AXPERT Eazy Series
AC Variable Frequency Drive

UPTO 1800kW (2415HP)

AN ISO 9001 : 2008 COMPANY
Easy to Install & Wire
- The AXPERT-EAZY has been downsized considerably hence require less space to mount.
- Well-defined terminations for power and control circuit allows user to install and wire the drive easily. Use of terminals with captive screws on the main control board facilitates single-handed installation.

Easy to Operate & Program
- 80-character, 4-line LCD display & 8-key keypad (HMI)
- Self-explanatory full parameter name is displayed on Digital Operation Panel for easy programming. This allows user to set parameters without referring to the manual.
- Navigation of parameters made easy with self-explanatory functional keys like NORM, MODE, GROUP, UP & DOWN, RUN & STOP for easy operation in local mode.
- 8 selectable parameters on single screen helps to monitor critical parameters simultaneously.
- Fault history with last ten faults and 8 important parameters helps in trouble shooting.

Easy to Control
- Advanced control is easy and less expensive with configurable analog / digital I/O and integral PID.
- Digital Operation Panel can be extended to 300 meter (1000 ft) for remote operation through optional cable.
- Easily configurable control modes as per the application requirement.
- User programmable 8-analog & 15 digital I/O’s.
- Axpert Communicator drive support software for PC.

Easy to Economize
- Auxiliary Drive feature allows the user to control two different motors with different HP and control schemes.
- Multi-pump control feature allows the control of 5 pumps with single drive which doesn't require PLC.
- Built-In energy meter displays all electrical parameters, which eliminates the need of separate energy meter.
- 50°C (122°F) design, eliminates the need of derating the drive.
- Built-in PID, PLC and application specific software reduces the peripherals’ cost.
- Built-in energy saving calculator.
- Modbus-RTU connectivity offered as a standard.
- No option board required for encoder feedback.

Easy to Maintain
- The cooling fan, one of the common service parts can be easily removed for replacement.
- Total Conductive Time and Total Run Time provides the information about the drive and machine usage for the monitoring of serviceable parts.

Easy to Protect
- The 32-bit High Speed Digital Signal Processor protects the drive against the short circuit or ground fault conditions. User setable over load function protects the load against the over load conditions.
- Soft stall current limit reduces the output frequency if the output current exceeds the set level before the drive trips. Input and Output Phase Loss to prevent loading on the other phases.
AC Drive by Design

Improved Efficiency, High Reliability & Unmatched Performance

Digital Operation Panel

- LCD Display: 20 character x 4 line display with backlight
- User Selectable 8 parameter display on single screen
- Fault history with last ten faults with 8 dynamic parameter's values
- Easy navigation through MODE, NORM, GROUP, UP, DOWN keys

Axpert-Communicator

ModBus-RTU Connectivity for Networking

Energy Saving Calculator

Mode-M Group-2
M216 Money Saved x 1k
290 kINR
Fwd; Lcl; Normal Run

Mode-M Group-2
M213 Energy Saved
58 MWH
Fwd; Lcl; Normal Run

Designed for Harsh Environments

Immune to Power Fluctuations

CUL US CE

TO OWN
Application Industries and Fields

Axpert-Eazy Series AC Drive is a perfect solution for soft start, speed regulation, energy saving and intelligent control of Induction Motor. For demanding applications like crane (hoist), conveyor, stacker/reclaimer, centrifuge, etc... it delivers unmatched performance.

### Typical application industries include:

#### Thermal power, Hydro power, Biomass
- Forced draft fan
- Feed water pump
- Secondary air fan
- Primary air
- Induced draft fan
- Compressor
- Coal mill
- Slurry pump
- Cooling Tower fan
- Condensate pump
- Powder exhaust fan

#### Petroleum, Petrochemical, Natural gas
- Pipeline transportation pump
- Submerged pump
- Feed water pump
- Water injection pump
- Compressor
- Feed water pump
- Pressure blower
- Brine pump
- Ball mill
- Compressor
- Ventilation fan
- Slurry pump
- Klin transmission
- Conveyer
- Klin transmission
- Conveyer
- Crusher

#### Coal mines & minerals
- Descaling pump
- Feeding pump
- Drainage pump
- Blasting furnace blower
- Compressor
- Water-delivery pump
- Secondary dust removal blower
- Pusher car
- Kneader
- Induced draft fan
- Compressing blower
- Primary dust removal blower
- Forced draft fan
- Dewatering pump
- Ball mill
- Klin drive
- Cooling fan
- Stone crusher

#### Steel & nonferrous metallurgy
- Blast furnace blower
- Compressor
- Water-delivery pump
- Secondary dust removal blower
- Klin drive
- Dust removal fan
- Cooling fan
- Stone crusher
- Cooling fan

#### Cement & building materials
- Kiln draft fan
- Coal mill
- Rotary kiln transmission
- Stone crusher
- Klin drive
- Dust removal fan
- Cooling fan

#### Municipal (heat supply, water supply, sewage etc.)
- Pressure blower
- Sewage pump
- Gas blower
- Induced draft fan
- Forced draft fan
- Pressure pump
- Pressure pump
- Cleaning water pump
- Lifting pump
- Reclaimed water pump

#### Light industry, chemical industry
- Soft water pump
- Pressure pump
- Compressor
- Axial flow pump
- Water-delivery pump

#### Pulp & Paper
- Paper machine
- Paper winding
- Pulper machine
- Process fans & pumps

#### Sugar
- Mill drive
- Cane carrier
- Juice pump
- Fiberizer
- Leveler

### Full range of functions for fans and pumps
- Square law V/F function ensures high energy efficiency.
- Built-In PID Control with Sleep Mode and variables can be assigned to real process units.
- Speed Search allows the drive to start with rotating machinery without damage or tripping.
- Power Loss Carry Through allows the uninterrupted operation of the machine up to 5 second power loss.
- Under Current Level to prevent the machine from running idle.
- Multi-pump control function.
- Built-In Energy Meter and Energy saving calculator.
- Reverse direction lock to inhibit the reverse direction start.
- Digital connections accept NPN or PNP (sink/source) to allow the use of existing and new sensors / PLC.
## STANDARD SPECIFICATIONS

<table>
<thead>
<tr>
<th>Power Source</th>
<th>380~480 VAC, 3-Phase, 3-Wire, 50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolerance</td>
<td>Voltage tolerance: -15 to +10%, Frequency tolerance: +/-5%</td>
</tr>
</tbody>
</table>

### AMT - □ □ - 4

<table>
<thead>
<tr>
<th>Normal Duty</th>
<th>Heavy Duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Continuous Rated Current (A)</td>
<td>60</td>
</tr>
<tr>
<td>Max Continuous Rated Current (A) Note 1</td>
<td>030 037 045 055 075 090 110 132 160 200 250 315 355 400 450 500 630 710 900 10E 12E 14E</td>
</tr>
<tr>
<td>Max Applicable Motor (kW) Note 2</td>
<td>30 37 45 55 75 90</td>
</tr>
<tr>
<td>Overload Current Rating</td>
<td>120% for 60 seconds, 140% for 2.5 seconds</td>
</tr>
<tr>
<td>Max Applicable Motor (kW) Note 2</td>
<td>30 37 46 54 72 87 110 135 150 175 215 290 345 390 430 485 540 670 720 950 1060 1335 1400 1680</td>
</tr>
<tr>
<td>Overload Current Rating</td>
<td>120% for 60 seconds, 140% for 2.5 seconds every 5 minutes</td>
</tr>
</tbody>
</table>

### Power Source | 500~575 VAC, 3-Phase, 3-Wire, 50/60 Hz |
| Tolerance | Voltage tolerance: -15 to +10%, Frequency tolerance: +/-5% |

### AMT - □ □ - 5

<table>
<thead>
<tr>
<th>Normal Duty</th>
<th>Heavy Duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Continuous Rated Current (A)</td>
<td>46</td>
</tr>
<tr>
<td>Max Continuous Rated Current (A) Note 1</td>
<td>030 037 045 055 075 090 110 135 150 175 215 290 345 390 430 485 540 670 720 950 1060 1335 1400 1680</td>
</tr>
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<td>Max Applicable Motor (kW) Note 2</td>
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</tr>
<tr>
<td>Overload Current Rating</td>
<td>120% for 60 seconds, 140% for 2.5 seconds every 5 minutes</td>
</tr>
</tbody>
</table>

### Power Source | 600~690 VAC, 3-Phase, 3-Wire, 50/60 Hz |
| Tolerance | Voltage tolerance: -15 to +10%, Frequency tolerance: +/-5% |

### AMT - □ □ - 6

<table>
<thead>
<tr>
<th>Normal Duty</th>
<th>Heavy Duty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Continuous Rated Current (A)</td>
<td>37</td>
</tr>
<tr>
<td>Max Continuous Rated Current (A) Note 1</td>
<td>030 037 045 055 075 090 110 135 150 175 215 290 345 390 426 482 537 662 713 941 1058 1327 1396</td>
</tr>
<tr>
<td>Max Applicable Motor (kW) Note 2</td>
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<tr>
<td>Overload Current Rating</td>
<td>120% for 60 seconds, 140% for 2.5 seconds every 5 minutes</td>
</tr>
</tbody>
</table>

### Control Method
- Digital Space Vector PWM Control
- Frequency Range: 0.1~600 Hz for V/F Control
- Frequency Accuracy: ±0.01% (0~50 ºC) / Analog References: ±0.01% (0~50 ºC)
- 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: 0.1~60,000 Seconds / Linear or S-Curve selective
- Slip Frequency: 3 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 Note3: Default: 5 kHz, 2~10 kHz
- Speed Search Function: Allows the drive to start with rotating machinery without damage / tripping. Bump less transfer for redundancy application (Optional)
- Power Loss Carry Through: Up to 5 seconds for smooth operation of the system during power loss
- DC Braking: DC Braking start frequency: 0.1~50 Hz, Time: 0~25 seconds, Brake current: 15 to 150%
- Frequency Setting Input: Digital Operation Panel (Keypad)
- Torque Setting Input: Digital Operation Panel (Keypad)

### Operation Specifications
- Potentiometer: 2 k Ohm
- Programmable Analog Inputs
- Static Pot: Frequency Increase/Frequency Decrease using digital inputs
- Preset Speeds: Using digital inputs
- PLC Analog Output - 1, 2, 3 & 4
- Serial RS-485

### Control Functions
- 2-Preprogrammed patterns, 1-Custom 3-point setting pattern
- Frequency Accuracy: ±0.01% (0~50 ºC) / Analog References: ±0.01% (0~50 ºC)
- 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%
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- Potentiometer: 2 k Ohm
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- Static Pot: Torque Increase/Torque Decrease using digital inputs
- Preset Speeds: Using digital inputs
- PLC Analog Output - 1, 2, 3 & 4
- Serial RS-485
<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
</table>
| Programmable Analog Inputs | FSV: 0–5 Vdc or 0–10 Vdc (or Inverse)  
FSI: 0–20 mA or 4–20 mA (or Inverse)  
VIN: 0–10 Vdc (or Inverse)  
INI: 0–20 mA or 4–20 mA (or Inverse) |
| Digital Inputs | Programmable to 35 different options: Not Used, Jog Select, Ramp Select, Preset i/p-0, Preset i/p-1, Preset i/p-2, Freq Increase, Freq Decrease, Aux Drive, Emergency Stop, Fault Reset, Ex T Fault, Reverse, Terminal, Ref Select 0, Ref Select 1, PR Step Skip, PR Step Hold, PR/RSF Reset, PID Bypass, PID Disable, Emergency Stop-NC, Ext Fault-NC, Run, Stop, Drive Enable-NC, Drive Enable-NO, PLC input 1–7  
Digital Outputs | Programmable to 32 different options: Not Used, Run, Local, Reverse Run, I-Detection, 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, Pump-1–4, Doff-End Alarm, Sleep Mode, Fault, PLC Output 1–7 |
| Programmable Analog Outputs | Programmable between 14 different options: Output Frequency, Output Current, Output Power, Output Voltage, DC Bus Volt, PID Output, Heatsink temperature, PLC Analog Output 1 to 4, Torque Current, Excite Current and Set Frequency  
Potential Free Contacts | 3-Programmable relays:  
1-NO, 1-NC for 2A @ 240 VAC  
Programmable between 32 different options same as digital outputs |
| Network connectivity | RS-485 for PC Interface with Modbus-RTU protocol as standard |
| Display and Keypad unit | Total 80-Character, 4-Line LCD panel with backlit, 8-Key keypad, 3-Status Indicating LED for Run, Stop and Fault  
Simultaneous display of eight selectable monitor parameters from Output Frequency, RPM, Current, % Current, Set Frequency, PID Reference, PID Feed Back, Input Voltage R-Y, Input Voltage Y-B, Output Voltage, DC Bus Voltage, kW, kWh, MWH, Heatsink Temperature in °C and °F  
Smooth Operation | Speed Search, Auto Restart and Power Loss Carry through functions, Heat sink over temperature alarm  
Fault History | Last ten faults with status and eight operational parameters like Output Frequency, Output Current, Dc Bus Voltage, Heat Sink Temperature, Input Voltage, Total ON Time, kWh and MWH  
Installation Location | Indoor  
Vibration | As per EN 60068-2-6, Acceleration: 1g, Frequency: 10 Hz ~ 150 Hz  
Ambient Temperature | Note 4: Indicates the total effective value including the higher harmonics.  
Note2: The maximum applicable motor output is given for a standard 4-pole motor.  
Note3: If the default carrier frequency is exceeded, derate the output current by 5% per 1kHz. The default carrier frequency for 500 V & 600 V series drives is 4 kHz and can be adjustable between 2–6 kHz.  
Note4: Consult Amtech for other temperature requirements. | Note 4: Indicates the total effective value including the higher harmonics.  
Note2: The maximum applicable motor output is given for a standard 4-pole motor.  
Note3: If the default carrier frequency is exceeded, derate the output current by 5% per 1kHz. The default carrier frequency for 500 V & 600 V series drives is 4 kHz and can be adjustable between 2–6 kHz.  
Note4: Consult Amtech for other temperature requirements. |
| 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) |
| Humidity | 0–95% maximum non-condensing |
| Enclosure | IP00 (Consult Amtech for higher protection requirement) |

The input power factor is 0.9 with 3% ACL / The inverter efficiency will be >98%  
Consult Amtech for models other than mentioned in this catalog.
### EXTERNAL DIMENSION FOR 400V SERIES

#### Dimensions in mm (inch) | Weight in kg (lb)
---|---
**A** | **B** | **C** | **D** | **E** | **F** | **G** | **H**
**AMT-011-4, AMT-015-4, AMT-018-4, AMT-022-4**
470 (18.5) | 250 (9.8) | 262 (10.3) | 197 (7.8) | 439 (17.3) | 61.5 (2.4) | 81 (3.2) | 61.5 (2.4) | 18 (6.97)
**AMT-030-4, AMT-037-4, AMT-045-4, AMT-055-4**
585 (23.0) | 250 (9.8) | 300 (11.8) | 197 (7.8) | 565 (22.2) | 61.5 (2.4) | 186 (7.3) | 61.5 (2.4) | 31 (11.0)
**AMT-075-4, AMT-090-4**
700 (27.6) | 322 (12.7) | 365 (14.4) | 217 (8.5) | 680 (26.8) | 98 (3.9) | 145 (5.7) | 98 (3.9) | 45 (16.8)
**AMT-110-4, AMT-132-4, AMT-160-4**
970 (38.2) | 360 (14.2) | 365 (14.4) | 255 (10.0) | 940 (37.0) | 127 (5.0) | 238 (9.4) | 106 (4.2) | 76 (29.8)
**AMT-200-4, AMT-250-4**
1185 (46.6) | 481 (18.9) | 321 (12.6) | 400 (15.7) | 1155 (45.5) | 167 (6.6) | 431 (17.0) | 187 (7.4) | 103 (39.9)
**AMT-315-4, AMT-355-4**
1330 (52.4) | 506 (19.9) | 321 (12.6) | 400 (15.7) | 1300 (51.2) | 155 (6.1) | 528 (20.8) | 224.5 (8.8) | 138 (51.5)
**AMT-400-4 ~ AMT-14E-4**
Consult AMTECH for the dimension

### EXTERNAL DIMENSION FOR 500V & 600V SERIES

#### Dimensions in mm (inch) | Weight in kg (lb)
---|---
**A** | **B** | **C** | **D** | **E** | **F** | **G** | **H**
**AMT-011-5, AMT-015-5, AMT-018-5, AMT-022-5, AMT-030-5**
595 (23.4) | 291 (11.5) | 300 (11.8) | 236.5 (9.3) | 574.5 (22.6) | 82.5 (3.2) | 142.5 (5.6) | 80.5 (3.2) | 22 (8.6)
**AMT-037-5, AMT-045-5, AMT-055-5, AMT-045-6, AMT-055-6, AMT-075-6**
679.5 (26.7) | 290 (11.4) | 300 (11.8) | 236.5 (9.31) | 659.5 (26.0) | 82.5 (3.2) | 227.5 (9.0) | 80.5 (3.2) | 28.5 (10.8)
**AMT-075-5, AMT-090-5, AMT-110-5, AMT-090-6, AMT-110-6, AMT-132-6**
906 (35.7) | 368.5 (14.5) | 364.5 (14.3) | 313 (12.3) | 876 (34.5) | 121 (4.8) | 375 (14.8) | 120 (4.7) | 65 (25.4)
**AMT-132-5, AMT-160-5, AMT-160-6, AMT-200-6**
970 (38.2) | 360 (14.2) | 364 (14.3) | 255 (10.0) | 940 (37.0) | 127 (5.0) | 236.5 (9.3) | 105.5 (4.2) | 77.4 (30.3)
**AMT-200-5, AMT-250-5, AMT-315-5, AMT-250-6, AMT-315-6, AMT-355-6**
1247 (49.0) | 506 (19.9) | 321 (12.6) | 400 (15.7) | 1217 (47.9) | 154.5 (6.0) | 460 (18.1) | 224.5 (8.8) | 117.7 (46.1)
**AMT-355-5 ~ AMT-14E-5, AMT-400-6 ~ AMT-14E-6**
Consult AMTECH for the dimension
### INPUT / OUTPUT TERMINAL FUNCTION

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>NAME</th>
<th>USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>+24V</td>
<td>+24V source</td>
<td>This source is used for the Programmable Sequence Inputs. The logic for the Programmable Sequence Inputs can be changed to sink or source with the help of JP1 on the control board.</td>
</tr>
<tr>
<td>COM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RUN</td>
<td>RUN command</td>
<td>This is programmable sequence input and can be configured to different 35 functions using C114.</td>
</tr>
<tr>
<td>STOP</td>
<td>STOP command</td>
<td>This is programmable sequence input and can be configured to different 35 functions using C115.</td>
</tr>
<tr>
<td>PSI1-6</td>
<td>Programmable Sequence Inputs 1 ~ 6</td>
<td>These are programmable sequence inputs and can be configured to different 35 functions using C101 ~ C106.</td>
</tr>
<tr>
<td>PSO1-4</td>
<td>Programmable Sequence Outputs 1 ~ 4</td>
<td>These are programmable sequence outputs different 32 functions using C107 ~ C110.</td>
</tr>
<tr>
<td>P15</td>
<td>+15V source</td>
<td>This is used when a frequency setter is connected to the FSV input circuit. The frequency setter to be used should be a variable resistor of 2k and 2W.</td>
</tr>
<tr>
<td>0V</td>
<td>Common</td>
<td>This is a common terminal for analog input signals.</td>
</tr>
<tr>
<td>FSV</td>
<td>Frequency Setting Voltage input</td>
<td>This is mainly used for setting the frequency (speed) input. A maximum frequency setting is available at 10V input. This setting is valid when FSV 0-10V, FSV 0-5V, FSV 10-0V or FSV 5-0V is selected as frequency reference input in A106 or D204 or torque reference input in A108. Also, this input can be configured as PID Reference input (C603) or PID Feedback input (C604) or Math Reference Input2 (A702) or Variable bias (A706) for math operation.</td>
</tr>
<tr>
<td>FSI</td>
<td>Frequency Setting Current input</td>
<td>This is mainly used for setting the frequency (speed) input. A maximum frequency setting is available at 20mA input. This setting is valid when FSI 0-20mA, FSI 4-20mA, FSI 20-0mA or FSI 20-4mA is selected as frequency reference input in A106 or D204 or torque reference input in A108. Also, this input can be configured as PID Reference input (C603) or PID Feedback input (C604) or Math Reference Input2 (A702) or Variable bias (A706) for math operation.</td>
</tr>
<tr>
<td>VIN</td>
<td>Voltage input</td>
<td>This is mainly used for setting the frequency (speed) input. A maximum frequency setting is available at 10V input. This setting is valid when VIN 0-10V is selected as frequency reference input in A106. Also, this input can be configured as PID Reference input (C603) or PID Feedback input (C604) or Math Reference Input2 (A702) or Variable bias (A706) for math operation.</td>
</tr>
<tr>
<td>IIN</td>
<td>Current Input</td>
<td>This is mainly used for setting the frequency (speed) input. A maximum frequency setting is available at 20mA input. This setting is valid when IIN 4-20mA is selected as frequency reference input in A106. Also, this input can be configured as PID Reference input (C603) or PID Feedback input (C604) or Math Reference Input2 (A702) or Variable bias (A706) for math operation.</td>
</tr>
<tr>
<td>VO1</td>
<td>Vout-1</td>
<td>These are programmable analog voltage outputs 0-10V. In default condition, output frequency signal is assigned to VO1 and output current signal is assigned to VO2. Different seven internal signals can be assigned to these outputs using C201 &amp; C202.</td>
</tr>
<tr>
<td>VO2</td>
<td>Vout-2</td>
<td></td>
</tr>
<tr>
<td>IO1</td>
<td>Iout-1</td>
<td>These are programmable analog current outputs 4-20mA. In default condition, motor power signal is assigned to IO1 and output voltage signal is assigned to IO2. Different seven internal signals can be assigned to these outputs using C203 &amp; C204.</td>
</tr>
<tr>
<td>IO2</td>
<td>Iout-2</td>
<td></td>
</tr>
<tr>
<td>TX</td>
<td>DATA+</td>
<td>These two signals are for the two-wire RS-485 serial link. The protocol used is Modbus-RTU.</td>
</tr>
<tr>
<td>RX</td>
<td>DATA-</td>
<td></td>
</tr>
</tbody>
</table>
### INPUT / OUTPUT TERMINAL FUNCTION

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<thead>
<tr>
<th>SYMBOL</th>
<th>NAME</th>
<th>USE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA</td>
<td>A-Phase Pulses</td>
<td>The A-phase positive pulse of encoder is applied at this terminal.</td>
</tr>
<tr>
<td>PAN</td>
<td>B-Phase Pulses</td>
<td>The A-phase negative pulse of encoder is applied at this terminal.</td>
</tr>
<tr>
<td>PB</td>
<td>B-Phase Pulses</td>
<td>The B-phase positive pulse of encoder is applied at this terminal.</td>
</tr>
<tr>
<td>PBN</td>
<td>B-Phase Pulses</td>
<td>The B-phase negative pulse of encoder is applied at this terminal.</td>
</tr>
<tr>
<td>+5V</td>
<td>+5V source</td>
<td>This is +5V source for the encoder. The encoder is required only in case of close loop control mode. Refer chapter-10 for detail on encoder specification.</td>
</tr>
<tr>
<td>FA</td>
<td>Fault Relay Contacts</td>
<td>These contacts function when a fault occurs (when the FAULT LED is flashing on Digital Operation Panel). When a fault occurs, the section FA-FC is closed and the section FB-FC is open. It can be configured to different 32 function using C113.</td>
</tr>
<tr>
<td>FC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R1A</td>
<td>Programmable Relay 1 contacts</td>
<td>This is programmable relay and its function is assigned to “Run” condition in default. When a programmed condition occurs, the section R1A-R1C is closed and the section R1B-R1C is open. It can be configured to different 32 function using C111.</td>
</tr>
<tr>
<td>R1C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R1B</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2A</td>
<td>Programmable Relay 2 contacts</td>
<td>This is programmable relay and its function is not assigned to any internal signal in default. When any function is assigned using C112 and the programmed condition occurs, the section R2A-R2C is closed and the section R2B-R2C is open. It can be configured to different 32 function using C112.</td>
</tr>
<tr>
<td>R2C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R2B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SYSTEM OPTIONS

#### Types of options

<table>
<thead>
<tr>
<th>Option classification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AC reactor</td>
<td></td>
</tr>
<tr>
<td>DC choke (DCL)</td>
<td></td>
</tr>
<tr>
<td>Noise filter</td>
<td></td>
</tr>
<tr>
<td>DBR unit</td>
<td></td>
</tr>
<tr>
<td>Output reactor</td>
<td></td>
</tr>
<tr>
<td>Output sine filter</td>
<td></td>
</tr>
<tr>
<td>Static Harmonic Converter</td>
<td></td>
</tr>
<tr>
<td>Cabinets / Panels</td>
<td></td>
</tr>
</tbody>
</table>

**Eazy Drive Software (PC)**

**AXPERT COMMUNICATOR**

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

**Functions**

- All parameter reading / writing & monitoring
- Bargraphs
- Trend plots
- Alarm view
**USER SELECTABLE FUNCTIONS**

**PID Control**

- Multi-pump Control
- PLCT & Speed Search Function
- Pattern Run Function & RSF
- Math Operation
- Auto Restart

**Auxiliary Drive Motor Control**

- PC Software - AXPERT COMMUNICATOR
OUR OTHER OFFERINGS

MOTION CONTROL

AUTOMATION

POWER QUALITY

INDUSTRIAL ELECTRONICS

“DRIVE FOR SUCCESS”

We provide complete motion 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 applications.

Flagship Solutions

- AXPERT-EAZY AC Drive
- AXPERT-VT240S AC Drive
- AXPERT-HIVERT Medium Voltage Drive
- AXPERT-OPTI torque Soft Starter
- AXPERT-EAZY HF-High Frequency Drive

Applications

- Fans, Blowers, pumps
- Compressors, Centrifuges
- Agitators & Conveyors
- Oil & Gas
- Mining

“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.

We simplify the contradictory imperatives in modern automation to provide simplistic but cost effective customized solutions.

Flagship Solutions

NANO, DELTA, MIKRO, JETWEB, JETVIEW, HMI & SCADA, SERVO & AXES CONTROL SYSTEM

Applications

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

“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

- Passive Harmonic Filter
- Active Harmonic Filter
- Harmonic Reactor
- Static Harmonic Converter
- EMI/RFI Filter
- Sinus Filter
- Active Front end Converter

Services

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

“YOUR TECHNOLOGY PARTNER”

We offer technology solutions to independent R&D labs as well as industrial segments, like Traction, Renewable Energy sources (Wind, Solar etc.) thereby zeroing your lead time to commercialization.

Products

- Traction Drive
- High Voltage Power Supply
- Battery back-up drive & systems for critical loads
- Wind Power Converter
- Solar Inverter

Services

- Retrofit Solutions
- Customized solutions for industry specific applications
- Solution for Oil, Gas & Mining
- Power Electronics Technology outsourcing

Specifications in this catalog are subject to change without notice.