selective door control rear entrance door side	
0F			**Same as for 0d**	KBEWD2
	2^7	KKD	Articulated lever contact rear entrance door - closed	
	2^6	LSD	Light barrier etc. rear entrance door (turns off on interruption)	
	2^5	KK	Articulated lever contact main door - closed	
	2^4	LS	Light barrier, protective edge, pressure-wave contact main door (turns off on interruption)	
	2^3	TSUD	Door closed acceptance rear entrance door	
	2^2	TSOD	Door open acceptance rear entrance door	
	2^1	TSU	Door closed acceptance main door	
	2^0	TSO	Door-open acceptance main door	
10			**Car output word 1**	KBAW1
	2^7	ZTZ	Forced door closing command (slow closing speed)	
	2^6	FWA	Fireman's operation indicator in car is activated	
	2^5	FWH	Fireman's operation horn is actuated	
	2^4	ÜBA	Overload indicator	
	2^3			
	2^2	NA	Emergency power indicator in car	
	2^1			
	2^0	SF	Special run indicator	
11			**Not assigned**	KBAWD
12			**Destination is displayed in binary code**	ZIELO
	2^7			
	2^6			
	2^5	X		

	2^4	X		
	2^3	X		
	2^2	X		
	2^1	X		
	2^0	X		
13			**Destination exists**	ZIELJN
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1			
	2^0	ZV	Destination exists	
14				LTLCW1
	2^7	LK	Sensor selector	
	2^6	IS/RS	Inspection operation /emergency electrical operation switch on	
	2^5	ISO	Inspection operation in UP direction	
	2^4	ISU	Inspection operation in DOWN direction	
	2^3	LN	Sensor re-levelling (not displayed during run)	
	2^2			
	2^1	W/W1	Contactors – check-back (picked up)	
	2^0	WO/WU	Contactors – check-back (picked up)	
15			**Not assigned**	LTLCW
16				LNHCW
	2^7			
	2^6			
	2^5			
	2^4	SR-RM	Check back SR module	
	2^3	EK	Final contact closed (safety circuit)	
	2^2	HK	Locking contact closed (safety circuit)	
	2^1	TK	Door contacts closed (safety circuit)	
	2^0	KT	Car door contacts closed (safety circuit)	
17			**Not assigned**	LSKCW
18			**Not assigned**	LNHCW
19			**Not assigned**	TOEZ
1A			**Not assigned**	TOEDZ
1b			**Car position is displayed in binary code**	KSTND
	2^7	Zone		
	2^6			
	2^5			
	2^4	X		
	2^3	X		
	2^2	X		
	2^1	X		
	2^0	X		
1C			**Speed selection in binary code (with Isostop 16M only)**	VSEL
	2^7			
	2^6			

	2^5			
	2^4			
	2^3			
	2^2			
	2^1	X		
	2^0	X		
1d			**Port check word A4**	PCWA4
	2^7	MBV	Anti-tampering device (with telenot and TELEservice equip. only)	Only with TCI
	2^6	VÜ	Reduced overtravel (set speed is exceeded)	
	2^5			
	2^4			
	2^3			
	2^2	SM	Collective fault signalling control and drive motor	
	2^1	AVO	Anti-creep device/emergency stop system	
	2^0	ABA	Out-of-service indicator: – Safety circuit interrupted – Inspection run – Lift is at standstill (e.g. by AL = disconnection control and light – Lift blocked by emergency power set – Thermal contact (main motor) tripped	
1F			**Port check word A6**	PCWA6
	2^7	EO	Travel continuation indication UP is displayed (TCI)	
	2^6	EU	Travel continuation DOWN is displayed (TCI)	
	2^5			
	2^4	FeMa[1])	Additional feature error trace (TCM)	
	2^3			
	2^2			
	2^1			
	2^0			

Extension of columns for TCM control with MC1 or MC2 circuit boards

[1]) Error marking

ol	LED	Signal	Inputs & States	Notes
20			**Absolute position of ZSE switch (binary with MC1/MC2**	ASTND
	2^7			
	2^6	X		
	2^5	X		
	2^4	X		
	2^3	X		
	2^2	X		
	2^1	X		
	2^0	X		
21			**Pulses channel A Low-Byte[1])**	
22			**Pulses channel A High-Byte [1])**	
23			**Pulses channel B Low-Byte [1])**	
24			**Pulses channel B High-Byte [1])**	
25			**Additional inputs on MZ1 - Evolution**	**MZ1ZE**
	2^7			
	2^6		Check back Relay-Flat-Pit (RFS)	1SPL:b12 MC2-X40:2
	2^5		Check back SR1 module (Evolution)	1SPL:b8
	2^4		Check back jack plug emergency braking system (Evolution)	1SPL:b6
	2^3		State of complete maintenance platform O.K.	
	2^2		Travel limiter closed FWBO (Evolution)	1SPL:b2
	2^1		Travel limiter open (Evolution) break contact!(0-active)	1SPL:b4
	2^0		Maintenanc platform WAKLA (Evolution)	1SPL:b10
26			**Port check word A0**	**PCWA0**
	2^7			
	2^6			
	2^5		FJR (Intermediate speed hydraulic lifts) with Evolution: FWV: reduced travel	MV6-x32.8 1SPL:b26
	2^4			
	2^3			
	2^2			
	2^1			
	2^0			
27		ZSE0(1)	1. ZSE switch recognized in landing XX (displayed in binary code)	
28		ZSE0(2)	2. ZSE switch recognized in landing XX (displayed in binary code)	
29		ZSE0(3)	3. ZSE switch recognized in landing XX (displayed in binary code)	
2A		ZSE0(4)	4. ZSE switch recognized in landing XX (displayed in binary code)	
2b			**Output on EL display(Telegram)**	**ELDISP**
	2^7	B	Occupied	
	2^6	F	Fireservice	
	2^5	V	Priority	
	2^4	ÜB	Overload	
	2^3		Out-of-service indicator	
	2^2		Emergency power active	
	2^1		Collective fault message	
	2^0	SF	Special run	

[1]) pulses are counted dependent on the run direction (2^0 to 2^7 is displayed in LED row A/B)

2C			**Current failure cause with group lifts[1])**	**STGRND**
	00		Lift available	
	01		Forced run operation active	
	02		Out-of-service	
	03		Poor operation phase (dependent on Norway version)	
	04	VK	Priority car	
	05	ZTK	Intermediate door contact open	
	06	V	Priority MZ1 circuit board	
	07	SF	Special run	
	08	FW	Fireservice	
	09	N	Emergency power	
	0A		Car door open too long	
	0b		Door failure	
	10		Removed from group operation by monitoring	
	>80		Lift-specific program	
2d			**Last failure with group lifts[2])**	**STGRA**
	00		Lift available	
	01		Forced run operation active	
	02		Out-of-service	
	03		Poor operation phase (dependent on Norway version)	
	04	VK	Priority car	
	05	ZTK	Intermediate door contact open	
	06	V	Priority MZ1 circuit board	
	07	SF	Special run	
	08	FW	Fireservice	
	09	N	Emergency power	
	0A		Car door open too long	
	0b		Door failure	
	10		Removed from group operation by monitoring	
	>80		Lift-specific program	
2E			**Data from API-S to MC**	**APISMC**
	2^7			
	2^6	STS	Reference start signal with CPX	
	2^5	NN	Zero speed	
	2^4	THE	Temperature	
	2^3	SMR	Controller failure	
	2^2	v<0,3m/s		
	2^1	EBS	Request to apply brakes	
	2^0	ESP	Request to activate ESP contactor (FL)	
2F			**Output on CPI drive**	**MCAPIS**
	2^7			
	2^6	FF	Free run	
	2^5	V_E	Levelling operation speed	
	2^4	v_I	Inspection operation speed	
	2^3	v_j	Adjusting run speed	
	2^2	v_N	Rated speed	
	2^1	WU	Run direction DOWN	

[1]) will be displayed as hexadecimal number in LED row A. Example: 09 in LED row A LEDs 0000 1001 light up
[2]) displays last failure before current failure cause column 2C. Is displayed in hexadecimal numbers as in column 2C

	2^0	WO	Run direction DOWN	

30			**Same as for 1MI circuit board port B**	**MI1PB**
	2^7			
	2^6	IF/RS	Inspection/emergency operation switchr	MF3-x40:1/2SPL:b30
	2^5	IFO	Inspection button UP	MF3-X40:2
	2^4	IFU	Inspection button DOWN	MF3-X40:3
	2^3	LN	Light-barrier re-levelling operation	MF3-X42:2
	2^2			
	2^1	W/L-S		1SPL:b12
	2^0	WO/WU		1SPL:b10
31			**Same as for 1MI circuit board port C**	**MI1PC**
	2^7	NSE	Emergency power	1MP-X1:8
	2^6	B	Occupied MZ1	MV6-X4:11
	2^5	ÜL	Overload MZ1	MV6-X4:3
	2^4	SR	Check back SR module	MV6-X4:2
	2^3	EK	Limit stop contact	1SPL:b2
	2^2	HK	Stop contact	1SPL:b4
	2^1	TK	Door contact	1SPL:b6
	2^0	KT	Car door contactkt	1SPL:b8
32			**Same as with 2MI circuit board Now MP inputs**	**MI2PA**
	2^7			
	2^6		Barring of calls	1MP-X1:7
	2^5		Reserve (used to be: MV-X4:7)	1MP-X1:6
	2^4		Emergency call Bayer	1MP-X1:5
	2^3		Repair switch Bayer	1MP-X1:4
	2^2		Return disconnectable	1MP-X1:3
	2^1		Peak traffic DOWN	1MP-X1:2
	2^0		Peak traffic UP	1MP-X1:1
33			**Same as for 2MI Port B**	**MI2PB**
	2^7			
	2^6			
	2^5	SFG1		MV6-X9:12
	2^4			
	2^3			
	2^2		Tony Warren fireservice	1MP-X2:3
	2^1		Emergency stop butoon Norway	1MP-X2:2
	2^0	AVI	Anti-creep device/Emergency braking system	1MP-X2:1
34			**Car input word 1 (d112H)**	**MKEW1**
	2^7	UT	Door-closed button	MF3-X18:1 / X60:3
	2^6	FW/BF	Fireservice/case-of-fire	MF3(VA) [1])-x6:3
	2^5			
	2^4	ÜB	Overload	MF3-X9:1
	2^3	LM1	Car empty	MF3(VA)-X16:1
	2^2	OT	Door-open button	MF3-X8:1/X59:3
	2^1	B	Occupied	MF3-X15:1
	2^0	V	Priority	MF3-X7:1/X34:3

[1]) MF3 (VA) stands for circuit board MF3 with double-sided insertion

35			**Car input word 2 (d113H)**	**MKEW2**
	2^7	KKD	Articulated lever contact – rear entrance door	MF3(VA) -X6:1
	2^6	LTD	Door light barrier rear entrance door	MF3(VA)-X6:3
	2^5	KK	Articulated lever contact – main door	MF3-X5:1
	2^4	LT	Door light barrier mian door	MF3-X5:3
	2^3			
	2^2	TSOD	Door-open acceptance rear entrance door	MF3(VA)-X4:1
	2^1			
	2^0	TSO	Door-open acceptance main door	MF3-X3:1
36			**Car input word 3**	**MKEW3**
	2^7	IFO	Inspection operation button UP	MF3-X40:2
	2^6	IFU	Inspection operation button DOWN	MF3-X40:3
	2^5	IF	Inspection operation switch	MF3-X40:1
	2^4	LM2	Load-weighing device input 2	MF3(VA)[1])-X17:1
	2^3			
	2^2	RES2	Reserve 2	MF3(VA)-X47:1
	2^1	RES1	Reserve 1 (ZTK)	MF3-X41:1
	2^0	AT	Coding of landings	MF3 (VA)-X48:1/X49:3
37			**Car input word 1**	**MKEWD1**
	2^7	UTD	Door-closed button rear entrance side	MF3-X18:1/X60:3
	2^6	FWD	Fireservice rear entrance side	MF3(VA)-X10:1/X50:3
	2^5			
	2^4			
	2^3			
	2^2	OTD	Door-open button rear entrance side	MF3-X8:1/X59:3
	2^1			
	2^0	VD	Priority rear entrance side	MF3-X7:1/X34:3
38			**Car input word 2 rear entrance side**	**MKEWD2**
	2^7	KKT	Articulated lever contact rear entrance side	MF3(VA)-X6:1
	2^6	LTD	Light barrier rear entrance side	MF3(VA)-X6:3
	2^5			
	2^4			
	2^3			
	2^2	TSOD	Door switch rear entrance side open	MF3(VA)-X4:1
	2^1			
	2^0			
39			**Car input word 3 rear entrance side**	**MKEWD3**
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2	RES2D	Reserve 2 rear entrance side	MF3(VA)-X47:1
	2^1	RES1D	Reserve 1 rear entrance side	MF3-X41:1

[1]) MF3 (VA) stands for circuit board MF3 with double-sided insertion

	2^0	ATD	Coding of rear entrance landings	MF3(VA)-X48:1/X49:3

3A			**Port check word MZ1**	**MPMZ**
	2^7	TSP	Barring of car door (switch on MZ1/MZ2)	
	2^6	THE	Temperature monitoring main motor O.K.	MV6-X4:12
	2^5	AL	Disconnection control, light activated	MV6-X4:6
	2^4	ÜWR	Monitoring of controller tripped (1 = O.K.)	MV6-X6:16
	2^3	RU	Car call given to lowest landing (button on MZ1)	
	2^2	V	Priority switch activated (switch on MZ1)	
	2^1	RO	Car call given to upper landing (button on MZ1)	
	2^0	S	Test switch	
3b			**Messages from ME emergency power circuit board**	**MNSAV**
	2^7	AF	Start interlocking effective	
	2^6	RESET	Reset button pressed	
	2^5			
	2^4			
	2^3	NF	Emergency power evacuation enabled	
	2^2	AS	Start interlocking not effective	
	2^1	NS	Power contactor activated	
	2^0	ME	ME emergency power circuit board	
3C			**Brake test switch**	**PEX01**
	2^7	BLK2	Brake test switch 2	MV6-1SPL:b30
	2^6			
	2^5			
	2^4			
	2^3	BLK1	Brake test switch 1	MV6-1SPL:b28
	2^2			
	2^1			
	2^0			
3d			**Electrical recall operation**	**RHSEIN**
	2^7			
	2^6	RS	Electrical recall operation activated	MV6-2SPL:b26
	2^5	RSO	Emergency operation switch UP activated	MV6-2SPL:b28
	2^4	RSU	Emergency operation switch DOWN activated	MV6-2SPL:b30
	2^3			
	2^2			
	2^1			
	2^0			
3E			**Commands and calls (main and rear entrance side)**	**MSBOIT**
	2^7			
	2^6	TOD	Landing call UP rear entrance side activated	
	2^5	TUD	Landing call DOWN rear entrance side activated	
	2^4	TID	Car command given to rear entrance side	
	2^3			
	2^2	TO	Landing call UP given to main side	
	2^1	TU	Landing call DOWN given to main side	
	2^0	TI	Car command given to main side	

3F			**Data from load-weighing device LMS1**	**QBEL**
	2^7		Loading of car in % of rated load	
	2^6			
	2^5			
	2^4			
	2^3	X		
	2^2	X		
	2^1	X		
	2^0	X		
40			**Door states door drives with CAN bus**	**MTEW**
	2^7			
	2^6			
	2^5	>150 N	Closing force rear entrance door	
	2^4	>150 N	Closing force main door	
	2^3	TSUD	Door-closed acceptance rear entrance door	
	2^2	TSOD	Door-open acceptance rear entrance door	
	2^1	TSU	Door-closed acceptance main door	
	2^0	TSO	Door-open acceptance main door	
41			**Error messages from CAN bus door drives for main door**	**F2HSF**
	2^7		Door drive F2/1: overtemperature housing F5:driver voltage too low	
	2^6		No controller enable	
	2^5		Overtemperature of door motor	
	2^4		Overtemperature of heat sink	
	2^3		Overvoltage	
	2^2		Overcurrent	
	2^1		Response of watchdog	
	2^0		Response of run time monitoring	
42			**Error messages from CAN bus door drives for rear entrance doors**	**F2DSF**
	2^7		Door drive F2/1: overtemperature housing F5:driver voltage too low	
	2^6		No controller enable	
	2^5		Overtemperature of door motor	
	2^4		Overtemperature of heat sink	
	2^3		Overvoltage	
	2^2		Overcurrent	
	2^1		Response of watchdog	
	2^0		Response of run time monitoring	
43			**Main memory**	**KBEWX1**
	2^7	UT	Door-closed button	
	2^6	FW/BF	Fireservice / case-of-fire	
	2^5			
	2^4	ÜB	Overload	
	2^3	LM1	Empty car	

	2^2	OT	Door-open button	
	2^1	B	Car occupied	
	2^0	V	Car priority switch activated	

Col	*LED*	*Signal*	**Outputs**	***Notes***
50			**Power part output word 1 (same as for column 05)**	**FARIL**
	2^7	VR	Lock magnet (TSM) picked up	MV6-X4:9
	2^6	A5A	Flashing light indicator (will not be evaluated)	
	2^5	TO	Door-open command main door (will turn off, if door-open time has elapsed)	MF3-X43:2
	2^4	TU	Door-closed command main door (will turn off, if RK contact is closed)	MF3-X43:1
	2^3	FL	Contactor L (FV)/contactor W (controlled drives) activated	MV6-1SPL:b22
	2^2	FS	Contactor S (FV)/brake release magnet (Isostop 16M) activated	MV6-1SPL:b24
	2^1	FO	Current run direction UP	MV6-1SPL:b20
	2^0	FU	Current run direction DOWN	MV6-1SPL:b18
51			**Power part output word 1 (same as for column 06)**	**LAW2**
	2^7	AL2	Disconnection control and light (effective, if all car commands are served)	MV6-X4:5
	2^6	FM	Error message LED on MZ1 circuit board	MZ1:H2
	2^5	TOD	Door-open command rear entrance door (turns off if door-open time has elapsed)	MF3(VA)[1])-X45:2
	2^4	TUD	Door-closed command rear entrance door (RKD contact same as for TU with main door)	MF3(VA)-X45:1
	2^3	NS	Selection of emergency power relay	1MP-X1:14
	2^2	ASP	Emergency power start barred	1MP-X1:15
	2^1			
	2^0	ZS	Car zone signal within landing vane	MV6-X4:1
52			**Port Controll word A4 (same as for column 1d)**	**PCWA4**
	2^7			
	2^6	VUE	Reduced overtravel	1MP-X2:15
	2^5	ER	Isostop 40RM converter activated	1MP-X2:14
	2^4	NHTN	Emergency stop button Norway activated	1MP-X2:13
	2^3	FES	Accurate adjustment through special gear effective	1MP-X2:12
	2^2	SM	Collective fault message activated	MV6-2SPL:b14
	2^1	AVO	Anti-creep device/emergency braking system activated	1MP-X2:10
	2^0	ABA	Out-of-service indicator	1MP-X2:9
53			**Port check word A6 (same as for 1F)**	**PCWA6**
	2^7			
	2^6			
	2^5	ZS3	Former scanning spots selection	1MP-X1:16
	2^4		Error marking	1MP-X2:11
	2^3			
	2^2			
	2^1			
	2^0			
54			**Car output word 1 (same as for column 10)**	**KBAW1**
	2^7			

[1]) MF3 (VA) stands for circuit board MF3 with double-sided insertion

	2^6	FWL	Fireservice indicator	MF3-X14:2
	2^5	FW/BF	Gong fireservice/case-of-fire	MF3-X21:2
	2^4	ÜL/ÜW	Overload indicator/alarm	MF3-X13:2
	2^3	RW	Call alarm	MF3-X20:2
	2^2	N	Emergency current indicator	MF3-X12:2
	2^1			
	2^0	SFQ	Special run acceptance	MF3-X11:2
55			**Car output word 2 main side (same as for column 10)**	**KBAW2**
	2^7	GO	Gong in car actuated in UP direction	MF3-X19:2
	2^6	GU	Gong in car actuated in DOWN direction	MF3-X22:2
	2^5	LB3	Position indicator lighted display 3	MF3-X35:9
	2^4	LB2	Position indicator lighted display 2	MF3-X35:8
	2^3	RES4	Reserve 2	MF3-X63:2
	2^2	RES3	Reserve 3	MF3-X62:2
	2^1	LB1	Position indicator lighted display 1	MF3-X35:7
	2^0	DIM	Dimmer	MF3-X61:2
56			**Car output word 2 rear entrance side**	**KBAWD2**
	2^7	GOD	Gong in car actuated in UP direction (reserve)	MF3-X19:2
	2^6	GUD	Gong in car actuated in DOWN direction (reserve)	MF3-X22:2
	2^5	LB3D	Position indicator lighted display 3	MF3-X35:9
	2^4	LB2D	Position indicator lighted display 2	MF3-X35:8
	2^3	RES4D	Reserve 4	MF3-X63:2
	2^2	RES3D	Reserve 3	MF3-X62:2
	2^1	LB1D	Position indicator lighted display 1	MF3-X35:7
	2^0	RES	Dimmer	MF3-X61:2
57			**Car output word 3**	**KBAW3**
	2^7			
	2^6			
	2^5			
	2^4			
	2^3	ZTZD	Partly opening forced door-closing command rear entrance side	
	2^2	ZTZ	Partly opening forced door-closing command main side	
	2^1	ZTZD	Forced door-closing command rear entrance side	MF3-X46:2
	2^0	ZTZ	Forced door-closing command main side	MF3-X44:2
58			**58 to 5d not assigned currently**	
5E			**To be assigned freely through diagnostic unit VI via codes 9014 and 9015**	
5F			**To be assigned freely through diagnostic unit VI via codes 9016 and 9017**	
60			**Reference state MF3 circuit boards**	**FKSOLL**
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1		MF3 circuit board rear entrance side available	
	2^0		MF3 circuit board main side available	
61			**Current state MF3 circuit boards**	**FKIST**

	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1		MF3 circuit board rear entrance side responded	
	2^0		MF3 circuit board main side responded	

62			**Reference state MP circuit boards 0 - 7**	**MPSOL1**
	2^7		7MP is available	
	2^6		6MP is available	
	2^5		5MP is available	
	2^4		4MP is available	
	2^3		3MP is available	
	2^2		2MP is available	
	2^1		1MP is available	
	2^0		0MP is available (0MP not available)	
63			**Reference state MP boards 0 - 7**	**MPIST1**
	2^7		7MP responded	
	2^6		6MP responded	
	2^5		5MP responded	
	2^4		4MP responded	
	2^3		3MP responded	
	2^2		2MP responded	
	2^1		1MP responded	
	2^0		0MP responded (0MP not available)	
64			**Reference state MP circuit boards 8 - 15**	**MPSOL2**
	2^7		15MP is available	
	2^6		14MP is available	
	2^5		13MP is available	
	2^4		12MP is available	
	2^3		11MP is available	
	2^2		10MP is available	
	2^1		9MP is available	
	2^0		8MP is available	
65			**Actual state MP circuit boards 8 - 15**	**MPIST2**
	2^7		15MP responded	
	2^6		14MP responded	
	2^5		13MP responded	
	2^4		12MP responded	
	2^3		11MP responded	
	2^2		10MP responded	
	2^1		9MP responded	
	2^0		8MP responded	
66			**Reference state additional local circuit boards 1 - 8**	**LOKOSO1**
	2^7			
	2^6			
	2^5			

	2^4			
	2^3			
	2^2			
	2^1		MQ1 available	
	2^0		FIS available	

67			**ACTUAL state additional local circuit boards 1 - 8**	**LOKIST1**
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1		MQ1 responded	
	2^0		FIS-responded	
68[1])			**Reference state additional local circuit boards 9 - 16**	**LOKOSO2**
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1			
	2^0			
69[1])			**ACTUAL state additional local circuit boards 1 - 8**	**LOKIS2**
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1			
	2^0			
6A			**Reference state additional car circuit boards 1 - 8**	**FKZSO1**
	2^7			
	2^6			
	2^5			
	2^4		LED display rear entrance side available	
	2^3		LED display main side available	
	2^2		Fx door drive rear entrance side available	
	2^1		Fx door drive main side available	
	2^0		LMS1 is available	
6b			**Actual state additional car circuit boards 1 - 8**	**FKZIS1**

[1]) not assigned currently.

	2^7			
	2^6			
	2^5			
	2^4		LED display rear entrance side responded	
	2^3		LED display main side responded	
	2^2		Fx door drive rear entrance side responded	
	2^1		Fx door drive main side responded	
	2^0		LMS1 responded	

6C			**Reference state additional car circuit boards 9 - 16**	**FKZSO2**
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1			
	2^0			
6d			**Actual state additional car circuit boards 9 - 16**	**FKZIS2**
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1			
	2^0			
6E			**Not assigned**	
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1			
	2^0			
6F			**Not assigned**	
	2^7			
	2^6			
	2^5			
	2^4			
	2^3			
	2^2			
	2^1			
	2^0			

Function 06 00 Interrogation of bolt contacts main door (only with TCI control)

LEDs 1 ... 16 in rows A and B indicate the open or closed state of bolt contacts. If there are more than 16 landings, an extension from 17 ... 31 is possible by pushbutton operation.

Example: Lift installation with 6 landings

Main landing	1	2	3	4		6
Rear entrance landing		2			5	

Sequence:
1) Select function 06 00 with program selector wheel.
2) LED 1, 2, 3, 4, 6, in row B will light (5 does not light, since 5. Landing is rear entrance landing).
3) For example, if LED 3 does not light, the bolt contact in the third landing is not closed.

Attention	In the event of a fault, all LEDs above the interrupted bolt contact will not light. The display is meaning less when the safety circuit is used (SR module in running-open operating and/or re-levelling with door open, if the car is in a landing and the bolt contacts are bridged. **Functions 06 00 and 07 00 are not effective with TCM controls!**

Function7 00 Interrogation bolt contacts rear entrance door (only with TCI control)

Interrogation analogous to function 06 00

Function07 00 Display of parameters of CPI controller (only with TCM controls)

1) Select function 0700 with program selector wheel. Afterwards press button and you will get to parameter entry level. 0001 will appear on the seven-segment display.
2) The desired parameter can be selected from below list of pre-set parameters through selector wheel. Press button again and th contents of the parameter will be displayed.
3) To exit function 0700 press button again. Consequently the contents of one parameter can only be displayed; the parameter values cannot be changed. Changes of the parameter settings can only be performed in teach-in mode A7 XX.
4) If LED 8 lights stands for negative sign of displayed value!!

Display	CPI parameters (same as for displays with parameter entry panel)	Unit	Parameter
00 01	Motor speed	U/min	P100
00 02	Actual speed	cm/s	P101
00 03	Binary inputs	without	P103
00 04	Binary outputs	without	P104
00 05	Encoder PPR	without	P105
00 06	Reference speed	cm/s	P106
00 07	Load current	x 0,1A	P107
00 08	Switching sequence index	without	P110
00 09	Computed deceleration distance $_v$	cm	P111
00 10	Measured deceleration distance s_v	cm	P112
00 11	Travel	cm	P113

Display	CPI parameters (adjustable through parameter entry panel)	Unit	Parameter
00 12	Reference value start delay t_{STS}	ms	P0
00 13	Brake application time t_{BE}	ms	P1
00 14	Direction of rotation (0000=not inverted, 0001=inverted)	without	P3
00 15	Direction of rotation (0000=not inverted,001=inverted)	without	P4
00 16	Speed controller, P gain	x 0,1	P5
00 17	Speed controller, I gain	ms	P6
00 18	Preset load (0001=on, 0000=off)	on/off	
00 19	Default value load		
00 20	Analog output MP42	without	P10
00 21	Analog output MP43	without	P11
00 22	Reduction ratio	x 0,1	P13
00 23	Taction-sheave diameter	mm	P14
00 24	Suspension (0001=1:1, 0002=2:1)	without	P15
00 25	Rated speed		
00 26	Motor speed (computed)	U/min	P17
00 27	Operating point for n = 0 speed	x 0,1 U/min	P18
00 28	Start jerk	cm/s^3	P19
00 29	Acceleration	cm/s^2	P20
00 30	Acceleration pre-control (0001=on, 0000=off)	on/off	P21
00 31	Acceleration pre-control	x 0,1 %	P22
00 32	Re-levelling speed v_E	cm/s	P23
00 33	Inspection operation speed v_I	cm/s	P24
00 34	Rated speed v_N	cm/s	P25
00 35	Adjusting operation speed v_J	cm/s	P26
00 36	Operating point for output v<0.3 m/s	cm/s	
00 37	Short-run computer (0001=on, 0000=off)	on/off	P38
00 38	Short-run distance correction	without	P39
00 39	Motor selection (time factor for lagging of van) motor type	without	
00 40	Load-weighing	on/off	P50
00 41	Measured value from load-weighing	%	P51
00 42	Input value for load compensation	%	P52
00 43	Compute gain of load weighing from load current	A	P53

00 44	Gain of load weighing	x 0,1 %	P54

Comments:
If necessary, display of parameter setting via function 07 00 can be used as quick and useful interrogation tool.
For detailed explanation (settings and changes) see respective specific erection instruction.
Also see operating instruction Diagnostic Unit I Teach-In and Parameter setting (orange sheets).

Function08 00 Giving car calls – main side

1) Select function 08 00 with program selector wheel.
2) Press button momentarily, 08 00 will appear on the 7-segment display.
3) Press button momentarily; dependent on the number of landings LEDs 1 ... 8 in row B and LEDs 9 ....16 in row A will consecutively flash momentarily.
4) As soon as the LED of the desired landing flashes, press button momentarily to set one or several car calls. Acknowledge signals on car control panel will light up simultaneously.
5) To abort the function, press button for longer than two sec.

Attention	If there are more than 16 landings, the second pass can be started for landings 17 to 32, once the first pass is finished. Here, 08 00 will appear on the seven-segment display. Repetitions and giving new calls are possible at any time !

Function09 00 Giving Down calls – main side

Same as in function 08 00 (00 09 etc. will be indicated after pressing the button momentarily.)

Function10 00 Giving UP landing calls

Same as in function 08 00 (00 0 A etc. will be indicated after pressing the button momentarily)

Function11 00 Giving car calls rear entrance side (selective door control)

Same as in function 08 00 (00 0b etc. will be indicated after pressing the button momentarily)

Function12 00 Giving DOWN landing calls rear entrance side (selective door control)

Same as in function 08 00 (00 0 C will be indicated after pressing the button momentarily)

Function13 00 Giving UP landing calls – rear entrance side (selective door control)

Same as in function 08 00 (00 0C will be indicated after pressing button)

Function14 00 Display of versions and setting of marking flag

Display of version – issue of work program (for Siemens or Thyssen CPU)

1) Select function 14 00 with program selector wheel
2) Press button and the work program version will appear on the 7-segment display

Example: **0 2 9 6 / 2 6**

- 2 6 – Version number in binary representation (by LEDs in row A)
- 2 6 – Modification number in binary representation (by LEDs in row B only with TCM)
- 9 6 – Year of issue (7-segment display)
- 0 2 – Month of issue (7-segment display)

Marking flag (for identification in error stack)

1) As soon as the work program version is indicated, turn program selector switch until all LEDs 5 ... 8 in row B are lighting.
2) Continue turning the selector switch until the binary number sequence 0 ... 9 appears on LEDs 1 ... 4 in row B.

Row B	0	1	2	3	4	5	6	7	8	9	Decimal numbers
LED 4	0	0	0	0	0	0	0	0	1	1	Binary numbers
LED 3	0	0	0	0	1	1	1	1	0	0	1 = LED lights
LED 2	0	0	1	1	0	0	1	1	0	0	0 = LED does not light
LED 1	0	1	0	1	0	1	0	1	0	1	

3) Set the desired binary number with the selector switch and enter it in the error stack of the CPU by pressing the button.
4) When the error stack (function 01 00) is interrogated, the following indication will appear on the 7-segment display

0 F X X

- X X – desired binary number
- 0 F – marking flag

Attention	As soon as a marking flag is entered, the error-signalling light-emitting diode on circuit board MZ or MZ1 will go out. The error stack can be cleared by teach-in function shaft teach-in. Several marking flags can be stored consecutively !

Official work program versions:

The further development of additional features and the use of new drive variants make it necessary that the work program must be adapted to the given development state.
The work programs are normally backward compatible with (references to this effect must be observed). Work programs of older date may only be replaced by up-to-date official version if urgently required (provisional update software, faul6ty lift functions, add-on features, etc.).

For information concerning respective actual software and compatibility see Urgent Information !!