d-LIST®
Line Type Heat Detector

Commands and System messages

SCU 800-03
SCU 800/16

Valid as of:
Software version V1.24

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CONTENT

> ⇨ **Note**: System messages in this manual are returned if the SCU language is set to English (☞ SPR).
> System messages in other languages are listed in ☞ APPENDIX 1.

1 ABOUT THIS MANUAL

The following notations and abbreviations are used in this manual.

> ⇨ **Note**: All text, written in text boxes such as this, is of utmost importance to the correct and successful installation of the system. These texts must be adhered to at all times.

`Text written in this font indicates text, which is displayed either on the LC-Display of the LISTcontroller or on the screen of the connected PC.`

`Shaded Text indicates formulas used in the SCU.`

☞ are references to further information.

Commands written as follows::

LVL	**Command:**	CLEAR-TEXT	✶nn

LVL: = *Access levels are shown in Roman numerals (**I – II**).*
= *Clear-text command from a PC keyboard*
✶ = *Numerical command from a PC keyboard*

2 EN 54-5 RESPONSE BEHAVIOUR

> ⇨ **Note:** Standard settings have proven conformity for a system response behaviour according to EN 54-5, class A1. All other possible settings have not proven this conformity.

Standard settings:

Parameter	***Description***	***Standard setting***	***Page***
TKRITD	Differential temperature threshold	2.8	15
TKRITA	Absolute (maximum) temperature threshold	50	15
ZYKLUS	Measuring cycle interval	00:00:10	16
ZYKLMAX	Reference value update interval	1	16
SD0	cross zoning (double-knock)	0	12
SD1	HSM – Hyper Sensitivity Mode	0	12
SD6	Fault-alarm for disabled sensors	0	13

3 SAFETY AND GENERAL INFORMATION

3.1 SAFETY

Read before installing the product. Retain and follow all product safety and operating instructions. Always refer to the documentation supplied with the equipment, whether printed or in electronic format.

3.2 VALIDITY

This document is valid **as of** the software version V1.24. The software version is printed on the EPROM label.

4 MESSAGES

4.1 ALARM MESSAGES

The following alarm messages can be transmitted via the RS232 interface to a host system or terminal:

`HEATING ! !`	*Warning when the differential temperature reaches the pre-alarm value, set with the command TKRITVD, for the differential temperature threshold*
`FIRE ! - DT`	*Exceeding of the differential temperature threshold*
`WARNG. - AT`	*Warning when temperature reaches the pre-alarm value, set with the command TKRITVA, for maximum temperature threshold*
`FIRE ! - AT`	*Exceeding of the maximum temperature threshold*
`WARNG. - UT`	*Warning if temperature is less than 5.0°C above the minimum temperature threshold*
`ALARM! - UT`	*Falling short of minimum temperature threshold*

4.2 RETURNED MESSAGES

These messages confirm the entering of a command or are the reaction of the system to a command.

✶	*Prompt after a correct input*
`F`	*Prompt after entering the incorrect password*
`??SYNTAX??`	*Erroneous command input*
`??PARAMETER??`	*Parameters are not valid*
`??AUTHORISATION??`	*Input of a service ✶ command without entering the password*
`??INADMISSIBLE??`	*Illegal function call*
`NO MESSAGE`	*Reaction to FLIST command after the message list was erased*
`ACKNOWLEDGE`	*"ACKNOWLEDGE" key pressed or after an external acknowledgement; this message is stored in the list of messages.*

4.3 SYSTEM MESSAGES

`Power on`	*The power supply to the SCU was switched on*
`COLDSTART`	*Cold start routine executed*
`Auto-Seek`	*AUTO command executed*
`REF.PROFILE`	*Reference temperature profile formed during the cold start routine or after the command "CRESET"*
`MEASURING`	*First measurement after recording the reference profile*
`RESET`	*The unit executes a software start after switching on the power supply or after the command RESET*
`WD-RESET`	*Reset initiated by Watchdog circuit*

4.4 FAULT (ERROR) MESSAGES

The common fault relay can only be reset with **RUECKSETZEN** (ACKNOWLEDGE) if all fault bits are set to 0.

The command **TEST** can be used to check which fault bits are set.

Numbering of the fault bits checked with ✶**42/TEST**

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

Bit	*Description*	*Fault message*
Bit 0	Sensor defect	`SENS.BROKEN` `CRC-ERROR`
Bit 1	Cable defect, no active sensors	`CABLEDEFECT`
Bit 2	not used	
Bit 3	not used	
Bit 4	ROM defect	`ROM DEFECT`
Bit 5	not used	
Bit 6	not used	
Bit 7	EEPROM defect	`??EEPROM??`
Bit 8	not used	
Bit 9	not used	
Bit 10	Measuring point disabled	`SwitchedOff`
Bit 11	Communication error: Master	`Komm.Fehler`
Bit 12	Communication error: Protocol	`HostCommErr`

Bit: 0 Sensor defect

Is set if at least one sensor has the status `SENSOR-BROKEN` or `CRC-ERROR` ; is reset if all sensors are OK or after ✶**14** if system status is `Cable defect`.
The fault relay can only be reset once the defect sensor has been removed from the configuration with **$ $$KILL** and the next measuring cycle has occurred.

Cause:	`SENS.BROKEN`	Sensor does not respond to polling
	`CRC-ERROR`	Communication with sensor is not correct

Bit:1 Cable defect

Is set at the end of a measuring cycle if all sensors are defect; reset with ✶**14**.

Cause: No sensor could be found after a cold start or none of the configured sensors responded to polling
Action: Check cable connection; sensor cable might be disconnected.

Bit: 4 ROM defect

Is set if the ROM test indicates a fault; otherwise it is reset. The ROM test is executed after power on and by the command **TEST**.

Bit: 7 EEPROM defect

Is set if the EEPROM is defect or not present; reset if EEPROM is OK. The EEPROM test is executed after power on and after the command **RESET**.

After correction of the fault, the fault relay must be reset with ✶**14**.

Bit: 10 Measuring point disabled

Is set if at least one measuring point was disabled with the command ✶**33**; is reset with ✶**14**. The status remains after switching the unit off and on.

Bit 11 - Communication error with master (via RS485)

Is set if the master requests data from a slave and the slave cannot send data without error; is reset if the slave unit can send data to the master.

Action: Check parameters / connection

Bit 12 - Communication error with superordinate equipment

Is set if the communication to a superordinate system (connection via protocol) fails

Action: Check parameters / connection

5 COMMAND LIST

Commands can be entered as clear text (ASCII-symbols) or as "✶" command with the corresponding command-code via the serial interface .

Command line:

LVL	Command:	⌨ CLEAR-TEXT	▪ ✶nn

LVL: = *Access levels are shown in Roman numerals (**I or II**).*
I *Can be executed by any user*
II *Requires the password*
⌨ = *Clear-text command from a PC keyboard*
▪ ✶ = *Numerical command from a PC Keyboard*

5.1 SYSTEM INITIALISATION

5.1.1 MASTER/SLAVE COMMUNICATION

II	Command:	⌨ SL	▪ ✶60

Sets the slave number

***SL**n* *n=1...31 Slave number*

SL *Returns the slave number*

The slave number (1...31) must be set in the SCU 800 with the command ✶60n / SLn. The number is stored in the EEPROM and is therefore permanently set, as on a DIP switch. If the slave number is not correctly set, no communication is possible.

⇨ **Note:** This command cannot be sent via the master; it can only be entered at the SCU800.

II	Command:	⌨ SB	▪ ✶66

Baud rate for master/slave communication

***SB**=m* *m=0...1200* *m=1...2400*
m=2...4800 *m=3...9600 Baud*

SB *Returns the current Baud rate*

The baud rate of the SCU 800 can be changed via the master unit. This results in an immediate error message due to communication break. If setting new baud rates via the master, first change it in all slaves and then in the master. This setting is saved in the EEPROM.

⇨ **Note:** The baud rate 1200 is not available on LISTcontroller.

5.1.2 COLD START COMMANDS

II	**Command:**	KALTSTART	✶03

Cold start routine.

KALTSTART

This command erases all data and parameters are reset to their default values.

Select the required command after message `AUTO / KVECTOR / RLSIS` appears

II	**Command:**	AUTO	✶43

Automatic search (auto-seek) for measuring points (sensors) after a cold start routine. Must be preceded by the command KALTSTART (✶03).

AUTO

The following command short-cut executes a cold start routine with an auto-seek:

✶031 *(*= KALTSTART + AUTO*)*

The message `CABLEDEFECT` is returned and registered in the message list if no measuring points are found.

II	**Command:**	RLSIS	✶59

Reading of the system parameters, previously saved in the EEPROM into the operating memory (RAM). Must be preceded by the command KALTSTART (✶03).

RLSIS

The following command short-cut executes a cold start routine with an auto-seek:

✶032 *(*= KALTSTART + RLSIS*)*

The message `CABLEDEFECT` is returned and registered in the message list if no measuring points are found.

II	**Command:**	START	✶06

Immediate start of the measuring cycle after configuration by KVECTOR commands.

START

5.1.3 SENSOR CABLE CONFIGURATION

II	**Command:**	KVECTOR	✶28

Assigns measuring point numbers to physical addresses.

KVECTOR*k.n=x* *k= cable 1 or 2*
n = measuring point number 1 - 6499
x= address

This command can only be executed after a cold start routine if the message `AUTO / KVECTOR / RLSIS` is displayed, otherwise message `??INADMISSIBLE??` will be returned.
Any measuring point number can be allocated to a physical address.
First, the measuring points of port A (cable 1) and then those of port B (cable 2) have to be defined. The measuring point numbers in a cable must be entered in ascending order.
While entering KVECTOR commands, the previously entered configuration can be checked via KKONFIG. To commence with the temperature measurement, the command START must be executed after entering all the data

III	**Command:**	KABSCHN	✶27

Assigns measuring points to alarm sections (zones).

KABSCHN*a=n-m* *a = alarm section 1 – 64*
n/m = measuring point (from/to)

KABSCHN*n* *Returns the alarm section for measuring point n*
`Section a n`

I	**Command:**	KKONFIG	✶19

Displays the configuration of the cable: measuring point numbers are shown with their corresponding physical addresses and alarm sections with their corresponding measuring point numbers.

KKONFIG

5.1.4 SCU CONFIGURATION

I	**Command:**	KONSOLE	✶12

Defines the RS232 mode

KONSOLE*k* *k=1* *ASCII-mode*
k=2 *protocol-mode*

KONSOLE2 sets the serial communication to protocol communication. Terminal communication is no longer available. The characters "+++" must be sent to the interface to return to the ASCII mode.

II **Command:** SD ✶67

Software option switch.

***SD**n=m* *n = 0...7 Bit Nr.* *m = 0/1*

SD *returns the values of the option switches* `00000000 00000000`

***SD**0=1* *cross zoning (double knock)*
Prevents a DT- or AT-alarm, if only one sensor is heated. An DT- or AT-alarm is given only if a neighbouring sensor (measuring point no. +1 or -1) has at least a pre-alarm status. If a neighbouring sensor has the status `SENS.BROKEN` *it is set equal to pre-alarm status, therefore giving the respective alarm.*

⇨ **Note:** Prerequisite for the correct operation of this function is the logical numeration of the measuring points with respect to the spatial arrangement. (KVECTOR definition).

***SD**1* *HSM – Hyper Sensitivity Mode*

***SD**1 = 0* *Standard evaluation according to EN 54-5 for class A1 detectors.*

***SD**1 = 1* *activate HSM*
if DRIFT <= 0,5° a DT-alarm is already set when the DT-pre-alarm threshold is reached. As in the case of the standard evaluation, the DT-alarm only set if a DT-pre-alarm was detected in the previous measuring cycle

If DRIFT > 0,5° the standard evaluation is used.

⇨ **Application note:** The requirements of European Norm EN 54-5, class 1, are fulfilled by the default parameters of the line type heat detector d-LIST (SCU 800 sensor control unit and SEC 15 sensor cable)
In many special applications the ambient temperatures are relatively consistent. The response times for fire recognition in these areas can now be reduced significantly by activating the Hyper Sensitivity Mode (HSM) in the SCU 800 control unit.
In this mode a main alarm is already triggered when the differential pre-alarm threshold is exceeded in two subsequent measuring cycles.This rule is only applicable if one or a small number of sensors show an increase in temperature and the rest of the temperatures remain stable.
HSM is suitable for high sensitivity monitoring of cable trays, e.g. in voids, high rooms or for the early recognition of overheated idlers in conveying systems.

***SD** 2 and **SD**3* *not used*

***SD**4*	*Pre-alarm registration*	
	***SD**4 = 0*	*All pre-alarms, i.e.* `HEATING`, `WARNG.-AT` *and* `WARNG.-UT` *are registered in the message list.*
	***SD**4 = 1*	*No pre-alarms are registered in the message list.*
***SD**7*	*not used*	
***SD**6*	*Fault-alarm for disabled sensors*	
	***SD**6 = 0*	*the fault LED and relay are set if a measuring point is disabled.*
	***SD**6 = 1*	*the fault LED and relay are **NOT** set if a measuring point is disabled*
***SD**7*	*not used.*	

I **Command:** SPR ✶73

Definition of the language for messages from the SCU. This setting is written directly to the EEPROM.

***SPR**n*	*n = 1...6*	*1 = German* *2 = French* *3 = **English** (default)* *4 = Dutch* *5 = Italian* *6 = Spanish*

II **Command:** MREL ✶54

The SCU 800 either signalise common alarms per sensor cable connection or by alarm sections (zonal alarming).

This setting is not changed during a cold-start. The value is written directly to the EEPROM on command entry and is read back from the EEPROM when powering up the SCU.

***MREL**0*	*Alarms are signalised separately for each sensor cable connection by the relays AL1 and AL2 on the main board. No zonal alarming by relays takes place.*

⇨ **Warning**: ***MREL**0* must be used for the SCU800-03 (SCU800 without relay card).

***MREL**x*	*x = 0 - 64*	*Sets the highest relay number present in the SCU and therefore enables zonal alarming*
MREL	*Returns highest relay number*	

The data-transmission LED lights up when data is being transferred to the relay card.

II **Command:** AREL ✶10

Sets zonal-relay offset. Signalisation according to the examples below. As a rule, negative offsets are used.

***AREL**x*	*x =OFFSET-value*	
	x = 0	*Alarm in section 1 sets relay 1*
	x = -10	*Alarm in section 11 sets relay 1*
	x = 1	*Alarm in section1 sets relay 2 etc.*
	x =- 1	*inadmissible*
AREL	*Returns present setting*	

II **Command:** SREL ✶51

Sets first relay for zonal fault signalisation.

***SREL**x*	*x = 0*	*no zonal fault signalisation*
	x = 2-64	*first zonal fault relay*
SREL	*Returns present setting*	

II **Command:** VREL ✶50

Sets first relay for zonal pre-alarm signalisation.

***VREL**x*	*x=0*	*no zonal pre-alarm signalisation*
	x=2...64	*first zonal pre-alarm relay*
VREL	*Returns present setting*	

5.2 INTERROGATION / INPUT OF PARAMETERS

II **Command:** TKRITD ✶38

Sets the differential (ΔT) temperature threshold for each alarm section.

***TKRITD**a=tt.t* *a = section a = 0 : all sections*
tt.t = maximum differential value

***TKRITD**a* *returns the maximum differential value for section a*

Default value for all sections: 2.8°

II **Command:** TKRITVD ✶86

Sets the differential (ΔT) pre-alarm threshold as a percentage (%) of the differential temperature thresholds (TKRITD). This setting is global , i.e. it cannot be set per zone.

***TKRITVD**p* *p = 10 – 90 (in percent)*

TKRITVD *returns the pre-alarm threshold*

A pre-alarm `HEATING!!` is set if the differential value reaches the set value.

Default value for all sections: 50%

Example: Alarm threshold TKRITD=2.8°, pre-alarm at 1.4° for TKRITVD50

II **Command:** TKRITA ✶37

Sets the absolute (maximum) temperature threshold for each alarm section.

***TKRITA**a=tt.t* *a = section a = 0 : all sections*
tt.t = absolute temperature threshold

***TKRITA**a* *returns the absolute temperature threshold for section a*

Default value for all sections: 50.0°C

II **Command:** TKRITVA ✶87

Sets the absolute (maximum) pre-alarm threshold as a percentage (%) of the absolute thresholds (TKRITA). This setting is global , i.e. it cannot be set per zone.

***TKRITVA**p* *p = 10 – 90 (in percent)*

TKRITVA *returns the pre-alarm threshold*

A pre-alarm `WARNG. - AT` is set if the differential value reaches the set value.

Default value for all sections: 90%

Example: Alarm threshold TKRITA=50°C, pre-alarm at 45°C for TKRITVA90

II **Command:** TKRITC ✶39

Sets a minimum temperature threshold for each alarm section.

***TKRITC**a=tt.t* *a = section* *a = 0 : all sections*
tt.t = minimum temperature threshold

***TKRITC**a* *returns the minimum temperature threshold for section a*

A pre-alarm `WARNG. - UT` is set if the temperature falls below value TKRITC+5°C.

Default value for all sections: -40.0°C (i.e. no function)

II **Command:** ZYKLUS ✶36

Interrogates / sets the time between measuring cycles

***ZYKLUS**=00.00.ss* *ss = seconds*

ZYKLUS *Returns the set value*

Default value: 00.00.10 (10 seconds)
Maximum value: 00.00.30 (30 seconds)

II **Command:** ZYKLMAX ✶15

Interrogates / sets the number of measuring cycles between new reference profiles.

***ZYKLMAX**x* *x = 1-40* *number of cycles*

ZYKLMAX *Returns the set value*

Default value: 1

5.3 MESSAGE AND TEMPERATURE DATA OUTPUT

I **Command:** TMA ✶08

Cyclic output of the temperature for one measuring point.

***TMA**n* *n = 1-6499* *measuring point*

This function is terminated with TME.

I **Command:** TMST ✶07

Output of the temperature for one measuring point.

***TMST**n* *n = 1-6499* *measuring point*

I **Command:** TME ✶09

Terminates the cyclic output of the temperature for one measuring point TMA.

TME

I **Command:** TMB ✶48

Output of the avarage temperature for one alarm section.

TMB*a* *a = 1-64* *alarm section*

I **Command:** FN ✶25

Selects a specific message.

FN*x* *x = message number*

FN *selects the next message*

FN*1000* *selects the newest message in the message list*

I **Command:** FV ✶26

Selects a specific message.

FV*x* *x = message number*

FV *selects the previous message*

I **Command:** AZN ✶13

Shows the absolute measuring cycle number. Counting starts from the last cold start.

AZN

Example: for the default cycle time of 10 seconds, result in 360 measuring cycles per hour, 8640 cycles per day and 3 153 600 cycles per year.

5.4 DISABLING AND ENABLING

I	**Command:**	ABSCHALTEN	✶33

Disables a measuring point or all measuring points in a section (zone).

ABSCHALTEN*n*	*n=1-6499*	*measuring point*
ABSCHALTEN✶*a*	*a=1-64*	*section (zone)*

This function sets a fault alarm (LED, fault alarm relay). if SD6 = 0.
No fault alarm is set if SD6=1.

I	**Command:**	EINSCHALTEN	✶01

Enables a previously disabled measuring point or section (zone).

EINSCHALTEN*n*	*n=1-6499*	*measuring point*
EINSCHALTEN✶*a*	*a=1-64*	*section (zone)*

5.5 RESETTING (ACKNOWLEDGEMENT)

I	**Command:**	RUECKSETZEN	✶14

Acknowledges (resets) fire- and fault-alarms.

RUECKSETZEN

After RUECKSETZEN all alarm relays are reset to their normal position, the fault alarm relay is set (=normal position) and the command is registered in the message list.

I	**Command:**	RESET	✶04

Software reset command.

RESET

After RESET a software-reset takes place; parameters are not changed.

I	**Command:**	CRESET	✶17

Reset corresponding to RESET, but with new reference profile build-up.

CRESET

5.6 OUTPUT OF LISTS

During RS232 operation the output of lists (except DLIST) can be terminated with the ESC-key.

I **Command:** FLIST ✶24

Message list output: max. 650 messages

FLIST *output of the complete message list*

FLISTZ *output of the complete message list, incl. the absolute measuring cycle in which the message was generated*

II **Command:** KLIST ✶69

Lists the 50 last commands which were entered

KLIST *lists the last 50 commands*

KLIST*x* *x = 1 – 50* *the last number of commands to be listed*

I **Command:** LISTP ✶29

Temperature list output, with the absolute cycle number.

LISTP *output of the complete temperature list*

LISTP*=n-m* *output of a partial temperature list where:*
n *first measuring point*
m *last measuring point*

The state of the sensors is given in the column STAT, where:

`STAT= w`	*AT-/DT- or UT- pre-alarm*
`STAT= c`	*UT-alarm*
`STAT= a`	*Fire-AT*
`STAT= d`	*Fire-DT*
`STAT= s`	*Sensor disabled*

I **Command:** LISTA ✶30

Cyclic temperature list output, with the absolute cycle number.

LISTA *cyclic output of the complete temperature list*

LISTA*=n-m* *cyclic output of a partial temperature list where:*
n *first measuring point*
m *last measuring point*

The state of the sensors is given in the column STAT, as described above.
This function is terminated with LISTE.

I **Command:** LISTE ✶40

Terminates the cyclic temperature list output LISTA.

LISTE

II **Command:** DLIST ✶70

Output of the maximum differential temperature per alarm section

***DLIST**=a* *a=1-64* *alarm section*

These tables are used to save the highest differential temperature values which have arisen the system. The max. values are listed in order of size. Each alarm section has one table (i.e. 64 tables in total) with 8 entries per table: An entry contains the measuring point number, the respective differential temperature and the cycle number.

5.7 TEST FUNCTIONS

I **Command:** TEST ✶42

A ROM test is executed.

This function takes a few seconds after which the following line is transmitted:

`Sns.Cnt: nnn activ mmm ssssssss ssssssss`
s: 0 = no fault 1 = fault

`nnn` shows the number of configured measuring points (sensor count) and `mmm` shows the number of currently active measuring points. A difference between `nnn` and `mmm` means that sensors are defective (marked with `SENS.BROKEN` or `CRC-ERROR`) or have been disabled with $$$KILL/ABSCHALTEN. (☞ Fehler: Referenz nicht gefunden Fehler: Referenz nicht gefunden).

II **Command:** VERSION ✶46

Output of the software version.

VERSION

5.8 SERVICE AND MAINTENANCE FUNCTIONS

I	**Command:**	✶00	✶00

Password command

***✶00**pppppp*	*pppppp*	*valid password*

III	**Command:**	STSIS	✶58

Saves the system parameters to the permanent memory (EEPROM).

STSIS

The following information is saved in the SCU 800:

KVEKTOR** definitions, **Sensor status** (defect or killed sensors), **KABSCHN** definitions, **TKRITA**, **TKRITVA**, **TKRITC**, **TKRITD**, **TKRITVD**, **ZYKLMAX**, **ZYKLUS, MREL, VREL, SREL, AREL, SPR.

I	**Command:**	REL	✶49

Test command for the selective setting of the relays

The function of this command depends on the MREL relay configuration:

for MREL0 SCUs without relay cards:

***REL**n*	*n=1*	*sets alarm relay AL1 (LED A)*
	n=2	*sets alarm relay AL2 (LED B)*
	n=3	*sets the fault relay*

for MREL>0 SCUs with relay cards:

***REL**n*	*n=1...8*	*sets the corresponding relay-card output , relay AL1 on the main board and LED A*
	n=9...16	*sets the corresponding relay-card output relay AL2 on the main board and LED B*
	n=65	*sets both fault relays: main board and relay-card relays*

Reset with RUECKSETZEN (✶14)

II **Command:** TARU ✶31

Starts an automatic test of the section relays.

The function of this command depends on the MREL relay configuration :

for MREL0 SCUs without relay cards: no function

for MREL>0 SCUs with relay cards:

The alarm section (zonal) relays from 1 to MREL are set at 0,5 second intervals.

TARU

At the end of the test the relays are automatically reset.

II **Command:** $FLIST ✶18

Deletes the message list.

$FLIST

⇨ **Warning:** All messages are deleted!

II **Command:** $$$KILL ✶32

Deactivation of a single sensor

$$$KILLn *n=1...6499* *measuring point*

⇨ **Warning:** Sensors can only be reactivated by the command $$$NKILL. Sensors deactivated with $$$KILL will be reactivated on powering up the SCU800, unless the deactivation was previously saved to the EEPROM with the command STSIS.

II **Command:** $$$NKILL ✶56

Reactivation of a single sensor previously deactivated with $$$KILL.

$$$NKILL*n* *n=1...6499* *measuring point*

Only measuring points, which were originally configured with AUTO or KVECTOR can be reactivated. If no sensor is present at this address, the message `SENS.BROKEN` is registered in the message list.

II **Command:** $DLIST ✶71

Deletes all data in all 64 maximum differential temperature tables.

$DLIST

⇨ **Warning:** Data in all tables are deleted!

APPENDIX 1: Translations

English	*German*	*French*	*Dutch*	*Italian*	*Spanish*
SPR3	***SPR1***	***SPR2***	***SPR4***	***SPR5***	***SPR6***
! Stop !	! Stop !	! STOP !	! Stop !	! Stop !	! Stop !
??AUTHORIZATION??	??BERECHTIGUNG??	??AUTORISATION??	??PASWOORD??	??ACCETTAZIONE??	??AUTORIZACION??
??EEPROM??	??EEPROM??	??EEPROM??	??EEPROM??	??EEPROM??	??EEPROM??
??INADMISSIBLE??	??UNZULAESSIG??	??INADMISSIBLE??	??NIET TOEGESTAAN??	??NON POSSIB.??	??INADMISIBLE??
??PARAMETER??	??PARAMETER??	??PARAMETRES??	??PARAMETER??	??PARAMETRO??	??PARAMETERO??
??SYNTAX??	??SYNTAX??	??SYNTAXE??	??SYNTAX??	??SYNTAX??	??SINTAXIS??
ACKNOWLEDGE	RUECKSETZEN	COMD:REMISE	RESETTEN	RIPRISTINO	ACUSE
ALARM! - UT	ALARM! - UT	ALARME! GEL	ALARM! - UT	ALLARME!-UT	ALARMA - TI
CABLEDEFECT	KABELDEFEKT	CABLE DEFEC	KABELDEFECT	CAVO DIFET.	DEFECTO CAB
COLDSTART	KALTSTART	DEM A FROID	KOUDSTART	START A FRE	ARRANQUE
CRC-ERROR	CRC-Fehler	ERREUR CRC	CRC - FOUT	CRC- errore	CRC-Error
FAULT	STOERUNG	DERANGEMENT	STORING	DISTURBO	FALLO
FIRE ! - AT	FEUER! - AT	FEU! T-ABSO	BRAND! - AT	FUOCO! - AT	ALARMA - TA
FIRE ! - DT	FEUER! - DT	FEU! T-DIFF	BRAND! - DT	FUOCO! - DT	ALARMA - DT
HEATING !!	ERHITZUNG!!	ECHAUFFEMNT	TEMP.VERH.!	SURRISCALD!	PREAL. - DT
HostCommErr	Komm.F.Host	HOSTCOMMERR	Laatste ARU rel.	HostCommErr	HostCommErr
Komm.Fehler	Komm.F.M/S	ERREUR COMM	HostCommErr	Comun.Error	Fallo Com.
last ARU-rel	letztes ARU-Rel	DERNIER RELAIS ARU	Laatste ARU rel.	ultimo ARU-REL	ulti.ARU-rel
MAX CYCL	ZYKLMAX	CYCLE MAX	ZYKLMAX	CICLO.MASS.	MAX CICLO
MEASURING	MESSUNG	MESURE	MEETING	MISURAZIONE	MEDIDA
NO ALARM	KEIN ALARM	SANS ALARME	GEEN ALARM	NESS.ALLARM	SIN ALARMA
NO MESSAGE	KEINE MLDG.	SANS ANONCE	GEEN MELD.	NESS.MESSAG	SIN MENSAJE
Power on	Einschalten	ENCLENCHER	Inschakelen	Inserire	ENCENDIDO
REF.PROFILE	REFERENZ-PR	PROFIL REF.	REF-PROFIEL	REFERENZ-PR	PERFIL REF.
RESET	RESET	REMISE	RESET	RESET	REINICIO
ROM DEFECT	ROM defekt	ROM DEFECT	ROM defect	ROM difett.	ROM DEFECT
SENS.BROKEN	SENSORBRUCH	CAPT. CASSE	SENSORBREUK	SENSOR.ROTT	SENS.AVERI.
SwitchedOff	Abschaltung	COUPURE	UITSCHAKEL.	Disattivaz.	APAGADO
TEMPERATURE	TEMPERATUR	TEMPERATURE	TEMPERATUUR	TEMPERATURA	TEMPERATURA
WARNG. - AT	WARNG. - AT	AVERT!TABSO	ALERT - AT	AVVERTIM.AT	PREAL. - TA
WARNG. - UT	WARNG. - UT	AVERT.! GEL	ALERT - UT	AVVERTIM.UT	PREAL. - TI
WD-RESET	WD-RESET	REMISE WD	WD-RESET	WD-RESET	WD-REINICIO

APPENDIX 2: Alphabetical command list

Command	**-Code*	*Description*
	*00pppp	Password command
$$$KILL	*32	Deactivation of a single sensor
$$$NKILL	*56	Reactivation of a single sensor
$DLIST	*71	Delete all data maximum differential temperature tables.
$FLIST	*18	Delete message list.
ABSCHALTEN	*33	Disable measuring point or section (zone).
ARELx	*10	Sets zonal-relay offset.
AUTO	*43	Automatic measuring point detection
AZN	*13	Absolute measuring cycle number
CRESET	*17	Reset and rebuild reference profile
DLIST	*70	Output the maximum differential temperature per alarm section
EINSCHALTEN	*01	Enable measuring point or section (zone)
FLIST	*24	Message list output
FN	*25	Page down in message list
FV	*26	Page up in message list
KABSCHN	*27	Assign measuring points to alarm sections (zones).
KALTSTART	*03	Cold start routine..; *031:Autoseek.; *032: read from EEPROM.
KKONFIG	*19	Display cable and section (zone) configuration
KLIST	*69	List last commands
KONSOLE	*12	Set communication: ASCII / protocol
KVECTOR	*28	Assign measuring point numbers to physical addresses.
LISTA	*30	Cyclic temperature list output
LISTE	*40	Terminates the cyclic temperature list output LISTA.
LISTP	*29	Temperature list output
MREL	*54	Set number of relays present
REL	*49	Test command: set relays
RESET	*04	Software reset
RLSIS	*59	Read system parameters from EEPROM
RUECKSETZEN	*14	Acknowledge (reset) fire- and fault-alarms
SB	*66	Set Baud rate for Master/Slave communication
SD	*67	Software option switch.
SL	*60	Set slave number
SPR	*73	Set language
SRELx	*51	Sets first relay for zonal fault-alarm signalisation.
START	*06	Start of the measuring cycle after configuration by KVECTOR commands.
STSIS	*58	Save system parameters in EEPROM
TARU	*31	Automatic relay test
TEST	*42	Display configured/active measuring points, fault bits
TKRITA	*37	Set maximum threshold for an alarm section.
TKRITC	*39	Set minimum threshold for an alarm section.
TKRITD	*38	Set differential threshold for an alarm section.
TKRITVA	*87	Pre-alarm level maximum threshold

APPENDIX 2: Alphabetical command list

Command	**-Code*	*Description*
TKRITVD	*86	Pre-alarm level differential threshold
TMA	*08	Cyclic temperature display for one measuring point.
TMB	*48	Average temperature for one alarm section.
TME	*09	Terminate cyclic output of the temperature display TMA.
TMST	*07	Display temperature for one measuring point.
VERSION	*46	Display software version
VREL	*50	Sets first relay for zonal pre-alarm signalisation.
ZYKLMAX	*15	Set number of measuring cycles between new reference profiles.
ZYKLUS	*36	Measuring cycle

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