

Bardac Drives Catalog 2023

Issue 1



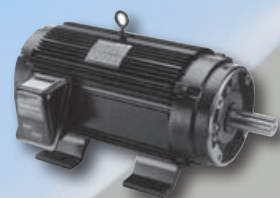
drive.web AUTOMATION



AC DRIVES



DC DRIVES



MOTORS



SERVICE

AutomationThings

Everything is...

- ... Internet accessible**
- ... Ethernet workable, peer-to-peer**
- ... Configurable from anywhere**
- ... IIoT ready**

AutomationThings.com

Everything normally in stock!

Since our founding in 1992 we have worked hard to build our reputation around key goals:

- Innovative technologies.
- Reliable products.
- Unrelenting customer support.
- All catalog items normally in stock.
- Competitive pricing.



Our Company President: Paul Crowhurst

Bardac ...the safe bet!

Seamlessly Integrated Automation



AC DRIVES

Vector Systems
To 350 HP - pages 36 - 38

ECO fan & pump
To 350 HP - pages 39 - 41

General Purpose
To 30 HP - pages 42 - 43

NEMA 4X (IP66)
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CONTROLLERS

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savvyPanel
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DC DRIVES

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POWER QUALITY ~ MOTORS ~ ENGINEERING ~ SERVICE ~ SUPPORT ~ TRAINING

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Specifications ... At the time of going to press we believe the information in this catalog to be accurate. However, the specifications of products may be amended at any time, so please check with us when ordering to ensure that such changes will not affect your requirements.

K-Series single phase DC drives - up to 2HP

Regenerative & Non-regenerative

Enclosed, DIN rail mounting drives in elegant compact packages for both stand alone and systems applications.

Standard features include:

- Plug-in screw terminals
- Dual 115 & 230 volts, 50/60Hz supply
- Armature volts or tach feedback
- IP20 enclosure
- Output for ramps, speed demand, current demand
- Inputs for ramped speed, unramped speed, torque (current)
- Logic outputs for overload & trip
- Configurable level comparator & sign changer
- Standards: UL, cUL, CE



MODEL	RATING	FEATURES	TERMINALS
NON-ISOLATED			
K340	Armature current 3.4 amps 1/4HP 0.25kW @90Vdc 1/2HP 0.55kW @180Vdc Size 1.4"W x 4.2"H x 4.7"D	Max Speed Min Speed Up Ramp IR Comp	+10V Min Input + Common
K680	Armature current 6.8 amps 1/2HP 0.55kW @90Vdc 1HP 0.75kW @180Vdc Size 1.8"W x 4.2"H x 4.7"D	I max AVF/Tach switch Speed range switch AC voltage selector Field 1Amp 0.9x ac supply	Run Tach f/b
K1220	Armature current 12.2 amps 1HP 0.75kW @90Vdc 2HP 1.8kW @180Vdc Size 1.8"W x 4.2"H x 4.7"D		
ISOLATED			
K340i	Armature current 3.4 amps 1/4HP 0.25kW @90Vdc 1/2HP 0.55kW @180Vdc Size 2.4"W x 4.2"H x 4.7"D	Max Speed Min Speed Up Ramp Down Ramp Stability	+10V ref Min speed Input + Output +/- Common
K680i	Armature current 6.8 amps 1/2HP 0.55kW @90Vdc 1HP 0.75kW @180Vdc Size 2.8"W x 4.2"H x 4.7"D	I max IR Comp AVF/Tach switch Speed range switch AC voltage selector Level comparator	Input +/- Pushbutton + Pushbutton - Run Common Tach f/b
K1220i	Armature current 12.2 amps 1HP 0.75kW @90Vdc 2HP 1.8kW @180Vdc Size 2.8"W x 4.2"H x 4.7"D		
4-QUADRANT, REGENERATIVE, REVERSING, ISOLATED			
K340XRI	Armature current 3.4 amps 1/4HP 0.25kW @90Vdc 1/2HP 0.55kW @180Vdc Size 2.4"W x 4.2"H x 4.7"D	Max Speed Min Speed Up Ramp Down Ramp Stability	+10V ref Min speed Input + Output +/- Common
K680XRI	Armature current 6.8 amps 1/2HP 0.55kW @90Vdc 1HP 0.75kW @180Vdc Size 2.8"W x 4.2"H x 4.7"D	I max IR Comp AVF/Tach switch Speed range switch AC voltage selector Level comparator	Input +/- Pushbutton + Pushbutton - Run Common Tach f/b
K1220XRI	Armature current 12.2 amps 1HP 0.75kW @90Vdc 2HP 1.8kW @180Vdc Size 2.8"W x 4.2"H x 4.7"D		



Optional **drive.web smarty**

For complete process automation Model dw210-1107 uses discrete I/O interface to provide:

- Ethernet networking
- Internet access
- Powerful function blockprogramming
- ModbusRTU and ModbusTCP/IP
- Additional remote I/O
- **savvyPanel** smart touch screens (see page 27)



High Speed Fuse Kits - DIN Rail Mounting

FLN-6.3	Line fuse kit	K340
FLL-6.3	Line/line fuse kit	K340
FLNR-6.3	Line & arm fuse kit	K340XRI
FLLR-6.3	Line/line & arm fuse kit	K340XRI
FLN-20	Line fuse kit	all non-regen K
FLL-20	Line/line fuse kit	all non-regen K
FLNR-20	Line & arm fuse kit	all regen K
FLLR-20	Line/line & arm fuse kit	all regen K

Single Phase DC Systems Drives

This family of single phase DC drives with isolated control circuitry, is designed to meet the most exacting requirements of high performance systems builders. It is a range of full featured products using advanced manufacturing technologies to give unequalled value and functionality to OEMs and System Integrators with world wide markets and demanding applications.

NON-REGEN MODELS

FUSE KIT

	230VAC, 180VDC	115VAC, 90VDC	
400i (4 amps)	0.75HP	0.4HP	included
1600i (16 amps)	3HP	1.5HP	F2-30
3200i/32 (32 amps)	6HP	3HP	F2-60
3200i/48LL (48 amps)	7.5HP	4HP	F2-80
3200i/32C109 (32 amps)	8HP	5HP	F2-60

4-Q REGEN, REVERSING MODELS

FUSE KIT

	230VAC, 180VDC	115VAC, 90VDC	
3600XRI/16	3HP	1.5HP	F3-30
3600XRI/32	6HP	3HP	F3-60
3600XRI/36	6.5HP	3HP	F3-60
3600XRI/36LL	10HP	6HP	F3-60
3600XRI/32C132	10HP	6HP	F3-60

Standard Features

Approvals: CE
 Linear torque control
 Armature voltage or tach feedback
 Calibration range switches
 Speed reference 0-10V or 4-20mA
 Maximum and minimum speed settings
 Adjustable current limit
 Current range switch selectable (not on 400i)
 Independently adjustable up and down ramps
 150% overload capacity, 30 second stall timer
 Stall relay contact output (transistor on 400i)
 Zero speed relay contact (transistor on 400i)
 Control fuses fitted (Power fuse on 400i)
 Start inhibit after power loss
 Power on and stall indicator LEDs
 Speed signal output
 Current signal output
 Ramp signal output
 Total demand signal output
 Dual supply voltage 110 / 230 VAC, 50/60Hz
 Suitable for shunt or PM motors
 IR compensation
 Stability adjustment

Additional Regen Drive Features

Speed reference +/-10V or 4-20mA
 Speed trim input
 Independent up & down ramps in FWD & REV
 Separate adjustable current limits motor/brake
 Torque control in either 2 or 4 quadrants
 Relay for Stall, Zero speed, Reverse, Overload
 Control fuses fitted
 Fast, ramped or coast stop
 LEDs for + current, - current, stall & stall timer
 Momentary contact for reversing applications

Optional drive.web smarty

For complete process automation
 Model dw210-1107 uses discrete I/O interface to the drive and to provide:

- Ethernet networking
- Internet access
- Powerful function block programming
- ModbusRTU and ModbusTCP/IP
- Additional remote I/O
- **savvyPanel** smart touch screens (see page 18 for details)



Enclosed Drives

Enclosed wall mounting versions of these drives and a wide range of other options are detailed in the "Modulus Drive Units" section of this catalog



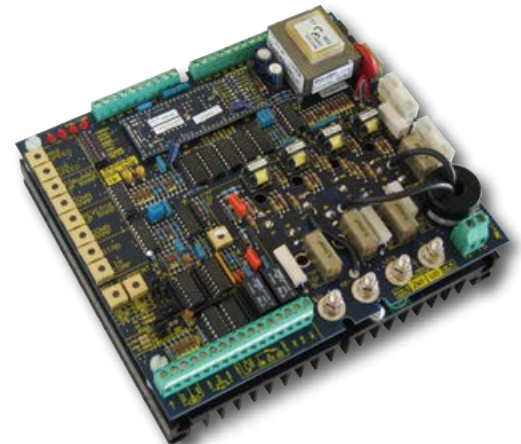
Model 400i, up to 0.75HP
 4" x 6.25" x 2" (100 x 160 x 50mm)



Model 1600i, up to 3HP
 6.1" x 6.1" x 3.4" (150 x 150 x 85 mm)



Model 3200i, up to 7.5HP
 6.1" x 8.0" x 4.2" (150 x 200 x 105 mm)



Model 3600XRI
 Up to 32 amps - 6.9"x 8"x 3.2" (175x200x80 mm)
 36 amps unit - 6.9"x 8"x 3.8" (175x200x95 mm)

Single Phase DC Drives for OEMs

Model 370 ... OEM Chassis Drives

Compact, DC drives designed for low cost, non-regenerative, non-isolated machine controls.

Basic Specification:

Rating: 1/4HP at 90VDC, 1/2HP at 180VDC

Maximum and minimum speed settings

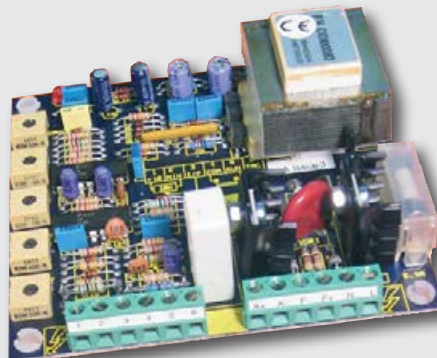
Current limit

Acceleration pot

Suitable 110 or 230 volts, single phase, 50 or 60Hz (not isolated)

For use with permanent magnet or shunt field motors

Approval: CE



Dimensions

4" x 4" x 1.6" (100 x 100 x 40mm)

Models 400, 800, 1200 ... OEM DC Drives (up to 2HP)

Versatile, basic, low cost drives suitable for wide range of machine control applications

Model	Amps	Description	@ 180VDC	@ 90VDC	Dimensions
400	4 amps	Open chassis with screw terminals	0.75HP	0.38HP	5.2"x4.0"x1.6" (130x100x40mm)
800	8 amps	Open chassis with screw terminals	1.5HP	0.75HP	5.2"x4.0"x2.8" (130x100x70mm)
1200	12 amps	Open chassis with screw terminals	2.0HP	1.0HP	5.2"x4.0"x2.8" (130x100x70mm)
400E	4 amps	Enclosed NEMA 1 with pot, switch, fuse	0.75HP	0.38HP	9.9"x7.0"x3.8" (250x177x95 mm)
800E	8 amps	Enclosed NEMA 1 with pot, switch, fuse	1.5HP	0.75HP	9.9"x7.0"x3.8" (250x177x95 mm)
1200E	12 amps	Enclosed NEMA 1 with pot, switch, fuse	2.0HP	1.0HP	9.9"x7.0"x3.8" (250x177x95 mm)
400ER	4 amps	Enclosed, pot, switch, brake, reverse, fuse	0.75HP	0.38HP	9.9"x7.0"x3.8" (250x177x95 mm)
800ER	8 amps	Enclosed, pot, switch, brake, reverse, fuse	1.5HP	0.75HP	9.9"x7.0"x3.8" (250x177x95 mm)
1200ER	12 amps	Enclosed, pot, switch, brake, reverse, fuse	2.0HP	1.0HP	9.9"x7.0"x3.8" (250x177x95 mm)

Standard features:

Linear torque control

Armature voltage or tach feedback with IR compensation

Calibration range switches (no component changes)

Speed reference 0-10V or 4-20mA

Maximum and minimum speed settings

Adjustable current limit

Independently adjustable up and down ramps

150% overload capacity with 30 second stall timer

Stall and Zero Speed relay driver outputs

Power fuse (up to 12 amps)

Power on and stall indicator LEDs

Stability adjustment

Speed, Ramp Speed and Current signal outputs

International supply voltages 110 / 230 VAC, 50/60hz (not isolated)

Suitable for shunt wound or permanent magnet motors

Approvals: CE



Model 1200E

DC Servo Drives

These drives are designed for small, high performance position and speed control applications such as robotics, mechanical handling, automated assembly, packaging processes, machine tool axis, etc.

The units are miniature, fast response, reversing, linear transistor drives for brushed DC motors with armatures up to 48 volts. They operate from either a smoothed, unregulated, rectified DC, or battery supply, and include built in thermal protection, current limit with short term overcurrent capacity and resettable overload trip.

The control circuits are designed to ensure extremely low noise emissions, and will meet the most stringent of EMC (Electro-Magnetic Compliance) requirements.

Model 200XLV 4-Quadrant DC Drive

Miniature linear amplifier with built in "P" or "P+I" or "PID" (Proportional, Integral, Derivative) for closed loop position, speed or torque control.

Optional configurations:

1. Speed control, armature voltage feedback with IR compensation.
2. Speed control, tach feedback.
3. Position control, position feedback.
4. Torque control with armature current feedback

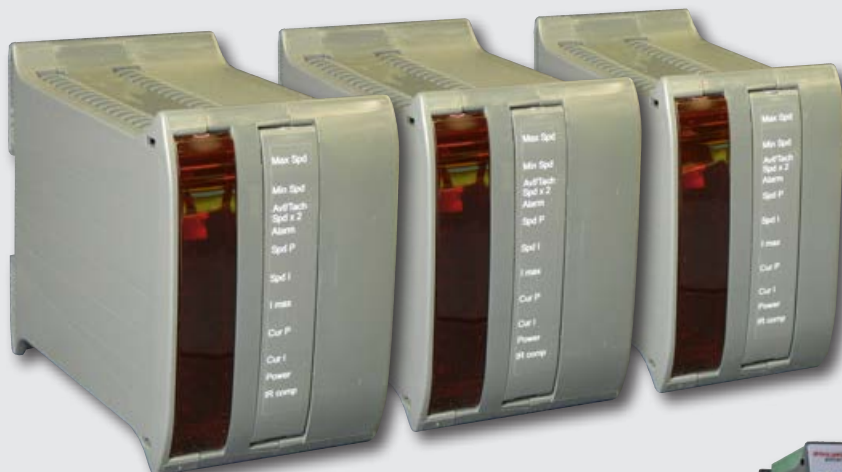
Specifications

Model	Max Amps	Dimensions
200XLV	2	3.25" x 1.65" x 1.65" (82x40x40mm)



Models 400XLV, 800XLV & 1200XLV 4-Quadrant DC, PWM Servo Drives

These products are designed for small, high performance position and speed control applications such as robotics, mechanical handling, automated assembly, packaging processes, machine tool axis, etc.



Standard Features

- Speed, or Torque control modes
- Extremely low RF noise emissions
- Ready indicator light
- Motor voltage range: +/-6 VDC to +/-48 VDC
- Armature current (see specifications below)
- Supply voltage 12 to 48 VDC
- Precision 5v and 10v references
- Differential setpoint inputs (300K ohms)
- Overload trip
- Thermal protection
- Adjustable Maximum Speed
- Adjustable IR Compensation for arm volts f/b
- Plug-in terminals
- DIN rail mounting (optional on 200XLV)

Model	Max Amps	Dimensions
400XLV	4	4.2"h x 2.4"w x 4.75"d (106 x 61 x 120mm)
800XLV	8	4.2"h x 2.75"w x 4.75"d (106 x 70 x 120mm)
1200XLV	12	4.2"h x 2.75"w x 4.75"d (106 x 70 x 120mm)

Approvals: CE



smarty Motion Control Options

Full featured motion controller with:

- Trapezoidal and cam motion functions
- Encoder speed & position feedback
- Ethernet, multi-axis networking
- **savvyPanel touch** industrial displays (see pages 30-31)



DC technology

PL Series ...digital dc drives



**up to
2000+HP**

LA503846

dw Ethernet
Through-Panel
Port for closed
door system
access



Standard Features

- Total digital control
- Basic peer-to-peer link
- 40 character backlit display
- Friendly, easy menu structure
- Modern, compact packaging
- Extensive, flexible, plug-in I/O
- RS232 serial port
- Easy configuration saving & cloning
- Built-in automatic field controller
- Built in programmable control functions for PID, winders, orientation, etc.
- Tach, encoder & arm volts feedback
- Easy reliable autotune

Size 4 & 5 drives include an embedded **speedy** Automation Controller (dw221) for safe, doors closed, start up & operation with:

- Easy USB port interface
- Peer-to-peer Ethernet communications
- **drive.web** programmable control
- ModbusTCP over Ethernet
- Easy, safe, **savvyPanel** "Quick Start"
- see pages 20 & 21 for dw221 details -

Optional:

- ModbusRTU RS485 serial port
- Devicenet, Profibus DP, fieldbus



powerDRIVE Packages

PL/X DC drives up to 1200 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)
- USB & Ethernet interface with **speedy dw221**
- Optional motor blower starter (100HP & up)



Key Features

Analog Inputs & Outputs

8 analog inputs & 4 analog outputs (12 bits)
All outputs short circuit protected
All inputs over voltage protected up to +50v
Inputs configurable 5 to 30v
Input volts programmable up to +/-30v

Digital Inputs & Outputs

17 digital inputs & 7 digital outputs
Digital I/O short circuit protected
Digital inputs over volts protected to +50v
(with settable switching levels)
Digital outputs over volts protected to +50v

Speed Feedback - Standard

Analog tach
Encoder
Armature voltage
Encoder + armature volts
Encoder + analog tach

Field Configurations

Fixed Current
Fixed voltage
Automatic field weakening
Delayed field quench
Standby field setting
Field economy

Diagnostic Monitoring

Scope terminal monitors selectable values
All analog input voltages
All digital input states
All analog output voltages
All digital output states
Tach volts
Motor arm volts & amps
Field current
Output power Kw
AC supply volts

User Configurable Software Functions

PID blocks, Parameter profiler, Winder reel diameter calculator, Winder taper tension calculator, Winder torque/inertia/friction compensator, Preset speed function, Two summers, Software "motorized pot", Interval timer, Current profiling, Zero speed with shaft position lock, Jog / crawl functions, Two filters, Dual motor swap, Latch, Sample & hold function, Auto self-tune current loop, Linear and S-ramps, Slack take-up, Batch Counter, Draw control.

Engineered Configuration Packages

Pre-configured generic apps are available for Open & Closed Loop Winders, Position Controls, Coordinated Line Drives, Indexing, registration and others.

Safe, "Doors Closed" Start Up & Operation

The optional dw221 Automation Controller is embedded as standard in size 4 & 5 for easy system wide access to configure, connect & control.

Protection

Interline device networks
High energy MOV's
Instantaneous overcurrent
Overcurrent (inverse time)
Field fail and overcurrent
Motor over temperature
SCR (thyristor) over temp
Main power phase loss
Armature over volts
Over speed protection
Speed feedback mismatch
Stall protection
Standstill logic
SCR (Thyristor) trigger failure
Digital output short circuit

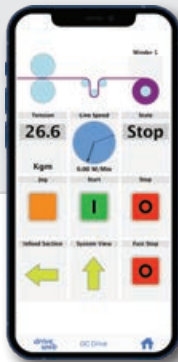
Communications Ports*

drive.web peer-to-peer Ethernet
ModbusTCP/IP Ethernet
USB port for easy network wide set up
Serial port (RS232)

Optional Communications

Ethernet: EIP (PCCC)
ModbusRTU
Profibus DP

* Included with all **powerDRIVES** and size 4 & 5 **basicDRIVES**



Easily add a **savvyPanel** touch screen HMI with secure WiFi interface

- Simple, intuitive configuration techniques with clear display of information
- No pots or switches to set
- Accurate display of voltages and currents
- Positive displacement pushbuttons for tactile feel
- High power processor and large memory will ensure ease of product enhancement in the future
- 2-button reset gets users back to OEM set up
- Powerful **savvy** graphical configuration, diagnostics & system design tools



Reliable, easy plug-in control terminals

The powerful **savvy** configuration tools are used for the PL Series DC drives, AC drives, **drive.web** programmable controllers, **savvyPanel** operator stations & complete systems.



↑ 75 HP, PLX50/123

powerPLX50/123 →
With fuses, contactor
& power components
(shown hinged open
for easy access)



↑ 400 HP, PL265/630

powerPL265/630 →
With fuses, contactor
& power components
(shown with optional
motor blower starter)



Models & Ratings

4-Quadrant, Regenerative Drives

HP @ 500V arm 460VAC	HP @ 240V arm 230VAC	Armature Amps DC @ 40°C power(basic)	Field Amps DC power(basic)	powerDRIVE Model	Dimensions W x H x D (weight) inches (LBS)	basicDRIVE Model	Dimensions W x H x D (weight) inches (LBS)	Line Reactor Model
20	10	36	5(8)	powerPLX15/36d	8.5 x 11.4 x 11.7 (26)	PLX15/36	8.5 x 11.4 x 6.9 (16)	LM37
30	10	51	5(8)	powerPLX20/51d	8.5 x 11.4 x 11.7 (26)	PLX20/51	8.5 x 11.4 x 6.9 (16)	LM52
60	25	99	5(8)	powerPLX40/99d	8.5 x 11.4 x 11.7 (30)	PLX40/99	8.5 x 11.4 x 6.9 (17)	LM120
75	35	123	5(8)	powerPLX50/123d	8.5 x 11.4 x 11.7 (30)	PLX50/123	8.5 x 11.4 x 6.9 (17)	LM120
100	50	164	10(16)	powerPLX65/164d	16 x 33 x 9.7 (80)	PLX65/164	8.5 x 16.2 x 8.6 (27)	LM150
125	60	205	10(16)	powerPLX85/205d	16 x 33 x 9.7 (80)	PLX85/205	8.5 x 16.2 x 8.6 (27)	LM195
150	75	270	10(16)	powerPLX115/270d	16 x 33 x 9.7 (82)	PLX115/270	8.5 x 16.2 x 8.6 (28)	LM240
200	100	330	10(16)	powerPLX145/330d	16 x 33 x 9.7 (89)	PLX145/330	8.5 x 16.2 x 8.6 (28)	LM300
250	125	405	20(32)	powerPLX185/405d	16 x 43.5 x 14.4 (143)	PLX185/430	8.5 x 19.9 x 14.4 (43)	LM375
300	150	480	20(32)	powerPLX225/480d	16 x 43.5 x 14.4 (145)	PLX225/530	8.5 x 19.9 x 14.4 (45)	LM480

2-Quadrant, Non-Reversing Drives

HP @ 500V arm 460VAC	HP @ 240V arm 230VAC	Armature Amps DC @ 40°C power(basic)	Field Amps DC power(basic)	powerDRIVE Model	Dimensions W x H x D (weight) inches (LBS)	basicDRIVE Model	Dimensions W x H x D (weight) inches (LBS)	Line Reactor Model
20	10	36	5(8)	powerPL15/36d	8.5 x 11.4 x 11.7 (26)	PL15/36	8.5 x 11.4 x 6.9 (16)	LM37
30	10	51	5(8)	powerPL20/51d	8.5 x 11.4 x 11.7 (26)	PL20/51	8.5 x 11.4 x 6.9 (16)	LM52
60	25	99	5(8)	powerPL40/99d	8.5 x 11.4 x 11.7 (30)	PL40/99	8.5 x 11.4 x 6.9 (17)	LM120
75	35	123	5(8)	powerPL50/123d	8.5 x 11.4 x 11.7 (30)	PL50/123	8.5 x 11.4 x 6.9 (17)	LM120
100	50	164	10(16)	powerPL65/164d	16 x 33 x 9.7 (80)	PL65/164	8.5 x 16.2 x 8.6 (27)	LM150
125	60	205	10(16)	powerPL85/205d	16 x 33 x 9.7 (80)	PL85/205	8.5 x 16.2 x 8.6 (27)	LM195
150	75	270	10(16)	powerPL115/270d	16 x 33 x 9.7 (82)	PL115/270	8.5 x 16.2 x 8.6 (28)	LM240
200	100	330	10(16)	powerPL145/330d	16 x 33 x 9.7 (89)	PL145/330	8.5 x 16.2 x 8.6 (28)	LM300
250	125	405	20(32)	powerPL185/405d	16 x 43.5 x 14.4 (143)	PL185/430	8.5 x 19.9 x 14.4 (43)	LM375
300	150	480	20(32)	powerPL225/480d	16 x 43.5 x 14.4 (143)	PL225/530	8.5 x 19.9 x 14.4 (45)	LM480
400	200	630	20(32)	powerPL265/630d	16 x 43.5 x 14.4 (154)	PL265/630	8.5 x 19.9 x 14.4 (45)	LM600

basicDRIVES must be installed with new contactor and the correct high speed SCR fuses to maintain the warranty

drive.web options see pages 24 - 25

USB cable for programming (USB A to USB-C), 2M long - part number LA504302, please call +410-604-3400

Computer RS232 Communications Cable - Drive to DB9 - part number LA102595, included with every drive

For details of Drive Isolation Transformers, Line Reactors and Line Filters, please call +410-604-3400

PL-Series Drives to 2000HP

Models & Ratings

DC drives 400 HP to 2000 HP are normally available as **basicDRIVES** but can be supplied with **powerKITS** including:

- High speed fuses for line, armature & field
- Main DC contactor
- Line filter
- Flexible bus bar kits

(**basicDRIVES** must be installed with new power components to maintain the warranty)

Drives are available for either 6-pulse or 12-pulse, 460, 600 or 690 VAC configurations - please call for further information.

SAFE, "DOORS CLOSED" START UP AND OPERATION

Drive models with suffix "d" include a speedy dw221 onboard controller with drive.web



DC Drives - 500 VDC Armature, 480VAC Supply

HP @	ARMATURE AMPS DC @ 40°C	FIELD AMPS DC Basic(Optional)	basicDRIVE 4-QUAD REGEN REVERSING	basicDRIVE NON-REVERSING	DIMENSIONS W x H x D (weight) INCHES (LBS) TOP CABLE ENTRY	OVERLOAD RATING
400	650	32 (50)	PLX275/650d	PL275/650d	10 x 30 x 13.8 (120)	150%, 25 SECS
450	750	32 (50)	PLX315/750d	PL315/750d	10 x 30 x 13.8 (120)	150%, 25 SECS
500	850	32 (50)	PLX360/850d	PL360/850d	10 x 30 x 13.8 (120)	150%, 25 SECS
575	950	32 (50)	PLX400/950d	PL400/950d	10 x 30 x 13.8 (120)	150%, 25 SECS
650	1050	32 (50)	PLX440/1050d	PL440/1050d	10 x 30 x 13.8 (120)	100%, CONT
750	1250	64	PLX520/1250d	PL520/1250d	20 x 30 x 13.8 (285)	150%, 25 SECS
895	1450	64	PLX600/1450d	PL600/1450d	20 x 30 x 13.8 (285)	150%, 25 SECS
1000	1650	64	PLX700/1650d	PL700/1650d	20 x 30 x 13.8 (285)	150%, 25 SECS
1140	1850	64	PLX800/1850d	PL800/1850d	20 x 30 x 13.8 (285)	150%, 25 SECS
1260	2050 @35°C	64	PLX900/2050d	PL900/2050d	20 x 30 x 13.8 (285)	150%, 25 SECS
1380	2250 @35°C	64	PLX980/2250d	PL980/2250d	20 x 30 x 13.8 (285)	100%, CONT

DC Drives - 600 VDC Armature, 600VAC Supply

480	650	32 (50)	PLX275MV/650d	PL275MV/650d	10 x 30 x 13.8 (120)	150%, 25 SECS
550	750	32 (50)	PLX315MV/750d	PL315MV/750d	10 x 30 x 13.8 (120)	150%, 25 SECS
630	850	32 (50)	PLX360MV/850d	PL360MV/850d	10 x 30 x 13.8 (120)	150%, 25 SECS
700	950	32 (50)	PLX400MV/950d	PL400MV/950d	10 x 30 x 13.8 (120)	150%, 25 SECS
775	1050	32 (50)	PLX440MV/1050d	PL440MV/1050d	10 x 30 x 13.8 (120)	100%, CONT
925	1250	64	PLX520MV/1250d	PL520MV/1250d	20 x 30 x 13.8 (285)	150%, 25 SECS
1075	1450	64	PLX600MV/1450d	PL600MV/1450d	20 x 30 x 13.8 (285)	150%, 25 SECS
1220	1650	64	PLX700MV/1650d	PL700MV/1650d	20 x 30 x 13.8 (285)	150%, 25 SECS
1370	1850	64	PLX800MV/1850d	PL800MV/1850d	20 x 30 x 13.8 (285)	150%, 25 SECS
1510	2050 @35°C	64	PLX900MV/2050d	PL900MV/2050d	20 x 30 x 13.8 (285)	150%, 25 SECS
1660	2250 @35°C	64	PLX980MV/2250d	PL980MV/2250d	20 x 30 x 13.8 (285)	100%, CONT

DC Drives - 700 VDC Armature, 690VAC Supply

550	650	32 (50)	PLX275HV/650d	PL275HV/650d	10 x 30 x 13.8 (120)	150%, 25 SECS
650	750	32 (50)	PLX315HV/750d	PL315HV/750d	10 x 30 x 13.8 (120)	150%, 25 SECS
735	850	32 (50)	PLX360HV/850d	PL360HV/850d	10 x 30 x 13.8 (120)	150%, 25 SECS
820	950	32 (50)	PLX400HV/950d	PL400HV/950d	10 x 30 x 13.8 (120)	150%, 25 SECS
900	1050	32 (50)	PLX440HV/1050d	PL440HV/1050d	10 x 30 x 13.8 (120)	100%, CONT
1080	1250	64	PLX520HV/1250d	PL520HV/1250d	20 x 30 x 13.8 (285)	150%, 25 SECS
1250	1450	64	PLX600HV/1450d	PL600HV/1450d	20 x 30 x 13.8 (285)	150%, 25 SECS
1420	1650	64	PLX700HV/1650d	PL700HV/1650d	20 x 30 x 13.8 (285)	150%, 25 SECS
1600	1850	64	PLX800HV/1850d	PL800HV/1850d	20 x 30 x 13.8 (285)	150%, 25 SECS
1770	2050 @35°C	64	PLX900HV/2050d	PL900HV/2050d	20 x 30 x 13.8 (285)	150%, 25 SECS
1940	2250 @35°C	64	PLX980HV/2250d	PL980HV/2250d	20 x 30 x 13.8 (285)	100%, CONT

DC powerDRIVES - 500 VDC Armature, 480 VAC Supply & powerKITS

HP @ 500 VDC 460 VAC	ARMATURE AMPS DC @40°C	FIELD AMPS DC	FRAME SIZE	powerDRIVE w/contactor & fuses & <i>duw221 speedy</i>	Contact Kit Contactor + mount bus bars & h/w	Fuse Kit Line, Regen Arm & Aux Fuses + mountings + h/w	Fan Supply Kit 460/230V Transfmr Fuses + h/w
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REGENERATIVE, REVERSING, 4-QUADRANT DRIVES

400	650	32 (50)	4	powerPLX275/650v2d	CON-800V700A	FPX650	FANSUPPLY4
450	750	32 (50)	4	powerPLX315/750v2d	CON-800V850A	FPX750	FANSUPPLY4
500	850	32 (50)	4	powerPLX360/850v2d	CON-800V850A	FPX850	FANSUPPLY4
575	950	32 (50)	4	powerPLX400/950v2d	CON-800V1000A	FPX950	FANSUPPLY4
600	1000	64	5	powerPLX520/1000d	CON-800V1200A	FPX1000	FANSUPPLY5
700	1150	64	5	powerPLX520/1150d	CON-800V1200A	FPX1150	FANSUPPLY5
800	1350	64	5	powerPLX600/1350d	CON-800V1750A	FPX1350	FANSUPPLY5
1000	1650	64	5	powerPLX700/1650d	CON-800V1750A	FPX1650	FANSUPPLY5
1100	1750	64	5	powerPLX800/1750d	CON-800V2000A	FPX1750	FANSUPPLY5
1200	1950	64	5	powerPLX900/1950d	CON-800V2000A	FPX1950	FANSUPPLY5

NON-REGENERATIVE, 2-QUADRANT DRIVES

400	650	32 (50)	4	powerPL275/650v2d	CON-800V700A	FP650	FANSUPPLY4
450	750	32 (50)	4	powerPL315/750v2d	CON-800V850A	FP750	FANSUPPLY4
500	850	32 (50)	4	powerPL360/850v2d	CON-800V850A	FP850	FANSUPPLY4
575	950	32 (50)	4	powerPL400/950v2d	CON-800V1000A	FP950	FANSUPPLY4
700	1150	64	5	powerPL520/1150d	CON-800V1200A	FP1150	FANSUPPLY5
800	1350	64	5	powerPL600/1350d	CON-800V1750A	FP1350	FANSUPPLY5
1000	1650	64	5	powerPL700/1650d	CON-800V1750A	FP1650	FANSUPPLY5
1100	1750	64	5	powerPL800/1750d	CON-800V2000A	FP1750	FANSUPPLY5
1200	1950	64	5	powerPL900/1950d	CON-800V2000A	FP1950	FANSUPPLY5

NOTE 1:

To encourage "doors closed", safe start up & maintenance practices, all size 4 & 5 powerDRIVES are fitted with a *duw221 speedy* with isolated USB and Ethernet ports as standard for full remote configuration & control access.

NOTE 2:

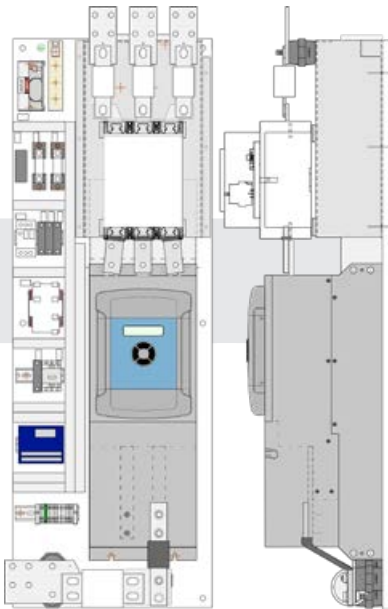
Due to the weight and dimensions, size 5 powerDRIVES are shipped in two parts (basic drive & power package panel) that will need to be assembled on site

Frame 4 Dimensions

Drive	OH	OW	OD
powerPL275	53.0"	18.5"	14.9"
powerPLX275	53.0"	18.5"	14.9"
powerPL315	56.0"	18.5"	16.0"
powerPLX315	56.0"	19.3"	16.0"
powerPL360	60.0"	18.5"	16.9"
powerPLX360	60.0"	19.3"	16.9"
powerPL400	60.0"	18.5"	16.9"
powerPLX400	63.9"	19.3"	16.9"

Frame 5 Dimensions

All frame 5 drives	67.0"	30.0"	16.0"
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Size 4 powerPL/X315 - 400



Size 5 powerPL/X520 - 900

PLXDd Separate Stack Controller

The PLXDd is a great retrofit option for controlling large separate SCR stacks in either 6 or 12-pulse DC drive configurations and also for wound rotor motor SCR stack control. The unit has all the standard PL/X series drive features together with:

- Available for stacks up to 690 volts AC, 700 volts DC
 - Built-in 32 amps fully automatic field controller (optional 50 amps rating)
 - Separate gate pulse driver unit for greater noise immunity and reliability
 - Ethernet and *drive.web* distributed control
 - Optional current transformers
- Please call for details



savvy tools for the PL/X DC drives

drive.web automation

- Intuitive
- Easy
- Reliable
- Very smart!

click on a parameter to open the setter

click on a function block to drill down to the detail

drive.web
Default PL-Series Configuration
192.168.1.4

↑ View the drive Signal Flow Diagram or
← View the drive in Engineering Info

- Import or export data
- Monitor trend charts
- Edit the configuration
- Drag & drop links
- Access multiple drives

drive.web smart drives



Add a **drive.web** module to any drive for unlimited automation capability:

- Powerful programmable control functions
- Peer-to-peer networking over Ethernet
- Smart iPad/Android or touch screen PC operation
- Internet access

smarty - adds programmable control & extra I/O
speedy - adds programmable control & gateway

- Get clear graphical signal flow system diagrams.
- Send event driven emails from your drive.
- All in one unique, intuitive, environment.

powerSL Series

Analog DC drives - up to 200HP

powerSLX Regen, reversing drive + field controller

powerSL Non-reversing drive + field controller

powerSLE Non-reversing OEM drive.

Please call for details



Power Quality For DC Drives

Drive Isolation Transformers

Standard specification:

NEMA 1 enclosed for indoor use
K-factor 4
Windings: Delta Primary, Wye Secondary
Aluminum or Copper windings as indicated
Taps at $\pm 5\%$
Approvals: UL, cUL

Options

Outdoor enclosures
Frequencies other than 60Hz
Voltages other than 230/460/575 pri, 230/460 sec
Special Taps
Fungus Proofing
80°C & 115°C Rise
Copper Windings
Electrostatic Shield
K-13, K-20, K-30

Discount Schedule SX-1

Model	Specification
DIT3**	3KVA - Cu (2HP)
DIT6**	6KVA - Cu (5HP)
DIT11**	11KVA - Al (7.5HP)
DIT14**	14KVA - Al (10HP)
DIT20**	20KVA - Al (15HP)
DIT27**	27KVA - Al (20HP)
DIT34**	34KVA - Al (25HP)
DIT40**	40KVA - Al (30HP)
DIT51**	51KVA - Al (40HP)
DIT63**	63KVA - Al (50HP)
DIT75**	75KVA - Al (60HP)
DIT93**	93KVA - Al (75HP)
DIT118**	118KVA - Al (100HP)
DIT145**	145KVA - Al (125HP)
DIT175**	175KVA - Al (150HP)
DIT220**	220KVA - Al (200HP)
DIT275**	275KVA - Al (250HP)
DIT330**	330KVA - Al (300HP)
DIT440**	440KVA - Al (400HP)
DIT550**	550KVA - Al (500HP)
DIT660**	660KVA - Al (600HP)

Line Reactors For 3-Phase DC Drives

Model Number	HP. at 230V	HP. at 460V	Arm Amps	Dimensions W x D x H	Mount Holes H x W	Weight LBS
LM18	5	10	20	6.0"x4.8"x3.1"	2.1"x2.0"	9
LM37	10	20	41	7.2"x5.6"x3.4"	2.3"x3.0"	11
LM52	15	30	58	7.2"x5.6"x3.8"	2.6"x3.0"	14
LM67	20	40	75	9.0"x7.0"x4.8"	3.2"x3.0"	23
LM82	25	50	91	9.0"x7.0"x4.8"	3.2"x3.0"	24
LM120	35	75	133	10.8"x8.2"x5.6"	3.5"x3.6"	43
LM150	40	100	166	10.8"x8.3"x5.6"	3.5"x3.6"	47
LM195	60	125	216	9.0"x7.1"x4.9"	3.2"x3.0"	29
LM240	75	150	266	10.8"x8.4"x5.8"	3.2"x3.6"	40
LM300		200	333	10.8"x8.4"x6.0"	4.2"x3.6"	48
LM375	100	250	416	10.8"x8.2"x7.3"	4.2"x3.6"	68
LM480	150	300	533	14.8"x14.0"x10.2"	5.9"x4.6"	125
LM600		400	666	15.5"x14.0"x11.5"	6.8"x4.6"	155
LM750		500	833	15.5"x14.0"x13.0"	6.8"x4.6"	180
LM900		600	1000	15.5"x14.0"x15.5"	9.3"x4.6"	290
LM1125		750	1250	22.0"x20.0"x14.8"	9.5"x7.2"	400

Line Filter



LF3 Line Filter

LF3-FK Line Filter Fuse Kit

Engineering & Support



AC and DC motors from fractional to over 2000 HP

All speed ranges, duties, enclosures and voltages complete with a full range of accessories such as encoders, tachs, thermal protection, brakes, blowers, filters, brushes and slide bases. Please call for details and competitive pricing.

Modulus Packaged Drives

Modulus solutions are a range of standard, pre-engineered drive packages with a selection of options for wide range common applications.

Using the flexible **drive.web** programmable automation technology it is possible to adapt a small range of hardware configurations to a wide range of applications thereby keeping design and manufacturing costs to a minimum.

Modulus drives are available either as packages mounted on an open panel, **Modulus P**, or as assemblies installed in an enclosure, **Modulus E**, to suit the type of operating environment and the control scheme required.

Every **Modulus** project is accompanied by a detailed, 50-point, Quality Control Report covering every facet of the product, its design, construction, testing and shipping.



User manuals for all products are available from www.bardac.com

Online Product Support

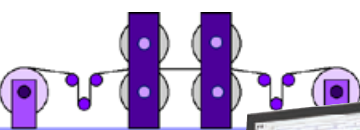
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Unbeatable!



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Online Training

Online product training courses are scheduled every week with options for users of all levels of interest and ability.

Level 1 - drive.web introductory seminar - 1½ hours - Free!

This provides an overview of the **drive.web** automation technology. Learn how to connect to drives, create drive “phantoms”, navigate systems, create signal flow diagrams and system drawings, find information, identify object attributes, make connections, show trend charts, build **savvyPanel** operator stations, etc.

Level 2 - drive.web design technology course - 3 hours (Level 1 is a prerequisite)

Covers configuration of drives, basic system design concepts, Ethernet networking, password protection, system safety

Level 3 - drive.web system design and application courses (Level 2 is a prerequisite)

3a) Drive and device interfaces - 2 hours

Covers the use of “Templates” and “Helpers” for documented drives, generic ModbusRTU master interfaces to third party drives, operator stations, etc.

3b) Winder Control Systems - 3 hours

Covers standard solutions for open loop CTCW winders, closed loop dancer controlled winders and closed loop load cell controlled winders.

3c) Encoder Control Systems - 3 hours

Covers applications such as “electronic line shaft”, spindle orientation, registration and position control.

3d) Advanced Ethernet, Internet Access and Security - 3 hours

Covers local and wide area network configuration, IP addressing, user access and device and system password protection.

For course details, registration, international training options and charges please call us at 1-888-667-7333 (toll free USA 888-ON SPEED) or international at +410-604-3400. Alternatively please contact training@driveweb.com

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Complete Terms & Conditions of Sale are shown at www.bardac.com. Net 30 day credit terms are available subject to prior approval. Credit card payments are only accepted for payments made at the time of service or shipment of products and will be subject to a 4% surcharge.

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Charge Basis

Rates (US\$)

a. Basic Rate - Field Service, Training & Start-up Assistance - up to 8 hours daily Monday to Friday, 7am to 6pm	\$190 per hour
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d. Overnight - Includes meals, and hotel accommodation	\$280 per night
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f. Public Transport - Rental cars, Air fares, etc.	At Cost
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