

SJ300 ACCESSORIES — FILTERS

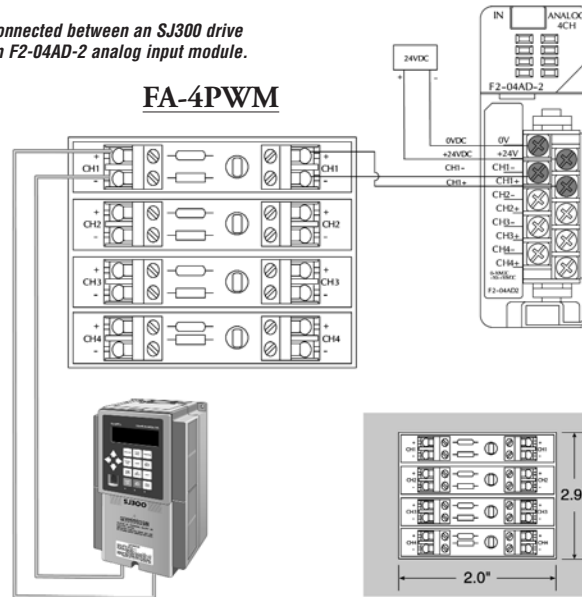
Pulse width modulation filter

Application

The Pulse Width Modulation filter card smooths the pulse-width modulated signal from the FM output terminal on the drive to a 0-10VDC signal. This signal can then be used as a source to PLC analog input modules or metering devices. The FA-4PWM has four channels for use with multiple inverters.



FA-4PWM shown connected between an SJ300 drive and channel 1 of an F2-04AD-2 analog input module.



| Pulse Width Modulation Filter | |
|-------------------------------|-------|
| Part Number | Price |
| FA-4PWM | <--> |



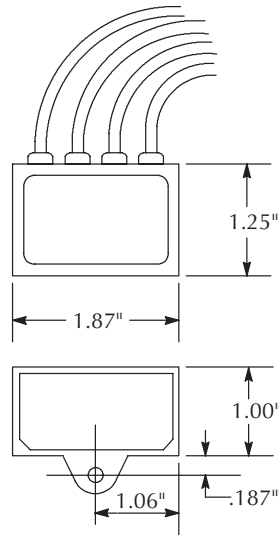
RF capacitive filters

Application

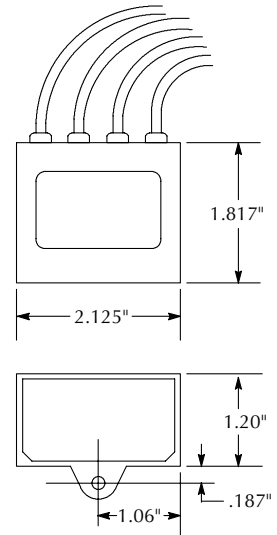
The RF filters can be used on the input side of the inverter to reduce RF noise.

| Specifications | | | |
|----------------|----------------|-------------------------------|-------|
| Part # | Input Voltage | Ambient Temperature | Price |
| CFI-L | 230V, 50/60 Hz | -40 to 85°C (-99 to 185°F) | <--> |
| CFI-H | 460V, 50/60Hz | | <--> |

CFI-L dimensions



CFI-H dimensions

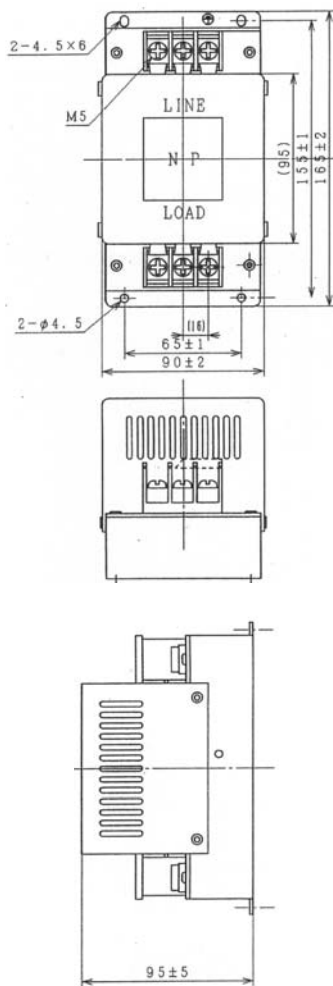


SJ300 ACCESSORIES — EMI FILTERS

EMI filters

EMI filters reduce electromagnetic interference or noise on the input side of the inverter, EMI filters are needed for CE compliance.

NF-CEH7 to NF-CEH40 dimensions

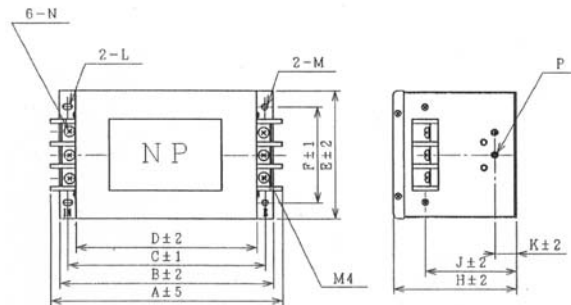


Filter dimensions are in mm.
(1 inch = 25.4 mm)
Example: 40 mm to inches-40/25.4 = 1.57 in.

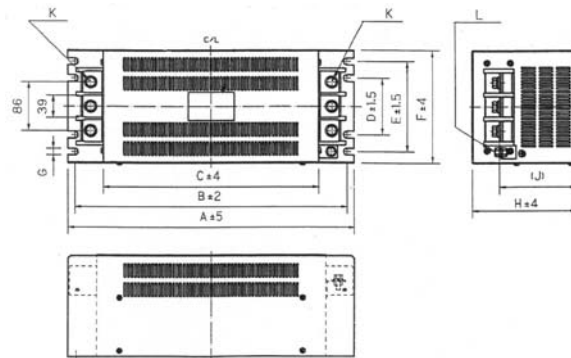
| SJ300 Model EMI Filter | | | | |
|------------------------|------------|------------|-------------------------------------|-------|
| 200V Class | 400V Class | EMI Filter | EMI Filter Rating | Price |
| 004LFU | 007HFU | NF-CEH7 | 1/2 - 1Hp 230VAC and 1 - 3Hp 480VAC | <---> |
| 007LFU | 015HFU | | | |
| | 022HFU | | | |
| 015LFU | 040HFU | NF-CEH10 | NF-CEH10 2Hp 230VAC and 5Hp 480VAC | <---> |
| 022LFU | 055HFU | NF-CEH20 | 3 5Hp 230VAC AND 7.5 - 10Hp 480VAC | <---> |
| 037LFU | 075HFU | | | |
| 055LFU | 110HFU | NF-CEH30 | 7.5Hp 230VAC AND 15Hp 480VAC | <---> |
| 075LFU | 150HFU | NF-CEH40 | 10Hp 230VAC AND 20Hp 480VAC | <---> |
| | 185HFU | NF-CEH50 | 25Hp 480VAC | <---> |
| 110LFU | 220HFU | NF-CEH60 | 15Hp 230VAC AND 30Hp 480VAC | <---> |
| 150LFU | n/a | NF-CEH80 | 20Hp 230VAC | <---> |
| 185LFU | n/a | NF-CEH100 | 25Hp 230VAC | <---> |
| 220LFU | n/a | NF-CEH150 | 30 Hp 230VAC | <---> |

| NF-CEHxx Dimensions in mm | | | | | | | | | | | | | | |
|---------------------------|-----|-----|-----|-----|-----|-----|---|-----|----|----|-----------|-------|----|----|
| Part # | A | B | C | D | E | F | G | H | J | K | L | M | N | P |
| NF-CEH50 | 217 | 200 | 185 | 170 | 120 | 90 | - | 115 | 85 | 20 | R2.75, L7 | Ph5.5 | M6 | M4 |
| NF-CEH60 | 217 | 200 | 185 | 170 | 120 | 90 | - | 115 | 85 | 20 | R2.75, L7 | Ph5.5 | M6 | M4 |
| NF-CEH80 | 217 | 200 | 185 | 170 | 120 | 90 | - | 115 | 85 | 20 | R2.75, L7 | Ph5.5 | M6 | M4 |
| NF-CEH100 | 254 | 230 | 215 | 200 | 150 | 120 | - | 115 | 85 | 30 | R3.25, L8 | Ph5.5 | M8 | M6 |
| NF-CEH150 | 314 | 300 | 280 | 260 | 200 | 170 | - | 130 | 90 | 35 | R3.25, L8 | Ph5.5 | M8 | M6 |

NF-CEH40 to NF-CEH150 dimensions



NF-CEH200 to NF-CEH300 dimensions



SJ300 ACCESSORIES — OPTION CARDS

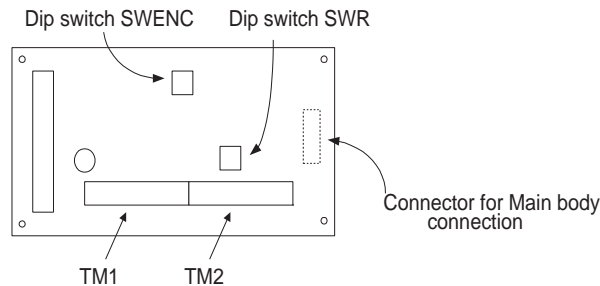
Encoder feedback board

The SJ-FB encoder feedback board improves the SJ300's speed regulation and torque response. The SJ-FB connects to a two-channel incremental encoder and detects the rotational speed of the motor to prevent speed fluctuations.

The SJ-FB can also be used for master/slave control, electronic line shaft with ratio control, and shaft position control.

| Specifications | | Price |
|---------------------------------|---|--|
| Part Number | SJ-FB | <---> |
| Speed control | Encoder Feed-back | Standard encoder pulse number 1024 pulses per revolution Max. input pulse 100k pulses per second |
| | Speed Control System | Proportional-integral (PI) / Proportional (P) control |
| Electronic Gears Control | Pulse Selection for Electronic Gears | Three kinds of pulse train input selectable by main body setting |
| | | Mode 0: 90° phase difference pulse |
| | | Mode 1: forward/reverse signal pulse |
| | Electronic Gears | Mode 2: forward pulse/reverse pulse Max. input pulse 100k pulses Pulse ratio A/B (A, B: 1~9999 selectable) Ratio setting range: 1/50 (.02) ≤ A/B ≤ 20 |
| Protection Function | | Encoder cable line break protection Over speed protection (over speed error detection level (P026)) Positioning error |

Encoder feedback board terminal assignment



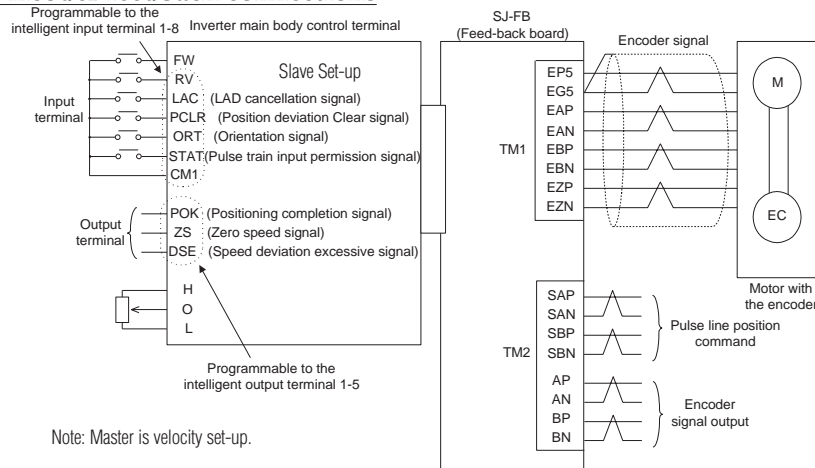
TM1 terminal assignment

| | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|
| EP5 | EG5 | EAP | EAN | EBP | EBN | EZP | EZN |
|-----|-----|-----|-----|-----|-----|-----|-----|

TM2 terminal assignment

| | | | | | | | |
|-----|-----|-----|-----|----|----|----|----|
| SAP | SAN | SBP | SBN | AP | AN | BP | BN |
|-----|-----|-----|-----|----|----|----|----|

Encoder feedback connections



Note: Master is velocity set-up.

| Terminal Specifications | | |
|--|---|--|
| Symbol | Description | Electrical Specifications |
| Input Terminals | | |
| SAP SAN SBP SBN | Pulse line position command input | DC5V receiver input (based on RS-422 standard) |
| EAP EAN EBP EBN EZP EZN | Encoder signal input | Photo coupler input (Correspondence to the DC5V line driver type rotary encoder) |
| STAT | Pulse train position command input permission signal (Note 1) | Photo coupler input (Refer to a main body intelligent input terminal.) |
| LAC | LAD cancel signal: (Note 1) | |
| PCLR | Position deviation clear signal: (Note 1) | |
| Output Terminals | | |
| AP AN BP BN | Encoder signal output | DC5V line driver output (based on RS-422 standard) |
| EP5 EG5 | Power supply for encoder | +5VDC, 150mA max |
| POK | Positioning completion signal (Note 2) | Open collector outputs (refer to a main body intelligent input terminal) |
| DSE | Speed deviation excessive signal (Note 2) | |
| ZS | Zero speed signal (Note 2) | |

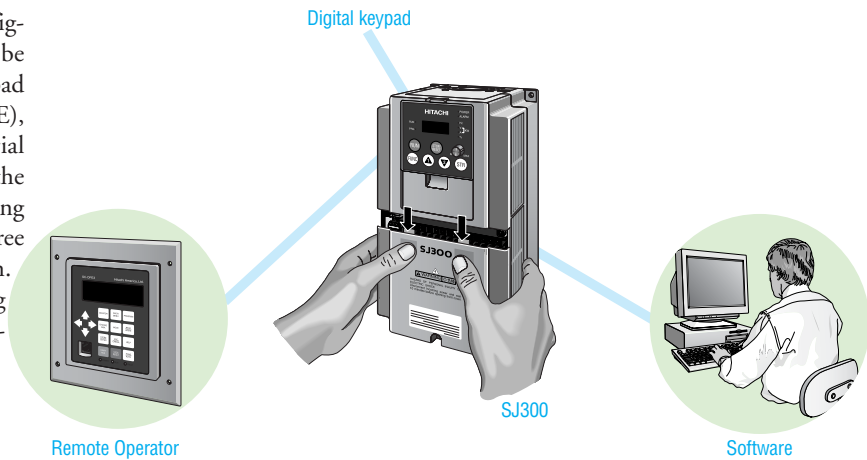
Note 1: Valid when LAC is assigned to an intelligent input terminal of the main body (SJ300).

Note 2: Valid when POK is assigned to an intelligent output terminal of the main body (SJ300).



SJ300 CONFIGURATION, CONTROL AND MONITORING

The SJ300 Series drives can be configured multiple ways. The drive can be configured using the removable keypad that comes with the drive (OPE-SRE), the remote digital keypad with serial communications (SC-OPE3I), or the optional Windows-based programming software DOP-PRO, available for free download at www.drivemanager.com. The DOP-PRO-CBL programming cable is required to download configurations to the drive.



Digital keypad

OPE-SRE (SJ300 Series only)

The OPE-SRE comes standard on every SJ300 Series drive. This keypad has a single line, 4-character LED display. The OPE-SRE can be used to program the drive's parameters as well as monitor specific drive functions.

The OPE-SRE can be mounted on the SJ300 drive or mounted remotely. Use a standard UTP Cat5e Ethernet cable (3m maximum length) for remote mounting. Replacement keypads for the SJ300 are available and come with an extra filler plate.

OPE-SRE



| Digital Keypad | | |
|----------------|-------------------------|-------|
| Part Number | Description | Price |
| OPE-SRE | Digital remote operator | <--> |

Programming Cable

The DOP-PRO-CBL cable is used to interface a PC to an SJ300 drive using DOP-PRO configuration software. It has a built-in RS232/422 converter and an RJ45 connector.

DOP-PRO-CBL



| Programming Cable | | |
|-------------------|--|-------|
| Part Number | Description | Price |
| DOP-PRO-CBL | Programming cable for DOP-PRO software | <--> |