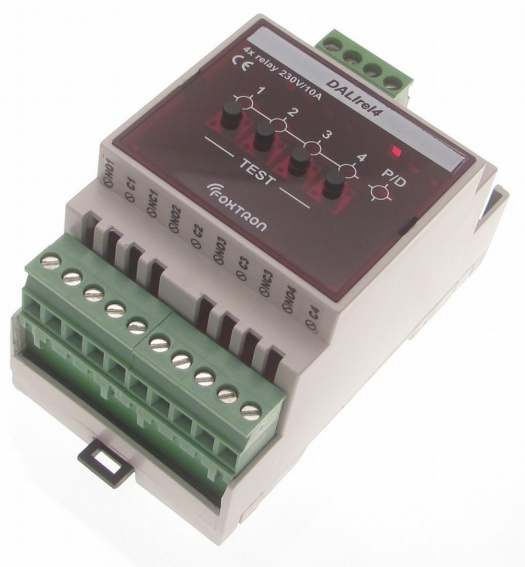


User manual

version 1.2

DALirel4



4 channel relay unit up to 10A

2 SPDT and 2 SPST relay

Controlled via DALI bus

Control according to ČSN EN 62386-208

Test buttons on the front panel

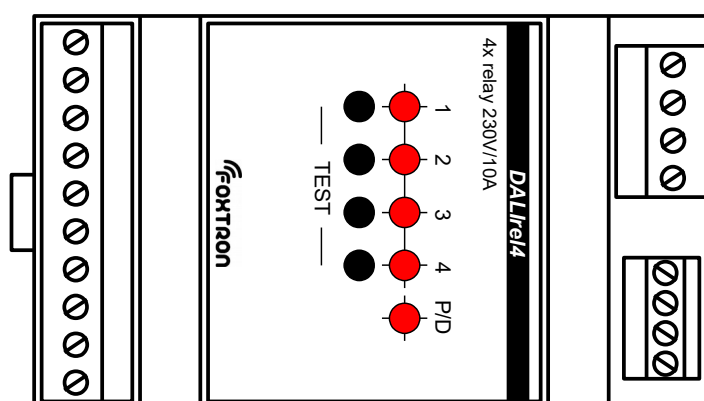
Indication of power supply and relay state

DIN rail mount (3 modules)

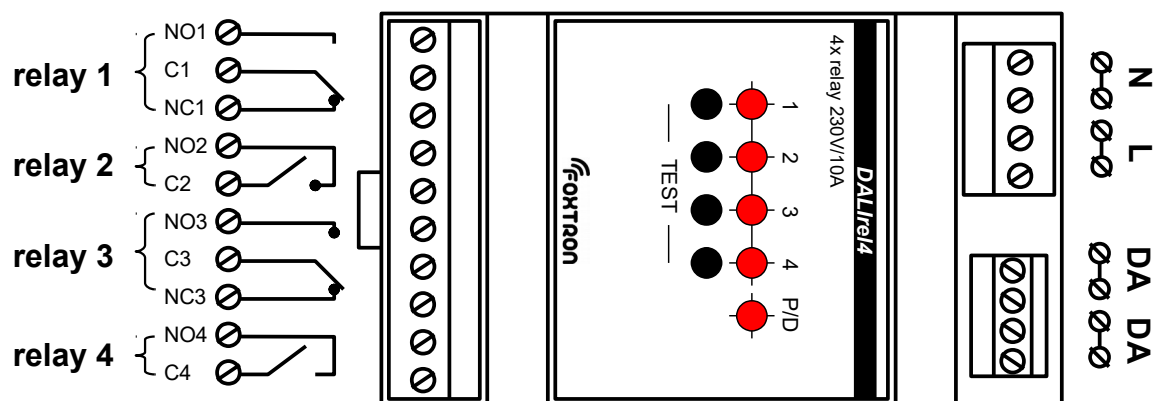
DALIREL4 is universal relay unit for DALI bus with 4 potential-free outputs which are independently adjustable. Two outputs are SPDT and two SPST. DALIREL4 allows 3 different modes: Normal, Blinds and Pulse. These modes are switched in the section “Advanced parameters”.

Technical specification			
bus		DALI	
Number of outputs		4	
Switching voltage		90 – 240	V
Maximal load	resistive	2300	W
	Linear fluorescent lamps	1200	W
	Compact fluorescent lamps	1000	W
	Wound transformers	500	VA
Power supply		~230 (50Hz)	V
consumption	Stand-by mode	< 0,15	W
	max (switching all outputs)	< 1	W
consumption (from DALI bus)		1,8	mA
Wires cross section (outputs, power supply)		Up to 2,5	mm ²
Wires cross section (DALI)		0,08 – 1,5	mm ²
Ingress protection rating		IP20	
Working ambient temperature		0 ÷ 50	°C
Storage temperature		-10 ÷ 50	°C
weight		170	g

Signalization	
1, 2, 3, 4	Signalization of switching given channel
P/D	Signalization of unit state and communication on DALI bus
	 Steady lighting signs input power supply and its correct connection Slight blinking (fast switching off) signs ongoing communication on DALI bus
	 simple flashing (switching on) in interval of 1 sec signs error in unit connection • DALI bus is not connected • inappropriate power supplier for DALI bus (e.g. Common voltage power source) • Mains voltage 230V connected to the DALI bus • low supply voltage
	 Double blinking in 1 sec interval signals that some of the channels is switched to the physical selection mode.



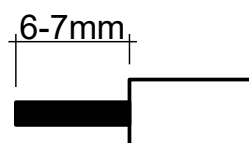
Terminals connection



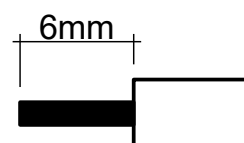
designation	description	
DA/DA	DALI bus, two inputs interchangeable	
N, L	supply ~230V (50Hz)	
NO1	relay 1	Normally opened contact
C1		Common wire for relay 1
NC1		Normally closed contact
NO2	relay 2	Normally opened contact
C2		Common wire for relay 2
NO3	relay 3	Normally opened contact
C3		Common wire for relay 3
NC3		Normally closed contact
NO4	relay 4	Normally opened contact
C4		Common wire for relay 4

Wire preparation:

outputs and power supply



DALI



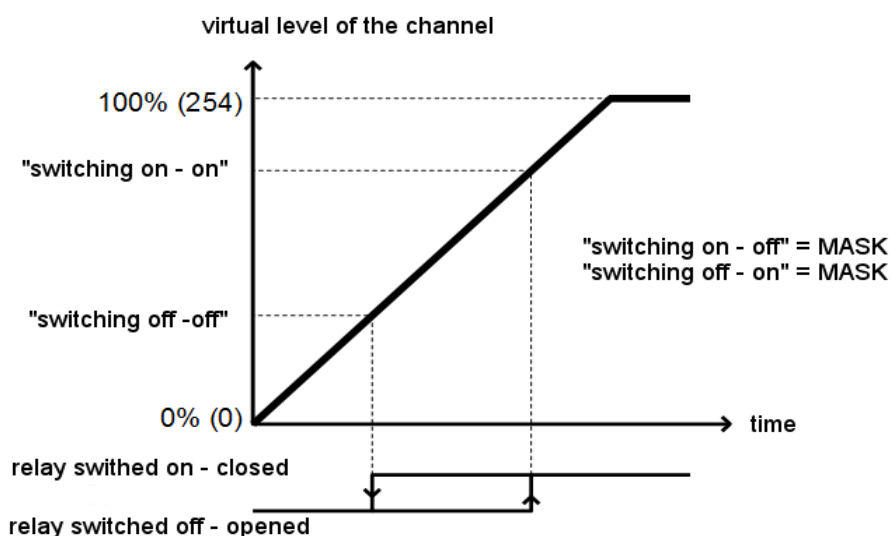
Function - Normal

DALirel4 unit contains 4 independent relays. Control is done via DALI bus according the ČSN EN 62386-208 norm. Controlling according this norm is similar as for dimmable outputs. Standard messages for dimmers are used („direct arc power“, „off“, „recall max level“, „up“, „on and step up“ etc.), with which the virtual dimmable level of each channels is set (relay). The value of this virtual channel level is converted on the output relay state thanks to 4 parameters which are stated in following table:

„switching on→on“	Critical level for switching relay on when increasing virtual level (up switch-on threshold)
„switching on→off“	Critical level for switching relay off when increasing virtual level (up switch-off threshold)
„switching off→on“	Critical level for switching relay on when decreasing virtual level (down switch-on threshold)
„switching off→off“	Critical level for switching relay off when decreasing virtual level (down switch-off threshold)

Those parameters can became value of 0 – 100% (0-254) or „MASK“ (255) which means that parameter is not used. Setting can be done with DALIconfig program which is downloadable for free on www.foxtron.cz

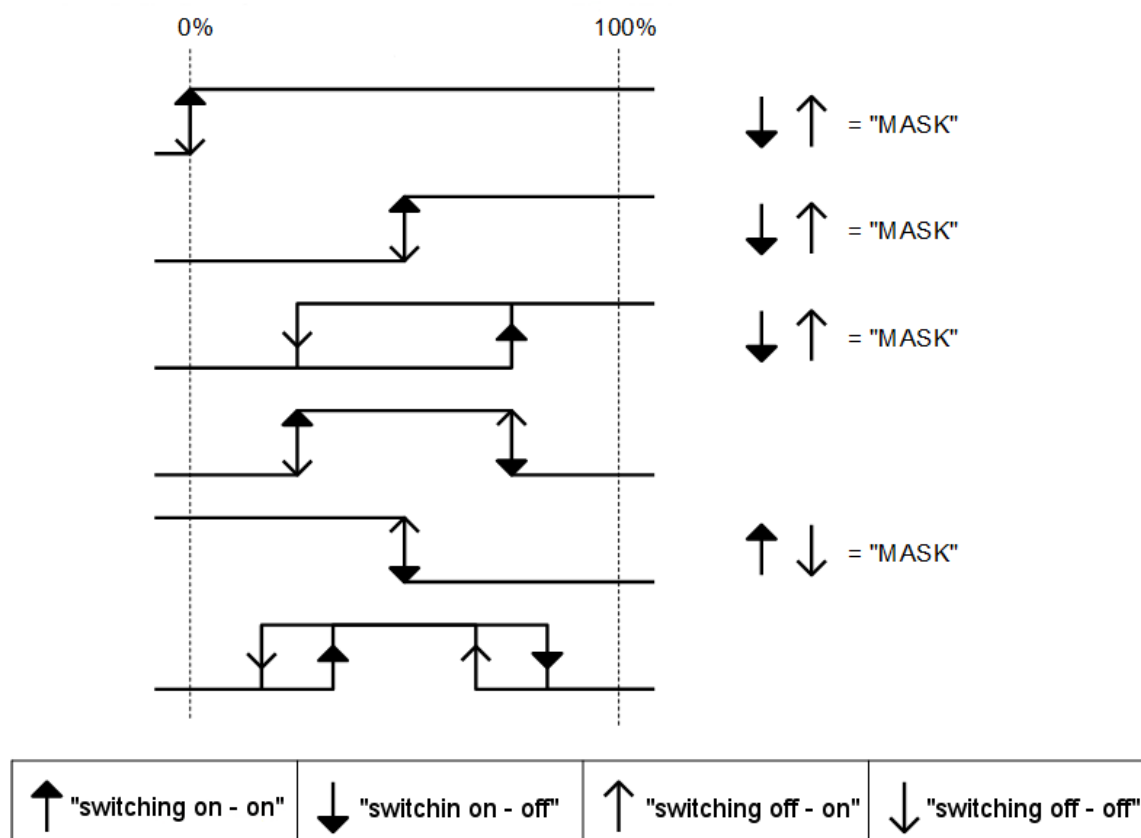
Dependence of the virtual level on switching relay is shown in following graph:



In the case of switching on will relay switch at the level „switching on→on“ and in the case of dimming will switch off at the level „switching off→off“. Values of level for „switching on→off“ and „switching off→on“ are in this case set to „MASK“, and therefore has no effect.

For zero value of virtual level is relay switched off except the case when parameter „switching on→on“ is deactivated (setting to „MASK“) - then is for zero value of virtual level whole relay switched on.

Examples of settings



Physical selection mode

On the front panel is located test button for every channel. With short press is relay switched on or off. In the case of change in the virtual level for relevant relay from DALI bus is physical selection mode canceled.

Function - Blinds

This function allows you to control motor blinds, canvas, etc. When this function is activated, the first output is combined with the second output and the third output is connected with the fourth output. The unit can thus control 2 independent blinds. Odd outputs always change direction (relay is switching), even outputs pin the drive. This prevents a change of direction while the engine is running (and thus destroys the engine). It is not necessary to activate this function for all 4 outputs and it is possible to combine it with Normal function. For example, only the first two outputs are in the Blinds mode and the second two outputs are in the Normal mode. The blind mode is always set to one output and the other is assigned automatically.

Function – Pulse

This function is not yet implemented. If you need to make a pulse, you have to send command „Recall max level“ and command „Direct 0“ to the address of the relay. Fade time in command „Direct 0“ sets the length of the pulse.

Dimensions (in mm)

