

Eaton 199441

Katalognummer: 199441

Eaton DC1 Variable frequency drive, 400 V AC, 3-phase, 18 A, 7.5 kW, IP66/NEMA 4X, Radio interference suppression filter, Brake chopper, 7-digital display assembly, Additional PCB protection, UV resistant, FS3



Foto ist repräsentativ

Allgemeine spezifikation

Product Name	Catalog Number
Eaton DC1 Variable frequency drive	199441
Product Length/Depth	Product Height
238 mm	310 mm
Product Width	Product Weight
210.5 mm	7 kg
Certifications	Catalog Notes
IEC/EN 61800-3	Environmental class: 3C3, 3S3 Overload cycle for 60 s every 600 s For normal internally and externally ventilated four-pole three-phase asynchronous motors with 1500 rpm at 50 Hz and 1800 rpm at 60 Hz
IEC/EN 61800-2	
UkrSEPRO	
RCM	
Certified by UL for use in Canada	
RoHS, ISO 9001	
IEC/EN 61800-5-1	
UL Listed	
UL	
UL 508C	
CSA-C22.2 No. 14	
UL File No.: E172143	
EAC	
UL report applies to both US and Canada	
CE	
CE marking	

IEC/EN61800-5

EAN

CUL

4015081078204

U

Merkmale und Funktionen

NVIMS7

Model Code

Features

DC1-34018FB-A66OE1

Parameterization: drivesConnect mobile (App)

Parameterization: Keypad

Parameterization: drivesConnect

Parameterization: Fieldbus

Fitted with:

Radio interference suppression filter

PC connection

Breaking resistance

UV resistance

7-digital display assembly

IGBT inverter

Control unit

Additional PCB protection

Brake chopper

Internal DC link

Functions

4-quadrant operation possible

Allgemein

Cable length

200 m, screened, with motor choke, maximum permissible cable length

300 m, unscreened, with motor choke, maximum permissible, Motor feeder

100 m, screened, maximum permissible cable length

C2 ≤ 5 m, maximum motor cable length

150 m, unscreened, maximum permissible cable length

C3 ≤ 25 m, maximum motor cable length

Communication interface

Modbus RTU, built in

CANopen®, built in

OP-Bus (RS485), built in

SmartWire-DT, optional

Connection to SmartWire-DT

No

Degree of protection

NEMA 4X

IP66

Klimatische Umweltbedingungen

Altitude

Above 1000 m with 1 % derating per 100 m

Max. 4000 m

Ambient operating temperature - min

-20 °C

Ambient operating temperature - max

40 °C

Ambient storage temperature - min

-40 °C

Ambient storage temperature - max

60 °C

Climatic proofing

< 95 average relative humidity (RH), no condensation, no corrosion

Hauptkreis

Electromagnetic compatibility

1st and 2nd environments (according to EN 61800-3)

Frame size

FS3

Mounting position

Vertical

Product category

Variable frequency drives

Protection

Finger and back-of-hand proof, Protection against direct contact (BGV A3, VBG4)

Protocol

CAN

Other bus systems

MODBUS

EtherNet/IP

Radio interference class

C2, C3: depending on the motor cable length, the connected load, and ambient conditions. External radio interference suppression filters (optional) may be necessary.
Optional external radio interference suppression filter for longer motor cable lengths and for use in different EMC environments

Suitable for

Branch circuits, (UL/CSA)

Efficiency

97 % (η)

Input current ILN at 150% overload

21.2 A

Leakage current at ground IPE - max

12.7 mA

Mains switch-on frequency

Maximum of one time every 30 seconds

Mains voltage - min

380 V

Mains voltage - max

480 V

Operating mode

Synchronous reluctance motors

BLDC motors

PM motors

U/f control

Speed control with slip compensation

Sensorless vector control (SLV)

Output frequency - min

0 Hz

Output frequency - max

500 Hz

Output voltage (U2)

400 V AC, 3-phase

480 V AC, 3-phase

Overload current IL at 150% overload

27 A

Rated control supply voltage

10 V DC (Us, max. 10 mA)

Rated frequency - min

48 Hz

Rated frequency - max

62 Hz

Rated operational current (Ie)

18 A at 150% overload (at an operating frequency of 6 kHz and an ambient air temperature of +40 °C)

Rated operational power at 380/400 V, 50 Hz, 3-phase

7.5 kW

Rated operational voltage

400 V AC, 3-phase

480 V AC, 3-phase

Resolution

0.1 Hz (Frequency resolution, setpoint value)

Short-circuit protection rating

25 A, UL (Class CC or J), Safety device (fuse or miniature circuit-breaker), Power Wiring

Starting current - max

175 %, IH, max. starting current (High Overload), For 2.5 seconds every 600 seconds, Power section

Supply frequency

50/60 Hz

Switching frequency

8 kHz, 4 - 24 kHz adjustable (audible), fPWM, Power section, Main circuit

System configuration type

AC supply systems with earthed center point

Voltage rating - max

480 V

Bemessungsbetriebsleistung

Assigned motor current IM at 110/120 V, 60 Hz, 150% overload

14 A

Assigned motor current IM at 115 V, 50 Hz, 150% overload

15.2 A

Assigned motor current IM at 220 - 240 V, 60 Hz, 150% overload

14 A

Assigned motor current IM at 230 V, 50 Hz, 150% overload

15.2 A

Assigned motor current IM at 400 V, 50 Hz, 150% overload

15.2 A

Assigned motor current IM at 440 - 480 V, 60 Hz, 150% overload

14 A

Assigned motor power at 115/120 V, 60 Hz, 1-phase

10 HP

Assigned motor power at 230/240 V, 60 Hz, 1-phase

10 HP

Assigned motor power at 460/480 V, 60 Hz

10 HP

Assigned motor power at 460/480 V, 60 Hz, 3-phase

10 HP

Scheinleistung

Apparent power at 400 V

12.47 kVA

Apparent power at 480 V

14.96 kVA

Trennfunktion

Braking resistance

80 Ω

Braking torque

Max. 30 % MN, Standard - Main circuit

Max. 100 % of rated operational current Ie, variable, DC - Main circuit

Max. 100 % of rated operational current Ie with external braking resistor - Main circuit

Switch-on threshold for the braking transistor

780 VDC

Steuerkreis

Bauartnachweis

Number of inputs (analog)

2 (parameterizable, 0 - 10 V DC, 0/4 - 20 mA)

Number of inputs (digital)

4 (parameterizable, 10 - 30 V DC)

Number of outputs (analog)

1

Number of outputs (digital)

1

Number of relay outputs

1 (parameterizable, N/O, 6 A (250 V, AC-1) / 5 A (30 V, DC-1))

Heat dissipation capacity P_{diss}

0 W

Heat dissipation per pole, current-dependent P_{vid}

0 W

10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects

Meets the product standard's requirements.

10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.2.7 Inscriptions

Meets the product standard's requirements.

10.3 Degree of protection of assemblies

Does not apply, since the entire switchgear needs to be evaluated.

10.4 Clearances and creepage distances

Meets the product standard's requirements.

10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

10.8 Connections for external conductors

Is the panel builder's responsibility.

10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Downloads

Anmerkungen zur Anwendung

[Update des DX-COM-STICK3](#)

[Set Point Setting](#)

[PI controller](#)

[Fire Mode](#)

[Anschluss von Frequenzumrichter an Generatormetze](#)

[I/O Configuration](#)

[Betrieb von Einphasenmotoren](#)

[Sollwertvorgabe](#)

[Conformal Coating](#)

[Start, Stopp und Betrieb](#)

[Zugang Parameter Level 2 + 3 – Parametersperre - Werkseinstellung](#)

[Motordaten – Motorschutz – Kennlinien - Schlupfkompensation](#)

[I/O-Konfiguration](#)

[Operating Permanent Magnet and Brushless DC Motors](#)

[Elektromagnetische Verträglichkeit \(EMV\)](#)

[Abhängigkeit des Ausgangsstroms von Schaltfrequenz und](#)

[Umgebungstemperatur](#)

[DX-COM-STICK3 verbinden](#)

[Starting, Stopping and Operation](#)

[PI-Regler](#)

[The OP System Bus - Parameterizing - Control](#)

[Fire Mode \(german\)](#)

[Operating Single Phase Motors](#)

[Low Temperature Applications](#)

[Wie funktioniert der interne Motorschutz?](#)

[Dependency of the output current on switching frequency and ambient temperature](#)

[How does the internal motor protection work?](#)

[DX-COM-STICK3_Connection](#)

[Update DX-COM-STICK3](#)

[Der OP-Systembus](#)

[Motor data - Motor Protection - V/f curves Slip Compensation](#)

[Access to Parameter Levels 2 + 3 Parameter Lock - Load Default](#)

[Betrieb von Permanentmagnet und Brushless DC-Motoren](#)

Benutzerhandbücher

[MN040022_DE](#)

[MN040019_DE](#)

[MN040059_DE](#)

[MN040003_DE](#)

[MN040018_DE](#)

Broschüren

Explore a World of Continuous Efficiency PowerXL DC1 and DA1 variable frequency drives

[DA-SW-Codesys 3 SWD for DC1 and DE1](#)

[DA-SW-DC1 CANopen ConfigFile 203](#)

[DA-SW-DC1 CANopen ConfigFile 202](#)

[DA-SW-Driver DX-CBL-PC-3M0](#)

[DA-SW-DC1 CANopen CODESYSV1_2 Library](#)

[DA-SW-USB Driver PC Cable DX-CBL-PC-1M5](#)

[DA-SW-USB Driver DX-COM-STICK3-KIT](#)

[DA-SW-drivesConnect - Installationshilfe](#)

[DA-SW-Codesys 2 SWD for DC1 and DE1](#)

[DA-SW-DC1 CANopen CODESYSV2 Library](#)

[DA-SW-drivesConnect](#)

[DA-SW-drivesConnect - installation help](#)

[DA-SW-DC1 ModbusRTU V1_00 Library](#)

Installationsanleitung

[eaton-powerxl-dc1-ip66-instruction-leaflet-il040059zu.pdf](#)

Installationsvideos

[Video PowerXL DA1](#)

[PowerXLTM Frequenzumrichter](#)

Kataloge

[Drives - Product range catalog](#)

mCAD model

[e3_s3_ip66_ohne_bedienelementen.stp](#)

[e3_s3_ip66_ohne_bedienelementen.dwg](#)

Zeichnungen

[eaton-frequency-inverter-dc1-dimensions-006.eps](#)



Eaton Konzern plc
Eaton-Haus
30 Pembroke-Straße
Dublin 4, Irland
Eaton.com

© 2024 Eaton. Alle
Rechte vorbehalten.

Eaton ist eine eingetragene
Marke.

Alle anderen Warenzeichen sind
Eigentum ihrer jeweiligen
Besitzer.



Eaton.com/socialmedia