Variable speed starter, Rated operational voltage 230 V AC, 1-phase, le 2.3 A, 0.37 kW, 0.5 HP, Radio interference suppression filter



Part no. DE1-122D3FN-N20N

174328

**EL Number** /Norwow\

4110092

(Norway)	
General specifications	
Product name	Eaton DE1 Variable speed starter
Part no.	DE1-122D3FN-N20N
EAN	4015081707904
Product Length/Depth	169 millimetre
Product height	230 millimetre
Product width	45 millimetre
Product weight	1.04 kilogram
Certifications	UL report applies to both US and Canada CE IEC/EN 61800-3 Certified by UL for use in Canada CSA-C22.2 No. 14 UL Category Control No.: NMMS, NMMS7 IEC/EN61800-5 CUL UL Specification for general requirements: IEC/EN 61800-2 UL File No.: E172143 RoHS, ISO 9001 IEC/EN61800-3 Safety requirements: IEC/EN 61800-5-1 RCM UL 508C
Product Tradename	DE1
Product Type	Variable speed starter
Product Sub Type	None
Catalog Notes	Overload cycle for 60 s every 600 s
Features & Functions	
Features	Parameterization: drivesConnect Parameterization: drivesConnect mobile (App) Parameterization: Fieldbus Parameterization: Keypad
Fitted with:	PC connection Radio interference suppression filter
General information	
Cable length	C1 $\leq$ 5 m, Radio interference level, maximum motor cable length C3 $\leq$ 25 m, Radio interference level, maximum motor cable length C2 $\leq$ 10 m, Radio interference level, maximum motor cable length
Communication interface	Modbus RTU, built in OP-Bus (RS485), built in
Connection to SmartWire-DT	Yes In conjunction with DX-NET-SWD3 SmartWire DT module
Degree of protection	IP20 NEMA Other
Electromagnetic compatibility	1st and 2nd environments (according to EN 61800-3)
Frame size	FS1
Product category	Variable speed starter
Protection	Finger and back-of-hand proof, Protection against direct contact (BGV A3, VBG4)
Protocol	MODBUS EtherNet/IP Other bus systems
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: for conducted emissions only Optional external radio interference suppression filter for longer motor cable lengths and for use in different EMC environments
Shock resistance	15 g, Mechanical, According to IEC/EN 60068-2-27, 11 ms
Suitable for	Branch circuits, (UL/CSA)

Vibration	Resistance: According to EN 61800-5-1
Climatic environmental conditions	
Altitude	Max. 2000 m
Ambient operating temperature - min	Above 1000 m with 1 % derating per 100 m
Ambient operating temperature - max	60 °C
Ambient operating temperature at 150% overload - min	-10 °C
Ambient operating temperature at 150% overload - max	60 °C
Ambient storage temperature - min	-40 °C
Ambient storage temperature - max	70 °C
Climatic proofing	< 95 average relative humidity (RH), no condensation, no corrosion
Main circuit	
Heat dissipation at current/speed	10 W at 50% current and 0% speed 10.4 W at 50% current and 90% speed 11.6 W at 50% current and 50% speed 16.8 W at 100% current and 0% speed 16.8 W at 100% current and 50% speed 18.3 W at 100% current and 90% speed 5.6 W at 25% current and 0% speed 5.6 W at 25% current and 50% speed
Input current ILN at 150% overload	6.2 A
Leakage current at ground IPE - max	< 3.5 mA (AC-operated) < 10 mA (DC-operated)
Mains switch-on frequency	Maximum of one time every 30 seconds
Mains voltage - min	200 V
Mains voltage - max	240 V
Operating mode	Speed control with slip compensation U/f control
Output frequency - min	0 Hz
Output frequency - max	300 Hz
Output voltage (U2)	230 V AC, 3-phase 240 V AC, 3-phase
Overload current IL at 150% overload	3.45 A
Rated control supply voltage	10 V DC (Us, max. 0.2 mA)
Rated frequency - min	45 Hz
Rated frequency - max	66 Hz
Rated operational current (Ie)	2.3 A at 150% overload (at an operating frequency of 16 kHz and an ambient air temperature of +50 $^{\circ}\text{C})$
Rated operational power at 220/230 V, 50 Hz, 1-phase	0.37 kW
Rated operational voltage	230 V AC, 1-phase 240 V AC, 1-phase
Resolution	0.025 Hz (Frequency resolution, setpoint value)
Short-circuit protection rating	10 A, UL (Class CC or J), Safety device (fuse or miniature circuit-breaker), Powe Wiring
Starting current - max	200 %, IH, max. starting current (High Overload), For 1.875 seconds every 600 seconds, Power section
Supply frequency	50/60 Hz
Switching frequency	16 kHz, 4 - 32 kHz adjustable (audible), fPWM, Power section, Main circuit
Voltage rating - max	240 V
Motor rating	
Assigned motor current IM at 220 - 240 V, 60 Hz, 150% overload	2.2 A
Assigned motor current IM at 230 V, 50 Hz, 150% overload	2 A
Assigned motor current IM at 400 V, 50 Hz, 150% overload	2 A
Assigned motor current IM at 440 - 480 V, 60 Hz, 150% overload	2.2 A
Assigned motor power at 230/240 V, 60 Hz, 1-phase	0.5 HP
Assigned motor power at 460/480 V, 60 Hz, 3-phase	0.5 HP
Apparent power	
Apparent power at 230 V	0.92 kV·A
Apparent power at 240 V	0.96 kV-A
Braking function	
Diaking full-tutil	

Control circuit       I (parameterizable, 0 - 10 V DC, Q/4 - 20 mA)         Number of inputs (digital)       4 (parameterizable, 0 - 10 V DC, Q/4 - 20 mA)         Number of outputs (digital)       0         Number of outputs (digital)       0         Number of relay outputs       1 (parameterizable, N/O, 6 A (250 V, AC-1)/5 A (30 V, DC-1))         Design verification       20 W         Equipment heat dissipation, current-dependent Pvid       20 W         Heat dissipation capacity Pdiss       0 W         Heat dissipation per pole, current-dependent Pvid       0 W         Rated operational current for specified heat dissipation (in)       23 A         Static heat product standard is requirements.       0 W         102.2 Cardination of thermal stability of enclosures       Meets the product standard's requirements.         102.3.1 Verification of thermal stability of enclosures       Meets the product standard's requirements.         102.2.2 Verification of resistance of insulating materials to normal heat       Meets the product standard's requirements.         102.2.3 Resistance to ultra-violet (UV) radiation       Meets the product standard's requirements.         102.5 Lifting       Does not apply, since the entire switchgear needs to be evaluated.         10.2.7 Inscriptions       Meets the product standard's requirements.         10.2.7 Inscriptions       Meets the product standard's r	
Number of inputs (digital)  Number of outputs (analog)  Number of outputs (digital)  Number of relay outputs  Design verification  Equipment heat dissipation, current-dependent Pvid  Heat dissipation capacity Pdiss  Heat dissipation capacity Pdiss  Rated operational current for specified heat dissipation (In)  Static heat dissipation, non-current-dependent Pvid  Rated operational current for specified heat dissipation (In)  Static heat dissipation non-current-dependent Pvis  DU2.2 Corrosion resistance  Meets the product standard's requirements.  10.2.3 I Verification of thermal stability of enclosures  Meets the product standard's requirements.  10.2.3 Resistance of insulating materials to normal heat  10.2.3 Resistance to ultra-violet (UV) radiation  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.  10.2.7 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 Incorporation of switching devices and components  10.5 Incorporation of switching devices and components  10.5 Incorporation of switching devices and components  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  1 Is the panel builder's responsibility.  10.9.2 Power-frequency electric strength  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  Is the panel builder's responsibility.	
Number of outputs (analog)  Number of outputs (digital)  Number of outputs (digital)  Number of relay outputs  Design verification  Equipment heat dissipation, current-dependent Pvid  Heat dissipation capacity Pdiss  Heat dissipation per pole, current-dependent Pvid  Meat dissipation per pole, current-dependent Pvid  Static heat dissipation, non-current-dependent Pvid  10.22 Corrosion resistance  10.23.1 Verification of thermal stability of enclosures  10.23.2 Verification of resistance of insulating materials to normal heat  10.23.3 Resist, of insul, mat. to abnormal heat/fire by internal elect. effects  10.24 Resistance to ultra-violet (UV) radiation  10.25 Lifting  10.25 Machanical impact  10.26 Machanical impact  10.27 Inscriptions  10.30 Degree of protection of assemblies  10.41 Clearances and creepage distances  10.52 Inscriptions  10.53 Loroporation of switching devices and components  10.54 Inscription of switching devices and components  10.55 Lifting  10.56 Incorporation of switching devices and components  10.57 Internal electrical circuits and connections  10.58 Connections for external conductors  10.59 Power-frequency electric strength  10.59 Dewor-frequency electric istrength  10.50 Signal Published (VI) responsibility.  10.59 Dewor-frequency electric istrength  10.59 Dewor-frequency electric istrength  10.59 Dewor-frequency electric istrength  10.59 Dewor-frequency electric istrength  10.50 Signal Published (VI) responsibility.	
Number of outputs (digital) Number of relay outputs  Design verification  Equipment heat dissipation, current-dependent Pvid 20 W  Heat dissipation capacity Pdiss 0W  Heat dissipation per pole, current-dependent Pvid 0W  Rated operational current for specified heat dissipation (In) 2.3 A  Static heat dissipation, non-current-dependent Pvid 0W  10.2.2 Corrosion resistance 0W  10.2.3 Verification of thermal stability of enclosures 0W  10.2.3 Verification of thermal stability of enclosures 0W  10.2.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects 0W  10.2.4 Resistance to ultra-violet (UV) radiation 0W  10.2.5 Lifting 0Des not apply, since the entire switchgear needs to be evaluated. 0Des not apply, since the entire switchgear needs to be evaluated. 10.2.7 Inscriptions 0Weets the product standard's requirements. 10.3 Dere of product standard's requirements. 0Des not apply, since the entire switchgear needs to be evaluated. 10.4 Clearances and creepage distances 0Weets the product standard's requirements. 10.5 Protection against electric shock 0Des not apply, since the entire switchgear needs to be evaluated. 10.5 Protection against electric shock 0Des not apply, since the entire switchgear needs to be evaluated. 10.6 Incorporation of switching devices and components 0Des not apply, since the entire switchgear needs to be evaluated. 10.7 Internal electrical circuits and connections 1st he panel builder's responsibility. 1st he panel builder's responsibility. 1st	
Number of relay outputs  Design verification  Equipment heat dissipation, current-dependent Pvid  Heat dissipation capacity Pdiss  Heat dissipation capacity Pdiss  OW  Rated operational current for specified heat dissipation (In)  Static heat dissipation, non-current-dependent Pvid  OW  10.22 Corrosion resistance  10.23.1 Verification of thermal stability of enclosures  10.23.2 Verification of resistance of insulating materials to normal heat  10.23.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects  10.24 Resistance to ultra-violet (UV) radiation  10.25 Lifting  Does not apply, since the entire switchgear needs to be evaluated.  10.27 Inscriptions  10.3 Degree of protection of assemblies  10.4 Clearances and creepage distances  10.5 Protection against electric shock  Does not apply, since the entire switchgear needs to be evaluated.  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  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  1 sthe panel builder's responsibility.  1 sthe panel builder's responsibility.	
Equipment heat dissipation, current-dependent Pvid 20 W Heat dissipation capacity Pdiss 0W Rated operational current for specified heat dissipation (In) 2.3 A Static heat dissipation, non-current-dependent Pvid 0W  10.22 Corrosion resistance 0Weets the product standard's requirements. 10.23.1 Verification of thermal stability of enclosures Meets the product standard's requirements. 10.23.2 Verification of resistance of insulating materials to normal heat Meets the product standard's requirements. 10.23.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects Meets the product standard's requirements. 10.24 Resistance to ultra-violet (UV) radiation Meets the product standard's requirements. 10.25 Lifting Does not apply, since the entire switchgear needs to be evaluated. 10.26 Mechanical impact Does not apply, since the entire switchgear needs to be evaluated. 10.27 Inscriptions Meets the product standard's requirements. 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.	
Equipment heat dissipation, current-dependent Pvid  Heat dissipation capacity Pdiss  Heat dissipation per pole, current-dependent Pvid  Rated operational current for specified heat dissipation (In)  Static heat dissipation, non-current-dependent Pvs  10.2.2 Corrosion resistance  10.2.3.1 Verification of thermal stability of enclosures  10.2.3.2 Verification of thermal stability of enclosures  10.2.3.2 Verification of resistance of insulating materials to normal heat  10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects  10.2.4 Resistance to ultra-violet (UV) radiation  10.2.5 Lifting  10.2.6 Mechanical impact  10.2.7 Inscriptions  10.3 Degree of protection of assemblies  10.4 Clearances and creepage distances  10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  20.W  OW  2.3 A  Weets the product standard's requirements.  Meets the product standard's requirements.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.  Is the panel builder's responsibility.	
Heat dissipation capacity Pdiss  Heat dissipation per pole, current-dependent Pvid  Rated operational current for specified heat dissipation (In)  2.3 A  Static heat dissipation, non-current-dependent Pvs  0 W  10.2.2 Corrosion resistance  Meets the product standard's requirements.  10.2.3.1 Verification of thermal stability of enclosures  10.2.3.2 Verification of resistance of insulating materials to normal heat  10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects  10.2.4 Resistance to ultra-violet (UV) radiation  10.2.5 Lifting  10.2.6 Mechanical impact  10.2.7 Inscriptions  10.3 Degree of protection of assemblies  10.3 Degree of protection of assemblies  10.4 Clearances and creepage distances  10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.3 Impulse withstand voltage  10.9.4 Power-frequency electric strength  10.9.9 Impulse withstand voltage  10.9.9 Impulse withstand voltage  10.9.0 W  2.3 A  2.3 A  2.3 A  2.3 A  0 W  Meets the product standard's requirements.  Meets the product standard's requirements.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  10.6 Incorporation of switching devices and components  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.3 Impulse withstand voltage	
Heat dissipation per pole, current-dependent Pvid  Rated operational current for specified heat dissipation (In)  Static heat dissipation, non-current-dependent Pvs  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  10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects  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.  10.2.7 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.	
Rated operational current for specified heat dissipation (In)  Static heat dissipation, non-current-dependent Pvs  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  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.  10.2.7 Inscriptions  Meets the product standard's requirements.  Meets the product standard's requirements.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  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.  10.9.2 Power-frequency electric strength  Is the panel builder's responsibility.	
Static heat dissipation, non-current-dependent Pvs  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.  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.  Does not apply, since the entire switchgear needs to be evaluated.  10.4 Clearances and creepage distances  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  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.	
10.2.2 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.  10.3.1 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.  10.5 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.	
10.2.3.1 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  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.  10.3 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.	
10.2.3.2 Verification of resistance of insulating materials to normal heat  10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects  10.2.4 Resistance to ultra-violet (UV) radiation  10.2.5 Lifting  10.2.6 Meets the product standard's requirements.  10.2.6 Mechanical impact  10.2.7 Inscriptions  10.3 Degree of protection of assemblies  10.4 Clearances and creepage distances  10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  Meets the product standard's requirements.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  In the panel builder's responsibility.  Is the panel builder's responsibility.  Is the panel builder's responsibility.	
10.2.3.3 Resist. of insul. mat. to abnormal heat/fire by internal elect. effects  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.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  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.  10.9.2 Power-frequency electric strength  Is the panel builder's responsibility.  Is the panel builder's responsibility.	
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.	
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.  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.	
10.2.6 Mechanical impact  10.2.7 Inscriptions  Meets the product standard's requirements.  10.3 Degree of protection of assemblies  10.4 Clearances and creepage distances  Meets the product standard's requirements.  10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.  Is the panel builder's responsibility.	
10.2.7 Inscriptions  10.3 Degree of protection of assemblies  10.4 Clearances and creepage distances  10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.	
10.3 Degree of protection of assemblies  10.4 Clearances and creepage distances  10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.  Is the panel builder's responsibility.  Is the panel builder's responsibility.	
10.4 Clearances and creepage distances  10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  Meets the product standard's requirements.  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.  Is the panel builder's responsibility.  Is the panel builder's responsibility.	
10.5 Protection against electric shock  10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.5 Protection against electric shock  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.	
10.6 Incorporation of switching devices and components  10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  Does not apply, since the entire switchgear needs to be evaluated.  Is the panel builder's responsibility.  Is the panel builder's responsibility.  Is the panel builder's responsibility.	
10.7 Internal electrical circuits and connections  10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  Is the panel builder's responsibility.  10.9.1 Is the panel builder's responsibility.	
10.8 Connections for external conductors  10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  10.9.3 Impulse withstand voltage  10.9.3 Impulse withstand voltage	
10.9.2 Power-frequency electric strength  10.9.3 Impulse withstand voltage  Is the panel builder's responsibility.  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. Eato provide heat dissipation data for the devices.	will
10.11 Short-circuit rating  Is the panel builder's responsibility. The specifications for the switchgear observed.	nust be
10.12 Electromagnetic compatibility  Is the panel builder's responsibility. The specifications for the switchgear observed.	nust be
10.13 Mechanical function  The device meets the requirements, provided the information in the instru leaflet (IL) is observed.	tion

## **Technical data ETIM 9.0**

Low-voltage industrial components (EG000017) / Frequency converter =< 1 kV (EC001857)

Electric engineering, automation, process control engineering / Electrical drive / Static frequency converter / Static frequency / Servo converter = < 1 kV (ecl@ss13-27-02-31-01 [AKE177019])

Mains frequency Number of phases input Number of phases output Number of phases output Max. output frequency Max. output voltage Nominal output current I2N Max. output at quadratic load at rated output voltage Max. output at linear load at rated output voltage Max. output output at linear load at rated output v	Electric engineering, automation, process control engineering / Electrical drive / St	tatic frequency converter	/ Static frequency / Servo converter = < 1 kV (eci@ss13-2/-02-31-01 [AKE17/019])
Number of phases input  Number of phases output  Max. output frequency  Max. output voltage  Numinal output current I2N  Max. output at quadratic load at rated output voltage  Max. output at linear load at rated output voltage  Number of analogue input at linear load at rated output voltage  Max. output at linear load at rated output voltage  Number of analogue input at linear load at rated output voltage  Number of analogue input at linear load at rated output voltage  Number of analogue input at linear load at rated output voltage  Number of analogue input at linear load at rated output voltage  Number of analogue input at linear load at rated output voltage  Number of analogue input	Mains voltage	V	200 - 240
Number of phases output  Max. output frequency  Max. output voltage  V 250  Nominal output current I2N  Max. output at quadratic load at rated output voltage  Max. output at quadratic load at rated output voltage  Max. output at linear load at rated output voltage  Max. output at linear load at rated output voltage  W 0.37  Power consumption  W 20  Relative symmetric net frequency tolerance  M 10  Number of analogue outputs  Number of analogue inputs  I 1	Mains frequency		50/60 Hz
Max. output frequency Max. output voltage V 250 Nominal output current I2N A 2.3 Max. output at quadratic load at rated output voltage kW 0.37 Max. output at linear load at rated output voltage kW 0.37 Power consumption W 20 Relative symmetric net frequency tolerance Number of analogue outputs  Number of analogue inputs  Hz 300  A 2.3  A 2.3  A 2.3  A 0.37  A 0.37	Number of phases input		1
Max. output voltage  Nominal output current I2N  Max. output at quadratic load at rated output voltage  Max. output at linear load at rated output voltage  KW  0.37  Power consumption  Relative symmetric net frequency tolerance  Relative symmetric net voltage tolerance  Number of analogue outputs  Number of analogue inputs  V 250  A 2.3  AWW 0.37  POWD 0.37  PO	Number of phases output		3
Nominal output current I2N  Max. output at quadratic load at rated output voltage  kW  0.37  Max. output at linear load at rated output voltage  kW  0.37  Power consumption  W  20  Relative symmetric net frequency tolerance  Kelative symmetric net voltage tolerance  W  10  Number of analogue outputs  Number of analogue inputs  1	Max. output frequency	Hz	300
Max. output at quadratic load at rated output voltage kW 0.37  Max. output at linear load at rated output voltage kW 0.37  Power consumption W 20  Relative symmetric net frequency tolerance % 10  Relative symmetric net voltage tolerance % 10  Number of analogue outputs 0  Number of analogue inputs 1  Number of analogue inputs 1	Max. output voltage	V	250
Max. output at linear load at rated output voltage	Nominal output current I2N	Α	2.3
Power consumption W 20 Relative symmetric net frequency tolerance % 10 Relative symmetric net voltage tolerance % 10 Number of analogue outputs 0 Number of analogue inputs 1	Max. output at quadratic load at rated output voltage	kW	0.37
Relative symmetric net frequency tolerance % 10 Relative symmetric net voltage tolerance % 10 Number of analogue outputs 0 Number of analogue inputs 1	Max. output at linear load at rated output voltage	kW	0.37
Relative symmetric net voltage tolerance % 10 Number of analogue outputs 0 Number of analogue inputs 1	Power consumption	W	20
Number of analogue outputs 0  Number of analogue inputs 1	Relative symmetric net frequency tolerance	%	10
Number of analogue inputs 1	Relative symmetric net voltage tolerance	%	10
	Number of analogue outputs		0
Number of digital outputs 0	Number of analogue inputs		1
	Number of digital outputs		0

With control olement         No           Application in industrial area permitted         Yea           Application in industrial area permitted         Yea           Supporting protocol for TCPIP         No           Supporting protocol for TCPIPS         No           Supporting protocol for TCNIP         No           Supporting protocol for TCNIP         No           Supporting protocol for TCNIP         No           Supporting protocol for INTERBUS         No           Supporting protocol for INTERBUS         No           Supporting protocol for Modulus         Yea           Supporting protocol for SUCONET         No           Supporting protocol for SUCONET         No           Supporting protocol for FRIPMET ID         No     <			
Application in infustrial area permitted         Yes           Application in infustrial area permitted         Yes           Supporting probes for TOPP         No           Supporting probes for TOPP         No           Supporting probes for EAN         No           Supporting probes for INTERIUS         No           Supporting pr	Number of digital inputs		4
Application in damastic- and commercial area permitted Supporting praces for TCP/IP	With control element		No
Supporting protocol for PRDFIBUS         No           Supporting protocol for CAN         No           Supporting protocol for INTERBUS         No           Supporting protocol for ASI         No           Supporting protocol for KNCX         No           Supporting protocol for CNE         No           Supporting protocol for Data-Highway         No           Supporting protocol for CDN         No           Supporting protocol for SUDNET         No           Supporting protocol for SUDNET         No           Supporting protocol for SERIOS         No           Supporting protocol for SERIOS <td>Application in industrial area permitted</td> <td></td> <td>Yes</td>	Application in industrial area permitted		Yes
Supporting protocol for PROFIBUS         No           Supporting protocol for CAN         No           Supporting protocol for KMX         No           Supporting protocol for Data-Highway         No           Supporting protocol for PEDRHETE DA         No           Supporting protocol for PEDRHETE DA         No           Supporting protocol for FERDES         No           Supporting protocol for FerDRHETE DA         No           Supporting protocol for Foundation Fieldous         No           Supporting protocol for Foundation Fieldous         No           Supporting protocol for Foundation Fieldous         No           Supporting protocol for Pelvelated Salety         No           Supporting protocol for Pelvelated Salety         No           Supporting protocol for PROFESEI         No           Supporting protocol for other bus systems         No           Su	Application in domestic- and commercial area permitted		Yes
Supporting protect for CAN         No           Supporting protect for INTERBUS         No           Supporting protect for KNX         No           Supporting protect for KNXX         No           Supporting protect for Modbus         No           Supporting protect for SUCONET         No           Supporting protect for SUCONET         No           Supporting protect for FDROFINET CDA         No           Supporting protect for PDROFINET CDA         No           Supporting protect for FDROFINET CDA         No           Supporting protect for PDROFINET CDA         No           Supporting protect for PDROFIN	Supporting protocol for TCP/IP		No
Supporting protocol for INTERBUS         No.           Supporting protocol for ASI         No.           Supporting protocol for Medius         Yes           Supporting protocol for Dratt-Highway         No.           Supporting protocol for Dratt-Highway         No.           Supporting protocol for Dratt-Highway         No.           Supporting protocol for SUCINET         No.           Supporting protocol for SUCINET         No.           Supporting protocol for FURTH TUD         No.           Supporting protocol for SERCOS         No.           Supporting protocol for FURTH TUD         No.           Supporting protocol for Furth High TUD         No.           Supporting protocol for FURTH TUD         No.           Supporting protocol for Power Safety         No.           Supporting protocol for Power Safety         No.           Supporting protocol for POWER TUD         No.           Supporting protocol for POWER TUD         No.           Number of HW-In	Supporting protocol for PROFIBUS		No
Supporting protocel for KIXX         No           Supporting protocel for KIXX         No           Supporting protocel for Modeus         Yes           Supporting protocel for Device Net         No           Supporting protocel for Device Net         No           Supporting protocel for Device Net         No           Supporting protocel for EUCN         No           Supporting protocel for FURTHS ID         No           Supporting protocel for FROFINET EBA         No           Supporting protocel for FROFINET EBA         No           Supporting protocel for Foundation Fieldbus         No           Supporting protocel for Policia Net Suffey         No           Supporting protocel for Policia Net Suffey         No           Supporting protocel for SuffeyBUS p         No           Supporting protocel for SuffeyBUS p         No           Supporting protocel for SuffeyBUS p	Supporting protocol for CAN		No
Supporting protocol for KNXX         Yas           Supporting protocol for Modubus         No           Supporting protocol for DeviceNet         No           Supporting protocol for SUCONET         No           Supporting protocol for SUCONET         No           Supporting protocol for SUCONET         No           Supporting protocol for PROFINET CBA         No           Supporting protocol for PROFINET CBA         No           Supporting protocol for PROFINET CBA         No           Supporting protocol for SEROS         No           Supporting protocol for SEROS         No           Supporting protocol for Poundstain Fledbus         No           Supporting protocol for SEROS         No           Supporting protocol for Poundstain Fledbus         No           Supporting protocol for SEROS         No           Supporting protocol for Poundstain Fledbus         No           Supporting protocol for SEROS         No           Supporting protocol for DeviceNet SEROS         No           Supporting protocol for PROFISEI         No           Supporting protocol for Seros SEROS         No           Supporting protocol for Seros SEROS         No           Supporting protocol for Seros SEROS         No           Supporting protocol for Sero	Supporting protocol for INTERBUS		No
Supporting protocol for Data-Highway Supporting protocol for Data-Highway Supporting protocol for Data-Highway Supporting protocol for Data-Highway Supporting protocol for LON Supporting protocol for LON Supporting protocol for PROFINET IO Supporting protocol for FRORINET IO Supporting protocol for Selves III Supporting protocol for Develore Safety at Work Supporting protocol for Develore Safety III Supporting protocol for Develore Safety III Supporting protocol for Develore Safety III Supporting protocol for Selves III Supporting protocol for Selves III Supporting protocol for Develore Safety III Supporting protocol for INTERBUS Safety Supporting protocol for Safety III Supporting protocol for Safety III Supporting protocol for Selves III Supporting protocol for Selves III Supporting protocol for Safety III Supporting Safety III Suppo	Supporting protocol for ASI		No
Supporting protocol for Data-Highway         No           Supporting protocol for DeviceNet         No           Supporting protocol for DEVICONET         No           Supporting protocol for UN         No           Supporting protocol for PROFINET IO         No           Supporting protocol for PROFINET CEAR         No           Supporting protocol for FERCIS         No           Supporting protocol for ERCIS         No           Supporting protocol for ERCIS         No           Supporting protocol for ExtenNexIP         Yes           Supporting protocol for DeviceNets Safety         No           Supporting protocol for DeviceNets Safety         No           Supporting protocol for PROFISES         No           Supporting protocol for Safety8US p         No           Supporting protocol for Safet	Supporting protocol for KNX		No
Supporting protocol for DeviceNet         No           Supporting protocol for SUDNET         No           Supporting protocol for PROFINET IO         No           Supporting protocol for PROFINET CBA         No           Supporting protocol for PROFINET CBA         No           Supporting protocol for ENDRIGHUS         No           Supporting protocol for Endrafeor Foundation Fieldhus         No           Supporting protocol for Endrafeor Stafety         No           Supporting protocol for Poundation Fieldhus         No           Supporting protocol for DeviceNt Safety         No           Supporting protocol for Poundation Fieldhus         No           Supporting protocol for SAFORDEATE         No           Supporting protocol for SAFORDEATE         No           Supporting protocol for SAFORDEATE         No           Number of HW-Interfaces SAFORDEATE         O           Number of HW-Interfaces RS-422         O           Number of HW-Interfaces SAFORDEATE         O           Number of HW-Interfaces SAFORDEATE         O           Number of HW-In	Supporting protocol for Modbus		Yes
Supporting protocol for SUCONET         No           Supporting protocol for PROFINET IO         No           Supporting protocol for PROFINET GBA         No           Supporting protocol for PROFINET GBA         No           Supporting protocol for FRECOS         No           Supporting protocol for FROWARD         No           Supporting protocol for EtherWelt/P         Yes           Supporting protocol for DeviceNet Safety at Work         No           Supporting protocol for DeviceNet Safety         No           Supporting protocol for INTERBUS-Safety         No           Supporting protocol for INTERBUS-Safety         No           Supporting protocol for PROFISE         No           Supporting protocol for PROFISE         No           Supporting protocol for PROFISE         No           Supporting protocol for DeviceNet Safety         No           Supporting protocol for PROFISE         No           Supporting protocol for PROFISE         No           Supporting protocol for DeviceNet Safety         No           Number of HW-interfaces industrial Ethernet         No           Number of HW-interfaces RS-428         1           Number of HW-interfaces RS-428         1           Number of HW-interfaces serial         No           Nu	Supporting protocol for Data-Highway		No
Supporting protocol for PROFINET IO         No           Supporting protocol for PROFINET CBA         No           Supporting protocol for PROFINET CBA         No           Supporting protocol for PROFINET CBA         No           Supporting protocol for FEMEROS         No           Supporting protocol for Foundation Fieldbus         No           Supporting protocol for Foundation Fieldbus         No           Supporting protocol for AS-Interface Safety at Work         No           Supporting protocol for AS-Interface Safety at Work         No           Supporting protocol for INTERBUS-Safety         No           Supporting protocol for INTERBUS-Safety         No           Supporting protocol for PROFIsafe         No           Supporting protocol for SafetyBUS 2         No           Supporting protocol for SafetyBUS 3         No           Number of HW-interfaces SafetyBUS 3         No           Number of HW-interfaces RS-42         0           Number of HW-interfaces RS-42S         0           Number of HW-interfaces Safety 3         N	Supporting protocol for DeviceNet		No
Supporting protocol for PROFINET ID         No           Supporting protocol for PROFINET CBA         No           Supporting protocol for SERCOS         No           Supporting protocol for Ebundheid Fieldbus         No           Supporting protocol for Fundation Fieldbus         No           Supporting protocol for Ebundheit Fieldbus         No           Supporting protocol for AS-Interface Safety at Work         No           Supporting protocol for Device, Next Safety         No           Supporting protocol for INTERBUS-Safety         No           Supporting protocol for SafetyBUS Safety         No           Number of HW-interfaces Reveals         SafetyBUS Safety           Number of HW-interfaces BROFINET         0           Number of HW-interfaces Safety Safety         0           Number	Supporting protocol for SUCONET		No
Supporting protocol for PROFINET CBA         No           Supporting protocol for SERCOS         No           Supporting protocol for EdenNet/IP         Yes           Supporting protocol for EthenNet/IP         No           Supporting protocol for DeviceNet Safety at Work         No           Supporting protocol for DeviceNet Safety         No           Supporting protocol for INTERBUS-Safety         No           Supporting protocol for INTERBUS-Safety         No           Supporting protocol for SafetyBUS p         No           Supporting protocol for SafetyBUS p         No           Supporting protocol for GBACnet         No           Supporting protocol for other bus systems         Yes           Number of HW-interfaces industrial Ethernet         0           Number of HW-interfaces RS-422         0           Number of HW-interfaces RS-422         0           Number of HW-interfaces RS-425         0           Number of HW-interfaces serial TY         0           Number of HW-interfaces aparallel         0           Number of HW-interfaces since         No           With PC connection         Yes           Number of HW-interfaces other         No           With PC connection         Yes           No         No <td>Supporting protocol for LON</td> <td></td> <td>No</td>	Supporting protocol for LON		No
Supporting protocol for SERCOS         No           Supporting protocol for Foundation Fieldbus         Yes           Supporting protocol for AS-Interface Safety at Work         No           Supporting protocol for DeviceNet Safety         No           Supporting protocol for PoeviceNet Safety         No           Supporting protocol for PoeviceNet Safety         No           Supporting protocol for INTERBUS-Safety         No           Supporting protocol for PROFIsafe         No           Supporting protocol for SafetyBUS p         No           Supporting protocol for SafetyBUS p         No           Supporting protocol for SafetyBUS p         No           Supporting protocol for Other bus systems         Yes           Number of HW-interfaces PROFINET         0           Number of HW-interfaces PROFINET         0           Number of HW-interfaces RS-222         0           Number of HW-interfaces RS-228         0           Number of HW-interfaces Serial TTY         0           Number of HW-interfaces Serial TTY         0           Number of HW-interfaces parallel         0           Number of HW-interfaces other         0           With potical interface         No           With potical interface         No           Operation poss	Supporting protocol for PROFINET IO		No
Supporting protocol for Foundation Fieldbus Supporting protocol for EtherNavIP Supporting protocol for EtherNavIP Supporting protocol for DeviceNet Safety at Work Supporting protocol for DeviceNet Safety Supporting protocol for INTERBUS-Safety Supporting protocol for PROFIsafe Supporting protocol for SafetyBUS p Supporting protocol for BACnet Supporting protocol for BACnet Supporting protocol for SafetyBUS p Supporting protocol for HW-interfaces industrial Ethernet Supporting protocol for HW-interfaces industrial Ethernet Supporting protocol for HW-interfaces RS-322 Supporting protocol for HW-interfaces RS-422 Supporting protocol for HW-interfaces RS-422 Supporting protocol for HW-interfaces RS-425 Supporting prot	Supporting protocol for PROFINET CBA		No
Supporting protocol for EtherNeVIP         Yes           Supporting protocol for AS-Interface Safety at Work         No           Supporting protocol for DeviceNet Safety         No           Supporting protocol for PROFIsafe         No           Supporting protocol for PROFIsafe         No           Supporting protocol for SafetyBUS p         No           Supporting protocol for BACnet         No           Supporting protocol for other bus systems         Yes           Number of HW-interfaces industrial Ethernet         0           Number of HW-interfaces PROFINET         0           Number of HW-interfaces RS-422         0           Number of HW-interfaces RS-422         0           Number of HW-interfaces RS-428         0           Number of HW-interfaces Sarial TTY         0           Number of HW-interfaces sarial TTY         0           Number of HW-interfaces stafe         0           Vith potal interface         No	Supporting protocol for SERCOS		No
Supporting protocol for AS-Interface Safety at Work Supporting protocol for DeviceNet Safety Supporting protocol for INTERBUS-Safety Supporting protocol for INTERBUS-Safety Supporting protocol for INTERBUS-Safety Supporting protocol for SafetyBUS p Supporting protocol for SafetyBUS p Supporting protocol for BACnet Supporting protocol for BACnet Supporting protocol for other bus systems Supporting protocol for other bus systems Supporting protocol for other bus systems Supporting frotocol for BACnet Supporting frotocol for Other bus systems Supporting frotocol for BACnet Supporting frotocol for BACnet Supporting frotocol for BACnet Supporting protocol for SafetyBUS p Sup	Supporting protocol for Foundation Fieldbus		No
Supporting protocol for DeviceNet Safety         No           Supporting protocol for INTERBUS-Safety         No           Supporting protocol for SafetyBUS p         No           Supporting protocol for SafetyBUS p         No           Supporting protocol for BACnet         No           Supporting protocol for the bus systems         Yes           Number of HW-interfaces industrial Ethernet         0           Number of HW-interfaces PROFINET         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 used ITTY         0           Number of HW-interfaces brail TTY         0           Number of HW-interfaces brail TY         0           Number of HW-interfaces brail TY         0           Number of HW-interfaces brail         0           With optical interfaces ther         0           With optical interfaces where         No           With optical interfaces there were the protocolon         No           Vittle of converter         No           Degree of protocolon (NEMA)         No           Degree of protocolon (NEMA)         Unconverter           Degree of protocolon (NEMA)         Unit	Supporting protocol for EtherNet/IP		Yes
Supporting protocol for INTERBUS-Safety         No           Supporting protocol for PROFIsafe         No           Supporting protocol for SafetyBUS p         No           Supporting protocol for BACnet         No           Supporting protocol for DACnet         No           Supporting protocol for other bus systems         Yes           Number of HW-interfaces industrial Ethernet         0           Number of HW-interfaces RS-323         0           Number of HW-interfaces RS-422         0           Number of HW-interfaces RS-425         1           Number of HW-interfaces RS-485         1           Number of HW-interfaces serial TTY         0           Number of HW-interfaces Serial TTY         0           Number of HW-interfaces other         0           With optical interface         No           Vith Optical interface         No           4-quadrant operation possible         No           Upper of converter         U converte	Supporting protocol for AS-Interface Safety at Work		No
Supporting protocol for PROFIsafe Supporting protocol for SafetyBUS p Supporting protocol for BACnet Supporting protocol for other bus systems Supporting protocol for other bus systems Number of HW-interfaces industrial Ethernet O Number of HW-interfaces RS-232 Number of HW-interfaces RS-422 Number of HW-interfaces RS-428 Number of HW-interfaces RS-488 Number of HW-interfaces Systems N	Supporting protocol for DeviceNet Safety		No
Supporting protocol for SafetyBUS p         No           Supporting protocol for BACnet         No           Supporting protocol for other bus systems         Yes           Number of HW-interfaces industrial Ethernet         0           Number of HW-interfaces RS-232         0           Number of HW-interfaces RS-232         0           Number of HW-interfaces RS-485         1           Number of HW-interfaces RS-485         0           Number of HW-interfaces serial TTY         0           Number of HW-interfaces aprallel         0           Number of HW-interfaces aprallel         0           Number of HW-interfaces other         0           With optical interface         No           With pC connection         Yes           With PC connection         Yes           Integrated breaking resistance         No           4-quadrant operation possible         No           Type of converter         U converter           Degree of protection (IP)         IP20           Degree of protection (NEMA)         mm         230           Width         mm         45	Supporting protocol for INTERBUS-Safety		No
Supporting protocol for BACnet         No           Supporting protocol for other bus systems         Yes           Number of HW-interfaces industrial Ethernet         0           Number of interfaces PROFINET         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 HW-interfaces other         0           With optical interface         No           With optical interface other         No           With Optical interface         No           U converter         No           Degree of protection (IP)         U converter           Degree of protection (NEMA)         With Optical interface	Supporting protocol for PROFIsafe		No
Supporting protocol for other bus systems         Yes           Number of HW-interfaces industrial Ethernet         0           Number of interfaces PROFINET         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 HW-interfaces other         0           With optical interface         No           Uconverter         No           Uconverter         Uconverter           Degree of protection (IP)         IP20           Degree of protection (NEMA)         With Optical interface           With Human Interface Interface Interface Interface Interface Interface Interface Interface Interface Int	Supporting protocol for SafetyBUS p		No
Number of HW-interfaces industrial Ethernet         0           Number of interfaces PR0FINET         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 HW-interfaces parallel         0           Number of HW-interfaces other         0           With optical interface         No           With Optical interface         No           With PC connection         Yes           Integrated breaking resistance         No           4-quadrant operation possible         No           Type of converter         U converter           Degree of protection (IP)         IP20           Degree of protection (NEMA)         mm         230           With M         mm         45	Supporting protocol for BACnet		No
Number of interfaces RROFINET         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 HW-interfaces parallel         0           Number of HW-interfaces other         0           With optical interface         No           With PC connection         Yes           Integrated breaking resistance         No           4-quadrant operation possible         No           Type of converter         U converter           Degree of protection (IP)         IP20           Degree of protection (NEMA)         Other           Height         mm         230           With M         mm         45	Supporting protocol for other bus systems		Yes
Number of HW-interfaces RS-232         0           Number of HW-interfaces RS-422         1           Number of HW-interfaces RS-485         1           Number of HW-interfaces serial TTY         0           Number of HW-interfaces USB         0           Number of HW-interfaces parallel         0           Number of HW-interfaces other         0           With optical interface         No           With PC connection         Yes           Integrated breaking resistance         No           4-quadrant operation possible         No           Type of converter         U converter           Degree of protection (IP)         IP20           Degree of protection (NEMA)         mm         230           Width         mm         45	Number of HW-interfaces industrial Ethernet		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 HW-interfaces parallel         0           Number of HW-interfaces other         0           With optical interface         No           With PC connection         Yes           Integrated breaking resistance         No           4-quadrant operation possible         No           Type of converter         U converter           Degree of protection (IP)         IP20           Degree of protection (NEMA)         other           Height         mm         230           Width         mm         45	Number of interfaces PROFINET		0
Number of HW-interfaces RS-485  Number of HW-interfaces serial TTY  Number of HW-interfaces USB  Number of HW-interfaces USB  Number of HW-interfaces parallel  Number of HW-interfaces other  Number of HW-interfaces other  Number of HW-interfaces other  No  With optical interface  With PC connection  Integrated breaking resistance  4-quadrant operation possible  Type of converter  Degree of protection (IP)  Degree of protection (NEMA)  Height  mm 230  Witht optical interfaces RS-485  No  Integrated breaking resistance  No  Other  Height  mm 230  Withth	Number of HW-interfaces RS-232		0
Number of HW-interfaces serial TTY  Number of HW-interfaces USB  Number of HW-interfaces parallel  Number of HW-interfaces other  Number of HW-interfaces other  No  With optical interface  With PC connection  With PC connection  Integrated breaking resistance  A-quadrant operation possible  Type of converter  Degree of protection (IP)  Degree of protection (NEMA)  Height  Mm  230  Width  Width  Mind  Degree of M-interfaces vibar  No  Other  Mm  45	Number of HW-interfaces RS-422		0
Number of HW-interfaces USB  Number of HW-interfaces parallel  Number of HW-interfaces other  With optical interface With PC connection Unterface breaking resistance  Integrated breaking resistance  Integrated protection possible  Type of converter  Degree of protection (IP)  Degree of protection (NEMA)  Height  Mmm  With  Integrated breaking resistance  Integrated breaking resis	Number of HW-interfaces RS-485		1
Number of HW-interfaces parallel  Number of HW-interfaces other  O  With optical interface  With PC connection  With PC connection  Integrated breaking resistance  4-quadrant operation possible  Type of converter  Degree of protection (IP)  Degree of protection (NEMA)  Height  Width  O  O  O  O  O  O  O  O  O  O  O  O  O	Number of HW-interfaces serial TTY		0
Number of HW-interfaces other  With optical interface  With PC connection  With PC connection  Integrated breaking resistance  Integrated breaking possible  Aquadrant operation possible  Type of converter  Degree of protection (IP)  Degree of protection (NEMA)  Height  Width  Integrated breaking resistance  No  Voconverter  U converter  IP20  Other  mm 230  mm 45	Number of HW-interfaces USB		0
With optical interface With PC connection With PC connection Ves Integrated breaking resistance 4-quadrant operation possible Type of converter Degree of protection (IP) Degree of protection (NEMA) Height Width  Width  No  Type of converter U converter IP20 Other Height mm 230 Width	Number of HW-interfaces parallel		0
With PC connection  Integrated breaking resistance Integrated	Number of HW-interfaces other		0
Integrated breaking resistance 4-quadrant operation possible No Type of converter U converter Degree of protection (IP) Degree of protection (NEMA) Height Midth No No Vonverter U converter Other Have a substitute of the substitu	With optical interface		No
A-quadrant operation possible  Type of converter  Degree of protection (IP)  Degree of protection (NEMA)  Height  Width  No  U converter  IP20  Other  Associated in mm  230  mm  45	With PC connection		Yes
Type of converter  Degree of protection (IP)  Degree of protection (NEMA)  Height  Mm  Width  U converter  U converter  U converter  U converter  Degree of protection (NEMA)  Nther  Where  Mm  Width  Mm  Width	Integrated breaking resistance		No
Degree of protection (IP)  Degree of protection (NEMA)  Height  mm  230  Width  mm  45	4-quadrant operation possible		No
Degree of protection (NEMA)  Height  mm  230  Width  mm  45	Type of converter		U converter
Height mm 230 Width mm 45	Degree of protection (IP)		IP20
Width mm 45	Degree of protection (NEMA)		Other
	Height	mm	230
Depth mm 169	Width	mm	45
	Depth	mm	169