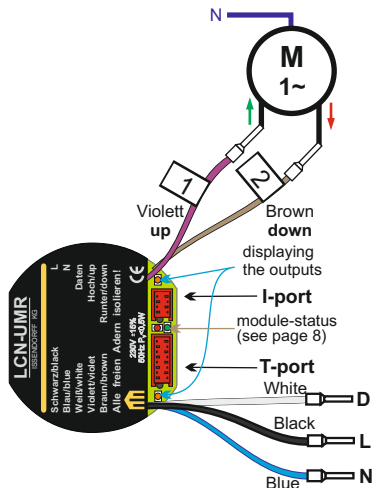


Universal shutter-/roller blinds-module for a flush-mounted box

The shutter module LCN-UMR is a sensor-actuator module of the LCN Bus system for controlling shutters/roller blinds. It has two 230V switchable relay outputs that are interlocked against each other.



Application

The LCN-UMR device is used in dry rooms in deep flush-mounted boxes/electronic boxes. An installation in junction boxes is also possible.

The module has a sensor input, the T-port connection (push-button input), on to which conventional push-buttons or GT-glass Key-sensors can be connected.

As a second sensor input, the I-port connection is available for many functions, e.g. IR-receiver, display key-sensors (e.g. LCN-GT4D), sensors, and so on.

Installation / Connection

The module has no fuse for the outputs. That is why a **circuit breaker 6A** (B-characteristic) should be used. The flush-mounted module is connected with 5 wires on the power side:

description	colour	function
D	white	data wire
N	blue	neutral wire
L	black	230V phase (L1, L2 or L3)
1	violet	output 1, UP (switches internally against phase)
2	brown	output 2, DOWN (switches internally against phase)

Note:

The relay outputs 1 and 2 are directly provided over the phase of the module.

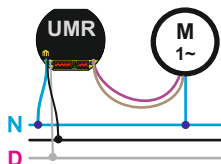
Should outputs not be needed, the free connections must be insulated!

The net connections are have a proof voltage of up to 2kV(D)/ 4kV(L+N) according to VDE, additional measures against operational overvoltages are generally not necessary. (lightning protection should be provided as usual.)

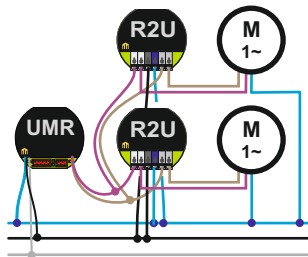
Relay outputs

Important: The relay outputs are interlocked against each other, that means that only one output can be switched on, not both together.

Normal operation



Parallel operation from shutters/ and roller blinds



Some types of motors **may not be** operated **parallel**, the same goes for operating over the LCN-UMR! You have to separate the motors, e.g. by using auxiliary relays **LCN-R2U!**

LCN-modules monitor their **operating temperature**. If this increases unacceptably, both of the outputs will be switched off and a status message will be shown in the bus monitor of the LC-PRO: "Module reports overload/over temperature".

After cooling down below around 70°C, the outputs can be switched on again completely as normal. However you should check incase the connected load was too high.

A further error source can be a very high environmental temperature and / or a very inappropriate (warmth insulated) installment.

Properties of the built-in control program

number ranges:	module-ID: 5..254, group numbers: 5..254 segment numbers: 5..124
group members:	12 (fixed) plus 8 (dynamic)
command table:	A, B, C & D with each 2 * 8 rows (3 commands) & additional 48 keys, 96 rows (used internally)
combinations:	depending on: logic, time, sensors, output conditions, panel and fault indication-processing (4 status) according to DIN.
scene storage:	10 x 10 per output (brightness & ramp)

Time emitter (amount):

outputs (4):	10ms..40min (staircase timer)
keypad (4):	je 1s .. 45 days (send keys delayed)
lock keys (1):	je 1s .. 45 days (only table A)
lock output (2x1):	1s .. 45 days (partly & full lockage)
impulse generator(1):	0,3s .. 6500s (periodic time emitter)
relays (2):	30ms ..4 min (relay timer)

Properties of the built-in control program**Measurement value processing**

variables:	12
triggering:	10 oder 12 bit
processing:	autom. value notification formulas for linear equation with 3 inp. (e.g. for diff. value calculation.), adjustable value grading, value remote transmission, etc.
evaluation:	
thresholds / discont. regulators	4 reg. with each 4 switch thresholds with hysteresis
regulators:	2 continuous regulators (P-regulator behaviour), independantly deployable
counting/calculating:	up to 12 counters, 0 ... 30.000, cascadable

Remote control

keys:	16 (with LCN-RT: 4 key levels)
amount of access codes:	250 + serial number evaluation (transponders)
central access controls:	> 16 mio. Codes
transponders:	16 codes directy evaluable, any amount per LCN-GVS

Status display of the lamps

GREEN (flashes constantly):

nr. of flashes	<u>message</u>
1	normal operation
2	self testing-error, module is not programmed
3	bus error: module cannot send
4	(reserved)
5	module is in programming mode

RED (flashes only when occurrences are entered):

nr. of flashes	<u>message</u>
1	key was pressed, command was sent
2	different errors: please check with PC and the LCN-PRO
3	received telegram data was faulty
4	IR-telegram received from unauthorised sender
5	received illegal command (will be ignored)
6	error in the structure of a received command
7	parameter of a command exceeds permitted limit
8	command received cannot be carried out at the moment
cyclic (30s.)	periphery (T-,I-connection) was overloaded and/or short circuited, see page 11. Both LED's left and right side of the plug show switch and dimming conditions of the outputs, see page 1.

In the menus and help texts found in the programme LCN-PRO, further informations and properties of the module are available.

Without parameterization the module has no functions.

Because no access to the module is required when first programming, (no programming button, all functions are controlled over the bus), the module may be installed before being setting up. In this case the serial number of the unprogrammed module should be noted in the building plan, for better identification.

Important note:

Despite its extensive functionalities, the LCN system is simple to install and programme: It's all in the hands of the electrician. However a **training course is necessary for every electrician**, who installs this system. The direct users support over the telephone hotline, is only free of charge and open to installers who have taken part in a training course.

Sensor technology (T- & I-Port connections)

The red sensor plugged connections are only protected against overvoltage to a minor extent. A contact with the phase would lead to a destruction of the module.

The sensor terminals are on the N-potential, and are not decoupled from the power side. That is why you must make sure that a protection against contact is guaranteed for all users in every operating mode. All push-buttons from all the approved switch panel systems guarantee this protection.

The T-port connection can be used for additional actuators (LCN-R1U, LCN-DDR) if necessary. The same goes for the I-port connection, e.g. BEGARGBW lights.

Note: The plug connectors (T- & I-port connection) are protected against sliding off through a projection on the casing. To release the plug, please pull on the flat cable towards the top with moderate force. Please do not use force too much! try it out first of all on a non-installed module!

T-port connection

A maximum of 8 conventional push-buttons can be evaluated over a push-button converter LCN-T8. Apart from that there are a range of sensors, that can be connected alternatively, e.g. LCN-GT6/-GT12 or KNX-key sensors, etc..

Additionally, two electronic & 2 virtual outputs can be used per LCN-DDR, also 4 DALI groups can be controlled.

I-port connection

Here the push-button converter LCN-BT4R or the IR-receiver for the remote control can be connected, also additionally the binary sensor LCN-B3I, the LCN-GBL/-BMI and the temperature sensor LCN-TS. The LCN-GT2, -GT4D, -GT10D or the -GT3L can also be operated on the I-port. These devices can be connected parallel on the LCN-IV.

Alternatively to this, the I-port can serve as counter for pulses up to 1kHz, when no other periphery is connected, the maximal counter value is 30.000.

Notes about the sensor technology

The module monitors its sensor technology (T-, I-port) against overload and short circuit. Should the module for example be short circuited on its periphery due to a wiring fault, it will autonomously switch off the power supply to the sensors for around 4 seconds. If 2 further tests show the same fault, it will switch off for 8s + 30s and a status message will be sent to the bus:

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"Module reports overload/short circuit periphery."
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The red LED will also blink cyclical, as long as the sensor technology is switched off. .

In this case the connected sensor technology and wiring must be checked over. Even with these faults, the module will remain accessible and operational!

Technical data**Connection**

power supply:	230V AC \pm 15%, 50/60Hz (110V AC available)
power consumption:	<0,5W
power connection:	5 fine wires with wire end-sleeves 0,75mm ²
connection sensor side:	T- and I-port

Outputs

type:	2x relays, interlocked against each other
mech. life span:	10 ⁶ switching cycles
switching power:	300VA
inrush current:	max. 50A 8/10 μ s

Installation

operating temperature:	-10°C..+ 40°C
air humidity:	max. 80% rel., non condensing
environmental conditions:	use as stationary installation according to VDE632, VDE637
protection art:	IP20 installed in a fl-mounted box, only for stationary installation
dimensions (WxD):	50mm \varnothing x 22mm

Technical information and images are non binding. Changes are reserved.

Technical hotline: +49 5066 998844 or www.LCN.de