Datasheet Roller Shutter x4

RSH-384-D-01

Roller Shutter module allows to control 4 shutter or roller shutter drives (e.g. external blinds, internal blinds, curtains, awnings). Additionally, it allows to connect 8 independent elements containing a contact input (e.g. classic switches, motion, smoke or flood sensors).

1. Parameters - ROLLER_SHUTTER

Features:	
MechanicalOffset	The time of compensation for start of the drive
MaxTime	The time in milliseconds it takes to fully open / close the blind
BlindsUpMaxTime	The time in milliseconds it takes to fully open the blind
BlindsDownMaxTime	The time in milliseconds it takes to fully close the blind
State	Output state: 0 - no movement, 1 - moving upwards, 2 - moving downwards, 3 - blocked, 4 - calibration
Up	State of UP relay (moving upwards)
Down	State of DOWN relay (moving downwards)
Position	Percentage value of the shutter opening: 0% - fully closed, 100% - fully open
LamelPosition	Roller shutter lamel position 90 - fully closed, 0 - fully open
LamelMoveTimeout	The maximum working time of the shutter's slats, if the shutter does not have slats, should be set to 0
DistributedLogicGroup	Distributed Logic group - broadcast group for distributed logic
ReversePosition	The function for inverting position range (0-100% for 100-0%): 0 - No, 1 - Yes
ReverseDirections	The function of reversing the direction of the roller shutter operation
Methods:	
SetMechanicalOffset	Sets the time of compensation for start of the drive
SetBlindsUpMaxTime	Sets the shutter opening time
SetBlindsDownMaxTime	Sets the shutter closing time
SetPosition	Shutter opening percentage setting: 0% - fully closed, 100% - fully open
SetLamelPosition	Sets the position of the slats
Calibration	Calibrates the shutter position
SetLamelMoveTimeout	Sets the cycle time of the slats
MoveUp	Roller shutter UP or STOP if moving. Parameter Time: num - move up time (or until roller shutter is open), 0 - move up time equal BlindsUpMaxTime + LamelMoveTimeout (or until roller shutter is open)
MoveDown	Roller shutter DOWN or STOP if moving. Parameter Time: num - move down time (or until roller shutter is closed), 0 - move down time equal BlindsDownMaxTime + LamelMoveTime-out (or until roller shutter is closed)
Start	Roller shutter up if the preceding motion was down or roller shutter down if the preceding motion was up. Parameter Time: num - move time (or until roller shutter is at the end position), 0 - move time equal BlindsUpMaxTime/BlindsDownMaxTime + LamelMoveTimeout (or until roller shutter is at the end position)
Stop	STOP if moving
Hold	Hold with direction change
HoldUp	Hold always up
HoldDown	Hold always down
SetRollerBlocked	Enables / disables the ability to control the roller shutter
LamelStart	Changes the position of the slats by 45°
Events:	
OnStateChange	Occurs when changing the State properties
OnUp	Occurs when changing the Stop state to the Up state
OnDown	Occurs when changing the Stop state to the Down state
OnStart	Occurs when the shutter is activated
OnStop	Occurs when the shutter is stopped
OnLamelClosed	Occurs when the slats are closed (value 90°)
OnLamelOpen	Occurs when the slats are opened (value 0°)
OnPositionChange	Occurs when the roller shutter position has changed
OnLamelPositionChange	Occurs when the position of the slats has changed

2. Parameters - DIN

Features:	
Inertion	Specifies the time constant of the input
HoldDelay	Time in milliseconds after which, when pressing and holding a button, the OnHold event occurs
HoldInterval	Cyclical interval in milliseconds after which, when pressing and holding a button, the OnHold event occurs
Value	Returns input state as 0 or 1
DistributedLogicGroup	Distributed Logic group - broadcast group for distributed logic
StatisticState	Load measurement type: Off - turned off, Continuous - load measurement for the whole device's period operation, Pulse - load measurement counted at the moment of a high state appearing on the input
Load	The measured value multiplier. For StatisticState: Continuous - load measurement value in the unit of time, Pulse - load measurement value for the single impulse (e.g. 1kW)
Methods:	
SetInertion	Minimum interval in milliseconds which has to pass between presses of a button so that it is interpreted as a new pressing activity
SetHoldDelay	Sets HoldDelay value
SetHoldInterval	Sets HoldInterval value
Events:	
OnValueChange	Occurs when a change in the input state takes place (regardless of the value)
OnSwitchOn	Occurs when the high state is set at input
OnSwitchOff	Occurs when the low state is set at input
OnShortPress	Occurs after pressing the button for 500 - 2000ms
OnLongPress	Occurs after pressing the button for at least 2000ms
OnHold	Occurs for the first time after HoldDelay time and then cyclically every HoldInterval value
OnClick	Occurs after pressing the button for less than 500ms

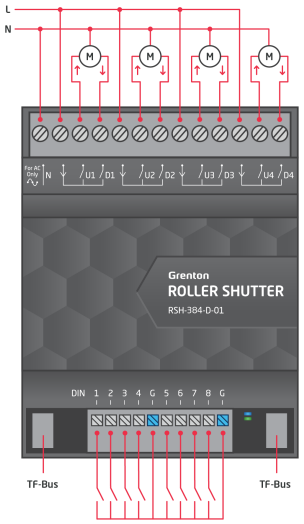
3. Parameters - PowerSupplyVoltage

Features:	
Value	Current power supply voltage value
Value%	Current percentage input value of the maximum value (MaxValue characteristic)
Sensitivity	Minimum change of input state when the OnValueChange, OnValueLower or OnValueRise event is generated
MinValue	Minimum value of the Value characteristic after exceeding which the OnOutOfRange event is generated
MaxValue	Maximum value of the Value characteristic after exceeding which the OnOutOfRange event is generated
Methods:	
SetSensitivity	Sets input sensitivity value
SetMinValue	Sets MinValue
SetMaxValue	Sets MaxValue
Events:	
OnValueChange	Event resulting from changing input state
OnValueLower	Event occurs when a value lower than the value from the last reading appears at input
OnValueRise	Event occurs when a value higher than the value from the last reading appears at input
OnOutOfRange	Event resulting from exceeding the permissible range (MinValue - MaxValue)
OnInRange	Event occurs when value returns to MinValue - MaxValue range

4. Technical Data

Device power supply	$24V_{dc}$
Maximum power consumption	0,9W (225mW/ch)
Maximum device current	75mA (for $24V_{dc}$)
Rated load voltage	$230V_{ac}$ or $24V_{dc}$
Max AC motor load (per drive)	350W
Relay type	NO
Maximum wire cross section for outputs	$2,5mm^2$
Maximum wire cross section for inputs	$1,5mm^2$
Weight	148g
Size [DIN]	4
Fixing	electrical box, rail DIN-3 / TH 35 / TS 35
Dimensions (H/W/D)	90/72/58mm
Operating temperature range	0 to +45°C

5. Wiring Diagram



N	'Neutral' signal input
U1	UP relay output for roller shutter channel 1
D1	DOWN relay output for roller shutter channel 1
U2	UP relay output for roller shutter channel 2
D2	DOWN relay output for roller shutter channel 2
U3	UP relay output for roller shutter channel 3
D3	DOWN relay output for roller shutter channel 3
U4	UP relay output for roller shutter channel 4
D4	DOWN relay output for roller shutter channel 4
DIN 1-4	digital inputs 1-4
G	ground for digital inputs 1-4
DIN 5-8	digital inputs 5-8
G	ground for digital inputs 5-8

- Each roller shutter channel has two independent relay outputs (UP and DOWN). Both relays cannot be active simultaneously.
- For optimal relay switching with $230V_{ac}$ loads, it is necessary to connect both the 'N' signal and the first circuit power supply (common terminal of channel 1).
- Connect only one drive per channel.
- In the case of $230V_{ac}$ supply, the entire device should be connected to a single phase for optimal switching of all relays.

6. Device Status

	Off - no power supply
	On continuously for 2s - module startup
	On continuously - module in bootloader mode
	Short flash every 2s - correct module operation
	Short flash every 1s - no address (run CLU Discovery)
	Fast flashing every 100ms - no TF-bus connection
	Two short flashes every 2s - voltage too low
	Short flash - change of module input or output state

7. Warnings and Cautionary Statements

ATTENTION !

- Before proceeding with the assembly, read the installation schematics and full instructions available at www.grenton.com. Failure to follow the guidelines contained in the instructions and other requirements of due care valid as a result of the nature of the equipment (device) may be dangerous to life / health, damage the device or installation to which it is connected, damage other property or violate other applicable regulations. The manufacturer of the device, Grenton Sp. z o. o. does not bear any responsibility for the damage (property and non-property related) resulting from the assembly and / or use of the equipment not in accordance with the instructions and / or due diligence in handling the equipment (device).
- Device power supply, permissible load or other characteristic parameters have to be in accordance with the device specification, described in particular in the "Technical data" section.
- The product is not intended for children and animals.
- If you have technical questions or comments about the device operation, contact Grenton Technical Support.
- Answers to frequently asked questions can be found at: www.support.grenton.com.

DANGER !

- Danger to life caused by electric current!
- The components of the installation (individual devices) are designed to work in a home electrical installation or directly in its vicinity. Incorrect connection or use may cause a fire or electric shock.
- All work related to the installation of the device, in particular works involving interference in the electrical installation, may be performed only by a person with appropriate qualifications or licences.
- When installing the device, make sure that the power supply voltage is disconnected from the circuit in which the device is connected or near which the assembly takes place.

8. CE Marking

The manufacturer declares that the device is in full compliance with the requirements of EU legislation that includes the directives of a new approach appropriate for this equipment. In particular, Grenton Sp. z o. o. declares that the device fulfills the requirements on safety, specified by law, and that it conforms to the national regulations that implement the appropriate directives: The Directive on the electromagnetic compatibility (EMC - 2014/30/UE) and the Directive on the limitation of the use of specific substances in electrical and electronic equipment (RoHS II - 2011/65/UE).

9. Warranty

Warranty available at www.grenton.com/warranty.

10. Manufacturer Contact Details

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