

Description

Refer to section 2 in the “PIC Operating Manual”

The PIC-STARTER is an add on interconnection board for the PIC servo amplifier that plugs on top of the amplifier. The purpose of this board is the translation of the PIC 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 PIC is kept.

Standard Features

Refer to section 2.1 in the “PIC Operating Manual”

- Four LEDs allow convenient diagnostics of the PIC 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

PIC-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 & R2)

Refer to section 3.1 in the “PIC Operating Manual”

The user can change the default scale of the differential input ($\pm 3.75V$) by calculating and inserting R1 & R2 into the designated solderless terminals. The value of these resistors is given by:

$$R1=R2=5.33 \cdot V_{\text{ref}} - 20 \text{ [K}\Omega\text{]}$$

V_{ref} 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 “PIC Operating Manual”

A solderless terminal is available for Re_{clc} . It is designated as R3.

External Current Limit – Peak (ECLP)

Refer to section 3.5 in the “PIC Operating Manual”

A solderless terminal is available for Re_{clp} . It is designated as R4.

DIP – Switches

Switch	Function	ON	OFF
S1	CGC	CGC – ON (see section 3.3 in “PIC Operating Manual)	CGC - OFF
S2	CFM	CFM – ON (see section 3.2 in “PIC Operating Manual)	CFM - OFF
S3	SEL	30° halls sensor format. (see section 3.7 in “PIC Operating Manual)	60° Halls Sensor Format.
S4	LM	LM – ON (see section 3.6 in “PIC Operating Manual)	LM – OFF
S5	EN+	Setting S5 to ON applies +VCC voltage to EN+ pin (If +VCC is applied to J4). Setting both S5 & S6 will enable the amplifier without an external signal.	No voltage is applied to EN+
S6	EN–	Setting S6 to ON connects VCCRET to EN- pin.	No voltage is applied to EN–

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 “PIC 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
Commutation Failure	Yes	OFF	ON	ON	ON

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