

Specifikace



Foto je ilustrační

Eaton 199438

Eaton DC1 Variable frequency drive, 400 V AC, 3-phase, 9.5 A, 4 kW, IP66/NEMA 4X, Radio interference suppression filter, Brake chopper, 7-digital display assembly, Local controls, Additional PCB protection, UV resistant, FS2

Obecné specifikace

PRODUCT NAME	Eaton DC1 Variable frequency drive
CATALOG NUMBER	199438
EAN	4015081978274
PRODUCT LENGTH/DEPTH	182 mm
PRODUCT HEIGHT	257 mm
PRODUCT WIDTH	188 mm
PRODUCT WEIGHT	3.5 kg
CERTIFICATIONS	CE UL Listed RCM Certified by UL for use in Canada CUL CSA-C22.2 No. 14 IEC/EN 61800-2 IEC/EN 61800-3 UL report applies to both US and Canada UkrSEPRO UL File No.: E172143 UL Category Control No.: NMMS, NMMS7 IEC/EN61800-5 IEC/EN 61800-5-1 UL 508C RoHS, ISO 9001 CE marking UL EAC

CATALOG NOTES

- Environmental class: 3C3, 3S3
- Overload cycle for 60 s every 600 s



Powering Business Worldwide

- For normal internally and externally ventilated four-pole three-phase asynchronous motors with 1500 rpm at 50 Hz and 1800 rpm at 60 Hz

Zdánlivý výkon

APPARENT POWER AT 400 V 6.58 kVA

APPARENT POWER AT 480 V 7.9 kVA

Klimatické podmínky a podmínky prostředí

ALTITUDE Above 1000 m with 1 % derating per 100 m
Max. 4000 m

AMBIENT OPERATING TEMPERATURE - MAX 40 °C

AMBIENT STORAGE TEMPERATURE - MAX 60 °C

AMBIENT OPERATING TEMPERATURE - MIN -20 °C

AMBIENT STORAGE TEMPERATURE - MIN -40 °C

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

MODEL CODE

DC1-349D5FB-A6SOE1

Funkce brzdění

BRAKING RESISTANCE 120 Ω

BRAKING TORQUE

Max. 30 % MN, Standard - Main circuit
Max. 100 % of rated operational current I_e with external braking resistor - Main circuit
Max. 100 % of rated operational current I_e , variable, DC - Main circuit

SWITCH-ON THRESHOLD FOR THE BRAKING TRANSISTOR

780 VDC

Řídicí obvod

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))

Ověření návrhu

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.
10.2.2 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	Does not apply, since the

Features & functions

FEATURES	Parameterization: Fieldbus Parameterization: drivesConnect mobile (App) Parameterization: drivesConnect Parameterization: Keypad
FITTED WITH:	Radio interference suppression filter Internal DC link UV resistance Additional PCB protection Breaking resistance 7-digital display assembly IGBT inverter Control unit Local controls PC connection Brake chopper
FUNCTIONS	4-quadrant operation possible

AGAINST ELECTRIC SHOCK	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.
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W

Obečné informace

CABLE LENGTH	C3 ≤ 25 m, maximum motor cable length 150 m, unscreened, maximum permissible cable length 300 m, unscreened, with motor choke, maximum permissible, Motor feeder 100 m, screened, maximum permissible cable length 200 m, screened, with motor choke, maximum permissible cable length C2 ≤ 5 m, maximum motor cable length
	SmartWire-DT, optional OP-Bus (RS485), built in CANopen®, built in Modbus RTU, built in
CONNECTION TO SMARTWIRE-DT	No
DEGREE OF PROTECTION	IP66 NEMA 4X
ELECTROMAGNETIC COMPATIBILITY	1st and 2nd environments (according to EN 61800-3)
FRAME SIZE	FS2
MOUNTING POSITION	Vertical
PRODUCT CATEGORY	Variable frequency drives
PROTECTION	Finger and back-of-hand proof, Protection against direct contact (BGV A3, VBG4)
PROTOCOL	EtherNet/IP Other bus systems CAN MODBUS
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)

Hlavní obvod

EFFICIENCY	97 % (η)
HEAT DISSIPATION AT CURRENT/SPEED	117 W at 100% current and 0% speed 130 W at 100% current and 50% speed 143 W at 100% current and 90% speed 61 W at 25% current and 50% speed 62 W at 25% current and 0% speed 92 W at 50% current and 0% speed 93 W at 50% current and 50% speed 94 W at 50% current and 90% speed
INPUT CURRENT ILN AT 150% OVERLOAD	11.5 A
LEAKAGE CURRENT AT GROUND IPE - MAX	12.6 mA
MAINS SWITCH-ON FREQUENCY	Maximum of one time every 30 seconds
MAINS VOLTAGE - MAX	480 V
MAINS VOLTAGE - MIN	380 V
OPERATING MODE	Synchronous reluctance motors Speed control with slip compensation U/f control Sensorless vector control (SLV) BLDC motors PM motors
OUTPUT FREQUENCY - MAX	500 Hz
OUTPUT FREQUENCY - MIN	0 Hz
OUTPUT VOLTAGE (U2)	480 V AC, 3-phase 400 V AC, 3-phase
OVERLOAD CURRENT IL AT 150% OVERLOAD	14.25 A
RATED CONTROL SUPPLY VOLTAGE	10 V DC (Us, max. 10 mA)
RATED FREQUENCY - MAX	62 Hz
RATED FREQUENCY - MIN	48 Hz
RATED OPERATIONAL CURRENT (IE)	9.5 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	4 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	15 A, UL (Class CC or J), Safety device (fuse or miniature circuit-breaker), Power Wiring
STARTING CURRENT - MAX	175 % IH
SUPPLY FREQUENCY	50/60 Hz
SWITCHING FREQUENCY	8 kHz, 4 - 32 kHz adjustable (audible), fPWM, Power section, Main circuit
SYSTEM CONFIGURATION TYPE	AC supply systems with earthed center point
VOLTAGE RATING - MAX	480 V

Jmenovité charakteristiky motoru

ASSIGNED MOTOR CURRENT IM AT 400 V, 50 HZ, 150% OVERLOAD 8.5 A

ASSIGNED MOTOR CURRENT IM AT 440 - 480 V, 60 HZ, 150% OVERLOAD 7.6 A

ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 3-PHASE 5 HP

Zdroje

	DX-COM-STICK3_Connection
APLIKAČNÍ POZNÁMKY	The OP System Bus - Parameterizing - Control How does the internal motor protection work?
DECLARATIONS OF CONFORMITY	eaton-variable-frequency-drive-declaration-of-conformity-eu250595en.pdf eaton-variable-frequency-drive-declaration-of-conformity-uk251078en.pdf
INSTALAČNÍ NÁVODY	eaton-powerxl-dc1-ip66-instruction-leaflet-il040059zu.pdf
INSTALAČNÍ VIDEA	Video PowerXL DA1
MCAD MODEL	e3_s2_ip66_mit_bedienelementen.stp eaton-micro-compact-drives-mcad-drawings-e3-s2-ip66-mit.dwg
VÝKRESY	eaton-frequency-inverter-dc1-dimensions-003.eps

NÁZEV PROJEKTU:

ČÍSLO PROJEKTU:

PŘIPRAVIL:

DATUM:



Eaton Corporation Plc. Eaton House
30 Pembroke Road
Dublin 4, Irsko
Eaton.com

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