

AXPERT **Eazy+** 4Q Series VFD

World's Most Advanced 4Q Regenerative VFD

The Next Generation **Axpert-Eazy+ 4Q Series Regenerative VFD** is the outcome of Amtech's three decades of experience in motor control and automation. The Low harmonics, High efficiency Industrial Grade New Series is designed to meet the ever increasing expectations of our customers; deliver highest performance, protection and energy saving without compromising the user friendliness.

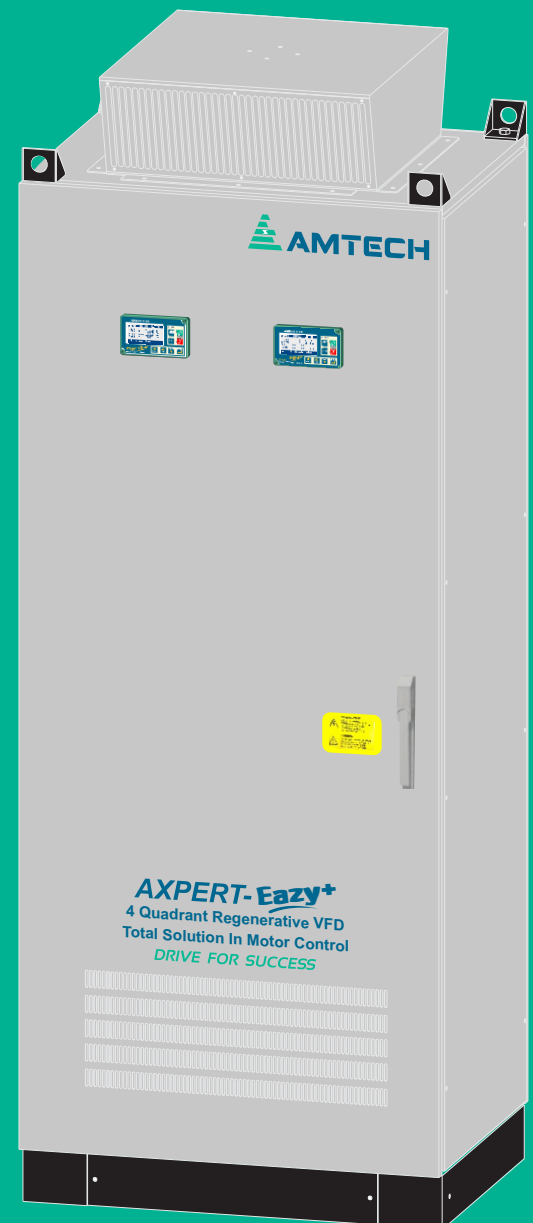
The 4Q Regenerative VFD has IGBT based converter which keeps the supply side line current harmonics below 5% and power factor to unity at rated load. It is also capable of feeding the excessive power generated by load back to the grid. It comes with fully configurable I/O and Functional Safety Functions and meets the international power quality standards such as IEEE 519-2014.

Benefits

- Energy savings as it feeds back the excess power to grid from regenerative loads, connected at the output.
- Reduces total harmonic distortion to draw sine wave current from the utility.
- Minimized downtime due to reliable operation as it stabilizes DC voltage against mains and load fluctuations and provides stable AC voltage output.
- Optimized cost and space as it includes an active supply unit and a line filter in drive.
- Improves power factor to unity.

Target Applications

- Centrifuges
- Cranes and hoists
- Un-winders
- Paper machines
- Regenerative application
- Roller tables
- Test jigs for dynamometers, gears and motor test benches



“Feeds back excess power with improved quality”

Standard Specifications

Electrical Specifications & Frame size																							
Input Power Source	-4:415 VAC, 3-Ph, 3-W																			-6:690 VAC, 3-Ph, 3-W			
	50/60 Hz, Voltage: -15...+10 %, Freq. tolerance: ±5 %																						
Output Voltage	0...Input voltage																						
Output Frequency	0.10...599.00 Hz for V/F control																						
Model AMT-4Q-XXXXA-4/6	0039	0048	0065	0077	0095	0115	0155	0190	0225	0260	0336	0375	0415	0445	0510	0590	0660	0785	0850	0925	0430	0470	0553
Input capacity (kVA)	22	25	36	43	50	61	83	101	122	144	176	219	219	273	273	341	388	438	492	546	436	490	545
Input current (Amp)	30	35	50	60	70	85	115	140	170	200	245	304	304	380	380	475	540	610	685	760	400	450	500
No overload rating (Amp)	39	48	65	77	95	115	155	190	225	260	336	375	415	445	510	590	660	785	850	925	430	470	553
No overload rating (kW)	18.5	22	30	37	45	55	75	90	110	132	160	185	200	220	250	315	355	400	450	500	400	450	500
Normal duty rating (Amp)	37	45	62	73	90	110	147	180	215	246	320	360	395	425	485	575	630	745	810	880	426	455	537
Normal duty rating (kW)	18.5	22	30	37	45	55	75	90	110	132	160	185	200	220	250	315	355	400	450	500	400	450	500
Heavy duty rating (Amp)	33	40	48	65	77	95	115	155	190	225	260	336	375	410	425	490	550	660	745	810	387	426	482
Heavy duty rating (kW)	15	18.5	22	30	37	45	55	75	90	110	132	160	185	200	220	250	315	355	400	450	355	400	450
Frame size	A	A	A	A	A	A	A	A	A	A	B	B	B	B	B	C	C	D	D	D	D	D	D
Approximate weight in kg/lb	292/643	292/643	295/650	295/650	297/654	297/654	300/661	305/672	315/694	335/739	435/959	460/1014	460/1014	488/1076	488/1076	652/1437	672/1482	1400/3086	1400/3086	1400/3086	1332/2937	1400/3086	1470/3241
Overload Current Rating	Nominal output current available continuously, No overload allowed 120 % for 60 second, 140 % for 2.5 second every 5 minimum, Normal Duty (ND) use 150 % for 60 second, 175 % for 2.5 second every 5 minimum, Heavy Duty (HD) use																						
Control Specifications																							
Control mode	Constant Voltage																						
Control method	Hysteresis current control																						
Input current distortion (% THD)	Less than 5 % (at 100 % load)																						
Input Power factor	0.99 (at 100 % load & nominal voltage), >0.95 (at load of more than 30 %)																						
Regeneration mode	Yes (Automatic)																						
Max. Switching Frequency	5 kHz																						
Mechanical Specifications																							
Color	RAL 7035																						
Protection class	IP 31																						
Installation	Floor mounting																						
Dimensions by Frame size (W x D x H in mm [Inch])	A = 800 x 600 x 1995 [31.5 x 23.6 x 78.5]					B = 800 x 800 x 1995 [31.5 x 31.5 x 78.5]					C = 1100 X 800 x 2195 [43.3 x 31.5 x 86.4]					D = 1900 x 800 x 2195 [74.8 x 31.5 x 86.4]							
Environmental specifications																							
Installation location	Indoor																						
Ambient temperature	-15...45 °C (5...113 °F)																						
Storage temperature	-20...70 °C (-4 ... 158 °F)																						
Audible noise	≤ 78 db @ 1.0 m (3ft)																						
Altitude (above sea level)	1000 m (3300 ft) without derating, above this derate 3 % per 305 m (1000 ft) upto 4000 m (13200 ft)																						
Derating with temperature	Above 45 °C (113 °F), derate by 3 % /1 °C (1.8 °F) maximum up to 50 °C (122 °F) temperature																						
Relative humidity	0...95 % max. non condensing																						

- Note:
1. Module efficiency >96%
 2. All specifications valid at nominal voltage
 3. All control functions, operating specifications, display indications, communication & protective specifications are as per standard Aexpert-Eazy+ Series VFD.
 4. For higher rating model, contact Amtech sales representative.
 5. Panel fan height is included but Panel plinth height is not included in above dimension. Standard plinth height is 100 mm.



DRIVE FOR SUCCESS

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