

F2K AVIO

400Hz

**Frequency
Converter**

F2K2 AVIO Frequency Converter a new IGBT - PWM solid state hi-efficiency integrated system converter for top class performances on 400Hz ground power supply .

F2K2 are also available on multiple output system range and different standard size - Custom size are also available on request

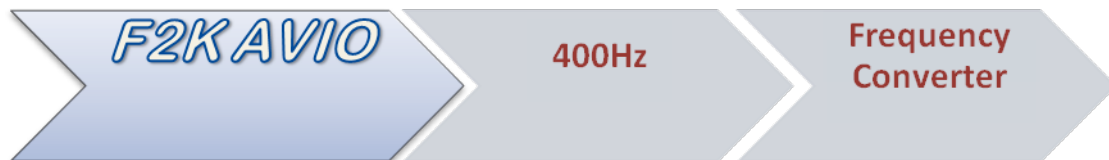
- 5kva –120Kva
- 200Kva
- 250Kva
- 320Kva
- 400Kva
- 500Kva |



✓ **F2K2 Avio - Main features and performances**

- ↻ Wide input power supply range available from 380 VAC to 480 VAC 3Ph + G
- ↻ Multiple output configuration 200/115V 400Hz 3Ph+ N + G (adjustable +-10%) 36V 400Hz 1Ph + N + G and 28VDC (configuration available from 50A up to 600 A)
- ↻ Standard bottom cable entry – degree of protection IP21 –Color RAL 7035
- ↻ EN 61000-6-2, EN 61000-6-4, 2006/95/EC, ISO 1540, ISO 6858, SAE ARP 5015, MIL-STD-704F, MIL-STD-1472, DFS-400MIL, STD-405-F compliant
- ↻ **Wide option range :**
- ↻ 12 pulse input rectifier for lower THD current level
- ↻ 5th and 7th harmonic input filter on request on 6 pulse units
- ↻ Trailer available (certified) on request to allow easy handling of the unit up to 150kva
- ↻ Top cable entry on request for standalone units
- ↻ Increased degree of protection from IP31 to IP52
- ↻ Full range of customized colors available
- ↻ Voltage drop compensation available
- ↻ ± 10% output voltage adj potentiometer available on request

➤ F2K AVIO DATASHEET						
General Data	20Kva	30Kva	50Kva	60Kva	100Kva	120Kva
Overall Ac/Ac Efficiency at 100% load	90,7%	90,9%	91,1%	91,5%	91,7%	91,9%
Overall Ac/Ac Efficiency at 50% load	88,4%	88,7%	89,7%	90,1%	90,3%	90,5%
Heat Rejection at 100% Load 0,8PF (Btu)	5.598,95	8.199,73	13.336,52	20.290,31	24.712,10	29.650,05
Cooling Air(77F-86F/25°C-30°C) (CMF)	410,14	600,66	976,95	1.486,34	1.810,25	2.172,5
Audible Noise Level(at Five Feet)dB(A)	54	54	57	59	59	64
Fault Current Rating (KA)	25	25	25	25	25	25
Operating Temperature (UPS)	32F-104F(0°C-40°C)					
Storage Temperature Range(UPS)	5F-122F(-15°C+50°C)					
Relative Humidity	0-95% non condensing					
Maximum Altitude(without derating)	3281Ft					
Maximum Altitude(with derating)	4921Ft/-5% 6562Ft/-9% 8202Ft/ -14% 9843Ft/-18%					
Enclosure (type)	Indoor IP21					
Enclosure (safety)	Internal dead front construction					
Enclosure (cooling)	Forced air (redundant Fans)					
Enclosure (colour)	To be defined within the Ral grade					
Installation and Maintenance	Front access required for normal maintenance					
Conduit Access	Bottom standard-top option					
Standards	UL1778, IEC62040, ISO9001,EN52001 -MIL-STD-405_F and others					
Electrostatic Discharge Immunity	4KV Contact / 8KV air discharge					
Configuration Standard	Stand alone					
Rectifier						
Configuration	6 pulse thyristor Rectifier -- 12 pulse on request					
Input Voltage	380-400-415-440-480 Vac, 3 phase, 3 wire + ground ± 15%					
Frequency	50/60Hz, +/- 10% selectable					
Power Factor	0,9 lagging typical @ 100% load @ 400vac 0,92 lagging on 12 pulse					
Inrush Current	Limited by soft-start circuit					
Output Voltage Tolerance	+/- 1%					
Inverter						
Configuration	IGBT pwm controlled					
Nominal Output Voltage (adj +/-10%)	190-200 V ac 400Hz 3 phase, 4 wire + ground					
Nominal Output Voltage	36V ac 1 phase, 2 wire + ground Max 20% unit size			OPTION	[1]	
Nominal Output Voltage	28V DC 2 wire ground up to 600A			OPTION	[2]	
Inverter Bridge	IGBT Technology					
Output Isolation Transformer	yes					
Output Waveform	True sine wave					
Inverter specs						
Static	+/- 1%					
Load Step 0% - 100% - 0%	+/-8% Recovering within tolerance into 2 cycles					
Load Step 0% - 50% - 0%	+/-3% Recovering within tolerance into 2 cycles					
100% Unbalanced Load (IEC62040)	+/-3% voltage deviation					
General Data						
	20Kva	30Kva	50Kva	60Kva	100Kva	120Kva
100% Unbalanced Load (IEC62040)	± 5%	± 5%	± 5%	± 5%	± 5%	± 5%
Output Voltage Distortion						
100% Linear Load	2% THD Maximum					
80% Non Linear Load (IEC62040)	5% THD Maximum					
Crest Factor Compatibility	3:1 with 80% load					
Output Neutral Wire Rating	200%					
Phase Displacement						
100% Balanced Load	120° +/-1%					
100% Unbalanced Load (80%-0-80%)	120° +/-2%					
Output Frequency						
Free Running	400Hz, +/- 0.01%					
Overload Capability (on inverter)	125% at 0.8PF for 10 minutes / 150% at 0.8PF for 60 seconds					
Short Circuit Capability (on inverter)	150% of rated current for 60 sec, followed by current limitation					
Maximum Op Current @ 0,8PF (A) 3ph 200VAc	53A	79A	132A	174A	262A	334A



General		
Alarm Contact (voltage free)	Four user defined contacts	
Serial Communication	standard 1x RS232	
Standard	Emergency power off (User supplied N/C Contact)	
Input Signals	AUX input 1*(default=on generator).	

Size , weight and code :

F2K2-020-std -U: size 800x750x1200 , weight 300kg average

F2K2-030-std -U : size 800X750X1200 , weight 380kg average

F2K2-050-std -U : size 860X860X2000 , weight 470kg average

F2K2-060-std -U : size 860X860X2000 , weight 610kg average

F2K2-100-std -U : size 1060X860X2000 , weight 700kg average

F2K2-120-std -U : size 1460X860X2000 , weight 900kg average

CUSTOMER NOTE :

