

SP600 Options



The SP600 Product Family is easily modified with a full line of optional kits and accessories including communications, resistors, filters, OIMs, and cables.



Braking Resistor Kits - Low Energy

SP600 drives in frames A, B, C, D, B4, D4 and 2 include mounting provisions for low-energy braking resistors. Dependant upon the drive power rating, these resistors will provide momentary braking capacities of about 6 - 10%, enough to handle most simple deceleration needs as well as speed overshoot correction. Consider other braking options from the GV3000/SE section of this catalog should more braking capacity be required. Minimum braking resistances apply (see page D-41). Wattage depends on application.

200-240 VAC Braking Resistors			
Model Number	Frame	Brake Resistance	List
* 6SP2-DB1-A	A	62	\$156
* 6SP2-DB1-B	B, B4	62	156
* 6SP2-DB1-C	C	62	156
* 6SP2-DB1-D	D, D4	22	156

380-480 VAC Braking Resistors			
Model Number	Frame	Brake Resistance	List
* 6SP4-DB1-A	A	115	\$156
* 6SP4-DB1-B	B, B4	115	156
* 6SP4-DB1-C	C	115	156
* 6SP4-DB1-D	D, D4	62	156
* 6XX4-DB1-2	2	22	156

Communication Modules - Network Options

Network connectivity can be achieved by adding one of the options listed below:

Model Number	Description	List
* RECOMM-ENET	EtherNet/IP	\$494
* RECOMM-DNET	DeviceNet	326
* RECOMM-CNET	ControlNet	468
* RECOMM-PBUS	Profibus	494
* RECOMM-IBUS	Interbus-S	676
* RECOMM-485	RS485 DF1	307
* RECOMM-H485	P1, N2, or Modbus-RTU	540

CE & C-Tick External Mount EMC Compliance Filter Kits

SP600 drives are designed to meet Global Industry Standards, including those of Europe (CE) and Australia (C-Tick). EMC compliance for both conducted and radiated noise emissions can be met by following the table below and adding the recommended filter as designated.

Also be sure to follow recommended wiring practices for drives and motors as identified in our product manuals as well as those of each region.

CE EMC Filters		
Model Number	Description	List
* 6SP-MF1A	1 Phase, 240 VAC, 8A	\$146
* 6SP-MF3A	3 Phase, 200-460 VAC, 5 A	156

SP600 Frame	Filter
A	External only (see above)
B	Optional (internal by model number)
C	Standard (internal)
D	Standard (internal)
2	Standard (internal)
3	Standard (internal)
4	Standard (internal)
5	Standard (internal)
6	Standard (internal)

SP600 (6SP Series) Optional I/O Board		
Model Number	Description	List
* AK-M9-115VAC-1	115 V Input Card (6SP models only)	\$104

SP600 (6SB401 and 6SB501 Series) Optional I/O Boards		
Model Number	Description	List
* 6SB-024A	24 V Input Card (6SB models only)	\$450
* 6SB-115B	115 V Input Card (6SB models only)	450

* Normally carried in stock

DISCOUNT VS-1AC

V*S Utilities Configuration Software

This windows-based software package allows online configuration and monitoring of the SP600 AC drives. This software utility allows the user to upload, download, monitor and compare parameter values in a user-friendly environment. VS Utilities runs under Windows 98/NT/ME/2000/XP.



V*S Utilities Features:

- Custom views for monitoring selected parameters
- Compare drive parameter settings to:
 - Defaults
 - Saved files
- Point-to-point or multi-drop capabilities (serial network or EtherNet)
- Built-in online help

NOTE: Software requires the RECOMM-232 serial converter. The RECOMM-232 serial converter comes standard with a one meter cable.

The cable length can be extended by:

- Replacing the RECBL-M10 with a longer cable (see table).
- Extending the cable with extension option.

DPI cables, drive side of converter box, cannot exceed 10 meters (DPI = Drive Peripheral Interface).

- * **Software/Serial Converter Model No. RECOMM-VSU232\$437**
- * **Software ONLY Model Number: RECOMM-VSUTIL 154**

SP600 NEMA 4X Remote Mount OIM (Operator Interface Module)

Remote mountable LCD OIM for door mounting. This will allow users to operate the SP600 drive from a door mounted operator interface. The remote interface is supplied with a 3 meter DPI male-to-male cable (RECBL-M30) that can be extended by using the RECBL-F30/F90 cables. A DPI screw terminal adapter kit can also be used to extend with customer fabricated cables.

- * **Model Number: RE4ALCD\$281**



RE4ALCD

- * Normally carried in stock



RE1LCD

SP600 Accessories

Model Number	Description	Length	List
* RECBL-M03		0.33 m	\$42
* RECBL-M10	DPI cable (male to male; locking mini DIN)	1.0 m	47
* RECBL-M30	(converter to drive cable)	3.0 m	57
* RECBL-M90		9.0 m	83
* RECBL-F03		0.33 m	42
* RECBL-F10	DPI cable (male to female; locking mini DIN)	1.0 m	47
* RECBL-F30	(drive cable extension)	3.0 m	57
* RECBL-F90		9.0 m	83
* 1202-TB-KIT-SET	DPI Screw Terminal Adapter Kit for extending remote OIM connections up to 100 meters (Includes two screw terminal adapters)	n/a	120
* 2-CBL-KIT-100M	DPI Screw Terminal Adapter Kit w/Cable for extending remote OIM connections up to 100 meters (Includes two screw terminal adapters, tools, and 100M shielded cable)	n/a	364
* RECBL-SSP	1 to 2-port DPI splitter cable	n/a	67
* RECBL-LCD	OIM LCD external-mount harness (Hirose to DIN)	n/a	52
* RECBL-SFC	Serial flash cable (converter to 9DSUB)	n/a	57
* RECOMM-232	RS232 serial converter includes RECBL-M10 and RECBL-SFC	n/a	306
* RECOMM-VSU232	VS Utilities and RECOMM-232	n/a	437

m=meters

Note: Drive DPI is a female mini-din connector. In order to connect to this port you need a male mini-din connector.

RE1LCD OIMs have a Hirose connector (only one type of Hirose connector is used).

Note: DPI Screw Terminal Kits are to be utilized when a remote OIM is to be located more than 10 meters from the drive.

DPI Screw Terminal Kits can be used with RE4ALCD or REZL-N1 OIM kits (not usable with RE4LCD-PNL)

SP600 LCD OIM (Operator Interface Module)

Backlit graphical multiline display and ICON menu. For either Drive Mounted Local Operation or Remote Handheld Operation of the SP600. Cable required for remote handheld operation.

To connect the RE1LCD as a remote handheld keypad, the RECBL-LCD 1 meter cable is required. If you require length greater than 1 meter, you can select a RECBL-F30/F90 cable extension for lengths up to 10 meters.

- * **Model Number: RE1LCD\$182**

SP600 NEMA 1 Bezel Kit

The NEMA 1 Bezel Kit provides a convenient means for panel or door mounting of the RE1LCD OIM. The kit also includes a 3 meter DPI male-to-male cable (RECBL-M30), mounting hardware, and installation instructions. The distance from the drive can be extended by using the RECBL-F30/F90 cables. A DPI screw terminal adapter kit can also be used to extend with customer fabricated cables.

- * **Model Number: REBZL-N1 \$78**

DISCOUNT VS-1AC

SP600 BRAKE RESISTOR SPECIFICATIONS

The specifications below are applicable to external braking resistors.

The average power dissipation of the braking mode must be estimated and the power rating of the Dynamic Brake Resistor chosen to be greater than the average regenerative power dissipation of the drive.

Reference manual D2-3489 “SP600 AC Drive Dynamic Braking Selection Guide” for more detailed information.

Output Power		Minimum Resistance SP600	Suggested Resistor		
Drive Rating (Normal Duty)	Motor kW		Resistance 10% Tolerance	Peak Power (kW) During On Time	Resulting Braking Torque (expressed in % of rated motor torque)
240V, 0.5HP	0.37	34	131	1.08	293%
240V, 1HP	0.75	34	66	2.15	287%
240V, 2HP	1.5	34	61	2.33	155%
240V, 3HP	2.2	34	49	2.89	132%
240V, 5HP	4	31	33	4.3	107%
240V, 7.5HP	5.5	23	24	5.91	107%
240V, 10HP	7.5	23	24	5.91	79%
480V, 0.5HP	0.37	68	502	1.13	305%
480V, 1HP	0.75	68	306	1.85	247%
480V, 2HP	1.5	68	163	3.48	232%
480V, 3HP	2.2	68	131	4.33	197%
480V, 5HP	4	68	97	5.85	146%
480V, 7.5HP	5.5	74	70	8.11	147%
480V, 10HP	7.5	74	73	7.77	104%
480V, 15HP	11	44	45	12.61	115%
480V, 20HP	15	31/44*	45	12.61	84%
480V, 25HP	18.5	32	32	17.73	96%
480V, 30HP	22	27	27	21.01	96%
480V, 40HP	30	20	20	28.37	95%
480V, 50HP	37	21	21	27.02	73%
480V, 60HP	45	17	17	33.37	74%
480V, 75HP	55	11	11	51.58	94%
480V, 100HP	75	11	11	51.58	69%
480V, 125HP	90	9	9	63.04	70%
480V, 150HP	110	7	7	81.05	74%
480V, 200HP	132	3.3	4	141.84	107%
600V, 0.5HP	0.37	117	874	1.01	274%
600V, 1HP	0.75	117	471	1.88	251%
600V, 2HP	1.5	117	255	3.48	232%
600V, 3HP	2.2	117	209	4.24	193%
600V, 5HP	4	81	120	7.39	185%
600V, 7.5HP	5.5	81	82	10.81	197%
600V, 10HP	7.5	81	82	10.81	144%
600V, 15HP	11	48	48	18.47	168%
600V, 20HP	15	48	48	18.47	123%

* 31 ohms for 6SP models and 44 ohms for 6SB models.

MODIFIED STANDARD V*S DRIVES

SP600 Drives: 480 VAC⁽³⁾



SP Models:⁽⁴⁾

Analog Input #1 (0 -10 VDC or 4-20 ma)

Analog Input #2 (+ 10VDC, 0-10 VDC or 4-20 ma)

Analog Output (0 -10 VDC)

480 VAC Base Drive Model Number	6SP401-3P4CTNN	6SP401-005CTNN	6SP401-008CTNN	6SP401-011CTAN	6SP401-014CTAN	6SP401-022CTAN	6SP401-027CTAN	6SP401-034CTAN	6SP401-040CTAN	6SP401-052CTAN	6SP401-065CTAN
HP Rating (110% Overload)	2	3	5	7.5	10	15	20	25	30	40	50
HP Rating (150% Overload)	1.5	2	3	5	7.5	10	15	20	25	30	40
FLA @ 4 kHz	3.4	5	8	11	14	22	27	34	40	52	65
Base Drive List	\$1,217	\$1,321	\$1,513	\$1,896	\$2,007	\$2,584	\$3,099	\$3,848	\$4,784	\$5,720	\$7,176
Enclosure Options											
NEMA 1 Cabinet	3,350	3,350	3,350	3,650	3,650	3,650	3,650	3,650	3,950	3,950	3,950
NEMA 4/12 Cabinet ⁽⁵⁾	3,500	3,500	3,500	3,800	3,800	7,800 ⁽²⁾	7,800 ⁽²⁾	7,800 ⁽²⁾	7,800 ⁽²⁾	8,200 ⁽²⁾	8,600 ⁽²⁾
Input Protection & Disconnect Options											
Input Fuses Only	158	158	158	158	158	178	178	245	317	317	611
Fused Disconnect Switch & Door Handle	403	403	403	403	403	438	438	505	757	757	1,208
Circuit Breaker Only	752	752	752	752	752	865	865	865	865	865	911
Circuit Breaker Disconnect & Door Handle	1,018	1,018	1,018	1,018	1,018	1,131	1,131	1,131	1,131	1,131	1,177
Door Mounted Operator Devices											
Door Mounted OIM	600	600	600	600	600	600	600	600	600	600	600
Maintained Start/Stop Switch	106	106	106	106	106	106	106	106	106	106	106
Momentary Start/Stop Pushbuttons	172	172	172	172	172	172	172	172	172	172	172
E-Stop Pushbutton (Mushroom Head)	120	120	120	120	120	120	120	120	120	120	120
Jog Pushbutton	86	86	86	86	86	86	86	86	86	86	86
2 or 3 Position Selection Switch	120	120	120	120	120	120	120	120	120	120	120
Pilot Light ⁽¹⁾	86	86	86	86	86	86	86	86	86	86	86
Contactors, Overloads, Starters, Control Transformers & Line Reactors											
Input Contactor ⁽¹⁾	342	342	342	467	467	467	467	467	467	467	467
Output Contactor ⁽¹⁾	342	342	342	467	467	467	467	467	467	467	467
Drive Bypass Control ⁽¹⁾	932	932	932	1,185	1,185	1,185	1,185	1,185	1,185	1,185	1,286
Motor Overload Relay	181	181	181	181	181	181	181	181	181	181	376
Blower Motor Starter ⁽¹⁾	408	408	408	408	408	408	408	408	408	408	408
Control Transformer: 460:120 VAC, 250VA	375	375	375	375	375	375	375	375	375	375	375
3% Impedance Input Line Reactor	291	323	323	384	384	461	461	496	511	640	774
Dynamic Braking - Transistor + Resistor											
6-10% Duty Braking	256	256	256	256	256	256	256	256	CF	CF	CF
20% Duty	CF	CF	CF	CF	CF	CF	CF	CF	CF	CF	CF

⁽¹⁾ Requires Control Transformer option

⁽²⁾ Usually includes a cooling device and control transformer

⁽³⁾ Contact Factory for 230 VAC Drives

⁽⁴⁾ SB models available (15/20 HP) and up at additional cost

⁽⁵⁾ Flange style units are available in some ratings, which may reduce the enclosure size and/or the cost. Contact the factory for pricing

CF = Contact Factory

Photo shown with optional OIM installed

Discount: MS-1AC

MODIFIED STANDARD V*S DRIVES

SP600 Drives: 480 VAC

SB Models:

- Analog Input #1 (0 + / - 10 VDC or 4-20 ma)
- Analog Input #2 (+ 10VDC, 0-10 VDC or 4-20 ma)
- Analog Output (0 + / -10 VDC or 4-20 ma))

480 VAC Base Drive Model Number	6SB401-077CNANA	6SB401-096CNANA	6SB401-125CNANA	6SB401-156CNANA	6SB401-180CNANA	6SB401-248CNANA
HP Rating (110% Overload)	60	75	100	125	150	200
HP Rating (150% Overload)	50	60	75	100	125	150
FLA @ 4 kHz	77	96	125	156	180	248
Base Drive List	\$8,388	\$9,386	\$11,367	\$12,641	\$13,692	\$19,068
Enclosure Options						
NEMA 1 Cabinet	3,950	5,525	6,050 ⁽²⁾	6,050 ⁽²⁾	6,050 ⁽²⁾	6,050 ⁽²⁾
NEMA 1A - Force Vent w/ Fan & Filter ⁽³⁾	692	692	Std.	Std.	Std.	Std.
NEMA 4/12 Cabinet ⁽²⁾	9,500	14,475	14,475	14,475	14,475	CF
Input Protection & Disconnect Options						
Input Fuses Only	611	611	1,054	1,102	1,102	1,274
Fused Disconnect Switch & Door Handle	1,208	1,208	2,114	2,162	2,162	2,334
Circuit Breaker Only	911	911	1,074	1,074	1,363	1,363
Circuit Breaker Disconnect & Door Handle	1,177	1,177	1,426	1,426	1,715	1,715
Door Mounted Operator Devices						
Door Mounted OIM	600	600	600	600	600	600
Maintained Start/Stop Switch	106	106	106	106	106	106
Momentary Start/Stop Pushbuttons	172	172	172	172	172	172
E-Stop Pushbutton (Mushroom Head)	120	120	120	120	120	120
2 or 3 Position Selection Switch	120	120	120	120	120	120
Pilot Light ⁽¹⁾	86	86	86	86	86	86
Contactors, Overloads, Starters, Control Transformers & Line Reactors						
Input Contactor ⁽¹⁾	1,260	1,260	1,260	1,951	1,951	1,951
Output Contactor ⁽¹⁾	1,260	1,260	1,260	1,951	1,951	1,951
Drive Bypass Control ⁽¹⁾	3,220	3,220	3,220	4,080	4,080	4,080
Motor Overload Relay	376	376	376	430	430	430
Blower Motor Starter ⁽¹⁾	408	408	408	408	408	408
Control Transformer: 460:120 VAC, 250VA	375	375	375	375	375	375
3% Impedance Input Line Reactor	900	1,114	1,292	1,480	2,101	2,745
Dynamic Braking - Transistor + Resistor						
10% Duty Braking (requires BTANA or CTANA model)	Contact Factory					
>10% Duty Braking	Contact Factory					

⁽¹⁾ Requires Control Transformer option
⁽²⁾ Usually includes a cooling device and control transformer
⁽³⁾ Add to NEMA 1 Option
 CF = Contact Factory

Discount: MS-1AC