

PRODUCT-DETAILS

# HF9-DOL-24VDC

## HF9-DOL-24VDC Electronic Compact Starter 24 VDC



### General Information

Extended Product Type	HF9-DOL-24VDC
Product ID	1SAT142000R1011
EAN	4013614515590
Catalog Description	HF9-DOL-24VDC Electronic Compact Starter 24 VDC

Long Description	<p>The HF-DOL-range is used for the direct-on-line start of motors and the switching of non-resistive loads. With contactor and overload relay functionalities integrated into one device, the results are faster wiring times and fewer faults. The range covers 0.6 A, 2.4 A and up to 9 A - for motors up to 3 kW – 500 V AC. The integrated electronic overload protection has a wide setting range that enables just three models to cover all requirements. Setting range of HF9-DOL-24VDC is 1.5 A to 9 A. The control supply voltage is 24 V DC. For the control and main connection points ABB offers screw connections. ABB also offers a HF-DOLE safety range with emergency stop function. This offers Safety Integrity Level 3 in accordance with functional safety standard IEC 61508-1 and Performance Level 'e' in accordance with ISO 13849-1. The safety range is ATEX-certified.</p>
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### Ordering

Minimum Order Quantity	1 piece
Customs Tariff Number	85371098
Product Main Type	HF
Product Name	Electronic Starter

## Popular Downloads

Instructions and Manuals	2CDC130014M0401
	2CDC130009M0401
	2CDC130013M0401
	2CDC130007M0401
	2CDC130015M0401
Dimension Diagram	1SAT100401F0001

## Dimensions

Product Net Width	22.5 mm
Product Net Height	99 mm
Product Net Depth / Length	114.5 mm
Product Net Weight	0.206 kg

## Technical

Standards	IEC/EN 60947-1 IEC/EN 60947-4-2 UL 60947-1 UL 60947-4-2
Function	Direct-on-line starter with overload protection
Utilization	Motor Protection
Rated Operational Voltage	Main Circuit 500 V AC
Operational Voltage	Maximum 550 V AC Minimum 42 V AC
Rated Frequency (f)	Main Circuit 50 Hz Main Circuit 60 Hz
Rated Control Supply Voltage ( $U_s$ )	24 V DC
Rated Input Voltage ( $U_{IN}$ )	Switching Threshold at Signal <0> -3 ... 9.6 V Switching Threshold at Signal <1> 19.2 ... 30 V
Rated Impulse Withstand Voltage ( $U_{imp}$ )	Main Circuit 6 kV
Rated Insulation Voltage ( $U_i$ )	500 V
	9 A
	6.5 A
Rated Control Supply Current ( $I_s$ )	0.04 A
Rated Uninterrupted Current ( $I_U$ )	9 A
Input Current	0.003 A
Switching Frequency	$\leq 2$ Hz 120 starts/min 7200 starts/h
Rated Operational Power AC-53a ( $P_e$ )	3 kW
Overvoltage Category	III

Overload Protection	Electronic overload protection
Setting Range	1.5 ... 9.0 A
Trip Class	class 10A
Number of Poles	3
Power Loss	Maximum 14.6 W Minimum 1.1 W
Number of Protected Poles	3
Mechanical Durability	10000 cycle
Electrical Durability	30000000 cycle
Delay Time (T)	Off, Maximum, Switched Off via Supply Voltage 500 ms Off, Typical, Switched Off via Control Input Voltage 30 ms Off, Typical, Switched Off via Supply Voltage 25 ms Off, Maximum, Switched Off with Pushbutton 3 second [unit of time] Off, Minimum, Switched Off with Pushbutton 0.5 second [unit of time]
Mounting on DIN Rail	TH35-15 (35 x 15 mm Mounting Rail) acc. to IEC 60715 TH35-7.5 (35 x 7.5 mm Mounting Rail) acc. to IEC 60715
Mounting Position	1
Connecting Capacity Control Circuit	Flexible with Ferrule 1/2x 1 ... 2.5 mm <sup>2</sup> Flexible 1/2x 1 ... 2.5 mm <sup>2</sup> Rigid 1x 0.5 ... 4 mm <sup>2</sup>
Connecting Capacity Main Circuit	Flexible with Ferrule 1x 2 ... 2.5 mm <sup>2</sup> Flexible 1x 2 ... 2.5 mm <sup>2</sup> Rigid 1x 2 ... 2.5 mm <sup>2</sup>
Recommended Screw Driver	Control Circuit M3 Main Circuit M3
Terminal Type	Screw Terminals
Tightening Torque	Control Circuit 0.5 ... 0.6 N·m Main Circuit 0.5 ... 0.6 N·m
Wire Stripping Length	Control Circuit 8 mm Main Circuit 8 mm
Response Time	Phase Asymmetry 33% 120 second [unit of time] Phase Asymmetry 67% 1.8 second [unit of time] Phase Failure 1.8 second [unit of time]
Pollution Degree	2
Phase Loss Sensitive	Yes
Degree of Protection	Housing IP20 Main Circuit Terminals IP20
Short-Circuit Current Rating (SCCR)	(500 V AC, 30 A Class J or CC) 100 kA

## Technical UL/CSA

Maximum Operating Voltage UL/CSA	Main Circuit 500 V AC
Horsepower Rating UL/CSA	Nominal Switching Performance Full Load (power factor = 0.4) 3 Hp Nominal Switching Performance Full Load (power factor = 0.8) 6.1 Hp
Full Load Amps Motor Use	6.5 A
Connecting Capacity Main Circuit UL/CSA	Flexible with Ferrule 1x 24 ... 14 AWG Flexible 1x 24 ... 14 AWG Solid 1x 24 ... 14 AWG
Connecting Capacity Control Circuit UL/CSA	Flexible with Ferrule 1x 24 ... 14 AWG Flexible 16-8 AWG

	Solid 1x 24 ... 14 AWG
Tightening Torque	Control Circuit 5 ... 7 in-lb
UL/CSA	Main Circuit 5 ... 7 in-lb

### Safety Information

Mean Time to Failure (MTTF)	43.3 year
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### Environmental

Ambient Air Temperature	Operation -25 ... +70 °C Operation Compensated -40 ... + 80 °C
Maximum Operating Altitude Permissible	Without Derating 2000 m
RoHS Status	Following EU Directive 2011/65/EU

### Certificates and Declarations

cUL Certificate	cUL E191658
Declaration of Conformity - CCC	2020970304003456
Declaration of Conformity - CE	1SAD938504-0195
Declaration of Conformity - UKCA	1SAD938501-1195

### Container Information

Package Level 1 Units	1 piece
Package Level 1 Width	150 mm
Package Level 1 Depth / Length	115 mm
Package Level 1 Height	34 mm
Package Level 1 Gross Weight	0.306 kg
Package Level 1 EAN	4013614515590

### Classifications

Object Classification Code	B
ETIM 6	EC001037 - Motor starter/Motor starter combination
ETIM 7	EC001037 - Motor starter/Motor starter combination
ETIM 8	EC001037 - Motor starter/Motor starter combination
eClass	V11.0 : 27370905
UNSPSC	39121521
IDEA Granular Category Code (IGCC)	4727 >> Motor starter controls
E-Number (Finland)	3707542

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## Categories

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Low Voltage Products and Systems → Control Products → Motor Controllers → Motor Controllers → Electronic Starters

