Eaton 174330

Eaton DE1 Variable speed starter, Rated operational voltage 230 V AC, 1-phase, Ie 4.3 A, 0.75 kW, 1 HP, Radio interference suppression filter

PRODUCT NAME	Eaton DE1 Variable speed starter
CATALOG NUMBER	174330
PRODUCT LENGTH/DEPTH	169 mm
PRODUCT HEIGHT	230 mm
PRODUCT WIDTH	45 mm
PRODUCT WEIGHT	1.06 kg
CERTIFICATIONS	UL report applies to both US and Canada CSA-C22.2 No. 14 CUL IEC/EN 61800-3 Safety requirements: IEC/EN 61800-5-1 UL File No.: E172143 Certified by UL for use in Canada IEC/EN61800-5 UL Category Control No.: NMMS, NMMS7 UL 508C CE RCM IEC/EN61800-3 Specification for general requirements: IEC/EN 61800-2 RoHS, ISO 9001 UL
CATALOG NOTES	Overload cycle for 60 s every 600 s

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FEATURES	Parameterization: drivesConnect Parameterization: drivesConnect mobile (App) Parameterization: Fieldbus Parameterization: Keypad
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	Does not apply, since the

	IL040005ZU
	eaton-powerxl-variable-frequency-drives-hvac-brochure-br040012en-en-us.pdf eaton-powerxl-de1-variable-speed-starter-brochure-br040003en-en-us.pdf
	eaton-de1-variable-speed-starter-manual-mn040011-hu-hu.pdf eaton-de1-variable-speed-starter-manual-mn040011-zh-cn.pdf
	eaton-frequency-inverter-dimensions-009.eps eaton-frequency-inverter-3d-drawing-017.eps
	The OP System Bus - Parameterizing - Control DX-COM-STICK3_Connection How does the internal motor protection work?

IMPACT	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.
FITTED WITH:	Radio interference suppression filter PC connection
CLIMATIC PROOFING	< 95 average relative humidity (RH), no condensation, no corrosion
CONNECTION TO SMARTWIRE-DT	Yes In conjunction with DX-NET-SWD3 SmartWire DT module
OPERATING MODE	Speed control with slip compensation U/f control
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	2000 V
FRAME SIZE	FS1
ALTITUDE	Max. 2000 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	60 °C
AMBIENT OPERATING TEMPERATURE - MIN	-10 °C
MAINS VOLTAGE - MAX	240 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 OPERATING TEMPERATURE AT 150% OVERLOAD - MAX	60 °C
AMBIENT OPERATING TEMPERATURE AT 150% OVERLOAD - MIN	-10 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
APPARENT POWER AT 230 V	1.71 kVA
APPARENT POWER AT 240 V	1.79 kVA
APPLICATION IN INDUSTRIAL AREA PERMITTED	Yes
PRODUCT CATEGORY	Variable speed starter
PROTECTION	Finger and back-of-hand proof, Protection against direct contact (BGV A3, VBG4)
RESOLUTION	0.025 Hz (Frequency resolution, setpoint value)
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W

VOLTAGE RATING - MAX	240 V
MOUNTING POSITION	Vertical
OVERVOLTAGE CATEGORY	III
COMMUNICATION INTERFACE	OP-Bus (RS485), built in Modbus RTU, built in
CONVERTER TYPE	U converter
DEGREE OF PROTECTION	IP20 NEMA Other
ASSIGNED MOTOR POWER AT 220/230 V, 60 HZ, 3-PHASE	1 HP
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	32 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
INPUT CURRENT ILN AT 150% OVERLOAD	11.3 A
MAINS CURRENT DISTORTION	120 %
ASSIGNED MOTOR CURRENT IM AT 220 - 240 V, 60 HZ, 150% OVERLOAD	3.2 A
ASSIGNED MOTOR CURRENT IM AT 230 V, 50 HZ, 150% OVERLOAD	3.2 A
PROTOCOL	MODBUS EtherNet/IP Other bus systems
OVERLOAD CURRENT IL AT 150% OVERLOAD	6.45 A
RATED FREQUENCY - MAX	66 Hz
RATED FREQUENCY - MIN	45 Hz
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	4.3 A
BRAKING CURRENT	≤ 0.6 A (max. 6 A for 120 ms), Actuator for external motor brake
ELECTROMAGNETIC COMPATIBILITY	1st and 2nd environments (according to EN 61800-3)
BRAKING TORQUE	Max. 30 % MN, Standard -

	Main circuit Adjustable to 100 %, DC - Main circuit
CABLE LENGTH	C1 ≤ 5 m, Radio interference level, maximum motor cable length C2 ≤ 10 m, Radio interference level, maximum motor cable length C3 ≤ 25 m, Radio interference level, maximum motor cable length
OUTPUT VOLTAGE (U2)	240 V AC, 3-phase 230 V AC, 3-phase
DELAY TIME	< 10 ms, On-delay < 10 ms, Off-delay
NUMBER OF INPUTS (ANALOG)	1 (parameterizable, 0 - 10 V DC, 0/4 - 20 mA)
NUMBER OF INPUTS (DIGITAL)	4 (parameterizable, 10 - 30 V DC)
RADIO INTERFERENCE CLASS	C1: for conducted emissions only 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
NUMBER OF OUTPUTS (DIGITAL)	0
STARTING CURRENT - MAX	200 %, IH, max. starting current (High Overload), For 1.875 seconds every 600 seconds, Power section
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	3

(OUTPUT)	
POWER CONSUMPTION	32 W
RATED CONTROL SUPPLY VOLTAGE	10 V DC (Us, max. 0.2 mA)
SUPPLY FREQUENCY	50/60 Hz
LEAKAGE CURRENT AT GROUND IPE - MAX	< 10 mA (DC-operated) < 3.5 mA (AC-operated)
MAINS VOLTAGE - MIN	200 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)	0
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	300 Hz
OUTPUT FREQUENCY - MIN	0 Hz
SHORT-CIRCUIT PROTECTION (EXTERNAL OUTPUT CIRCUITS)	Type 1 coordination via the power bus' feeder unit, Main circuit
SHOCK RESISTANCE	15 g, Mechanical, According to IEC/EN 60068-2-27, 11 ms

SUITABLE FOR	Branch circuits, (UL/CSA)
SWITCHING FREQUENCY	16 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 16 kHz and an ambient air temperature of +50 °C)
RATED OPERATIONAL VOLTAGE	230 V AC, 1-phase 240 V AC, 1-phase
SHORT-CIRCUIT PROTECTION RATING	15 A, UL (Class CC or J), Safety device (fuse or miniature circuit-breaker), Power Wiring
VIBRATION	Resistance: According to EN 61800-5-1
HEAT DISSIPATION AT CURRENT/SPEED	10.3 W at 25% current and 0% speed 10.3 W at 25% current and 50% speed 10.9 W at 50% current and 0% speed 12.3 W at 50% current and 50% speed 15.3 W at 50% current and 90% speed 28.9 W at 100% current and 50% speed 30.9 W at 100% current and 90% speed 31.8 W at 100% current and 0% speed

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
:	

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