

User Manual

LON I/O Module DR-N 8S-10A Art. no.:MTN881801

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1. Description



- Independent switching of eight load groups
- Eight relay outputs (NO, 10 A)
- Manual operation and status indication per output
- Power-down detection
- Supply voltage: DC 24 V
- Pluggable screw-type terminals
- Device width: approx. 72 mm (4 pitch)
- DIN rail mounting according to EN 50 022
- Software application for control of eight independent consumer loads according to the LonMark profile "Lamp Actuator (3040)" with timers, prioritised control, logic operation, configurable reaction of the outputs to power-up/bus reset and two "Scene Controller (3251)" objects





2. Function

The LON I/O Module DR-N 8S-10A has eight independent, potentialfree relay outputs for switching of lighting components and other electrical consumer loads.

The device requires a 24 V DC power supply for operation. The potential-free outputs switch 230 V AC /10 A.



The general device state is displayed by a service and operation LED.

The application software conforms to the LonMark guidelines.

3. Installation

The LON I/O Module DR-N 8S-10A in a DIN rail housing is intended for installation on DIN tophat rails according to the EN 50 022 standard.

The power supply cables are connected via screw-type terminals. The plug terminals can be screwed onto the cables before installation of the device and then plugged in later.

The consumer cables are connected via screw-type terminals.

All devices mounted next to the I/O module must be equipped with basic insulation at a minimum.

The green RUN LED does not illuminate until the application program has been correctly loaded into the device.

Pressing the service button sends the Neuron ID of the device. The Service LED shows the programming status.

An application program is required to operate the device.

A separate tool is needed to load the application into the device.

!Warning:

Safety clearances according to DIN VDE 0110 Part 1 must be maintained. A clearance of at least 4 mm must exist between individual 230 V conductors and the bus cables.





Danger to life due to electric current:

Even when the manual switch is in the "OFF" position, a BUS telegram can switch power to the connections at any time. Always deactivate/remove the upstream fuses before working on the device.

Output connections:

Danger to life due to electric current:

Vibration during transport can switch on the outputs. Voltage may appear at the outputs when mains voltage is applied!

To switch off outputs:

After commissioning, use bus telegrams to perform a switching cycle (on/off) or set the manual switch to "OFF".

Warning:

Switching actuators might be damaged. Secure the switching contacts with an upstream 10 A circuit breaker.

Connect the device according to the connection example. The consumer cables and the mains voltage (L1, L2 or L3) are connected using screw terminals rated to a maximum of 10 A.

Notes

Installation and mounting of electrical devices may only be done by a skilled electrician.

When planning and installing electrical equipment, the applicable norms, guidelines, rules and regulations for the respective country are to be followed. Beyond this, the device specifications are also to be followed. Detailed specialised knowledge of LON technology is a prerequisite for project work, installation, and commissioning.

The functioning of the device is software dependent.

The installer has the responsibility of ensuring that the loaded application programs, and the parameters defined within this, agree with the external connections of the device. This applies especially to situations where several application programs for different applications are available for the device.



4. Technical data

Power supply	
Operating voltage:	24 V DC (+/-10%)
Current consumption:	max. 30 mA
Bus connection	
Transceiver type:	LON Free Topology Transceiver (TP/FT-10)
	Via pluggable bus connection terminals
Outputs	
Number:	8
Туре:	Relays (NO), potential-free
Rated voltage:	230 V AC, 50 to 60 Hz
max. Load current:	10 A
Operating elements	
Service button:	Sends the Neuron ID
	Pressing the service button during a hardware reset places the device in the
	"unconfigured" state
Manual control buttons (1-8):	Manual switching of the outputs
Display elements	
RUN LED:	ON: Device is working normally; OFF: No application loaded, no voltage
Service LED:	eq:off:off:off:off:off:off:off:off:off:of
	has no application loaded
Connections	
Power supply, outputs:	Pluggable screw-type- terminals for cross-sections of 1.5 2.5 mm ²
Bus:	Standard bus connection terminals (2-pole for connection to 4 conductor pairs)
Housing	
Dimensions:	68 x 72 x 90 mm (H x W x D), 4 pitch according to DIN 43 880
Type of protection:	IP20 (EN 60 529/IEC 144)
EMC specification	
Noise immunity:	according to EN 50 090-2-2

Version: 23.07.08



Application: 881801I_01B

5. Application description

The application "881801I_01A" is used for controlling eight independent consumers connected to the relay outputs of the LON I/O Module DR-N 8S-10A. It reflects the LonMark profiles "Lamp Actuator (#3040)" (8x) and "Scene Controller (#3251)" (2x). In addition to the functions specified in these profiles, the application also allows timer functions for every switched output and controlling using different priorities. The "Global Control" object allows a definable group of outputs to be switched on and off together. The current status of the outputs is displayed above the corresponding switch positions on the upper side of the housing.

Function

Central control and visualisation

The "Global Control" allows actuator channels to be switched by a central binding. The "Global Control" affects the actuator channels through internal bindings. This allows implementation of group switching or lighting effects.

The "Global Control" object also shows the status of the outputs to be displayed via an output variable (nvoGCdeviceState).

At the nviGCscene input, freely definable scenes can be called up that define a separate switching value for each actuator channel. The priority of the individual scenes with regard to the "Lamp Actuator" inputs nviLAlampValue and nviLAmanOverride can be adjusted. For temporal correction of central switching commands, the activation of the requested scenes can be parameterised with a configurable random period (UCPTmaxRandomDelay).

The variable nviGCoccupancy refers to the internal scene storage, in a similar manner to nviGCscene. Assignment of the input values (SNVT_occupancy) to the scene numbers is done in the parameter UCPToccToScene. The stored scenes for the actuator channels are switched according to the building state (e.g. Occupied, Standby, etc.).

All actuator channels can be controlled at lower priority or without delays using nviGCdirectInput (SNVT_state).

Switching consumers

Switch-on/off delays and automatic switch-offs (stairwell function) can be parameterised in every lamp actuator object. The reaction to different power supply events (loss of power, power switch-on, restart) is configurable. It is also possible to define group control membership.

The behaviour of the actuators after a restart is definable using the variables UCPTdefaultLampValue[i].

The input nviLALampValue[i] switches the corresponding output (at low priority). The temporal behaviour of the output can be defined using the variables UCPTonDelay[i] (switch-on delay), UCPToffDelay[i] (switch-off delay) and UCPTautoOffTime[i] (stairwell automation).

This input can be monitored. If no telegram is received within the time defined in UCPTlaMaxRcvTime[i], then the associated channel is switched to the value defined in UCPTrcvFailureLampValue[i].

Telegrams to prioritised inputs nviLAManOverride[i] directly switch the associated outputs (without delays). To release the output once more, the .state part of the associated nviLAManOverride[i] variable must be set to -1. The output then switches to the value defined in UCPTafterReleaseManOverride[i].

Alternatively, the input nviLAManOverride[i] can be used as a logically linked input to nviLALampValue[i]. The desired logical linking is defined in the parameter UCPTlogicFunction[i].



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The feedback value of the output is sent to nvoLALampValueFb[i] with the delay time specified in UCPTfeedbackDelay[i], it can also be cyclically sent in the time period specified in SCPTmaxSendTime[i].

Working with scenes

The room scene controller can store complex room scenes defining lighting values, occupancy states, and positional information for blinds. Up to 20 different room scenes can be stored. After switching on the scene controller via nviSCSetting[i] (SET_ON), the stored scheme can be called up based on the scene number by setting nviSCScene[i].function = SC_RECALL, and then output using nvoSCSwitch[i], nvoSCSetting[i] and nvoSCOccupancy[i]. The room scene storage can be configured in 2 different ways:

- The scene storage can be directly written via the configuration parameter UCPTsceneKeeperXXX[i][j].
- The lighting control scenes can be adopted in the scene storage via nviSCSwitch[i] (when bound) under the scene number specified in nviSCScene[i].scene_number. This is initiated by setting nviSCScene[i].function = SC_LEARN (in general with a long button push).

The variables nviSCSetting[i] allow switching the scene controller on and off, thus disabling its functions. After switching off, the outputs are set to the values for scene 20. After being switched on again, the last active scene is recalled.

The cross-fade behaviour of a scene change at output nvoSCSwitch[i] can be set using the configuration variables UCPTsceneKeeperFadeTime[i], UCPTsceneKeeperDimStep[i] and UCPTsceneKeeperDelayTime[i].

Invalid entries in the scene storage lead to the associated network output not being propagated/sent.

The input nviSCSceneOffset[i] whose input value is added to the received scene number is available to allow scene panels to be linked to each other.

Display and control elements at the front of the device

The RUN LED displays the operating status. After a restart and in the configured/online state, the RUN LED illuminates. If the node is placed offline then the LED switches off.

The Service LED shows the state of the LON node. If it continuously illuminates then no valid application is loaded into the node. If it blinks then the device is not configured. A blink task also exists. When this is activated the RUN LED blinks for about 20 s.

The outputs can be directly switched using the manual buttons on the upper side of the device, with a loaded application they show the status of the outputs.

5.1 System requirements

An LNS-compatible LON management tool is required for the configuration of the application! "User-defined configuration property types" (UCPTs) are used as parameters in the DirectMemoryAccess. To be able to use these parameters, the " Device Resource Files" (DRFs) need to be installed **before (!)** creating a device template.

The used LNS must be Version 2.0 or higher.



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Network interface / LonMark objects

5.2 Node object (LONMARK[®] profile #0)



Input variables

nviRequest

Type:	SNVT_obj_request
Value range:	Valid object ID in combination with
-	RQ_NORMAL,
	RQ_UPDATE_STATUS,
	RQ_REPORT_MASK
Default value:	RQ_NORMAL
Description:	Input used to initiate the node status messages.

Output variables

nvoStatus

Type:	SNVT_obj_status
Value range:	The status bits supported by the object:
	.report_mask,
	.invalid_id,
	.invalid_request
Default value:	All bits =0
Description:	Is transmitted when an update to nviRequest is received.

nvo00FileDir

Type:	SNVT_address
Value range:	16,384 64,767
Default value:	Undefined
Description:	Is required for internal functionality !

Configuration variables

UCPTdeviceButton - Device buttons

Type:	UNVT_enabled
Range:	DISABLED, ENABLED
Default:	ENABLED
Description:	To disable the device buttons.



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5.3 Lamp Actuator (LONMARK[®] profile #3040)

Output A (Index=0) to H (Index=7)



Input variables

nviLAlampValue[i]

Type:	SNVT_switch
Value range:	.value: 0 100 %
	.state: 0, 1
	ON: .state = 1 and .value > 0
	OFF: .state = 0 or .state = 1 and .value = 0
Default value:	UCPTdefaultLampValue[i]
Description:	Control input for switching the output channels

nviLAmanOverride[i]

Type:	SNVT_switch									
Value range:	.value:	.value: 0 100 %								
	.state:	0, 1, -1								
	ON:	.state = 1 and .value > 0								
	OFF:	.state = 0 or .state = 1 and .value = 0								
	Deactivated: .state = -1									
Default value:	UCPTdefaultManOverrideSw[i]									
Description:	ut with a higher priority than nviLAlampValue[i]. After deactivation									
(.state = -1, invalid value) the switching channel adopts a status deper										
setting in UCPTafterReleaseManOverride[i].										
Alternatively, this input can be logically linked with nviLAlampValue[i										
	is selected using the parameter UCPTlogicFunction[i].									





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Output variables

nvoLAlampValueFb[i]

Type:	SNVT_switch
Value range:	.value: 0 100 %
_	.state: 0, 1
	ON: .state = 1 and .value > 0
	OFF: .state = 0 or .state = 1 and .value = 0
Default value:	UCPTdefaultLampValue[i]
Description:	The current value/status of the switching channel is sent to the network here; either
-	immediately upon being changed or after a delay defined in
	UCPTfeedbackDelay[i]. Switch-on and switch-off delays are regarded as being
	complete. This output can be cyclically sent over the period specified in
	SCPTmaxSendTime[i].

Configuration variables

UCPTonDelay[i] - Switch-on delay

Type:	UNVT_time	_sec										
Value range:	0 65,535 s (increment: 1 s)											
Default value:	0 (deactivat	ed)										
Description:	Switch-on	delay	of	the	output	after	arrival	of	an	ON	telegram	at
	nviLAlamp	Value	[i].		-						-	

UCPToffDelay[i] - Switch-off delay

Type:	UNVT_time	sec		h 1 a)								
value range:	0 65,535	s (incre	men	LTS)								
Default value:	0 (deactivated)											
Description:	Switch-off	delay	of	the	output	after	arrival	of	an	OFF	telegram	at
	nviLAlam	Value	[i].									

UCPTautoOffTime[i] - Automatic switch-off time

Type:	UNVT_time_sec
Value range:	0 65,535 s (increment: 1 s)
Default value:	0 (deactivated)
Description:	The output is automatically switched off (without receiving an OFF telegram) after this time has expired. The time begins as soon as an ON telegram is received at nviLAlampValue[i].

UCPTrestartAutoOffTimer[i] - Automatic switch-off time extendable

Type:	UNVT_boolean
Value range:	TRUE, FALSE
Default value:	TRUE
Description:	Defines whether the automatic switch-off time (UCPTautoOffTime[i]) is restarted
	on receipt of every ON telegram (TRUE) or not reset (FALSE).



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Configuration variables

UCPTbreakAutoOffTimer[i] - Automatic switch-off interruptible

Type:	UNVT_boolean
Value range:	TRUE, FALSE
Default value:	FALSE
Description:	Defines whether the automatic switch-off time (UCPTautoOffTime[i]) is interrupted on receipt of an OFF telegram (TRUE) or not (FALSE).

UCPTlogicFunction[i] - Logic function

Type: Value range: Default value: Description:	UNVT_logic_fnc LF_OVERRIDE, LF_ LF_OVERRIDE This parameter canviLAlampValue[below. The following	AND, LF_OR, LF_XO an be used to d i] and nviLAmanOv assignments apply:	R, LF_ efine rerric	NAND, a logi le[i]	LF_NC cal lir accordi	R, LF_N king c ng to t	NXOR If the he trut	inputs h table
	1 = On (.sta 0 = Off (.sta -1 = invalid (. DLV = Value de !DLV = UCPTdet DMO = Value de !DMO = UCPTdet	ate = 1 and .value > ate = 0 or .state = state = -1) fined in the UCPTdefa EaultLampValue[i] fined in UCPTdefault EaultManOverrideS	• 0) 1 and ault <u>L</u> a inverte tManOv	.value amp <u>v</u> al ed verrid	==0) ue[i]. eSw[i].		
	nviLAlampValue[i]	nviLAmanOverride[i]	AND	OR	XOR	NAND	NOR	NXOR
	0	0	0	0	0	1	1	1
	0	1	0	1	1	1	0	0
	1	0	0	1	1	1	0	0
	1	1	1	1	0	0	0	1
	0	-1	0	DMO	1	1	!DMO	0
	1	-1	DMO	1	1	!DMO	0	0
	-1	0	0	DLV	1	1	!DLV	0
	-1	1	DLV	1	1	!DLV	0	0
	-1	-1	0	DLV	0	1	!DLV	1
	The temporal beha parameterised acco	viour of the outputs is rding to the result of th	s not a e linkir	affected	by the	logical	linking	, but is

Under standard parameterisation LF_OVERRIDE nviLAmanOverride[i] is prioritised with regard to nviLAlampValue[i].





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Configuration variables

SCPTlaMaxRcvTime[i] - Maximum reception pause

Type:	SNVT_tin	ne_sec									
Value range:	0 6,553	3.5 s (increr	nent: 0).1 s)							
Default value:	0 (deactiv	/ated)									
Description:	An updat	e to nviLA	lampV	/alue[i]	must	be rec	eived	within	the time	period defi	ined
	here, o	otherwise	the	output	is	set	to	the	value	defined	in
	UCPTrcv	FailureLa	ampVa	lue[i].							

UCPTfeedbackDelay[i] - Feedback delay

Type:	UNVT_time_msec
Value range:	0 65,535 ms (increment: 1 ms)
Default value:	0 (deactivated)
Description:	The transmission of the feedback value via nvoLAlampValueFb[i] is delayed by
	the value specified here. The time is restarted on every value/status change.

UCPTdefaultLampValue[i] - Default lamp value

Type:	SNVT_switch
Value range:	.value: 0 100 %
	.state: 0, 1
	ON: .state = 1 and .value > 0
	OFF: .state = 0 or .state = 1 and .value = 0
Default value:	.value = 0
	.state = 0
Description:	The value adopted by nviLAlampValue[i] after the power supply is restored or after a restart. This normally reflects the output value.

UCPTdefaultManOverrideSw[i] - Default override control

Type:	SNVT_switch	
Value range:	.value: 0.	100 %
	.state: 0,	1, -1
	ON: .sta	ate = 1 and .value > 0
	OFF: .sta	ate = 0 or .state = 1 and .value = 0
	Deactivated: .sta	ate = -1
Default value:	.value = 0	
	.state = -1	
Description:	The value auton	natically adopted by the input after the bus voltage is restored or after
	a reset.	



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Configuration variables

UCPTafterRel	easeManOverride[i] - Default manual override release
Type:	UNVT_switch_cfg
Value range:	.function: SW_NUL, SW_HOLD, SW_VALUE
	.value: 0 100 %
Default value:	.function = SW_NUL
	.value = 0
Description:	The value adopted by the output after nviLAmanOverride[i] is released.
	SW_NUL: Current value of the nviLAlampValue[i] input is adopted.
	SW_HOLD: Current value of the actuator channel is retained.
	SW_VALUE: The actuator channel adopts the value parameterised in .value

UCPTrcvFailureLampValue[i] - Lamp value in case of reception failure

Type:	SNVT_switch	
Value range:	.value: 0	100 %
	.state: 0, 1	, -1
	ON: .stat	e = 1 and .value > 0
	OFF: .stat	e = 0 or .state = 1 and .value = 0
	Deactivated: .stat	e = -1
Default value:	.value = 0	
	.state = -1	
Description:	The value adopte has expired. If .s	d by the output after the time specified in SCPTlaMaxRcvTime[i] tate = -1 the output is not changed.

UCPTpowerFailureLampValue[i] - Lamp value in case of power failure

Type:	SNVT_switch
Value range:	.value: 0 100 %
	.state: 0, 1, -1
	ON: .state = 1 and .value > 0
	OFF:
	Deactivated: .state = -1
Default value:	.value = 0
	.state = -1
Description:	Value adopted by the output when the power fails. If .state = -1 the output is not changed.



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5.4 Scene controller (LONMARK[®] profile #3251)

(SceneCtrl) 1 (Index=0) to 2 (Index=1)



Input variables

nviSCScene[i]

Type:	SNVT_scene
Value range:	.function: SC_RECALL, SC_LEARN
	.scene_number: 1 20
Default value:	.function = SC_NUL
	.scene_number = 255
Description:	Recalling (SC_RECALL) and storing (SC_LEARN) scenes. There are 20 storage
	locations available. In SC_RECALL mode, the settings are transferred to the output
	variables according to the selected .scene_number. InSC_LEARN mode, the
	current values of nviSCSwitch[i] are stored in the storage location specified by
	.scene number. Fading and delay times for nvoSCSwitch[i] are taken from the
	current values in UCPTsceneKeeperFadeTime[i] and
	UCPTscenekeeperDelayTime[1].

nviSCSwitch[i]

Type: Value range:	SNVT_switch .value: 0 100 % .state: -1. 0. 1
Default value:	.value = 0 .state = -1
Description:	Direct setting of a value in nvoSCSwitch[i]. This allows manual entry of scene values.



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Input variables

nviSCSetting[i]

Type: Value range:	SNVT_setting .function: SET_OFF, SET_ON
Default value:	.function: SET_ON
	.setting: 0 .rotation: 0
Description:	Variable for switching the controller on (SET_ON) and off (SET_OFF). After switching on, the last selected scene is active. After switching off, scene 20 is active. Repeated reception of SET_ON has no effect

nviSCSceneOffset[i]

Type:	SNVT_scene
Value range:	.function: SC_RECALL
	.scene_number: 1 20
Default value:	.function = SC_RECALL
	.scene_number = 255
Description:	The value stored at .scene_number is added to the .scene_number values of
	nviSCScene[i]. For invalid values (addition of both scene numbers > 20), a value
	of 0 is assumed.

Output variables

nvoSCSwitch[i]

Type: Value range:	SNVT_switch .value: 0 100 % .state: -1, 0, 1
Default value:	.value = 0
	.state = -1
Description:	Output of the active scene value configured in UCPTsceneKeeperSwitch[i][j].

nvoSCSetting[i]

Type: Value range:	SNVT_setting .function: SET_OFF, SET_ON, SET_DOWN, SET_UP, SET_STOP, SET_STATE, SET_NUL .setting: 0 100 % rotation: -359 98° 360°
Default value:	.function: SET_NUL .setting: 0
Description:	.rotation: 0 Output of the active scene value configured in UCPTsceneKeeperSetting[i][j].



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nvoSCOccupancy[i]

Type: Value range: Default value: Description:	SNVT_occupancy OC_OCCUPIED, OC_UNOCCUPIED, OC_BYPASS, OC_STANDBY, OC_NUL OC_NUL Output of the active scene value configured in UCPTsceneKeeperOccupancy[i][j].

Configuration parameters

UCPTsceneKeeperSwitch[i][j] - Scene storage for nvoSCSwitch[i]

Type: Value range:	UNVT_switch_0 .function: SW_1 .value: 0 100	cfg NUL, SW_HOLD, SW_VALUE) %
Default value:	.function = SW_ .value = 0	_HOLD
Description:	Configuration o	f the scene values for nvoSCSwitch[i].
	SW_NUL:	<pre>nvoSCSwitch[i].value is adopted from .value nvoSCSwitch[i].state is set to -1</pre>
	SW_VALUE:	<pre>nvoSCSwitch[i].value is adopted from .value nvoSCSwitch[i].state is set to 1 when .value > 0,</pre>
	SW_HOLD:	no telegram is generated

UCPTsceneKeeperSetting[i][j] - Scene storage for nvoSCSetting[i]

Type:	UNVT_setting
Value range:	.function: SET_OFF, SET_ON, SET_DOWN, SET_UP, SET_STOP, SET_STATE,
	SET_NO_MESAGE, SET_NUL
	.setting: 0 100 %
	.rotation: -359.98° 360°
Default value:	.function: SET_NO_MESSAGE
	.setting: 0
	.rotation: 0
Description:	Configuration of the scene values for nvoSCSetting[i]. If a value with
	.function = SET_ NO_MESSAGE is stored here, then the value is not propagated.

UCPTsceneKeeperOccupancy[i][j] - Scene storage for nvoSCOccupancy[i]

Type:	SNVT_occupancy
Value range:	OC_OCCUPIED, OC_UNOCCUPIED, OC_BYPASS, OC_STANDBY, OC_NUL
Default value:	OC_NUL
Description:	Configuration of the individual scene values. If a value of OC_NUL is stored here,
	then the value is not propagated.

UCPTsceneKeeperFadeTime[i][j] - Scene storage cross-fade time for nvoSCSwitch[i]

Type:	UNVT_time_msec
Value range:	100 65,535 ms
Default value:	0 (deactivated)
Description:	Cross-fade time for scene change to nvoSCSwitch[i].



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UCPTsceneKee	perDimStep[i][j] - Scene storage dimming step size for nvoSCSwitch[i]
Type:	SNVT_lev_cont
value range:	0100 %
Default value:	3.5 %
Description:	Step-size of the cross-fade for a scene change to nvoSCSwitch[i].
UCPTsceneKeeperDelayTime[i][j] - Scene storage delayed scene change for nvoSCSwitch[i]	

Type:SNVT_time_secValue range:0 ... 6,553.4 sDefault value:0Description:Delay time for activating the new scene at nvoSCSwitch[i].



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5.5 GlobalControl (LONMARK[®] profile #5)



Input variables

nviGCscene

Type:	SNVT_scene
Value range:	.function: SC_RECALL
	.scene_number: 1 10
Default value:	.function = SC_NUL
	.scene_number = 255
Description:	Input for central activation/deactivation of functions (ON/OFF) of the individual
	actuator channels. UCPTmaxRandomDelay can be used to define a device-specific
	random delay to avoid load peaks in the central control system.

nviGCoccupancy

Type:	SNVT_occupancy
Value range:	OC_OCCUPIED, OC_UNOCCUPIED, OC_BYPASS, OC_STANDBY, OC_NUL
Default value:	OC_NUL
Description:	Input to the central presence/absence controller. The states to be activated are defined in an assignment table UCPToccToScene that maps the values received here to the specified scene numbers. On arrival of a telegram, the scene entered for the corresponding occupancy state is called up. UCPTmaxRandomDelay can be used to define a device-specific random delay to avoid load peaks in the central control system.

nviGCdirectInput

Type:	SNVT_state
Value range:	.bit0bit3: 0, 1 reflects channel A D
Default value:	All bits = 0
Description:	Input variable for direct control of the actuator channels using a priority according to
	nviLAlampValue. Channels that should not be controlled via this variable can be
	hidden using UCPTdirectInputMask, by specifying 0 for the appropriate channel.
	The delay UCPTmaxRandomDelay has no effect here.



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Output variables

nvoGCdeviceState

Type:	SNVT_state
Value range:	.bit0bit3: 0, 1 reflects channel A D
Default value:	All bits = 0
Description:	This output reflects the status of the individual module channels.

Configuration parameters

UCPTsceneKeeperChannelSw8

Type: Value range:	UNVT_skc_8 .scene: 1, 2 255; .priority: 0, 1				
Default value:	.channel[j]: SW_NUL, SW_HOLD, SW_OFF, SW_ON .scene = i+1 .priority = 0 .channel[i] = SW_OEE				
Description:	Storage for controlling the individual actuator channels, with the following functions				
	.scene: .priority:	Received scene number Priority in relation to the input at the "Lamp Actuator" object 1 = affects nviLAmanOverride 0 = affects nviLAlampValue			
	.channel[j]:	SW_NUL = Release nviLAmanOverride at .priority = 1 SW_HOLD = Retain existing channel state SW_OFF = Channel OFF SW_ON = Channel ON			

UCPToccToScene

Type:	UNVT_os_scene)
Value range:	.oc_occupied:	1, 2 255
	.oc_unoccupied:	1, 2 255
	.oc_standby:	1, 2 255
	.oc_bypass:	1, 2 255
	.oc_nul:	1, 2 255
Default value:	.oc_occupied	= 1
	.oc_unoccupied	= 2
	.oc_standby	= 3
	.oc_bypass	= 4
	.oc_nul	= 5
Description:	Assignment of th	e occupancy state to a scene.



Application: 881801I_01B

Configuration parameters

UCPTdirectInputMask

Type:	SNVT_state
Value range:	.bit0bit3: 0, 1 reflects channel A D
Default value:	All bits = 1
Description:	Parameter for hiding actuator channels from the central control via
	nviGCdirectInputbitx = 0 means that the associated channel is not taken into
	account.

UCPTmaxRandomDelay

Type:	SNVT_time_sec
Value range:	0 6,553.5 s (increment 1 s)
Default value: Description:	 0 (deactivated) When an actuator is controlled via nviGCscene or nviGCoccupancy this maximum value is used to generate a random time that delays the activation of the scene values. This helps to avoid current peaks in the central control system. The delay time also affects switch-on delays on restoration of power or after a reset, but is limited to a maximum value of 64 s. Reception of a new telegram at one of the two inputs starts the delay anew.