

# **Bardac Drives Catalog 2024**

**Issue 1**



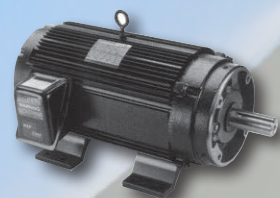
**drive.web AUTOMATION**



**AC DRIVES**



**DC DRIVES**



**MOTORS**

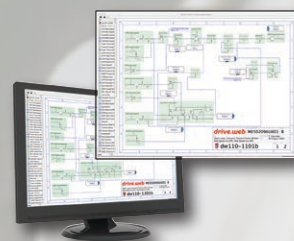
**AutomationThings**

**Everything is...**

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

**AutomationThings.com**

**Everything normally in stock!**



**SERVICE**

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**

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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.



# DC technology

## 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
<b>NON-ISOLATED</b>			
<b>K340</b>	<b>Armature current 3.4 amps</b> 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
<b>K680</b>	<b>Armature current 6.8 amps</b> 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
<b>K1220</b>	<b>Armature current 12.2 amps</b> 1HP 0.75kW @90Vdc 2HP 1.8kW @180Vdc Size 1.8"W x 4.2"H x 4.7"D		
<b>ISOLATED</b>			
<b>K340i</b>	<b>Armature current 3.4 amps</b> 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
<b>K680i</b>	<b>Armature current 6.8 amps</b> 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
<b>K1220i</b>	<b>Armature current 12.2 amps</b> 1HP 0.75kW @90Vdc 2HP 1.8kW @180Vdc Size 2.8"W x 4.2"H x 4.7"D		
<b>4-QUADRANT, REGENERATIVE, REVERSING, ISOLATED</b>			
<b>K340XRI</b>	<b>Armature current 3.4 amps</b> 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
<b>K680XRI</b>	<b>Armature current 6.8 amps</b> 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
<b>K1220XRI</b>	<b>Armature current 12.2 amps</b> 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/i
FLL-6.3	Line/line fuse kit	K340/i
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 blockprogramming
- ModbusRTU and ModbusTCP/IP
- Additional remote I/O
- **savvyPanel** smart touch screens (see page 18 for details)

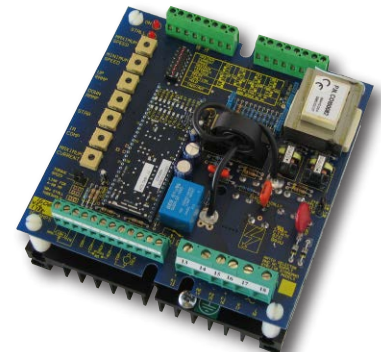


## Enclosed Drives

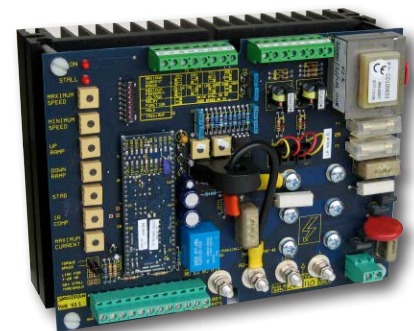
Enclosed wall mounting versions of these drives and a wide range of other options are detailed in the "Modulus Drive Units" section of this catalog



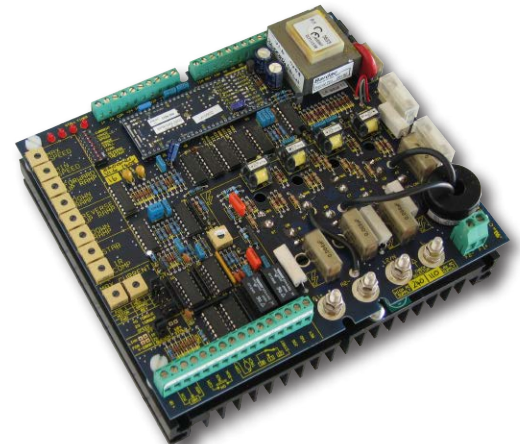
Model 400i, up to 0.75HP  
 4" x 6.25" x 2" (100 x 160 x 50mm)



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

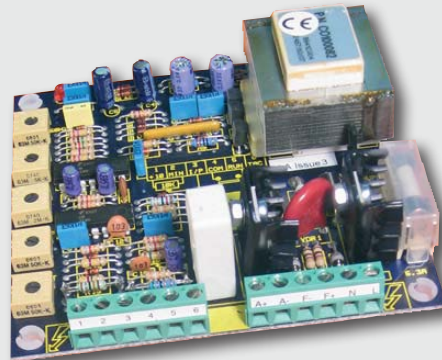
Current limit

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.



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

### 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)

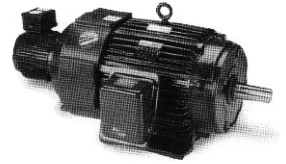
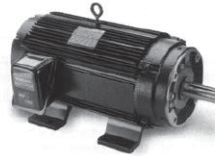
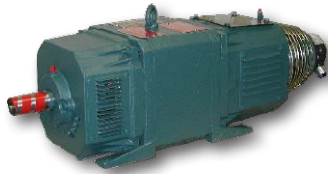
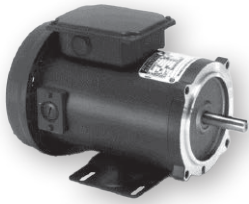
### smarty Motion Control Options

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)



# 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](http://www.bardac.com)

## Online Product Support

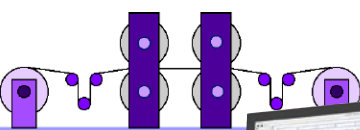
Using innovative, interactive, Internet online technologies we can provide either product training or product support through your browser from the comfort of your desk! Simply connect via your browser and get live interactive support where ever you are - with savvy running on your computer call +410-604-3400 and in less than a minute an engineer will be able to see your system live and give you the support you need.

*... it's as easy as that!*

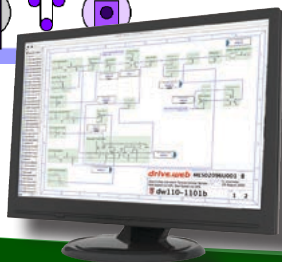
Our support view

Internet

**Unbeatable!**



Your plant view



# 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](mailto:training@driveweb.com)

## Terms of Sale & Payment

Complete Terms & Conditions of Sale are shown at [www.bardac.com](http://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.

## Field Service, Service Center Repair, Training and Start-up - Call +410-604-3400 Rates for the Continental United States

### 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
b. Standard Overtime - Weekdays 6pm to 7am & all day Saturday - Total work time not to exceed 12 hrs in any 24 hrs	\$285 per hour
c. Special Overtime - Sundays, Holidays and excess of 8 hours on Saturday	\$380 per hour
d. Overnight - Includes meals, and hotel accommodation	\$280 per night
e. Auto Travel - Covering cost of use of company or personal cars, distance to and from the local office	\$0.67 per mile
f. Public Transport - Rental cars, Air fares, etc.	At Cost
g. Holdover & Standby Time	Same as service
h. Travel Time - Time taken from Bardac to job site and return	Same as service
i. Basic Rate - Service Center Repair charges - Diagnosis & repair time	\$130 per hour + parts
j. Design or application engineering services	\$220 per hour

Notes:

1. Minimum service billing is 4 hours for field services, 1 hour for service center services.
2. Parts, materials, special visas, duties, and extraordinary expenses will be charged extra.
3. Warranty credits will be identified on the Daily Field Service Report.

For rates and availability of sales and service outside the US, please call +410-604-3400

## 24/7 Tech Support

During normal business hours basic tech support will be provided free of charge

Outside normal business hours call +410-604-3535. Tech support will be provided at \$380/hour (minimum of 1/2 hour per call) and this must be paid for with a credit card at the time of service.



# Bardac

# drive.web

## Bardac ...the safe bet!

*Everything normally in stock!*

### Bardac Corporation

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**Catalog 2024.1**



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