

KDM 3-24

DC Motor control relay with brake function, DC 24 V 1 high side switch and 1 N-channel brake switch

Type: KDM 3-24/DC12-24V R

Solid state relay for DC-motor control and similar applications

1 high side + 1 N channel transistor switch

All overload and short circuit protected

Adjustable or disabled brake function by

external resistor or jumper

LED status indicator

Pluggable module

Maximum load **3 A / 32 V**

Outputs

Type: Power MOS FET

Max. switching current

Max. continuous current

Max. inrush current, 1 sec ²⁾

Switching voltage range

Max. Load

Thermal overload protection ²⁾

Over current limiting ²⁾

Clamp voltage

Max. inductive switch-off energy ²⁾

ON resistance @ 25 °C

Leakage current

Drive

High side

3 A

3 A (5 A) ¹⁾

20 A

10 ... 32 V

100 W

self restoring

typ. 35 A

typ. 58 V

1 Ws single pulse

≤ 50 mΩ

≤ 10 μA

Brake

N-channel

3 A, 10 sec

2 A

7

10 ... 32 V

65 W

self restoring

7 ... 14 A

60 ... 70 V

0.4 Ws single pulse

≤ 100 mΩ

¹⁾ Repetitive operation: When the ratio t_{pulse} / t_{cycle} is a low value then the current can be increased up to 5 A @ $T_A \leq 50$ °C.

²⁾ Not for continuous repetitive operation

Control input $V_N =$

Operating voltage range

Release voltage

Typical input current @ 12 / 24 V

Power consumption @ 12 / 24 V

Polarity reversal

DC 12-24 V

9 ... 28 V

≤ 2 V

2 / 6.5 mA

25 / 160 mW

protected

General Specifications

Ambient temperature storage/operation

ON delay

Release time

Ingress protection degree

Housing material

Weight

-40 ... +85°C / -25 ... +60°C

1 ms

1 ms

IP 40 when the device is plugged in

Lexan

27 g

Standard types

DC 12-24

KDM3-24/DC12-24V R

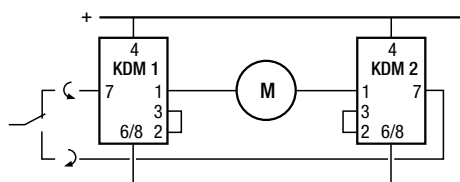
Accessories

Socket:

S7-C

Application example

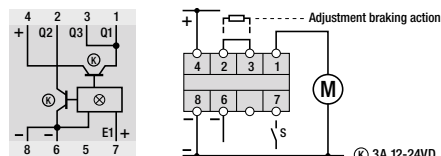
Four quadrant (forward / reversed) motor control



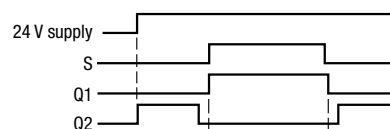
Operating with brake resistors (on 2-3) is not recommended in this application.



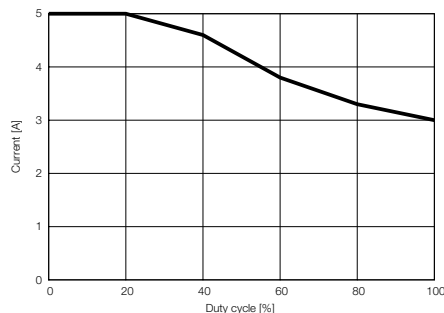
Connection diagram



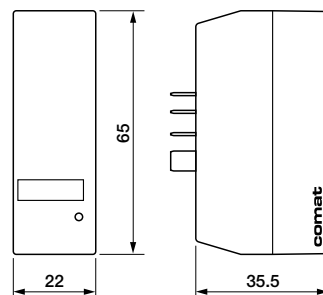
Function diagramm



Output current vs. duty cycle



Dimensions [mm]



Technical approvals, conformities

