Software description LON bus

Summary

Description of the standard software of the LON modules:

LF-DO4/21

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**

All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 60 s)

DO_1 - 4 Objects

nviValue_1...4 **Format SNVT_switch**
The respective relay is switched on through the variable nviValue_1...4 with a value having a value portion above 0 and a state portion of 1, in all other cases the relay is switched off.

nvoFeedback_1...4 **Format SNVT_switch**
Transmits the feedback value of the object.
If automatic mode ON: 100.0 1
If automatic mode OFF: 0.0 0
If manual mode ON: 100.0 -1
If manual mode OFF: 0.0 -1

nvoManualFb_1...4 **Format SNVT_switch**
Transmits the manual control feedback.
Manual switch on automaic 100.0 1
Manual switch on “0” or “1” 0.0 0

SCPTInvrtOut **Format SNVT_lev_disc**
Inversion of the relay switching states when actuated by nviValue_1...4.
Valid values: ST_ON contact open nviValue_1...4 is set.
ST_OFF contact closed nviValue_1...4 is set.

SCPTdelayTime **Format SNVT_time_sec**

Wiper function. When nviValue_1..4 is set and the preset time is over the relay changes its state. In the manual mode the wiper function is deactivated.

Valid values: 0 wiper function deactivated (factory setting)
1 … 6553 s

BTR Object

nviBTR **Format SNVT_state**

System object for METZ CONNECT LON door installation modules for easy connection with the group indicator module LM1. Is only active if UCPTBTR = ST_ON.

Bit0 ... Bit8 not used

Bit9 with automatic mode in the system = 1
with manual mode in the system = 0

Bit10 = 1 relay 2 activated
= 0 relay 2 deactivated (horn)

Bit11 = 1 relay 1 activated
= 0 relay 1 deactivated (error signal)

Bit12 = 1 relay 3 activated
= 0 relay 3 deactivated (maintenance signal)

Bit13 = 1 relay 4 activated
= 0 relay 4 deactivated (unlocking)

Bit14 not used

Bit15 not used

nvoBTR **Format SNVT_state**

Feedback to nviBTR. The value of nviBTR is passed on.

UCPTBTR **Format SNVT_lev_disc** **UCP_Type_18**

Activation of BTR Object.

UCPTBTR = ST_ON: nviBTR is used.
Relay contact 41-44 is closed for 1 s in case of a Reset. (unlocking)

UCPTBTR = ST_OFF: nviBTR is not used.

LF-TO4

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**
All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 60 s)

SCPTdirection SNVT_state
Shift of operation mode.
SCPTdirection.bit0....3 = 0: channel 1…4 operation mode: switching
SCPTdirection.bit0...3 = 1: channel 1…4 operation mode: clocking

DO_1 - 4 Objects

nviValue_1...4 **Format SNVT_switch**
The respective channels are activated in the switching mode by the variable nviValue_1...4 at a value having a state portion greater than 0 and a state portion of 1; in all other cases the channels are deactivated.

nviPercent_1...4 **Format SNVT_lev_percent**
The ratio of pulses and pauses are changed in the clocking mode by the variable nviPercent_1...4 during the period of time that is set by SCPTdriveTime.
For example SCPTdriveTime = 10 s, nviPercent_1 = 60 %
--> pulse = 6 s / pause = 4 s

nvoFeedback_1...4 **Format SNVT_switch**
Transmits the feedback value of the object.
Automatic mode ON: xxx.x 1
Automatic mode OFF: xxx.x 0
Manual mode ON: 100.0 -1
Manual mode OFF: 0.0 -1

nvoManualFb_1...4 **Format SNVT_switch**
Transmits the manual control feedback.
Manual switch on automatic 100.0 1
Manual switch on “0” or “1” 0.0 0

nvoManualFb_c_1...4 **Format SNVT_count**
Transmits the manual control feedback.
Manual switch on automatic 3
Manual switch on “0” 0
Manual switch on “1” 1

SCPTdriveTime **Format SNVT_time_sec**
Total duration of one period (pulse - pause). The ratio is determined by nviPercent_1..4.
Valid values: 0 function deactivated (factory setting)
1 … 6553 s

SCPTdefScale **Format SNVT_lev_percent**
The outputs are clocked in the here defined ratio proportionally to SCPTdriveTime if the module is in the clocking mode and the switch in position “1”,
SCPTdefScale = 50 %, SCPTdriveTime = 100 s
pulse = 50 s, pause = 50 s (factory setting)

BTR Object

nviBTR **Format SNVT_state**
System object for METZ CONNECT LON door installation modules for easy connection with the group indicator module LM1. Is only active if UCPTBTR = ST_ON.
Bit0 ... Bit8 not used
Bit9 with automatic mode in the system = 1
with manual mode in the system = 0
Bit10 = 1 relay 2 activated
= 0 relay 2 deactivated (horn)
Bit11 = 1 relay 1 activated
= 0 relay 1 deactivated (error signal)
Bit12 = 1 relay 3 activated
= 0 relay 3 deactivated (maintenance signal)
Bit13 = 1 relay 4 activated
= 0 relay 4 deactivated (unlocking)
Bit14 not used
Bit15 not used

nvoBTR **Format SNVT_state**

Feedback to nviBTR. The value of nviBTR is passed on.

UCPTBTR **Format SNVT_lev_disc** **UCP_Type_18**

Activation of the BTR Object.

UCPTBTR = ST_ON:	nviBTR is used. Relay contact 41-44 is closed for 1 s in case of a Reset. (unlocking)
UCPTBTR = ST_OFF:	nviBTR is not used.

LF-DI4 / LF-DI230

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**
All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 60 s)

SCPTminSendTime **Format SNVT_time_sec**
Two successive changes of state will not be issued before the end of the preset minSendTime.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting1 s)

UCPTSendOnDelta **Format SNVT_count** **UCP_Type_15**
The counter reading will only be issued when a preset counter difference to the previously issued value is reached.

UCPTInvert **Format SNVT_state** **UCP_Type_23**
Inversion of the input signals.
UCPTInvert.bit[0...3] = 0 contact closed
nvoDiValue_1...4 is set.
UCPTInvert.bit[0...3] = 1 contact open
nvoDiValue_1...4 is set.

DigitalIn_1 - 4 Objects

nvoDiValue_1...4 **Format SNVT_switch**
Status of the inputs at UCPTInvert = 0
Contact closed nvoDiValue_1...4 = 100.0 1
Contact open nvoDiValue_1...4 = 0.0 0

nvoDiValueCnt_1...4 **Format SNVT_count**
Counter of the positive impulse edges at the input.
Reset value = 65535 1. counted value = 1

Virtual Function Block

nvoIn_state **Format SNVT_state**

Status of inputs.
Assignment:
nvoIn_state.bit0 = input 1…bit3 = input 4

Contact closed	nvoIn_state.bit[0…3] = 1
Contact open	nvoIn_state.bit[0…3] = 0

LF-DI10

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**
All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 60 s)

SCPTminSendTime **Format SNVT_time_sec**
Two successive changes of state will not be issued before the end of the preset minSendTime.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 1 s)

UCPTSendOnDelta **Format SNVT_count** **UCP_Type_15**
The counter reading will only be issued when a preset counter difference to the previously issued value is reached.

UCPTInvert **Format SNVT_state** **UCP_Type_23**
Inversion of input signals.
UCPTInvert.bit[0...9] = 0 contact closed
nvoDiValue_1...10 is set.
UCPTInvert.bit[0...9] = 1 contact open
nvoDiValue_1...10 is set.

DigitalIn_1 - 10 Objects

nvoDiValue_1...10 **Format SNVT_switch**
Status of inputs if UCPTInvert = 0
Contact closed nvoDiValue_1...10 = 100.0 1
Contact open nvoDiValue_1...10 = 0.0 0

nvoDiValueCnt_1...4 **Format SNVT_count**
Counter of the positive impulse edges at the input.
Reset value = 65535 1. counted value = 1

Virtual Function Block

nvoIn_state	**Format SNVT_state**
Status of inputs	
Assignment:	
nvoIn_state.bit0 = input 1…bit9 = input 10	
Contact closed	nvoIn_state.bit[0…9] = 1
Contact open	nvoIn_state.bit[0…9] = 0

LF-SI4

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
Processes system queries, e.g. enabled, disabled, ...

nvoStatus **Format SNVT_obj_status**
Provides the device status.

nvoFileDirectory **Format SNVT_obj_status**
Allows direct read/write access to the memory.

nviTimeSet **Format SNVT_time_stamp**
Allows clock time adjustment.
The module is equipped with a real time clock with a power reserve of 24 hours.

Format:	year/month/day hour:minute:second
Example	2007/3/22 12:7:0

nvoTime **Format SNVT_time_stamp**
This output variable releases the internal time of the device.

Format:	year/month/day hour:minute:second
Example:	2007/3/22 12:7:8

SCPTmaxSendTime **Format SNVT_time_sec**
This configurable attribute defines the maximum period up to the automatic sending of the output network variables (heartbeat).

Format:	0.0 …
Factory setting:	60.0 = 60 s

SCPTminSendTime **Format SNVT_time_sec**
This configurable attribute defines the minimum period for the change of output network variables

Format	0.0
Factory setting:	1.0 =1 s

UtilityMeter_1 - 4 Objects LonMark Profil 2201-10 Utility Meter.

nviHistTime **Format SNVT_time_stamp**

With the indication of this time stamp a value rounded down to the next period is requested that has to be read by the network output variable nvoHistVal. If this value is not available, the value is provided with the next earlier time stamp.
The configuration attribute SCPTtimePeriod defines this period. nvoHistVal restores the standard value after one minute. This is the value of the first day of the previous month at midnight (e.g. 1.3.2007 00:00).
500 values are stored for each channel.

Format: year/month/day
hour:minute:second

Example: 2007/3/22 12:7:0

nvoMeterVal **Format SNVT_reg_val_ts**

The value is edited as per the information contained in SCPTpulseValue and SCPTbaseValue and updated in the network in accordance with the configuration attributes SCPTsndDelta, SCPTmaxSendTime and SCPTminSendTime.

Format: value unit decimal places status
register status time stamp

Example: 0 RVU_KWH 2 0 0 0/0/0 0:0:0
0 = value
RVU_KWH = unit
2 = decimal places
0 = status
- 0 = ok
- 1 = time has changed during period
- 2 = failure in the system or reset
- 4 = voltage breakdown within the period
- 8 = illegal value

0 = register status 0 = inactive 1 = active
0/0/0 0:0:0 = time stamp

Example: 10323 RVU_KWH 2 0 1 2007/3/22 12:37:55
Resulting value = 103.23 kWh

nvoHistVal **Format SNVT_reg_val_ts**

This variable can query either the requested value or the historical standard value. The value is prepared in accordance with the information contained in the variables SCPTpulseValue und SCPTbaseValue.
See also variable nviHistTime.

Format: value unit decimal places status
register status time stamp

Example: 0 RVU_KWH 2 0 0 0/0/0 0:0:0
0 value
RVU_KWH = unit
2 = decimal places
0 = status
0 = ok
1 = time has changed during period
2 = failure in the system or reset
4 = voltage breakdown within the period
8 = illegal value
0 = register status 0 = inactive 1= active
0/0/0 0:0:0 = time stamp

Example: 8323 RVU_KWH 2 0 1 2007/3/2212:28:0

SCPTlocation **Format SNVT_str_asc**

Allows indication of an identifier with 30 characters.

SCPTnumDigits **Format unsigned short**

Provides the number of digits of the meter. This attribute keeps the indication the same even in case of an overrun of the meter.

Format: 0
Preset value: 7, Example: 12345,67

The meter readout is reset to zero in case of changes.

ConstSCPTobjMajVer **Format unsigned short**

This number is increased by one if the network interface of the functional block changes.

Preset value: 2

ConstSCPTobjMinVer **Format unsigned short**

This number is increased by one if the network interface remains unchanged but the functional block shows a different behavior.

Preset value: 1

SCPTpulseValue **Format SNVT_mul_div**
Is needed to prepare a pulse value in a meter readout.
Format: Multiplier Divisor
Preset value: 1 1
NvoMeterVal = (""number of pulses" * "multiplier" * 10^"nr_decimals") / "Divisor"
Example: 1 100 -->33 * 1 * 10^2 / 100 = 33
The meter readout is reset to zero in case of changes.

SCPTbaseValue **Format SNVT_reg_val**
Regulates an initial meter readout.
Format: Value unit decimal places
Example: 123 RVU_KWH 2
123: numerical value of the initial meter readout
RVU_KWH: unit kWh
2: decimal places
Resulting initial meter readout: 1.23 kWh.
Unit and decimal places have to comply with the unit and decimal places of the variable SCPTsndDelta otherwise no values are issued! The meter readout is reset to zero in case of changes

SCPTinvrtOut **Format SNVT_lev_disc**
Defines the active edge for metering.
Format: ON/OFF
ST_OFF: no inversion High ->Low
ST_ON: inversion activated Low -> High
Preset value = ST_OFF

nvoMeterVal::SCPTsndDelta **Format SNVT_reg_val_ts**
nvoMeterVal is only updated when the delta value in the network is reached.
Format: 0 RVU_KWH 2 0 0 0/0/0 0:0:0
Preset value = 0 RVU_KWH 2 0 0 0/0/0 0:0:0
0: = Delta (default = 0 no automatic updating)
RVU_KWH: = unit
2: = decimal places
The other fields are not used (status, time stamp).
Unit and decimal places have to comply with unit and decimal places of the variable SCPTbaseValue otherwise no values are issued!

nvoMeterVal::SCPTinvrtOut Format SNVT_reg_val_ts

Allows a one-man setting-up operation of the module in connection with the channel push-button.
If the variable is set on ST_ON, the push-button to the respective channel is activated and the meter readout is not deleted when the variables SCPTpulseValue, SCPTbaseValue, SCPTnumDigits are changed.
Process of the one-man setting-up operation:

- setting of nvoMeterVal.SCPTinvrtOut = ST_ON
- press push-button and wait until the LED flashes three times
- release push-button
- write down the initial meter readout
- set the configuration variables of the LF-SI4 and the initial meter readout

Format:	ON/OFF
nvoMeterVal::SCPTinvrtOut =	ST_OFF behaviour in compliance to utility meter ST_ON: one-man setting-up operation activated Preset value: ST_OFF

nvoHistVal::SCPTtimePeriod Format structure SCP_Type_291

Defines the period, after which the data can be written to memory for history queries by nviHistVal.

Format:	Interval, value	
	Possible interval unit:	IOM_MINUTE IOM_HOUR IOM_DAY IOM_WEEK IOM_MONTH
	Value range: 1…255	
	Preset value: IOM_MONTH 1	

LF-DIO4/2

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**
All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 60 s)

DigitalIn Object

nvoIn_switch1...4 **Format SNVT_switch**
State of inputs. The output variables are issued after a change of the input state, at the end of the preset time for a forced update (SCPTmaxSendTime) or after a module reset.
Contact closed nvoIn_switch1...4 = 100.0 1
Contact open nvoIn_switch1...4 = 0.0 0

nvoIn_state **Format SNVT_state**
State of all inputs. The output variable is issued after a change of the input state, at the end of the preset time for a forced update (SCPTmaxSendTime) or after a module reset.
Assignment:
nvoIn_state.bit0 = input 1 … nvoIn_state.bit3 = input 4
Contact closed nvoIn_state.bit[0...3] = 1
Contact open nvoIn_state.bit[0...3] = 0

SCPTminSendTime **Format SNVT_time_sec**
Two successive changes of state will not be issued before the end of the preset minSendTime.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 1 s)

SCPTInvrtOut **Format SNVT_lev_disc**
Inversion of the input signals.
SCPTInvrtOut = ST_ON input contact open
nvoIn_switch und nvoIn_state = is set
SCPTInvrtOut = ST_OFF input contact closed
nvoIn_switch und nvoIn_state = is set

R1...2 Object

nviValue1...2 **Format SNVT_switch**
Switching of the outputs
nviValue1…2 = 100.0 1 relay activated
nviValue1...2 = 0.0 0 relay deactivated

nvoFeedback1..2 **Format SNVT_switch**
The output variables are issued after a change of the relay state.
nvoFeedback1...2 = 100.0 1 relay activated
nvoFeedback1…2 = 0.0 0 relay deactivated

nvoManualFb1..2 **Format SNVT_switch**
Feedback of manual mode
nvoManualFb1...2 = 100.0 1 manual switch on automatic
nvoManualFb1...2 = 0.0 0 manual switch on “1” or “0”

nvoManualFb1..2_c **Format SNVT_count**
Switch position.
nvoManualFb1...2_c = 0 position 0
nvoManualFb1...2_c = 1 position 1
nvoManualFb1...2_c = 3 automatic

SCPTdelayTime **Format SNVT_time_sec**
Wiper function. With a preset time and nviValue1..2 = 100.0 1 the respective relay releases automatically. It is only reactivated if nviValue1..2 is set from 0.0 0 to 100.0 1. The wiper function is deactivated during manual operation.
Valid values: 0 wiper function deactivated (factory setting)
1 ... 6553 s

LF-DM4/4

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**
All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 60 s)

DigitalIn Object

nvoIn_switch1...4 **Format SNVT_switch**
State of inputs. The output variables are issued after a change of the input state, at the end of the preset time for a forced update (SCPTmaxSendTime) or after a module reset.
Contact closed nvoIn_switch1...4 = 100.0 1
Contact open nvoIn_switch1...4 = 0.0 0

nvoIn_state **Format SNVT_state**
State of all inputs. The output variable is issued after a change of the input state, at the end of the preset time for a forced update (SCPTmaxSendTime) or after a module reset.
Assignment:
nvoIn_state.bit0 = input 1 … nvoIn_state.bit3 = input 4
Contact closed nvoIn_state.bit[0…3] = 1
Contact open nvoIn_state.bit[0...3] = 0

SCPTminSendTime **Format SNVT_time_sec**
Two successive changes of state will not be issued before the end of the preset minSendTime.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 1 s)

SCPTInvrtOut **Format SNVT_lev_disc**
Inversion of input signals
SCPTInvrtOut = ST_ON input contact open
nvoIn_switch und nvoIn_state = is set
SCPTInvrtOut = ST_OFF input contact closed
nvoIn_switch und nvoIn_state = is set

Relay Object

nviValue1…2 **Format SNVT_switch**
Switching of the outputs
nviValue1…2 = 100.0 1 relay activated
nviValue1…2 = 0.0 0 relay deactivated

nvoFeedback1..2 **Format SNVT_switch**
The output variables are issued after a change of the relay state.
nvoFeedback1…2 = 100.0 1 relay activated
nvoFeedback1…2 = 0.0 0 relay decativated

SCPTdelayTime **Format SNVT_time_sec**
Wiper function. With a preset time and nviValue1..2 = 100.0 1 the respective relay releases automatically. It is only reactivated if nviValue1..2 is set from 0.0 0 to 100.0 1. The wiper function is deactivated during manual operation.
Valid values: 0 wiper function deactivated (factory setting)
1 .. 6553 s

DigitalOut Object

nviDOut1…2 **Format SNVT_switch**
Switching of the outputs
nviDOut1…2 = 100.0 1 digital output activated
nviDOut1…2 = 0.0 0 digital output deactivated

nvoFeedback1..2 **Format SNVT_switch**
The output variables are issued after a change of the states of the digital outputs.
nvoDOut1…2 = 100.0 1 digital output activated
nvoDOut1…2 = 0.0 0 digital output deactivated

SCPTdelayTime **Format SNVT_time_sec**
Wiper function. With a preset time and nviValue1..2 = 100.0 1 the respective relay releases automatically. It is only reactivated if nviValue1..2 is set from 0.0 0 to 100.0 1. The wiper function is deactivated during manual operation
Valid values: 0 wiper function deactivated (factory setting)
1 ... 6553 s

LF-TP

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest	**Format SNVT_obj_request**
nvoStatus	**Format SNVT_obj_status**
nvoFileDirectory	**Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**

All output variables described below are issued after a preset period of time even without a change of status.

Valid values:	0 timer function deactivated
	1 … 6553 s (factory setting 60 s)

DigitalIn Object

nvoIn_switch1…6	**Format SNVT_switch**
State of inputs	
Contact closed	nvoIn_switch1…6 = 100.0 1
Contact open	nvoIn_switch1…6 = 0.0 0

nvoIn_state	**Format SNVT_state**
State of inputs	
Assignment	nvoIn_state.bit0 = input 1
	…
	nvoIn_state.bit5 = input 6
Contact closed	nvoIn_state.bit0…5 = 1
Contact open	nvoIn_state.bit0...5 = 0

SCPTdirection	**Format SNVT_state**
Inversion of input signal	
SCPTdirection.bit0...5 = 0	input contact closed;
	nvoIn_switch bzw. nvoIn_state = is set
SCPTdirection.bit0...5 = 1	input contact open;
	nvoIn_switch bzw. nvoIn_state = is set

Channel1 Object

nviOutput1ST1...2 **Format SNVT_switch**
Switching of the outputs

nviOutput1ST1 = x 1	relay contact 11-14 closed
nviOutput1ST2 = x 1	relay contact 11-24 closed
nviOutput1ST1 = x 0	relay contact 11-14 open
nviOutput1ST2 = x 0	relay contact 11-24 open

nviOutput1c **Format SNVT_count**

nviOutput1c = 0	relay contact 11-14-24 open
nviOutput1c = 1	relay contact 11-14 closed
nviOutput1c = 2	relay contact 11-24 closed

nvoOutput1ST1...2Fb **Format SNVT_switch**
State signal of the relays

nvoOutput1ST1Fb = 0.0 0	relay contact 11-14 open
nvoOutput1ST1Fb = 100.0 1	relay contact 11-14 closed
nvoOutput1ST2Fb = 0.0 0	relay contact 11-24 open
nvoOutput1ST2Fb = 100.0 1	relay contact 11-24 closed

nvoOutput1c **Format SNVT_count**
Feedback of nviOutput1c

nvoManualFb1 **Format SNVT_switch**
Feedback of manual mode

nvoManualFb1 = 100,0 1	Manual switch on automatic
nvoManualFb1 = 0,0 0	Manual switch on manual control

nvoManualFb1c **Format SNVT_count**
The values reflect the current switch position.

nvoManualFb1c = 0	position 0
nvoManualFb1c = 1	position 1
nvoManualFb1c = 2	position 2
nvoManualFb1c = 3	position automatic

UCPTModus **Format SNVT_count** **UCP_Type_24**
Order of switch positions

UCPTModus = 0	order 0 - 1 - 2 (factory setting)
UCPTModus = 1	order 1 - 0 - 2

Channel2 Object

nviOutput2ST1…2 **Format SNVT_switch**
Switching of the outputs

nviOutput2ST1 = x 1	relay contact 31-34 closed
nviOutput2ST2 = x 1	relay contact 31-44 closed
nviOutput2ST1 = x 0	relay contact 31-34 open
nviOutput2ST2 = x 0	relay contact 31-44 open

nviOutput2c **Format SNVT_count**

nviOutput2c = 0	relay contact 31-34-44 open
nviOutput2c = 1	relay contact 31-34 closed
nviOutput2c = 2	relay contact 31-44 closed

nvoOutput2ST1...2Fb **Format SNVT_switch**
Signal of relay states

nvoOutput2ST1Fb = 0.0 0	relay contact 31-34 open
nvoOutput2ST1Fb = 100.0 1	relay contact 31-34 closed
nvoOutput2ST2Fb = 0.0 0	relay contact 31-44 open
nvoOutput2ST2Fb = 100.0 1	relay contact 31-44 closed

nvoOutput2c **Format SNVT_count**
Feedback of nviOutput2c

nvoManualFb2 **Format SNVT_switch**
Feedback of manual mode

nvoManualFb2 = 100.0 1	manual switch on automatic
nvoManualFb2 = 0.0 0	manual switch on manual control

nvoManualFb2c **Format SNVT_count**
The values reflect the current switch position.

nvoManualFb2c = 0	position 0
nvoManualFb2c = 1	position 1
nvoManualFb2c = 2	position 2
nvoManualFb2c = 3	position automatic

UCPTModus **Format SNVT_count** **UCP_Type_24**
Order of switch positions

UCPTModus = 0	order 0 - 1 - 2 (factory setting)
UCPTModus = 1	order 1 - 0 - 2

DigitalOut Object:

nviDOut1...2	**Format SNVT_switch**
Switching of digital outputs	
nviDOut1...2 = x 1	pair of contacts S1-S1 or S2-S2 closed
nviDOut1...2 = x 0	pair of contacts S1-S1 or S2-S2 open

nvoDOut1..2Fb	**Format SNVT_switch**
State signal of the digital outputs	
nviDOut1...2 = x 1	pair of contacts S1-S1 or S2-S2 closed
nviDOut1…2 = x 0	pair of contacts S1-S1 or S2-S2 open

LF-AOP4 / LF-AO4-IP

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**
All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 60 s)

UOut1…4 Objects

nviAnalog_1...4 **Format SNVT_lev_percent**
Voltages are issued at the outputs according to the variables.
nviAnalog_1...4 = 0...100 % --> output 1...4 = 0...10 VDC

nviOutput_1…4 **Format SNVT_switch**
Voltages are issued at the outputs according to the value portion of the variables. The state portion is overriden.
nviOutput_1...4 = 0...100 % x --> output 1...4 = 0…10 VDC

The input variables described above are equal. The output supplies the last received value. Therefore it is necessary to work without Heartbeat when using both input variables.

nviFixedValue_1...4 **Format SNVT_switch**
Overrides the outputs to the percentages that are preset in SCPTmaxSetPoint. Only the state portion is evaluated.
nviFixedValue_1...4 = x.x (-)1 --> output1...4 = SCPTmaxSetpoint
nviFixedValue_1...4 = x.x 0 --> output1...4 = nviAnalog_1...4 or nviOutput_1...4

nvoFeedback_1...4 **Format SNVT_switch**
Transmits the feedback value of the object. The value portion transmits the value of nviAnalog_1...4 or the value portion of nviOutput. The state portion transmits the operation mode:
Automatic: x% 1
Manual: x% -1

nvoManualFb_1...4 **Format SNVT_switch**
Transmits feedback of manual mode
Potentiometer on left stop = automatic 100.0 1
Potentiometer not on left stop = manual 0.0 0

nviAnalog::SCPTmaxSetpoint **Format SNVT_lev_percent**
Upper range limit of the output in percent. When entering 85 % for example and a value of 100 % in the input variable, the output adopts a voltage of 8.5 V
Valid values: 0...100 % (factory setting 100)

nviAnalog::SCPTminSetpoint **Format SNVT_lev_percent**
Lower range limit of the output in percent. When entering 15 % for example and a value of 100 % in the input variable, the output adopts a voltage of 1.5 V. The total range results of both settings. With maxSetpoint = 85 and minSetpoint = 15 and an input value between 0 to 100 % a voltage between 1.5 to 8.5 results at the output
Valid values: 0...100 % (factory setting 0)

nviFixedValue::SCPTmaxSetpoint **Format SNVT_lev_percent**
Preset percentage when using FixedValue_1...4.
Valid values: 0...100 % (factory setting 100)

BTR Object

nviBTR **Format SNVT_state**
System object for METZ CONNECT LON door installation modules for easy connection with the group indicator module LM1.

nvoBTR **Format SNVT_state**
Feedback to nviBTR. Bit 9 changes from 1 to 0 if the module is in manual mode, otherwise the value of nviBTR transmitted.

LF-AI8

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**
All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 Timer function deactivated
1 … 6553 s (Factory setting 60 s)

UCPTHyst **Format SNVT_temp_p** **UCP_Type_4**
Setting of the hysteresis; the output variables nvoHigh and nvoLow change over when this hysteresis is expired (factory setting 2 Kelvin).

Temp1…8 Objects

nvoTemp_1...8 **Format SNVT_temp**
The output variable supplies a value with format °C depending on the input signal of 0 to 10.0 V and the settings in UCPTTempHigh and UCPTTempLow or depending on the selected temperature sensor.

nvoTempp_1...8 **Format SNVT_temp_p**
See Temp_1...8 but with format 0.01 K.

nvoPercent_1...8 **Format SNVT_lev_percent**
The output variable supplies a value with format 0 to 100.0 % depending on the input signal of 0 to 10.0 volt.

nvoVoltage_1...8 **Format SNVT_volt_f**
The output variable supplies a value with format 0 to 10.0 volt depending on the input signal.

nvoResistance_1...8 **Format SNVT_res_f**
The output variable supplies a value with format Ohm depending on the input signal between 40 Ohm and 4 MOhm

nvoHigh_1...8 **Format SNVT_switch**
When exceeding the temperature set in UCPTHighT, the output variable changes from 0.0 0 to 100.0 1. When under-running the temperature set in UCPTHighT plus the hysteresis set in UCPTHyst, the output variable changes from 100.0 1 to 0.0 0.

nvoLow_1...8 **Format SNVT_switch**
When under-running the temperature set in UCPTLowT, the output variable changes from 0.0 0 to 100.0 1. When exceeding the temperature set in UCPTLowT plus the hysteresis set in UCPTHyst, the output variable changes from 100.0 1 to 0.0 0.

UCPTTemp_Offset **Format SNVT_temp** **UCP_Type_17**
The output variable can be readjusted in steps of 0.1 K.

UCPTSensor_tab **Format structure** **UCP_Type_10**
Chart to define the input characteristic. The first 10 values are the temperatures in ascending order where the sensor has its operating range. The following 10 values are the corresponding resistance values. Then follows a 30 space place holder for the sensor name and at the end the switch ST_ON for resistance measuring and ST_OFF for voltage measuring.
Factory setting: 0 to 10 Volt

UCPTTempMax **Format SNVT_temp** **UCP_Type_6**
Factory setting: +150 °C

UCPTTempMin **Format SNVT_temp** **UCP_Type_5**
Factory setting: - 50 °C
The temperature output variables are calculated according to an input signal of 0 to 10 V and the here selected range

UCPTHighT **Format SNVT_temp** **UCP_Type_7**
Factory setting: +100 °C

UCPTLowT **Format SNVT_temp** **UCP_Type_8**
Factory setting: - 10 °C
Setting of the thresholds to make the switch variables change over.

SCPTinvrtOut **Format SNVT_lev_disc**
Inversion of the values at nvoHigh and nvoLow.

SCPTminSendTime **Format SNVT_time_sec**
In case of changes of state the input states are only issued at the end of the preset period of time.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 1 s)

SCPTminDeltaTemp **Format SNVT_temp_p**
The output variables are only issued after a preset temperature difference (factory setting 0.5 Kelvin).

LF-CI4

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**
All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 60 s)

CurrentIn1…4 Objects

nvoI_1…4 **Format SNVT_lev_percent**
Currents in the range of 0 to 20 mA or 4 to 20 mA are measured at the inputs and issued to the LON bus.

nvoWire_break_1….4 **Format SNVT_switch**
If current is below 2 mA the output variable changes from 0.0 0 to 100.0 1, to 100.0 1 in the range 4 to 20 mA.

nvoAlarm_1…4 **Format SNVT switch**
The output variable changes from 0.0 0 to 100.0 1, if the value set in SCPTmaxSetpoint is exceeded.

SCPTsndDelta **Format SNVT_lev_percent**
The output variable is only issued if the preset difference is either overrun or underrun.
Factory setting: 0 %

SCPTminSendTime **Format SNVT_time_sec**
Fixed interval between two current values
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 1 s)

UCPTMode **Format SNVT_switch** **UCP_Type_22**
Changes from the range 0 to 20 mA to the range 4 to 20 mA.
Settings:
0.0 0 measuring range 0 to 20 mA
100.0 1 measuring range 4 to 20 mA (factory setting)

SCPTmaxSetpoint **Format SNVT_lev_percent**
Threshold to switch nvoAlarm
Factory setting: 100 %

VoltageIn1…4 Objects

nvoV_1...4 **Format SNVT_lev_percent**
Voltages in the range of 0 to 10.0 volt DC are measured at the inputs and issued to the LON bus.

nvoAlarm_1...4 **Format SNVT switch**
The output variable changes from 0.0 0 to 100.0 1, if the value set in SCPTmaxSetpoint is exceeded.

SCPTsndDelta **Format SNVT_lev_percent**
The output variable is only issued if the preset difference is either overrun or underrun.
Factory setting: 0 %

SCPTminSendTime **Format SNVT_time_sec**
Fixed interval between two voltage values.
Valid values 0 timer function deactivated
1 … 6553 s (factory setting 1 s)

SCPTmaxSetpoint **Format SNVT_lev_percent**
Threshold to switch nvoAlarm
Factory setting: 100 %

LF-AM2/4

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**
All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 60 s)

DigitalOut Object

nviDOut1...2 **Format SNVT_switch**
Switching of the outputs
nviDOut1…2 = 100.0 1 digital output activated
nviDOut1…2 = 0.0 0 digital output deactivated

nvoFeedback1..2 **Format SNVT_switch**
The output variables are issued after a change of state of the digital outputs.
nvoDOut1...2 = 100.0 1 digital output activated
nvoDOut1…2 = 0.0 0 digital output deactivated

AnalogOut Object:

nviAOut1…2 **Format SNVT_lev_percent**
Voltages according to the variables are issued at the outputs.
nviAOut1…2 = 0..100 % --> 0..10 V DC

nviAOutFixed1..2 **Format SNVT_switch**
Switching of the outputs on preset voltage values.
nviAOutFixed1...2 = 100.0 1 --> output[1...2] = SCPTmaxSetpoint
nviAOutFixed1…2 = 0.0 0 --> output[1...2] = nviAOut1…2

SCPTmaxSetpoint **Format SNVT_lev_percent**
Preset value for nviAOutFixed1...2.
If a value is entered in SCPTmaxSetpoint and if nviAOut[1...2] exceeds this value, the digital output is activated. If nviAOut[1...2] underruns this value, the digital output turns off with a hysteresis of 5 %.
If SCPTmaxSetpoint = 0 the digital output [1..2] responds only to nviDOut[1..2].
Valid values: 0 ... 100 % (factory setting 0 %)

AnalogIn Object

nvoAIn1…2 **Format SNVT_lev_percent**
Voltages between 0 and 10.0 volt DC are measured at the inputs and issued to the LON bus.

SCPTsndDelta **Format SNVT_lev_percent**
The voltage values are only transmitted when a defined voltage change is overriden or underrun.
Example: SCPTsndDelta = 5 %
Transmission takes place after a change of 0.5 volt.
Valid values: 0 ... 100 % (factory setting 0 %)

SCPTminSendTime **Format SNVT_time_sec**
Assured transmission pause between two voltage values.
Valid values: 0 timer function deactivated …
1 ... 6553 timer times in seconds (factory setting 1 s)

LF-TI-IP

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**
nvoFileDirectory **Format SNVT_address**

SCPTmaxSendTime **Format SNVT_time_sec**
All output variables described below are issued after a preset period of time even without a change of status.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 60 s)

SCPTdirection SNVT_state
Change of operation mode of the Triac outputs.
SCPTdirection.bit0...3 = 0: channel 1...4 operation mode: switching
SCPTdirection.bit0...3 = 1: channel 1...4 operation mode: clocking

UI1_4 Objects

nvoTemp_1...4 **Format SNVT_temp**
The output variable supplies a value with format °C depending on the input signal between 0 to 10.0 V and the settings in UCPTTempHigh and UCPTTempLow or depending on the selected temperature sensor.

nvoTempp_1...4 **Format SNVT_temp_p**
See Temp_1...4 but with format 0.01 K.

nvoPercent_1...4 **Format SNVT_lev_percent**
The output variable supplies a value with format 0 to 100.0 % depending on the input signal between 0 to 10.0 volt.

nvoVoltage_1...4 **Format SNVT_volt_f**
The output variable supplies a value with format 0 to 10.0 volt depending on the input signal.

nvoResistance_1...4 **Format SNVT_res_f**
The output variable supplies a value with format Ohm depending on the input signal from 40 Ohm to 4 MOhm.

nvoHigh_1...4 **Format SNVT_switch**
When exceeding the temperature set in UCPTHighT, the output variable changes from 0.0 0 to 100.0 1. When under-running the temperature set in UCPTHighT plus the hysteresis set in UCPTHyst, the output variable changes from 100.0 1 to 0.0 0.

nvoLow_1...4 **Format SNVT_switch**
When under-running the temperature set in UCPTLowT, the output variable changes from 0.0 0 to 100.0 1. When exceeding the temperature set in UCPTLowT plus the hysteresis set in UCPTHyst the output variable changes from 100.0 1 to 0.0 0.

UCPTTemp_Offset **Format SNVT_temp** **UCP_Type_17**
The output variable can be readjusted in steps of 0.1 K.

UCPTSensor_tab **Format structure** **UCP_Type_10**
Chart to define the input characteristic. The first 10 values are the temperatures in ascending order where the sensor has its operating range. The following 10 values are the corresponding resistance values. Then follows a 30 space place holder for the sensor name and at the end the switch ST_ON for resistance measuring and ST_OFF for voltage measuring.
Factory setting: temperature sensor NTC20k

UCPTTempMax **Format SNVT_temp** **UCP_Type_6**
Factory setting: +150 °C

UCPTTempMin **Format SNVT_temp** **UCP_Type_5**
Factory setting: - 50 °C
The temperature output variables are calculated according to an input signal between 0 and 10 Volt and the range set here. .

UCPTHighT **Format SNVT_temp** **UCP_Type_7**
Factory setting: +100 °C

UCPTLowT **Format SNVT_temp** **UCP_Type_8**
Factory setting: - 10 °C
Settings of the thresholds to switch the switch variables.

SCPTinvrtOut **Format SNVT_lev_disc**
Inversion of the values at nvoHigh and nvoLow.

SCPTminSendTime **Format SNVT_time_sec**
In case of changes in state the input states are only issued at the end of the preset period of time.
Valid values: 0 timer function deactivated
1 … 6553 s (factory setting 1 s)

SCPTminDeltaTemp **Format SNVT_temp_p**
The output variables are only issued after a preset temperature difference (factory setting 0.5 Kelvin).

UCPTHyst **Format SNVT_temp_p** **UCP_Type_4**
Setting of the hysteresis after which the output nvoHigh and nvoLow switch over (factory setting 2 Kelvin).

DO1_4 Objects:

nviValue_1...4 **Format SNVT_switch**
The respective channels are activated in the switching mode by the variable nviValue_1...4 at a value having a value portion greater than 0 and a state portion of 1; in all other cases the channels are deactivated.

nviPercent_1...4 **Format SNVT_lev_percent**
In the "clocking" mode the pulse/pause ratio are changed by variables nviPercent_1...4 during the time period that is set in SCPTdriveTime.
Example SCPTdriveTime = 10 s, nviPercent_1 = 60 %
--> pulse = 6 s / pause = 4 s

nvoFeedback_1...4 **Format SNVT_switch**
Transmits the feedback value of the object.
Automatic mode ON: xxx.x 1
Automatic mode OFF: xxx.x 0
Manual mode ON: 100.0 -1
Manual mode OFF: 0.0 -1

SCPTdriveTime **Format SNVT_time_sec**
Total duration of one period (pulse - pause). The ratio is defined by nviPercent_1..4.
Valid values: 0 function deactivated (factory setting)
1 … 6553 s

LM1

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**

LED Object

nviLED[0...3] **Format SNVT_switch**
Switching-on of LEDs
nviLED[0...3] = 0.0 0 The LEDs adopt the states defined in nciLEDaus[0...3].
nviLED[0...3] = 100.0 1 The LEDs adopt the states defined in nciLEDan[0...3].

nvoLEDFb[0...3] **Format SNVT_switch**
Feedback to nviLED[0...3]
The value of nviLED[0...3] is passed on.
nvoLED[1...3] of the group indicator module are set to 100.0 1 in case of maintenance, error or manual operation signals.

Meldung Objekt (Signal Object)

nvoWartung **Format SNVT_switch**
If nviBTR.bit12 signals a maintenance signal in the system, nvoWartung adopts the value 100.0 1, to switch a relay for example. When the maintenance signal is no longer present and has been acknowledged the value changes to 0.0 0.

nvoStoerung **Format SNVT_switch**
If nviBTR.bit11 signals an error signal in the system, nvoStoerung adopts the value 100.0 1. If the error signal is no longer present, has been acknowledged and unlocked, the value changes to 0.0 0.

nvoHupe **Format SNVT_switch**
If nviBTR.bit10 signals an error signal in the system, nvoHupe adopts the value 100.0 1. After acknowledgement this value changes to 0.0 0.

nvoHand **Format SNVT_switch**
If nviBTR.bit9 signals a manual operation signal in the system nvoHand adopts the value 100.0 1. When the manual operation signal is no longer present the value changes to 0.0 0.

nvoWischer **Format SNVT_switch**

If the unlocking button is pressed nvoWischer adopts the value 100.0 1 for 5 seconds and then changes back to 0.0 0.

Taster Objekt (Button Object

nviTast[1...3] **Format SNVT_switch**

At the group indicator module nviTast1 can be used externally for acknowledgement, nviTast2 for unlocking and nviTast3 for lamp testing

nviTast1 = 100.0 1	nvoBTR.bit14 changes to 1
nviTast2 = 100.0 1	nvoBTR.bit13 changes to 1
nviTast3 = 100.0 1	nvoBTR.bit15 changes to 1

nvoTast[1...3] **Format SNVT_switch**

Feedback to nviTast[1...3].
The value of nviTast[1...3] is passed on or nvoTast[1...3] adopts the value 100.0 1 when pressing the respective button.

BTR Object

nviBTR **Format SNVT_state**

System object for METZ CONNECT LON door installation modules for easy connection with the group indicator module LM1.

Bit0 ... Bit8	not used
Bit9	with automatic mode in the system = 1 with manual mode in the system = 0
Bit10	new error signal in the system = 1 no or acknowledged error in the system = 0
Bit11	new error signal in the system = 1 no or unlocked error in the system = 0
Bit12	maintenance signal in the system = 1 no or acknowledged maintenance in the system = 0
Bit13	unlocking signal of LM1 is set to 1 by the unlocking button
Bit14	acknowledgement signal of LM1 is set to 1 by the acknowledgement button
Bit15	lamp test request of LM1 is set to 1 by the lamp test button

nvoBTR **Format SNVT_state**

Feedback to nviBTR. The value of nviBTR is passed on.
If a LED, that is defined as maintenance signal (yellow LED requiring acknowledgement) is set with nviLED[x], nvoBTR Bit12 changes to 1.
If a LED, that is defined as error signal (flashing red LED requiring acknowledgment and unlocking) is set with nviLED[x], nvoBTR Bit10 and Bit11 change to 1.

Configuration variables

nciLEDan[0...3] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...3] = 100.0 1.
Valid values: nciLEDan[0...3].value = a + b + c + d
nciLEDan[0...3].state = 0

a - color	b - flashing	c - acknowledge	d - unlock
0,5 red	0 = no	0 = no	0 = no
1 yellow	4 = yes	16 = yes	32 = yes
1.5 green			

nciLEDaus[0...3] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...3] = 0.0 0.
Valid values: see nciLEDan[0...3]
Example LED OFF nciLEDaus[0...3] = 0.0 0

Factory settings for nciLEDan[0...3] and nciLEDaus[0...3] are 0.0 0.
With this, the module is configured as BTR group indicator module.

nciMinSendTime **Format SNVT_count**

All output variables nvo described above, except nvoWischer, are issued after a preset period of time even without a change of status. This causes the module to report periodically to the system.
Valid values: 0 timer function deactivated (factory setting)
1 ... 60 timer time in seconds

LM2

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**

LED Object

nviLED[0...9] **Format SNVT_switch**
Switching-on of the LEDs.
nviLED[0...9] = 0.0 0 The LEDs adopt the states defined in nciLEDaus[0...9].
nviLED[0...9] = 100.0 1 The LEDs adopt the states defined in nciLEDan[0...9].

nvoLED[0...9] **Format SNVT_switch**
Feedback to nviLED[0...9]. The value of nviLED[0...9] is passed on.

nviLEDs **Format SNVT_state**
Switching-on of the LEDs.
nviLEDs.Bit0...9 = 0 The LEDs adopt the states defined in nciLEDaus[0...9].
nviLEDs.Bit0...9 = 1 The LEDs adopt the states defined in nciLEDan[0...9].

nvoLEDs **Format SNVT_state**
Feedback to nviLEDs. The value of nviLEDs is passed on.

Extern Object

nviEM **Format SNVT_switch**
Unlocking signal.
If nviEM adopts the value 100.0 1, the LM2 is unlocked and nvoBTR.Bit13 is set.

nviQM **Format SNVT_switch**
Acknowledgement signal.
If nviQM adopts the value 100.0 1, the LM2 is acknowledged and nvoBTR.Bit14 is set.

nviLT **Format SNVT_switch**
Lamp test.
If nviLT adopts the value 100.0 1, a lamp test is done at the LM2 and nvoBTR.Bit15 is set.

BTR Object

nviBTR **Format SNVT_state**

System object for METZ CONNECT LON door installation modules for easy connection with the group indicator module LM1.

Bit0 ... Bit8	not used
Bit9	with automatic mode in the system = 1 with manual mode in the system = 0
Bit10	new error signal in the system = 1 no or acknowledged error in the system = 0
Bit11	new error signal in the system = 1 no or unlocked error in the system = 0
Bit12	maintenance signal in the system = 1 no or acknowledged maintenance in the system = 0
Bit13	unlocking signal of LM1 is set to 1 by the unlocking button
Bit14	acknowledgement signal of LM1 is set to 1 by the acknowledgement button
Bit15	lamp test request of LM1 is set to 1 by the lamp test button

nvoBTR **Format SNVT_state**

Feedback to nviBTR. The value of nviBTR is passed on.
If a LED, that is defined as maintenance signal (yellow LED requiring acknowledgement) is set with nviLED[x], nvoBTR Bit12 changes to 1.
If a LED, that is defined as error signal (flashing red LED requiring acknowledgment and unlocking) is set with nviLED[x], nvoBTR Bit10 and Bit11 change to 1.

Configuration variables

nciLEDan[0...9] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...9] = 100.0 1.

Valid values: nciLEDan[0...9].value = a + b + c + d
nciLEDan[0...9].state = 0

a - color	b - flashing	c - acknowledge	d - unlock
0,5 red	0 = no	0 = no	0 = no
1 yellow	4 = yes	16 = yes	32 = yes
1.5 green			

(Factory setting 52.5: LED red, flashing, to acknowledge and to unlock if nviLEDx is set)

nciLEDaus[0...9] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...9] = 0.0 0.

Valid values: see nciLEDan[0...9]
nciLEDaus[0...9] = 0.0 0 (factory setting LED OFF)

nciMinSendTime **Format SNVT_count**

All output variables nvo described above, except nvoWischer, are issued after a preset period of time even without a change of status. This causes the module to report periodically to the system.

Valid values: 0 timer function deactivated (factory setting)
1 ... 60 timer time in seconds

LS1

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**

LED Object

nviLED[0...5] **Format SNVT_switch**
Switching-on of the LEDs.
nviLED[0...5] = 0.0 0 The LEDs adopt the states defined in nciLEDaus[0...5].
nviLED[0...5] = 100.0 1 The LEDs adopt the states defined in nciLEDan[0...5].

nvoLED[0...5] **Format SNVT_switch**
Feedback to nviLED[0...5]. Tha value of nviLED[0...5] is passed on.

K1 Object

nviSOben[0....2] **Format SNVT_switch**
(Upper switch)
With switch position automatic (11 o'clock) the input variables nviSOben[0....2] are directly passed to nvoSOben[0....2]. With all other switch positions the nviSOben[0....2] have no effect..

nvoSOben[0...2] **Format SNVT_switch**
With switch position automatic (11 o'clock) the input variables nviSoben[0...2] are directly passed on to nvoSOben[0...2].
In switch position 1 (12 o'clock)
nvoSOben[0] adopts the value 100.0 1
nvoSOben[1] adopts the value 0.0 0
nvoSOben[2] adopts the value 0.0 0
In switch position 2 (1 o'clock)
nvoSOben[0] adopts the value 0.0 0
nvoSOben[1] adopts the value 100.0 1
nvoSOben[2] adopts the value 0.0 0

In switch position 3 (3 o'clock)

nvoSOben[0] adopts the value 0.0 0
nvoSOben[1] adopts the value 0.0 0
nvoSOben[2] adopts the value 100.0 1

nvoHand1 **Format SNVT_switch**
(Manual operation feedback)
In switch position Automatic (11 o'clock) nvoHand1 has the value 100.0 1. In each other position it has the value 0.0 0.

K2 Object

nviSUnten[0...2] **Format SNVT_switch**
(Lower switch)
With switch position Automatic (11 o'clock) the input variables nviSUnten[0...2] are directly passed on to nvoSUnten[0...2]. With each other position the nviSUnten[0...2] have no effect.

nvoSUnten[0...2] **Format SNVT_switch**
In switch position Automatic (11 o'clock) the input variables nviSUnten[0...2] are directly passed on to nvoSUnten[0...2].
In switch position 1 (12 o'clock)

nvoSUnten[0] adopts the value 100.0 1
nvoSUnten[1] adopts the value 0.0 0
nvoSUnten[2] adopts the value 0.0 0

In switch position 2 (1 o'clock)

nvoSUnten[0] adopts the value 0.0 0
nvoSUnten[1] adopts the value 100.0 1
nvoSUnten[2] adopts the value 0.0 0

In switch position 3 (3 o'clock)

nvoSUnten[0] adopts the value 0.0 0
nvoSUnten[1] adopts the value 0.0 0
nvoSUnten[2] adopts the value 100.0 1

nvoHand2 **Format SNVT_switch**
(Manual operation feedback)
In switch position Automatic (11 o'clock) nvoHand2 has the value 100.0 1. In each other position it has the value 0.0 0.

Extern Object

nviEM **Format SNVT_switch**
Unlocking signal.
If nviEM adopts the value 100.0 1, the LS1 is unlocked and nvoBTR.Bit13 is set.

nviQM **Format SNVT_switch**

Acknowledgement signal

If nviQM adopts the value 100.0 1, the LS1 is acknowledged and nvoBTR.Bit14 is set.

nviLT **Format SNVT_switch**

Lamp test

If nviLT adopts the value 100.0 1, a lamp test is done at the LS1 and nvoBTR.Bit15 is set.

BTR Object

nviBTR **Format SNVT_state**

System object for METZ CONNECT LON door installation modules for easy connection with the group indicator module LM1.

Bit0 ... Bit8	not used
Bit9	with automatic mode in the system = 1 with manual mode in the system = 0
Bit10	new error signal in the system = 1 no or acknowledged error in the system = 0
Bit11	new error signal in the system = 1 no or unlocked error in the system = 0
Bit12	maintenance signal in the system = 1 no or acknowledged maintenance in the system = 0
Bit13	unlocking signal of LM1 is set to 1 by the unlocking button
Bit14	acknowledgement signal of LM1 is set to 1 by the acknowledgement button
Bit15	lamp test request of LM1 is set to 1 by the lamp test button

nvoBTR **Format SNVT_state**

Feedback to nviBTR. The value of nviBTR is passed on.

If a LED, that is defined as maintenance signal (yellow LED requiring acknowledgement) is set with nviLED[x], nvoBTR Bit12 changes to 1.

If a LED, that is defined as error signal (flashing red LED requiring acknowledgment and unlocking) is set with nviLED[x], nvoBTR Bit10 and Bit11 change to 1

Configuration variables

nciLEDan[0...5] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...5] = 100.0 1.

Valid values: nciLEDan[0...5].value = a + b + c + d
nciLEDan[0...5].state = 0

a - color	b - flashing	c - acknowledge	d - unlock
0,5 red	0 = no	0 = no	0 = no
1 yellow	4 = yes	16 = yes	32 = yes
1.5 green			

(Factory setting 52.5: LED red, flashing, to acknowledge and to unlock if nviLEDx is set)

nciLEDaus[0...5] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...5] = 0.0 0.

Valid values: see nciLEDan[0...5]
nciLEDaus[0...5] = 0.0 0 (factory setting LED OFF)

nciMinSendTime **Format SNVT_count**

All output variables nvo described above, except nvoWischer, are issued after a preset period of time even without a change of status. This causes the module to report periodically to the system.

Valid values: 0 timer function deactivated (factory setting)
1 ... 60 timer time in seconds

LT1

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**

LED Object

nviLED[0...5] **Format SNVT_switch**
Switching-on of LEDs.
nviLED[0...5] = 0.0 0 The LEDs adopt the states defined in nciLEDaus[0...5].
nviLED[0...5] = 100.0 1 The LEDs adopt the states defined in nciLEDan[0...5].

nvoLED[0...5] **Format SNVT_switch**
Feedback zu nviLED[0...5]. The value of nviLED[0...5] is passed on.

Taster Objekt (Button Object)

nvoTaster[1...2] **Format SNVT_switch**
nvoTaster[1...2] is 0.0 0 and is set to 100.0 1 when the button is pressed.

Extern Object

nviEM **Format SNVT_switch**
Unlocking signal
If nviEM adopts the value 100.0 1, the LT1 is unlocked and nvoBTR.Bit13 is set.

nviQM **Format SNVT_switch**
Acknowledgement signal
If nviQM adopts the value 100.0 1, the LT1 is acknowledged and nvoBTR.Bit14 is set.

nviLT **Format SNVT_switch**
Lamp test
If nviLT adopts the value 100.0 1, a lamp test is performed at the LT1 and nvoBTR.Bit15 is set.

BTR Object

nviBTR **Format SNVT_state**

System object for METZ CONNECT LON door installation modules for easy connection with the group indicator module LM1.

Bit0 ... Bit8	not used
Bit9	with automatic mode in the system = 1 with manual mode in the system = 0
Bit10	new error signal in the system = 1 no or acknowledged error in the system = 0
Bit11	new error signal in the system = 1 no or unlocked error in the system = 0
Bit12	maintenance signal in the system = 1 no or acknowledged maintenance in the system = 0
Bit13	unlocking signal of LM1 is set to 1 by the unlocking button
Bit14	acknowledgement signal of LM1 is set to 1 by the acknowledgement button
Bit15	lamp test request of LM1 is set to 1 by the lamp test button

nvoBTR **Format SNVT_state**

Feedback to nviBTR. The value of nviBTR is passed on.
If a LED, that is defined as maintenance signal (yellow LED requiring acknowledgement) is set with nviLED[x], nvoBTR Bit12 changes to 1.
If a LED, that is defined as error signal (flashing red LED requiring acknowledgment and unlocking) is set with nviLED[x], nvoBTR Bit10 and Bit11 change to 1.

Configuration variables

nciLEDan[0...5] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...5] = 100.0 1.

Valid values: nciLEDan[0...5].value = a + b + c + d
nciLEDan[0...5].state = 0

a - color	b - flashing	c - acknowledge	d - unlock
0,5 red	0 = no	0 = no	0 = no
1 yellow	4 = yes	16 = yes	32 = yes
1.5 green			

(Factory setting 52.5: LED red, flashing, to acknowledge and to unlock if nviLEDx is set)

nciLEDaus[0...5] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...5] = 0.0 0.

Valid values: see nciLEDan[0...5]
nciLEDaus[0...5] = 0.0 0 (factory setting LED OFF)

nciMinSendTime **Format SNVT_count**

All output variables nvo described above, except nvoWischer, are issued after a preset period of time even without a change of status. This causes the module to report periodically to the system.

Valid values: 0 timer function deactivated (factory setting)
1 ... 60 timer time in seconds

LT2

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**

LED Object

nviLED[0...3] **Format SNVT_switch**
Switching-on of the LEDs.
nviLED[0...3] = 0.0 0 The LEDs adopt the states defined in nciLEDaus[0...3].
nviLED[0...3] = 100.0 1 The LEDs adopt the states defined in nciLEDan[0...3].

nvoLED[0...3] **Format SNVT_switch**
Feedback to nviLED[0...3]. The value of nviLED[0...3] is passed on.

nviLEDs **Format SNVT_state**
Switching-on of the LEDs.
nviLEDs.Bit0...3 = 0 The LEDs adopt the states defined in nciLEDaus[0...3].
nviLEDs.Bit0...3 = 1 The LEDs adopt the states defined in nciLEDan[0...3].

nvoLEDs **Format SNVT_state**
Feedback to nviLEDs. The value of nviLEDs is passed on.

Taster Objekt (Button Object)

nvoTaster[1...4] **Format SNVT_switch**
nvoTaster[1...4] is 0.0 0 and is set to 100.0 1 when the buttons are pressed.

Extern Object

nviEM **Format SNVT_switch**
Unlocking signal.
If nviEM adopts the vale 100.0 1, the LT2 is unlocked and nvoBTR.Bit13 is set.

nviQM **Format SNVT_switch**

Acknowledement signal

If nviQM adopts the value 100.0 1, the LT2 is acknowledged and nvoBTR.Bit14 is set.

nviLT **Format SNVT_switch**

Lamp test

If nviLT adopts the value 100.0 1, a lamp test is done at the LT2 and nvoBTR.Bit15 is set.

BTR Object

nviBTR **Format SNVT_state**

System object for METZ CONNECT LON door installation modules for easy connection with the group indicator module LM1.

Bit0 ... Bit8	not used
Bit9	with automatic mode in the system = 1 with manual mode in the system = 0
Bit10	new error signal in the system = 1 no or acknowledged error in the system = 0
Bit11	new error signal in the system = 1 no or unlocked error in the system = 0
Bit12	maintenance signal in the system = 1 no or acknowledged maintenance in the system = 0
Bit13	unlocking signal of LM1 is set to 1 by the unlocking button
Bit14	acknowledgement signal of LM1 is set to 1 by the acknowledgement button
Bit15	lamp test request of LM1 is set to 1 by the lamp test button

nvoBTR **Format SNVT_state**

Feedback to nviBTR. The value of nviBTR is passed on.

If a LED, that is defined as maintenance signal (yellow LED requiring acknowledgement) is set with nviLED[x], nvoBTR Bit12 changes to 1.

If a LED, that is defined as error signal (flashing red LED requiring acknowledgment and unlocking) is set with nviLED[x], nvoBTR Bit10 and Bit11 change to 1.

Configuration variables

nciLEDan[0...3] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...3] = 100.0 1.

Valid values: nciLEDan[0...3].value = a + b + c + d
nciLEDan[0...3].state = 0

a - color	b - flashing	c - acknowledge	d - unlock
0,5 red	0 = no	0 = no	0 = no
1 yellow	4 = yes	16 = yes	32 = yes
1.5 green			

(Factory setting 52.5: LED red, flashing, to acknowledge and to unlock if nviLEDx is set)

nciLEDaus[0...3] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...3] = 0.0 0.

Valid values: see nciLEDan[0...3]
nciLEDaus[0...3] = 0.0 0 (factory setting LED OFF)

nciMinSendTime **Format SNVT_count**

All output variables nvo described above, except nvoWischer, are issued after a preset period of time even without a change of status. This causes the module to report periodically to the system.

Valid values: 0 timer function deactivated (factory setting)
1 ... 60 timer time in seconds

LT3

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**

LED Object

nviLED[0...7] **Format SNVT_switch**
Switching-on of the LEDs.
nviLED[0...7] = 0.0 0 The LEDs adopt the states defined in nciLEDaus[0...7].
nviLED[0...7] = 100.0 1 The LEDs adopt the states defined in nciLEDan[0...7].

nvoLED[0...7] **Format SNVT_switch**
Feedback to nviLED[0...7]. The value of nviLED[0...7] is passed on.

nviLEDs **Format SNVT_state**
Switching-on of the LEDs.
nviLEDs.Bit0...7 = 0 The LEDs adopt the states defined in nciLEDaus[0...7].
nviLEDs.Bit0...7 = 1 The LEDs adopt the states defined in nciLEDan[0...7].

nvoLEDs **Format SNVT_state**
Feedback to nviLEDs. The value of nviLEDs is passed on.

Taster Objekt (Button Object)

nvoTaster[1...2] **Format SNVT_switch**
nvoTaster[1...2] is 0.0 0 and is set to 100.0 1 when the buttons are pressed.

Extern Object

nviEM **Format SNVT_switch**
Unlocking signal
If nviEM adopts the value 100.0 1, the LT3 is unlocked and nvoBTR.Bit13 is set.

nviQM **Format SNVT_switch**

Acknowledgement signal

If nviQM adopts the value 100.0 1, the LT3 is acknowledged and nvoBTR.Bit14 is set.

nviLT **Format SNVT_switch**

Lamp test

If nviLT adopts the value 100.0 1, a lamp test is done at the LT3 and nvoBTR.Bit15 is set.

BTR Object

nviBTR **Format SNVT_state**

System object for METZ CONNECT LON door installation modules for easy connection with the group indicator module LM1.

Bit0 ... Bit8	not used
Bit9	with automatic mode in the system = 1 with manual mode in the system = 0
Bit10	new error signal in the system = 1 no or acknowledged error in the system = 0
Bit11	new error signal in the system = 1 no or unlocked error in the system = 0
Bit12	maintenance signal in the system = 1 no or acknowledged maintenance in the system = 0
Bit13	unlocking signal of LM1 is set to 1 by the unlocking button
Bit14	acknowledgement signal of LM1 is set to 1 by the acknowledgement button
Bit15	lamp test request of LM1 is set to 1 by the lamp test button

nvoBTR **Format SNVT_state**

Feedback to nviBTR. The value of nviBTR is passed on.

If a LED, that is defined as maintenance signal (yellow LED requiring acknowledgement) is set with nviLED[x], nvoBTR Bit12 changes to 1.

If a LED, that is defined as error signal (flashing red LED requiring acknowledgment and unlocking) is set with nviLED[x], nvoBTR Bit10 and Bit11 change to 1.

Configuration variables

nciLEDan[0...7] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...7] = 100.0 1.

Valid values: nciLEDan[0...7].value = a + b + c + d
nciLEDan[0...7].state = 0

a - color	b - flashing	c - acknowledge	d - unlock
0,5 red	0 = no	0 = no	0 = no
1 yellow	4 = yes	16 = yes	32 = yes
1.5 green			

(Factory setting 52.5: LED red, flashing, to acknowledge and to unlock if nviLEDx is set)

nciLEDaus[0...7] **Format SNVT_switch**

Setting of state and color of each LED with nviLED[0...7] = 0.0 0.

Valid values: see nciLEDan[0...7]
nciLEDaus[0...7] = 0.0 0 (factory setting LED OFF)

nciMinSendTime **Format SNVT_count**

All output variables nvo described above, except nvoWischer, are issued after a preset period of time even without a change of status. This causes the module to report periodically to the system.

Valid values: 0 timer function deactivated (factory setting)
1 ... 60 timer time in seconds

LA1

Node Object

The Node Object monitors and controls the functions of the different objects in the device. It supports the basic functions Object-Status and Object-Request required by LonMark.

nviRequest **Format SNVT_obj_request**
nvoStatus **Format SNVT_obj_status**

K1 Object

nviBarOben **Format** SNVT_lev_percent
Function: Control of the upper bar graph
nviBarOben = 0 .. 100 % The indicated values are rounded. The following LED lights up if the value is x6.

nvoBarOben **Format** SNVT_ lev_percent
Function: Feedback to nviBarOben. The value of nviBarOben is passed on.

nviHAOben **Format** SNVT_lev_percent
Function: Automatic value of a control if the switch is on "A" (11 o'clock).
nviHAOben = 0 .. 100 %

nvoHAOben **Format** SNVT_ lev_percent
Function: Feedback to nviBarOben if the switch is on "A" (11 o'clock).
The value of nviHAOben is passed on. nvoHAOben changes to 0, if the switch is on "0" (12 o'clock). The value of nvoHAOben corresponds to the position of the potentiometer if the switch is on "H" (13 o'clock).

nvoHand1 **Format** SNVT_switch
Function: If the switch is on"A" (11 o'clock) nvoHand1 issues 100.0 1.
In each other position it is 0.0 0.

K2 Object

nviBarUnten **Format** SNVT_lev_percent
Function: Control of the lower bar graph
nviBarUnten = 0 .. 100 % The indicated values are rounded. The following LED lights up if the value is x6.

nvoBarUnten **Format** SNVT_ lev_percent
Function: Feedback to nviBarUnten. The value of nviBarUnten is passed on.

nviHAUnten **Format** SNVT_lev_percent
Function: Automatic value of a control if the switch is on "A" (11 o'clock).
nviHAUnten = 0 .. 100 %

nvoHAUnten **Format** SNVT_ lev_percent
Function: Feedback to nviBarUnten if the switch is on "A" (11 o'clock).
The value of nviHAUnten is passed on. nvoHAUnten changes to 0, if the switch is on "0" (12 o'clock). The value of nvoHAUnten corresponds to the position of the potentiometer if the switch is on "H" (13 o'clock).

nvoHand2 **Format** SNVT_switch
Function: If the switch is on "A" (11 o'clock) nvoHand2 issues 100.0 1.
In each other position it is 0.0 0.

Extern Object

nviBlinkenOben **Format SNVT_switch**
Flashing of the upper bar graph.

nviBlinkenOben = 100.0 1	The value of nviBarOben is flashing. This indicates that this value is an analog fixed value.

nviBlinkenUnten **Format SNVT_switch**
Flashing of the lower bar graph.

nviBlinkenUnten = 100.0 1	The value of nviBarUnten is flashing. This indicates that this value is an analog fixed value.

nviLT **Format SNVT_switch**
Lamp test
If nviLT adopts the value 100.0 1, a lamp test is done at the LA1 and nvoBTR.Bit15 is set.

BTR Object

nviBTR **Format SNVT_state**
System object for METZ CONNECT LON door installation modules for easy connection with the group indicator module LM1.

Bit0 ... Bit8	not used
Bit9	with automatic mode in the system = 1 with manual mode in the system = 0
Bit10	new error signal in the system = 1 no or acknowledged error in the system = 0
Bit11	new error signal in the system = 1 no or unlocked error in the system = 0
Bit12	maintenance signal in the system = 1 no or acknowledged maintenance in the system = 0
Bit13	unlocking signal of LM1 is set to 1 by the unlocking button
Bit14	acknowledgement signal of LM1 is set to 1 by the acknowledgement button
Bit15	lamp test request of LM1 is set to 1 by the lamp test button

nvoBTR **Format SNVT_state**

Feedback to nviBTR. The value of nviBTR is passed on.
If a LED, that is defined as maintenance signal (yellow LED requiring acknowledgement) is set with nviLED[x], nvoBTR Bit12 changes to 1.
If a LED, that is defined as error signal (flashing red LED requiring acknowledgment and unlocking) is set with nviLED[x], nvoBTR Bit10 and Bit11 change to 1.

Configuration variables

nciMinSendTime **Format SNVT_count**

All output variables nvo described above, except nvoWischer, are issued after a preset period of time even without a change of status. This causes the module to report periodically to the system.

Valid values: 0 timer function deactivated (factory setting)
1 ... 60 timer time in seconds