



iC7-Automation Frequency Converter

Need flexibility to create more competitive systems?

The iC7 series of intelligent AC drives delivers high torque performance in a small footprint. Frequency converters in the iC7 series are optimized for wall-mounted, cabinet-mounted or free-standing installation.

Feature	Benefit				
Compact side-by-side mounting	Save space and reduce installation costs				
Compact bookshelf design reduces footprint	Dadusas areas areas in a second				
Isolated cooling channel minimizes required installation space	Reduce space requirement and air-conditioning load				
Integrated options such as functional extensions, common-mode filters, fuses and disconnects mean no extra external devices are required	Save cost and time in installation				
Installer-friendly design includes pluggable control terminals, pluggable power terminals ¹¹ , and replaceable fans	Save cost and time in installation and service				
Robust by design, high uptime and quality	Reliable in heavy-duty service				

^{1]} For frames up to FA05.

Technical data

Input	
Voltage rating	380-500 V AC, +10%/-15%
Supply frequency	50/60 Hz
Switching on input	1-2 times pr. minute
Grid type	TN, TT, IT, Delta
Output	
Output frequency	0-590 Hz
Switching on output	Unlimited
Overload capacity	110% and 150/160%
Protection ratings	

Frames FAxx: IP20 – Open Type, FKxx: IP21 – UL Type 1, FBxx: IP54 – UL Type 12



HIGHLIGHTS

- Modular and configurable drive
- STO SIL3 as standard
- Scalable control platform
- Powerful hardware-based security including end-toend encrypted data transfer
- Connectivity with multiple fieldbuses
- Industrial IoT-ready
- High-torque machine performance
- Superior motor control
- Ultra compact

Supply voltage and power range 3 x 380-500 V AC 0.5-950 HP

Intelligence

to empower your application



Technical data

Environmental conditions	
Rated temperature	-22 to 122°F¹¹
Nominal temperature 24 hours	-22 to 113°F¹¹
Maximum temperature with derating	140°F
Rated altitude	3280 feet
Maximum altitude	14400 feet with derating
Relative humidity	3K22, maximum 95% non-condensing
Particles (IEC 60721-3-3:2019)	Solid particles (nonconductive particles/dust) 3S6
Chemically active substances (IEC 60721-3-3:2019, ISO 9223:2012)	- C3 (P1) – Medium corrosivity - Non coated - C4 (P2) – High corrosivity – Coated in IP54/IP55/UL Type 12 enclosure or for IP20/Open Type and IP21/ UL Type 1 following installation guidance.
Shock & vibration (IEC 60721-3-3:2019)	3M12
Functional Safety I/O	
STO STO	Dual-channel, with galvanic isolation
STO feedback	Single channel, with galvanic isolation
External supply	

24 V/2 A

Basic I/O	
Digital inputs	4+2 ^{2]}
– Logic	NPN/PNP selectable – 0/24 V
– Pulse/Encoder input	0-110 kHz
Digital outputs	2 ^{2]}
– Logic	NPN/PNP selectable – 0/24 V
– Pulse output	0-100 kHz
Analog inputs	2
Voltage mode	0-10 V or ±10 V, scalable
Current mode	0/4-20 mA
Relay output	2
Function	NO/NC
Rating	250 V AC 2 A, 24 V DC 2 A
	0/4.20
Analog output	0/4-20 mA

^{1]} Frames Fx09-Fx12: For low overload conditions, the maximum permissible ambient air temperatures without derating are 104° F average over 24 hours duration; and 113° F for 1 hour duration, respectively. ²¹ 2 of the inputs can be reconfigured to outputs

EMC category	Frame EN/IEC 61800-3 compliance class							
(model code)		C	onducted emission	on	Radiated emission			
		C 1	C2	C3	C1	C2	C3	
			Cable length [ft]					
F1 – Combined C1 and C2 filter	Fx02-Fx08	164	492	492	No	Yes	Yes	
F2 – C2 filter	Fx02-Fx08	-	492	492	No	Yes	Yes	
	Fx09-Fx12	=	492	492	No	Yes	Yes	
F3 – C3 filter	Fx02-Fx05	-	-	820	No	No	Yes	
	Fx06-Fx08	_	_	984	No	No	Yes	
Fx09-Fx1		_	-	492	No	No	Yes	

Dimensions and weight

Rating

Frame		FA02a	FA03a	FA04a	FA05a	FA06	FK06	FA07	FK07	FA08	FK08
[in]	Width	3.5	4.5	5.1	6.5	7.9	8.3	9.1	9.5	10.0	10.6
	Height	10.6	10.6	15.7	15.7	21.9	26.4	23.6	30.3	29.4	38.6
	Depth	8.7	8.7	10.3	10.6	11.6	11.7	12.1	12.9	14.0	14.4
[lb]	Weight	10.4	12.6	25.6	31.1	57	61	77	83	121	132

 $Frames\ FA02b\ to\ FA05b\ Add\ 26\ mm\ (1\ in)\ to\ depth.\ Outer\ dimensions\ include\ mounting\ flange, without\ EMC\ shield\ plates.\ Weight\ is\ maximum\ weight.$

Frame		FA09	FK09/ FB09a	FK09c/ FB09c	FA10	FK10a/ FB10a	FK10c/ FB10c	FA11	FK11/ FB11	FA12	FK12/ FB12
[ir] Width	9.8	12.8	12.8	13.8	16.5	16.5	20	23.7	23.9	27.5
0-	Height	35.8	39.4	55.9	44.2	48.5	70.0	62.1	80.4	62.1	80.4
	Depth	14.8	14.9	15.0	14.6	14.9	15.0	19.0	20.2	19.0	20.2
[lk	o] Weight	179	184	236	280	302	384	496	600	654	705

Weight is maximum weight.

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