AXPERT Eazy+

SERIES VFD

World's Most Advanced VFD
User Friendly By Design

400 V System (380 to 480 V),
0.75 kW (1 HP) to 2000 kW (2700 HP)

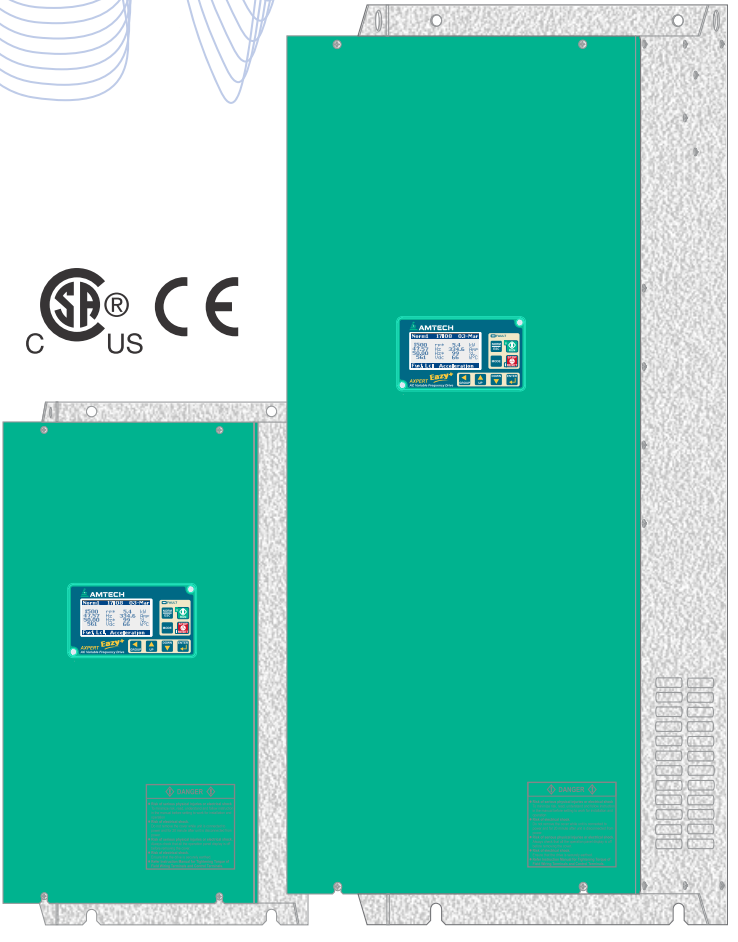
500 V System (500 to 600 V),
30 kW (40 HP) to 1800 kW (2415 HP)

600 V System (601 to 690 V),
37 kW (50 HP) to 2100 kW (2815 HP)

AMTECH

AMTECH ELECTRONICS (INDIA) LTD.

DRIVE FOR SUCCESS



The **Next Generation Axpert-Eazy+ Series VFD** is the outcome of Amtech's three decades of experience in motor control and automation.

The Low loss, 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.

It comes with fully configurable I/O and Functional Safety Functions.

Experience the easiness of control and powerful performance.

DRIVE FOR EVERY INDUSTRY

Easy to INSTALL & COMMISSION

Compact

The New Series VFD is downsized considerably, up to 52% smaller in volume compare to the previous series and requires less space to install.

Well-defined terminations for power and control circuit. All the power terminals are on either left side or bottom side.

Commissioning Mode for easy commissioning.

Debug Mode for the logic verification without actually rotating the motor.

Easy to PROGRAM

Shorter programming time, **Application Macro** sets the required parameters as per the application and rating.

Functional Macros sets the required parameters and I/O as per the function usage.

Identify the changed parameters at a glance with **Default differ function** and change the parameter from the same menu.

Easy to PROTECT

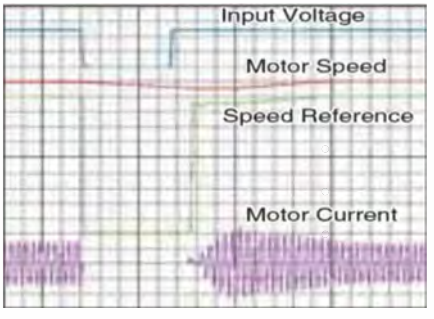
High Speed Digital Signal Controller protects the drive against abnormal conditions.

User settable overload function protects the load against overload conditions.

Soft stall current limit reduces the output frequency if the output current exceeds the set level.

Input and Output Phase Loss detection prevents overload on other phases.

Designed for HARSH ENVIRONMENTS



- Immune to power fluctuations
- Wide input voltage range
- Designed for **50 °C (122 °F) ambient temperature**
- State of the art conformal coating on electronic boards as standard to protect printed circuit boards against **3C3 environment**

Easy to MONITOR

IP 65 from front side detachable Digital Operation Panel

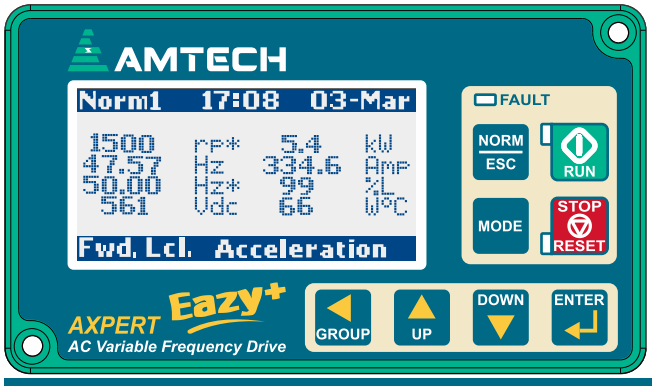
128x64 Graphical LCD Display with white back light and **Real Time Clock**

8-Key Keypad with 3 status indicating LEDs RUN, STOP and FAULT

Self-explanatory full parameter name in English

Auto Rotation of Norm Screens with settable time

8 selectable parameters on single screen to monitor critical parameters simultaneously



Easy navigation, self-explanatory functional keys NORM, MODE, GROUP, UP, DOWN, RUN & STOP

8 parameters (Norm1 & Norm2), 2 parameters (Norm3) and 1 parameter (Norm4) screens

Norm5 screen simultaneously displays start control reference, speed reference and 4 parameters

Easy to DIAGNOSE

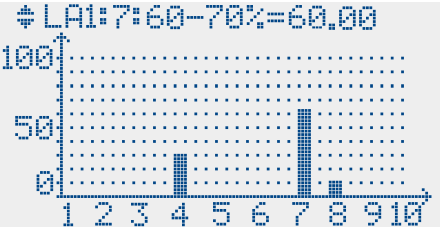
Diagnosis Functions help to pin point the fault

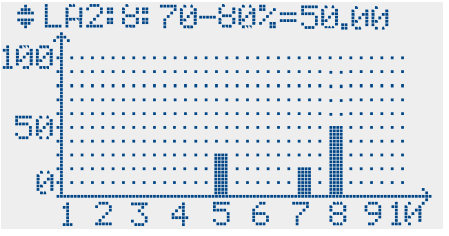
Fault history, last 20 faults with time stamp and 8 important operational parameters

Load Analyzer1 shows user selected parameter Vs time profile in 10% steps, useful for fault analysis (see below screen)

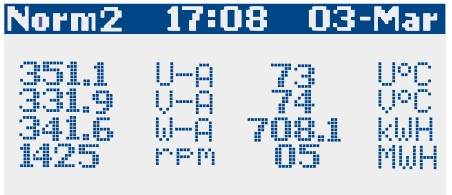
Load Analyzer2 shows load current Vs time profile for entire service life in 10% step (see below screen)

Peak Load monitoring with time stamp and other parameters

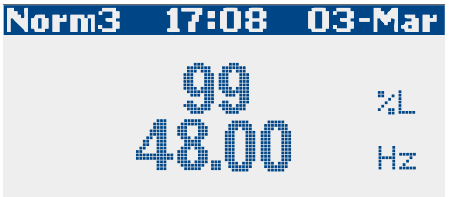




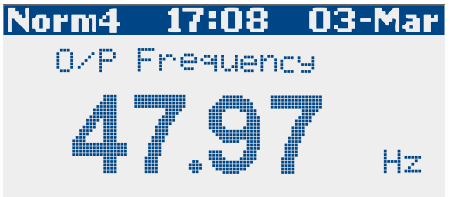
DRIVE FOR DEMANDING APPLICATIONS



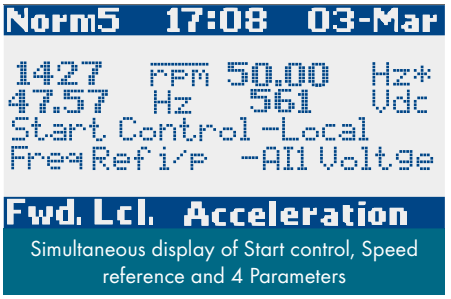
Second screen with 8 selectable parameters, Monitor critical parameters simultaneously



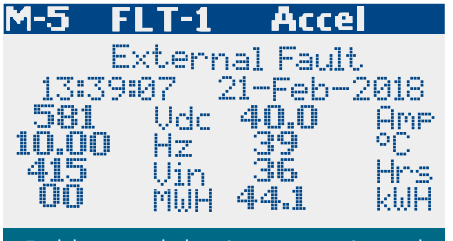
Two parameter screen, Large fonts, Selectable parameters



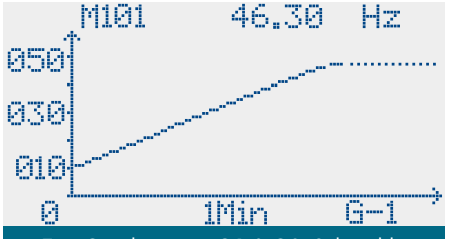
Single parameter screen, Large fonts, Better Readability



Simultaneous display of Start control, Speed reference and 4 Parameters



Fault history with date & time stamp, 8 critical parameters and VFD status at the time of fault



Two Graph-screens G1 & G2, Selectable Parameters and Resolution

Easy to CONTROL

NextGen control to deliver highest performance

In-built PLC with **Functional Block** Based Programming

Range of **Fully Configurable I/O**

10 Digital Inputs (2 fixed, 8 programmable), +24V operated sink/source and normally open/close selectable, DI8 is configurable as Pulse Input

4 Digital Outputs, Up to +30V operated and normally open/close selectable, DO4 is configurable as Pulse Output

3 Relays, normally open/close selectable

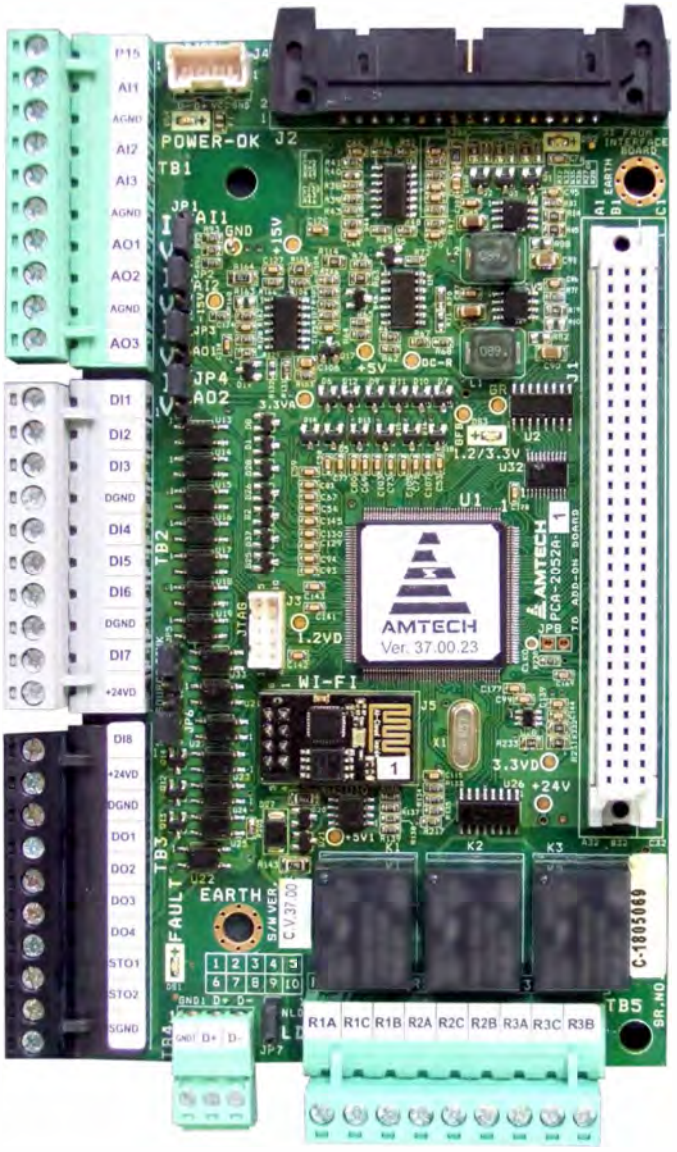
3 Analog Inputs (Two configurable as voltage or current input, one as +/-10 V input)

3 Analog Outputs (Two configurable as voltage or current output, one as +/-10 V output)

2 fixed digital inputs dedicated for **Safe Torque Off** (STO), the digital output can be programmed for the STO feedback

32 Configurable Serial Parameters helps to read 32 parameters in a one go

PID, Multi-pump, Ring Spinning Frame, Pattern Run software functions



Easy to MAINTAIN

The cooling fan, one of the common service parts can be easily removed for replacement.

Total Power On Time and Total Run Time provides the information about the drive and machine usage for the monitoring of serviceable parts.

Predictive maintenance helps reduce process down time

Easy to ECONOMIZE

IE2 Compliant VFD

Built-in PID, PLC & application specific software reduces the peripheral cost.

Built-in **Energy Saving Calculator**

High-Efficiency operation mode

Multi-pump control function

Auxiliary Drive control function

Easy to CONNECT

RS-485 Modbus Protocol, Wi-Fi as standard

Axpert-Communicator™ Drive Support Software

Powerful monitoring and control software for PC for controlling maximum drives at a time.

All parameter reading / writing & monitoring
Bargraphs / Trend plots / Alarm view

Mobile Application

Option BOARDS

ID	DESCRIPTION
OP01	Line Driver Encoder (5V)
OP04	Ethernet IP + Line Driver Encoder (5V)
OP05	Ethernet IP + HTL Encoder (5...24V)
OP06	ProfiNet + Line Driver Encoder (5V)
OP07	ProfiNet + HTL Encoder (5...24V)
OP08	Ethercat + Line Driver Encoder (5V)
OP09	Ethercat + HTL Encoder (5...24V)
OP10	Modbus TCP + Line Driver Encoder (5V)
OP11	Modbus TCP + HTL Encoder (5...24V)
OP12	DeviceNet + Line Driver Encoder (5V)
OP13	DeviceNet + HTL Encoder (5...24V)
OP14	Profibus-DP + Line Driver Encoder (5V)
OP15	Profibus-DP + Line Driver Encoder (5V) + 8DI + 8DO + 4AI + 3AO + 3RTD
OP16	Line Driver Encoder (5V) + 8DI + 8DO + 4AI + 3AO + 3RTD
OP17	HTL Encoder (5...24V)
OP18	Profibus-DP

External SYSTEM OPTIONS

EMI/RFI Filter helps control equipments run without disturbances

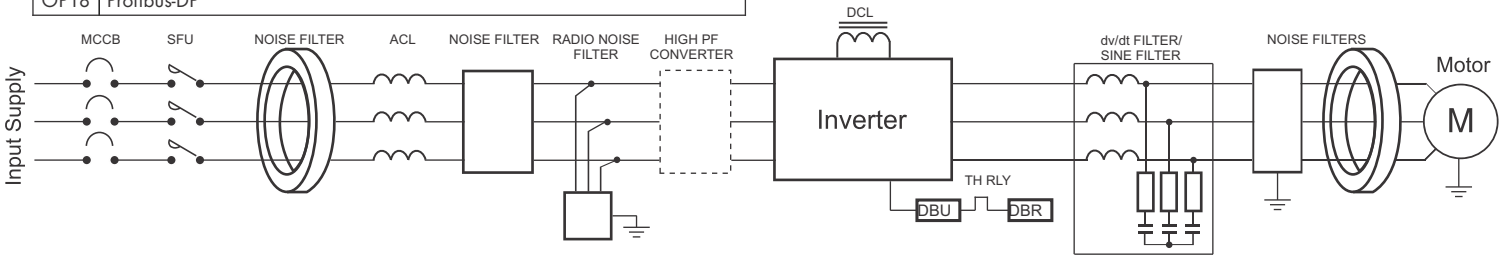
ACL/DCL reduces current harmonics up to 38 to 45%

Active Front-end Converter (AFC), 12-pulse/18-pulse Converter for low harmonic requirements and IEEE 519 compliance

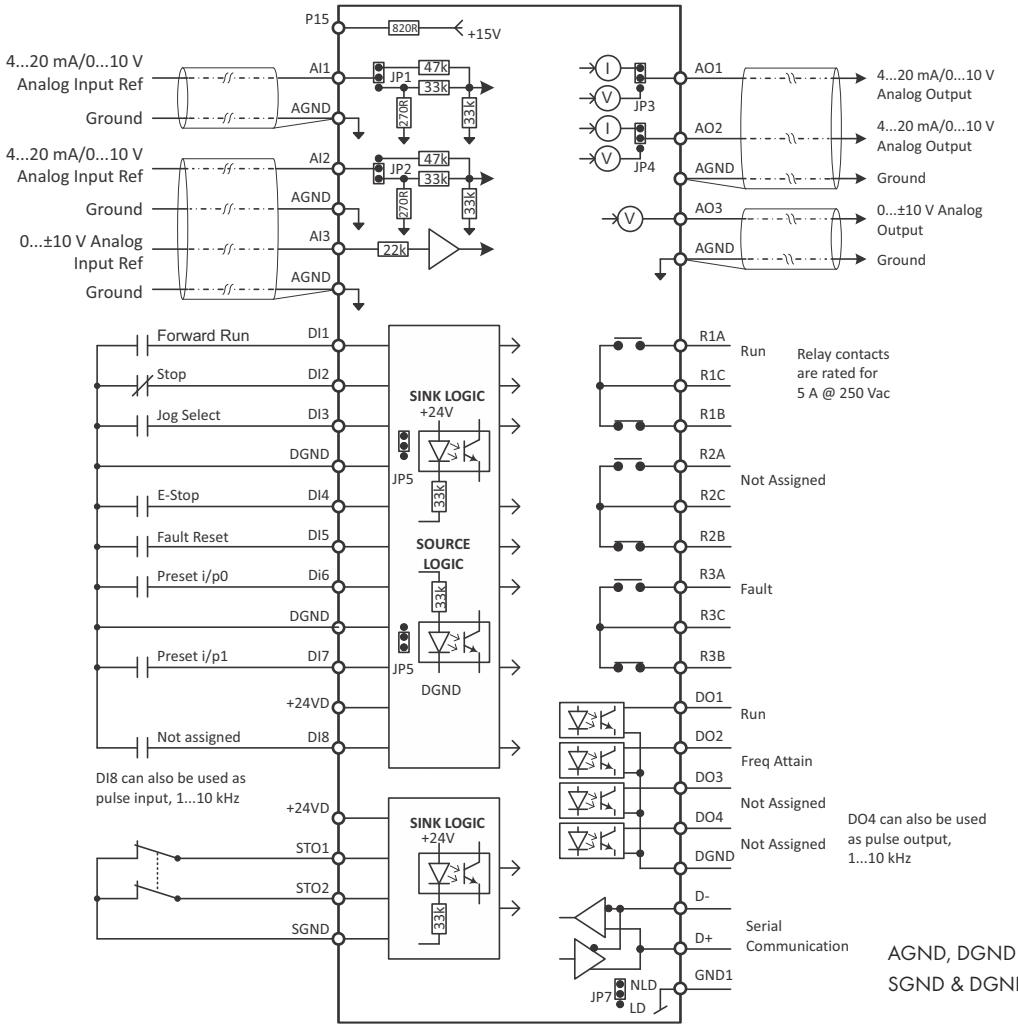
DB Unit and **DB Resistor** with various options

Load Reactor, dV/dt Filter, Sine Filter and Common Mode Noise Filter for longer cable lead to reduce the voltage stresses at motor terminals

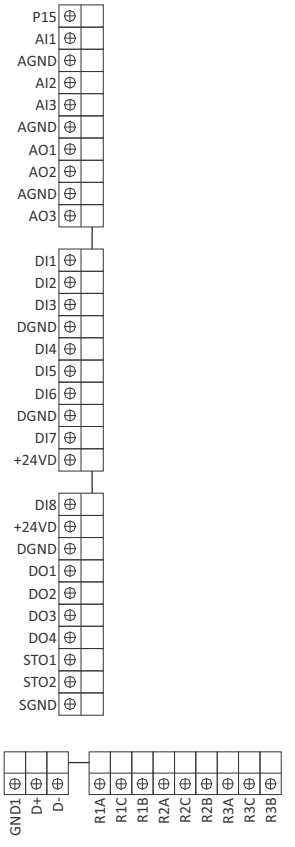
Refer our **Engineered System** catalog for more details



Connections and TERMINALS



Control Terminals



AGND, DGND & GND1 are internally isolated.
SGND & DGND are internally connected.

DRIVE FOR SUCCESS

Standard SPECIFICATIONS

Power Rating	Mains supply voltage	-4: 380...480 VAC, 3-Phase, 3-Wire, -15%, +10% -6: 500...600 VAC, 3-Phase, 3-Wire, -15%, +10% -6: 601...690 VAC, 3-Phase, 3-Wire, -15%, +10%
	Mains supply frequency	50 Hz, 60 Hz or 50/60 Hz, +/- 3 Hz
	Output current	Nominal output current available continuously, No overload allowed 120% for 60 seconds, every 5 minutes, Normal Duty (ND) use 150% for 60 seconds, every 5 minutes, Heavy Duty (HD) use Higher overload time during cold start
Control Functions	Control Method	Digital Space Vector PWM Control
	Control Mode	V/F, Closed loop V/F, Sensor less Vector Control, Closed loop Vector Control
	Frequency Range	0.10...599.00 Hz for V/F Control; for high frequency requirement, contact Amtech.
	Frequency Accuracy	Digital references: ±0.01% (-15...50 °C), Analog References: ±0.01% (-15...50 °C)
	Output Frequency Resolution	0.0001 Hz (20-bit)
	Frequency Setting Resolution	0.01 Hz Digital, 0.012 Hz @50 Hz Analog (12-bit)
	V/ Hz Characteristics	2-Preprogrammed patterns, 1-Custom 3-point setting pattern
	Torque Boost	Manual/Automatic Selective: 0...20%
	Acceleration/Deceleration Time	0.1-6,00,000 Seconds, Linear or S-Curve selective
	Start Frequency	Set between 0.10 Hz to 10.00 Hz
	Skip Frequency	Three frequencies can be set, band can be set up to 10.0 Hz
	Slip Compensation	Slip compensation frequency up to 5.0 Hz
	Carrier Frequency [1]	Default: 5 kHz, 2...10 kHz up to AMT-0336A-4, Default: 4 kHz, 2...6 kHz for AMT-0375A-4 & higher, 500V and 600V Series.
Operation Specifications	Speed Search Function	Allows the drive to start with rotating machine without damage/tripping.
	Kinetic Energy Buffering	In case of momentary power fluctuations allows the drive to run using the kinetic energy of the load
	Power Loss Carry Through	Up to 5 seconds for smooth operation of system during power loss with no output torque
	DC Braking	DC Braking start frequency 0.1...50.0 Hz, Time: 0...25 seconds, Brake current: 15...150%
	Dynamic Braking	In-built dynamic braking transistor up to AMT-0048A-4
	Frequency / Torque Setting Input	Digital Operation Panel (Keypad) Analog Input: 2 kOhm Potentiometer, Programmable Analog Inputs Digital Input: Static Pot (Frequency Increase/ Frequency Decrease), Preset Speeds (Preset input0, 1 & 2), Pulse Input1 Serial: RS-485, Wi-Fi and other communication protocols Built-in PLC: PLC Analog output1, 2, 3 & 4
	Auto Restart	Adjustable up to 10 times, selectable for different faults
	PID Controller	Inbuilt PID controller can be used as stand alone
I/O Specifications	Analog Inputs	3 Analog Inputs with settable Gain, Bias, Minimum and Maximum scaling AI1 & AI2: 0...10 Vdc/4...20 mA AI3: 0...±10 Vdc
	Digital Inputs	8 Digital Inputs, Sink/Source and Active Close/Active Open selectable; DI8 can be used as pulse input, 1...10 kHz
		Programmable options: Not Used, Jog Select, Ramp Select, Preset i/p0, Preset i/p1, Preset i/p2, Freq Increase, Freq Decrease, Aux Drive, Emergency Stop, Fault Reset, External fault1, External fault2, Reverse, Terminal, Ref Select0, Ref Select1, PR Step Skip, PR Step Hold, PR/RSF Reset, PID Bypass, PID Disable, Run, Stop, Drive Enable, PLC input1, PLC input2, PLC input3, PLC input4, PLC input5, PLC input6, PLC input7, PLC input8, Torque mode, Ready1 F/B, Forward Run, Reverse Run, Forward Jog, Reverse Jog and MBRK Answer
	Safety Inputs	Safe Torque Off (STO1 and STO2) inputs to comply with Safety Integrity Level 3 (SIL3)
	Digital outputs	4 Digital Outputs, open collector type, Active Close/Active Open selectable; DO4 can be used as pulse output, 1...10 kHz
		Programmable options: Not Used, Local, Run, Forward Run, Reverse, Reverse Run, I-Detection1, I-Detection2, Freq Attain, Speed Detect1, Speed Detect2, Acceleration, Deceleration, Aux Drive, Timer Output, Zero Speed, Fault Alarm, PID Up Limit, PID Lo Limit, Temp Alarm, Ready, Ready1, Pump1, Pump2, Pump3, Pump4, Doff-End Alarm, Sleep Mode, Fault, PLC O/P1, PLC O/P2, PLC O/P3, PLC O/P4, PLC O/P5, PLC O/P6, PLC O/P7, PID F/B Upper Limit, PID F/B Lower Limit, Fan Control, MBRK, KEB ON, Overload fault, Overcurrent fault, Earth fault, Over temperature fault, Overvoltage fault, STO1, STO2, STO1 & STO2, On Time1, On Time2 and On Time3
	Potential Free Contacts	3 Relays, 1-NO, 1-NC for 5 A @ 240 VAC Programmable options same as digital outputs
	Analog Outputs	3 Analog Outputs with settable Gain, Bias, Minimum and Maximum scaling AO1 & AO2: 0...10 Vdc / 4...20 mA AO3: 0...±10 Vdc
		Programmable options: Output frequency, Motor current, Drive current, Output power, Output voltage, DC bus voltage, PID output, Heatsink temperature, PLC AO1, PLC AO2, PLC AO3, PLC AO4, Unipolar torque current, Excitation current, Set frequency, Bipolar torque current, O/P frequency -10 to 10V, Motor and Drive Overload
	Network connectivity	Isolated RS-485 for PC Interface with Modbus-RTU protocol and Wi-Fi connectivity as standard, optional protocols are Profibus-DP(Slave), ProfiNet, Ethercat, Ethernet IP, Modbus-TCP, DeviceNet

Standard SPECIFICATIONS

Display	Display and Keypad unit	Digital Operation Panel 128x64 Graphical LCD with white back light LED, 8-Key Keypad, 3 Status indicating LED for Run, Stop, Fault | Real Time Clock Simultaneous display of 8 selectable monitor parameters Two graph screens with selectable graph signal and resolution Load Analyzer screens | Auto rotation of screens with settable time interval
Protective Specifications	Protective Function	Current Limit, Overcurrent fault, Drive overload fault, Motor overload fault, Undercurrent fault, DC Bus Overvoltage fault, DC Bus Undervoltage fault, Temperature fault, Input & Output phase loss fault, Earth (Ground) fault, External fault, Charging fault, Current sensor fault, EEPROM fault, 4-20mA Reference missing fault, Auto tuning fault, Emergency stop, Communication loss, Output unbalance current fault, Speed deviation fault, Overspeed fault, Motor PTC short fault, Motor overtemperature fault, Control power fault etc.
	Smooth Operation	Speed Search, Auto Restart (with individual fault selection), Power Loss Carry Through (PLCT), Kinetic Energy Buffering (KEB) and Heatsink/IGBT overtemperature alarm functions
	Diagnosis Functions	Helps in pinpointing the fault. Diagnosis Mode, Load Analyzer1, Load Analyzer2, Peak Monitoring, Number of Power On, Overtemperature fault, Overvoltage fault, Overcurrent fault, Earth fault, Overload fault, Auto restart monitoring; 3 warning timers for maintenance; Debug Mode for logic verification
	Fault history	Last 20 faults with date & time, status and 8 operational parameters (Output frequency, Output current, DC bus voltage, Heatsink/IGBT temperature, Input voltage, Total power ON time, kWH, MWH).
Environment	Installation location	Indoor
	Vibration	As per EN 60068-2-6, Acceleration: 1g, Frequency: 10...150 Hz
	Ambient temperature	-15...50°C (5...122°F)
	Storage temperature	-20...70°C (-4...158°F)
	Altitude (above sea level)	1000 m (3300 ft) without derating, above this derate 3% per 305 m (1000 ft)
	Relative Humidity	0...95% maximum non-condensing
	Enclosure	IP20 (Frame F0...F3); IP00 (F4 onwards), IP20 with option kit (F4 onwards)
Reference Standards		UL 508C, UL 61800-5-1, CSA C22.2 NO. 274-17, IEC 61800-5-1, CE (EN 50178:1997, EN 61800-3:2004+A1:2012, EN 61800-5-1:2007), EN 61800-5-2:2007

At rated load, the overall input power factor is approximately 0.9 with 3% ACL or equivalent DCL and displacement power factor is close to unity (>0.98).
The inverter efficiency is >98% at rated load.
(1) If the default carrier frequency is exceeded, derate the output current. Refer instruction manual for derating..

Dimension 400V/500V/600V SERIES

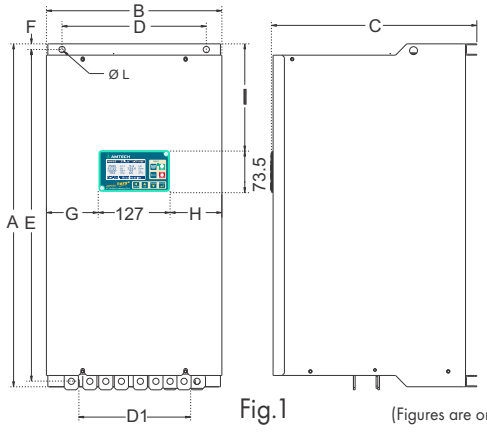


Fig.1

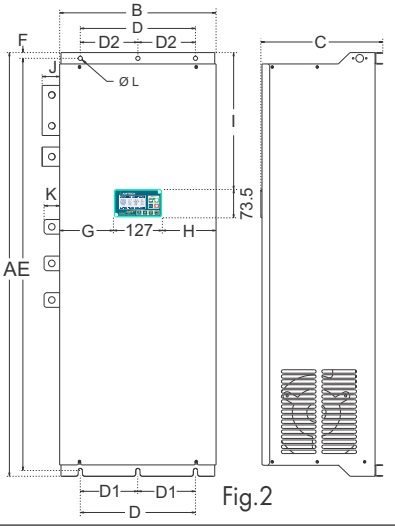


Fig.2

(Figures are only for reference)

DRIVE FOR ENERGY SAVING

Dimensions in mm/inch															
Frame	Fig.	A	B	C	D	D1	D2	E	F	G	H	I	J	K	Ø L
F0	1	325/12.80	183/7.20	191/7.52	118/4.65	118/4.65	-	307.5/12.11	8.5/0.33	28.0/1.10	28.0/1.10	58.5/2.30	-	-	7/0.28
F1	1	325/12.80	183/7.20	218/8.58	118/4.65	118/4.65	-	307.5/12.11	8.5/0.33	28.0/1.10	28.0/1.10	58.5/2.30	-	-	7/0.28
F2	1	335/13.19	228/8.98	218/8.58	163/6.42	163/6.42	-	317.5/12.50	8.5/0.33	50.5/1.99	50.5/1.99	58/2.28	-	-	7/0.28
F3	1	355/13.98	240/9.45	218/8.58	175/6.89	175/6.89	-	337.5/13.29	8.5/0.33	56.5/2.21	56.5/2.21	76/2.99	-	-	7/0.28
F4	1	430/16.93	251.5/9.90	267/10.51	175/6.89	175/6.89	-	411/16.18	9/0.35	62/2.44	62.5/2.46	103/4.06	-	-	10/0.39
F5	1	500/19.69	251.5/9.90	300/11.81	175/6.89	175/6.89	-	481/18.94	9/0.35	62/2.44	62.5/2.46	173/6.81	-	-	10/0.39
F6	1	606/23.86	310/12.20	363/14.29	255/10.04	205/8.07	-	586/23.07	10/0.39	91.5/3.60	91.5/3.60	189.5/7.46	-	-	11/0.43
F7	2	880/34.65	348/13.70	348/13.70	241/9.49	-	-	850/33.46	15/0.59	110.5/4.35	110.5/4.35	299/11.77	41/1.61	44.5/1.75	11/0.43
F8	2	1100/43.31	406/15.98	316.5/12.46	299/11.77	149.5/5.89	149.5/5.89	1070/42.13	15/0.59	139.5/5.49	139.5/5.49	355.5/14.00	55.2/2.17	50.2/1.98	11/0.43
F9	2	1310/51.57	433/17.05	324.2/12.76	326/12.83	163/6.42	163/6.42	1280/50.39	15/0.59	153/6.02	153/6.02	448.7/17.66	55/2.16	50/1.97	11/0.43
F10	*	1157/45.55	685/26.96	479.5/18.88	600/23.62	-	-	870/34.25	20/0.79	285.5/11.24	272.5/10.72	511.6/20.14	-	-	13/0.51
F11	*	1136/44.72	974/38.35	503.5/19.82	880/34.64	-	-	853/33.58	20/0.79	580.5/22.85	266.5/10.49	306.3/12.06	-	-	13/0.51

*** Contact AMTECH or nearest dealer for the dimension information of higher rating models.**

Standard SPECIFICATIONS (400V SERIES)

Model (AMT-XXXXA-4)	Frame	Weight	Nominal Input Voltage 3-Phase, 415 Vac						Airflow
			Output Rating [1]						
			No Overload Rating		Normal Duty Rating		Heavy Duty Rating		
		kg/lb	A	kW	A	kW	A	kW	(m3/h)
-002A6-4	F0	6.7/14.8	2.6	0.75	2.5	0.75	2.5	0.5	204
-003A3-4	F0	6.7/14.8	3.3	1.1	3.1	1.1	2.6	0.75	204
-0004A-4	F0	6.7/14.8	4	1.5	3.8	1.5	3.3	1.1	204
-005A8-4	F0	6.7/14.8	5.8	2.2	5.5	2.2	4.8	1.5	204
-0008A-4	F0	6.7/14.8	8	3	7.6	3	5.8	2.2	204
-0010A-4	F0	6.7/14.8	10	4	9.5	4	9	3	204
-0014A-4	F0	6.7/14.8	14	5.5	13	5.5	11.6	4	204
-0018A-4	F1	8.1/17.9	18	7.5	17	7.5	14.9	5.5	204
-0025A-4	F2	9.0/20.3	25	11	24	11	21	7.5	204
-0033A-4	F2	9.7/21.4	33	15	31	15	27	11	204
-0039A-4	F3	10.9/24.0	39	18.5	37	18.5	33	15	204
-0048A-4	F3	10.9/24.0	48	22	45	22	40	18.5	204
-0065A-4	F4	18.5/40.8	65	30	62	30	48	22	204
-0077A-4	F4	18.5/40.8	77	37	73	37	65	30	204
-0095A-4	F5	23.5/51.8	95	45	90	45	77	37	356
-0115A-4	F5	23.5/51.8	115	55	110	55	95	45	356
-0155A-4	F6	41/90.4	155	75	147	75	115	55	880
-0190A-4	F6	41/90.4	190	90	180	90	155	75	880
-0225A-4	F6	41/90.4	225	110	215	110	190	90	880
-0260A-4	F7	61.8/136.3	260	132	246	132	225	110	1200
-0336A-4	F7	63.2/139.4	336	160	320	160	260	132	1200
-0375A-4	F8	88.2/194.5	375	185	360	185	336	160	1200
-0415A-4	F8	88.2/194.5	415	200	395	200	375	185	1200
-0445A-4	F8	88.2/194.5	445	220	425	220	410	200	1200
-0510A-4	F8	88.2/194.5	510	250	485	250	425	220	1200
-0590A-4	F9	115/253.6	590	315	575	315	490	250	1200
-0660A-4	F9	115/253.6	660	355	630	355	550	315	1200
-0785A-4	F10	154/339.5	785	400	745	400	660	355	2400
-0850A-4	F10	154/339.5	850	450	810	450	745	400	2400
-0925A-4	F10	154/339.5	925	500	880	500	810	450	2400
-1040A-4	F11	208/458.5	1040	560	990	560	880	500	3600
-1175A-4	F11	208/458.5	1175	630	1120	630	990	560	3600
-1265A-4	F11	208/458.5	1265	710	1205	710	1067	630	3600
-1540A-4	F12	*	1540	800	1460	800	1320	710	9600
-1780A-4	F12	*	1780	900	1690	900	1460	800	9600
-1900A-4	F13	*	1900	1000	1780	1000	1690	900	14400
-2100A-4	F13	*	2100	1100	2000	1100	1780	1000	14400
-2300A-4	F13	*	2300	1250	2190	1250	2000	1100	14400
-2650A-4	F14	*	2650	1400	2520	1400	2190	1250	15600
-2900A-4	F14	*	2900	1550	2760	1550	2520	1400	15600
-3260A-4	F15	*	3260	1800	3100	1800	2760	1550	16800
-3460A-4	F15	*	3460	2000	3300	2000	3000	1800	16800

(1) The maximum applicable motor output is given for a standard induction motor.
* Contact Amtech for weight and dimension details.

Standard SPECIFICATIONS (500V & 600V SERIES)

Model (AMT-XXXXA-6)	Frame	Weight	Input Voltage 500...600 V (Nominal 575 V)						Input Voltage 601...690 V (Nominal 690 V)					
			Output Rating [1]						Output Rating [1]					
			No Overload Rating		Normal Duty Rating		Heavy Duty Rating		No Overload Rating		Normal Duty Rating		Heavy Duty Rating	
		kg/lb	A	kW	A	kW	A	kW	A	kW	A	kW	A	kW
-0048A-6	F6	41/90.4	48	30	46	30	39	22	48	37	46	37	39	30
-0056A-6	F6	41/90.4	56	37	54	37	46	30	56	45	54	45	46	37
-0075A-6	F6	41/90.4	75	45	72	45	56	37	75	55	72	55	56	45
-0090A-6	F6	41/90.4	90	55	87	55	75	45	90	75	87	75	75	60
-0115A-6	F6	41/90.4	115	75	110	75	90	60	115	90	110	90	90	75
-0140A-6	F6	41/90.4	140	90	135	90	115	75	140	110	135	110	115	90
-0155A-6	F7	63/138.9	155	110	150	110	135	90	155	132	150	132	135	110
-0182A-6	F7	63/138.9	182	132	175	132	155	110	182	160	175	160	155	132
-0221A-6	F7	63/138.9	221	160	215	160	182	132	221	200	215	200	182	160
-0300A-6	F8	90/198.4	300	200	290	200	240	160	300	250	290	250	240	200
-0355A-6	F8	90/198.4	355	250	345	250	295	200	355	315	345	315	295	250
-0398A-6	F9	115/253.6	398	315	387	315	345	250	398	355	387	355	345	315
-0430A-6	F9	115/253.6	430	355	426	355	387	315	430	400	426	400	387	355
-0470A-6	F10	148/326.3	470	400	455	400	426	355	470	450	455	450	426	400
-0553A-6	F10	148/326.3	553	450	537	450	482	400	553	500	537	500	482	450
-0605A-6	F11	208/458.5	605	500	580	500	537	450	605	560	580	560	537	500
-0685A-6	F11	208/458.5	685	560	662	560	580	500	685	630	662	630	580	560
-0750A-6	F11	208/458.5	750	630	730	630	662	560	750	710	730	710	662	630
-0850A-6	F11	208/458.5	850	710	840	710	750	630	850	800	840	800	750	710
-0970A-6	F12	*	970	800	950	800	850	710	970	900	950	900	850	800
-1090A-6	F12	*	1090	900	1060	900	950	800	1090	1000	1060	1000	950	900
-1170A-6	F12	*	1170	1000	1150	1000	1060	900	1170	1100	1150	1100	1060	1000
-1360A-6	F13	*	1360	1100	1330	1100	1150	1000	1360	1250	1330	1250	1150	1100
-1520A-6	F13	*	1520	1250	1440	1250	1330	1100	1520	1400	1440	1400	1330	1250
-1700A-6	F14	*	1700	1400	1680	1400	1440	1250	1700	1700	1680	1700	1440	1400
-1850A-6	F14	*	1850	1700	1755	1700	1680	1400	1850	1800	1755	1800	1680	1700
-2300A-6	F15	*	2300	1800	2210	1800	1755	1700	2300	2100	2210	2100	1755	1800

1) If the default carrier frequency is exceeded, derate the output current. Refer instruction manual for derating.
2) The inverter efficiency is >98%. The input power factor is approximately 0.9 when 3% rating of ACL/DCL is used.
3) The output current indicates the total effective value including the higher harmonics.
4) The kW shown is maximum applicable motor output for a 4-pole standard induction motor.

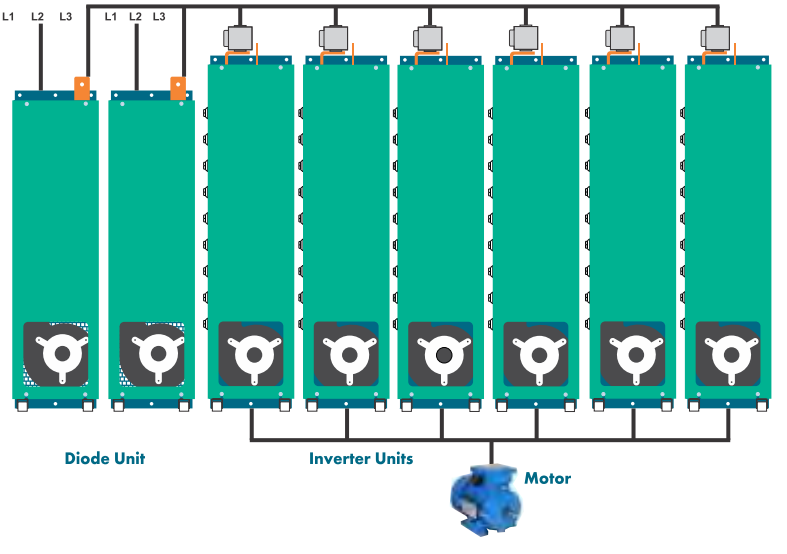
IU/DU Concept for HIGH POWER VFD

Amtech offers VFD up to 2100 kW (2815 Hp) power rating.

The high power rating models adopt paralleling of modular **Diode Units (DU)** and **Inverter Units (IU)** as shown in the figure and are assembled in a panel.

Number of IU/DU depends on VFD rating. Up to six Inverter Units can be connected in parallel.

The DU/IU are easily removable in case of maintenance.



DRIVE FOR SUCCESS

Application INDUSTRIES

Axpert-Eazy+ Series VFD is a perfect solution for soft start, speed regulation, energy saving & intelligent control of induction motor. For demanding applications like crane, conveyor, stacker/reclaimer, centrifuge etc.. it delivers unmatched performance.

Thermal power, Hydro power

ID Fan, FD Fan, FW Pump, PA Fan, SA Fan, Slurry Pump, Cooling Tower Pump & Fan, Condensate Water Pump, Air Compressor, Coal Mill, Conveyor, Wagon tippler, Cranes

Chemical & Pharmaceutical

Gas Blower, Water Delivery Pump, Soft Water Pump, Chlorine Compressor, Pressure Pump, Axial Flow Pump, Stirrer, Agitator, Fermentator, Dozing Pumps

Coal mines & Minerals

Descaling Pump, Feeding Pump, Drainage Pump, Mud Pump, Stirring Pump, Ball Mill, Slurry Pump, Kiln Transmission, Conveyer, Clean Water Pump, Ventilation Fan, Crusher, Bucket Elevator

Steel & Metal

Blast furnace Fan, Compressing Blower, Compressor, Water-delivery Pump, Descaling Pump, Pusher/Charging/Transfer Car, ID Fan, FD Fan, Stacker/Reclaimer, Crane, Primary/Secondary Dust Removal Blower, Rolling Mills, Roller Table, Wire/Sheet Drawing Machine, Apron Feeder, Wagon Tippler, Downhill Conveyor, Kiln, Washer Pumps, Bellet Heaters, Cranes

Cement & Aggregate

Kiln Draft Fan, Coal / Raw Mill Drive, Dust Removal Fan, Cooling Fan, Stone Crusher, Rotary Kiln Transmission, Stacker Reclaimer, Cranes, Feeder, Conveyor, Cooler Fan, Preheater Fan, Baghouse Fan, ESP Fan, Circulating Dust Collector Fan, Plant Automation, Roto Packer Machine, Roller Press Mill, Air Compressors

Sugar

Complete Drive & Automation Solutions for Sugar Mill; Can Unloader, Feeder Table, Cane Carrier, Cutter, Fiberizer, Rack Elevator, Mill Drive, Juice Pump, PAN Circulator, Sugar Centrifugal, Bagasse Carrier, ID/FD Fan, FW Pumps, Packing Plant, Refinery & Distillery

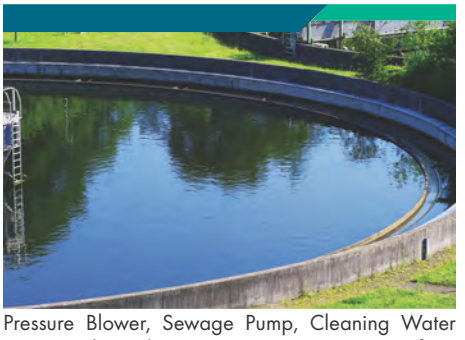
Oil & Gas

Drilling Rig, Mud Pump, Submersible Pump, Progressive Cavity Pump, Artificial Lift (Pump Jack), Pipeline Transportation Pump, Submerged Pump, Compressor, Pressure Blower, Water Injection Pump, Feed Water Pump for Offshore Oil Platform

Pulp & Paper

Complete Drive & Automation Solutions for Pulp & Paper Mill; VFD for Sectional Paper Machine, Pulp Mill, Rewinder, Process Fans & Pumps, Boiler, Sheet Cutting Machine, Printing & Packaging Machines

Water & Waste Water



Pressure Blower, Sewage Pump, Cleaning Water Pump, Reclaimed Water Pump, FD Fan, ID Fan, Lifting Pump, Pressure Pump, DM Water Supply Pump, ETP Pumps, Odour Fan, Raw Water Pump, Decanter Centrifuge

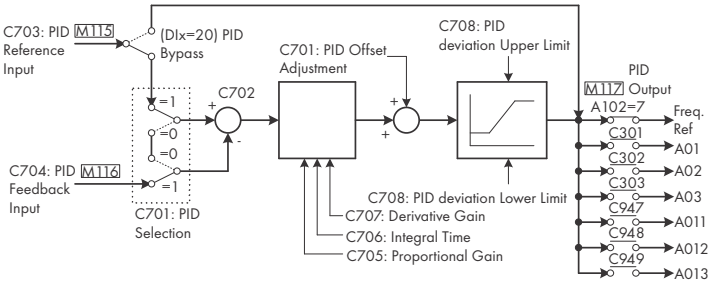
and many other industries like food & beverages, textile, automobile, fertilizer and manufacturing units.

Application Macros

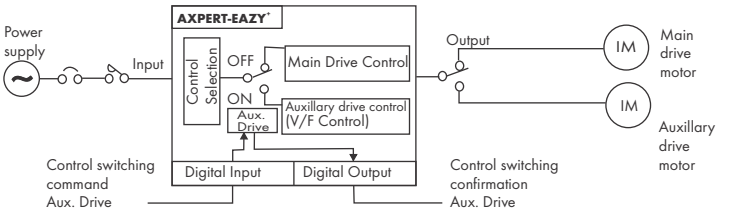
Conveyor
Compressor
Centrifuge
Fan
Fermentor
Crane/ Hoist
Pump
Pump Jack (Artificial Lift)

User selectable FUNCTIONS

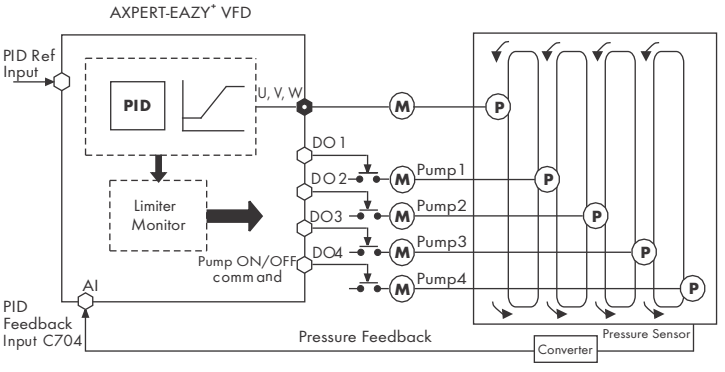
PID Control



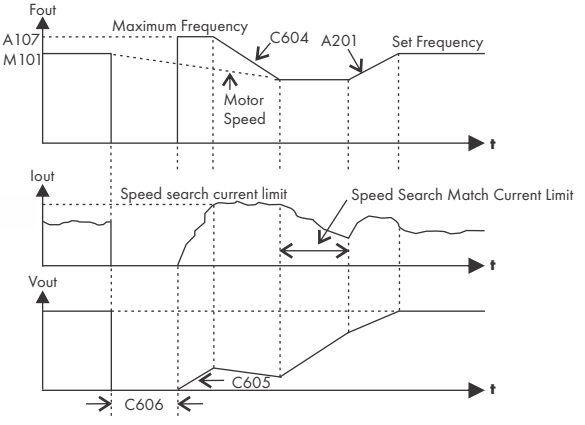
Auxiliary Drive Motor Control



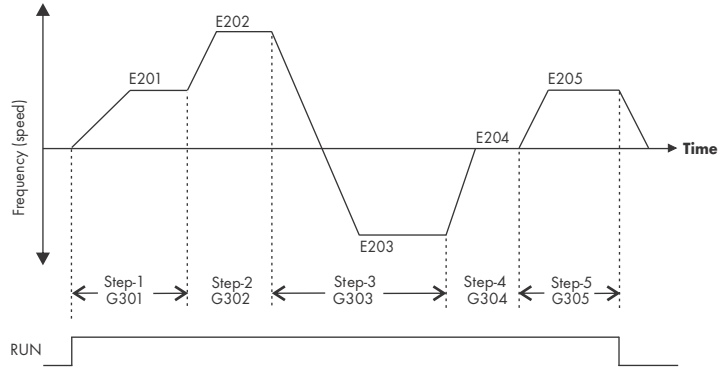
Multi-pump Control



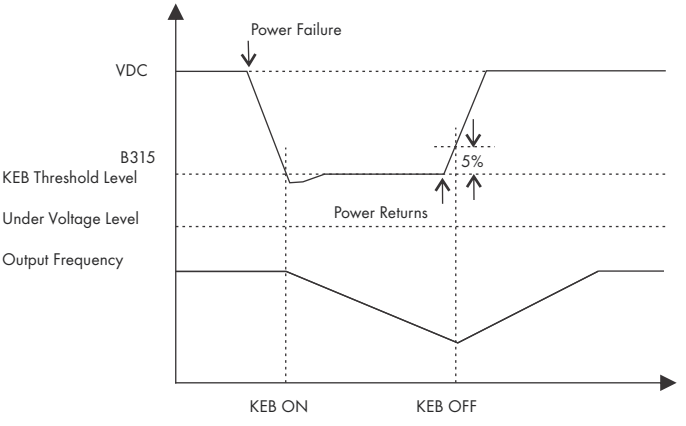
PLCT & Speed Search



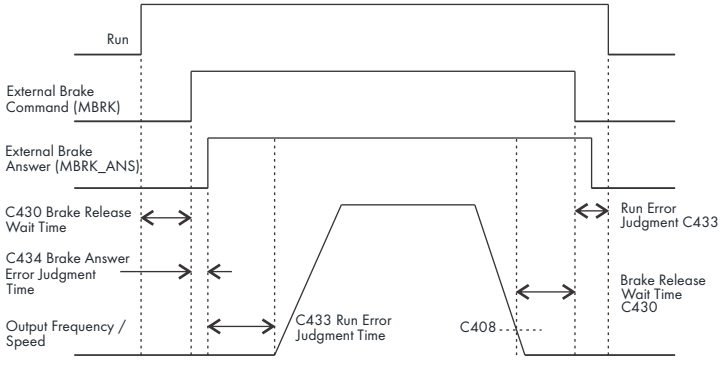
Pattern Run & RSF



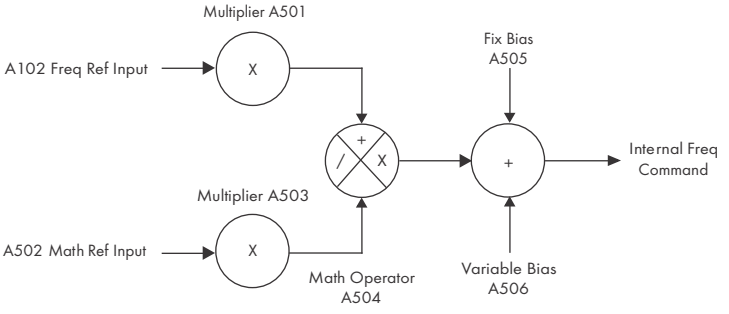
KEB (Kinetic Energy Buffering)



External Brake Control



Math Operation



OUR OTHER OFFERINGS

MOTOR CONTROL

"DRIVE FOR SUCCESS"

We provide complete motor control system solutions or individual system components to address industry specific requirements and optimize your process.

Our solutions are simple, compatible and environment friendly, resulting in efficient production, cost optimization and minimizing human intervention. It even leads to energy conservation especially in typical Fan, Blower, Pump applications.

Flagship Solutions

- Axpert-Eazy+ Series VFD
- Axpert-VT240S Series VFD
- Axpert-Hivert Series Medium Voltage Drive
- Axpert-Opti torque Series Soft Starter
- Axpert-Eazy HF Series High Frequency Drive

Applications

- Fans, Blowers, Pumps
- Compressors, Centrifuges
- Agitators & Conveyors
- Crane, Hoist & Elevator
- Rolling Mill, Sugar Mill, Pulp Mill, Coal/Raw Mill

AUTOMATION

"AUTOMATION. MADE EASY"

"Automation Made Easy" is our philosophy to simplify the increasing complexity of modern production systems through our Amtech-Jetter PROCESS PLC technology platform.

Over 35 years experience in Machine, Line, Plant and Networking Automation has helped us to find the best solution in terms of functionality, sustainability and efficiency.

Flagship Solutions

Jet Control series PLC Controllers, Expansion Modules, Jet view Soft SCADA, HMIs, Jet Move series Servo and Axes Control System.

Applications

- Paper Machine Automation
- Textiles Manufacturing
- Packaging
- Winder Machine
- Crane & Material Handling Equipment
- CNC Machines
- Semiconductor Assembly Line
- Retrofit solutions

POWER QUALITY

"ONE STOP SOLUTION TO QUALITY POWER"

Amtech's Power Quality Solutions offer you the synergy of multiple benefits - energy conservation, enhanced operational efficiency and reliability through a dedicated range of products and services.

Products

- Axpert-i-Sine Series Active Front-end Converter
- Axpert-i-Sine Series Active Harmonic Filter (AHF)
- Axpert-i-Sine Series Active Static VAR Compensator (STATCON)
- Harmonic Reactor
- Sinus Filter
- EMI/RFI Filter

Services

- Harmonic Audit and Solutions to comply with IEEE-519 standard
- System design, optimization & payback analysis
- Consultancy for Power Quality improvement
- Training on Power Quality Management
- Energy Audit and solutions by experienced BEE certified professionals

INDUSTRIAL ELECTRONICS

"YOUR TECHNOLOGY PARTNER"

Amtech's Power Electronics Engineering Services offer technology solutions to independent R&D labs, industrial segments like Traction, Oil & Gas, Automotive and Renewable Energy for wind to reduce your time to market.

Products

- Traction Drive
- High Voltage Power Supply
- Battery back-up drive & systems for critical loads
- Wind Power Converter
- Digital Heater Controller
- Battery Charger
- Drive Train

Services

- Power Electronics Engineering Services
- Customized solutions for industry specific applications
- Solution for Oil, Gas & Mining
- Power Electronics product development & testing
- Product verification & validation
- Retrofit Solutions

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