

NOARK

Ex9QR5-90-6-D

Electronic soft-starter - 1720007 - Ex9QR5 - 90A - 200-690Vac

Electronic soft-starter - NOARK (Ex9QR5 series) - 90A rated current - 200Vac-690Vac rated input voltage - 100Vac-240Vac control voltage - 55kW (460Vac; mtr. rating; IEC) / 60HP (480Vac; mtr. rating; UL) rated power - equivalent to 1720007 / Ex9QR50906D / Ex9QR5906D

Additional information

The technical information provided in the datasheet is subject to change without notice. For confirmation, please contact NOARK's product support team.

Specifications

Primary brand	NOARK
Main function	Soft starter
Product series / family name	Industrial controls > Soft starters
Sub-range name	Ex9QR5 series
Functions	Electronic soft-starter Built-in signal relays (K1) -- Bypass relay Built-in signal relays (K2) -- Programmable status relay Built-in signal relays (K3) -- Programmable fault relay Optional I/O (IN1) -- Programmable input terminal Optional I/O (IN2) -- Programmable input terminal Cooling fan
Design	Without bypass contactor
Supply voltage (AC)	200Vac-690Vac 200Vac-690Vac (200Vac / 208Vac / 220Vac / 230Vac / 240Vac / 380Vac / 400Vac / 415Vac / 440Vac / 480Vac / 500Vac / 525Vac / 600Vac / 660Vac / 690Vac)
Frequency	35-60Hz (current mode) 48-52Hz (other starting mode) 58-62Hz (other starting mode)
Display	LCD display

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Rated current	90A 78A (200Vac; motor rating FLA; UL) 88A (208Vac; motor rating FLA; UL) 80A (240Vac; motor rating FLA; UL) 77A (480Vac; motor rating FLA; UL) 75A (600Vac; motor rating FLA; UL) 84A (220Vac; motor rating FLA; IEC) 84A (380Vac; motor rating FLA; IEC) 84A (460Vac; motor rating FLA; IEC) 84A (575Vac; motor rating FLA; IEC) 84A (690Vac; motor rating FLA; IEC)
Rated active power (kW)	55kW (460Vac; mtr. rating; IEC) 22kW (220Vac; motor rating; IEC) 45kW (380Vac; motor rating; IEC) 75kW (575Vac; motor rating; IEC) 90kW (690Vac; motor rating; IEC)
Rated power (HP)	60HP (480Vac; mtr. rating; UL) 25HP (200Vac; motor rating; UL) 30HP (208Vac; motor rating; UL) 30HP (240Vac; motor rating; UL) 77HP (600Vac; motor rating; UL)
Rated operating voltage (Ue)	(AC) 60-483 V
Rated impulse voltage (Uimp)	8 kV
Rated insulation voltage (Ui)	800 V
Connection type	built-in lugs (power connections) M3 screw connection (control circuit)
Cross-section	#14AWG...#6AWG / 2.5mm2...16mm2 lugs #13AWG control circuit conductors
Short circuit breaking rating	10kA (UL/IEC)
Control Voltage (AC)	100Vac-240Vac
Protection functions	Overload protection (classes 10A; 10; 20; 37) Phase loss/phase unbalance Starting current limit timeout Undervoltage/Overvoltage Output phase loss Motor overload Load locked/short circuit Multi-start lockout
Communication protocol	RS-485 Modbus
Digital inputs	1 x digital input (Start; NO dry contact) 1 x digital input (Stop; NC dry contact) 1 x digital input (Emergency Stop; NC dry contact)
Analog inputs	1 x analog input (PTC thermistor input; optional I/O)
Dimensions	H264.5mm x W184mm x D165.3mm H10.4" x W7.2" x D6.5

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Ambient air temperature for operation	-14°F...+104°F / -10°C...+40 °C
Ambient air temperature for storage	-13°F...+158°F / -25°C...+70 °C
Technical compatibility with	Recommended protection -- M2S250T3L MCCB or 250A 600V K5 fuse Bypass -- Ex9C115F22K contactor
Application type	<1000m above sea level -- full performance 1000-3000m above sea level -- the current derated 0.5% for every 100m
Order code / Manufacturer SKU	Ex9QR5-90-6-D 1720007 Ex9QR50906D
Manufacturer product status	Commercialized
Equivalent to	1720007 Ex9QR50906D Ex9QR5906D
Compliant with standard(s)	UL 508 (file number E533416) UL 60947-4-2 CSA C22.2 No. 14 CSA C22.2 No. 60947-4-2 Shock resistance -- less than 0.5g EMC equipment level -- Class A (industrial grade) Level 3
Tightening torque	(screw) 5 N.m (control circuit) 0.5 N.m
Degree of pollution	Class III

Benefits

Ex9QR5 is a solid-state reduced voltage (SSRV) motor starter used in the control and protection of 3-phase electric motors.
Its multiple starting modes control the voltage and current applied to the motor to provide soft start, speed ramp and soft stop capability.
The Ex9QR5 has built-in motor overload protection in class 10, 20 and 30, along with advanced protection such as phase loss/phase unbalance, undervoltage and more.
It is the ideal solution for energy savings and torque control in applications like fans, blowers, pumps, compressors, ball mills, crushers and many other loads.

Ex9QR5 Features
- Seven unique starting modes
- Automatic light-load energy savings
- Low-speed forward and reverse
- Programmable kickstart mode
- Soft stop and braking
- Sequential, multiple motor starting
- Programmable digital inputs and analog output
- Built-in RS-485 communication interface and standard Modbus protocol
- Separately mountable LCD display with user-friendly interface

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Ex9QR5 Ratings
- 200Vac to 690Vac
- Ampacity ratings from 15A through 1000A in 5 frame sizes
- Input frequency range from 35Hz to 60Hz

Motor Protection Functions
- Phase loss/phase unbalance
- Starting current limit timeout
- Undervoltage/Overvoltage
- Output phase loss
- Motor overload
- Load locked/short circuit
- Multi-start lockout

Certifications
- UL 508 Listed, File No. E533416 / UL 60947-4-2
- CSA C22.2 No. 14 / CSA C22.2 No. 60947-4-2

Documents

NOARK - Ex9QR5 soft starters - Catalog.pdf

Access to all NOARK drawings

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