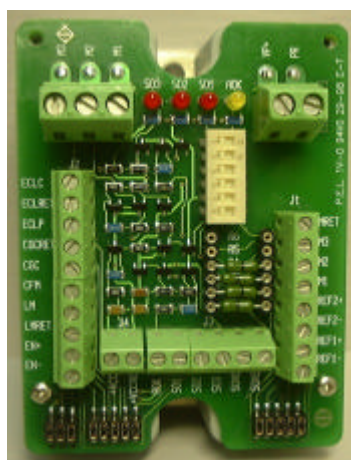


FLU - STARTER

*Addendum to the FLU Operating Manual
Revision 8/99*

Introduction

This addendum is intended for the use of the design engineer who uses a FLU amplifier with a FLU-STARTER evaluation and interface board. This document should be regarded as an extension to the “FLU Operating Manual”, describing **ONLY** the pins and functions (of the FLU amplifier) that are either different or slightly modified from the description in the “FLU Operating Manual”. The chapters in this document are sequenced in correlation to the chapters in the “FLU Operating Manual” that cover the same information.



Description

Refer to section 2 in the “FLU Operating Manual”

The FLU-STARTER is an add-on interconnection board for the FLU servo amplifier that plugs on top of the amplifier. The purpose of this board is the translation of the FLU solder type pins into screw type terminals thus enabling easy connectivity for evaluation and low quantity applications.

One to one relationship between board terminals and the pins of the FLU is kept.

Standard Features

Refer to section 2.1 in the “FLU Operating Manual”

- Four LEDs allow convenient diagnostics of the FLU status outputs
- The dedicated digital inputs can be activated by DIP switches
- Scaling resistors are provided for adjusting the current limits and the command reference

Type designation

FLU-Starter

Pins functions

There is a new terminal strip – J4 with the following functions:

Terminal	Function
+VCC	Positive supply voltage for the LED's
VCCRET	Return for the LED supply voltage

Current Command Scaling Resistors (R1 through R4)

Refer to section 3.1 in the “FLU Operating Manual”

The user can change the default scale of the differential input ($\pm 3.75V$) by calculating and inserting R1 through R4 into the designated solderless terminals. The value of these resistors is given by:

$$R1=R2=R3=R4=5.33*V_{cref}-20 \text{ [K}\Omega\text{]}$$

V_{cref} is the desired maximum reference voltage.

If for example, the new desired scale is $\pm 10V$, all that is required is to change the default resistors (0 ohms) to 33Kohm.

External Current Limit – Continuous (ECLC)

Refer to section 3.4 in the “FLU Operating Manual”

A solderless terminal is available for Re_{clc} . It is designated as R5.

External Current Limit – Peak (ECLP)

Refer to section 3.5 in the “FLU Operating Manual”

A solderless terminal is available for Re_{clp} . It is designated as R6.

DIP – Switches

Switch	Function	ON	OFF
S1	CGC	CGC – ON (see section 3.3 in “FLU Operating Manual)	CGC - OFF
S2	CFM	CFM – ON (see section 3.2 in “FLU Operating Manual)	CFM - OFF
S3	LM	LM – ON (see section 3.6 in “FLU Operating Manual)	LM – OFF
S4	EN+	Setting S4 to ON applies +VCC voltage to EN+ pin (If +VCC is applied to J4). Setting both S4 & S5 will enable the amplifier without an external signal.	No voltage is applied to EN+
S5	EN–	Setting S5 to ON connects VCCRET to EN– pin.	No voltage is applied to EN–
S6	N/C		

Supply Voltage (+VCC & VCCRET)

In order to operate the diagnostics LEDs and/or use the enable (EN) feature, an external voltage must be applied to +VCC & VCCRET terminals at J4. The DC supply requirements are as follows:

Min. input voltage	5VDC
Max. input voltage	15VDC
Max. input current	13 mA

LED Indications

Refer to section 5 in the “FLU Operating Manual”

Function	Latch option	AOK	SO1	SO2	SO3
Amplifier OK (AOK)	N/A	ON	OFF	OFF	OFF
External disable	No	ON	ON	OFF	ON
Current limit	No	ON	OFF	OFF	ON
Short	Yes	OFF	ON	OFF	ON
Over temperature	Yes	OFF	OFF	ON	ON
Internal supplies protection	No	OFF	ON	ON	OFF
Under voltage	No	OFF	ON	OFF	OFF
Over voltage	No	OFF	OFF	ON	OFF
Shunt request	No	ON	OFF	ON	OFF
Power Up Reset	No	OFF	OFF	OFF	OFF

Note: LEDs will light only if voltage is applied to +VCC and VCCRET.