

Technical Data Sheet

Commutator motors F 460 Ex, F 460 Ex EL, F 460-1 Ex



More than just pumps



Advantages/characteristics:

- ▶ Compact design
- ▶ Extremely tough housing with aluminium double casing
- ▶ Extremely low noise
- ▶ Fully closed
- ▶ Optimum airflow enables excellent cooling
- ▶ Above average service life of the carbon brushes
- ▶ Highest safety standard (protection class I or III)
- ▶ Optionally with integrated low-voltage protection: Prevents uncontrolled start-up of the pump after a power failure
- ▶ F 460 Ex EL: with stepless speed setting to regulate the rising medium



Technical data/type	F 460 Ex	F 460 Ex EL	F 460-1 Ex
Motor type	Single phase universal motor		
Housing, material	Aluminium, painted		
Venting	Externally ventilated		
Motor protection	Circuit breaker		
Low-voltage protection	Optional		
Speed setting, stepless	No	Yes	No
Power supply cable (100 - 240 V)	H 07 RN-F 3G 1.5		
Power supply cable (12 - 24 V)	H 07 RN-F 2X 4		
Power supply cable (42 V)	H 07 RN-F 2GX 1.5		
Standard cable length ¹⁾	16 ft (5 m)		
Standard plug ²⁾	CEE 7/7 ³⁾		
Weight	11.2 lbs (5.1 kg)		13 lbs (5.9 kg)

Certificates	
Operation category as per EN 60034-1 (VDE 0530)	S1 (continuous operation)
Protection class as per DIN EN 60 529	IP 55
EC-type examination certificate number	PTB 10 ATEX 1053X
Operating range	
Operating temperature	-4 -104°F (-20 -40°C)

1) Other cable lengths available on request 2) Other plugs available on request 3) For applications outside hazardous areas

Nominal data for F 460 Ex, F 460 Ex EL, output 460 Watt										
Nominal voltage (V) ¹⁾	240		230		120	110		42	24	12
Nominal frequency	50	50	50 - 60	60	50	50 - 60	50	DC	DC	DC
Nominal output (W)	460									
Nominal speed (R/min)	8,500							7,700	6,000	
Nominal current (A)	2.1	2.2	2.2	4.4	4.5	4.5	11.5	17.0	19.0	
Protection class	I	I	I	I	I	I	III	III	III	
Ex-identification	II 2 G Ex de IIC T6 Gb			File No: E67399 Class I, Groups C+D	II 2 G Ex de IIC T6 Gb					

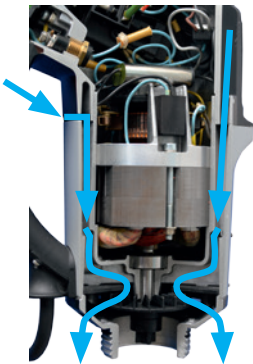
Nominal data for F 460-1 Ex, output 700 Watt						
Nominal voltage (V) ²⁾	240		230		120	110
Nominal frequency (Hz)	50	50	50 - 60	60	50	50 - 60
Nominal output (W)	700					
Nominal speed (R/min)	9,500					
Nominal current (A)	3.3	3.4	3.4	6.8	7.0	7.0
Protection class	I	I	I	I	I	I
Ex-identification	II 2 G Ex de IIC T6 Gb			File No: E67399 Class I, Groups C+D	II 2 G Ex de IIC T5 Gb	

- 1) The 230 V and 110 V versions without low-voltage protection can also be operated with 60 Hz. The speed is reduced by approx. 5 - 8 % (with the same input power). Power consumption increases by 4 - 6 %.
- 2) The 230 V and 110 V versions without low-voltage protection can also be operated with 60 Hz. The speed is reduced by approx. 5 - 6 % (with the same input power). Power consumption increases by 3 - 4 %.

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Design:

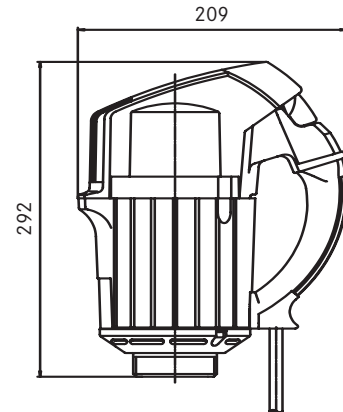


F 460 Ex externally ventilated with double housing.

The cooling air flows through the chambers of the double housing. The interior of the motor is thereby completely protected against corrosion of electrical components, e.g. from ambient air vapours, like in electroplating units.

The arrows show the direction of the cooling air through the chambers of the double housing.

Dimensions [mm]:



Part numbers:

Voltage (Volt)	Frequency (Hz)	Output (Watt)	Cable length	Plug CEE 7/7	Part no.	
					Low-voltage protection	
Motor F 460 Ex, without speed setting					with	without
240	50	460	16 ft (5 m)	Yes	460 00 005	460 00 000
			16 ft (5 m)	-	460 00 023	460 00 020
			-	-	460 00 013	460 00 008
230	50		16 ft (5 m)	Yes	460 00 006	460 00 001
			16 ft (5 m)	-	460 00 024	460 00 021
			-	-	460 00 014	460 00 009
120	50-60		16 ft (5 m)	Yes		460 00 026
	60		16 ft (5 m)	-		460 00 031*
110	50		16 ft (5 m)	Yes	460 00 007	
			16 ft (5 m)	-	460 00 025	
			-	-	460 00 015	
	50-60		16 ft (5 m)	Yes		460 00 002
		16 ft (5 m)	-		460 00 022	
		-	-		460 00 010	
42	50	16 ft (5 m)	-	460 00 030		
24	DC	410	16 ft (5 m)	-		460 00 003
			-	-		460 00 011
230		16 ft (5 m)	-		460 00 004	
		-	-		460 00 012	
12						
Motor F 460 Ex EL, with speed setting					With low-voltage protection	
230	50	460	16 ft (5 m)	Yes		460 00 028
			16 ft (5 m)	-		460 00 035
			-	-		460 00 029
Motor F 460-1 Ex, without speed setting					Low-voltage protection	
240	50	700	16 ft (5 m)	Yes	460 01 003	460 01 000
			16 ft (5 m)	-	460 01 019	460 01 016
			-	-	460 01 009	460 01 006
230	50		16 ft (5 m)	Yes	460 01 004	460 01 001
			16 ft (5 m)	-	460 01 020	460 01 017
			-	-	460 01 010	460 01 007
120	50-60		16 ft (5 m)	Yes		460 01 022
	60		16 ft (5 m)	-		460 01 024*
110	50		16 ft (5 m)	Yes	460 01 005	
			16 ft (5 m)	-	460 01 021	
			-	-	460 01 011	
	50-60		16 ft (5 m)	Yes		460 01 002
		16 ft (5 m)	-		460 01 018	
		-	-		460 01 008	

* Version for the USA with UL approval

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