

HF9-ROLE-24VDC



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

General Information

Extended Product Type:	HF9-ROLE-24VDC
Product ID:	1SAT146000R1011
EAN:	4013614515538
Catalog Description:	HF9-ROLE Electronic Compact Starter 24 VDC
Long Description:	<p>The HF-ROLE-range is our safety range with emergency stop function. It's 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-ROLE-24 VDC 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. Safety Integrity Level 3 in accordance with functional safety standard IEC 61508-1 and Performance Level 'e' in accordance with ISO 13849-1 are certified. Also ATEX is certified.</p>

Ordering

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

Popular Downloads

Instructions and Manuals:	2CDC130007M0401
Instructions and Manuals (Part 2):	2CDC130006M0401
Dimension Diagram:	1SAT100402F0001

Dimensions

Product Net Width:	22.5 mm
Product Net Height:	99 mm
Product Net Depth:	114.5 mm
Product Net Weight:	0.289 kg

Technical

Standards:	IEC/EN 60947-1 IEC/EN 60947-4-2 IEC/EN 61508 ISO 13849 UL 60947-1 UL 60947-4-2
Function:	Reversed-on-line starter with electronic overload protection and emergency stop function
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
Rated Operational Current AC-51 (I_e):	9 A
Rated Operational Current AC-53a (I_e):	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:	≤ 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 (?):	Off, Maximum, Switched Off via Control Input Voltage 80 ms 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:	Position 1, load side bottom
Connecting Capacity Control Circuit:	Flexible with Ferrule 1/2x 1 ... 2.5 mm ² Flexible 1/2x 1 ... 2.5 mm ² Rigid 1x 0.5 ... 4 mm ²
Connecting Capacity Main Circuit:	Flexible with Ferrule 1x 2 ... 2.5 mm ² Flexible 1x 2 ... 2.5 mm ² Rigid 1x 2 ... 2.5 mm ²
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

Safety Information

Performance Level (PL):	Up to e
Safety Integrity Level (SIL):	3
Mean Time to Dangerous Failure (MTTF_d):	Motor Protection 447 year Safe Shutdown 517 year
Mean Time to Failure (MTTF):	39.3 year
Probability of Dangerous Failure per Hour (PFH_D):	3 hour
Diagnostic Coverage:	98.79 %

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
Ampere Rating UL/CSA:	6.5 A
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 UL/CSA:	Control Circuit 5 ... 7 in·lb Main Circuit 5 ... 7 in·lb

Environmental

Ambient Air Temperature:	Operation -25 ... +70 °C Operation Compensated -40 ... + 80 °C
RoHS Status:	Following EU Directive 2011/65/EU

Certificates and Declarations (Document Number)

ATEX Certificate:	1SAA918002-3901
CCC Certificate:	1SAA918005-3801
cUL Certificate:	cUL E191658
Declaration of Conformity - CE:	1SAD038501-0194
EAC Certificate:	1SAA918001-2701
Instructions and Manuals:	2CDC130007M0401
RoHS Information:	1SAD038501-0194

Container Information

Package Level 1 Units:	1 piece
Package Level 1 Width:	150 mm
Package Level 1 Length:	115 mm
Package Level 1 Height:	34 mm
Package Level 1 Gross Weight:	0.389 kg
Package Level 1 EAN:	4013614515538

Classifications

E-nummer:	3210500
ETIM 5:	EC001037 - Motor starter combination
ETIM 6:	EC001037 - Motor starter/Motor starter combination

ETIM 7:

EC001037 - Motor starter/Motor starter combination

eClass:

7.0 27370905

UNSPSC:

39121514

