

Ecodesign requirements | Notes on the documentation

This description is intended exclusively for trained specialists in control and automation technology who are familiar with the applicable national standards.

The documentation and the following notes and explanations must be complied with when installing and commissioning the components.

The trained specialists must always use the current valid documentation.

The trained specialists must ensure that the application and use of the products described is in line with all safety requirements, including all relevant laws, regulations, guidelines, and standards.

Disclaimer

The documentation has been compiled with care. The products described are, however, constantly under development.

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Ecodesign requirements | Document content

Product information according to REGULATION (EU) 2019/1781 (ANNEX I, section 4)

This document describes the requirements set out in the EU Ecodesign Regulation 2019/1781 and the UK Ecodesign Regulations (S.I. 2010 No. 2617 and S.I. 2021 No. 745) for the AF1000 economy variable frequency drives. These points are:

Index	Information on the variable frequency drive in accordance with Regulation 2019/1781	
(1)	Power losses in % of the rated output certificate power	(0;25)
	(relative motor stator frequency vs. relative torque generating current)	(0;50)
		(0;100)
		(50;25)
		(50;50)
		(50;100)
		(90;50)
		(90;100)
(1)	Losses in standby mode	%
(2)	Efficiency level	W
(3)	Vendor name	
(3)	Commercial register number	
(4)	Model identifier	
(5)	Output apparent power	kVA
(6)	Indicative rated output power PN	kW
(7)	Rated output current	A
(8)	Maximum operating temperature	°C
(9)	Rated input frequency	Hz
(10)	Nominal input voltage	V
	Switching frequency	kHz

Index 1 lists the power losses in % of the rated apparent output power at the eight operating points specified by the regulation and the standby losses for each device.

The operating points are stated as two numbers separated by a semicolon in the regulation, e.g. "0;50". The first number is the relative motor stator frequency, the second number indicates the relative torque-producing current.

Ecodesign requirements | 1 x 230 V, 50 Hz

Rated input voltage $U_N = 1 \times 230 \text{ V}$, rated input frequency $f_N = 50 \text{ Hz}$

(1)	Power losses in % of the rated output certificate power (relative motor stator frequency vs. relative torque generating current)	(0;25)	2.22	1.63	1.62	2.34	2.24
		(0;50)	2.21	1.82	1.85	2.41	2.28
		(0;100)	2.55	2.70	2.40	2.86	2.71
		(50;25)	2.55	1.95	1.93	2.88	2.96
		(50;50)	2.59	2.39	2.28	2.94	3.02
		(50;100)	3.20	3.33	3.32	3.61	3.71
		(90;50)	3.00	3.26	3.28	3.47	3.69
		(90;100)	3.78	4.46	4.83	4.99	4.63
	Losses in standby mode	%	0.68	0.31	0.19	0.63	0.35
W		5.00	5.00	5.00	5.00	5.00	
(2)	Efficiency level		IE 2	IE 2	IE 2	IE 2	IE 2
(3)	Vendor name	Beckhoff Automation GmbH & Co. KG Hülshorstweg 20 33415 Verl Germany					
	Commercial register number	Gütersloh HRA 7075					
(4)	Model identifier	AF1103 -1x00	AF1107 -1x00	AF1115 -1x00	AF1203 -1x00	AF1207 -1x00	
(5)	Output apparent power	kVA	0.750	1.50	2.44	0.750	1.35
(6)	Indicative rated output power PN	kW	0.375	0.750	1.50	0.375	0.750
(7)	Rated output current	A	2.0	4.0	6.5	2.0	3.6
(8)	Maximum operating temperature	°C	55				
(9)	Rated input frequency	Hz	50				
(10)	Nominal input voltage	V	1 x 110 V AC _{-15%} ... 240 V AC ^{+10%}				
	Switching frequency	kHz	4	4	4	4	4

Ecodesign requirements | 3 x 400 V, 50 Hz

Rated input voltage $U_N = 3 \times 400 \text{ V}$ | Rated input frequency $f_N = 50 \text{ Hz}$

(1)	Power losses in % of the rated output certificate power	(0;25)	2.09	2.13	1.48	1.59	1.17	1.23
		(0;50)	2.37	2.27	1.53	1.71	1.22	1.53
	(relative motor stator frequency vs. relative torque generating current)	(0;100)	2.65	2.63	1.97	2.31	1.81	1.92
		(50;25)	2.42	2.43	1.85	2.04	1.35	1.73
		(50;50)	1.54	2.62	1.88	2.24	1.71	1.62
		(50;100)	3.06	2.84	2.44	2.89	2.40	2.60
		(90;50)	2.67	2.81	1.41	2.52	1.73	2.08
	Losses in standby mode	(90;100)	2.59	2.84	2.88	2.95	2.14	3.11
		%	0.57	0.62	0.30	0.37	0.14	0.28
	W	9.9	10.7	9.0	10.9	7.5	12.0	
(2)	Efficiency level		IE 2	IE 2	IE 2	IE 2	IE 2	IE 2
(3)	Vendor name	Beckhoff Automation GmbH & Co. KG Hülshorstweg 20 33415 Verl Germany						
	Commercial register number	Gütersloh HRA 7075						
(4)	Model identifier	AF1103 -3x00	AF1107 -3x00	AF1115 -3x00	AF1203 -3x00	AF1207 -3x00	AF1222 -3x00	
(5)	Output apparent power	kVA	1.32	1.34	2.55	2.67	4.94	3.87
(6)	Indicative rated output power PN	kW	0.750	0.750	1.50	1.50	3.00	2.20
(7)	Rated output current	A	2.5	2.5	4.3	4.3	7.6	6.0
(8)	Maximum operating temperature	°C	55					
(9)	Rated input frequency	Hz	50					
(10)	Nominal input voltage	V	3 x 208 V AC _{-15%} ... 480 V AC ^{+8%}					
	Switching frequency	kHz	4	4	4	4	4	4

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