Eaton 3-4918-105A

Eaton DG1 Variable frequency drive, 400 V AC, 3-phase, 730 A, 400 kW, IP00, DC link choke

PRODUCT NAME	Eaton DG1 variable frequency drive
CATALOG NUMBER	3-4918-105A
PRODUCT LENGTH/DEPTH	561 mm
PRODUCT HEIGHT	980 mm
PRODUCT WIDTH	1037 mm
PRODUCT WEIGHT	410 kg
CERTIFICATIONS	IEC/EN 61800-3 UL File No.: E134360 RoHS, ISO 9001 UL Category Control No.: NMMS, NMMS7 C-Tick EAC Safety requirements: IEC/EN 61800-5 UkrSEPRO UL CUL CE Specification for general requirements: IEC/EN 61800-2

Powering Business Worldwide

FEATURES	Externally accessible fan Temperature-controlled fan
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.
10.9.3 IMPULSE WITHSTAND VOLTAGE	Is the panel builder's responsibility.
FITTED WITH:	Radio interference suppression filter Multi-line graphic display IGBT inverter Internal DC link Additional PCB protection DC link choke Control unit PC connection
POLLUTION DEGREE	2
CLIMATIC PROOFING	< 95 average relative

MCAD MODEL	dg1_18_2.stp dg1_18_2.dwg
	eaton-profinet-de1-dc1-da1-dg1-dm1-dx1-mn040062-en-en.pdf

	humidity (RH), no condensation, no corrosion
CONNECTION TO SMARTWIRE-DT	In conjunction with DXG-NET-SWD SmartWire DT module Yes
OPERATING MODE	Torque regulation Speed control with slip compensation Sensorless vector control (SLV) U/f control
FRAME SIZE	FS8
AIR VOLUME CAPACITY	2800 m^3/h
ALTITUDE	Max. 1000 m Max. 2000 m for Corner Grounded TN Systems Max. 3000 m Above 1000 m with 1 % derating per 100 m
ENVIRONMENTAL CLASS	3C2, 3S2 (Air quality)
APPLICATION IN DOMESTIC AND COMMERCIAL AREA PERMITTED	Yes
MAINS SWITCH-ON FREQUENCY	Maximum of one time every 60 seconds
APPLICATION IN INDUSTRIAL AREA PERMITTED	Yes
AMBIENT OPERATING TEMPERATURE - MAX	50 °C
AMBIENT OPERATING TEMPERATURE - MIN	-10 °C
AMBIENT OPERATING TEMPERATURE AT 150% OVERLOAD - MAX	40 °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 400 V	568.1 kVA
APPARENT POWER AT 480 V	710.1 kVA

ASSIGNED MOTOR CURRENT IM AT 400 V, 50 HZ, 110% OVERLOAD	769 A
ASSIGNED MOTOR CURRENT IM AT 400 V, 50 HZ, 150% OVERLOAD	698 A
MOUNTING POSITION	Vertical
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	65 kA
RELATIVE SYMMETRIC NET FREQUENCY TOLERANCE	10 %
RELATIVE SYMMETRIC NET VOLTAGE TOLERANCE	10 %
PROTECTION	Finger and back-of-hand proof, Protection against direct contact (BGV A3, VBG4)
RESOLUTION	0.01 Hz (Frequency resolution, setpoint value)
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	215 W
SWITCH-ON THRESHOLD FOR THE BRAKING TRANSISTOR	850 VDC
VOLTAGE RATING - MAX	500 VAC
OVERVOLTAGE CATEGORY	III
COMMUNICATION INTERFACE	SmartWire-DT, optional Modbus RTU, built in BACnet MS/TP, built in PROFIBUS, optional Ethernet IP, built in Modbus TCP, built in CANopen®, optional DeviceNet, optional
CONVERTER TYPE	U converter
DEGREE OF PROTECTION	IP00 NEMA Other
PROTOCOL	BACnet CAN DeviceNet EtherNet/IP MODBUS Other bus systems PROFIBUS

	PROFINET IO TCP/IP
ASSIGNED MOTOR CURRENT IM AT 440 - 480 V, 60 HZ, 150% OVERLOAD	683 A
ASSIGNED MOTOR CURRENT IM AT 440/480 V, 60 HZ, 110% OVERLOAD	775 A
ASSIGNED MOTOR CURRENT IM AT 500 V, 50 HZ, 110% OVERLOAD	770 A
ASSIGNED MOTOR CURRENT IM AT 500 V, 50 HZ, 150% OVERLOAD	720 A
SYSTEM CONFIGURATION TYPE	TN-S, TN-C, TN-C-S, TT, IT
ELECTROMAGNETIC COMPATIBILITY	1st and 2nd environments (according to EN 61800-3)
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ	600 HP
ASSIGNED MOTOR POWER AT 460/480 V, 60 HZ, 110% OVERLOAD	700 HP
BRAKING RESISTANCE	1.4 Ω
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	11316 W
INPUT CURRENT ILN AT 110% OVERLOAD	822 A
INPUT CURRENT ILN AT 150% OVERLOAD	731 A
MAINS CURRENT DISTORTION	28 %
CURRENT LIMITATION	0.1 - 2 x IH (CT), motor, main circuit
NUMBER OF SLOTS	2 (expansion)
BRAKING TORQUE	Max. 100 % of rated operational current Ie with external braking resistor - Main circuit Adjustable to 150 %, DC - Main circuit Max. 30 % MN, Standard - Main circuit Adjustable to 150 % (I/Ie), DC - Main circuit
CABLE LENGTH	C3 ≤ 50 m, Radio

	interference level, maximum motor cable length C2 ≤ 10 m, Radio interference level, maximum motor cable length 200 m, screened, maximum permissible, Motor feeder
OUTPUT VOLTAGE (U2)	400 V AC, 3-phase 480 V AC, 3-phase 500 V AC, 3-phase
NUMBER OF INPUTS (ANALOG)	2
NUMBER OF INPUTS (DIGITAL)	8
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. C1: with external filter, for conducted emissions only 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	200 %, IH, max. starting current (High Overload), For 2 seconds every 20 seconds, Power section
NUMBER OF PHASES (INPUT)	3
NUMBER OF RELAY OUTPUTS	3 (parameterizable, 2 changeover contacts and 1 N/O, 6 A (240 V AC) / 6 A (24 V DC))
NUMBER OF PHASES (OUTPUT)	3
RATED CONTROL SUPPLY VOLTAGE	10 V DC (Us, max. 10 mA)
EFFICIENCY	97.4 % (η)
RATED CONTROL VOLTAGE (UC)	24 V DC (external, max. 250 mA options incl.)

SUPPLY FREQUENCY	50/60 Hz
MAINS VOLTAGE - MAX	500 V
MAINS VOLTAGE - MIN	380 V
NOMINAL OUTPUT CURRENT I2N	730 A
NUMBER OF HW-INTERFACES (INDUSTRIAL ETHERNET)	1
NUMBER OF HW-INTERFACES (OTHER)	1
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)	2
OUTPUT AT LINEAR LOAD AT RATED OUTPUT VOLTAGE - MAX	400 kW
OUTPUT AT QUADRATIC LOAD AT RATED OUTPUT VOLTAGE - MAX	450 kW
OUTPUT FREQUENCY - MAX	400 Hz
OUTPUT FREQUENCY - MIN	0 Hz
OUTPUT VOLTAGE - MAX	500 V
OVERLOAD CURRENT IL AT 110% OVERLOAD	902 A
OVERLOAD CURRENT IL AT 150% OVERLOAD	1095 A
SHOCK RESISTANCE	Storage and transportation: maximum 15 g, 11 ms (inside the packaging) Mechanical, According to EN 61800-5-1, IEC/EN 60068-2-27

	UPS drop test (for weights inside the UPS frame)
SUITABLE FOR	Branch circuits, (UL/CSA)
SWITCHING FREQUENCY	2 kHz, 1.5 - 6 kHz adjustable, fPWM, Power section, Main circuit
RATED OPERATIONAL VOLTAGE	500 V AC, 3-phase 400 V AC, 3-phase 480 V AC, 3-phase
SHORT-CIRCUIT PROTECTION RATING	2 A, UL (Class CC or J), Safety device (fuse or miniature circuit-breaker), Power Wiring
VIBRATION	Resistance: 15.8 – 150 Hz, 1 g, Maximum acceleration amplitude Resistance: 5 - 15.8 Hz, Amplitude 1 mm (peak) Resistance: 5 - 150 Hz, According to EN 61800-5-1, IEC/EN 60068-2-6
RATED FREQUENCY - MAX	66 Hz
RATED FREQUENCY - MIN	45 Hz
RATED OPERATIONAL CURRENT (IE) AT 110% OVERLOAD	820 A
RATED OPERATIONAL CURRENT (IE) AT 150% OVERLOAD	730 A
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	730 A
RATED OPERATIONAL POWER AT 380/400 V, 50 HZ	400 kW
RATED OPERATIONAL POWER AT 380/400 V, 50 HZ, 110% OVERLOAD	450 kW
RATED OPERATIONAL POWER AT 500 V, 50 HZ	500 kW
RATED OPERATIONAL POWER AT 500 V, 50 HZ, 110% OVERLOAD	560 kW
SAFETY FUNCTION/LEVEL	STO (Safe Torque Off, SIL1, PLc Cat 1)

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
:	

Eaton House
30 Pembroke Road
Dublin 4,
Eaton.com

© 2025

Follow us on social media to get the latest product and support information.