INSTRUCTION MANUAL

Channel relay KR 461

Certification of the Producer

STANDARDS

The Channel Relay KR 461 has been developed and produced in accordance with the EU Standards.
73 / 23 / EWG
89 / 336 / EWG
1999 / 5 / EWG

CE

References to the User's Manual

1. The information in this User's Manual can be changed at any time without previous notice. The present version can be downloaded under www.mobatime.com.
2. This User's Manual has been composed with utmost care, in order to explain all details in respect of the operation of the product. Should you, nevertheless, have questions or discover errors in this Manual, please contact us.
3. We do not answer for direct or indirect damages, which could occur, when using this Manual.
4. Please read the instructions carefully and start the setting-up of the product, only once you have correctly understood all information for the installation and of the operation.
5. The installation must only be carried out by skilled staff.
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Content

1 Introduction

1.1 Description

The channel relay KR 461 is a switch relay to operate with a MOBALine master clock.
It executes the switch commands, which are sent out from the master clock over MOBALine.
For test purposes the relay can be manually controlled by a small toggle switch.

The channel address will be set on a DIP switch (1 – 63).

Two LEDs serve as state display (MOBALine and relay situation).

1.2 Product table

Product range for switching programs and relays:

Art.No.:	**Type:**	**Description:**
203007	KR 461	Channel relay with one relay
35359	KR 465	Channel relay box with 5 relays
700081	Suppressor	Suppressor RC-element 0.1µF / 100 Ohm 250 VAC
36520	Switch Editor	Switching program software for Windows
202395	Switch Editor Ud	Switch Editor Update to newest version
201672	ETC 14	MOBALine master clock with switch program function (4 int. relays)
201673	ETC 24	MOBALine master clock with switch program function (4 int. relays)
Various	CTC	Modular master clock with switch program function
Various	MTC	Modular time keeping station with switch program function

2 Function description

2.1 Switching commands

The following switching commands can be programmed on the master clock:

- Switch functions: ON and OFF commands
- Signal function: Start every minute, duration 1 .. 99 s

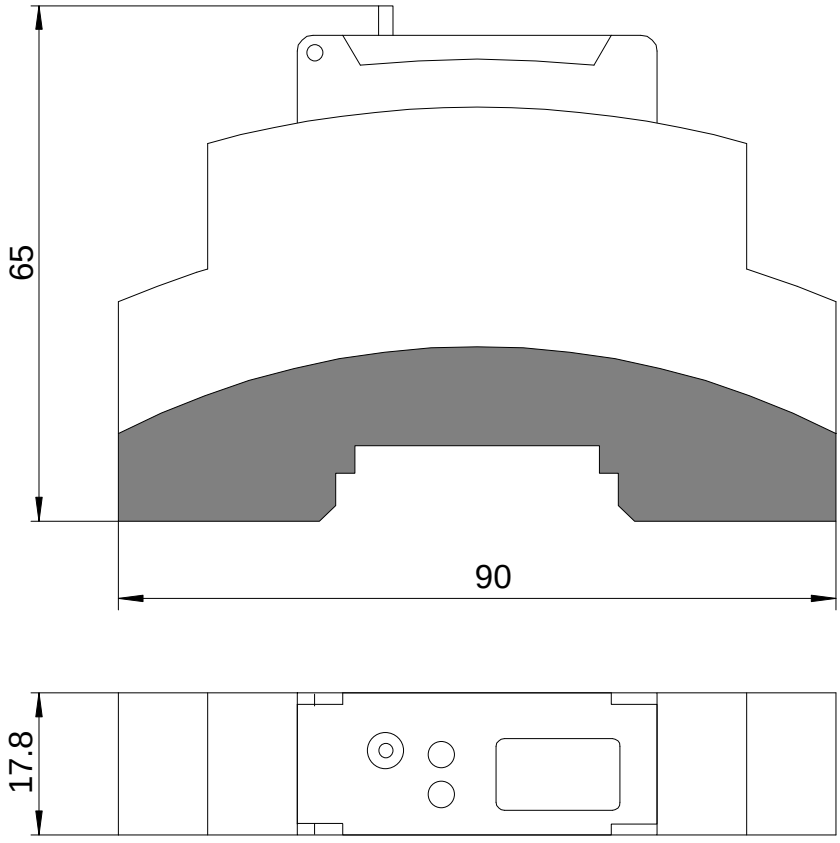
For reasons of an ON or OFF command the relay can only change its state every minute.

The signal function can start every minute only as well. The switching off is however dependent on the signal duration.

2.2 Dimensions / Installation

The KR 461 is installed in a white and black housing 17.8x90x65 mm. The inscriptions on the housing inform on the in- and outputs as well as on the operation and display elements.

The KR 461 can be clicked on a DIN bar and can be installed in any electro-cupboard. The dimensions correspond to an electro-installation device as for inst. a wire protection switch.

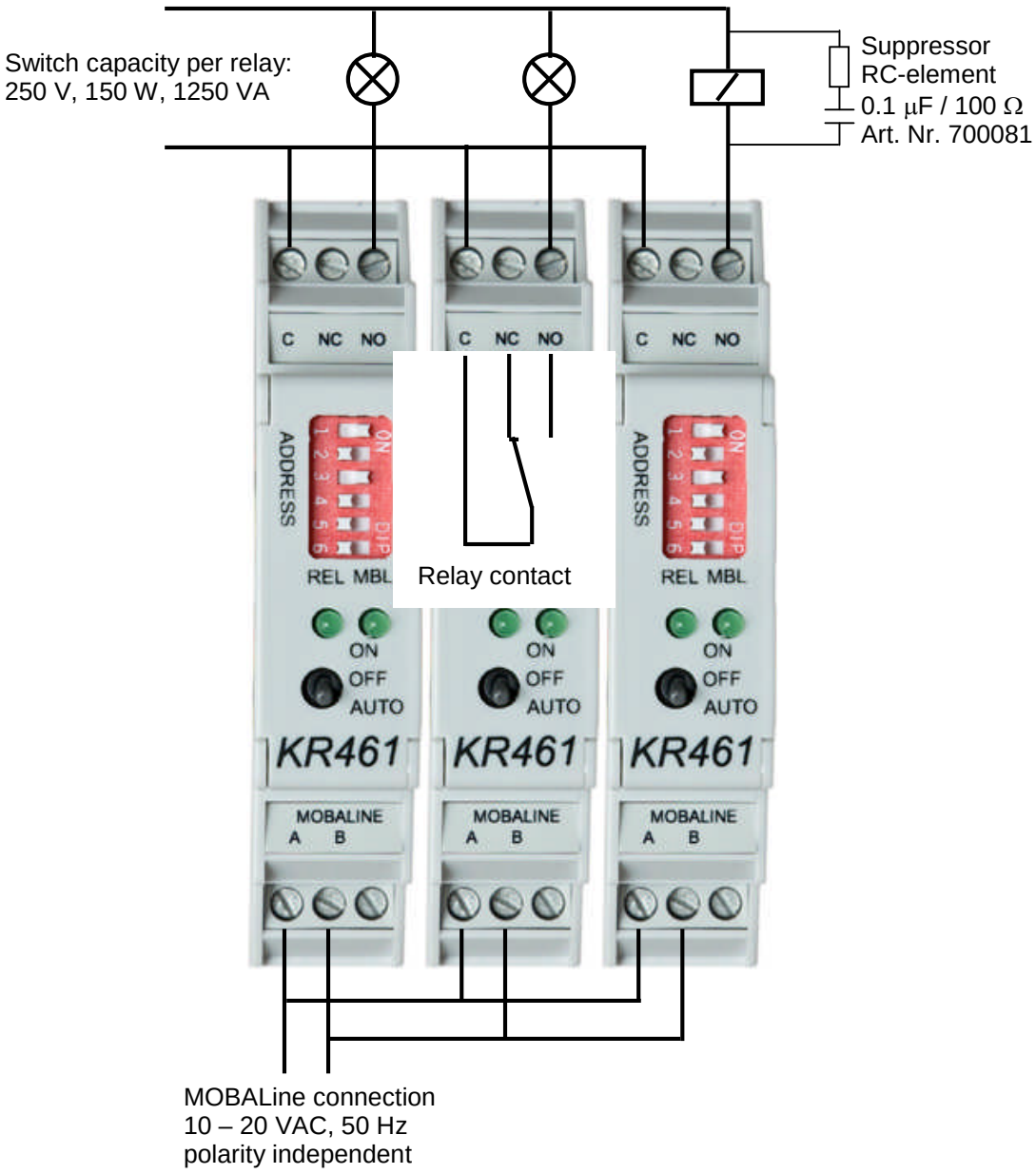


2.3 Connections / Power supply

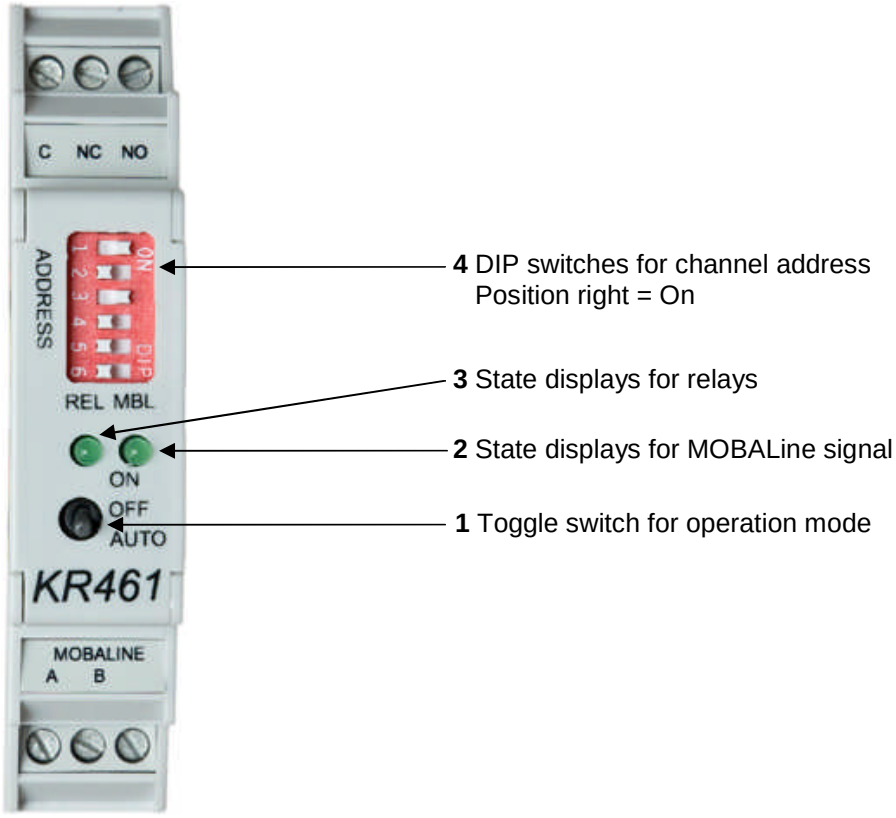
The KR 461 will be connected directly on a two-wire MOBALine line and will be supplied by this line as well. The polarity is of no importance.

The output is the switch-over contact of the relay.
The maximum switching load is: 250 VAC / 1250 VA or 250 VDC / 150 W.

Attention: In case of big coils (inductivities) as switching load, a suppressor element must absolutely be used, otherwise the relay or the MOBALine master clock can be destroyed (see chapter 1.2).



2.4 Operation and Display elements



1 Operation mode Selection switch

Toggle switch position:	**Effect:**
AUTO	Switch commands are taken over from the master clock via MOBALine and executed.
OFF	Switch relay is always switched off (reaction time max. 5s). Switch commands from the master clock are ignored.
ON	Switch relay is always switched on (reaction time max. 5s). Switch commands from the master clock are ignored.

2 State disply for relays:

LED:	**Meaning:**
Permanently on	Relay on
Off	Relay off

3 State display for MOBALine signal:

LED:	**Meaning:**
Permanently on	Valid MOBALine signal found, power supply present
Off	No valid MOBALine signal readable

4 DIP-Switch positions for channel addresses:

Switch:	State:	Function:
1	Off	Choice of channel address. Significance 0
	On	Choice of channel address. Significance 1
2	Off	Choice of channel address. Significance 0
	On	Choice of channel address. Significance 2
3	Off	Choice of channel address. Significance 0
	On	Choice of channel address. Significance 4
4	Off	Choice of channel address. Significance 0
	On	Choice of channel address. Significance 8
5	Off	Choice of channel address. Significance 0
	On	Choice of channel address. Significance 16
6	Off	Choice of channel address. Significance 0
	On	Choice of channel address. Significance 32

Remark: Should the address 0 be set, the relay is out of service and switch commands from the master clock are ignored.

Remark: Several relays can be set to the same address, if they shall show the same behaviour.

Examples for channel settings on different channel relays:

Address Channel		Function	Address Channel		Function
01	X	ETC Ground Floor Door control Main Entrance	33		
02		Illumination Entrance Hall	34		
03			35		
04			36		
05			37		
06			38		
07			39		
08			40	X	KR 465 / 2 Control cabinet production Illumination stairway
09			41		Illimination break room
10	X	KR 465 / 1 Control cabinet 1st floor Illumination corridor 1st floor west	42		Break bell
11		Illumination corridor 1st floor east	43		Entrance doors production
12		Fire protection doors 1st floor	44		
13		Fax, printer 1st floor	45		
14			46		
15			47		
16			48		
17			49		
18			50	X	KR 461 / 3 Control cabinet 2nd floor Outdoor illumination
19			51		
20	X	KR 461 / 1 Control cabinet 2nd floor Illumination corridor 2nd floor west	52		
21	X	KR 461 / 2 Control cabinet 2nd floor Illumination corridor 2nd floor east	53		
22			54		
23			55		
24			56		
25			57		
26			58		
27			59		
28			60		
29			61		
30			62		
31			63		
32			64		

Basis address KR 465 No. 2
5 Channels are occupied.

5 Channels in KR 465 No. 2

Address KR 461 No. 3

2.5 Connection page

Address Channel	Function	Address Channel	Funktion
01		33	
02		34	
03		35	
04		36	
05		37	
06		38	
07		39	
08		40	
09		41	
10		42	
11		43	
12		44	
13		45	
14		46	
15		47	
16		48	
17		49	
18		50	
19		51	
20		52	
21		53	
22		54	
23		55	
24		56	
25		57	
26		58	
27		59	
28		60	
29		61	
30		62	
31		63	
32		64	

3 Technical Data

3.1 Overview

Output / Relay contact:	1 Switch-over contact Max. switch load: 250 VAC / 1250 VA or 250 VDC / 150 W.
Input:	MOBALine
Micro controller:	8-Bit Single Chip RISC controller
Operation elements:	Toggle switch for operation mode (reaction time max. 5s): ON: Relay permanently on OFF: Relay permanently off AUTO: Relay controlled by master clock 6 x DIP-Switches for address setting (Channel number 1 .. 63)
Display elements:	Green state LED for relay: ON = Relay on Green LED for MOBALine: ON = MOBALine signal OK
Power supply:	10 V..20 V, 50 Hz, from MOBALine
Current consumption:	< 5 mA
Time keeping / Switch condition:	If no further MOBALine telegrams are received, the present condition will be maintained
Accuracy:	Deviation for switch commands <+/-50 ms
Environmental influences:	-30°..+70°C, 10-90% relative humidity, without condensation IP 20
Housing:	Plastic, 17.8 x 90 x 65 mm (W x H x P)
Connections:	At the bottom: MOBALine A, B: MOBALine signal, polarity independent, max. 1.5 mm^2 At the top: Relay contact C: Common = Common connection NC: Normal close = Opening contact NO: Normal open = Closing contact
Installation:	On DIN / Standard rails of following types: -NS 35 (35 x 15) as per DIN EN 60715 (DIN EN 50022) -NS 35 (35 x 7.5) as per DIN EN 60715 (DIN EN 50022)

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