

Eaton 199395

Eaton DC1 Variable frequency drive, 115 V AC, single-phase, 4.3 A, 0.75 kW, IP66/NEMA 4X, 7-digital display assembly, Additional PCB protection, UV resistant, FS1

PRODUCT NAME	Eaton DC1 Variable frequency drive
CATALOG NUMBER	199395
PRODUCT LENGTH/DEPTH	162 mm
PRODUCT HEIGHT	232 mm
PRODUCT WIDTH	161 mm
PRODUCT WEIGHT	2.5 kg
CERTIFICATIONS	Certified by UL for use in Canada UL File No.: E172143 RoHS, ISO 9001 CSA-C22.2 No. 14 UL report applies to both US and Canada UL RCM EAC UL 508C IEC/EN 61800-2 CE IEC/EN 61800-3 IEC/EN61800-5 UL Listed CE marking CUL UL Category Control No.: NMMS, NMMS7 UkrSEPRO IEC/EN 61800-5-1



FEATURES	Parameterization: drivesConnect Parameterization: drivesConnect mobile (App) Parameterization: Fieldbus
	Parameterization: Keypad
FITTED WITH:	Control unit IGBT inverter 7-digital display assembly Additional PCB protection UV resistance Internal DC link PC connection
CLIMATIC PROOFING	< 95 average relative humidity (RH), no condensation, no corrosion
CONNECTION TO SMARTWIRE-DT	No
OPERATING MODE	U/f control Speed control with slip compensation PM motors Sensorless vector control (SLV) Synchronous reluctance motors BLDC motors
FRAME SIZE	FS1
ALTITUDE	Max. 4000 m Above 1000 m with 1 % derating per 100 m
APPLICATION IN DOMESTIC AND COMMERCIAL AREA PERMITTED	Yes
MAINS SWITCH-ON FREQUENCY	Maximum of one time every 30 seconds
AMBIENT OPERATING TEMPERATURE - MAX	40 °C
AMBIENT OPERATING TEMPERATURE - MIN	-20 °C
MAINS VOLTAGE - MAX	115 V
OUTPUT VOLTAGE - MAX	250 V
RATED OPERATIONAL POWER AT 220/230 V, 50 HZ, 3-PHASE	0.75 kW

RELATIVE SYMMETRIC NET FREQUENCY TOLERANCE	10 %
RELATIVE SYMMETRIC NET VOLTAGE TOLERANCE	10 %
AMBIENT STORAGE TEMPERATURE - MAX	60 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
APPLICATION IN INDUSTRIAL AREA PERMITTED	Yes
PRODUCT CATEGORY	Variable frequency drives
PROTECTION	Finger and back-of-hand proof, Protection against direct contact (BGV A3, VBG4)
RESOLUTION	0.1 Hz (Frequency resolution, setpoint value)
VOLTAGE RATING - MAX	120 V
MOUNTING POSITION	Vertical
COMMUNICATION INTERFACE	Modbus RTU, built in SmartWire-DT, optional OP-Bus (RS485), built in CANopen®, built in
CONVERTER TYPE	U converter
DEGREE OF PROTECTION	NEMA 4X IP66
ASSIGNED MOTOR POWER AT 230/240 V, 60 HZ, 3-PHASE	1 HP
INPUT CURRENT ILN AT 150% OVERLOAD	15.8 A
ASSIGNED MOTOR CURRENT IM AT 220 - 240 V, 60 HZ, 150% OVERLOAD	4.2 A
ASSIGNED MOTOR CURRENT IM AT 230 V, 50 HZ, 150% OVERLOAD	3.2 A
PROTOCOL	MODBUS Other bus systems CAN EtherNet/IP
OVERLOAD CURRENT IL AT 150% OVERLOAD	6.45 A
RATED FREQUENCY - MAX	62 Hz

RATED FREQUENCY - MIN	48 Hz
SYSTEM CONFIGURATION TYPE	AC supply systems with earthed center point
BRAKING TORQUE	Max. 100 % of rated operational current I_e , variable, DC - Main circuit Max. 30 % MN, Standard - Main circuit
CABLE LENGTH	150 m, unscreened, with motor choke, maximum permissible, Motor feeder 100 m, screened, with motor choke, maximum permissible, Motor feeder 75 m, unscreened, maximum permissible, Motor feeder 50 m, screened, maximum permissible, Motor feeder
OUTPUT VOLTAGE (U2)	230 V AC, 3-phase
NUMBER OF INPUTS (ANALOG)	2
NUMBER OF INPUTS (DIGITAL)	4
RADIO INTERFERENCE CLASS	Optional external radio interference suppression filter for longer motor cable lengths and for use in different EMC environments
NUMBER OF OUTPUTS (DIGITAL)	1
STARTING CURRENT - MAX	175 % I_H
NUMBER OF PHASES (INPUT)	1
NUMBER OF RELAY OUTPUTS	1 (parameterizable, N/O, 6 A (250 V, AC-1) / 5 A (30 V, DC-1))
NUMBER OF PHASES (OUTPUT)	3
POWER CONSUMPTION	37.5 W
RATED CONTROL SUPPLY VOLTAGE	10 V DC (U_s , max. 10 mA)
EFFICIENCY	97 % (η)
SUPPLY FREQUENCY	50/60 Hz
LEAKAGE CURRENT AT GROUND IPE - MAX	4.8 mA
MAINS VOLTAGE - MIN	110 V

NOMINAL OUTPUT CURRENT I2N	4.3 A
NUMBER OF HW-INTERFACES (INDUSTRIAL ETHERNET)	0
NUMBER OF HW-INTERFACES (OTHER)	0
NUMBER OF HW-INTERFACES (PARALLEL)	0
NUMBER OF HW-INTERFACES (RS-232)	0
NUMBER OF HW-INTERFACES (RS-422)	0
NUMBER OF HW-INTERFACES (RS-485)	1
NUMBER OF HW-INTERFACES (SERIAL TTY)	0
NUMBER OF HW-INTERFACES (USB)	0
NUMBER OF INTERFACES (PROFINET)	0
NUMBER OF OUTPUTS (ANALOG)	1
OUTPUT AT LINEAR LOAD AT RATED OUTPUT VOLTAGE - MAX	0.75 kW
OUTPUT AT QUADRATIC LOAD AT RATED OUTPUT VOLTAGE - MAX	0.75 kW
OUTPUT FREQUENCY - MAX	500 Hz
OUTPUT FREQUENCY - MIN	0 Hz
SUITABLE FOR	Branch circuits, (UL/CSA)
SWITCHING FREQUENCY	8 kHz, 4 - 32 kHz adjustable (audible), fPWM, Power section, Main circuit
RATED OPERATIONAL CURRENT (IE)	4.3 A at 150% overload (at an operating frequency of 6 kHz and an ambient air temperature of +40 °C)
RATED OPERATIONAL VOLTAGE	115 V AC, 1-phase
SHORT-CIRCUIT PROTECTION RATING	25 A, UL (Class CC or J), Safety device (fuse or miniature circuit-breaker), Power Wiring

DECLARATIONS OF CONFORMITY	eaton-variable-frequency-drive-declaration-of-conformity-uk251078en.pdf
INSTALLATION VIDEOS	Video PowerXL DA1
MCAD MODEL	e3_s1_ip66_ohne_bedienelementen.stp e3_s1_ip66_ohne_bedienelementen.dwg
	eaton-powerxl-variable-frequency-drives-dc1-da1-brochure-br040001en-en-us.pdf
	eaton-frequency-inverter-dc1-dimensions-002.eps
	How does the internal motor protection work? The OP System Bus - Parameterizing - Control DX-COM-STICK3 Connection

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
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