

DATA SHEET

Article number : 09980425

installation contactors
HS 2-024AC/24-13
with coil voltage 24 V AC



Function

Installation contactors are electromagnetically operated switches. When a control current flows through the magnetic coil, the magnetic pull closes a main circuit. The switch-on position is maintained as long as the control current is flowing. If the control current is interrupted, a spring forces the contacts to return to their initial position. This construction makes it possible for contactors to ensure galvanic isolation between the control circuit and the switched circuit whilst simultaneously allowing high currents to be switched. Installation contactors are only partly intended for disconnection from the mains, they must be protected against overload and short circuits by upstream protective devices. The HS low-noise version for installation in distributor boards are characterised by low-noise switching operations, by versatility due to their utilization categories and by their long mechanical and electrical service life. The magnetic coil of this series is suitable for continuous operation (100% duty cycle). This low-noise version is suitable for use in industry and workshops. This low-noise design is suitable for use in workshop and industrial applications.

Features

wide range of different contacts, high electrical and mechanical endurance, suitable auxiliary switch and seal cap available

Mounting

quick fastening to mounting rail, installation position: see drawing

Applications

Installation contactors can be used in a variety of ways. The low-noise version is suitable for industry and workshops, whilst the nonoise version is suitable for hotels, offices and residential areas. They take on the switching of incandescent lamps, fluorescent lamps, transformers for halogen low-voltage lamps, mercury vapour high-pressure lamps (HQL, HPL), metal halide lamps (HQI, HPI), sodium vapour, low and high-pressure lamps, storage heaters and drives (motors).

Notes

The names of devices in this family contain both the rated current (first pair of digits) and the contact variant (last pair of digits): For example, a HS 25-31 has a rated current of 25 A, three NOCs and one NCC, At ambient temperatures of 40°C and higher, using the DHDS spacer is recommended, The HS 1 contact is 1 module width wide, and thus the HS 2 and HS 3 are 2 and 3 module widths wide.

Accessories

spacers DHDS, auxiliary switches HSH, seal caps HSP

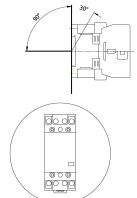
Technical data

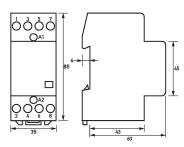
Series	HS 2
	control input
Rated voltage (AC)	24 V
Rated frequency	50 Hz/60 Hz
Rated power (switch on)	20 VA 25 VA
Rated power (retaining)	4 VA 6 VA
	load circuit
Specification	switching contact
min. Contact opening	3 mm
Contact assignment	3 NC/1 NO
Rated voltage (AC)	400 V
Rated current (AC)	24 A
Rated insulation voltage	440 V
Switching frequency	max. 300 / h
Allowed utilization category	AC-1, AC-2, AC-3
Power dissipation per pole AC-1	2 W
Overvoltage class	I, II, III
Rated short-circuit current "r"	3 kA

Rated short-circuit current "Iq"	3 kA
Rated voltage AC-1 (fix)	230 V
max. Rated power AC-1 (11x)	230 V 5.5 kW
max. Rated power AC-1 230 V	
	14 kW
Rated voltage AC-3 one-phase (fixed)	230 V
Rated voltage AC-3 3-phase (fix)	230 V, 400 V
max. Rated power AC-3 400 V	3 kW
max. Rated power glow lamps	3000 VA
max. Rated power fluorescent lamp	1360 VA
compensated	
max. Rated power fluorescent lamp not compensated	1190 VA
max. Rated power fluorescent lamps duo-	2552 VA
switching	
max. Inrush current LED	195 A
Contact endurance AC-1	100000 switching cycles
Contact endurance AC-3	150000 switching cycles
Duration of light arcs	10 ms 15 ms
Switching delay, open	6 ms 12 ms
Switching delay, close	7 ms 16 ms
quiet design	false
40.00 acaign	screw-type terminal M3.5 top and bottom (load circuit)
Allowed types of wires	aluminium conductor, copper conductor, solid conductor, flexible conductor
Connection C1 Maximum number of	1
	1
conductors per terminal	
Cross section solid	1-wire: 1.5 mm ² 10 mm ²
Connecting capacity flexible	1-wire: 1.5 mm ² 6 mm ²
Cross section flexible with ferrule	1.5 mm ² 6 mm ²
Cross section stranded	1-wire: 1.5 mm ² 10 mm ²
Tightening torque	o.8 Nm 1.4 Nm
	screw-type terminal M ₃ top and bottom (control input)
Allowed types of wires	aluminium conductor, copper conductor, solid conductor, flexible conductor
Connection C ₂ Maximum number of	1
conductors per terminal	
Cross section solid	1-wire: 0.75 mm ² 2.5 mm ²
Connecting capacity flexible	1-wire: 0.5 mm ² 2.5 mm ²
Cross section flexible with ferrule	0.5 mm ² 1.5 mm ²
Cross section stranded	1-wire: 0.75 mm ² 2.5 mm ²
Tightening torque	0.6 Nm 1.2 Nm
	General data
Duty cycle	General data continuous operation (Duty cycle < 100 %)
Duty cycle Operating position	continuous operation (Duty cycle ≤ 100 %)
Operating position	continuous operation (Duty cycle ≤ 100 %) optional
Operating position Mechanical endurance	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles
Operating position Mechanical endurance Electrical endurance	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles
Operating position Mechanical endurance Electrical endurance Storage temperature	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles -40 °C 70 °C
Operating position Mechanical endurance Electrical endurance Storage temperature Ambient temperature	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles -40 °C 70 °C -40 °C 40 °C
Operating position Mechanical endurance Electrical endurance Storage temperature Ambient temperature Ambient temperature	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles -40 °C 70 °C -40 °C 40 °C Max. 60°C with spacer
Operating position Mechanical endurance Electrical endurance Storage temperature Ambient temperature Ambient temperature Housing type	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles -40 °C 70 °C -40 °C 40 °C Max. 60°C with spacer distribution board housing
Operating position Mechanical endurance Electrical endurance Storage temperature Ambient temperature Ambient temperature Housing type Installation type	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles -40 °C 70 °C -40 °C 40 °C Max. 60°C with spacer distribution board housing Mounting rail (35 mm)
Operating position Mechanical endurance Electrical endurance Storage temperature Ambient temperature Ambient temperature Housing type Installation type Housing material	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles -40 °C 70 °C -40 °C 40 °C Max. 60°C with spacer distribution board housing Mounting rail (35 mm) thermoplastic
Operating position Mechanical endurance Electrical endurance Storage temperature Ambient temperature Housing type Installation type Housing material Protection class	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles -40 °C 70 °C -40 °C 40 °C Max. 60°C with spacer distribution board housing Mounting rail (35 mm) thermoplastic IP20
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Operating position Mechanical endurance Electrical endurance Storage temperature Ambient temperature Housing type Installation type Housing material Protection class Width Height	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles -40 °C 70 °C -40 °C 40 °C Max. 60 °C with spacer distribution board housing Mounting rail (35 mm) thermoplastic IP20 36 mm 85 mm
Operating position Mechanical endurance Electrical endurance Storage temperature Ambient temperature Housing type Installation type Housing material Protection class Width Height Depth	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles -40 °C 70 °C -40 °C 40 °C Max. 60°C with spacer distribution board housing Mounting rail (35 mm) thermoplastic IP20 36 mm 85 mm 65 mm
Operating position Mechanical endurance Electrical endurance Storage temperature Ambient temperature Housing type Installation type Housing material Protection class Width Height Depth Installation depth	continuous operation (Duty cycle ≤ 100 %) optional min. 10 · 10 ⁶ switching cycles min. 1000000 switching cycles -40 °C 70 °C -40 °C 40 °C Max. 60 °C with spacer distribution board housing Mounting rail (35 mm) thermoplastic IP20 36 mm 85 mm 65 mm 60 mm
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Degree of pollution

Dimensions





Dimensioned drawing installation contactors HS 2-024AC/24-13

Wiring example



Wiring example installation contactors HS 2-024AC/24-13