

Frequency converter
EFC 3600



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Documentation



- Compact and complete: space saving side-by-side assembly, plug-in I/O terminals, with brake chopper and mains filter – for ultra-simple installation and integration
- Simply practical: removable operator panel with storage function, straightforward parameter inputs, harmonized parameters for the entire series – to save time and improve quality during series start-up
- Maximized energy efficiency and minimized motor noises through continuously adjustable pulse frequency

The Rexroth EFC 3600 frequency converter is the compact, cost-efficient and energy-efficient drive solution for the power range from 0.4 kW to 4 kW. Easy commissioning and installation permit a wide range of applications.

Technical data

		EFC3600-0K40-1P2	EFC3600-0K75-1P2	EFC3600-1K50-1P2	EFC3600-2K20-1P2	EFC3600-0K40-3P4	EFC3600-0K75-3P4	EFC3600-1K50-3P4	EFC3600-2K20-3P4	EFC3600-4K00-3P4
Performance data										
Rated output	[kW]	0.4	0.75	1.5	2.2	0.4	0.75	1.5	2.2	4
Rated continuous current	[A]	2.3	3.9	7	9.7	1.2	2.1	3.7	5.1	8.8
Nominal motor voltage		Three phase, 0 V ... mains voltage								
Output voltage		0 V ... mains voltage								
Output frequency		0 ... 400 Hz								
Overload capacity		200 % I _n for 1 s, or 150 % I _n for 60 s								
Mains connection voltage	1 AC	1 AC 200 ... 240 V (-10 % / +10 %)								
	3 AC					3 AC 380 ... 480 V (-15 % / +10 %)				
Frequency		50 ... 60 Hz (±5 %)								
Brake chopper/resistor										
Brake resistor		External								
Brake chopper		Internal								
Ambient conditions										
Permissible temperature (operation)		-10 ... +50 °C								
Permissible relative humidity (operation)		< 90 %								
Max. installation height		Derating from 1000 m (1 % of the power output per 100 m)								
Functions										
Control technology		V/f								
Pulse width modulation (PWM), adjustable in 1-kHz increments	[kHz]	1 ... 15								

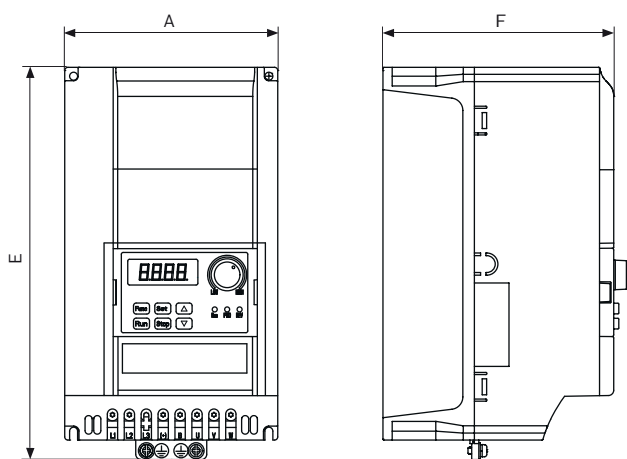
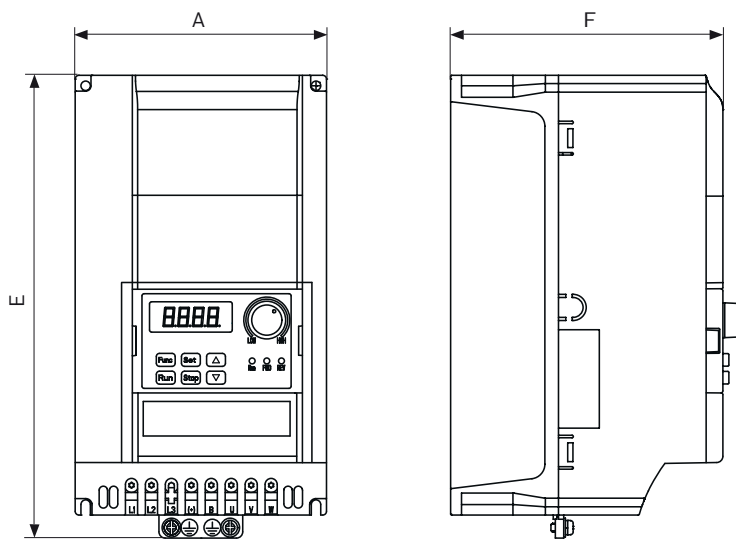
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Modulation type		Magnetic flux PWM-modulation: SVPWM								
Speed control range	Without pulse encoder	1 : 50								
	With pulse encoder	–								
Start-up torque	V/f	100 % at 1.5 Hz; 150 % at 3 Hz								
Frequency resolution	Digital	0.01 Hz								
	Analog		Max. frequency x 0.1 %							
V/f curve		Freely definable								
Ramps		Linear, S-curve								
DC brake	Start frequency	0 ... 50 Hz								
	Braking time	0 ... 20 s								
Automatic energy saving function		Load-dependent adaptation of V/f curve								
Automatic PWM frequency adaptation		Load-dependent adaptation of PWM frequency								
Integrated controller		Integrated step switching mechanism								
Frequency setting accuracy	Analog	0.1 %								
	Digital	0.01 %								
Controller		PID								
Bus systems		Modbus								
		PROFIBUS (option in preparation)								
Status messages via digital outputs		Mode, target value achieved, etc.								
Display		4-digit LED: frequency, output voltage, output current, etc.								
Status LED		Rotation direction and operating status								
Weight										
Mass	[kg]	0.96	1.24	1.61	2.35	1.18	1.26	1.52	2.25	2.36

Dimensions

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EFC 3600**Dimensions**

Type	A [mm]	E [mm]	F [mm]
EFC3600-0K40-1P2	90	146	105
EFC3600-0K75-1P2	95	156	120
EFC3600-1K50-1P2		196	125
EFC3600-2K20-1P2	120	221	130
EFC3600-0K40-3P4	95	156	120
EFC3600-0K75-3P4		196	125
EFC3600-1K50-3P4	120	221	130
EFC3600-2K20-3P4		221	130
EFC3600-4K00-3P4			

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EFC 3600**Accessories**

Type code	Description	Part number:
FEAA01.1-RS485-RS232-NNNN-NN	RS232/RS485 adapter	R912001656

Type code	Description	Part number:
FEAM01.1-EFC-SHIELDING-CONNECTOR	Shielding connector	R912004815

Type code	Description	Part number:
FPCC01.1-EBNN-7P-NNNN	Operating panel IP20	R912003767

Type code	Description	Part number:
FELR01.1N-0K06-N400R-D-700-NNNN	Brake resistor 0.06 kW, 2 k Ω - EFC 3600 400 W, 400 V, 10 % OT	R912004563
FELR01.1N-0K10-N400R-D-700-NNNN	Brake resistor 0.10 kW, 400 Ω - EFC 3600 400 W, 230 V, 20 % OT	R912004564
FELR01.1N-0K10-N190R-D-700-NNNN	Brake resistor 0.10 kW, 190 Ω - EFC 3600 750 W, 230 V, 10 % OT	R912004566
FELR01.1N-0K20-N190R-D-700-NNNN	Brake resistor 0.20 kW, 190 Ω - EFC 3600 750 W, 230 V, 20 % OT	R912004567
FELR01.1N-0K20-N095R-D-700-NNNN	Brake resistor 0.20 kW, 95 Ω - EFC 3600 1.5 kW, 230 V, 10 % OT	R912004569
FELR01.1N-0K40-N095R-D-700-NNNN	Brake resistor 0.40 kW, 95 Ω - EFC 3600 1.5 kW, 230 V, 20 % OT	R912004570
FELR01.1N-0K30-N065R-D-700-NNNN	Brake resistor 0.30 kW, 65 Ω - EFC 3600 2.2 kW, 230 V, 10% OT	R912004572
FELR01.1N-0K50-N065R-D-700-NNNN	Brake resistor 0.50 kW, 65 Ω - EFC 3600 2.2 kW, 230 V, 20 % OT	R912004573
FELR01.1N-0K06-N2R00-D-700-NNNN	Brake resistor 0.06 kW, 400 Ω - EFC 3600 400 W, 230 V, 10 % OT	R912004575
FELR01.1N-0K10-N2R00-D-700-NNNN	Brake resistor 0.10 kW, 2 k Ω - EFC 3600 400 W, 400 V, 20 % OT	R912004576
FELR01.1N-0K10-N1R00-D-700-NNNN	Brake resistor 0.10 kW, 1 k Ω - EFC 3600 750 W, 400 V, 10 % OT	R912004578
FELR01.1N-0K20-N1R00-D-700-NNNN	Brake resistor 0.20 kW, 1 k Ω - EFC 3600 750W, 400 V, 20 % OT	R912004579
FELR01.1N-0K20-N500R-D-700-NNNN	Brake resistor 0.20 kW, 500 Ω - EFC 3600 1.5 kW, 400 V, 10 % OT	R912004581
FELR01.1N-0K40-N500R-D-700-NNNN	Brake resistor 0.40 kW, 500 Ω - EFC 3600 1.5 kW, 400 V, 20 % OT	R912004582
FELR01.1N-0K30-N330R-D-700-NNNN	Brake resistor 0.30 kW, 330 Ω - EFC 3600 2.2 kW, 400 V, 10 % OT	R912004584
FELR01.1N-0K50-N330R-D-700-NNNN	Brake resistor 0.50 kW, 330 Ω - EFC 3600 2.2 kW, 400V, 20 % OT	R912004585
FELR01.1N-0K50-N180R-D-700-NNNN	Brake resistor 0.5 kW, 180 Ω - EFC 3600 4.0 kW, 400 V, 10 % OT	R912004587
FELR01.1N-1K00-N180R-D-700-NNNN	Brake resistor 1.0 kW, 180 Ω - EFC 3600 4.0 kW, 400 V, 20 % OT	R912004588

EMC filter selection guide for EFC 3600 frequency converters

Frequency converter	EMC filter type code	Part number:	Purchase
EFC3600-0K40-1P2-MDA-7P-NNNN	FENF01.1B-A030-E0006-A-240-NNNN	R912004600	1
EFC3600-0K75-1P2-MDA-7P-NNNN	FENF01.1B-A030-E0010-A-240-NNNN	R912004601	1
EFC3600-1K50-1P2-MDA-7P-NNNN	FENF01.1B-A030-E0020-A-240-NNNN	R912004602	1
EFC3600-2K20-1P2-MDA-7P-NNNN	FENF01.1B-A030-E0025-A-240-NNNN	R912004603	1

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EFC 3600**EMC filter selection guide for EFC 3600 frequency converters**

Frequency converter	EMC filter type code	Part number:	Purchase
EFC3600-0K40-3P4-MDA-7P-NNNN	FENF01.1B-A030-E0008-A-480-NNNN	R912004604	1
EFC3600-0K75-3P4-MDA-7P-NNNN			
EFC3600-1K50-3P4-MDA-7P-NNNN			
EFC3600-2K20-3P4-MDA-7P-NNNN			
EFC3600-4K00-3P4-MDA-7P-NNNN	FENF01.1B-A030-E0020-A-480-NNNN	R912004605	1

Ordering information

Type code	Description	Part number:
EFC3600-0K40-1P2-MDA-7P-NNNN	0.4 kW, 1 AC 200 ... 240 V, 50/60 Hz, 2.3 A	R912003758
EFC3600-0K75-1P2-MDA-7P-NNNN	0.75 kW, 1 AC 200 ... 240 V, 50/60 Hz, 3.9 A	R912003759
EFC3600-1K50-1P2-MDA-7P-NNNN	1.5 kW, 1 AC 200 ... 240 V, 50/60 Hz, 7 A	R912003760
EFC3600-2K20-1P2-MDA-7P-NNNN	2.2 kW, 1 AC 200 ... 240 V, 50/60 Hz, 9.7 A	R912003761
EFC3600-0K40-3P4-MDA-7P-NNNN	0.4 kW, 3 AC 380 ... 480 V, 50/60 Hz, 1.2 A	R912003762
EFC3600-0K75-3P4-MDA-7P-NNNN	0.75 kW, 3 AC 380 ... 480 V, 50/60 Hz, 2.1 A	R912003763
EFC3600-1K50-3P4-MDA-7P-NNNN	1.5 kW, 3 AC 380 ... 480 V, 50/60 Hz, 3.7 A	R912003764
EFC3600-2K20-3P4-MDA-7P-NNNN	2.2 kW, 3 AC 380 ... 480 V, 50/60 Hz, 5.1 A	R912003765
EFC3600-4K00-3P4-MDA-7P-NNNN	4 kW, 3 AC 380 ... 480 V, 50/60 Hz, 8.8 A	R912003766

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It must be remembered that our products are subject to a natural process of wear and aging.