

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, C-UL, 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	LevelO/P Level i/P Overload Trip Ramp O/P Demand O/P Speed O/P Current O/P + Speed I/P Torque I/P
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	Ramp O/P Demand O/P Speed O/P Current O/P + Speed I/P Torque I/P
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

	230VAC, 180VDC	115VAC, 90VDC	FUSE KIT
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

	230VAC, 180VDC	115VAC, 90VDC	FUSE KIT
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



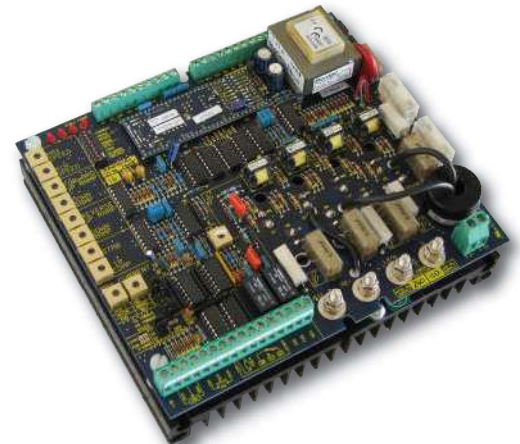
Model 400i, up to 0.75HP
4" x 6.25" x 2" (100 x 160 x 50mm)



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)

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 19 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

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

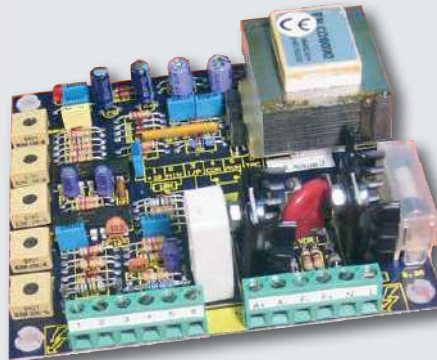
Current limit

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)

