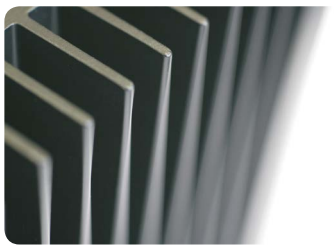
World class in design | World beating in function | Over 30 years of industrial motor control

DC MOTOR CONTROL TECHNOLOGY
PRODUCT CATALOGUE

SINGLE PHASE DC DRIVES



SPRINT ELECTRIC

Sprint Electric, based in England, was formed in 1987 to design and manufacture industrial motor drives. It has specialised in DC drive technology and has been successful in penetrating global markets. This success has been achieved using well trained distributors and direct sales, offering rapid delivery and prompt technical support. Outlets have been established in a wide spread of overseas markets, creating a loyal and varied customer base.

In 2009 Sprint Electric was very proud to become one of an elite group of companies to win a Queen's Award for Enterprise, the most prestigious business award in the UK. The award was made for continuous achievement in International Trade. Winning this award puts Sprint Electric among the most successful of UK businesses.

Contents:

DC Motor Control Technology:

Increase your productivity, save energy and reduce downtime.

With an extensive range of DC motor control products, you will find an answer to your industrial automation questions.

Your Industry - Our Experience.

We've used our renowned industrial automation experience to design a range of DC motor controllers which provide you with solutions to the most demanding motor control applications.

It's now easier than ever to design new DC motor control systems or improve the performance of an existing application by retrofitting with the latest DC technology.

Save with Compact Designs and Ex-Stock Delivery.

You can save cabinet space in new control systems, or easily upgrade an existing DC motor application. Compact design comes as standard.

Reduce your downtime by relying on our ex-stock delivery. With a global network of partners and all products built for stock, you can quickly get your business moving again.

Three Phase Products.

We also manufacture three phase DC motor controllers. Please see our Three Phase Product Catalogue for details.

DIN RAIL MOUNTING OPTIONS

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PRODUCT NAME

340

340 0.55KW / 0.75HP
680 0.75KW / 1.0HP
1220 1.8KW / 2.0HP

DESCRIPTION

Ultra compact DC motor control. Non isolated.

Make upgrading your existing control panel easier. Save space in new DC single direction motor control systems. The ultra compact DIN rail mounting package lets you install quickly.

Three options are available for controlling DC motors up to 12.2 Amps. You can use this versatile range of non-isolated controllers for permanent magnet, shunt wound motors or universal motors.

To make your installation quick and simple, all 340, 680, and 1220 series controllers have easy to access drive adjustments, plug-on screw terminals and a small footprint from just 35mm x 105mm.

MODEL COMPARISON

MODEL	AC SUPPLY RANGE	TYPICAL ARMATURE VOLTAGE	MAX CONTINUOUS ARMATURE CURRENT	NOMINAL POWER
340	100 to 130V	90V	3.4A	0.25KW (0.35HP)
	200 to 264V	180V	3.4A	0.55KW (0.75HP)
680	100 to 130V	90V	6.8A	0.55KW (0.75HP)
	200 to 264V	180V	6.8A	0.75KW (1.0HP)
1220	100 to 130V	90V	12.2A	0.75KW (1.0HP)
	200 to 264V	180V	12.2A	1.8KW (2.0HP)

DIMENSIONS 340

H	105 mm
W	35 mm
D	120 mm

680 / 1220

H	105 mm
W	45 mm
D	120 mm

See parts list at back for low voltage supply options and fuses.
Refer to features chart for further details or download product manual for full specification.

AT A GLANCE
340, 680, 1220 series

340 controller for DC motors rated up to 3.4 Amps (0.55KW/0.75HP)

680 controller for DC motors rated up to 6.8 Amps (0.75KW/1HP)

1220 controller for DC motors rated up to 12.2 Amps (1.8KW/2HP)

DIN rail mounting

Easy to access drive adjustments

Plug-on screw terminals

Small footprint

Technical highlights:

Switch selectable Tach or Armature voltage feedback

Adjustable IR compensation for improved AVF speed regulation

Selectable dual voltage AC supply

Aux speed trim input available in AVF mode

User adjustable:

Ramp

Max motor speed

Min motor speed

IR comp

Max motor current

AT A GLANCE

340i, 680i, 1220i series

Fully isolated control electronics

340i controller for DC motors rated up to 3.4 Amps (0.55KW/0.75HP)

680i controller for DC motors rated up to 6.8 Amps (0.75KW/1HP)

1220i controller for DC motors rated up to 12.2 Amps (1.8KW/2HP)

DIN rail mounting

Easy to access drive adjustments

Plug-on screw terminals

Small footprint

UL, CuL, CE approved

PRODUCT NAME

340i

340i	0.55KW / 0.75HP
680i	0.75KW / 1.0HP
1220i	1.8KW / 2.0HP

DESCRIPTION

Fully isolated DC motor control with compact design

Improving or upgrading your single direction DC motor control system is easier with this series of fully-isolated controllers. The ultra compact DIN rail mounting package lets you quickly integrate the 340i, 680i and 1220i series with your existing motor control equipment.

Three options are available for controlling DC motors up to 12.2 Amps. You can use this versatile series of fully-isolated controllers for permanent magnet or shunt wound motors.

To make your installation quick and simple, all 340i, 680i and 1220i series controllers have easy to access drive adjustments, plug-on screw terminals and a small footprint from just 60mm x 105mm.

See parts list at back for low voltage supply options and fuses.

PRODUCT NAME

340i

340i 0.55kW / 0.75HP
680i 0.75kW / 1.0HP
1220i 1.8kW / 2.0HP

Technical highlights:

340i, 680i, 1220i series
Switch selectable Tach or Armature voltage feedback
Adjustable IR compensation for improved AVF
Speed or torque control
Selectable dual voltage AC supply
Aux speed input
150% overload with stall protection

User adjustable:

Max motor speed
Min motor speed
Up ramp
Down ramp
Stability
Imax
IR comp
AVF/Tach switch
Speed range switch
AC voltage selector
Signal level comparator

Signal terminals:

+10V ref
Min speed
Ramped input +
Output +/-
Common
Input +/-
Pushbutton +
Pushbutton -
Run input
Common
Tach input

Level output
Level input
Overload output
Trip output
Ramp output
Demand output
Speed output
Current output
Speed input
Torque input

MODEL COMPARISON

MODEL	AC SUPPLY RANGE	TYPICAL ARMATURE VOLTAGE	MAX CONTINUOUS ARMATURE CURRENT	NOMINAL POWER
340i	100 to 130V	90V	3.4A	0.25kW (0.35HP)
	200 to 264V	180V	3.4A	0.55kW (0.75HP)
680i	100 to 130V	90V	6.8A	0.55kW (0.75HP)
	200 to 264V	180V	6.8A	0.75kW (1.0HP)
1220i	100 to 130V	90V	12.2A	0.75kW (1.0HP)
	200 to 264V	180V	12.2A	1.8kW (2.0HP)

DIMENSIONS 340i

H	105 mm
W	60 mm
D	120 mm

680i / 1220i

H	105 mm
W	70 mm
D	120 mm

Refer to features chart for further details or download product manual for full specification.

AT A GLANCE

340XRi, 680XRi, 1220XRi series

4 Quadrant regenerative DC motor controller

Fully isolated control electronics

340XRi controller for DC motors rated up to 3.4 Amps (0.55KW/0.75HP)

680XRi controller for DC motors rated up to 6.8 Amps (0.75KW/1HP)

1220XRi controller for DC motors rated up to 12.2 Amps (1.8KW/2HP)

DIN rail mounting

Easy to access drive adjustments

Plug-on screw terminals

Small footprint

UL, CuL, CE approved

PRODUCT NAME

340XRi

340XRi	0.55KW / 0.75HP
680XRi	0.75KW / 1.0HP
1220XRi	1.8KW / 2.0HP

DESCRIPTION

Regenerative DC motor control with compact Design. Fully isolated control electronics.

This 4 Quadrant regenerative DC motor controller gives a fast controlled response over the full forward/reverse speed range for motoring and braking.

Improve your energy efficiency by regenerating energy into the mains supply whilst under braking. The energy invested accelerating the load mass is recovered when braking. There is no dissipation of energy in wasteful braking resistors.

The compact DIN rail mounting package uses less panel space so you can save space as well as energy.

Three options are available for controlling DC motors up to 12.2 Amps. You can use this versatile series of fully-isolated controllers for permanent magnet or shunt wound motors.

To make your installation quick and simple, all 340XRi, 680XRi and 1220XRi series controllers have easy to access drive adjustments, plug-on screw terminals and a small footprint from just 60mm x 105mm.

See parts list at back for low voltage supply options and fuses.

PRODUCT NAME

340XRi

340XRi 0.55kW / 0.75HP
680XRi 0.75kW / 1.0HP
1220XRi 1.8kW / 2.0HP

Technical highlights:

Switch selectable Tach or Armature voltage feedback
Adjustable IR compensation for improved AVF
Speed or torque control
Selectable dual voltage AC supply
Aux speed input
Pushbutton reversing function
150% overload with stall protection
Built-in current limit protection
Full 4 Quadrant operation

User adjustable:

Max motor speed
Min motor speed
Up ramp
Down ramp
Stability
Imax
IR comp
AVF/Tach switch
Speed range switch
AC voltage selector
Signal level comparator

Signal terminals:

+10V ref
Min speed
Ramped input +
Output +/-
Common
Input +/-
Pushbutton +
Pushbutton -
Run input
Common
Tach input

Level output
Level input
Overload output
Trip output
Ramp output
Demand output
Speed output
Current output
+ Speed input
Torque input

MODEL COMPARISON

MODEL	AC SUPPLY RANGE	TYPICAL ARMATURE VOLTAGE	MAX CONTINUOUS ARMATURE CURRENT	NOMINAL POWER
340XRi	100 to 130V	90V	3.4A	0.25kW (0.35HP)
	200 to 264V	180V	3.4A	0.55kW (0.75HP)
680XRi	100 to 130V	90V	6.8A	0.55kW (0.75HP)
	200 to 264V	180V	6.8A	0.75kW (1.0HP)
1220XRi	100 to 130V	90V	12.2A	0.75kW (1.0HP)
	200 to 264V	180V	12.2A	1.8kW (2.0HP)

DIMENSIONS 340XRi

H	105 mm
W	60 mm
D	120 mm

680XRi / 1220XRi

H	105 mm
W	70 mm
D	120 mm

Refer to features chart for further details or download product manual for full specification.

PANEL MOUNTING OPTIONS

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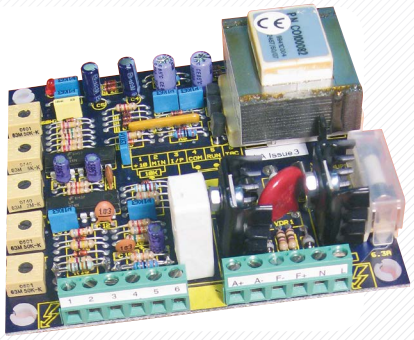

400
400i

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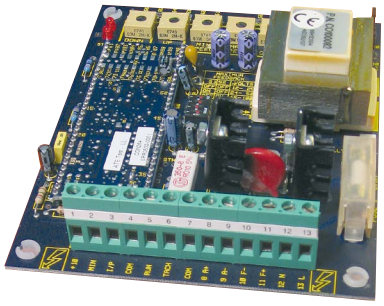

800
1200

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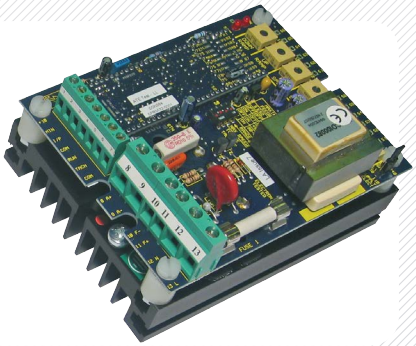

1600i
3200i

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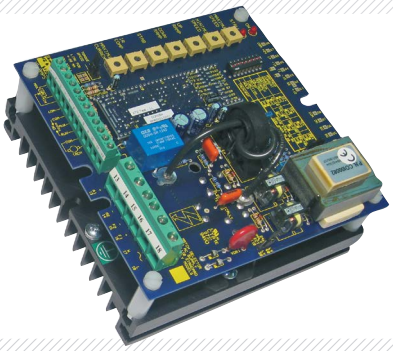

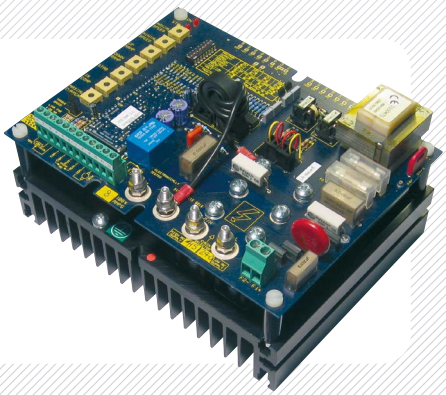

3600XRi

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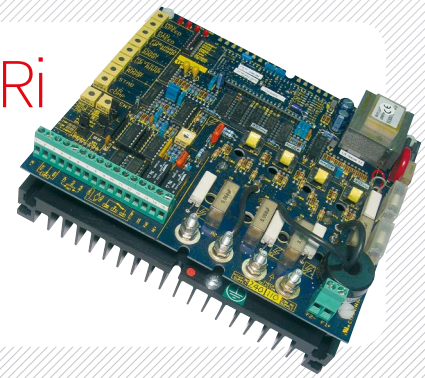


PRODUCT NAME

370

Non Isolated

0.55KW / 0.75HP

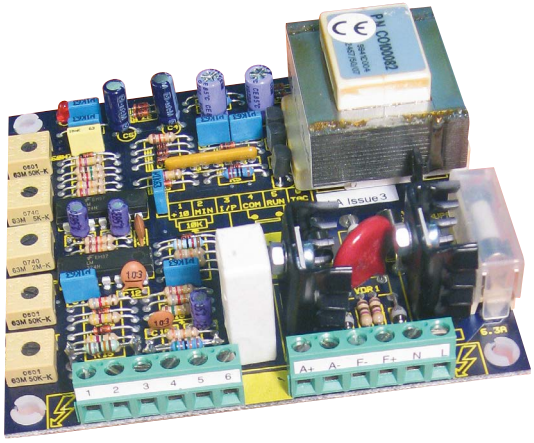
DESCRIPTION

Small footprint speed controller for permanent magnet or shunt wound motors up to 0.55KW.

Easily adjustable parameters include minimum and maximum motor speed, armature current, acceleration rate and IR compensation.

AC supply input selection for international mains voltage compatibility.

This unit is non-isolated.



SPECIFICATION

Speed range:	0 - 100%
Speed regulator:	0.1% tachogenerator 2% armature voltage feedback
Armature:	3.7 Amps continuous 200V max
Field:	0.5 Amps at 0.9 x AC supply voltage
Speed loop:	Full P + I armature voltage feedback
Current loop:	Full P + I current shunt feedback
Customer presets:	Max speed, min speed, up ramp, max armature current, IR comp. Adjustment non interactive ensuring ease of adjustment.

MODEL COMPARISON

MODEL	AC SUPPLY RANGE	TYPICAL ARMATURE VOLTAGE	MAX CONTINUOUS ARMATURE CURRENT	NOMINAL POWER
370	90 to 120V	90V	3.7A	0.25KW (0.38HP)
	200 to 264V	180V	3.7A	0.55KW (0.75HP)

DIMENSIONS

H	100 mm
W	100 mm
D	42 mm

See parts list at back for low voltage supply options and fuses.
Refer to features chart for further details or download product manual for full specification.

370 KEY FEATURES

For DC motors rated up to 3.7 Amps

Integral AC supply fuse

Selectable dual international voltage supply 110/240V AC 50/60HZ

Adjustable current overload protection

Tachogenerator or armature voltage speed feedback

Adjustable acceleration rate between 1 and 20 seconds

Remote stop/start signal input facility

Adjustable IR compensation for improved AVF speed regulation

Sophisticated dual loop control

Infinitely variable speed adjustment via remote potentiometer

Electronic soft start

Drive run input

Suitable for permanent magnet, shunt wound or universal motors

Compact footprint

400/400i KEY FEATURES

For DC motors rated up to 4 Amps

Single Quadrant operation

Extra 50% peak torque for rapid acceleration or shock loads

Torque control input for basic winding or tension control, with overspeed limiting

Ultra stable potentiometer reference for optimum long term speed and torque stability

Compact size

PRODUCT NAME

400

Non Isolated

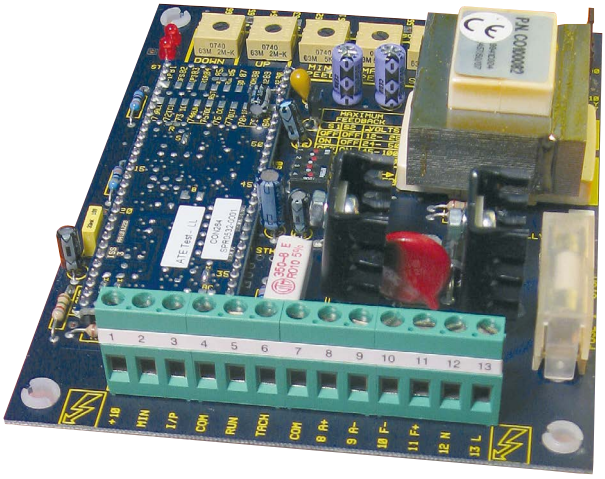
0.55KW / 0.75HP

DESCRIPTION 400 / 400i

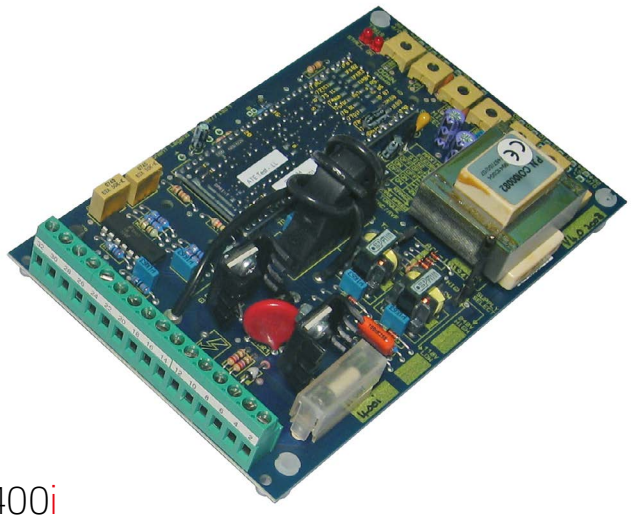
For motors rated up to 4 Amps these are the first of an extensive range of models featuring the Sprint micro analog processor.

The micro analog processor provides many user benefits normally only seen in expensive "high end" products. This philosophy allows for cost saving solutions by meeting the users exact requirements and enhancing process performance.

As with all Sprint Electric products quality and reliability is a paramount part of the design process.



400



400i

International dual voltage supply compatibility

Switch selectable Tach or Armature voltage feedback

Integral AC supply fuse

MODEL COMPARISON

MODEL	AC SUPPLY RANGE	TYPICAL ARMATURE VOLTAGE	MAX CONTINUOUS ARMATURE CURRENT	NOMINAL POWER
400	100 to 130V	90V	4A	0.25KW (0.38HP)
	200 to 264V	180V	4A	0.55KW (0.75HP)
400i	100 to 130V	90V	4A	0.25KW (0.38HP)
	200 to 264V	180V	4A	0.55KW (0.75HP)

DIMENSIONS 400

H	130 mm
W	100 mm
D	40 mm

400i

H	160 mm
W	100 mm
D	50 mm

See parts list at back for low voltage supply options and fuses

PRODUCT NAME

400i

Fully Isolated

0.55KW / 0.75HP

SPECIFICATION 400 / 400i

Control action:	Dual Loop Proportional + Integral
Speed regulation:	0.1% Tachogenerator, 2% Armature Voltage
Armature:	4 Amps, continuous 200v max
Overload protection:	Extra 50% peak torque for 30 secs prior to stall trip operation
Field output:	0.5 Amps at 0.9 x AC supply voltage
Customer presets:	Max speed: 12v-200v full scale feedback Min speed 0-30% of max speed Up ramp (Acceleration) 1-30 secs Down ramp (Deceleration) 1-30 secs Stability IR comp Max Armature current 0-100%
Switches:	Feedback voltage - 4 ranges Torque or speed mode Tachogenerator or armature voltage feedback
Inputs:	Speed Torque Auxiliary speed input Auxiliary inverted speed input for trims etc. Run command Tachogenerator 4-20mA or 0-20mA Pushbutton stop/start input
Outputs:	Speed Current Setpoint ramp Total demand +/- 12v/-24v rails Zero Speed relay driver Stall relay driver
400	NON ISOLATED control electronics for single shaft applications
400i	FULLY ISOLATED control electronics allows interfacing with other systems

Refer to features chart for further details or download product manual for full specification.

400/400i KEY FEATURES

Output signals for easy display of motor speed and load

Switch selectable feedback calibration - no component changes

Precision tach rectifier

Zero speed signal output

Motor overload output

Remote stop/start input

User adjustable:
- Acceleration
- Deceleration
- Max motor speed
- Min motor speed
- Max motor current
- Stability
- IR comp

Adjustable IR compensation for improved AVF speed regulation

Adjustable stability control for optimum motor response

Easily interfaced with armature reversing module

800/1200 KEY FEATURES

800 controller for DC motors rated up to 8 Amps

1200 controller for DC motors rated up to 12 Amps

International dual voltage supply compatibility

Single Quadrant operation

Extra 50% peak torque for rapid acceleration or shock loads

User adjustable:
- Acceleration
- Deceleration
- Max motor speed
- Min motor speed
- IR comp
- Stability
- Max motor current

Torque control input for basic winding or tension control, with overspeed limiting

Many additional input and output signals

Switch selectable Tach or armature voltage feedback

4-20mA and 0-20mA loop input option as standard

Easily interfaced with armature reversing module

PRODUCT NAME

800/1200

Non Isolated

800
1.1kW / 1.5HP

1200
1.8kW / 2.0HP

DESCRIPTION

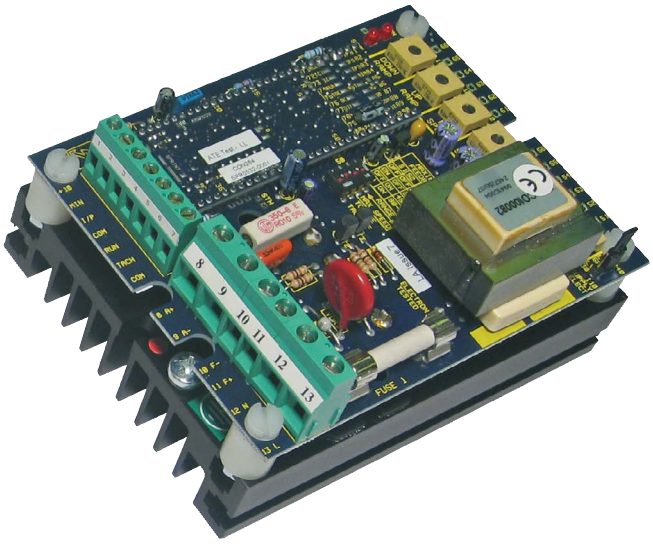
Two models available in 8 Amp and 12 Amp versions allow an easy upgrade path for those applications requiring extra power.

Both models feature the Sprint Electric micro analog processor module providing all the extra features normally associated with expensive "high end" products.

Compact design results in savings in panel space and hence costs.

Robust screw terminals reflect the overall quality and reliability, with overall performance meeting even the most arduous of applications.

Careful design with switch selection of key functions make the 800 and 1200 controllers quick and easy to install.



MODEL COMPARISON

MODEL	AC SUPPLY RANGE	TYPICAL ARMATURE VOLTAGE	MAX CONTINUOUS ARMATURE CURRENT	NOMINAL POWER
800	100 to 130V	90V	8A	0.55kW (0.75HP)
	200 to 264V	180V	8A	1.1kW (1.5HP)
1200	100 to 130V	90V	12A	0.9kW (1.0HP)
	200 to 264V	180V	12A	2.0kW (2.0HP)

DIMENSIONS

H	130 mm
W	100 mm
D	70 mm

See parts list at back for low voltage supply options and fuses.

PRODUCT NAME

800/1200

Non Isolated

800
1.1KW / 1.5HP

1200
1.8KW / 2.0HP

SPECIFICATION

Control action:	Dual Loop Proportional + Integral
Speed regulation:	0.1% Tachogenerator 2% Armature Voltage
Armature:	800, 8 Amps 1200, 12 Amps continuous 200v max
Overload protection:	Extra 50% peak torque for 30 secs prior to stall trip operation
Field output:	0.5 Amps at 0.9 x AC supply voltage
Customer presets:	Max speed: 12v-200v full scale feedback Min speed 0-30% of max speed Up ramp (Acceleration) 1-30 secs Down ramp (Deceleration) 1-30 secs Stability IR comp Max Armature current 0-100%
Switches:	Feedback voltage - 4 ranges Torque or speed mode Tachogenerator or Armature Voltage feedback
Inputs:	Speed Torque Auxiliary speed input Auxiliary inverted speed input for trims etc. Run command Tachogenerator 4-20mA or 0-20mA Pushbutton stop/start input
Outputs:	Speed Current Setpoint ramp +/- 12v/-24v rails Zero Speed relay driver Stall relay driver

Refer to features chart for further details or download product manual for full specification.

800/1200 KEY FEATURES

Adjustable Stability control for optimum motor response

Integral AC supply fuse

Ultra stable potentiometer reference for optimum long term speed and torque stability

Output signals for easy display of motor speed and load

Zero reference interlock facility

Adjustable IR compensation for improved AVF speed regulation

Switch selectable feedback calibration - no component changes

Precision tach rectifier

Zero speed signal output

Motor overload output

Identical footprint for 8 or 12 Amp output

Remote stop/start input

Features Sprint Electric micro analog processor

Pushbutton input for electronic control of motor stop/start

Compact size, saves panel space and makes for easy retrofitting

1600i/3200i KEY FEATURES

For DC motors up to 16 Amps

Fully isolated control electronics

On-board relay indicates zero speed and/or motor overload

Features Sprint Electric micro analog processor

Numerous inputs and outputs for complex system applications

PRODUCT NAME

1600i/3200i

Fully Isolated

1600i
2.2kw

3200i
2.2kw to 11.0kw

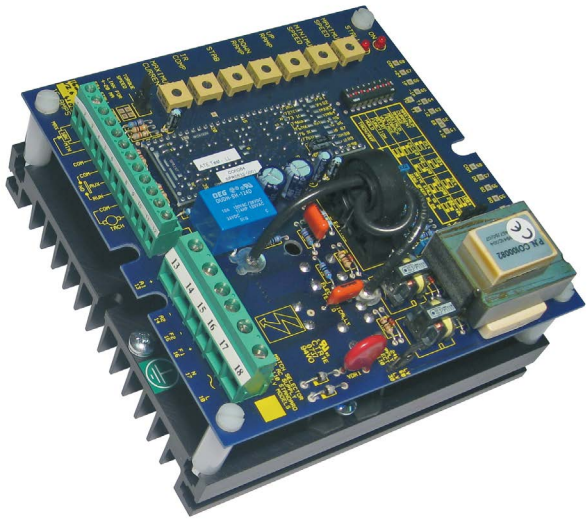
DESCRIPTION

Designed to give the customer the choice.

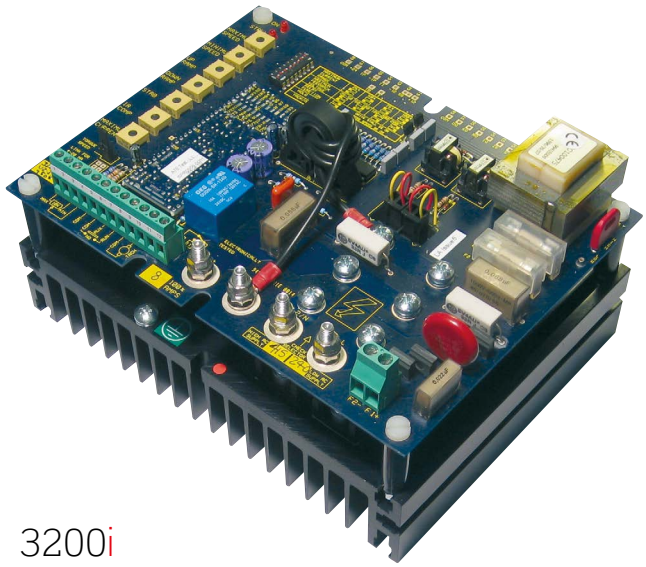
The 1600i includes an extensive specification with quality, value for money and reliability assured.

At a full 2.2kw output capability this compact design is easily integrated and provides unparalleled performance.

For even higher powers and AC supply voltages. The 3200i is available up to 48 Amps.



1600i



3200i

Extra 50% peak torque for rapid acceleration or shock loads

User adjustable:
- Acceleration
- Deceleration
- Max motor speed
- Min motor speed
- IR comp
- Stability
- Max motor current

Switch selectable power up inhibit

MODEL COMPARISON

MODEL	AC SUPPLY RANGE	TYPICAL ARMATURE VOLTAGE	MAX CONTINUOUS ARMATURE CURRENT	NOMINAL POWER
1600i	100 to 130v	90v	16A	1.1kw (1.5hp)
	200 to 264v	180v	16A	2.2kw (3hp)
3200i/8	200 to 264v	180v	8A	1.1kw (1.5hp)
	360 to 440v	320v	8A	2.2kw (3hp)
3200i/16	200 to 264v	180v	16A	2.2kw (3hp)
	360 to 440v	320v	16A	4.0kw (5.3hp)
3200i/32	200 to 264v	180v	32A	4.5kw (6.0hp)
	360 to 440v	320v	32A	7.5kw (10.0hp)
3200i/48	200 to 264v	180v	48A	7.0kw (10.0hp)
	360 to 440v	320v	48A	11.0kw (14.6hp)

DIMENSIONS 1600i

H	150 mm
W	150 mm
D	90 mm

3200i

H	150 mm
W	200 mm
D	110 mm

See parts list at back for low voltage supply options and fuses.

PRODUCT NAME

1600i/3200i

Fully Isolated

1600i
2.2kw

3200i
2.2kw to 11.0kw

SPECIFICATION

Control action:	Dual loop Proportional + Integral
Speed regulation:	0.1% Tachogenerator 2% Armature voltage feedback
Armature:	1600i,16 Amps continuous 3200i, 32 Amps at 0.9 x AC supply voltage
Overload protection:	Extra 50% peak torque for 30 secs prior to stall trip operation
Field output:	1 Amp at 0.9 x AC supply voltage
Customer presets:	Max speed: 25v - 400v full scale feedback Min speed 0 to 30% of max speed Up ramp (Acceleration) 1-30 secs Down ramp (Deceleration) 1-30 secs Stability IR comp Max armature current 0-100%
Switches:	Maximum current - 4 ranges Feedback voltage - 4 ranges Relay function - zero speed and/or stall Power-up Inhibit Tach/AVF selection
Inputs:	Speed Torque 4-20mA and 0-20mA Auxiliary speed inputs +ve and -ve Drive Run Tachogenerator Pushbutton stop/start
Outputs:	Speed Current Setpoint Ramp Total Demand Zero speed and stall relay driver +/-12v, +/- 24v rails
Relay:	Volt free change over contacts for zero speed and/or stall
Other features:	Overspeed limit Over torque limit Inverse time overload 50% stall threshold Phase angle clamp Precision Reference Precision tach rectifier

Refer to features chart for further details or download product manual for full specification.

1600i/3200i KEY FEATURES

Switch selectable feedback calibration - no component changes

Switched maximum current ranges for easy matching to motor current rating

Switch selectable drive relay functions

Ultra stable potentiometer reference for optimum long term speed and torque stability

Adjustable Stability control for optimum motor response

Switch selectable Tach or armature voltage feedback

Torque control input for basic winding or tension control, with overspeed limiting

International dual voltage supply compatibility

4-20mA and 0-20mA loop input option as standard

Output signals for easy display of motor speed and load

Compact size, saves panel space and makes for easy retrofitting

Zero reference interlock facility

Single Quadrant operation

Adjustable IR compensation for improved AVF speed regulation

Precision tach rectifier

3600XRi KEY FEATURES

Four Quadrant forward, reverse and braking operation

Five current outputs
- 4 Amp
- 8 Amp
- 16 Amp
- 32 Amp
- 36 Amp

Extra 50% peak torque for rapid acceleration or shock load

Fully regenerative - no braking energy dissipated as waste heat

Isolated control electronics for easy connection to other drives/equipment

Extremely compact size, saves panel space and makes for easy retrofitting

User adjustable presets for:
- Forward acceleration
- Reverse acceleration
- Forward deceleration
- Reverse deceleration
- Max motor speed
- Min motor speed
- Motor current limit
- Brake current limit
- Forward current limit
- Reverse current limit
- Positive current limit
- Negative current limit
- IR comp
- Stability

4Q torque input

2Q torque input

Regen to zero input

PRODUCT NAME

3600XRi

Fully Isolated

0.55kw to 9.5kw

DESCRIPTION

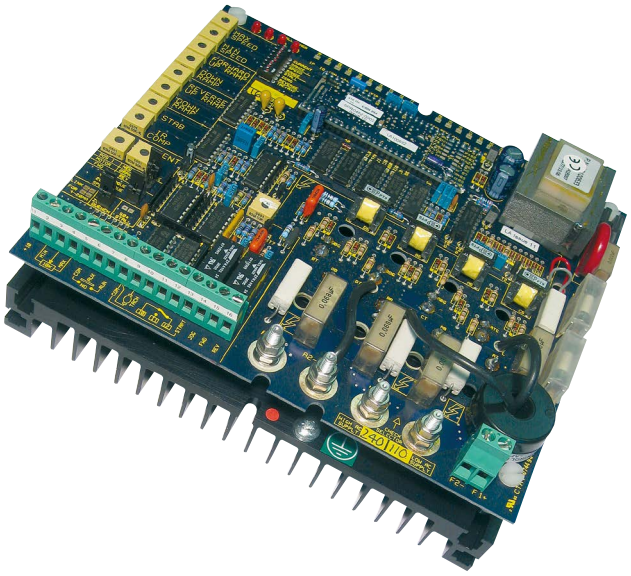
A four quadrant regenerative drive providing motoring and braking in both directions of rotation.

The regenerative ability is fully rated on a continuous basis with braking energy efficiently returned to the AC supply.

This feature sets the 3600XRi apart from AC inverter or vector drives where wasted energy is dissipated in costly resistor banks.

The 3600XRi is designed to meet the most demanding of process line applications where both loads and speeds vary in each direction.

Quality and reliability are assured by the use of advanced manufacturing and testing technologies.



MODEL COMPARISON

MODEL	AC SUPPLY RANGE	TYPICAL ARMATURE VOLTAGE	MAX CONTINUOUS ARMATURE CURRENT	NOMINAL POWER
3600XRi/4/LN	100 to 130v 200 to 264v	90v 180v	4A	0.25kw (0.4hp) 0.55kw (0.75hp)
3600XRi/8/LN			8A	0.55kw (0.75hp) 1.1kw (1.5hp)
3600XRi/16/LN			16A	1.1kw (1.5hp) 2.2kw (3.0hp)
3600XRi/16/LL	200 to 264v 360 to 440v	180v 320v	16A	2.2kw (3.0hp) 4.0kw (5.3hp)
3600XRi/32/LL			32A	5.0kw (6.6hp) 7.5kw (10hp)
3600XRi/36/LL			36A	5.5kw (7hp) 9.5kw (12.6hp)

DIMENSIONS

H	175 mm
W	200 mm
D	70 mm 36 Amp model 90 mm

See parts list at back for low voltage supply options and fuses.

PRODUCT NAME

3600XRi

Fully Isolated

0.55kw to 9.5kw

SPECIFICATION

Control action:	Dual loop Proportional and Integral
Speed regulation:	0.1% Tachogenerator 2% Armature voltage feedback
Armature:	Six models: 4, 8, 16, 32 and 36 Amps continuous
Overload protection:	Extra 50% peak torque for 30 secs prior to stall trip operation
Field output:	2 Amps at 0.9 x AC supply voltage
Customer presets:	Max speed: 25v - 400v full Scale feedback Min speed 0 to 30% of max speed Up ramp (Acceleration) 1-30 secs Down ramp (Deceleration) 1-30 secs Independent up/down ramp adjustment for forward and reverse direction Stability IR comp Multi option current limit
Switches:	Maximum current - 4 ranges Feedback voltage - 4 ranges Relay function - zero speed and/or stall and/or overload Tach/AVF selection
Inputs:	Speed 2Q/4Q Torque Auxiliary speed inputs +ve and -ve 4-20mA and 0-20mA Drive run Tachogenerator Fast quench Pushbutton stop/start, fwd/rev Regen to zero Jog Direct speed
Outputs:	Speed Current (bipolar & rectified) Setpoint Ramp Total Demand Zero speed and stall relay driver Overload timer relay driver +/-12v, +/- 24v rails
Relay:	Volt free change over contacts for zero speed or stall
Other features:	Overspeed limit Over torque limit Inverse time overload 50% stall threshold Precision Reference Dual setpoint

Refer to features chart for further details or download product manual for full specification.

3600XRi KEY FEATURES

Features Sprint Electric micro analog processor

Direct pushbutton inputs for control of stop/start, direction and jog functions

Includes all the features of 1600i and 3200i

Relay output indicates motor shaft reversal

Relay output indicates motor load > 105%

Dual setpoint facility for alternate speed e.g. run and crawl toggled speed reference ideal for easy end of travel reversal

Switch selectable Tach or Armature voltage feedback

Switched maximum current ranges for easy matching to motor current rating

Ultra stable potentiometer reference for optimum long term speed and torque stability

International dual voltage supply compatibility

On-board relay indicates zero speed and/or motor overload

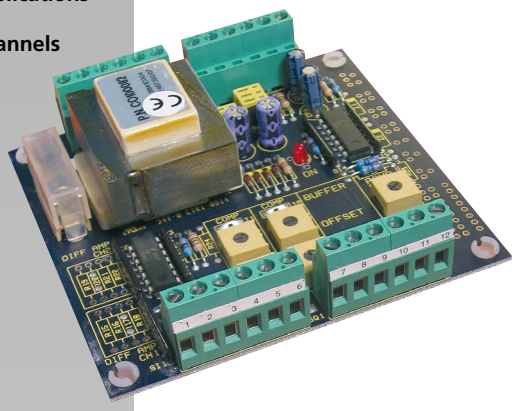
BUFFER

Versatile analog system signal blocks

Ideal for systems applications

Five independent channels

Mains powered



BUFFER CARD

The buffer card is a compact self-powered interface product for signal processing and amplification. The card has 5 independent channels with a large variety of uses, e.g multi setpoint systems, closed loop control, field weakening processor, signal buffering.

CHANNELS 1 AND 2. High accuracy differential amplifier with adjustable gain. Uses include inverting, non-inverting, amplification, attenuation, buffering, rectifying, filtering, load cell amplifier etc.

CHANNELS 3 AND 4. High accuracy summing amplifier with variable gain, voltage input and zero offset adjustment. Uses include summing, scaling, amplification, subtraction, clamping, comparator, integrator, buffering etc.

CHANNEL 5. Linear ramp with variable ramp rate and ramp reset input.

All channels are short circuit protected and can drive upto 10, 10K pots with + or - signals. Also included is a precision power supply with +/-12v and +/-24v outputs, the unit can be powered from 110/240v AC supplies.

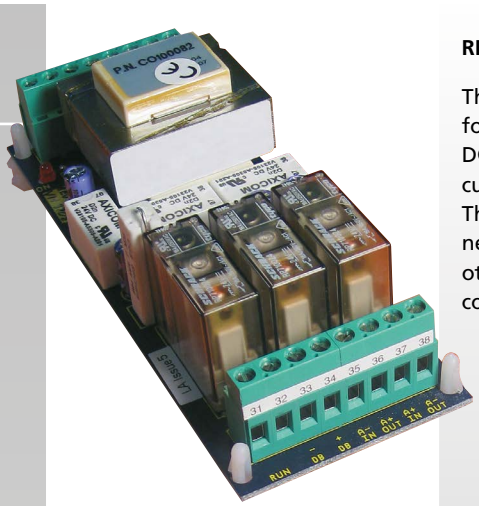
REV UNIT

Designed for use with Sprint 400, 800 and 1200 drives

Robust design for safe reversal from any speed

No additional contactors or relays required

Suitable for any armature voltage up to 180v DC



REVERSING UNIT

This compact unit allows for the safe reversal of DC Motors with armature currents up to 12 Amps. The card possesses all the necessary logic and unlike other available units, all the contactors for reversing and dynamic braking are integral to the unit.

For currents higher than 12 Amps the unit is easily interface with external power contactors.

DPM

Available in two versions 3½ and 4½ digit

Specifically designed for use with drives

Quick and easy to calibrate in any engineering units

Mains powered

Simple slide-in legend facility for process variable

DIGITAL PANEL METERS

A range of digital panel meters contained within a DIN size case.

DPM35S. Three and a half digit panel meter. Features include slide in legend, plug-in screw terminals, display hold, 110/240v AC supply. Display is 14mm red LED with range +/- 1999 and selectable decimal point. The unit is scaleable in engineering units via customer accessible multiturn preset. Any full scale voltage from +/-5v to +/-200v can be adjusted to read any display number. Customer accessible offset control. Full ratio facility with automatic "out of limits", 4-20mA loop input facility. Range adjustment to 100mV and an AC voltage measurement input facility.

DPM35SD. A four and a half digit version of the DPM35S with display reading to +/-19990. All other features included.

PRODUCT NAME

ENCLOSURES

Non Isolated

0.37kw to 1.8kw

DESCRIPTION

Seven drive models available in high quality aluminium enclosures.

From 0.37kw to 1.8kw in either forward (E) only or reversing (ER) variants. Features include IP40 protection, Mains on/off switch, dual voltage supply, fully fused, zero speed interlocked reversing, dynamic braking, set speed potentiometer with graduated scale.

These enclosures contain the Sprint Electric 370, 400, 800 and 1200 controllers already renowned for their extensive specification and versatility.

SPECIFICATION

Controls:

- On/Off AC supply rocker switch
- Set speed potentiometer
- AC supply fuse
- 400ER, 800ER, 1200ER: toggle switch for forward, stop and reverse

370E/400E/800E/1200E

400ER/800ER/1200ER

MODEL COMPARISON

MODEL	AC SUPPLY RANGE	TYPICAL ARMATURE VOLTAGE	MAX CONTINUOUS ARMATURE CURRENT	NOMINAL POWER
370E	110/240v	90/180v	3.7A	0.25kw/0.55kw
400E			4A	0.25kw/0.55kw
800E			8A	0.55kw/1.1kw
1200E			12A	0.9kw/1.8kw
400ER			4A	0.25kw/0.55kw
800ER			8A	0.55kw/1.1kw
1200ER			12A	0.9kw/1.8kw

DIMENSIONS

H	250 mm
W	175 mm
D	100 mm

See parts list at back for low voltage supply options and fuses.
Refer to features chart for further details or download product manual for full specification.

200XLV KEY FEATURES

- **Motors and brakes in both directions**
- **Ideal for small DC motors and linear actuators up to 48v**
- **Fast response**
- **Panel or DIN rail mounting**
- **+/- 2A output, with 150% overload capability**
- **Single polarity supply with wide supply voltage range up to 48v**
- **Suitable for battery or standard unregulated DC supply**
- **Precision references for ultra stable operation**
- **+ve and -ve differential speed inputs**
- **Built in thermal protection with resettable trip**
- **Current limit protection**
- **3 term PID control action**
- **Armature or tach feedback operation**
- **Position control facility**
- **Setpoint ramp facility**
- **Plug on screw terminals for easy wiring**
- **Adjustable IR compensation for improved AVF speed regulation**
- **CE marked with excellent EMC compliance**
- **Comprehensive manual with multi-applications data**
- **High bandwidth with superbly linear output**
- **Accepts bipolar or unipolar command inputs**
- **Direction control by switch or centre zero pot**
- **Easily interfaced for limit switch operation**
- **Ideal for low inductance, printed motors**

PRODUCT NAME

200XLV

DESCRIPTION

The 200XLV is a fast response, linear DC motor speed controller for driving small low voltage brushed DC motors.

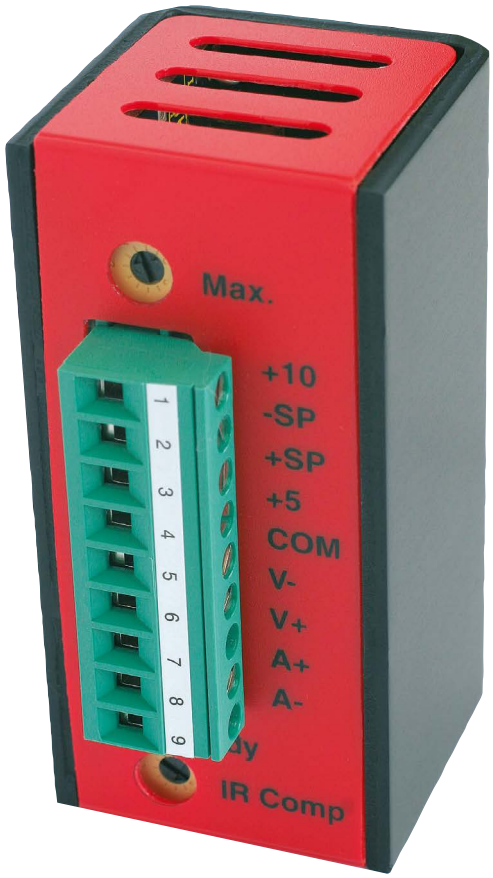
Ideal for positioning and servo type applications.

The 200XLV will motor and brake in both directions of rotation and operates from a single polarity supply, either battery or unregulated DC Source.

Excellent performance allows the 200XLV to meet the most demanding of applications. The extensive specification includes many standard features not normally associated with a drive the size and cost of the 200XLV.

The compact design has plug in screw terminals and provision for back panel or DIN rail mounting.

The 200XLV is fully EMC compliant and CE marked.



Due to its linear control circuits and linear output stage, this drive is ideal for applications with other highly sensitive low immunity circuits.

PRODUCT NAME

400/800/1200XLV

DESCRIPTION

Fast response, linear DC Drives designed for driving small low voltage brushed DC motors.

Ideal for servo-type applications requiring excellent speed control offering either speed or torque (current) control modes.

Three compact models available in 4/8/12A versions giving excellent performance and value. The high specification includes many standard features not normally associated with drives of comparable size and cost.

A fast acting current control loop allows precise speed control of small permanent magnet DC motors. The Drives allow for bi – or unipolar 0 – 10V speed / current reference. For highly dynamic applications, a shaft- mounted DC tacho-generator is recommended for speed feedback but in less demanding applications, armature voltage feedback (Avf) can be used. The 400/800/1200XLV will motor and brake in both directions of rotation and operate from a single polarity supply, either battery or unregulated DC Source from 12 – 48VDC.

The drives are easy to install with plug in screw terminals for DIN rail mounting and are fully EMC compliant and CE marked.

MODEL COMPARISON

MODEL	SUPPLY VOLTAGE	OUTPUT	CURRENT
400XLV	12vdc 24vdc 48vdc	12vdc 24vdc 48vdc	4A
800XLV	12vdc 24vdc 48vdc	12vdc 24vdc 48vdc	8A
1200XLV	12vdc 24vdc 48vdc	12vdc 24vdc 48vdc	12A

DIMENSIONS
400XLV & 800XLV

H	105 mm
W	60 mm
D	120 mm

DIMENSIONS 1200XLV

H	105 mm
W	70 mm
D	120 mm

400XLV KEY FEATURES

- **Motors and brakes in both directions**
- **Ideal for small DC motors and linear actuators up to 48v**
- **Fast response**
- **DIN rail mounting (Panel/DIN rail mounting options for XLV)**
- **4/8/12A output, with 200% overload for one second with inverse time reduction to 100% in 5 seconds**
- **Single polarity supply with wide supply voltage range up to 48v**
- **Suitable for battery or standard unregulated DC supply**
- **Precision references for ultra stable operation**
- **Current limit protection**
- **Armature or tach feedback operation**
- **Plug on screw terminals for easy wiring**
- **Adjustable IR compensation for improved AVF speed regulation**
- **CE marked with excellent EMC compliance**
- **Comprehensive manual with multi-applications data**
- **High bandwidth with superbly linear output**
- **Accepts bipolar or unipolar command inputs**
- **Direction control by switch or centre zero pot**
- **Easily interfaced for limit switch operation**
- **Ideal for low inductance, printed motors**

PRODUCT NAME	PART	PART NO.

SINGLE PHASE 1Q DC CONTROLLERS - NON ISOLATED

340

0.55KW 3.4A 240/110Vac 1Q Non Isolated

Controller	340
30/60V AC supply input version	340LV60
Semiconductor Fuse 6 x 32	CH00620A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

680

0.75KW 6.8A 240/110Vac 1Q Non Isolated

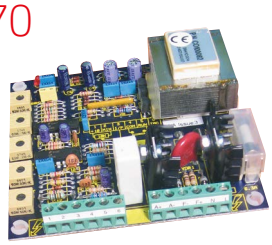
Controller	680
30/60V AC supply input version	680LV60
Semiconductor Fuse 6 x 32	CH00620A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

1220

1.8KW 12.2A 240/110Vac 1Q Non Isolated

Controller	1220
30/60V AC supply input version	1220LV60
Semiconductor Fuse 6 x 32	CH00620A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

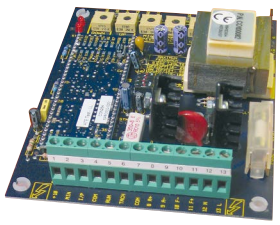
370



0.55KW 3.7A 240/110Vac 1Q Non Isolated

Controller	370
30/60V AC supply input version	370LV60
Semiconductor Fuse 6 x 32	CH00608A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

400



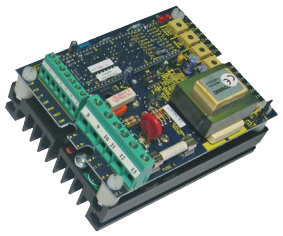
0.55KW 4A 240/110Vac 1Q Non Isolated

Controller	400
30/60V AC supply input version	400LV60
Semiconductor Fuse 6 x 32	CH00608A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

Please refer to website for further information or product technical manual for full specification.

PRODUCT NAME	PART	PART NO.

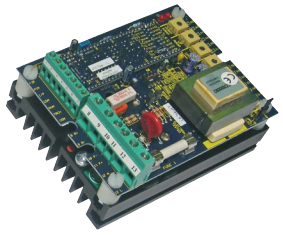
800



1.1KW 8A 240/110Vac 1Q Non Isolated

Controller	800
30/60V AC supply input version	800LV60
Semiconductor Fuse 6 x 32	CH00612A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

1200



1.8KW 12A 240/110Vac 1Q Non Isolated

Controller	1200
30/60V AC supply input version	1200LV60
Semiconductor Fuse 6 x 32	CH00620A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

KW ratings shown are at highest supply voltage.

SINGLE PHASE 1Q DC CONTROLLERS - ISOLATED

340i

0.55KW 3.4A 240/110Vac 1Q Isolated

Controller	340i
30/60V AC supply input version	340iLV60
Semiconductor Fuse 6 x 32	CH00620A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

680i

0.75KW 6.8A 240/110Vac 1Q Isolated

Controller	680i
30/60V AC supply input version	680iLV60
Semiconductor Fuse 6 x 32	CH00620A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

1220i

1.8KW 12.2A 240/110Vac 1Q Isolated

Controller	1220i
30/60V AC supply input version	1220iLV60
Semiconductor Fuse 6 x 32	CH00620A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

Please refer to website for further information or product technical manual for full specification.

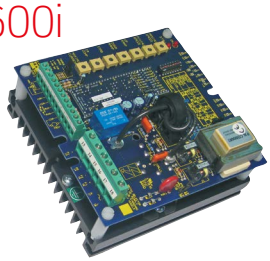
PRODUCT NAME	PART	PART NO.

400i

0.55KW 4A 240/110Vac 1Q Isolated

Controller	400i
30/60V AC supply input version	400iLV60
Semiconductor Fuse 6 x 32	CH00608A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

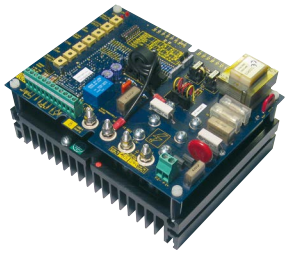
1600i



2.2KW 16A 240/110Vac 1Q Isolated

Controller	1600i
30/60V AC supply input version	1600iLV60
Semiconductor Fuse 14 x 51	CH00730A
Fuseholder 14 x 51	CP102053
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

3200i/8

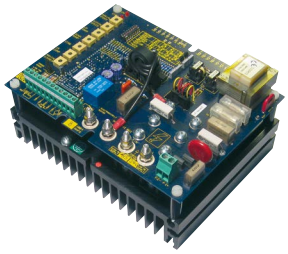


2.2KW 8A 415/240Vac 1Q Isolated

Controller	3200i/8
30/60V AC supply input version	3200i/8LV60
Semiconductor Fuse 6 x 32*	CH00612A
Fuseholder 6 x 32*	CP102071
DIN Rail Clip for Fuseholder*	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (240V operation, if required)	FRLN16
Filter (415V operation, if required)	FRLL16

* Note: Two fuses & holders etc. required for 415V Line to Line operation.

3200i/16

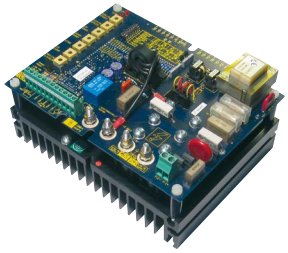


4KW 16A 415/240Vac 1Q Isolated

Controller	3200i/16
30/60V AC supply input version	3200i/16LV60
Semiconductor Fuse 14 x 51*	CH00730A
Fuseholder 14 x 51*	CP102053
Pot kit including graduated dial & knob	POTKIT
Filter (240V operation, if required)	FRLN16
Filter (415V operation, if required)	FRLL16

* Note: Two fuses & holders required for 415V Line to Line operation.

3200i/32



7.5KW 32A 415/240Vac 1Q Isolated

Controller	3200i/32
30/60V AC supply input version	3200i/32LV60
Semiconductor Fuse Size 000*	CH00850A
Fuseholder Size 000*	CP102054
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLL36

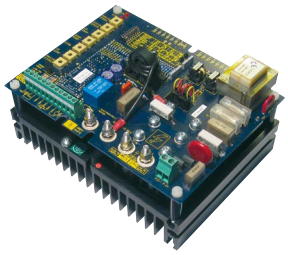
* Note: Two fuses & holders required for 415V Line to Line operation.

Please refer to website for further information or product technical manual for full specification.

PRODUCT NAME	PART	PART NO.

3200i/48

11kW 48A 415/240Vac 1Q Isolated



Controller	3200i/48
30/60V AC supply input version	3200i/48LV60
Semiconductor Fuse Size 000*	CH00880A
Fuseholder Size 000*	CP102054
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLL50

* Note: Two fuses & holders required for 415V Line to Line operation.

SINGLE PHASE 4Q DC CONTROLLERS - ISOLATED, FULLY REGENERATIVE

340XRi

0.55kW 3.4A 240/110Vac 4Q Regen Isolated

Controller	340XRi
30/60V AC supply input version	340XRiLV60
Semiconductor Fuse 6 x 32	CH00620A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

680XRi

0.75KW 6.8A 240/110Vac 4Q Regen Isolated

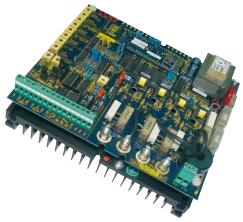
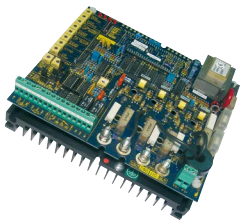
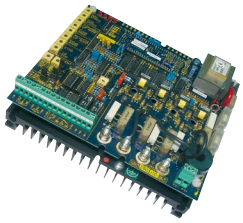
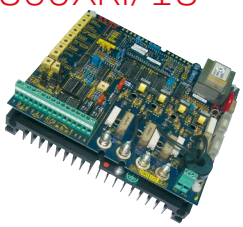
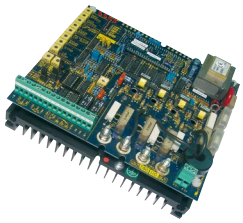
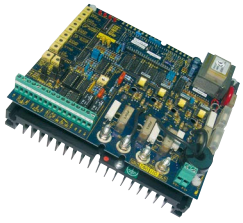
Controller	680XRi
30/60V AC supply input version	680XRiLV60
Semiconductor Fuse 6 x 32	CH00620A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

1220XRi

1.8KW 12.2A 240/110Vac 4Q Regen Isolated

Controller	1220XRi
30/60V AC supply input version	1220XRiLV60
Semiconductor Fuse 6 x 32	CH00620A
Fuseholder 6 x 32	CP102071
DIN Rail Clip for Fuseholder	FE101969
Pot kit including graduated dial & knob	POTKIT
Filter (if required)	FRLN16

Please refer to website for further information or product technical manual for full specification.

PRODUCT NAME	PART	PART NO.
3600XRi/4	0.55KW 4A 240/110Vac 4Q Regen Isolated	
	Controller	3600XRi/4/LN
	30/60V AC supply input version	3600XRi/4/LV60
	Filter	FRLN16
	Semiconductor Fuse 6 x 32	CH00608A
	Fuseholder 6 x 32	CP102071
	DIN Rail Clip for Fuseholder	FE101969
	Pot kit including graduated dial & knob	POTKIT
3600XRi/8	1.1KW 8A 240/110Vac 4Q Regen Isolated	
	Controller	3600XRi/8/LN
	30/60V AC supply input version	3600XRi/8/LV60
	Filter	FRLN16
	Semiconductor Fuse 6 x 32	CH00620A
	Fuseholder 6 x 32	CP102071
	DIN Rail Clip for Fuseholder	FE101969
	Pot kit including graduated dial & knob	POTKIT
3600XRi/16	2.2KW 16A 240/110Vac 4Q Regen Isolated	
	Controller	3600XRi/16/LN
	30/60V AC supply input version	3600XRi/16/LV60
	Filter	FRLN16
	Semiconductor Fuse 14 x 51	CH00730A
	Fuseholder 14 x 51	CP102053
	Pot kit including graduated dial & knob	POTKIT
3600XRi/16	4KW 16A 415/240Vac 4Q Regen Isolated	
	Controller	3600XRi/16/LL
	Filter	FRLL16
	Semiconductor Fuse 14 x 51*	CH00730A
	Fuseholder 14 x 51*	CP102053
	Pot kit including graduated dial & knob	POTKIT
	* Note: Two fuses & holders required for 415V Line to Line operation.	
3600XRi/32	7.5KW 32A 415/240Vac 4Q Regen Isolated	
	Controller	3600XRi/32/LL
	30/60V AC supply input version	3600XRi/32/LV60
	Filter	FRLL36
	Semiconductor Fuse Size 000*	CH00850A
	Fuseholder Size 000*	CP102054
	Pot kit including graduated dial & knob	POTKIT
	* Note: Two fuses & holders required for 415V Line to Line operation.	
3600XRi/36	9.5KW 36A 415/240Vac 4Q Regen Isolated	
	Controller	3600XRi/36/LL
	30/60V AC supply input version	3600XRi/36/LV60
	Filter	FRLL36
	Semiconductor Fuse Size 000*	CH00850A
	Fuseholder Size 000*	CP102054
	Pot kit including graduated dial & knob	POTKIT
	* Note: Two fuses & holders required for 415V Line to Line operation.	

KW ratings shown are at high supply voltage.

Please refer to website for further information or product technical manual for full specification.

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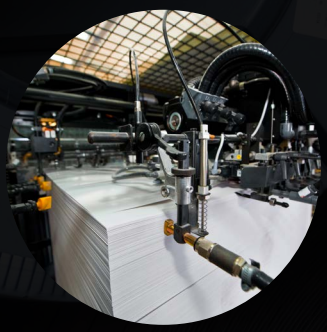

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