

Bardac

dc drive technology

PL/X Series

3-phase, Regenerative Drives Up to 2,000+ Horsepower

- Total digital control
- Peer-to-peer communications
- 40 character backlit display
- Friendly, easy menu structure
- Function blocks for PID, winders, orientation, etc.
- Modern, compact packaging
- Extensive, flexible i/o
- Built in programmable control functions
- RS232 serial port
- Easy configuration saving & cloning
- Built-in automatic field controller
- Tach, encoder & arm volts feedback standard
- Easy reliable autotune
- UL, C-UL, CE

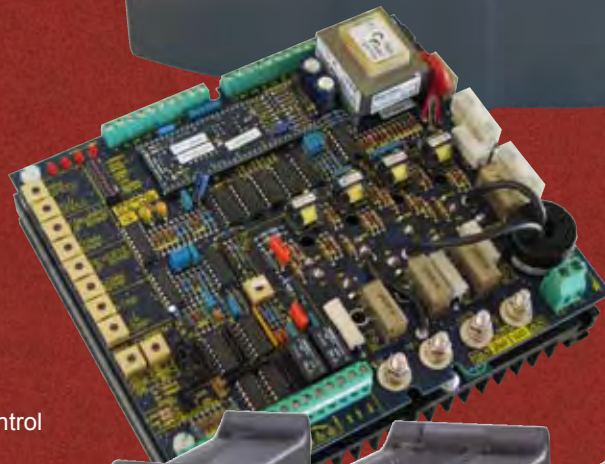
Optional:

- Peer-to-peer Ethernet communications
- **drive.web** programmable control
- ModbusTCP over Ethernet
- ModbusRTU RS485 serial port
- Devicenet
- Profibus DP



Single-phase Systems Drives Up to 10 Horsepower

- Regen up to 36 amps DC
- Non-Regen up to 48 amps DC
- Isolated control circuits
- Tach & arm volts feedback standard
- Extensive, versatile i/o
- Accurate torque control
- Independent up/down fwd/rev ramps
- 115/230, 240/415 & 230/460 volts versions
- Optional **drive.web** Ethernet & programmable control



Single-phase OEM Drives Up to 2 Horsepower

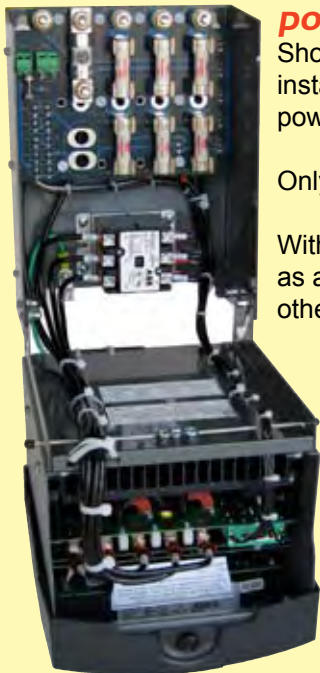
- A range of elegant, DIN rail mounting units
- Regen & Non-Regen up to 12.2 amps DC
- Isolated & non-isolated versions
- Tach & arm volts feedback standard
- Flexible systems i/o
- Accurate torque control
- Independent up/down ramps
- 115/230 volts supply selectable
- Optional **drive.web** Ethernet & programmable control



powerDRIVES

PL/X DC drives up to 400 horsepower are available in compact **powerDRIVE** packages complete with:

- Main contactor
- High speed 3-phase line fuses
- High speed armature fuse
- High speed control/field fuses
- Line filter (100HP & up)
- Optional motor blower starter (100HP & up)



powerPL/X - up to 75HP

Shown hinged open for easy installation wiring and access to the power components.

Only 8.5" x 11.4" x 11.7"

With a footprint about the same size as a notepad it can replace any other drive with ease!



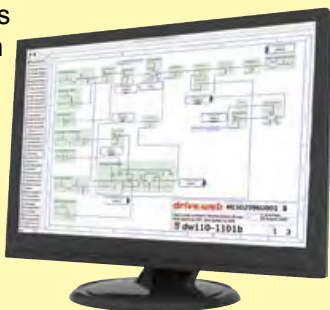
powerPL - 400HP

Only 16" x 43.5" x 13.7" with convenient access to all the power components.

Screw terminals provide easy, reliable power cable termination. The small footprint of this complete power packaging ensures a cost effective, fast, retrofit solution.

The **savvy** configuration tools can be downloaded free from www.driveweb.com.

savvy provides set up, file up/download, diagnostics, trend charting, and complete system design from an easy, intuitive graphical function block environment.



PL265
Up to 400HP

PL/X145
UP to 200HP

PL/X50
Up to 75HP

ARMATURE AMPS DC	FIELD AMPS DC	HP @ 500V ARM 460VAC	HP @ 240V ARM 230VAC	powerDRIVE 4-QUAD REGEN REVERSING
36	5(8)	20	10	powerPLX15/36
51	5(8)	30	12	powerPLX20/51
99	5(8)	60	25	powerPLX40/99
123	5(8)	75	35	powerPLX50/123
164	10(16)	100	50	powerPLX65/164
205	10(16)	125	60	powerPLX85/205
270	10(16)	150	75	powerPLX115/270
330	10(16)	200	100	powerPLX145/330
405	32	250	125	powerPLX185/405
480	32	300	150	powerPLX225/530
630	32	400	200	

ARMATURE AMPS DC	FIELD AMPS DC	HP @ 500VDC ARM 460VAC	BASIC DRIVE 4-QUAD REGEN REVERSING	BASIC DRIVE NON-REVERSING
650	32(50)	400	PLX275/650	PL275/650
750	32 (50)	450	PLX315/750	PL315/750
850	32 (50)	500	PLX360/850	PL360/850
950	32 (50)	575	PLX400/950	PL400/950
1050	32 (50)	650	PLX440/1050	PL440/1050
1250	64	750	PLX520/1250	PL520/1250
1450	64	895	PLX600/1450	PL600/1450
1650	64	1000	PLX700/1650	PL700/1650
1850	64	1140	PLX800/1850	PL800/1850
2050	64	1260	PLX900/2050	PL900/2050
2250	64	1380	PLX980/2250	PL980/2250

PL/X980
Up to 1940HP

PL265
Up to 400HP

PL/X145
UP to 200HP

PL/X50
Up to 75HP

PL/X440
Up to 900HP

PLXD
Separate SCR stack controller
for large 6 & 12 pulse drives

ARMATURE AMPS DC	FIELD AMPS DC	HP @ 500V ARM 460VAC	HP @ 240V ARM 230VAC	<i>power</i> DRIVE 4-QUAD REGEN REVERSING	<i>power</i> DRIVE NON-REVERSING	DIMENSIONS W x H x D (INCHES)	BASIC DRIVE 4-QUAD REGEN REVERSING	BASIC DRIVE NON-REVERSING	DIMENSIONS W x H x D (INCHES)
36	5(8)	20	10	<i>power</i> PLX15/36	<i>power</i> PL15/36	8.5x11.4x11.7	PLX15/36	PL15/36	8.5x11.4x6.9
51	5(8)	30	12	<i>power</i> PLX20/51	<i>power</i> PL20/51	8.5x11.4x11.7	PLX20/51	PL20/51	8.5x11.4x6.9
99	5(8)	60	25	<i>power</i> PLX40/99	<i>power</i> PL40/99	8.5x11.4x11.7	PLX40/99	PL40/99	8.5x11.4x6.9
123	5(8)	75	35	<i>power</i> PLX50/123	<i>power</i> PL50/123	8.5x11.4x11.7	PLX50/123	PL50/123	8.5x11.4x6.9
164	10(16)	100	50	<i>power</i> PLX65/164	<i>power</i> PL65/164	16x33x9.7	PLX65/164	PL65/164	8.5x16.2x8.6
205	10(16)	125	60	<i>power</i> PLX85/205	<i>power</i> PL85/205	16x33x9.7	PLX85/205	PL85/205	8.5x16.2x8.6
270	10(16)	150	75	<i>power</i> PLX115/270	<i>power</i> PL115/270	16x33x9.7	PLX115/270	PL115/270	8.5x16.2x8.6
330	10(16)	200	100	<i>power</i> PLX145/330	<i>power</i> PL145/330	16x33x9.7	PLX145/330	PL145/330	8.5x16.2x8.6
405	32	250	125	<i>power</i> PLX185/405	<i>power</i> PL185/405	16x43.5x13.7	PLX185/405	PL185/405	8.5x19x11.6
480	32	300	150	<i>power</i> PLX225/530	<i>power</i> PL225/530	16x43.5x13.7	PLX225/530	PL225/530	8.5x19x11.6
630	32	400	200	<i>power</i> PLX265/630	<i>power</i> PL265/630	16x43.5x13.7	PLX265/630	PL265/630	8.5x19x11.6

ARMATURE AMPS DC	FIELD AMPS DC	HP @ 500VDC ARM 460VAC	BASIC DRIVE 4-QUAD REGEN REVERSING	BASIC DRIVE NON-REVERSING	HP @ 700VDC ARM 690VAC	BASIC DRIVE 4-QUAD REGEN REVERSING	BASIC DRIVE NON-REVERSING	DIMENSIONS W x H x D (ins) TOP	OVERLOAD RATING
650	32(50)	400	PLX275/650	PL275/650	550	PLX275HV/650	PL275HV/650	10.0x30.0x13.8	150%, 25 secs
750	32(50)	450	PLX315/750	PL315/750	650	PLX315HV/750	PL315HV/750	10.0x30.0x13.8	150%, 25 secs
850	32(50)	500	PLX360/850	PL360/850	735	PLX360HV/850	PL360HV/850	10.0x30.0x13.8	150%, 25 secs
950	32(50)	575	PLX400/950	PL400/950	820	PLX400HV/950	PL400HV/950	10.0x30.0x13.8	150%, 25 secs
1050	32(50)	650	PLX440/1050	PL440/1050	900	PLX440HV/1050	PL440HV/1050	10.0x30.0x13.8	100%, cont.
1250	64	750	PLX520/1250	PL520/1250	1080	PLX520HV/1250	PL520HV/1250	20.0x30.0x13.8	150%, 25 secs
1450	64	895	PLX600/1450	PL600/1450	1250	PLX600HV/1450	PL600HV/1450	20.0x30.0x13.8	150%, 25 secs
1650	64	1000	PLX700/1650	PL700/1650	1420	PLX700HV/1650	PL700HV/1650	20.0x30.0x13.8	150%, 25 secs
1850	64	1140	PLX800/1850	PL800/1850	1600	PLX800HV/1850	PL800HV/1850	20.0x30.0x13.8	150%, 25 secs
2050	64	1260	PLX900/2050	PL900/2050	1770	PLX900HV/2050	PL900HV/2050	20.0x30.0x13.8	150%, 25 secs
2250	64	1380	PLX980/2250	PL980/2250	1940	PLX980HV/2250	PL980HV/2250	20.0x30.0x13.8	100%, cont.

PL/X980
Up to 1940HP



PL/X440
Up to 900HP

PLXD
Separate SCR stack controller
for large 6 & 12 pulse drives

KEY FEATURES

Analog Inputs & outputs

8 analog in, 4 analog out (12 bits)
Short circuit and overvolts protected up to 50V
Inputs configurable 5 to +/-30 volts

Digital Inputs & Outputs

17 digital inputs, 7 digital outputs
Short circuit and overvolts protected up to 50V
Settable switching levels

Standard Speed Feedback Selections

Analog Tach
Encoder
Armature voltage with armature IR compensation
Encoder + armature voltage or analog tach

Field Configurations

Constant current
Constant voltage
Automatic field weakening
Delayed field quench
Standby field setting
Field economy

Ratings

150% rating for 25 secs at 50°C (except as noted)
Re-ratings for higher overloads & longer durations

Diagnostic Monitoring

Scope terminal monitors selected parameters
All analog input & output voltages
All digital input & output states
Tach volts
Motor arm volts & amps and field current
Output power
AC supply volts

Basic User Configurable Function Blocks

PID, Profiler, winder diameter calculator, taper tension, torque/inertia/friction compensator, preset speeds, summers, MOP, timer, spindle orientation, jog/crawl, filters, dual motor swap, latch, sample & hold, linear & S-ramps, slack take up, batch counter, draw control.

Protection

Device networks, MOVs, instantaneous overcurrent, inverse time overcurrent, field fail & overcurrent, motor over temp, SCR over temp, phase loss, arm over volts, over speed, speed f/b mismatch, stall, standstill logic, SCR trigger fail, digital output short circuit.

RS232 Serial Communications Port

Parameter upload/download to save & print
Drive-to-drive parameter link & set up cloning

OPTIONS

drive.web peer-to-peer control over Ethernet
drive.web programmable control
drive.web distributed control & systems integration
drive.web Signal Flow Diagram graphical designer
drive.web IP addressing & Internet access
ModbusTCP Ethernet
ModbusRTU RS485
Allen Bradley PCCC Ethernet
Profibus DP
Devicenet

powerDRIVE	DIMENSIONS W x H x D (INCHES)	BASIC DRIVE 4-QUAD REGEN REVERSING	BASIC DRIVE NON-REVERSING	DIMENSIONS W x H x D (INCHES)
powerPL15/36	8.5x11.4x11.7	PLX15/36	PL15/36	8.5x11.4x6.9
powerPL20/51	8.5x11.4x11.7	PLX20/51	PL20/51	8.5x11.4x6.9
powerPL40/99	8.5x11.4x11.7	PLX40/99	PL40/99	8.5x11.4x6.9
powerPL50/123	8.5x11.4x11.7	PLX50/123	PL50/123	8.5x11.4x6.9
powerPL65/164	16x33x9.7	PLX65/164	PL65/164	8.5x16.2x8.6
powerPL85/205	16x33x9.7	PLX85/205	PL85/205	8.5x16.2x8.6
powerPL115/270	16x33x9.7	PLX115/270	PL115/270	8.5x16.2x8.6
powerPL145/330	16x33x9.7	PLX145/330	PL145/330	8.5x16.2x8.6
powerPL185/405	16x43.5x13.7	PLX185/405	PL185/405	8.5x19x11.6
powerPL225/530	16x43.5x13.7	PLX225/530	PL225/530	8.5x19x11.6
powerPL265/630	16x43.5x13.7		PL265/630	8.5x19x11.6

HP @ 700VDC ARM 690VAC	BASIC DRIVE 4-QUAD REGEN REVERSING	BASIC DRIVE NON-REVERSING	DIMENSIONS W x H x D (ins) TOP CABLE ENTRY	OVERLOAD RATING
550	PLX275HV/650	PL275HV/650	10.0x30.0x13.8	150%, 25 secs
650	PLX315HV/750	PL315HV/750	10.0x30.0x13.8	150%, 25 secs
735	PLX360HV/850	PL360HV/850	10.0x30.0x13.8	150%, 25 secs
820	PLX400HV/950	PL400HV/950	10.0x30.0x13.8	150%, 25 secs
900	PLX440HV/1050	PL440HV/1050	10.0x30.0x13.8	100%, cont.
1080	PLX520HV/1250	PL520HV/1250	20.0x30.0x13.8	150%, 25 secs
1250	PLX600HV/1450	PL600HV/1450	20.0x30.0x13.8	150%, 25 secs
1420	PLX700HV/1650	PL700HV/1650	20.0x30.0x13.8	150%, 25 secs
1600	PLX800HV/1850	PL800HV/1850	20.0x30.0x13.8	150%, 25 secs
1770	PLX900HV/2050	PL900HV/2050	20.0x30.0x13.8	150%, 25 secs
1940	PLX980HV/2250	PL980HV/2250	20.0x30.0x13.8	100%, cont.

SMARTER DRIVES WITH *drive.web*

By adding a *drive.web speedy* model dw111 to the PL/X series DC drives you gain both Ethernet communications and powerful programmable systems integration capability without the need for an external PLC or supervisory computer. Key features include:

- Peer-to-peer networking of drives over Ethernet
- Programmable control with graphical function blocks
- Internet access and IP addressing
- *savvy* intuitive, graphical, system design software with powerful navigation tools
- Simple drag & drop parameter connections, rules checking & online help
- Optional ModbusTCP over Ethernet
- Optional additional remote i/o with a *drive.web smarty*
- Optional encoder inputs for speed lock, phase lock, and registration
- Optional Function Block Libraries for process control, winders & encoder position
- Optional Signal Flow Diagram with on board storage

Download *savvy* **FREE** from www.driveweb.com
Learn more at one of our **FREE** weekly online seminars

Take control of your system from start to finish in smart, easy steps

1 CONCEPT & PLANNING - from your initial notes & sketches use the *savvy* tools to create "phantoms" of all your drives and devices.



2 DESIGN & CONFIGURATION - create signal flow diagrams by dragging & dropping connections between parameters in your "phantoms".

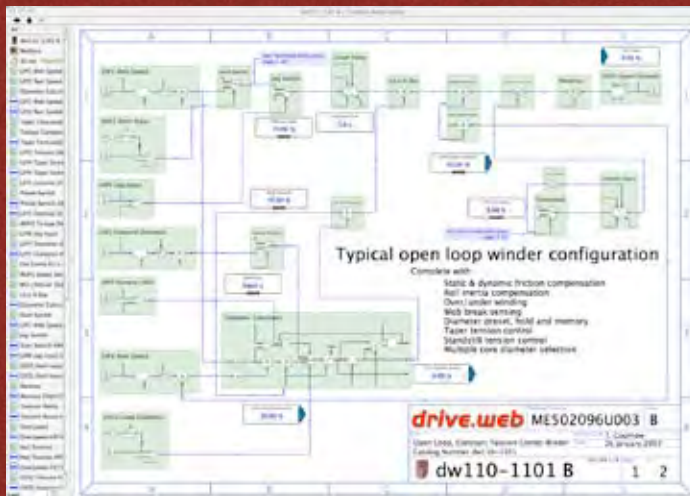


3 CONSTRUCTION & TESTING - simply connect your drives & devices over Ethernet and import your system design to see it all go live.

4 INSTALLATION & OPERATION - use *savvy* to create operator interfaces and provide realtime control.



5 MANAGEMENT & MAINTENANCE - Use *savvy* utilities to monitor and improve your process performance either locally or across the Internet.



VISUALIZE

IMPLEMENT

CONTROL

MANAGE

Quickly build clear graphical signal flow diagrams for drives and complete systems. Store this documentation in the drives for reliable access in the field.



Bardac
drive technology

40 Log Canoe Circle, Stevensville, MD 21666 USA
www.bardac.com
+410-604-3400, 1-888-667-7333 (1-888-ON SPEED)