Digi-3-Coder

(Hot Foil Printer)

INSTALLATION DETAILS
OPERATOR INSTRUCTIONS
PARTS LISTING
CIRCUIT DIAGRAMS

Designed and manufactured by:

OPEN DATE EQUIPMENT LIMITED
UNITS 8 & 9 PUMA TRADE PARK
145 MORDEN ROAD
MITCHAM
SURREY
CR4 4DG
UNITED KINGDOM

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Digi-3-Coder Index

IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions carefully. Follow all warnings and instructions marked on the product.
2. Always disconnect the printhead and controller from the mains electricity and air supply before attempting to clean or service it.
3. Never operate the printhead unless it is installed within the mounting frame supplied. When installed correctly, the gap between the printer and print base should not be greater than 5mm. (see page 7)
4. Do not use the product near water. Never spill liquid of any kind on to the product.
5. Do not place this product on an unstable stand, table or machine. It may fall causing serious damage to the product or injury to the operator.
6. Never insert objects of any kind into this product through any openings or gaps as they may touch dangerous voltage points or short circuit parts that could result in fire or electric shock.
7. This product should only be operated from the type of electrical supply as indicated on the side guard of the printer. (see page 5 & 41)
8. Ensure that the printhead connection cable is fully secured to the printer, with the bayonet connector fully locked in place. Failure to do this will result in the machine not being properly earthed.
9. Use only the power cable supplied with the product. The cable supplied is three core mains cable, utilising one wire as a grounding conductor. This must be connected to a suitable earth point at the electrical supply. This is a safety feature. If any doubt arises in trying to connect the power cable, please contact the manufacturer or agent who supplied the product.
10. Do not allow anything to rest on the power cable. Do not locate the product where persons will walk on the cable.
11. If an extension cable is used with this product, make sure that the total ampere ratings of the equipment plugged into the extension cable does not exceed the extension cable ampere rating. Also make sure that the total rating does not exceed the fuse rating.
12. Do not service this product yourself as opening or removing guards may expose you to dangerous voltage points, major burns and other risks. Refer all servicing to qualified personnel.
13. Do not attempt to use to use this product in areas where explosive gases or substances are present.
14. Once the product is under normal working conditions, care must be taken when removing the type holder as you can easily burn yourself. There is a yellow warning sign on the type holder access door indicating a danger. Open the door by gripping it at the side. The type holder can get very hot, it should only be held by its plastic handle. Never touch the metallic parts, as temperatures could be as high as 220 degrees C.
15. Disconnect the product from the electrical and air supply, referring to servicing by qualified personnel under the following conditions.

    a. If the power cable is damaged or frayed.
    b. If the air pipes are damaged in any way.
    c. If liquid has been spilled into or if the product has been exposed to rain or water.
    d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the instructions. Improper adjustment may result in damage needing qualified technicians to restore the product to normal operating conditions.

16. Only Fit the recommended fuse as specified on the side of the printer. (800mA Anti-Surge)
    (Failure to fit the correct fuse, will invalidate the Printer Warranty and may cause printer problems)

EC DECLARATION OF CONFORMITY (Passed EMC Tests, September 2005)

We hereby declare that the following machinery complies with the essential health and safety requirements of the Machinery Directive 98/37/EC, and the Low Voltage Directive 73/23/EEC and its amendments, and the requirements of the Electromagnetic Compatibility Directive 89/336/EEC and its amendments.

Machine Description:	**Hot Foil Printer.**
Model:	**Digi-3-Coder**
Type:	.....
Serial number:	.....
Manufactured by:	**Open Date Equipment Limited.**
Address	**Units 8 & 9, Puma Trade Park,** **145 Morden Road,** **Mitcham,** **Surrey. CR4 4DG** **United Kingdom.**

The following transposed harmonised European standards have been used.

BS EN ISO 12100: part 1, 2003. Safety of machinery. Basic concepts, general principles for design. Basic terminology, methodology.

BS EN ISO 12100: part 2, 2003. Safety of machinery. Basic concepts, general principles for design. Technical principles.

EN294: 1992. Safety of machinery. Safety distances to prevent danger zones being reached by the upper limbs.

BS EN 563:1994. Safety of machinery. Temperatures of touchable surfaces. Ergonomics data to establish temperature limit values for hot surfaces.

EN60204: part 1, 1997. Safety of machinery. Electrical equipment of machines. Specification for general requirements.

Emissions Tests

Generic Standard: EN61000-6-3:2001. Including Conducted Emissions, Radiated Emissions, Harmonics & Voltage Flicker.

Immunity Tests

Generic Standard: EN61000-6-1:2001. Including Electrostatic Discharge, Radiated

Immunity, Fast Burst Transients, Surge Immunity, Conducted RF Immunity, Magnetic Immunity & Voltage Dips.

FCC Part 15 Verification , Class A. Conducted and Radiated Emissions.

In addition, this machinery has been designed and manufactured in accordance with:-

PD 5304:2000, Safe use of machinery.

A technical construction file for this machinery is retained at the above address.

Signed: ..... Date: .....

Name K.F. Wingfield. Position Service Manager

Signing on behalf of the manufacturer.

Operating Specifications for Digi-3-Coder

Supply Voltage (Autosensed)
Nominal 230v AC, plus or minus 10% tolerance (207 – 253). 50 or 60 Hertz.

Nominal 115v AC, plus or minus 5% tolerance (109 – 121). 50 or 60 Hertz.

Heater
Single Cartridge Heater, 240 Volt AC, 500 Watt. (Part No. HEA 312070)
Normal temperature range: 70ºC to 220ºC, or 158ºF to 428ºF

Thermistor
Model No. USP5362 (Part No. THE 312080)

Output Relay Contacts
Fault Relay:- Rated at 24V DC, 1 amp current.
Print Relay:- Rated at 24V DC, 1 amp current.
(Both relays utilise common, normally open or normally closed contacts)

Input Print Signals
Voltage Free contacts. (microswitch, relay or plc etc.)
Voltage 10 – 30 Volts AC or DC (polarity unimportant)

Microprocessor
PIC Micro-Processor type:-.
Controlled by a specific designed membrane panel with inbuilt switches etc.
The temperature display is seen through a translucent panel on the membrane.

Solenoid Valve Output
24 Volt DC, 80mA current normally. (Part No. VAL 312034)

Air Pressure required
4.0 to 6.8 bar

Air Consumption
231cc @ 6.8 bar free air per cycle.

Foil Capacity
153 Metres (500 feet)

Foil Indexing
2mm to 16mm in 0.1mm increments or (*0.078" to 0.628" in 0.005" Increments*)

Dwell Time
10 to 2000 milliseconds.

Print Signal Delay
0 to 999 milliseconds. (Indicated by flashing green LED if activated)

Fuse Rating
800mA Anti-Surge. This is a safety feature that allows the fuse to blow if the heater Circuitry fails.

Digi-3-Coder Installation Procedures

Do not connect the mains supply until you have ensured that correct voltage is being supplied. (See page 5, Operating Specifications)

If the printer is fitted to a stand alone bracket provided by Open Date Equipment Limited, connect the electrical supply as required. Connect a 6mm air pipe to the solenoid valve. The air supply should be fitted with an Air Filter Regulator, not supplied by Open Date Equipment.

Note!

The air supply received must be clean and dry, any moisture may damage the printer.

Procedures

1. Mount the printer into the frame.
2. Ensure the printer is approximately parallel to the print base, and the clearance under the printer is approximately 5mm. (See page 7)
3. Place and secure the connecting box in a suitable position, ensuring the cable socket reaches the printer. (see page 8)
4. Connect the two 6mm air pipes (red & black) to the solenoid valve & the Printer (see page 8)
5. Connect a 6mm air supply pipe from the solenoid valve to a dry air supply, through an Air Filter Regulator to control the pressure required. (see page 8)

Note!

Ensure all cables and air pipes are properly fed and do not obstruct the substrate or printer movements.

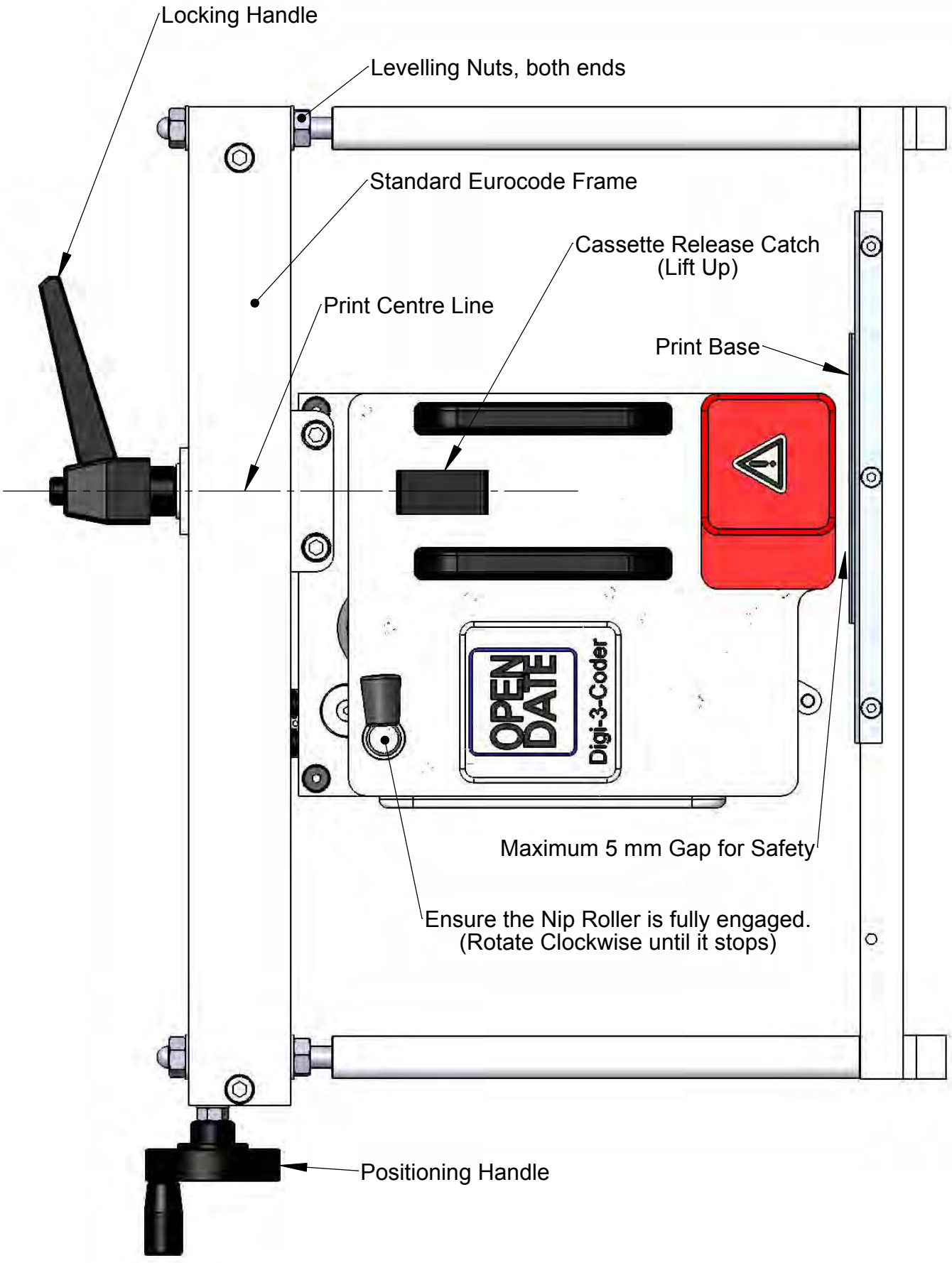
Connections

Mains Supply (see pages 5, 9 & 24)
Trigger/Print Signal (see pages 5, & 24)
Solenoid Valve (see pages 12 & 24)
Relays (see pages 10 & 24)
Low Air (see pages 11 & 24)

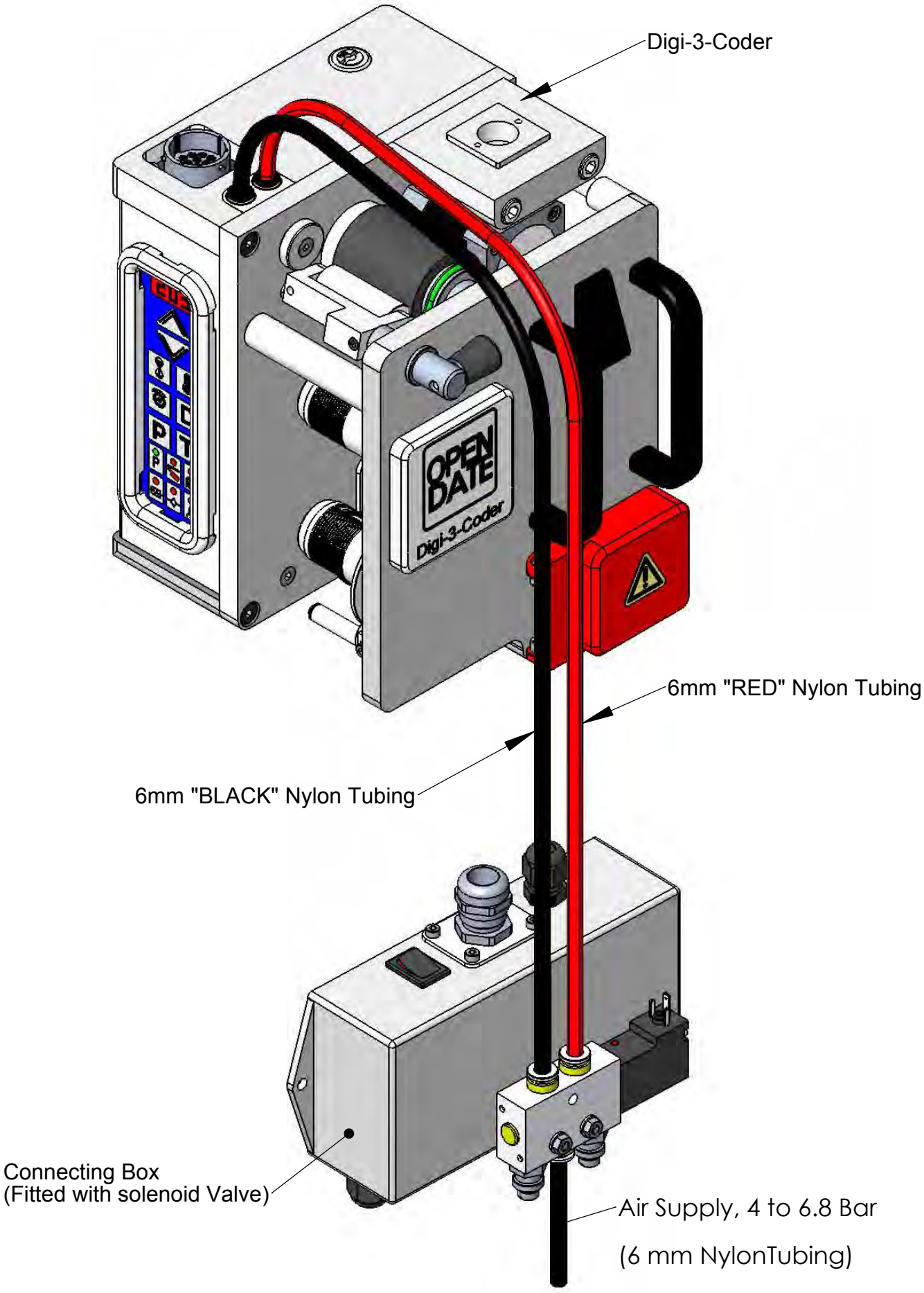
Settings and Calibration

Dip switch Settings (see page 26)
Calibration of Printer (see page 39)

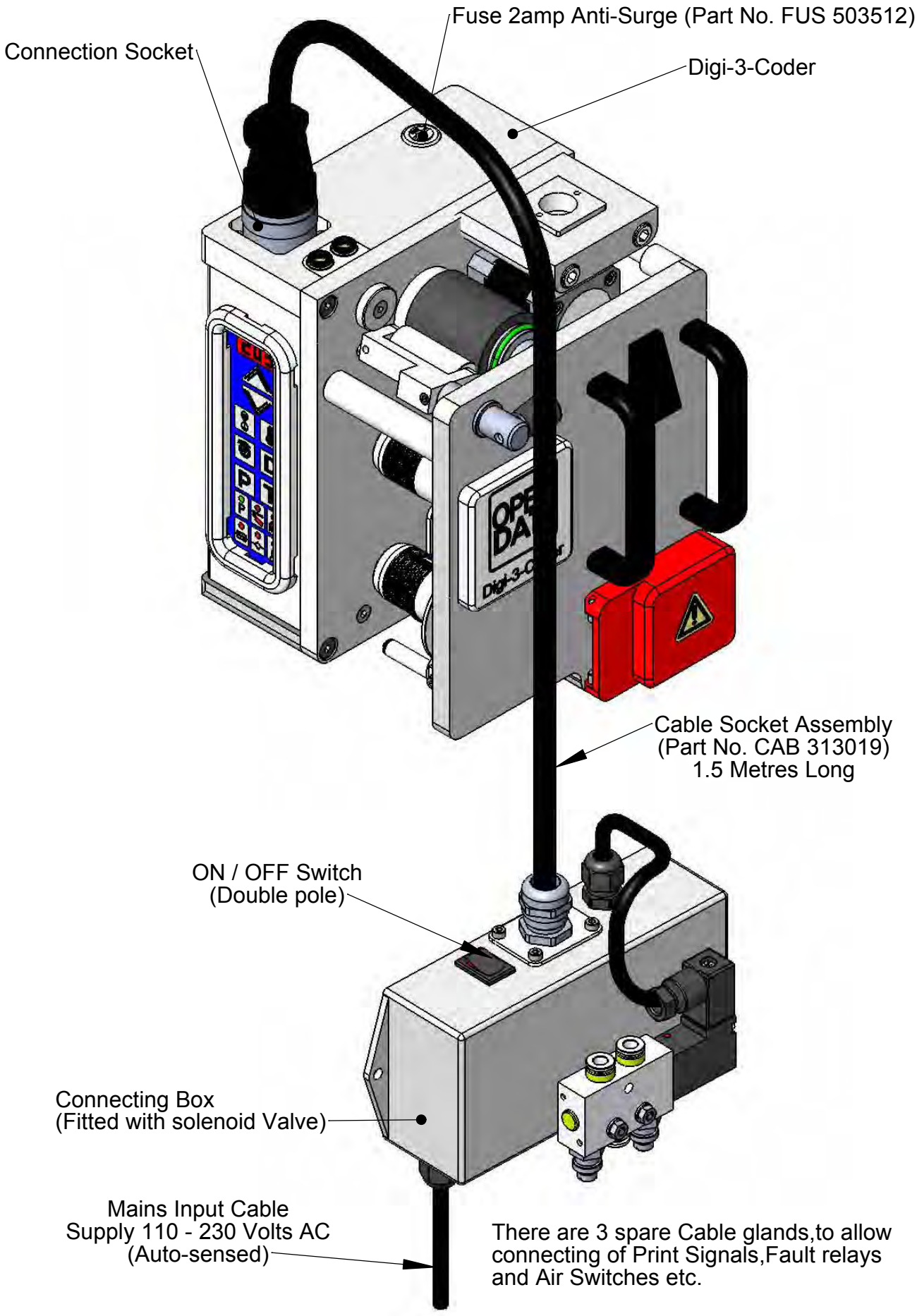
Digi-3-Coder Standard Frame Installation



Digi-3-Coder Pneumatic Installation Details

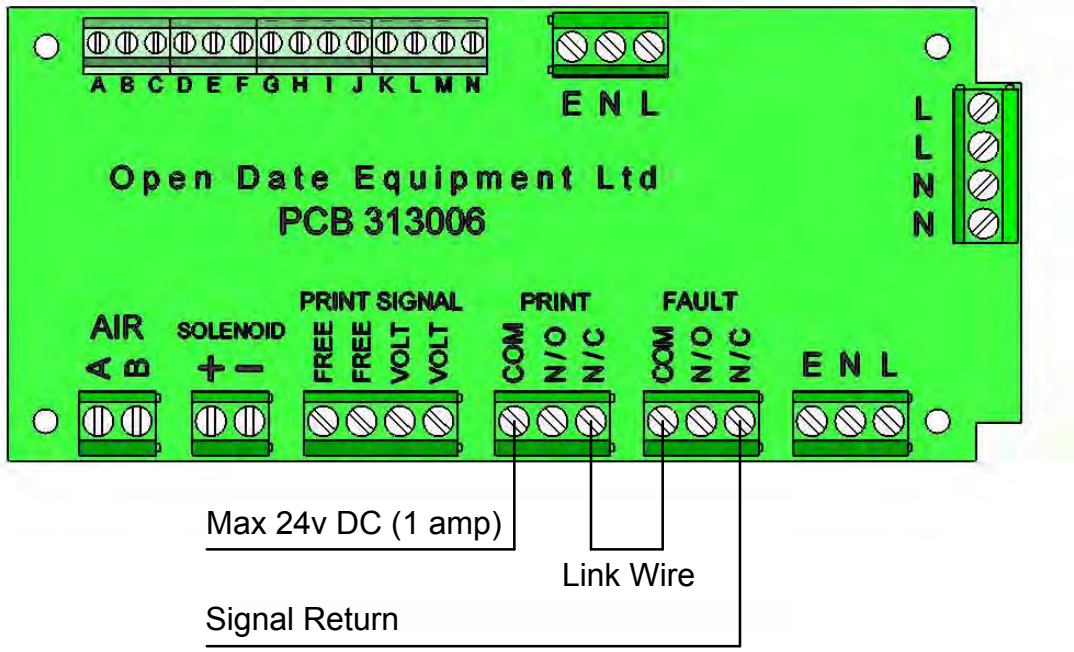


Digi-3-Coder Electrical Installation Details

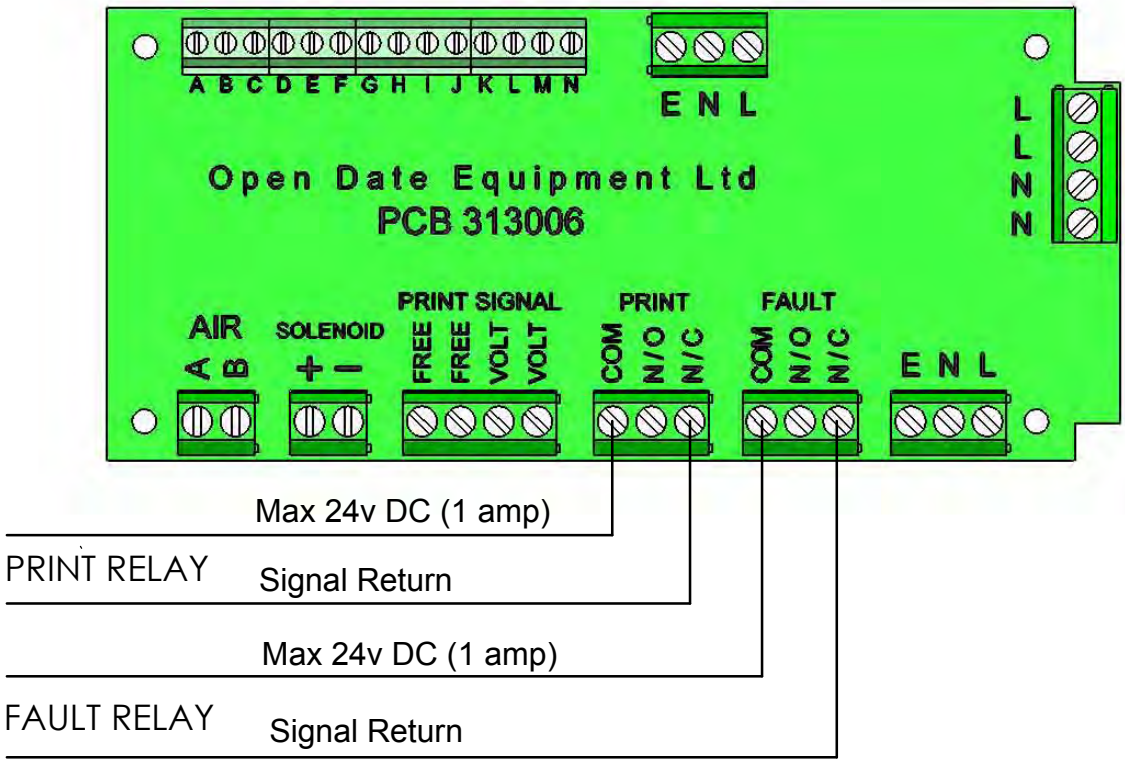


Digi-3-Coder Fault and Print Relay Connections

Linking the Fault and Print relays will achieve optimum security. If the Print switch is turned off, or when any fault occurs the relays will change state. This will break the signal return connection (High going Low) see below:-



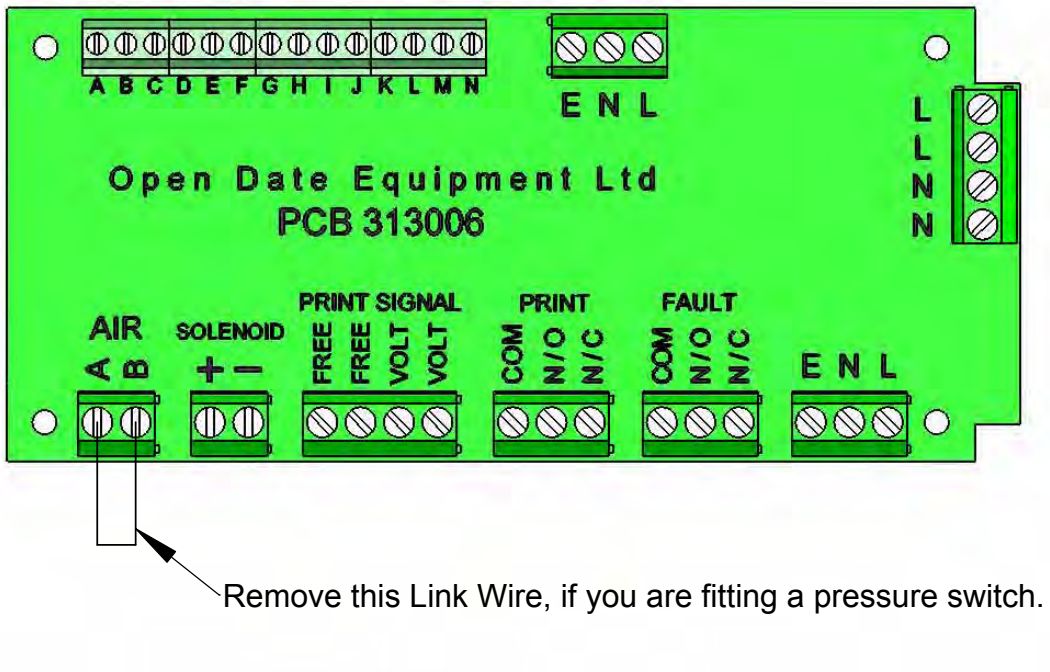
Digi-3-Coder Individual Relays & Connections



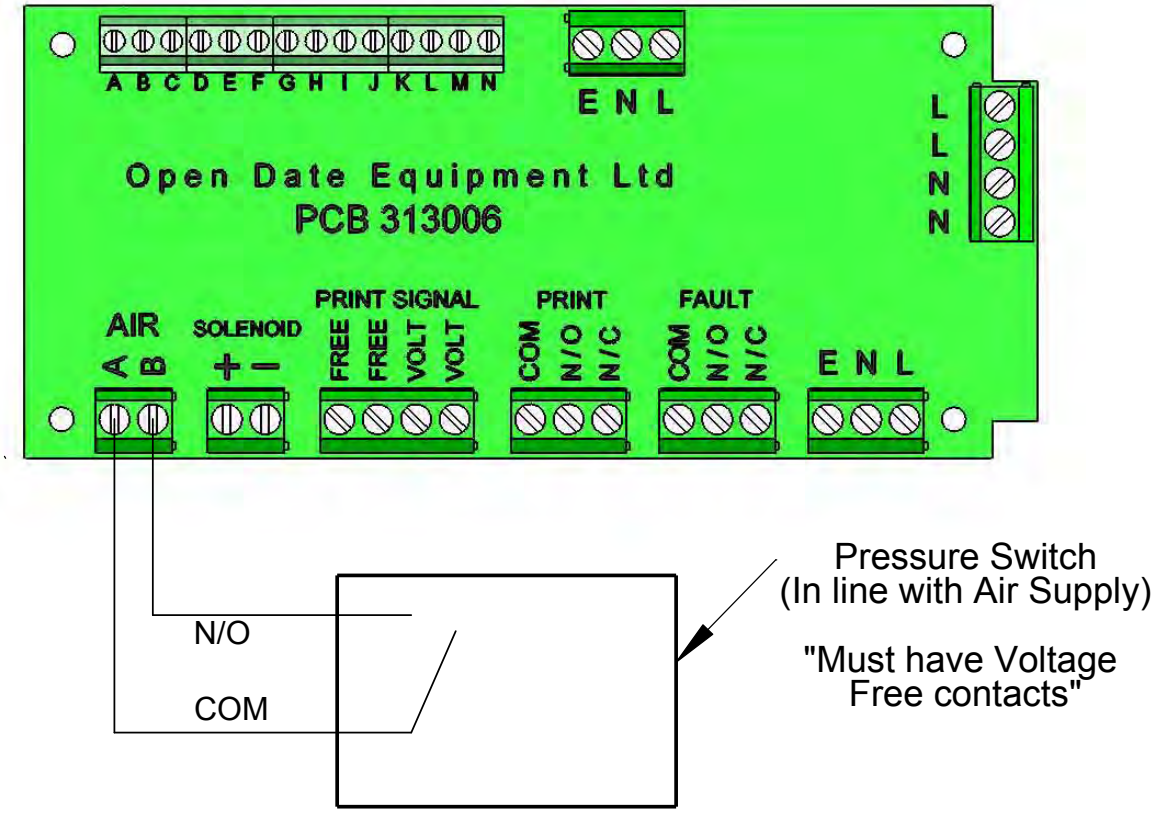
Both Relays are Rated at 24v DC, 1 amp maximum current.

Digi-3-Coder Low Air Pressure Option

The Digi-3-Coder supplied, has the Low Air Pressure option disabled via a link wire within the connections box, see picture below:-



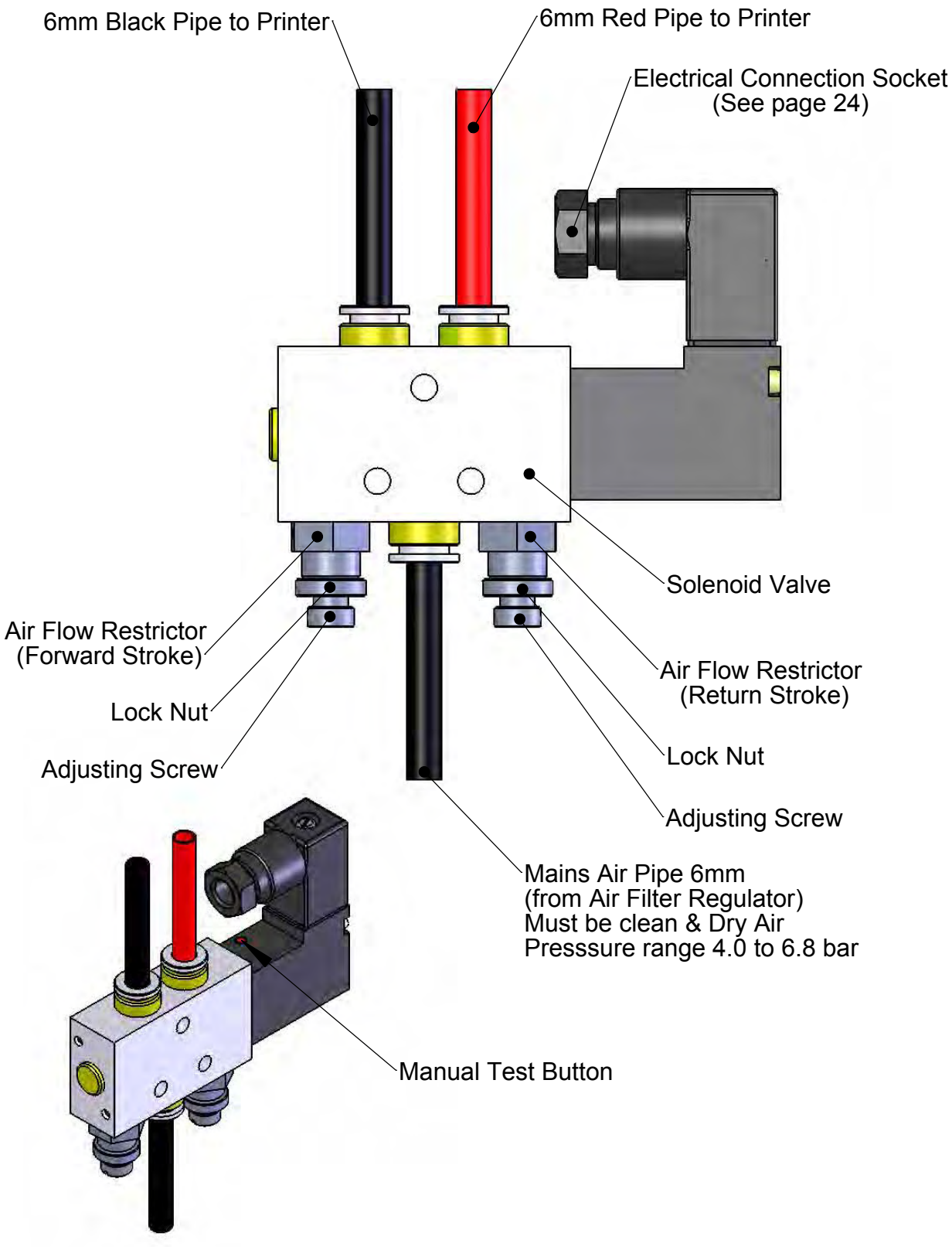
Digi-3-Coder Pressure Switch Connections



Digi-3-Coder Solenoid Valve Details

(Part No. VAL 312034 without fittings)

Voltage 24 Volt DC, 80mA Current normally



Digi-3-Coder Initial Setting Procedure

1. Ensure that printing foil and substrate are compatible. If in doubt, contact foil supplier for assistance.
2. Remove Type Holder from printhead.
3. Ensure that rubber print base is clean, undamaged and securely retained in position under printer.
4. Set air pressure regulator to approximately 6 bar (90 PSI)
5. Switch Printer on.
6. Set print dwell time to 120 milli-seconds and temperature to 130ºc (266ºF). allowing 3 to 4 minutes for printer to reach working temperature. (See pages 15 & 16)
7. Load type or die into holder, centrally if possible and fasten securely. Make sure that typeface is clean. (See page 37)
8. Load type/die holder into printer and close door. If cold, allow 3 to 4 minutes for holder to heat up before printing.
9. Remove foil magazine and load foil as detailed in this manual. (See page 18)
10. Re-fit foil magazine, ensuring the pinch roller is engaged first.
11. Ensure that **PRINT** switch is off.
12. Place a sample of substrate material under printer and press **TEST** button. Inspect resulting print.
13. Adjust print levelling screws until a light, uniform print impression is achieved. Lock levelling screws.
14. Adjust foil index for economical use, according to the print height. (See pages 15 & 16)
15. Press the **PRINT** switch for automatic operation.

Print Orientation (See page 7)

To rotate the printer and therefore turn the overprint through 90 degrees. Turn printer off, and disconnect the connection cable. Shut off the air supply and remove both 6mm pipes from the Printer. Unscrew the clamping handle until the location square on the top of the printhead is clear of the top rails. Turn the printer to the required position, tighten the clamping handle. Re-fit the air pipes and connection cable.

Temperature Adjustment (See pages 15 & 16)

- Normal setting is about 130ºc. (266ºF).
-
- Should the print not fully adhere to the substrate then a higher setting may be used.
-
- Small, fine detail print generally requires a lower temperature.
-
- Thermoplastic films and especially polyethylene generally require a lower temperature.
-
- Aluminium foils, paper and untreated polyester require a higher temperature.

See page 39 for temperature calibration

Digi-3-Coder Initial Setting Procedure (continued)

Print Dwell Adjustment (See pages 15 &16)

- Normal setting is about 120 milli-seconds.
-
- Generally, the larger the print, the higher the setting.
-
- Should the print not adhere fully to the substrate, a higher setting may be used.
-
- Remember, the printhead can only operate during the stationary cycle of the web, if the print time is longer than this the web may break.
-
- Should the dwell time have to be decreased to accommodate higher production speeds, it may be necessary to compensate by increasing the temperature setting.

Air Flow Controls (See pages 8 &12)

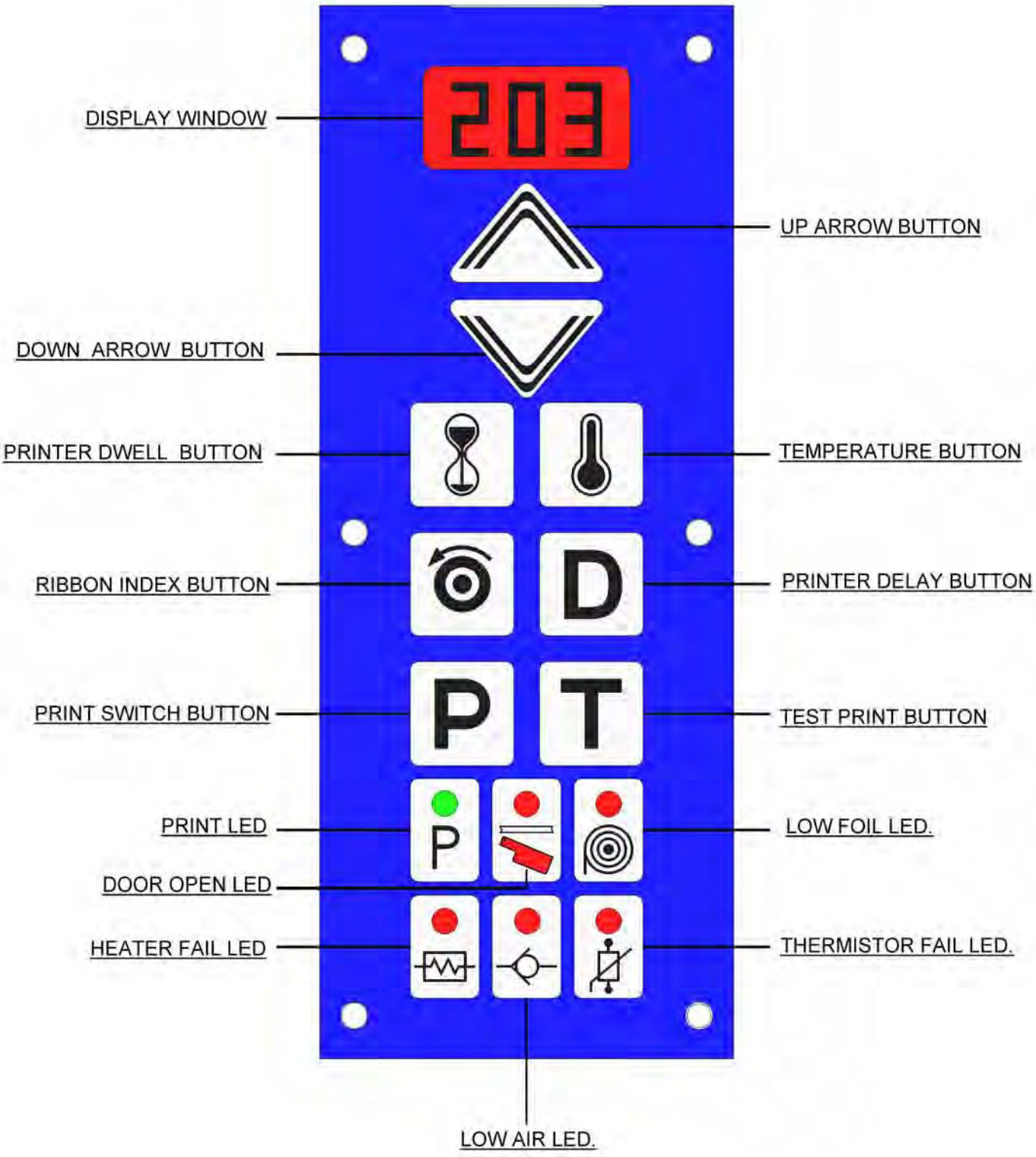
The airflow restrictors are usually attached to the solenoid valve exhaust ports. They work by regulating the speed at which air is exhausted from the air cylinder.

Turning the adjusting screws will alter the exhaust airflow and consequently the print ram velocity (speed), it also affect noise levels.

Increasing the exhaust airflow from the forward stroke of the print ram will increase the print pressure. Decreasing the exhaust airflow will reduce print pressure and the resulting print will be lighter.

For higher speed operation, the exhaust airflow from both the forward and return strokes will have to be increased.

Digi-3-Coder Membrane Keys & LED's Layout



See next pages, for a full description of functions and features.

Digi-3-Coder Operator Controls

Temperature Button

To adjust the temperature setting, press and hold down the temperature button and use the up/down arrow keys to increase or decrease the set point. (Required Temperature)

Range:- Minimum 70ºC (158ºF), Maximum 220ºC (428ºF).

In normal operation, temperatures could fluctuate by up to ±3% from the set point.

Default setting: 130°C - 266°F (See page 26 for temperature options).

Print Dwell Button

To adjust the print dwell setting, press and hold down the print dwell button and use the up/down arrow keys to increase or decrease the value required.

This adjustment controls the time the type/die face is in contact with the substrate. Higher numbers indicate longer dwell times.

Range:- 10 to 2000 milliseconds. (0.010 – 2 Seconds)

Default setting: 85 ms

Print Delay Button

To adjust the print delay setting, press and hold down the print dwell button and use the up/down arrow keys to increase or decrease the value required.

This adjustment controls the delay before printing.

Range:- 0 to 999 milliseconds. (0 – 1 Second)

Default setting: 0. ms (if a delay value has been programmed, the led will flash)

Ribbon Index Button

To adjust the ribbon index setting, press and hold down the print index button and use the up/down arrow keys to increase or decrease the value required.

This adjustment controls the amount of ribbon indexed, per print.

Range:- 2 to 16mm, in 0.1mm increments.

Default setting: 13.5mm.

Print Switch

Switches the print signal between external trigger (automatic print cycle) and the test button feature (manual operation).

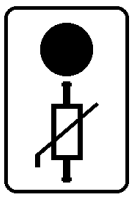
Note! The Print LED (green) is illuminated when switched for external triggering (automatic print cycle).

Test Button.

Manually operates the printer (will not operate whilst the Print LED is on).

Digi-3-Coder System LED Faults

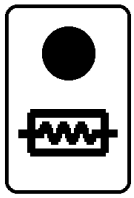
"Any fault will disable the print switch and activate the fault relay"



Thermistor LED on

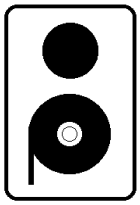
Thermistor open circuit.

The heater is switched off and the internal alarm is sounding.



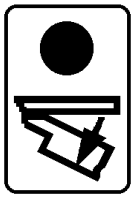
Heater LED on

Heater is open circuit and the internal alarm is sounding.



Foil Run Out LED on

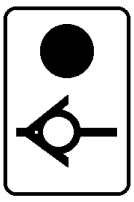
At end of foil roll, the LED is on, and the internal alarm is sounding.



Type Holder Door Opened, LED "On"

Type holder door is open, the LED is on and the internal alarm is sounding.

Print Button & Test Print Button trigger signals, are disabled.



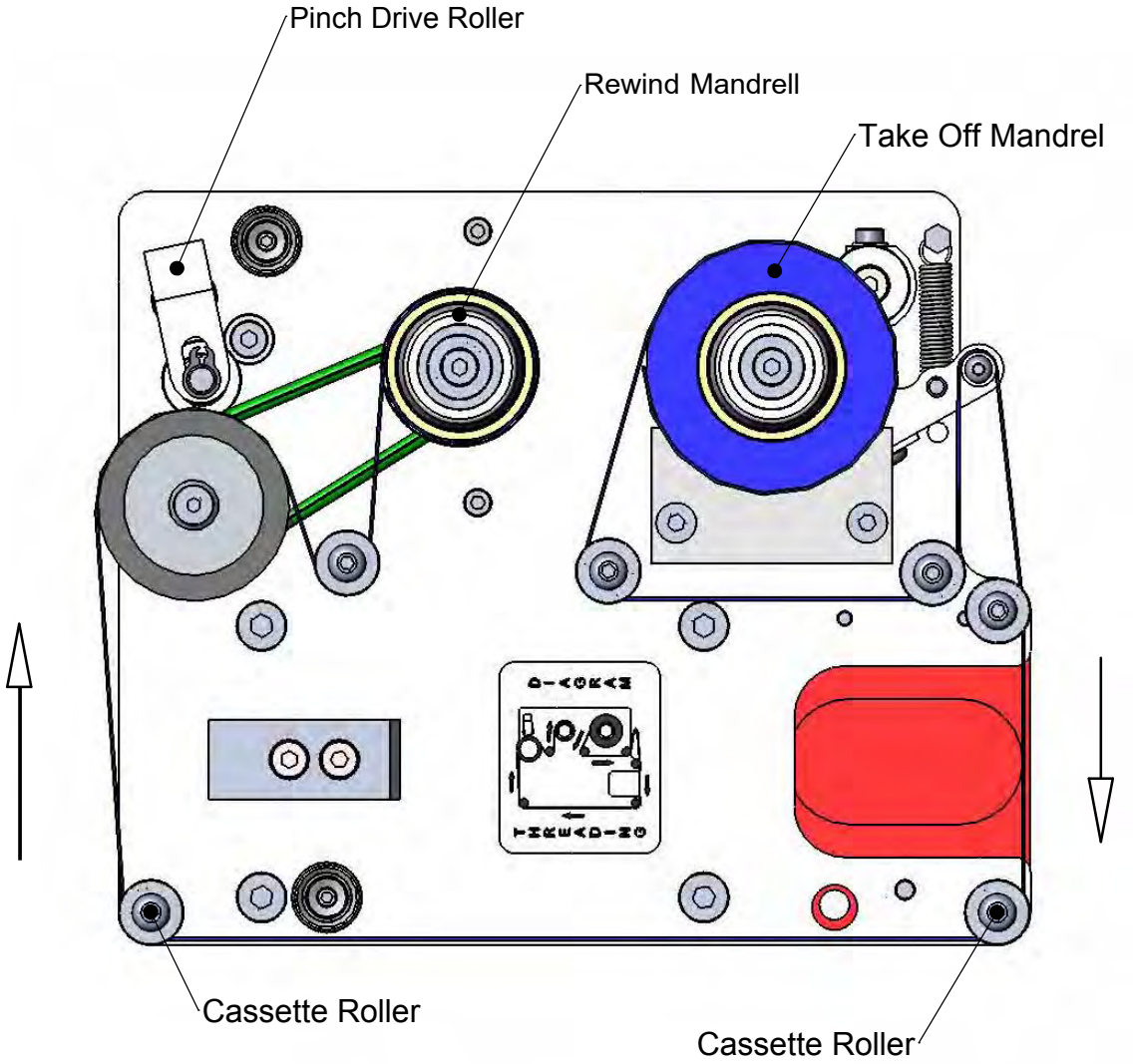
Low Air Pressure Switch (If connected)

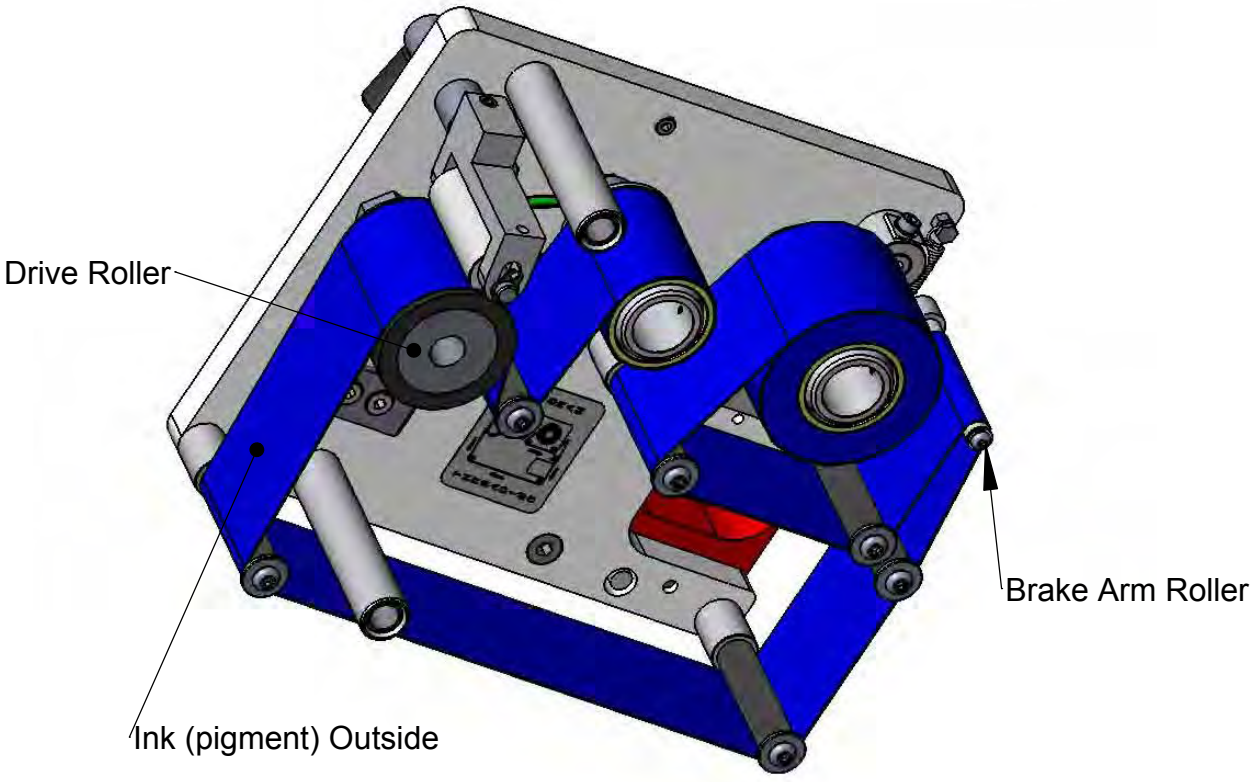
When air pressure is low, the LED is on, and the internal bleeper is sounding.

External Pressure switch required. (Not supplied as standard)

See separate wiring detail.

Digi-3-Coder Threading Diagram





Digi-3-Coder Mechanical Fault Finding

FAULT	POSSIBLE CAUSE
Insufficient foil pull.	Defective stepper motor. Drive belt is broken. Drive pulley loose on stepper motor. Driven pulley loose on bearing housing. Pinch roller not engaged. Drive roller damaged or dirty. Wrong index amount in settings.
Solenoid operates but printer does not.	No or low air pressure. Air pipe damaged. Dwell time may need to be increased. Dirty air supply, contaminating pipes etc.
Printer operates but does not print, i.e. impression but no print.	Printing foil exhausted. Printing foil not being driven through. Printing foil not suitable for substrate. Little or no heat. Little or not enough dwell time.
Printing foil tracks over to one side.	Bent spindle on foil magazine. Brake arm loose. Pinch roller misaligned with drive roller. Type not fitted centrally on type holder.
Foil rewind is loose.	Green drive belt worn out or dirty. Green drive belt is not fitted correctly. Loose cardboard core on rewind mandrel.
Printer is sluggish.	Insufficient air pressure. Flow restrictors wound in too far. Faulty valve. Dirty air supply, contaminating pipes etc.

Digi-3-Coder Operator Instructions

MAGAZINE REMOVAL (See pages 7 & 18)

To remove the foil magazine, slide the catch away from the type holder access door, hold in place and withdraw the magazine using the two handles.

FOIL THREADING (See page 18)

1. Fit an empty foil core onto the rewind mandrel.
2. Disengage the pinch drive roller.
3. Remove label from a new roll of foil.
4. Fit new roll of foil onto take-off mandrel (note unwind direction as shown on threading diagram).
5. Thread foil around all rollers as shown on threading diagram. Note, the gloss side of the foil should face inwards throughout the foil path.
6. Attach end of foil to empty core on rewind mandrel, gloss side facing inwards.
7. Wind foil on a few turn to track and tension it.
8. Engage pinch drive roller.

RE-FITTING FOIL MAGAZINE

Hold the magazine by the two handles, slide onto the locating pins and push to lock in place. Press the **PRINT** switch on.

FITTING TYPE/DIE HOLDER

"Never assume that a Type/die holder is cold"

Only pick up a type/die holder by its handle. Ensure that the face of the magnetic catch is clean. Open the red type holder access door (the alarm will sound continuously), align the type/die holder within the two side locators and slide in until the magnet catches on the end plate. Close the door. (Alarm stops sounding)

FOIL FEED ADJUSTMENT (See pages 15 & 16)

This is used to adjust the amount of foil used per print, adjusting the print index button to achieve the correct index required. A gap of 1 or 2mm is recommended between each section of used foil.

NOTE!

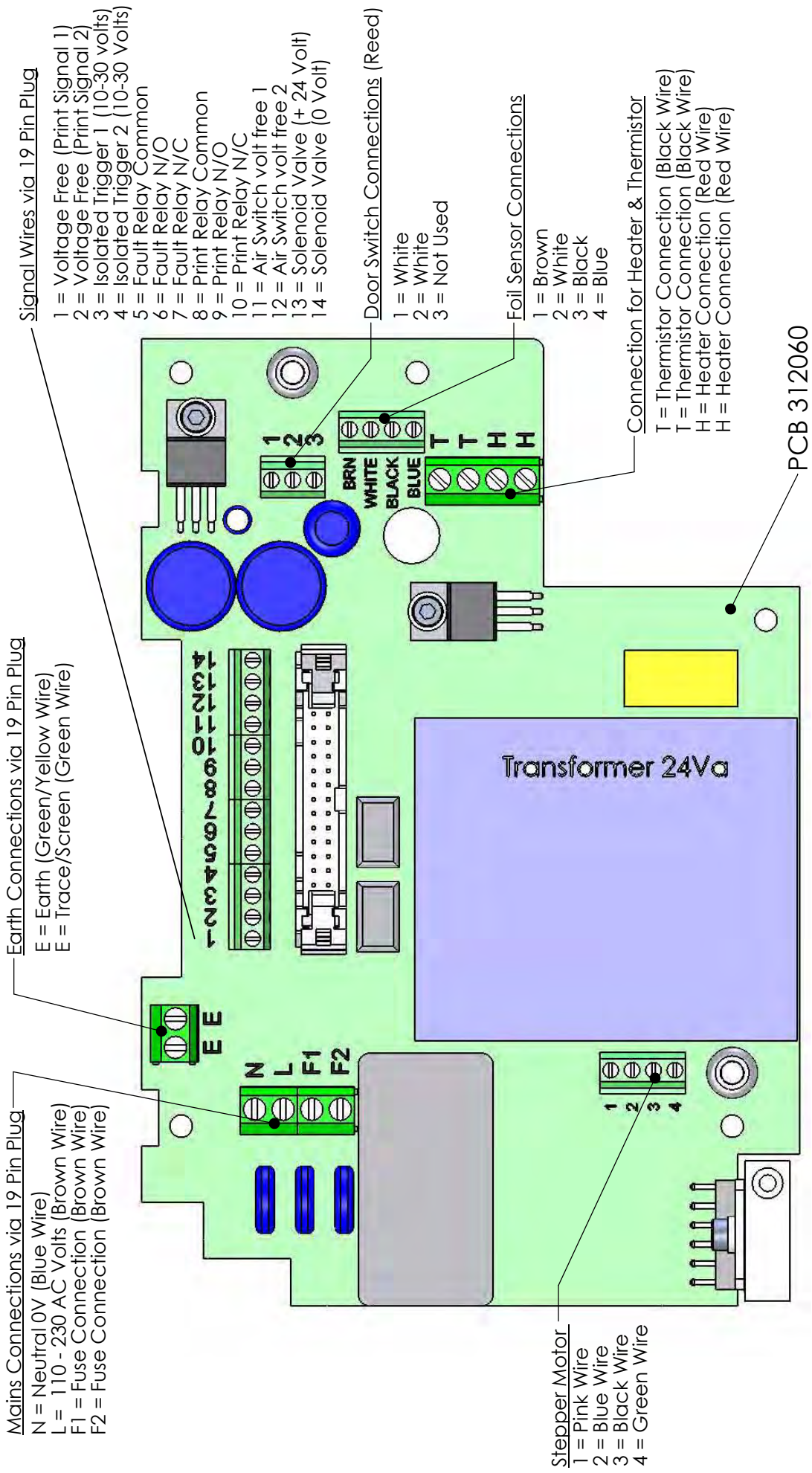
The new firmware will prevent the printer from going above 240ºC, if so the printer will stop operating, the alarm will sound, the heater will be switched off and the fault relay will operate. Until the printer temperature has reduced to a safe level.

Digi-3-Coder Print Quality Deterioration

"Print quality deterioration can be attributed to any of the following causes"

POSSIBLE CAUSE	CURE
Insufficient foil pull	See pages 16 & 19 (Foil Feed Adjustment)
Insufficient air pressure.	Check pressure regulator setting. See that pipes are not damaged.
Printer not level with print base.	Adjust levelling screws.
Too much or too little heat.	Check that settings are correct. Type holder loose in side locators.
Dirty, worn or damaged dies or type.	Clean or replace.
Damaged or out of position print base rubber.	Replace or re-position.
Printing foil not compatible with substrate.	Contact foil supplier.
Substrate surface altered, i.e. different coating.	Contact substrate or foil supplier.
Print ram not completing full stroke.	Open forward flow restrictor (where fitted). Increase print dwell time.
Substrate moving before print head is clear.	Reduce print dwell time.
Print Dwell incorrectly set.	Adjust as necessary.

Digi-3-Coder Main Circuit Board Connections (see next pages)



Digi-3- Coder (Wiring Connections) Trident 19 Way Plug on Printer

Signal	No.	Wire type	Pin No.	Colour	Length
Mains Neutral (Part No. PIN 508218) 20 AWG		0.5mm^2	F	BLUE	70mm
Mains Live (Part No. PIN 508218) 20 AWG		0.5mm^2	G	BROWN	80mm
Mains Earth (Part No. PIN 508218) 20 AWG		0.5mm^2	H	GREEN/YELLOW	70mm
Screen/Trace (Part No. PIN 508218) 20 AWG		0.5mm^2	J	GREEN	70mm
Volt free trigger 1 (Part No. PIN 508219) 24 AWG	1	0.22mm^2	T	GREEN	75mm
Volt free trigger 2 (GND) (Part No. PIN 508219) 24 AWG	2	0.22mm^2	S	YELLOW	75mm
Isolated Voltage trigger 1 (Part No. PIN 508219) 24 AWG	3	0.22mm^2	R	WHITE	85mm
Isolated Voltage trigger 2 (Part No. PIN 508219) 24 AWG	4	0.22mm^2	E	BLACK	85mm
Fault relay Common (Part No. PIN 508219) 24 AWG	5	0.22mm^2	K	ORANGE	90mm
Fault relay NO (Part No. PIN 508219) 24 AWG	6	0.22mm^2	U	BROWN	90mm
Fault relay NC (Part No. PIN 508219) 24 AWG	7	0.22mm^2	V	GREY	100mm
Print relay Common (Part No. PIN 508219) 24 AWG	8	0.22mm^2	P	PINK	100mm
Print relay NO (Part No. PIN 508219) 24 AWG	9	0.22mm^2	D	GREY/ BLUE	110mm
Print relay NC (Part No. PIN 508219) 24 AWG	10	0.22mm^2	C	MAUVE	110mm
Air fail volt free 1 (Part No. PIN 508219) 24 AWG	11	0.22mm^2	L	YELLOW/RED	115mm
Air fail volt free 2 (GND) (Part No. PIN 508219) 24 AWG	12	0.22mm^2	N	GREEN/RED	115mm
Solenoid + (Part No. PIN 508219) 24 AWG	13	0.22mm^2	A	RED	125mm
Solenoid - (GND) (Part No. PIN 508219) 24 AWG	14	0.22mm^2	B	BLUE	125mm

Digi-3-Coder OEM Connections PCB

Printer Connections

1 + 2 = Connections to Printer 19 way Socket.

A = Air Fail volt free 1
B = Air Fail volt free 2
C = Solenoid Valve + 24 Volt DC
D = Solenoid Valve 0 Volt
E = Volt free trigger 1
F = Volt free trigger 2
G = Isolated Voltage trigger 1
H = Isolated Voltage trigger 2
I = Print Relay Common
J = Print Relay N/O
K = Print Relay N/C
L = Fault Relay Common
M = Fault Relay N/O
N = Fault Relay N/C

E = Earth Connection
N = Neutral 0 Volt
L = 110-230 AC Voltage Input

3 = Mains Link Connections

If fitted into Connection Box Assembly:-

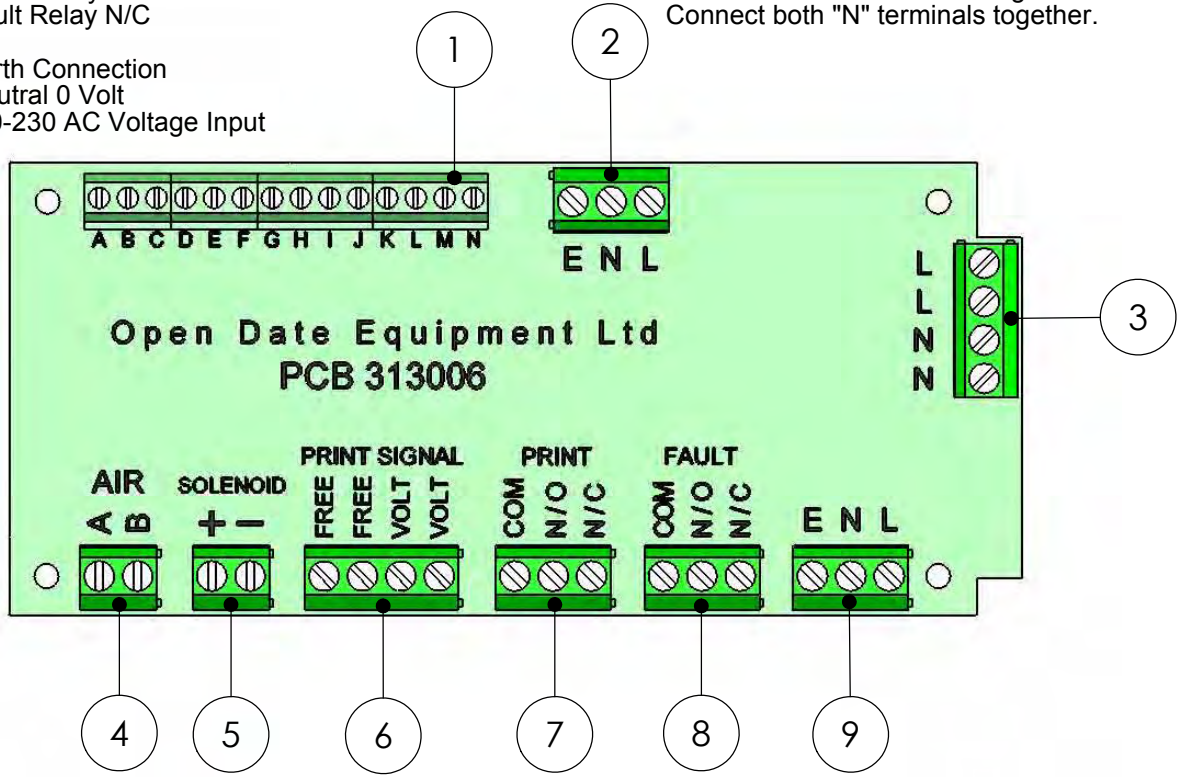
(Part No. BOX 312085)

Connect both "L" terminals to each side of mains switch. (inividual switch contact)

Connect both "N" terminals to the other sides of switch. (individual switch contact)

If used in a parent machine:-

Connect both "L" terminals together.
Connect both "N" terminals together.



OEM and Customer Connections

4 = Low Air Switch connections.
If Air Switch not fitted, please link "A" + "B". (Voltage Free)

5 = Solenoid Valve Connections (24 Volt DC, 80mA current nominal)
Red Wire to "+"
Blue Wire to "-"

6 = Print Signal Inputs
Connect any Voltage Free contacts to both "FREE" terminals. (Microswitch, relay or PLC contacts etc.)
Connect any Voltage Pulse (10 - 30 Volts AC or DC) Polarity unimportant.

7 = Print Relay Connections (Controlled by the Print Switch)
Connections: Common (COM), Normally Open (N/O) or Normally Closed (N/C)
Rated at 24V DC, 1 amp.

8 = Fault Relay Connections (Any Fault raises the Alarm & changes over the relay)
Connections: Common (COM), Normally Open (N/O) or Normally Closed (N/C)
Rated at 24V DC, 1 amp.

9 = Supply Voltage Input
E = Earth connection
N = Neutral Connection (O Volt)
L = Live Mains Connection (110 - 230 Volts AC) Autosensed

Digi-3- Coder (Wiring Connections) Trident 19 Way Socket on Connection Cable

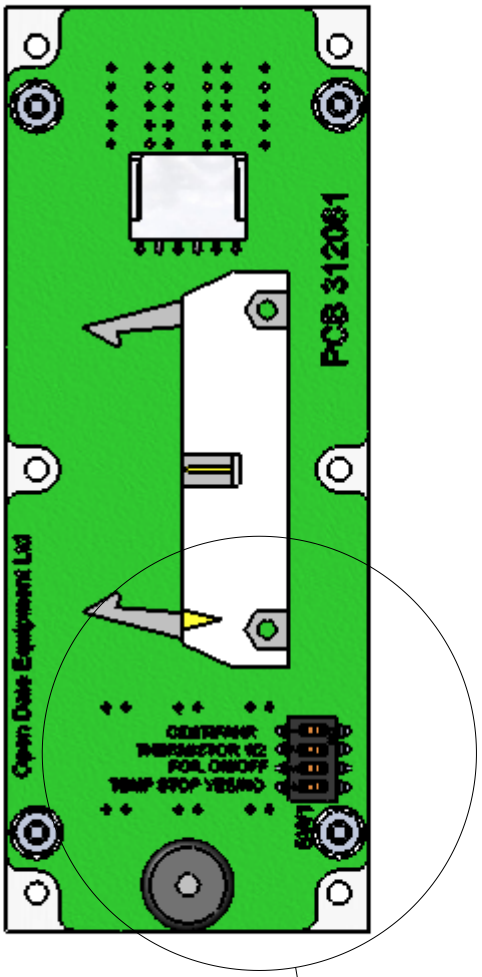
"Cable lengths supplied of 1.5 metres or 2.9 metres, stripped at the socket end 45mm"

Signal Name & Socket	Connector	Wire	Plug No	Colour	Length
Mains Neutral (Part No. SKT 508325) 20 AWG	N	0.5mm^2	F	BLUE	45mm
Mains Live (Part No. SKT 508325) 20 AWG	L	0.5mm^2	G	BROWN	45mm
Mains Earth (Part No. SKT 508325) 20 AWG	E	0.5mm^2	H	GREEN/YELLOW	45mm
Screen/Trace (Part No. SKT 508325) 20 AWG	CUT OFF	0.5mm^2	J	GREEN	45mm
Volt free trigger 1 (Part No. SKT 508326) 24 AWG	E	0.14mm^2	T	GREEN	45mm
Volt free trigger 2 (GND) (Part No. SKT 508326) 24 AWG	F	0.14mm^2	S	YELLOW	45mm
Isolated Voltage trigger 1 (Part No. SKT 508326) 24 AWG	G	0.14mm^2	R	WHITE	45mm
Isolated Voltage trigger 2 (Part No. SKT 508326) 24 AWG	H	0.14mm^2	E	BLACK	45mm
Fault relay Common (Part No. SKT 508326) 24 AWG	L	0.14mm^2	K	ORANGE	45mm
Fault relay NO (Part No. SKT 508326) 24 AWG	M	0.14mm^2	U	BROWN	45mm
Fault relay NC (Part No. SKT 508326) 24 AWG	N	0.14mm^2	V	GREY	45mm
Print relay Common (Part No. SKT 508326) 24 AWG	I	0.14mm^2	P	PINK	45mm
Print relay NO (Part No. SKT 508326) 24 AWG	J	0.14mm^2	D	LIGHT BLUE	45mm
Print relay NC (Part No. SKT 508326) 24 AWG	K	0.14mm^2	C	MAUVE	45mm
Air fail volt free 1 (Part No. SKT 508326) 24 AWG	A	0.14mm^2	L	YELLOW/BLACK	45mm
Air fail volt free 2 (GND) (Part No. SKT 508326) 24 AWG	B	0.14mm^2	N	GREEN/BLACK	45mm
Solenoid + (Part No. SKT 508326) 24 AWG	C	0.14mm^2	A	RED	45mm
Solenoid - (GND) (Part No. SKT 508326) 24 AWG	D	0.14mm^2	B	BLUE	45mm

Digi-3-Coder Dip Switch Settings & Explanations

The dip switches are located behind the membrane, inside the printer.

Access by removing the side guard of the printer.



Default Dip Switch Settings

Europe	USA
1 = OFF	1 = ON
2 = OFF	2 = OFF
3 = OFF	3 = OFF
4 = ON	4 = ON

Description of Switches

1 = CENT/FAHR

Off = Centigrade,
ON = Fahrenheit

2 = THERMISTOR 1/2

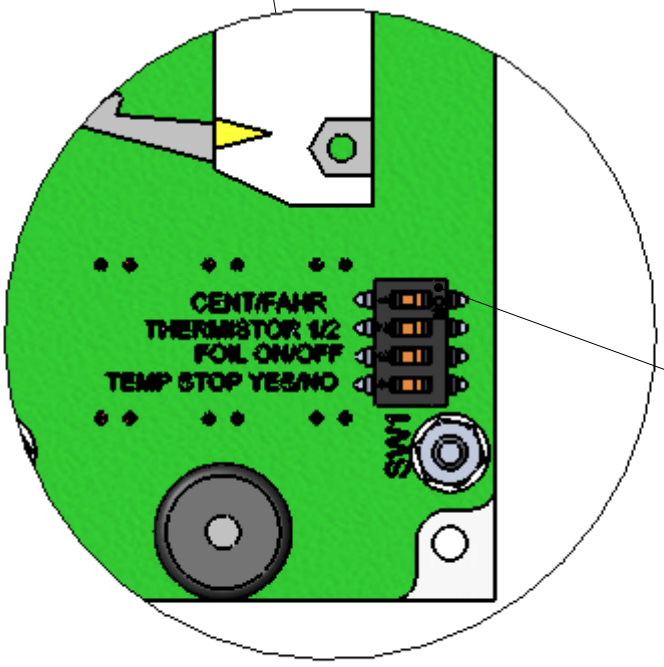
Off = USP Thermistor (Standard)
ON = Alternative Thermistor

3 = FOIL ON/OFF

Off = Foil Sensor Fitted.
ON = Not Fitted

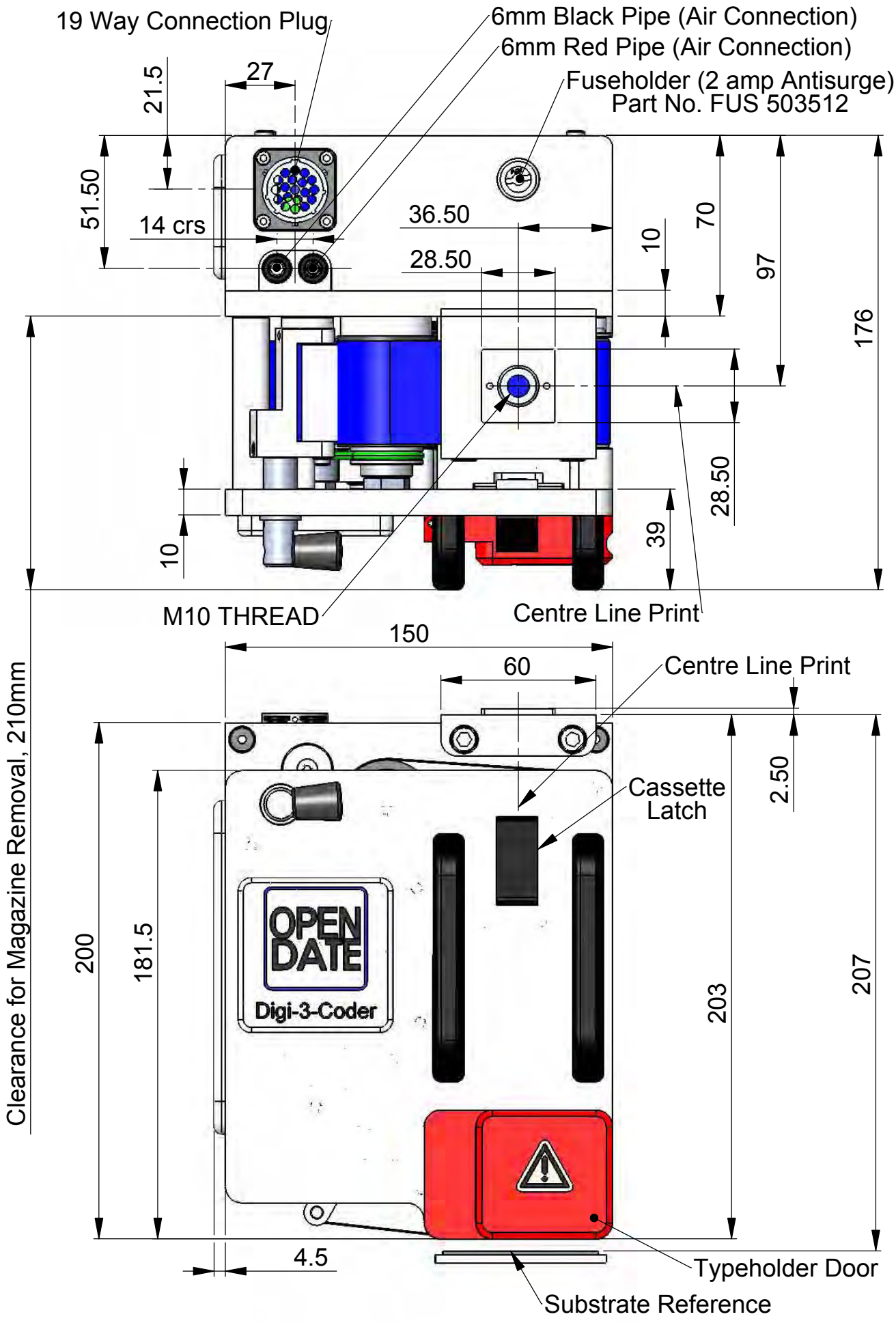
4 = TEMP STOP YES/NO

Off = Prints only within temperature range
ON = Prints at any temperatures.



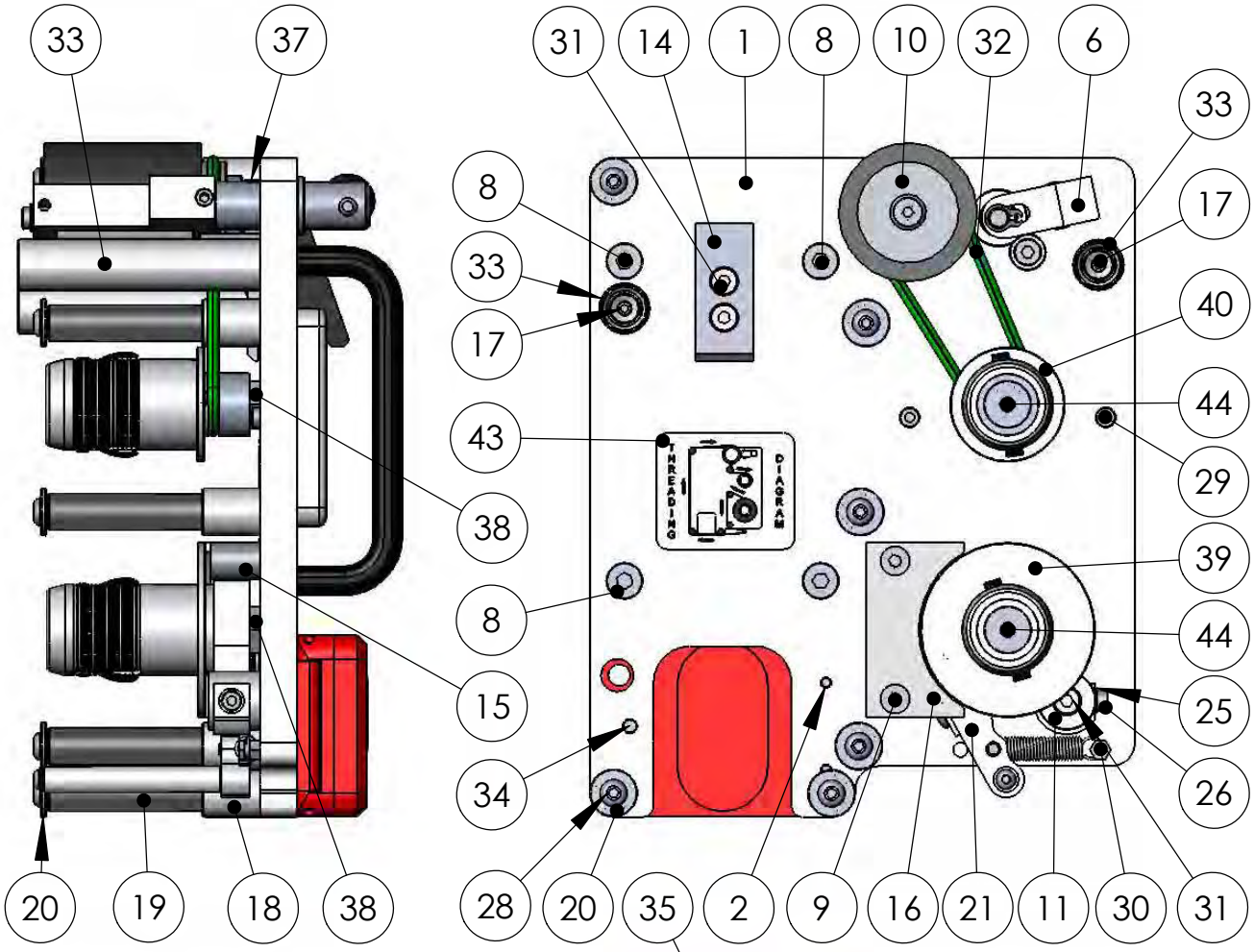
Dip Switch Location
(enlarged view)

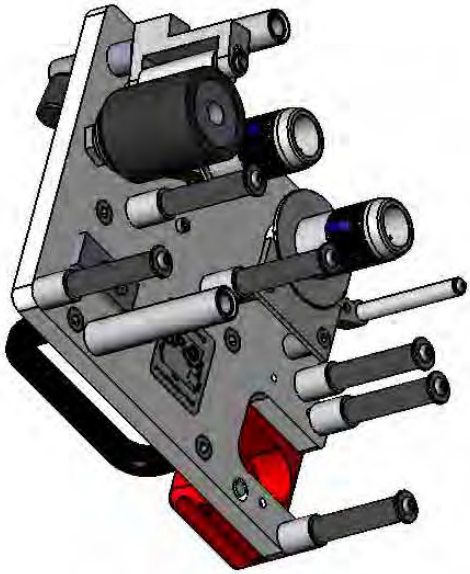
Digi-3-Coder Dimensional Drawing

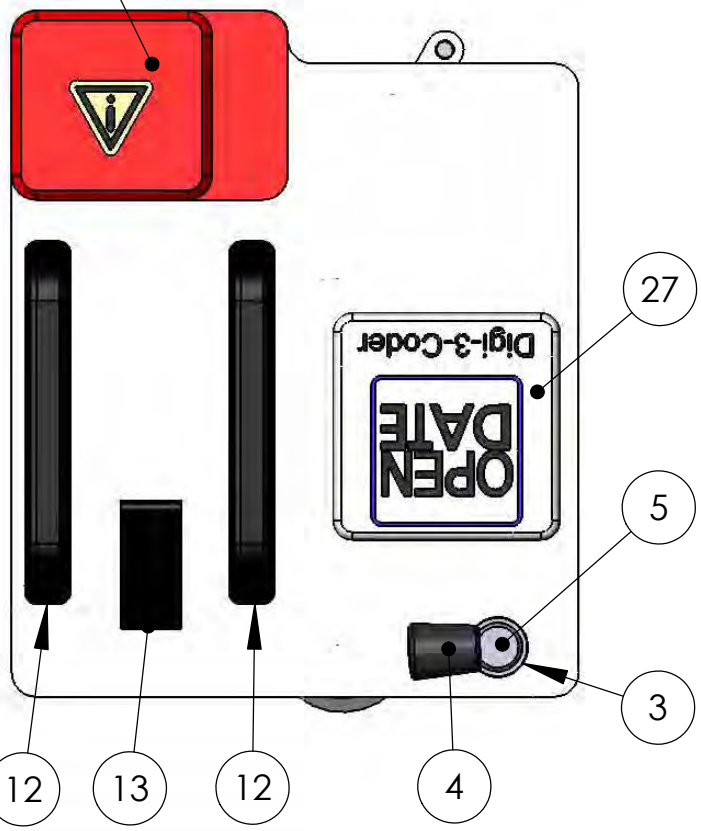


Digi-3-Coder Cassette Spare Parts Drawing

(Part No. CAS 311000)





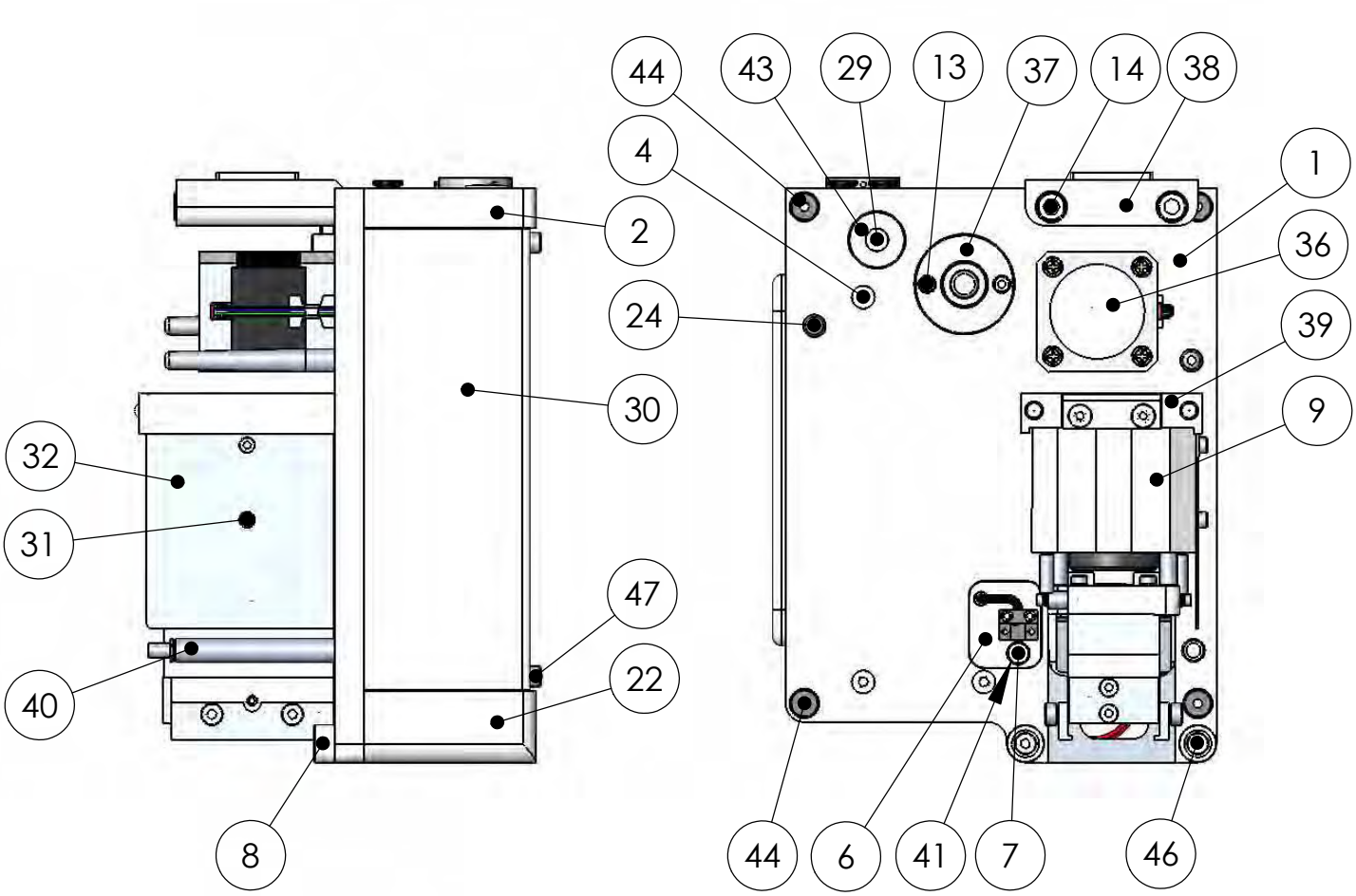


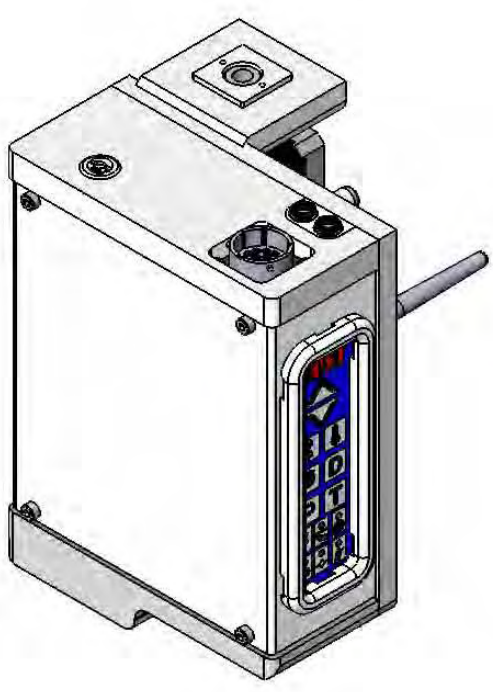
For item No's referencing see next page.

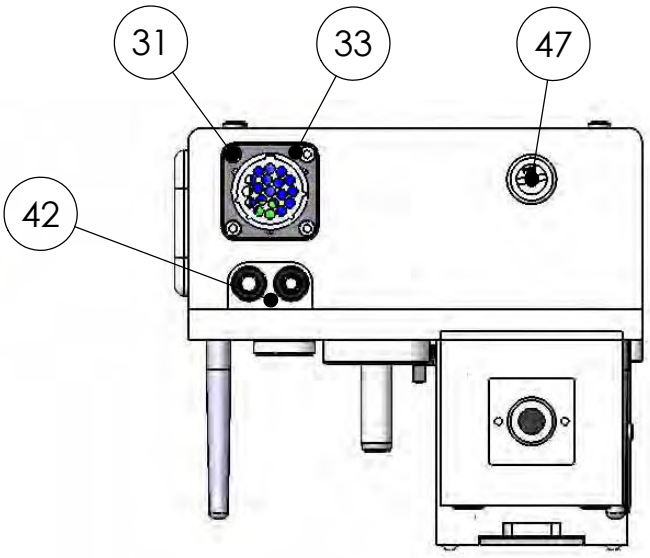
Digi-3-Coder Cassette Spare Parts Listing

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	PLA 311025	Plate Cassette	1
2	M3SCS10	M3 Cap Screw x 10 Long	2
3	BUS 620035	Bush	1
4	HAN 530502	Handle	1
5	SRI 620013	Spindle	1
6	ROL 620231	Pinch Roller & Yoke Assembly	1
7	M5SSS08	M5 Socket Set Screw x 8 Long	1
8	M5CSS16	M5 Countersunk Screw x 16 Long	4
9	M4CSS20	M4 Countersunk Screw x 20 Long	2
10	DRI 620204	Drive Roller Assembly	1
11	BLO 311028	Block Band Brake Adjuster	1
12	HAN 311023	Handle Cassette	2
13	THU 620127	Thumb Plate	1
14	LOC 620129	Locking PLATE	1
15	SUP 190024	Support	2
16	GUI 311032	Foil Guide	1
17	M4SSS16	M4 Socket Set Screw 16 Long	11
18	SPI 311014	Spindle Roller	6
19	ROL 620018	Roller	6
20	WAS 120035	Washer	8
21	DAN 311035	Dancing Arm Assembly	1
22	WAS 311015	Washer Top	1
23	M4CSS16	M4 Counter Sunk Screw 16 Long	1
24	WAS 311016	Washer Middle	1
25	M3WAS	M3 Stainless Steel Washer	1
26	M3SCS06	M3 Cap Screw x 6 Long	1
27	PLA 311029	Digi-3-Coder Identification Plate	1
28	M4BHS08	M4 Button Head Screw 08 Long	6
29	M3SCS16	M3 Socket Cap Screw 16 Long	2
30	SPR 190017	Spring Post	1
31	M4SCS16	M4 Countersunk Screw x 16 Long	3
32	DRI 110022	Eurocode Drive Belt	1
33	SOC 311036	Cassette Location Socket Assembly	2
34	M4CSS08	M4 Counter Sunk Screw x 8 Long (Steel)	1
35	DOO 311037	Door Assembly	1
36	M4CSS10	M4 Counter Sunk Screw 10 Long	1
37	SPI 311011	Spindle Drive Roller	1
38	SPI 311012	Spindle	2
39	HUB 620201	Take Off Hub Assembly	1
40	HUB 620202-1	Rewind Hub Assembly	1
41	SLE 311024	Sleeve Nip Roller Stop	1
42	M4SCS20	M4 Socket Cap Screw x 20 Long	1
43	LAB 506506	Eurocode Threading Diagram	1
44	M4SCS8	M4 Cap Screw x 8 Long	2

Digi-3-Coder Printer Body Spare Parts Drawing



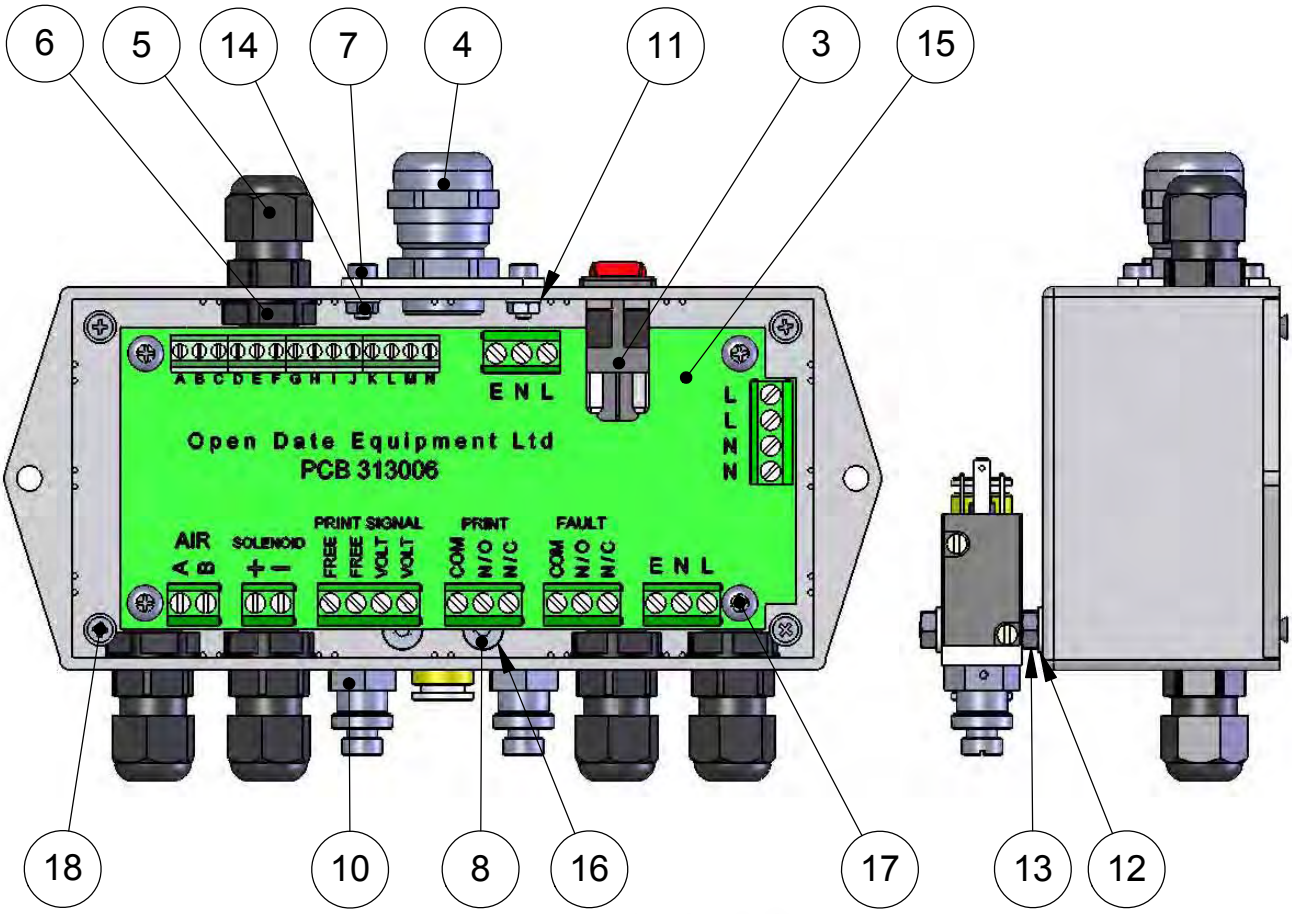


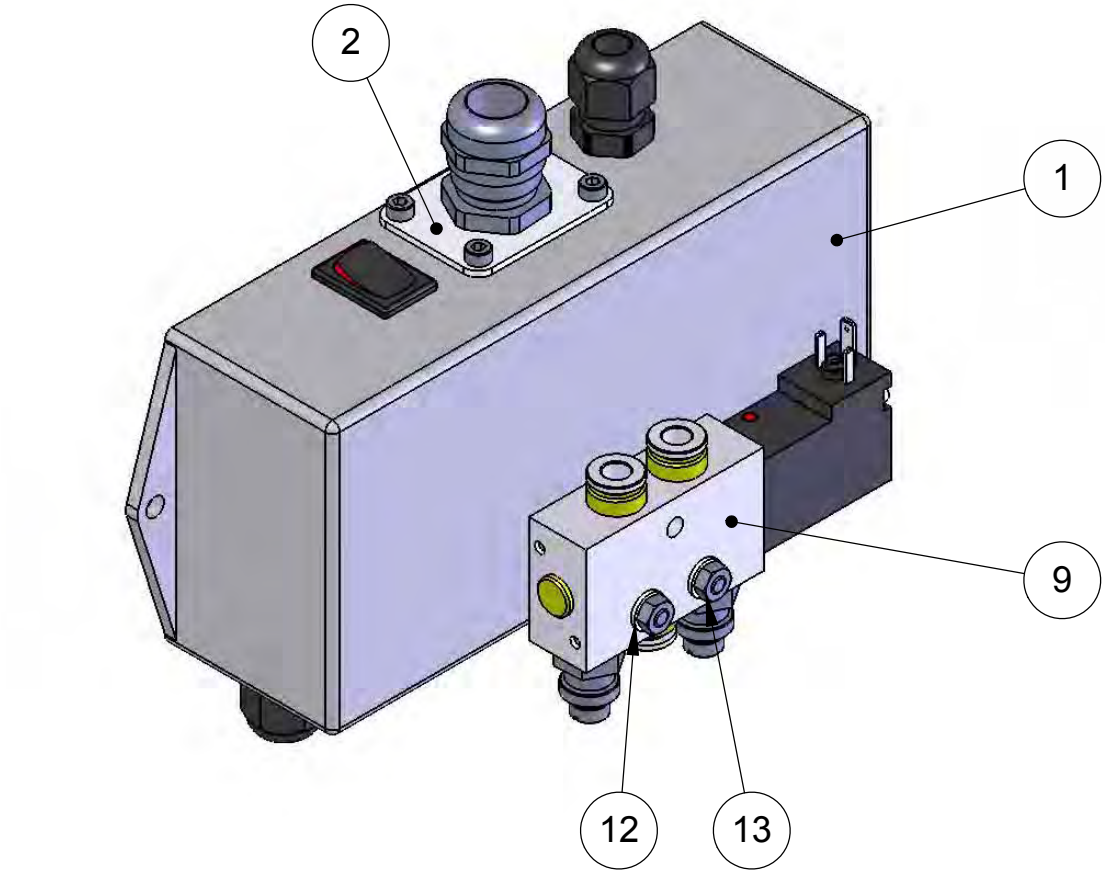


Digi-3-Coder Printer Spare Parts Listing

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	PLA 312030	Plate Digi-3-Coder Body	1
2	BLO 312018	Rear Guard Block	1
3	SPA 312023	Plate Spacer	5
4	M4CSS40	M4 Countersunk Screw 40 Long	5
5	SPA 312024	P C B Short Spacer	5
6	SEN 312086	Assembly Foil Sensor	1
7	M4SCS16	M4 Socket Cap Screw x 16 Long	1
8	SPA 312022	Cassette Location Spacer	2
9	CYL 312068	Cylinder Assembly	1
10	TUB 312073	Red Air Tube	1
11	TUB 312074	Black Air Tube 6	1
12	PUL 312036	48 Teeth Pulley	1
13	M3SCS12	M3 Cap Screw x 12 long	3
14	M6SCS60	M6 Socket Cap Screw x 60 Long	2
15	M4WAS	M4 Stainless Steel Washer	8
19	M6SCS20	M6 Socket Cap Screw 20 Long	2
20	GRO 312047	4mm Hole Grommet	1
21	M3SCS25	M3 Socket Cap Screw x 25 Long	1
22	BLO 312019	Front Block	1
24	LOC 312012	Taperered Location Rod	2
25	PLA 312081	Plate Guard Air	1
26	GUA 312053	Guard Protection	1
27	M4NUT	M4 Full Nut	2
28	PCB 312060	Main Assembly PCB	1
29	M4CSS12	M4 Counter Sunk Screw 12 Long	1
30	ASY 312091	Side Guard Assembly	1
31	M3SCS06	M3 Cap Screw x 6 Long	8
32	PLA 312038	Plate Cylinder	1
33	PLU 313012	Plug 19 Way (Trident)	1
36	MOT 312087	Assembly Ribbon Motor	1
37	BEA 312089	Bearing Block Assembly	1
38	PLA 312094	Plate Coder Support Assembly	1
39	PLA 312095	Plate Cylinder Location Assembly	1
40	REE 312107	Reed Switch Assembly	1
41	SPA 312082	Sensor Spacer	1
42	BLO 312106	Block Air Connection Assembly	1
43	WAS 312039	Washer Cassette Stop	1
44	SCR 312110	M5 Shoulder Screw	4
45	M5SCS16	M5 Cap Screw x 16 Long	2
46	M4SCS08	M4 Cap Screw x 8 Long	6
47	FUS 503506	Fuseholder	1

Digi-3-Coder Connection Box (Detail Drawing)





Digi-3-Coder Connection Box (Parts Listing)

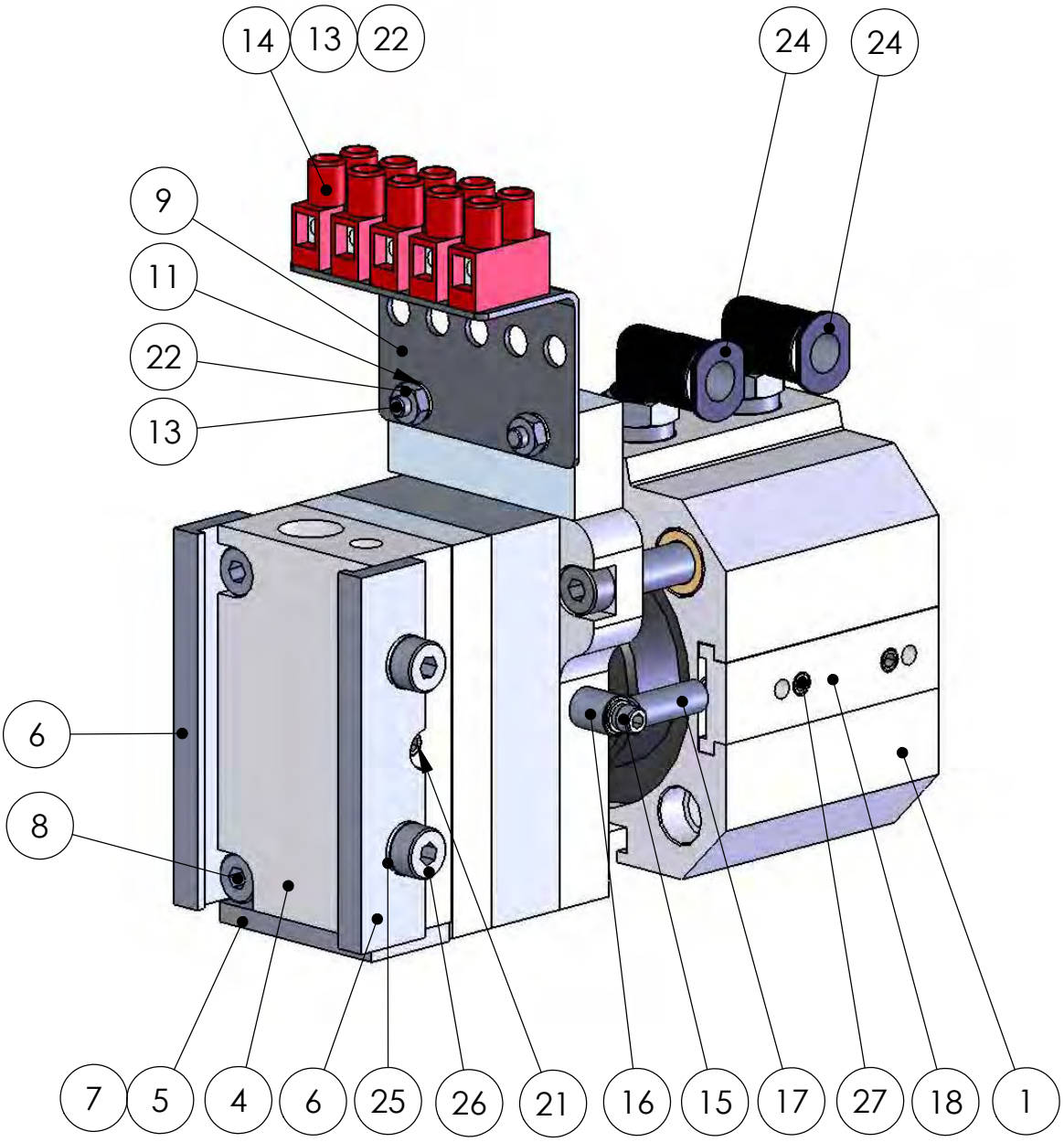
(Part No. BOX 312085)

ITEM	**PART NUMBER**	DESCRIPTION	QTY.
1	**BOX 312033**	Machined Connection Box	1
2	**PLA 312083**	Gland Plate	1
3	**ELE 312042**	Switch Rocker	1
4	**GLA 313004**	Cable Gland Skintop M16	1
5	**GLA 312041**	Cable Gland	5
6	**NUT 312040**	Lock Nut	5
7	**M3SCS08**	M3 Socket Cap Screw x 08 Long	4
8	**M4CSS30**	M4 Counter Sunk Screw 25 Long	2
9	**VAL 312034**	Solenoid Valve	1
10	**VAL 312035**	Flow Control Valve	2
11	**M3WAS**	M3 Stainless Steel Washer	4
12	**M4WAS**	M4 Stainless Steel Washer	4
13	**M4NUT**	M4 Full Nut	4
14	**M3NUT**	M3 Full Nut	4
15	**PCB 313006**	OEM Connections Assembly	1
16	**WAS 311015**	Washer Top	2
17	**M3STS06**	M3 Self Tapping Screw x 06 Long	4
18	**M3STS10**	M3 Self Tapping Screw x 10 Long	4

Digi-3-Coder Cylinder Assembly (Detail Drawing)

Heater & Thermistor removed for clarity.

See page 36 for Heater & Thermistor Part Numbers.



Digi-3-Coder Cylinder Assembly (Parts Listing)

ITEM	PART NUMBER	DESCRIPTION	QTY.
1	CYL 312066	Air Cylinder	1
2	PAC 190028	Packing Block	1
3	INS 120012	Insulating Plate	1
4	HEA 120013	Heater Block	1
5	KEE 120030	Keep Plate	1
6	SID 120014	Side Locator Plate	2
7	M3CSS08	M3 Contersunk Screw x 8 Long	2
8	M4SCS40	M4 Cap Screw x 40 Long	4
9	ANG 312057	Angle Terminal Support	1
10	BLO 312058	Block Insulator	1
11	WASM3SHK	Shakeproof Washer M3	6
12	M3SCS25	M3 Cap Screw x 25 Long	2
13	M3SCS16	M3 Socket Cap Screw 16 Long	2
14	ELE 312011	Terminal Block	1
15	M2.5SCS12	M2.5 Cap Screw x 12 Long	4
16	SLE 312075	Spring Sleeve	2
17	SPR530009	Tension Spring	2
18	TEE 312037	Cylinder Tee Nut	2
20	GRO 312031	Plastic Grommet	5
21	M4SSS08	M4 Socket Set Screw 8 Long	2
22	M3NUT	M3 Full Nut	2
23	M2.5NUT	M2.5 Full Nut	2
24	ELB 312067	Swivel Elbow 6.0mm	2
25	M4WASSHK	M4 Shakeproof Washer	5
26	M4SCS8	M4 Cap Screw x 8 Long	4
27	M4SSS06	M4 Socket Set Screw 06 Long	2

Digi-3-Coder Essential Spares List

	Description	Part No.
1.	Cassette Brake Tension Spring (2 off)	SPR 530008
2.	Timing Belt (Digi-3-Coder)	BEL 762064
3.	Drive Roller Assembly	DRI 620204
4.	Cassette Take Up Belt (2 off)	DRI 110022
5.	Cassette Brake Strap	BRA 311031
6.	Grey Self Adhesive Print Base 300 x 450mm sheet	SABASE
or		
7.	White Silicone Rubber Print Base 300 x 300 x 3mm thick sheet	SRBASE
8.	Cartridge Heater (240v x 500watt)	HEA 312070
9.	Thermistor Probe (Digi-3-Coder)	THE 312080
10.	Reed Switch (Door Sensor)	REE 312107
11.	Low Foil Sensor Assembly	SEN 312086
12.	Pack of Mains Fuses (5) 800mA Anti-Surge	FUS 393503

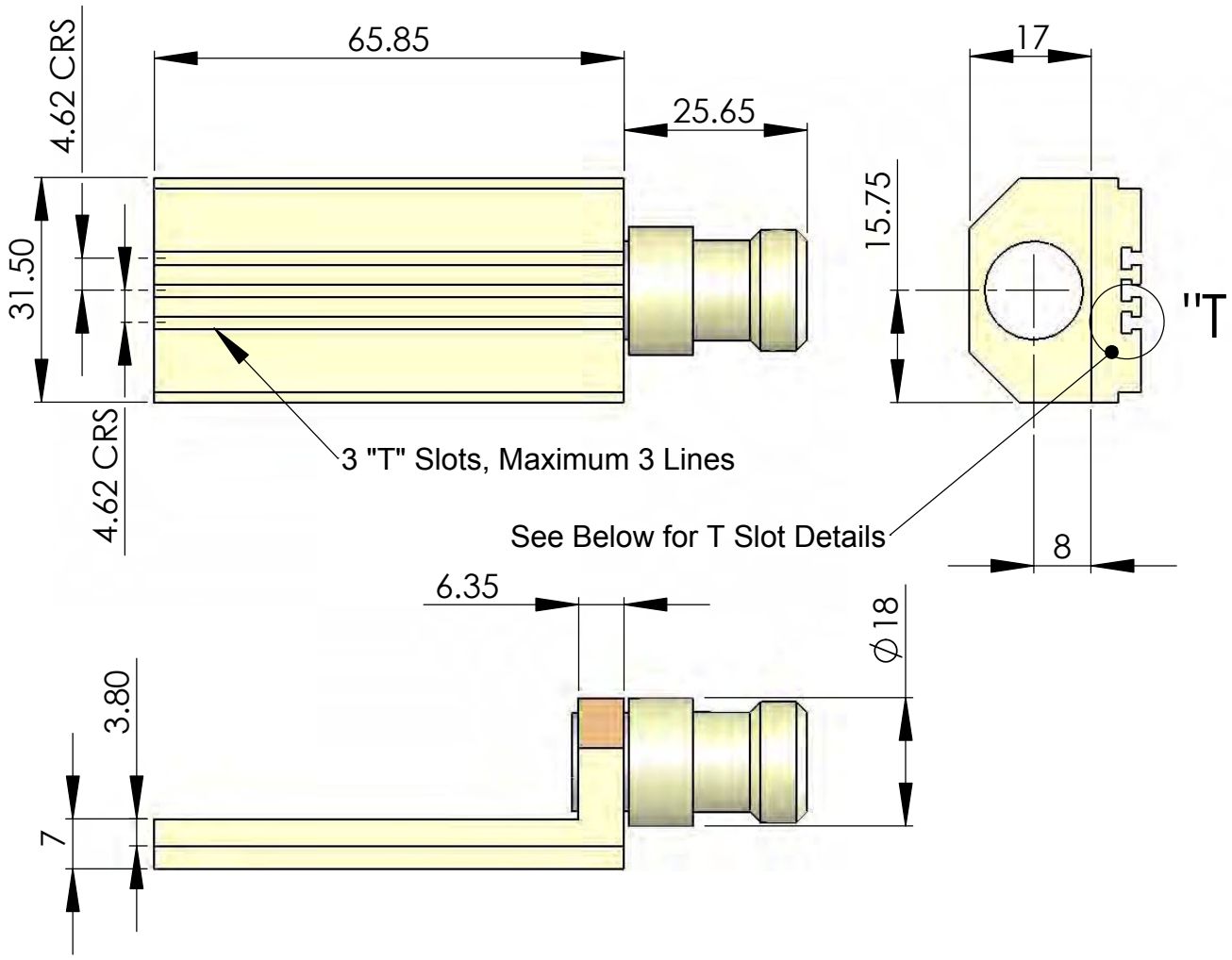
Digi-3-Coder Comprehensive Spares List

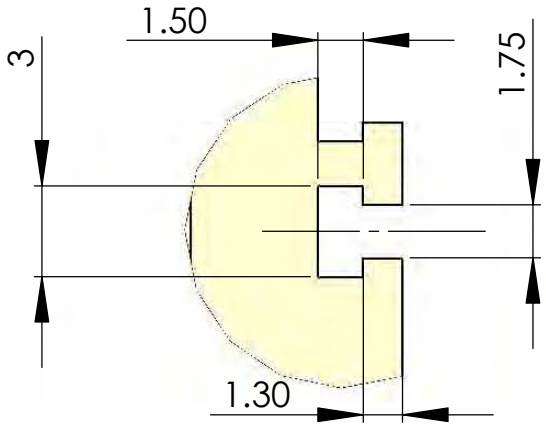
	Description	Part No,
1.	Cassette Brake Tension Spring (2 off)	SPR 530008
2.	Timing Belt (Digi-3-Coder)	BEL 762064
3.	Drive Roller Assembly	DRI 620204
4.	Cassette Take Up Belt (2 off)	DRI 110022
5.	Cassette Brake Strap	BRA 311031
6.	Grey Self Adhesive Print Base 300 x 450mm sheet	SABASE
or		
7.	White Silicone Rubber Print Base 300 x 300 x 3mm thick sheet	SRBASE
8.	Cartridge Heater (240v x 500watt)	HEA 312070
9.	Thermistor Probe (Digi-3-Coder)	THE 312080
10.	Reed Switch (Door Sensor)	REE 312107
11.	Low Foil Sensor Assembly	SEN 312086
12.	Pack of Mains Fuses (5) 800mA Anti-Surge	FUS 393503
13	Main Circuit Board (Digi-3-Coder)	PCB 312060
14.	Membrane Assembly (Including PCB)	KEY 312090
15.	Solenoid Valve without fittings	VAL 312034
16.	Ribbon Motor Assembly	MOT 312087
17.	Cable Socket 1.5 Metre Long (Connecting Box)	CAB 313019

Digi-3-Coder Standard Typehoder

3 Rows T'Slot type

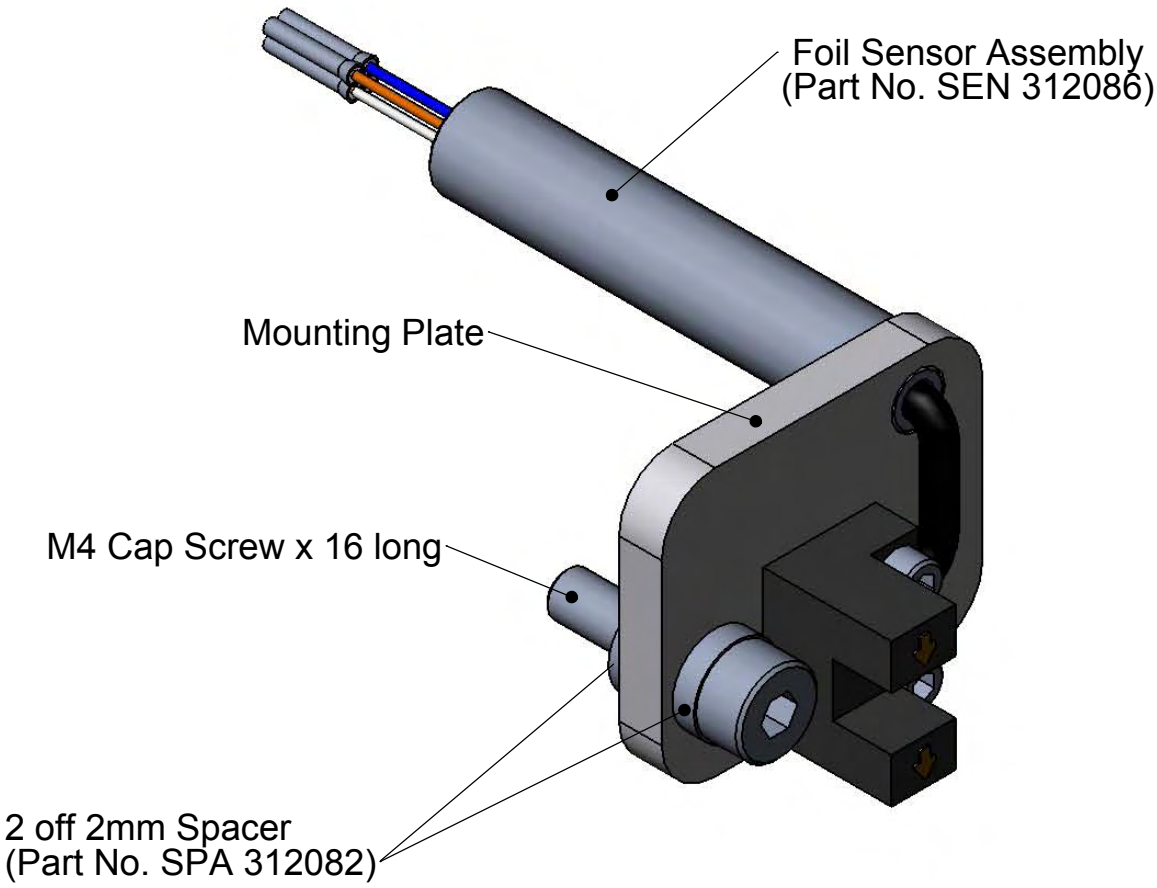
Please note that the standard Eurocode Typehoder does not fit the Digi-3-Coder





"T" SLOT DETAILS

Digi-3-Coder Foil Sensor Instructions



Standard 40mm width foil, fit the 1 off 2mm spacer above the mounting plate, and 1 below.

The mounting plate fits into the pocket of the main plate. (Standard Printer)

When using 38mm width foil, you must position both 2mm spacers underneath the mounting plate. Then refit the assembly to the printer body, using the M4 cap screw provided. This raises the sensor position by 2mm.

If other widths of foil are to be used in the Digi-3-Coder, you must contact your local supplier for additional spacers and screws.

Digi-3-Coder Calibration Method

NOTE

The standard Digi-3-Coder is calibrated at 130ºC or 266°F

Unless you are changing the temperature to the extremes, the default calibration should be left alone.

Calibration & Temperature Range:= 70ºC to 220ºC (158ºF to 428ºF)

External Calibration Method

1. Switch the Digi-3-Coder unit on and adjust the temperature setting to 130ºc or 266ºF.
2. Leave on for 10 to 15 minutes, allowing the temperature to stabilise.
3. Measure the temperature at the type face using a temperature probe.
4. Allow the temperature probe to stabilise before noting the reading.
5. Adjust the Digi-3-Coder set point to match the temperature probe reading.
6. Press both the up and down arrow keys at the same time, then press the print switch.
7. The controller is now calibrated.

Note.

Calibration may have to be repeated, for accuracy of temperatures.

"For operating temperatures above 180ºc or 356ºF calibrate at 200ºC or 392ºF"

Digi-3-Coder Airbourne Noise Emissions

Comprehensive tests have been carried out with the Digi-3-Coder fitted in a standard printer frame and mounted onto a typical label applicator. Measurements were taken at 1.6 metres above floor level and 1 metre away from the printer in all directions.

The measuring equipment used for conducting the tests was a Digital Sound Level Meter, Type d-1405E supplied by Lucas CEL. Before the tests were carried out, the instrument was calibrated and fitted with a foam windshield.

The results shown are based upon a standard type application for the printer, the operating air pressure was set at 6 bar and the flow restrictors correctly adjusted.

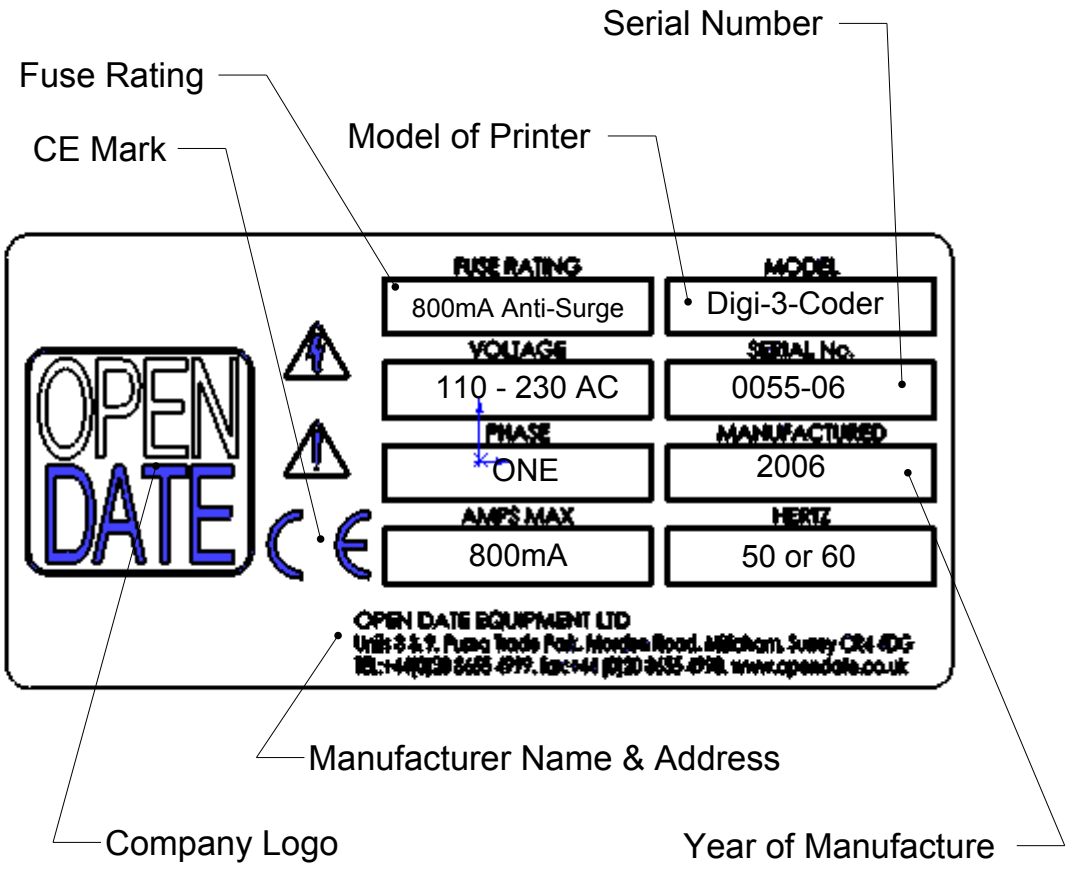
The noise levels shown below are the equivalent continuous “A-weighted” sound pressure levels in decibels “dB(A)”.

Prints Per Minute	Noise Levels – Decibels (dB)
100	**65**
200	**69**
300	**72**
400	**75**

Digi-3-Coder Machine Serial Number Identification

The identification label can be found on the side guard of the printer

Always quote the model and serial number when ordering spare parts.



STANDARD WARRANTY TERMS AND CONDITIONS – HOT FOIL PRINTERS

All Open Date Hot Foil Printers Carry a twelve (12) month return to base (at our discretion) warranty.

Open Date printers should be installed and operated according to the instructions given in the operating manual. No liability will be accepted for faults caused by incorrect installation or operation of the equipment or if the product has been altered or subjected to unreasonable use.

The following components are not covered by the warranty as they will be subject to wear and tear: -

1. Print base rubber.
2. Hardened steel type.

Should you have cause to claim for repair under warranty then please contact our service department stating the model, serial number of the product and the nature of the problems or faults.

We reserve the right to charge for components replaced during the warranty period, which are subsequently found to be damaged due to any of the above conditions not being followed.

Any items repaired or replaced under warranty will carry the balance of the original warranty period only.

OPEN DATE GROUP COMPANIES

FRANCE

OPEN DATE FRANCE
Z.I. D'Attichy
No.8, Voie Industrielle
60350 Attichy.

Local Tel:- 03 44 42 94 43
Local Fax:- 03 44 42 17 17

International Tel:- 0033 3 44.42.94.43
International Fax:- 0033 3 44.42.17.17

GERMANY

OPEN DATE GmbH
Mittlerer Stämmig 4
D - 97292 Üttingen

Local Tel:- 09369 9824 0
Local Fax:- 09369 9824 24

International Tel:- 0049 9369 9824 0
International Fax:- 0049 9369 9824 24

U.S.A.

OPEN DATE SYSTEMS INC.
Springfield Road
PO Box 538
Georges Mills
NH 03751-0538.

Local Tel:- 603 763 3444
Local Fax:- 603 763 4222

International Tel:- 001 603 763 3444
International Fax:- 001 603 763 4222

INTERNATIONAL AGENTS & DISTRIBUTORS

Please visit:

www.opendate.co.uk

for a list of international agents & distributors.