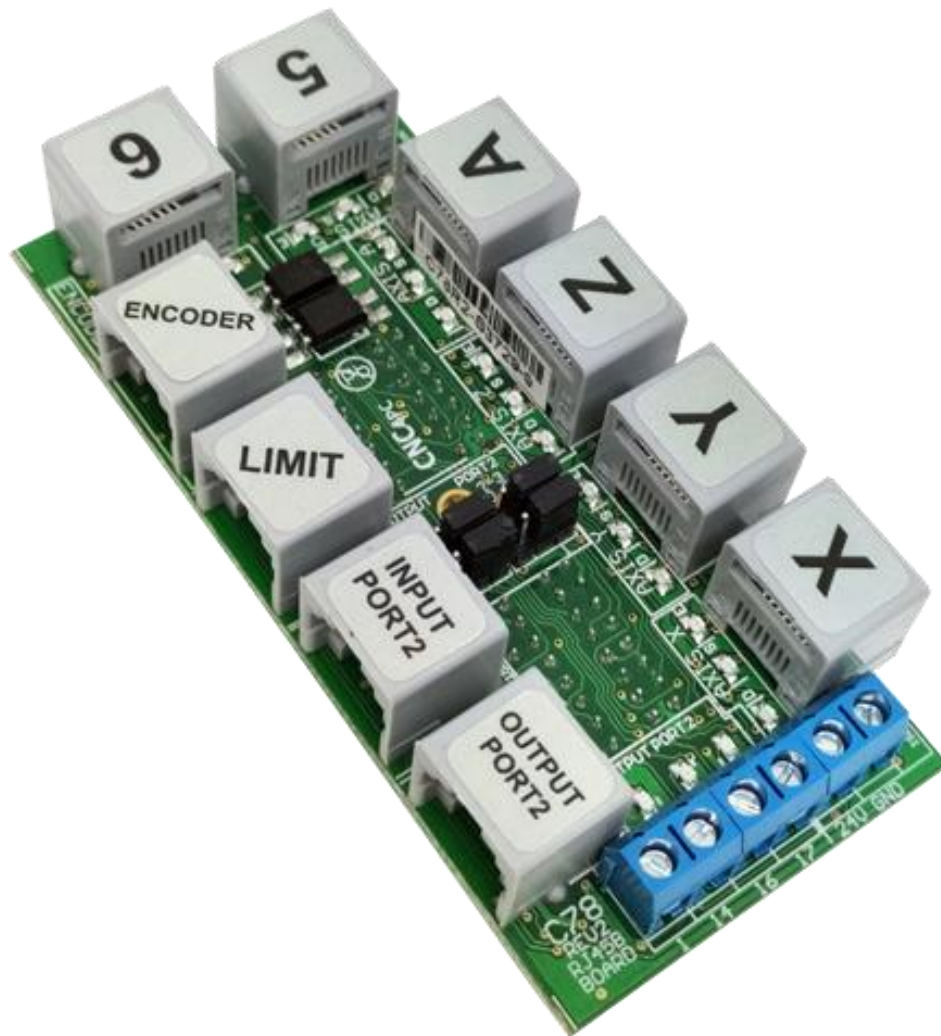


**SHIELD C78
Rev. 2**



MAY, 2023

USER'S MANUAL

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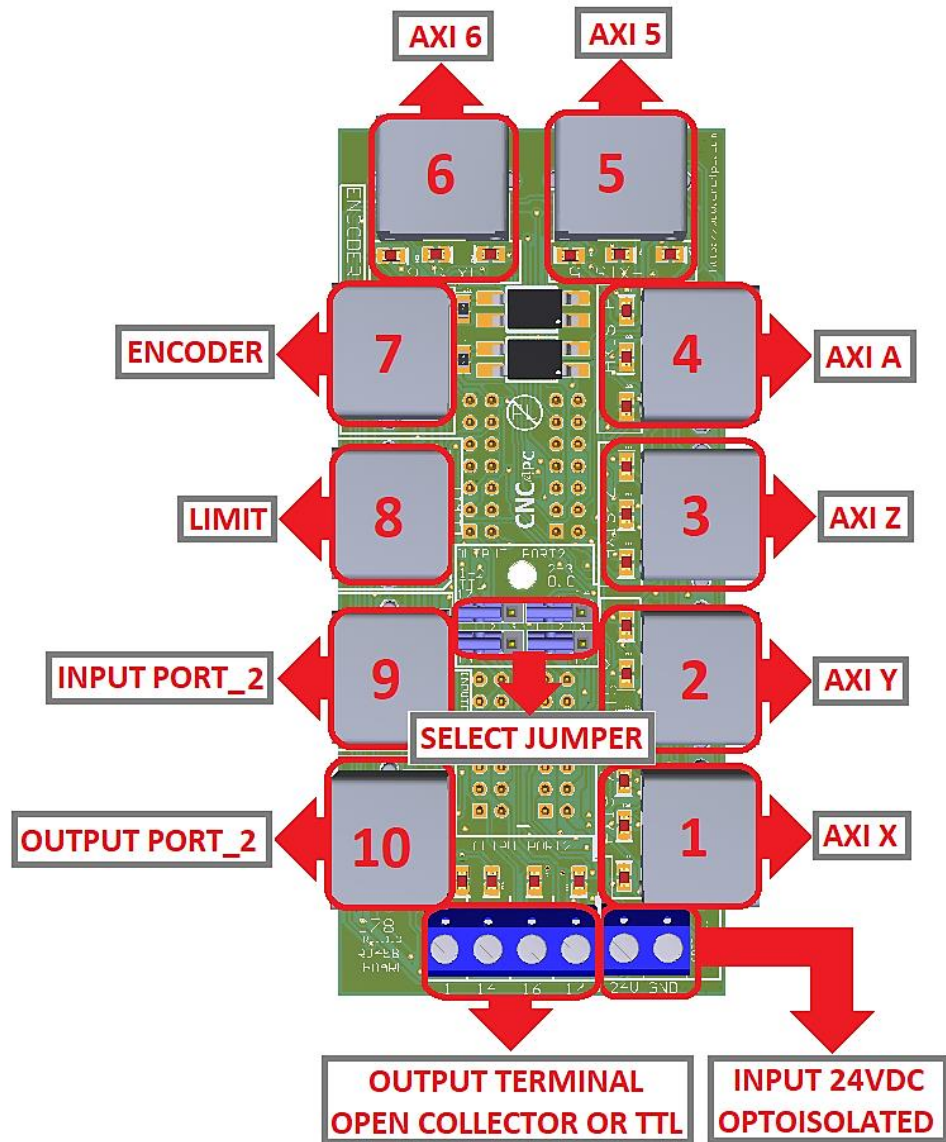
1. OVERVIEW

This shield board is used for connection [C76 Rev.4 onwards](#), and [C82 Rev.5 onwards](#). It has encoder, limits, port_1 input, signal TTL or Open Collector port_2 output and connection for axes.

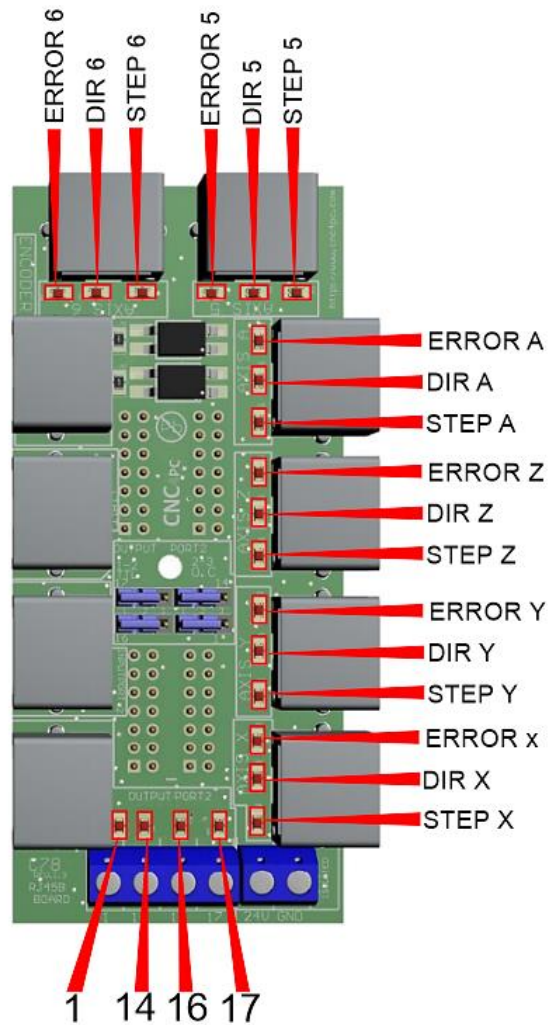
2. FEATURES

- RJ45 connector for Axes.
- RJ45 connector for encoder.
- RJ45 connector for limit.
- RJ45 connector for input port_2.
- Select jumper.
- Input terminal optoisolated.
- Compatibility with [C48 -EXT E-STOP](#)

3. BOARD DESCRIPTION

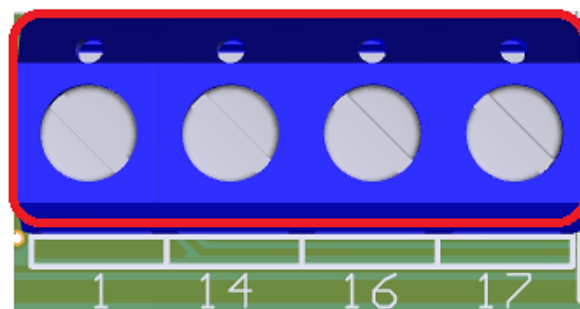


4. LEDS

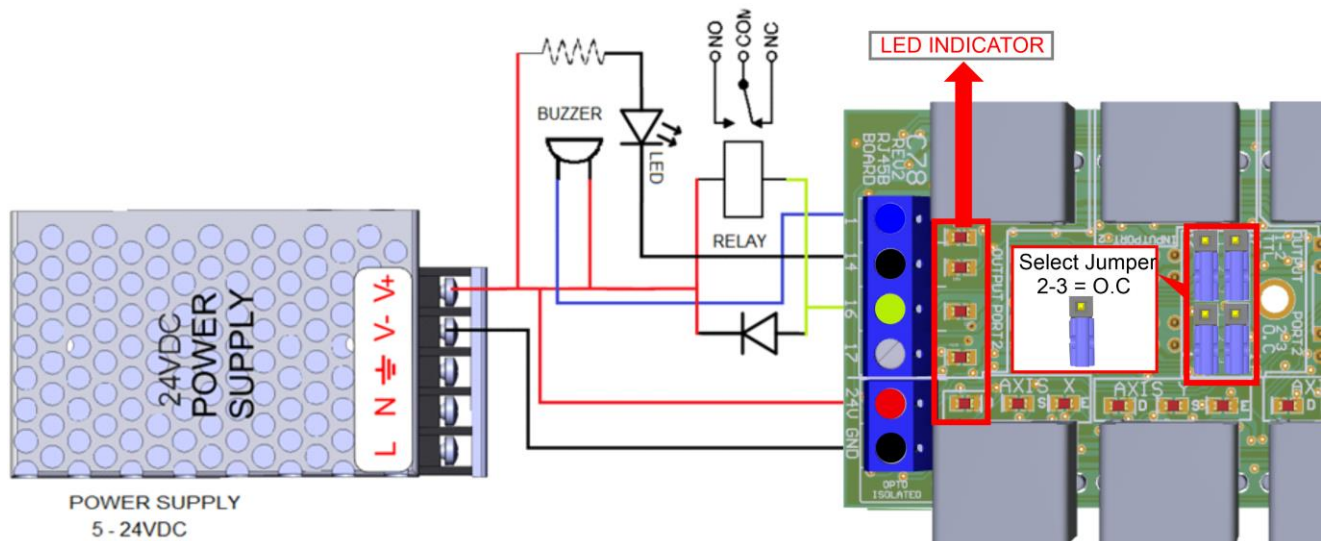


5. TERMINALS

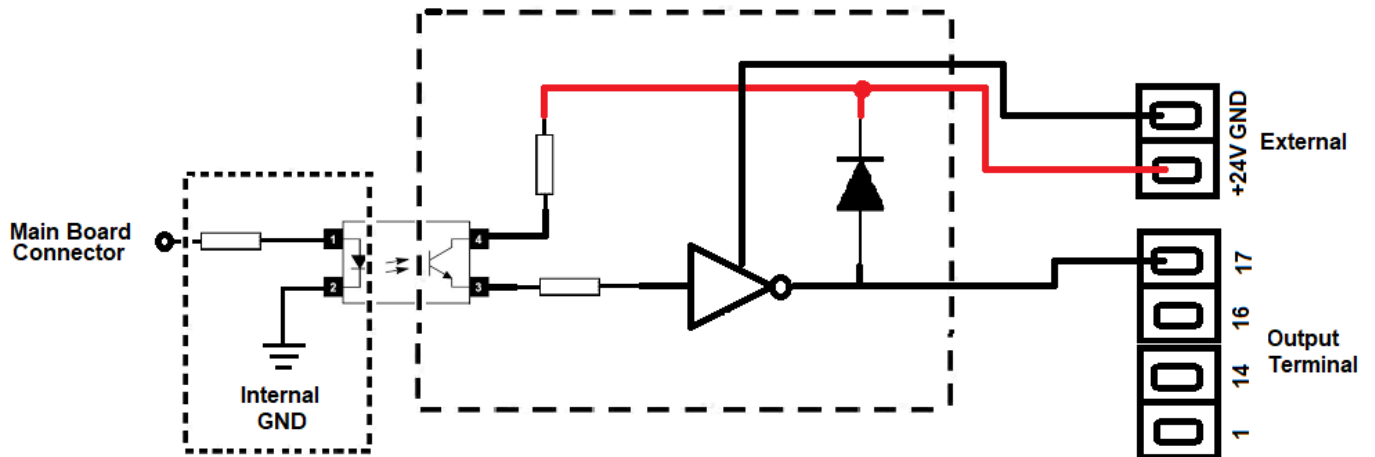
4.1 Outputs terminal TTL or Open Collector.



4.2 Wiring for Open Collector



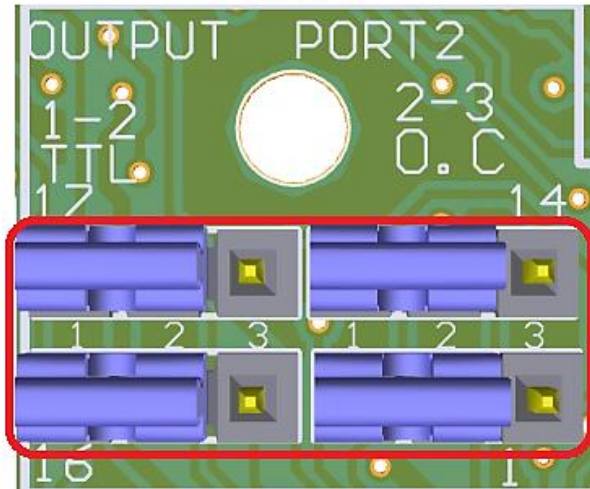
4.3 Outputs 1, 14, 16 and 17 simplified functional block diagrams



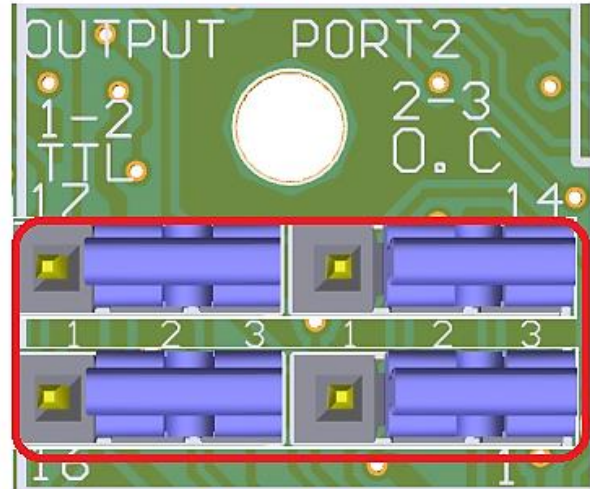
6. SELECT OUTPUT PORT_2

Set jumper to use outputs as +5VDC TTL or Open Collector 1, 14, 16, 17

1-2: TTL



2-3: OPEN COLLECTOR



7. PINOUT



ENCODER

LIMIT

INPUT PORT_2

OUTPUT PORT_2

RJ45_7		RJ45_8		RJ45_9		RJ45_10	
RJ45 PIN	P.P. PIN	RJ45 PIN	P.P. PIN	RJ45 PIN	P.P. PIN	RJ45 PIN	P.P. PIN
1	GND	1	GND	1	GND	1	GND
2	5VDC	2	1_13	2	NC	2	2_17
3	NC	3	1_12	3	EXT.E-stop	3	2_16
4	2_4(INDEX)	4	1_11	4	2_11	4	2_1
5	NC	5	1_15	5	1_15	5	2_14
6	2_2(enc. A)	6	2_11	6	NC	6	NC
7	NC	7	12/24VDC	7	12/24VDC	7	5VDC
8	2_3(enc. B)	8	NC	8	NC	8	12/24VDC



AXI X

AXI Y

AXI Z

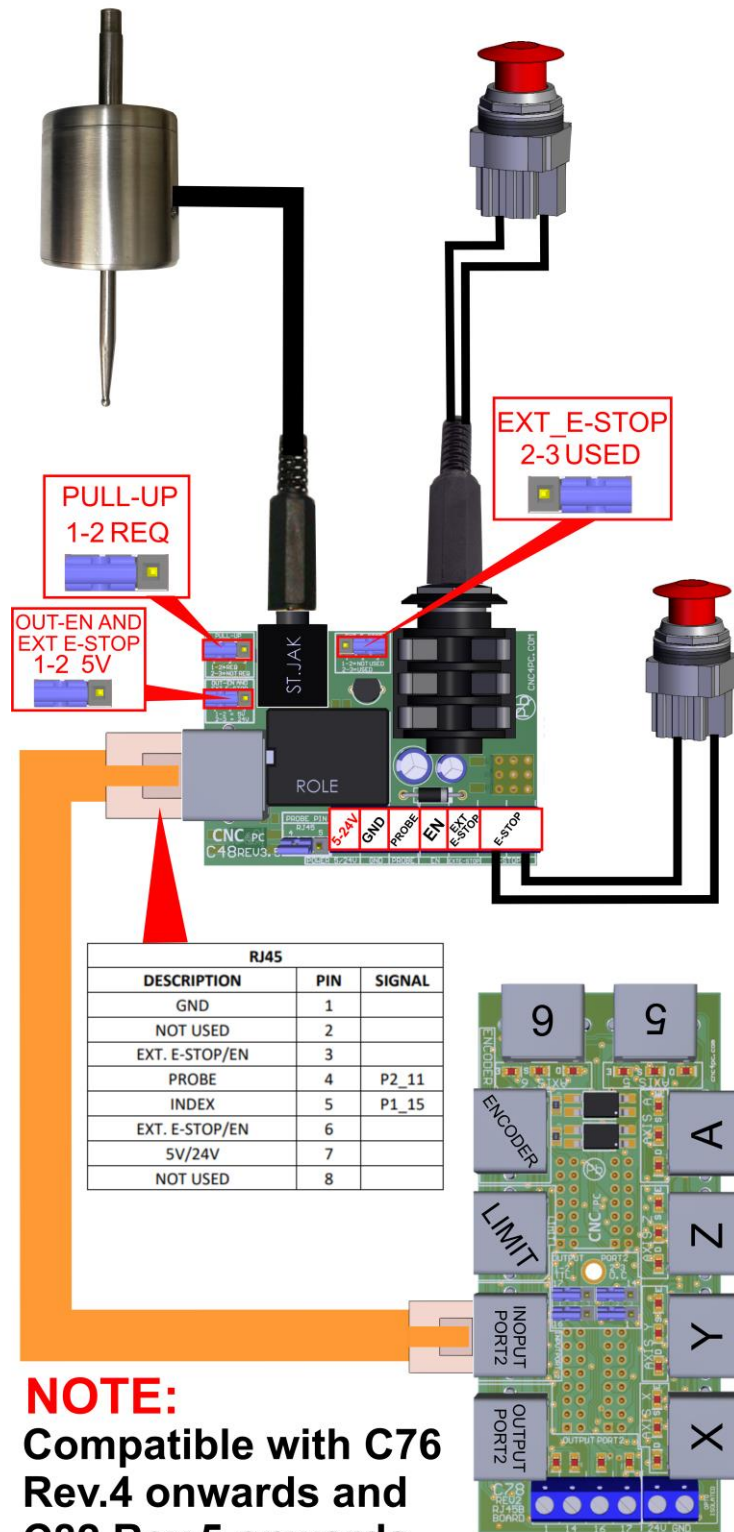
AXI A

AXI 5

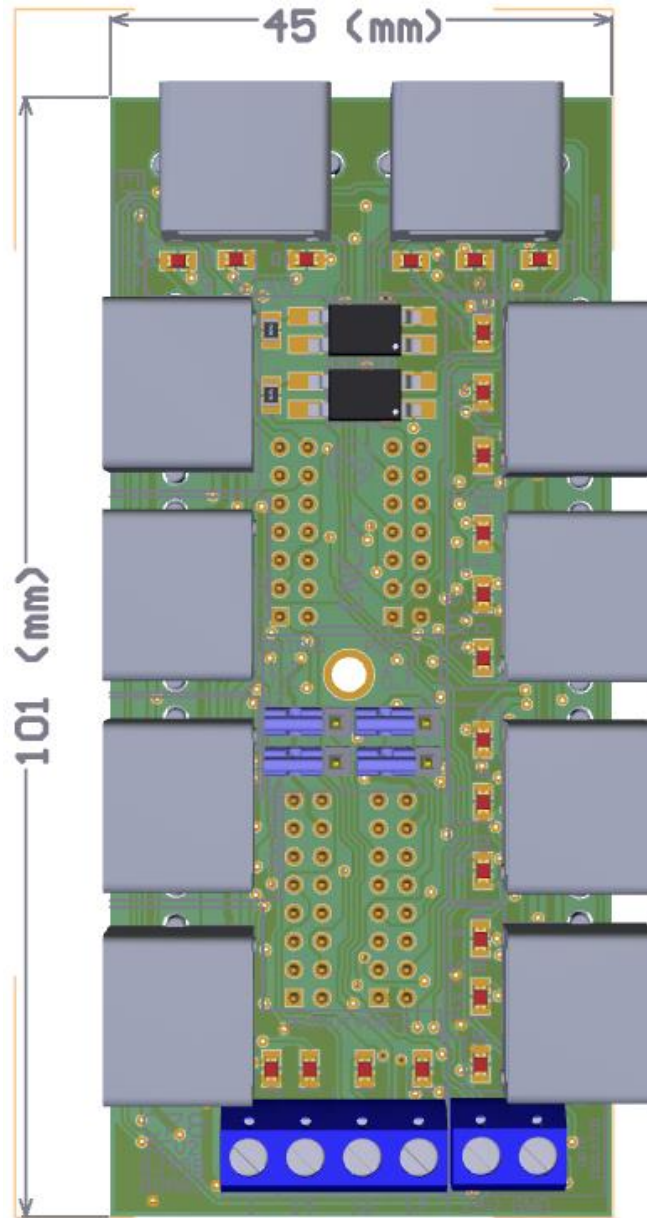
AXI 6

RJ45_1		RJ45_2		RJ45_3		RJ45_4		RJ45_5		RJ45_6	
RJ45 PIN	P.P. PIN	RJ45 PIN	P.P. PIN	RJ45 PIN	P.P. PIN	RJ45 PIN	P.P. PIN	RJ45 PIN	P.P. PIN	RJ45 PIN	P.P. PIN
1	NC	1	NC	1	NC	1	NC	1	NC	1	NC
2	1_2(Step X)	2	1_4(Step Y)	2	1_6(Step Z)	2	1_8(Step A)	2	1_1(Step 5)	2	1_14(Step 6)
3	NC	3	NC	3	NC	3	NC	3	NC	3	NC
4	GND	4	GND	4	GND	4	GND	4	GND	4	GND
5	Error/res X	5	Error/res Y	5	Error/res Z	5	Error/res A	5	Error/res 5	5	Error/res 6
6	1_3(Dir X)	6	1_5(Dir Y)	6	1_7(Dir Z)	6	1_9(Dir A)	6	1_17(Dir 5)	6	1_16(Dir 6)
7	12/24VDC	7	12/24VDC	7	12/24VDC	7	12/24VDC	7	12/24VDC	7	12/24VDC
8	5VDC	8	5VDC	8	5VDC	8	5VDC	8	5VDC	8	5VDC

8. WIRING SAMPLE WITH C48



9. DIMENSIONS



DISCLAIMER

Use caution. CNC machines can be dangerous machines. Neither DUNCAN USA, LLC nor Arturo Duncan are liable for any accidents resulting from the improper use of these devices. This product is not a fail-safe device and it should not be used in life support systems or in other devices where its failure or possible erratic operation could cause property damage, bodily injury or loss of life.