



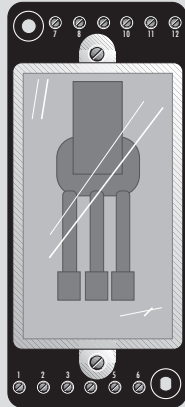
Electromechanical Latching Relays

MSP 33, MSP 34, MSP 43 for single voltage

Function: latching relay

**Contact equipment: MSP 33 = 3 changeover
MSP 34 = 4 changeover
MSP 43 = 3 changeover**

MSP 33, ...



General

Latching relays (see page M 5/3).

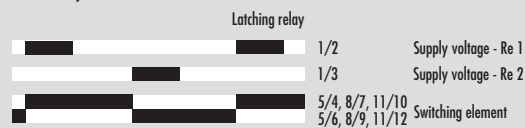
Function

The latching relays consist in main of two separate, mechanically interlocked solenoid systems. Upon momentary or continuous energization of the solenoid system (Re1), the contacts with which it is equipped, go into the active position. At the same time, the pawls mounted on the relay armature, interlock so that the contacts retain their active position even in the event of a voltage interruption or failure. When the solenoid system (Re2) which is not equipped with contacts is energized, the interlocking is released and the contacts revert into their off-position. If the coils of the AC models are energized simultaneously, the contacts maintain their active position. As opposed to this, the coils of the DC models must not be energized at the same time. Both solenoid systems are de-energized by an internal contact immediately following the locking action, so that if both solenoids are continuously energized, a continuous changeover action of the contacts will result.

Function Diagram

FD 0022

MSP 33, ...



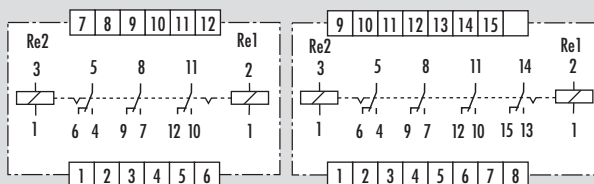
Connection Diagram

MSP 33, MSP 43

KS 5018/3

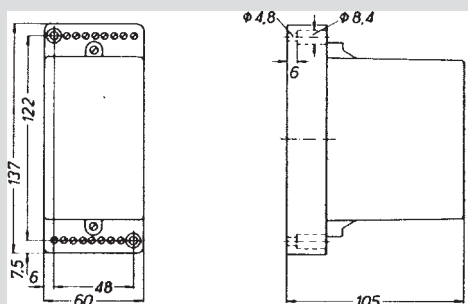
MSP 34

KS 5019/3



Dimensions

M 1-11



Product Description

The latching relays MSP 33, MSP 34 and MSP 43 are available in the following voltages:

Type	Standard voltage	Special voltage	Price Code
MSP 33	24 V AC 110 V AC 230 V AC 240 V AC 50 or 60 Hz	42 V AC 50 or 60 Hz	M 5/17.1
MSP 34	24 V AC 110 V AC 230 V AC 240 V AC 50 or 60 Hz	42 V AC 50 or 60 Hz	M 5/17.2
MSP 43	24 V DC 110 V DC 220 V DC	48 V AC 60 V DC	M 5/17.3



Electromechanical Latching Relays

TECHNICAL DATA

FUNCTION according to DIN VDE 0435 Part 110:04.89

Point 2.4

Function display
Function diagram

POWER SUPPLY

Rated voltage U_N	V AC
Rated voltage U_N	V DC
Rated consumption for Re1 at 50 Hz and U_N (AC) switching on	VA
Rated consumption for Re1 at 50 Hz and U_N (AC) switching on	W
Rated consumption for Re1 at 50 Hz and U_N (AC) holding	VA
Rated consumption for Re1 at 50 Hz and U_N (AC) holding	W
Rated consumption for Re2 at 50 Hz and U_N (AC) switching on	VA
Rated consumption for Re2 at 50 Hz and U_N (AC) switching on	W
Rated consumption for Re2 at 50 Hz and U_N (AC) holding	VA
Rated consumption for Re2 at 50 Hz and U_N (AC) holding	W
Rated consumption Re 1 DC	W
Rated consumption Re 2 DC	W
Rated frequency	Hz
Operating voltage range	

TIME CIRCUIT

Time setting/Number of time ranges	
Available time ranges	
Recovery time	
Minimum switch-ON time	ms
Release value	% U_N
Permissible parallel load	
Internal rectifier	

OUTPUT CIRCUIT

Contact equipment	
Contact material	
Available modifications	
Switching voltage U_n	V AC/DC
Maximum continuous current I_n	A
Application category according to EN 60947-5-1:1991	
Permissible switching frequency	switching cycles/h
Mechanical service life	switching cycles
Response time	ms
Release time	ms

GENERAL DATA

Creepage and clearance distances between circuits according to DIN VDE 0110-1:04.97: rated surge voltage	kV
Over voltage category	
Contamination level	
Design voltage	V AC
Test voltage U_{eff} 50 Hz acc. to DIN VDE 0110-1, Table A.1	kV
Protection class housing/terminals acc. to DIN VDE 0470 Sec. 1:11.92	
Radiated noise	
Noise immunity	

Ambient temperature, working range	°C
Dimensions	

Connection diagram	
Weight	kg
Accessories	
Approvals	

GENERAL TECHNICAL SPECIFICATIONS

MSP 33, MSP 34

Electromechanical latching relay for single voltage
Bistable relay
-
FD 0022

24 42 110 230 240

	ca. 18
	ca. 6,5
	ca. 5,2
	ca. 1,8
	ca. 10,5
	ca. 1,8
	ca. 3
	ca. 1

50 or 60
0,8 to 1,1 x U_N

-/-
-
-
-
≥ 15
yes
no

3 changeover for MSP 33,
4 changeover for MSP 34
Ag Cd O
Ag Pd 70/30*
400/400
5
AC-15 U_e 230 V AC, I_e 2 A
DC-13 U_e 24 V DC, I_e 2 A
3600
10 x 10⁶
≤ 20
≤ 25

5
III
3 outside, 2 inside
400
2,68
IP 30/IP 20
EN 50081-1:03.93, -2:03.94
EN 50082-2:1995

- 10 to + 55
M 1-1 for MSP 33 as M 1-11, but with only 6 screws on each terminal connector
M 1-11 for MSP 34
KS 5018/3 MSP 33; KS 5019/3 MSP 34
0,6
-
page i.4

page i.5

*) Price: upon request

MSP 43

Electromechanical latching relay for single voltage
Bistable relay
-
FD 0022

24 48 60 110 220

	ca. 20
	ca. 6
	-

0,8 to 1,1 x U_N

-/-
-
-
-
≥ 15
yes
no

3 changeover
Ag Cd O
Ag Pd 70/30*
400/400
5
AC-15 U_e 230 V AC, I_e 2 A
DC-13 U_e 24 V DC, I_e 2 A
3600
10 x 10⁶
≤ 20
≤ 25

5
III
3 outside, 2 inside
400
2,68
IP 30/IP 20
EN 50081-1:03.93, -2:03.94
EN 50082-2:1995

- 10 to + 55
M 1-1 for MSP 43 as M 1-11, but with only 6 screws on each terminal connector
KS 5018/3
0,6
-
page i.4

page i.5

*) Price: upon request

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