

590+ DC Drive Integrator Series

Born from over 30 years experience in designing and applying DC drive technology comes the 590+ range. DC drives that more than meet the requirements of all applications, from basic single motor installations through to the most demanding multi-motor systems.

The 590+ introduces a new concept to the world of DC Drives - the "DRV" package. DRV is a single integrated module that includes all the associated power components within the package. This innovative approach radically reduces panel space, wiring time and cost. The DRV concept is unique, and epitomizes the innovative design that comes from the experience gained from thousands of successful applications across a diverse range of industries.

INTEGRATOR SERIES.....The INTEGRATOR series is a single family of variable speed drives that includes both AC (690+range) and DC (590+ range) drive technologies. One family that provides the benefits of common programming, set-up and communications - one family that accommodates all your variable speed drive requirements.



The 590+ further confirms SSD Drives position as the market leader in DC drive technology.



INTERFACE OPTIONS.....Analog/ Digital Control

Whatever the complexity of your control scheme, the 590+ has the interface to suit. As standard there's enough analog and digital I/O for the most complex applications. Alternatively, add the relevant 'technology box' for immediate access to serial communications and Fieldbus networks. The 590+ has been designed to fit seamlessly, and without compromise, into any control environment.

- 5 Analog Inputs (12bit + sign)
- 3 Analog Outputs
- 9 Digital Inputs
- 3 Digital Outputs

.....Serial Communications and Fieldbus Options

- PROFIBUS-DP
- CANOPEN
- MODBUS PLUS
- RS422/RS485
- CONTROLNET
- EI BISOYNCH
- LINK
- DEVICENET
- MODBUS RTU
- ETHERNET

.....LINK - High Speed Drives Communications

LINK is SSD Drives' advanced fiber optic network for multi-drive process control systems. It allows distributed control elements including drives, operator stations and I/O modules to be interconnected into highly efficient cost effective networks. Being fiber optic based, it provides ultra high speed (3Mbaud) error free communications between each node of the system. Gateways to the principle Fieldbus protocols enable LINK to be seamlessly integrated into wider networks.

.....FEEDBACK OPTIONS

The 590+ has a range of interface options which are compatible with the most common feedback devices. Armature voltage feedback is standard without the need for any interface option.

- Analog Tachometer
- Encoder
- Plastic Fiber Microtach
- Glass Fiber Microtach

.....MAN MACHINE INTERFACE

The MMI has been ergonomically designed to allow quick and easy access to all functions of the drive via a bright easy to read backlit display and tactile keypad. It provides local control of start/stop, speed demand and rotation direction to greatly assist with machine commissioning.

- Multi-lingual alpha-numeric display
- Customized parameter values and legends
- Local or remote mounting
- Local control of start/stop, speed and direction
- Quick set-up menu



DRV - A NEW CONCEPT IN DC DRIVE TECHNOLOGY

The DRV version includes all the peripheral power components associated with a DC drive system, integrally fitted within the footprint area of the drive.



**TRADITIONAL
DC DRIVE SECTION**

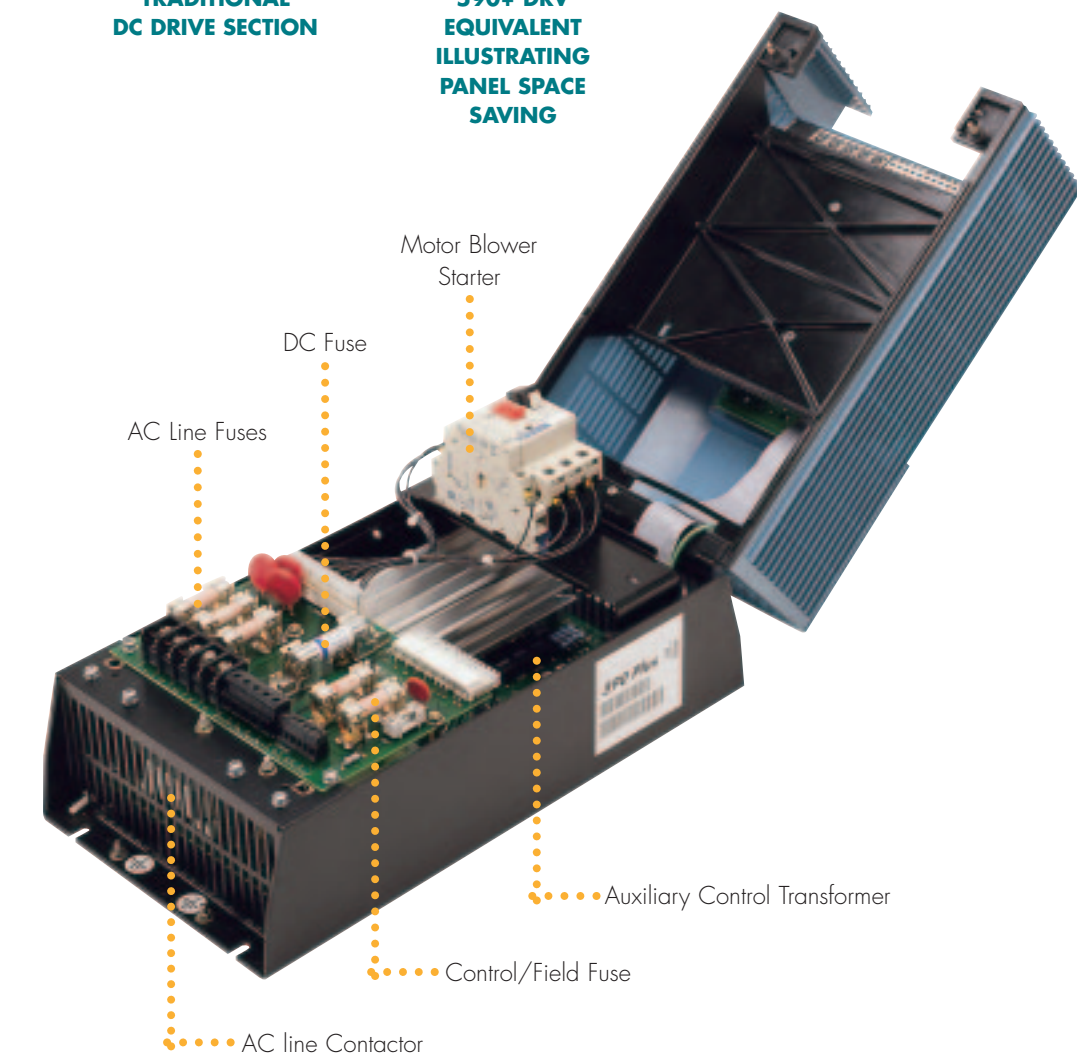
**590+ DRV
EQUIVALENT
ILLUSTRATING
PANEL SPACE
SAVING**

DRV includes

- AC line contactor
- AC line fuses
- DC fuse (regenerative version)
- Control/field fuses
- Motor blower starter (option)
- Auxiliary control transformer (option)

Saving You

- Panel space
- Component mounting and wiring
- Component sourcing
- Time and cost



590+ DESIGNED FOR SYSTEMS

The 590+ is the ultimate system drive, designed to meet the exacting demands of the most complex and sophisticated multi-drive applications across a diverse range of industries. All the following functions are available as standard without the need for any additional hardware.

- Function Block Programming
- Software Configurable I/O
- High Resolution (12 bit) Analog Inputs

- Winder Control
 - Open loop with inertia compensation
 - Closed loop speed or current
 - Loadcell/dancer process PID

- Math Functions
- Logic Functions
- Controlled Field Supply
- 'S' Ramp and Digital Ramp

590+ DESIGNED FOR A WORLD MARKET

The 590+ is available with full application and service support in over fifty countries worldwide. So wherever you are, you can be confident of full back up and support.

- Support in over 50 countries
- Input voltage ranges from 220-690V
- CE marked
- UL and c-UL listed
- 50/60Hz

SPECIFICATION

220 - 460 (±10%) Vac Supplies - Three Phase						
Part Number	Nominal Output (Hp)	DRV Output Current (Amps)		Controller Output Current (Amps)	Frame Size	
		230V Supply	460V Supply			
955+BR0007	3	7.5	15	-	1	
955+BR0020	10	20	35	-		
955+BR0030	15	30	55	-		
955+BR0040	20	40	70	-		
955+BR0050	25	50	90	-		
955+BR0060	30	60	110	-		
955+BR0075	40	75	125	-		
955+BR0100	50	100	165	-		
955+BR0125	60	125	206	-		
955+BR0150	75	150	246	-	270	3
955+BR0200-D4	100	200	360	-	380	
955+BR0250-D4	125	250	425	-	500	
955+BR0300-D4	150	300	490	-	725	4
955+BR0400-D4	200	400	700	-	830	
955+BR0500-D4	250	500	815	-		
955+BR0600-D5	-	600	1000	-		
955+BR0700-D5	-	700	1200	-	1580	5
955+BR0800-D5	-	800	1334	-		
955+BR0900-D5	-	900	1500	-		
955+BR0600	590+1050/500	-	600	1050	1050	7a (N or R)
955+BR0900	590+1450/500	-	900	1450	1450	
955+BR1000	590+2000/500	-	1000	1600	2000	7b (N or R)
955+BR1250	590+2400/500	-	1250	2000		
955+BR1500	590+2400/500	-	1500	2400	2400	

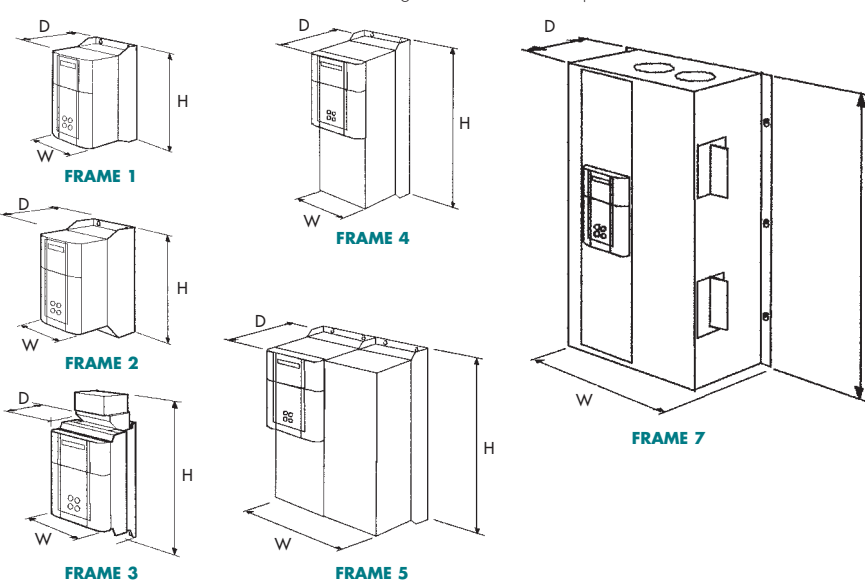
* Replace 'R' for regenerative with 'N' for non-regenerative;
 ** Replace 590+ for regenerative with 591+ for non-regenerative
 Consult factory for 575, 660, 690 VAC part numbers and higher HP ratings

DIMENSIONS

Frame Size	Controller			DRV		
	Height	Width	Depth	Height	Width	Depth
1	-	-	-	373 (14.7)	196 (7.7)	229 (9.0)
2	-	-	-	546 (21.5)	196 (7.7)	295 (11.6)
3	500 (19.7)	250 (9.8)	170 (6.7)	641 (25.25)	432 (17)	232 (9.13)
4	700 (27.6)	253 (10.0)	358 (14.2)	946.1 (37.75)	533.3 (21)	383.7 (15.11)
5	700 (27.6)	506 (20.0)	358 (14.2)	1378 (54.25)	965.1 (38)	469.2 (18.47)
7aN	955 (37.6)	851 (33.5)	417 (16.4)	1727.2 (68)	1524 (60)	406.4 (16)
7aR	1407 (55.4)	851 (33.5)	417 (16.4)	1727.2 (68)	1524 (60)	406.4 (16)
7bN	955 (37.6)	851 (33.5)	417 (16.4)	1727.2 (68)	1524 (60)	457.2 (18)
7bR	1407 (55.4)	851 (33.5)	417 (16.4)	1727.2 (68)	1524 (60)	457.2 (18)

Dimensions are in millimeters (inches) Ducting kit for cubicle roof external ventilation included for frame 4 and 5.

Frame 1-5 have integral cooling fan assemblies where required. Frame Size 7 has fan cooling assembly that can be cubicle roof mounted or drive mounted. Add +150mm (5.9") to overall height for drive mounted option.



POWER CONFIGURATION

Power Supply

- 220-500V (±10%) three phase;
- 500-690V (±10%) three phase > 675A

Armature Supply

- Four Quadrant, Regenerative (2 fully controlled, three phase thyristor bridges) or
- Two Quadrant, Nonregenerative (1 fully controlled, three phase thyristor bridge)

Field Supply (thyristor controlled)

- 4A for Frame 1
- 10A for Frames 2 and 3
- 30A for Frames 4 and 5
- 60A for Frame 7

OVERLOAD

- 200% for 10 seconds
- 150% for 30 Seconds

ENVIRONMENT

Ambient

- 045°C (32-113°F); 040°C (32-104°F) >246A;
- Derate 1% per °C to 55°C (131°F) max.

Altitude

- 500m (1640 ft.) ASL;
- Derate 1% per 200m (656 ft.) above 500m to 5000m (16400 ft.) max.

PROTECTION

- High Energy MOV's
- Inverse Time Overcurrent
- Speed Feedback Failure
- Heatsink Overtemperature
- Interline Snubber Network
- Standstill Logic
- Instantaneous Overcurrent
- Field Failure
- Motor Overtemperature
- Thyristor Trigger Failure
- Zero Speed Detection
- Stall Protection

INPUTS/OUTPUTS

Analog Inputs

- 5; 1 - Speed Demand Setpoint (±10V);
- 4 - User Configurable; (1 x 12 bit plus sign, 4 x 10 bit plus sign)

Analog Outputs

- 3; 1 - Armature Current Output (±10V or 0-10V);
- 2 - User Configurable (10 bit)

Digital Inputs

- 9; Program Stop/Coast Stop/External Trip/StartRun/5 - User Configurable (24V, max 15mA)

Digital Outputs

- 3; User Configurable (24V (max 30V) 100mA)

REFERENCE POWER SUPPLY OUTPUTS

- 24 VDC - Digital I/O supply total
- +10 VDC and -10 VDC - Analog supply

OPTIONAL EQUIPMENT

- 6901 Keypad (included)
- Communication Technology Box
ControlNet, DeviceNet, Profibus, Link, Ethernet, Modbus Plus Lanworks, Canopen Modbus/RS422/RS485/EIBisynch
- Speed Feedback Technology Box
Analog Tachometer (included)
Encoder Feedback

STANDARDS

- CE Marked to EN50178 (Safety, Low Voltage Directive).
- EN61800-3 (EMC)
- UL listed to US and Canadian safety standard UL508C (up to 675A)
- Overload UL/CUL for class 10
- North American safety standards pending >675A



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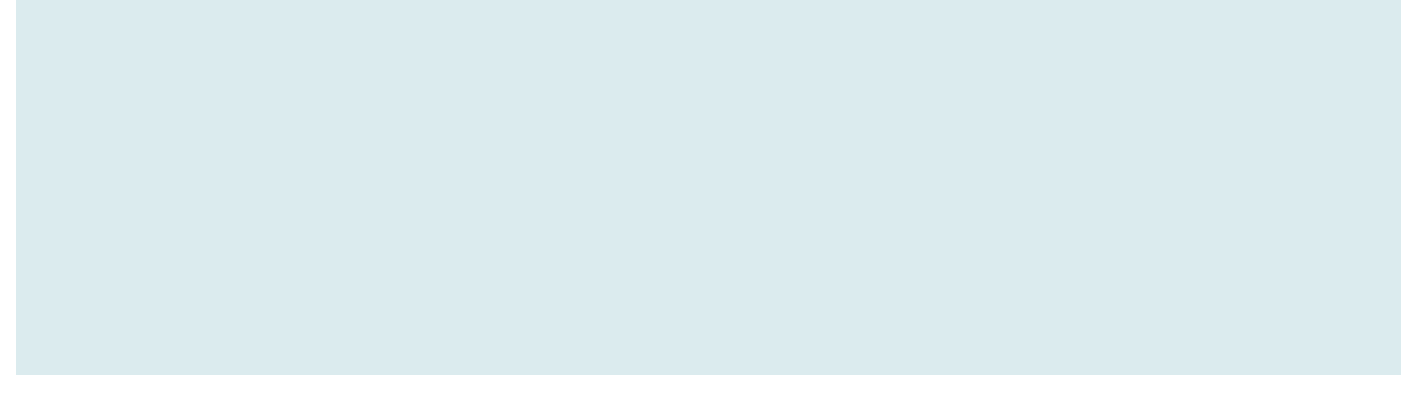
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www.SSDdrives.com

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DC590+ Integrator Series

DC DRIVES 1HP - 2000HP



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