DATA SHEET

installation contactors

HS 3-024AC/40-31

with coil voltage 24 V AC

Article number 09980415

Internetlink

Function

Installation contactors are electromagnetically operated switches. If a control current flows through the magnetic coil, the main circuit closes the magnetic energiser. As long as the control current flows, the switch-on position is maintained. If the control current is interrupted, a spring forces the disconnection o return of the contacts to their original position. This design means that contactors ensure a galvanic separation between the control circuit and the switched circuit whilst simultaneously allowing high currents to be switched. Installation contactors are only designed in a limited way for release and must be protected against overload and short-circuits by upstream protective devices. Installation contactors in the HS family for installation in distribution boards are extremely quiet and have very low-noise switching processes, are highly versatile thanks to their utilisation categories, and have prolonged mechanical and electrical service life. The magnetic coil in this family is suitable for continuous operation (100 % duty cycle). 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, any installation position

Applications

Installation contactors can be used in a variety of ways. The low-noise version is suitable for industry and workshops, whilst the no-noise 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

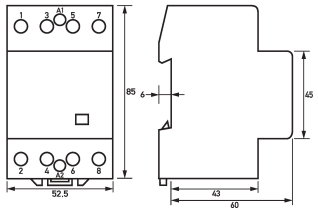
Technical Data

Technical Data	HS 3-024AC/40-31
Series	HS 3
	control input
Rated voltage (AC)	24 V
Rated frequency	50 Hz/60 Hz
Rated power (switch on)	33 VA ... 45 VA
rated power (retaining)	6 VA ... 8 VA
	load circuit
Specification	switching contact
min. Contact opening	3 mm
contact assignment	1 NC/3 NO
Rated voltage (AC)	400 V
Rated current (AC)	40 A

Technical Data	HS 3-024AC/40-31
Rated insulation voltage	440 V
Switching frequency	max. 600 / h
Allowed utilization category	AC-1, AC-2, AC-3
Power dissipation per pole AC-1	3 W
Overvoltage class	I, II, III
rated short-circuit current "r"	3 kA
rated short-circuit current "Iq"	10 kA
Rated voltage AC-1 (fix)	230 V
max. Rated power AC-1 230 V	9 kW
max. Rated power AC-1 400 V	27.5 kW
Rated voltage AC-3 one-phase (fixed)	230 V
Rated voltage AC-3 3-phase (fix)	230 V, 400 V
max. Rated current AC-3	27 A
max. Rated power AC-3 400 V	12.5 kW
max. rated power glow lamps	6000 VA
max. Rated power fluorescent lamp compensated	2805 VA
max. Rated power fluorescent lamp not compensated	2975 VA
max. rated power fluorescent lamps duo-switching	5280 VA
max. inrush current LED	420 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 ... 13 ms
Switching delay, close	11 ms ... 15 ms
quiet design	false
	screw-type terminal M5 top and bottom (load circuit)
Allowed types of wires	aluminium conductor, copper conductor, solid conductor, flexible conductor
Connection C1 Maximum number of conductors per terminal	1
Cross section solid	1-wire: 2.5 mm² ... 25 mm²
Connecting capacity flexible	1-wire: 2.5 mm² ... 16 mm²
Cross section flexible with ferrule	2.5 mm² ... 16 mm²
Cross section stranded	1-wire: 2.5 mm² ... 25 mm²
Tightening torque	2.5 Nm ... 3 Nm
	screw-type terminal M3 top and bottom (control input)
Allowed types of wires	aluminium conductor, copper conductor, solid conductor, flexible conductor
Connection C2 Maximum number of conductors per terminal	1
Cross section solid	1-wire: 0.75 mm² ... 2.5 mm²
Connecting capacity flexible	1-wire: 0.5 mm² ... 2.5 mm²
Cross section flexible with ferrule	0.5 mm² ... 1.5 mm²
Cross section stranded	1-wire: 0.75 mm² ... 2.5 mm²
Tightening torque	0.6 Nm ... 1.2 Nm
	General data
Duty cycle	continuous operation (Duty cycle ≤ 100 %)
Operating position	optional

Technical Data	HS 3-024AC/40-31
Mechanical endurance	min. 10 · 10⁶ switching cycles
Electrical endurance	min. 1 · 10⁶ switching cycles
Ambient temperature	Max. 60°C with spacer
Ambient temperature	-40 °C ... 40 °C
Housing type	distribution board housing
Installation type	Mounting rail (35 mm)
Housing material	thermoplastic
Protection class	IP20
Width	52.5 mm
Height	85 mm
Depth	65 mm
Installation depth	60 mm
Module widths	3
Design requirements/Standards	EN 60715, EN 60947-4-1, VDE 0660-102
Degree of pollution according to EN 60664	3

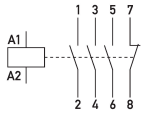
Dimensions



Dimensional drawing Group view

STEP file

Wiring example



Wiring diagram