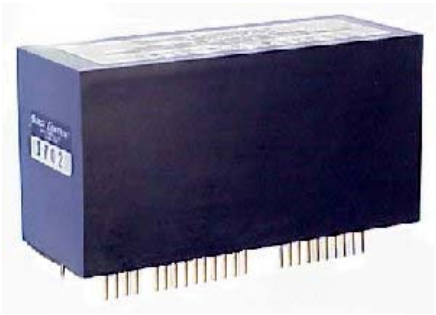
SAB Series

I/O Module Signal/Data/Power

Surge Suppressor Multi-Line

SAB-20LM Motherboard



Replaceable Daughtercard

Features:

- Universal DIN-Rail mounting allows easy installation on any standard DIN-Rail configuration.
- Performance exceeds highest class severity level of IEC/EN 61000-4-4 and 61000-4-5.
- Unique multi-stage design provides the most effective suppression and filtering available, and requires no additional secondary protection.
- Plug-in replaceable daughter card modules contain all active surge suppression.
- Sub-nanosecond response time stops failures due to lightning, spikes and over-voltage surges while filtering all other electrical noise.
- Space efficient protector is hermetically sealed and suitable for the most harsh industrial environments.
- Automatic reset and fail safe design requires no maintenance. Eliminates “Out of Service” downtime and repair/replacement costs caused by damaging electrical surges.
- Enhanced filtering to attenuate high frequency. Brings equipment into compliance with IEEE/ANSI C37.90.1.
- Model selection available for all Allen-Bradley I/O modules including AC, DC, contact output, current output and signal input.
- Keyed connector is plug compatible with Allen-Bradley I/O pre-wired 20 and 40 pin cables.
- UL-497B Listed for Data Models (60 VDC or less). UL File E205158.

Applications:

The SAB Series is designed to protect all I/O modules within Allen-Bradley’s series of control instrumentation in the most harsh environments. Protection is from lightning induced surges, Electrical Fast Transients (EFT) and EMI/RFI noise.

Select the SAB-20LM base module for 1 to 20 point applications. Select the SAB-40LM base module for 21-40 point applications. Select the required plug-in daughter module as noted on the reverse side of this sheet.

See the SPU Series data sheet for Allen-Bradley PLC or SLC I/O applications when pre-wired cables are not utilized. The SPU Series should be selected in all cases where Allen-Bradley IFM or AIFM modules are used.

Typical Installation:

Snap the rail mounted suppressor on any DIN-Rail next to the equipment it is to protect. Attach the wiring arm or removable terminal block end of the pre-wired cable to the I/O Module, and snap the cable connector end of the pre-wired cable to the SAB Filter/Suppressor unit. Keep the I/O pre-wired cable as short as possible. Field wires are connected to the field miniature screw terminals on the SAB unit. The suppressor must be connected to a good earth ground using a #12 AWG wire. Equipment ground and suppressor ground should be common.

SAB Series Operating Specifications:

Daughter Module Specifications	SPU-XX YY05	SPU-XX YY10	SPU-XX YY24	SPU-XX YY30	SPU-XX YY48	SPU-XX YY60	SPU-XX YY120	SPU-XX YY220
Operating Voltage	± 5 VDC	± 10 VDC	± 24 VDC	± 30 VDC	± 48 VDC	± 60 VDC	120 VAC	220 VAC
Maximum Operating Voltage	6 VDC	12 VDC	25 VDC	33 VDC	53 VDC	64 VDC	150 VAC	280 VAC
Maximum Operating	2.0 A	2.0 A	2.0 A	2.0 A	2.0 A	2.0 A	2.0 A	2.0 A
Clamping Action Turn-On	7.1 Volts	14.3 Volts	28.5 Volts	37.1 Volts	58.9 Volts	71.3 Volts	143 Volts	315 Volts
Maximum Clamping (8x20 microseconds)	11 Volts	22 Volts	44 Volts	52 Volts	81 Volts	94 Volts	190 Volts	470 Volts
Maximum Surge Voltage	6 kV	6 kV	6 kV	6 kV	6 kV	6 kV	6 kV	6 kV
Maximum Surge Current (8x20 microseconds)	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2.5 kA	2.5 kA
Response Time	Less than 1 nanosecond							
Operating & Storage Temperature	-40 °C to +85 °C							

BASE MODULE

SAB–XX YY

Number of Lines:
20 – 20 lines
40 – 40 lines

Application:
LM – Standard model with enhanced filtering

DAUGHTER MODULE

SPU–XX YY ☐

Number of Lines:
10 – Up to 10 lines
20 – Up to 20 lines
30 – Up to 30 lines
40 – Up to 40 lines

Application:
CD – Standard model

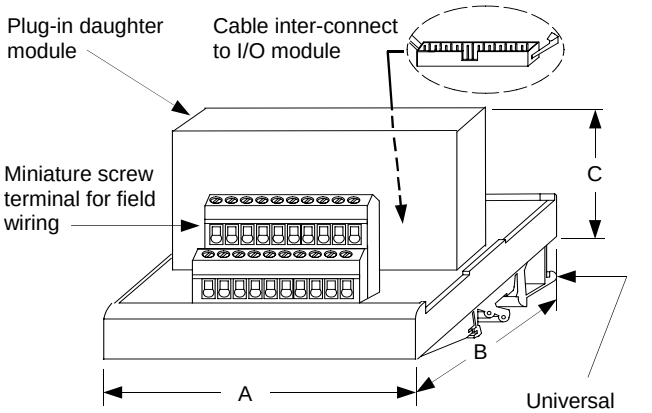
Operating Voltage:
See table above

Note:

Base and daughter modules can be purchased separately, however, initial installations will require both a base and daughter module.

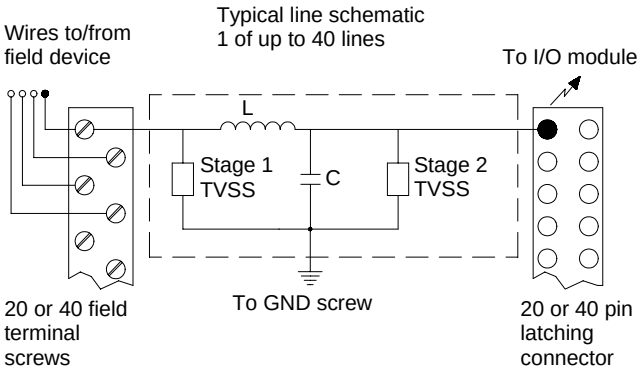
Outline Dimensions:

SAB-20LM & SPU-20CD24 Depicted



Base with Daughter Module	A	B	C
20 Line	4.5″	3.6″	2.9″
40 Line	6.3″	3.6″	2.9″

Typical Installation:



Note: See the SPU Series data sheet for Allen-Bradley PLC or SLC I/O applications when the I/O pre-wired cable is not utilized. An SPU Series base module should be selected in all cases where Allen-Bradley IFM or AIFM modules are used.

Circuit Components, Inc.
2400 S. Roosevelt Street Tempe, AZ • 85282
Tel: 480-967-0624 • Fax: 480-967-9385
Email: info@surgecontrol.com • Website: www.surgecontrol.com

SURGE CONTROL®
A PRODUCT OF CCI