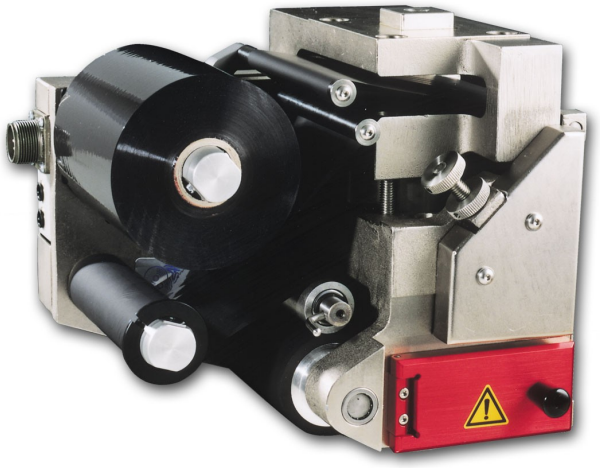
SPRINT
HOT FOIL PRINTER
WITH
DIGI-50 CONTROLLER

OPERATOR INSTRUCTIONS
PARTS LISTING
CIRCUIT DIAGRAMS
INSTALLATION DETAILS



Designed and manufactured by:

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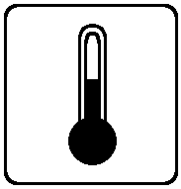
DECLARATION OF CONFORMITY

IMPORTANT SAFETY INSTRUCTIONS

- Read these instructions carefully. Follow all warnings and instructions marked on the product.
- Always disconnect the printhead and controller from the mains electricity and air supply before attempting to clean or service it.
- 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 4mm (see page 33).
- Do not use the product near water. Never spill liquid of any kind on to the product.
- 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.
- 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.
- This product should only be operated from the type of electrical supply as indicated on the rear of the printhead control unit (see page 7).
- Ensure that the printhead connection cable is fully secured to the printhead with the screws attached to the "D" connector cover. Failure to do this will result in the machine not being properly earthed.
- Use only the power cable supplied with the product. The cable supplied is three core, utilising one wire as a grounding conductor. This must be connected to a suitable earthing 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.
- Do not allow anything to rest on the power cable. Do not locate the product where persons will walk on the cable.
- 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.
- 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.
- Do not attempt to use to use this product in areas where explosive gases or substances are present.
- 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 should be held by its plastic handle only. Never touch metal parts as temperatures could be as high as 220 degrees C.
- Disconnect the product from the electrical and air supplies and refer servicing to qualified personnel under the following conditions.
  - If the power cable is damaged or frayed.
  - If the air pipes are damaged in any way.
  - If liquid has been spilled into or if the product has been exposed to rain or water.
  - 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 an damage needing qualified technicians to restore the product to normal operating conditions.

Digi50 Operating Instructions



Temperature Button

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

Range:- Minimum 70ºC (158ºF), Maximum 240ºC (464ºF).

Note! When selecting operating Modes 1, 3 or 5, the printer will not operate on the external trigger until the temperature has reached the pre-programmed set point. (see page 13 for ranges of the mode settings etc.)

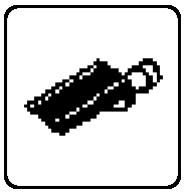
In normal operation, the temperature will fluctuate by up to ±4ºc from the set point.

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 the left of the display to increase or decrease.

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

Range:- 10 to 4000 milli–seconds. (0.010 – 4.0 Seconds)

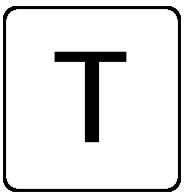


Print Switch

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

Switches the audible alarm off when a system fault occurs whilst operating from an external trigger (automatic print cycle).

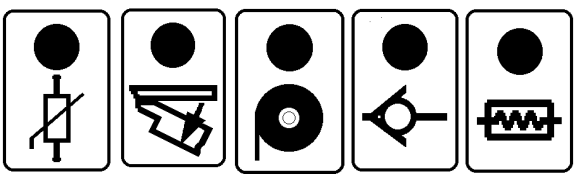
Note! The Print LED (green) is illuminated when switched for external triggering (automatic print cycle).



Test Button.

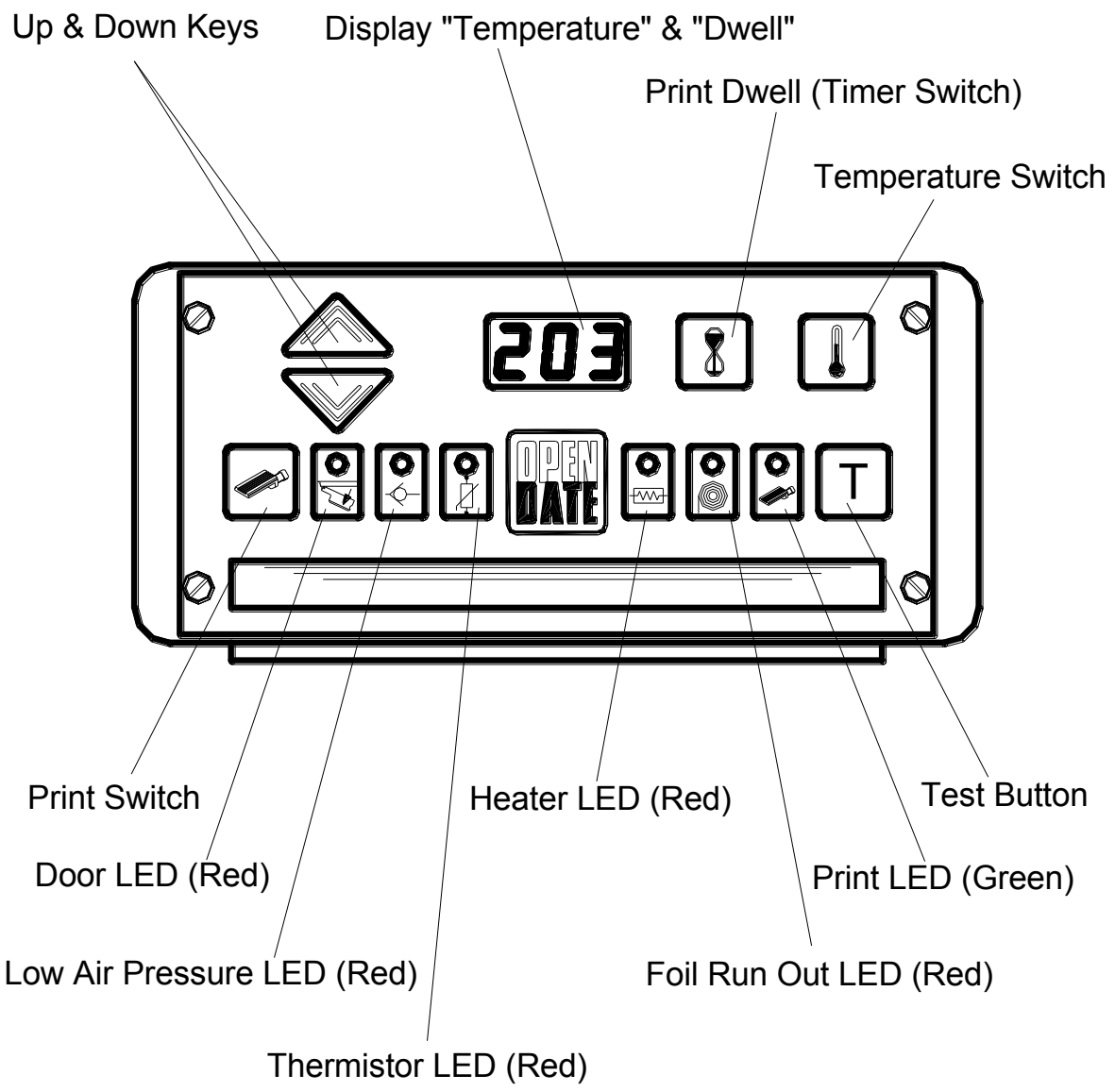
Manually operates the printer (will not operate whilst the Print LED is on).

Fault LEDs.



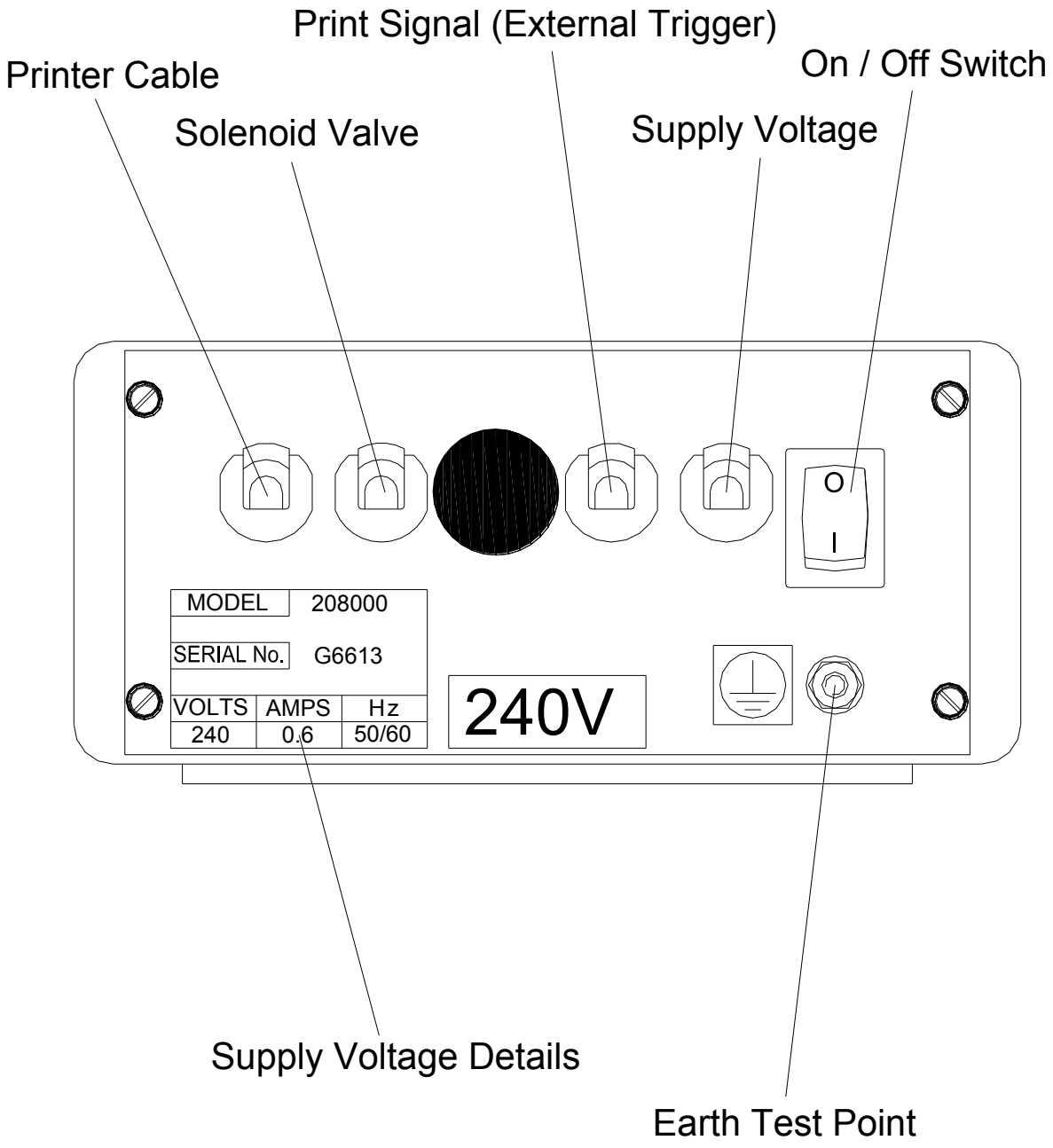
Refer to pages 22 & 23 for system faults.

Digi50 Control Unit Front Panel



Digi50 Control Unit Rear Panel

(Cables Excluded For Clarity)



OPERATING INSTRUCTIONS

FOIL THREADING (see diagrams below)

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

FITTING TYPE/DIE HOLDER

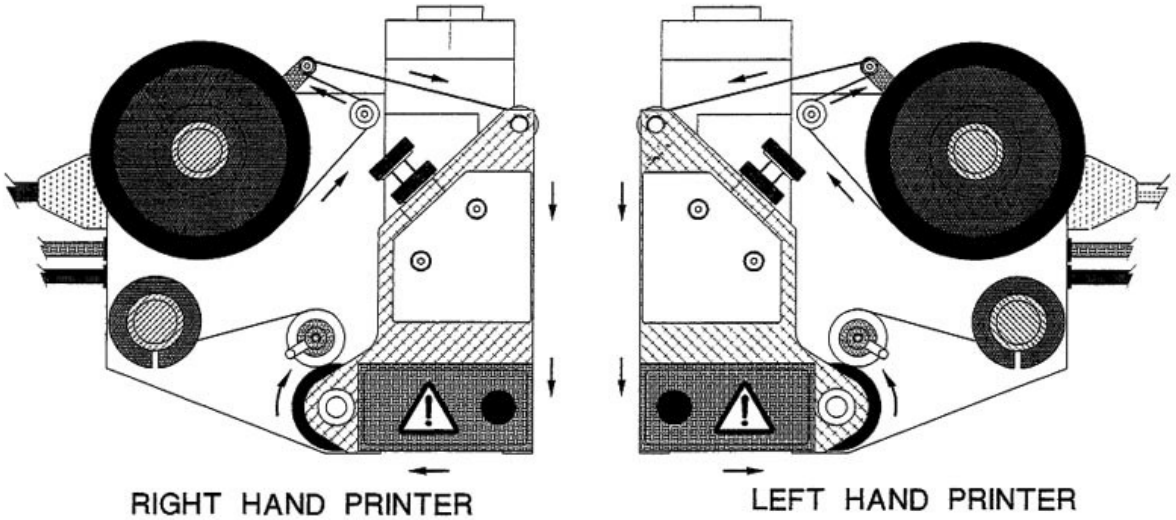
NEVER ASSUME THAT A TYPE/DIE HOLDER IS COLD.

Only pick up the 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 unless the print switch is off), align the type/die holder within the two side locators and slide in until the magnet catches on the keep plate. Close the door.

FOIL FEED ADJUSTING SCREW (refer to page 32)

This adjusts the amount of foil used per print and is located at the front of the printer, above the red type holder door. Winding in reduces the foil pull. Ensure that the locking nut is fully tightened after adjustment. A gap of 1 or 2mm is recommended between each portion of used foil.

THREADING DIAGRAMS



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. 4 to 7 Bar is recommended (60 to 100 PSI).
5. Switch controller on.
6. Set print dwell time to 120 milli-seconds and temperature to 125ºc (257ºF). 3 to 4 minutes should be allowed for printer to reach working temperature.
7. Load type or die into holder, centrally if possible and fasten securely. Make sure that typeface is clean.
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. Ensure that **PRINT** switch is off.
10. Place a sample of substrate material under printer and press **TEST** button. Inspect resulting print.
11. Adjust print levelling screws until a light, uniform print impression is achieved. Lock levelling screws.
12. Adjust foil metering screw for economic foil use as detailed previously and
13. tighten thumb nut.
14. Press the **PRINT** switch for automatic operation.

Print Orientation

To rotate the printer and therefore turn the overprint through 90 degrees, unscrew the clamping handle until the location square on top of the printhead is clear of the top rails, turn it to the required position, tighten the clamping handle.

Temperature Adjustment (refer to page 6)

- Normal setting is about 125ºc. (257ºF).
- 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 pages 13 & 20 for temperature mode & calibration

Print Timer Adjustment (refer to page 6)

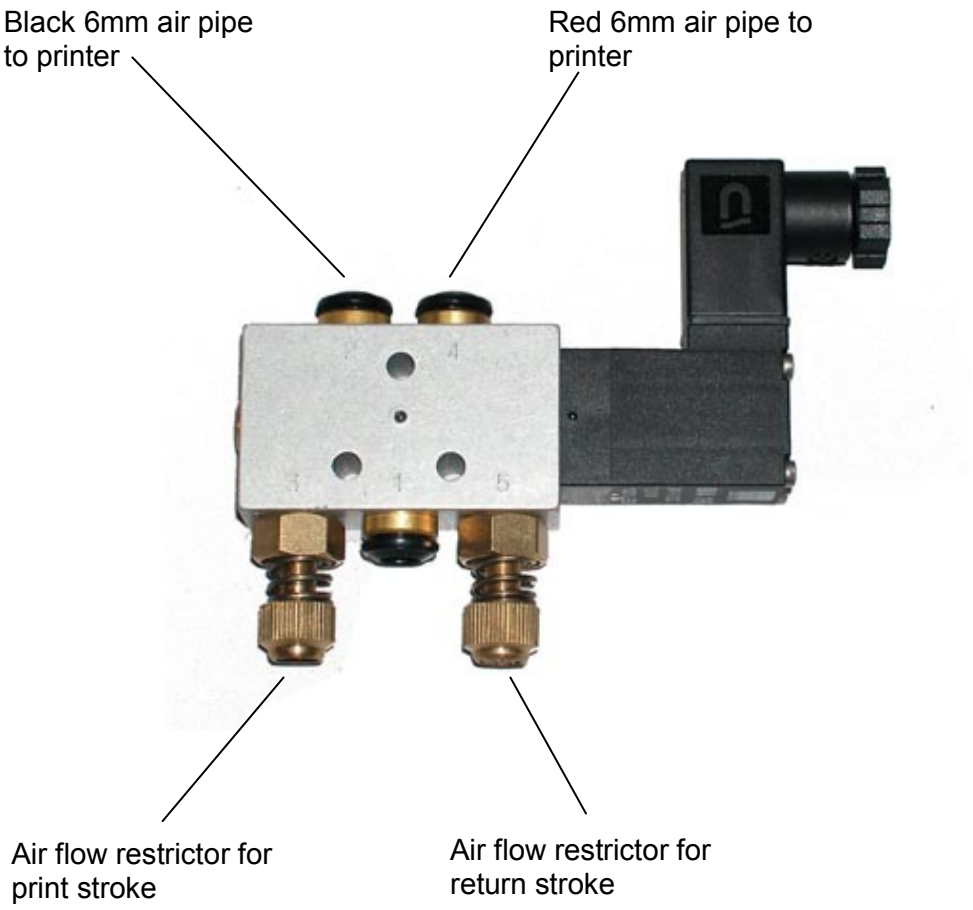
- Normal setting is about 120 milli-seconds.
- Generally, the larger the print, the higher the setting.
- Should the print not adhere fully to the substrate, a higher setting may be used.
- Remember, the printhead can only operate during the stationary cycle of the web, if the print time is longer than 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

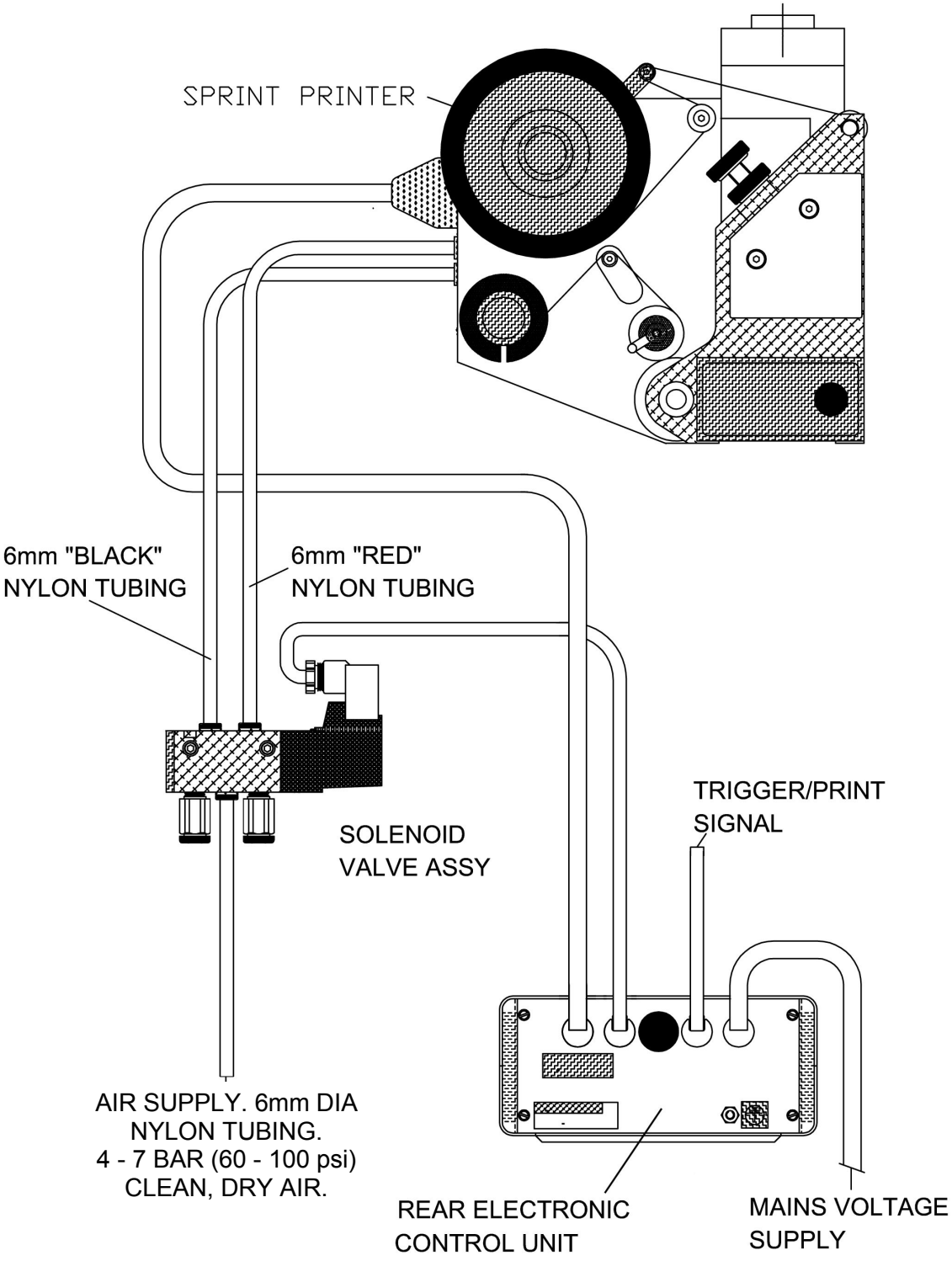
The airflow restrictors are usually attached to the solenoid valve exhaust ports. They work by regulating the speed at which air is exhausted from the air cylinder.
Turning the adjusting screws will alter the exhaust airflow and consequently the print ram velocity, it will also affect noise levels.
Increasing 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.
The drive for the printing foil is taken from the return stroke of the print ram. Increasing the exhaust airflow will speed up the foil feed. To ensure efficient foil feeding, the return stroke should be as gentle as possible.
For higher speed operation, the exhaust airflow from both the forward and return strokes will have to be increased.

Note, it is very important that the print ram returns fully before the next print cycle commences.

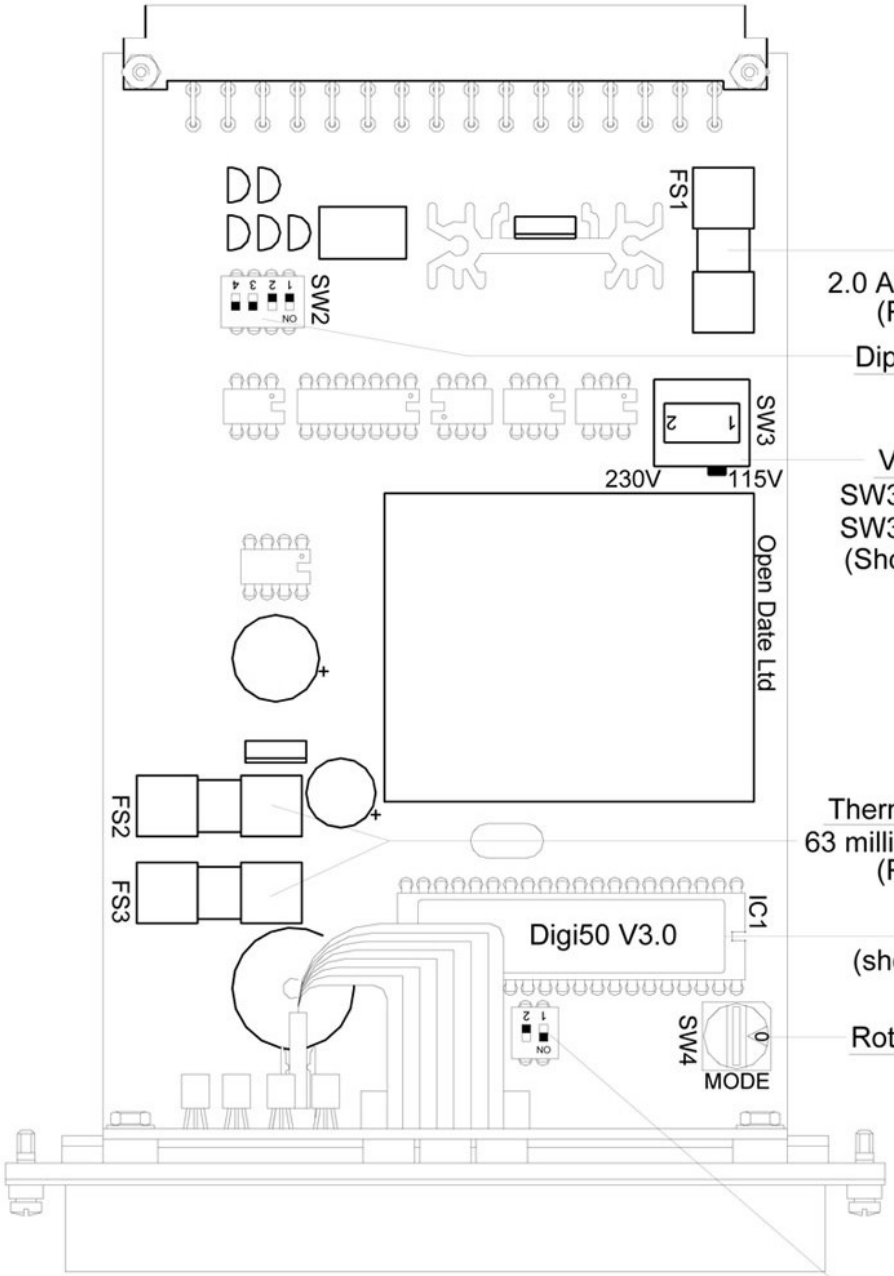
SOLENOID VALVE DETAILS



SPRINT CONNECTION DETAILS



SETTING UP DIGI-50 CONTROLLER



Mains Fuse (FS1)
2.0 Amp, 250 Volt (Anti-Surge)
(Part No. FUS 503512)

Dip Switch Settings (SW2)
See page 14

Voltage Selector (SW3)
SW3 - Position 1 = 115 Volts
SW3 - Position 2 = 230 Volts
(Shown as 115 Volt selected)

Thermistor Fuses (FS2 & FS3)
63 milliamp, 250 Volt (Quick Blo
(Part No. FUS 503511)

Eprom Label
(showing software version)

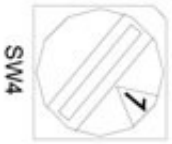
Rotary Mode Switch (SW4)
See page 13

Thermistor & On Line Dip Switch Settings
See page 15

DIGI-50 MODE SETTINGS FOR TEMPERATURE TOLERANCE RANGES

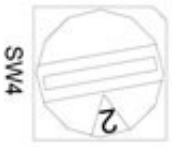
The Mode selector is a Rotary Switch located between the Front Panel and the Transformer.

Mode 1 (Default)



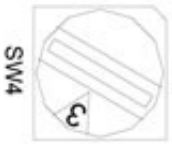
Temperature Range. -5% to +10% of the set point.
Printer operates on all temperatures.
Fault relay functions within the temperature range of the set point.
(The printer will continue to print when under or over temperature)

Mode 2



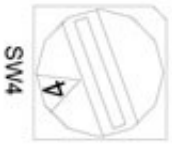
Temperature Range. -5% to +10% of the set point.
Printer operates within the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

Mode 3



Temperature Range. -5% to +5% of the set point.
Printer operates on all temperatures.
Fault relay functions within the temperature range of the set point.
(The printer will continue to print when under or over temperature)

Mode 4



Temperature Range. -5% to +5% of the set point.
Printer operates within the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

Mode 5

Temperature Range. -10% to +10% of the set point.
Printer operates on all temperatures.
Fault relay functions within the temperature range of the set point.
(The printer will continue to print when under or over temperature)

Mode 6

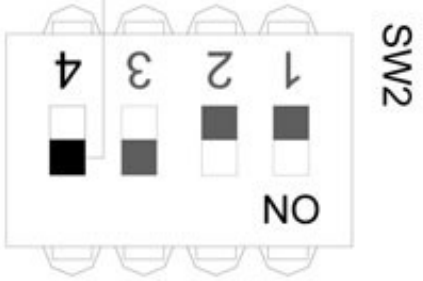
Temperature Range. -10% to +10% of the set point.
Printer operates with in the temperatures range of the set point.
Fault relay functions within the temperature range of the set point.

Modes 7, 8, 9 and 0 are the same as the default value. (Mode 1)

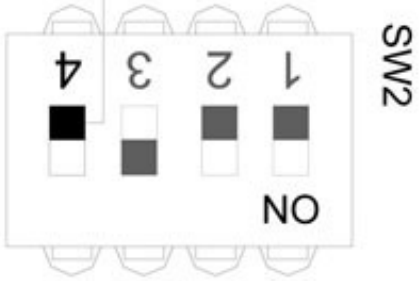
DIGI-50 DIP SWITCH SETTINGS

Temperature Range SW2 (No 4)

Centigrade

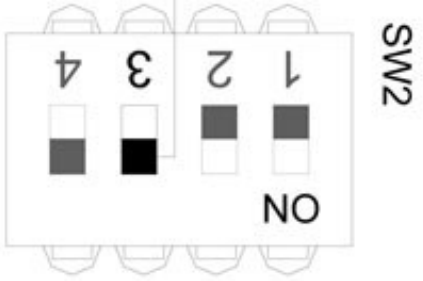


Fahrenheit

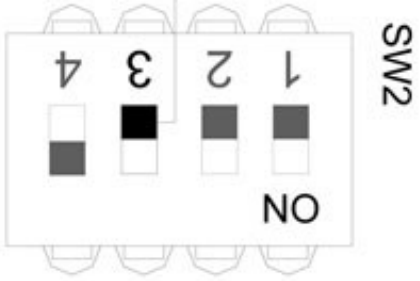


Low Air Configuration SW2 (No 3)

Disabled

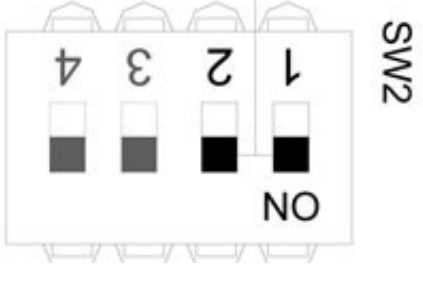


Enabled

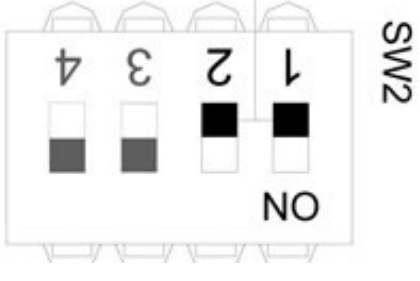


Print Trigger Selection SW2 (No 1 & 2)

Voltage Free

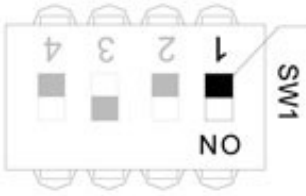


Voltage (10-50V DC)



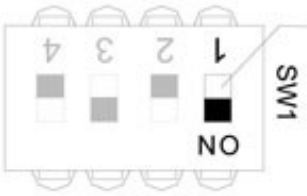
THERMISTOR & ON-LINE DIP SWITCH SETTINGS (SW1)

Settings for the Standard Thermistor. (see note below)



Set switch No. 1 to "OFF"
Part No. THE 312080
Thermistor Type USP 5362
Black Connection wires.

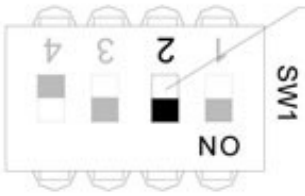
Settings for optional Thermistor.



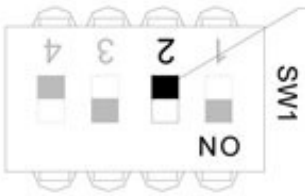
Set switch No. 1 to "ON"
Part No. THE 500502 (Optional)
Thermistor Type G55-Bead
White Connection wires.

NOTE!
Boards supplied before 21 July 2005 were fitted with the optional sensor Part No. THE 500502, if you have any doubt contact your supplier.

Settings for the "ON LINE" options (With Eprom Versions 3.0 or later)



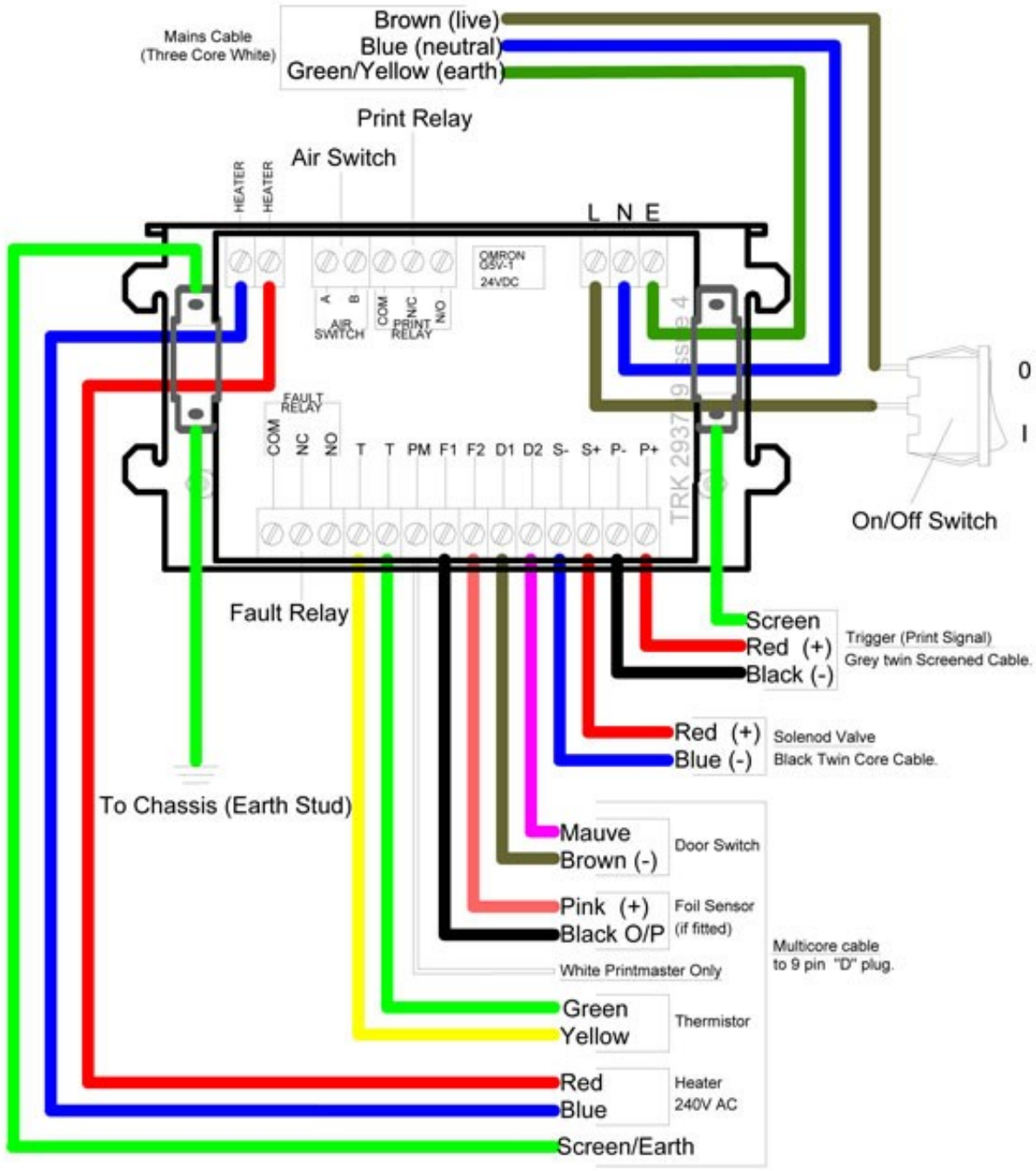
Set switch No. 2 to "ON"
The printer automatically, leaves the printer "ON LINE" ready for printing.
(once the fault is corrected)



Set switch No. 2 to "OFF"
The printer automatically, puts the printer "OFF LINE" .
Correct the fault, and press the "PRINT" Switch.

NOTE!
Boards supplied before March 2006 only have 2 switches. (Not 3 + 4)
Switches 3 & 4 are reserved for future use.

DIGI-50 CONNECTIONS
SHOWN FROM THE REAR OF THE CONTROL UNIT



DIGI-50 CONNECTION DETAILS - ROW C

Trigger/Print Signal - Grey twin core screened.

See page 20 for details of "Input Print Signals"

P+.	Red	External trigger input. + volts connection.
P-.	Black	External trigger input. – volts connection.

Solenoid Valve - Black twin core.

S+	Red	Solenoid output. + volts connection.
S-.	Blue	Solenoid output. – volts connection.

Printer – Multi-Core screened to 9 pin D plug. D plug Connections.

D2.	Mauve	Type Holder door safety switch return.	Pin 6
D1.	Brown	Feed to the safety switch & foil sensor, –0v DC.	Pin 5
F2.	Pink	Feed to the foil sensor, +27v DC. (see note below)	Pin 9
F1.	Black	Output from the foil sensor.	Pin 8
PM.	White	Foil sensor **Printmaster only.**	Pin 7
T.	Green	Thermistor connection.	Pin 2
T.	Yellow	Thermistor connection.	Pin 1
H.	Red	Heater element.	Pin 3
H.	Blue	Neutral ac heater element.	Pin 4

NOTE! Units supplied before October 2005 had only 14V DC supply for the foil sensor, if in doubt contact your supplier.

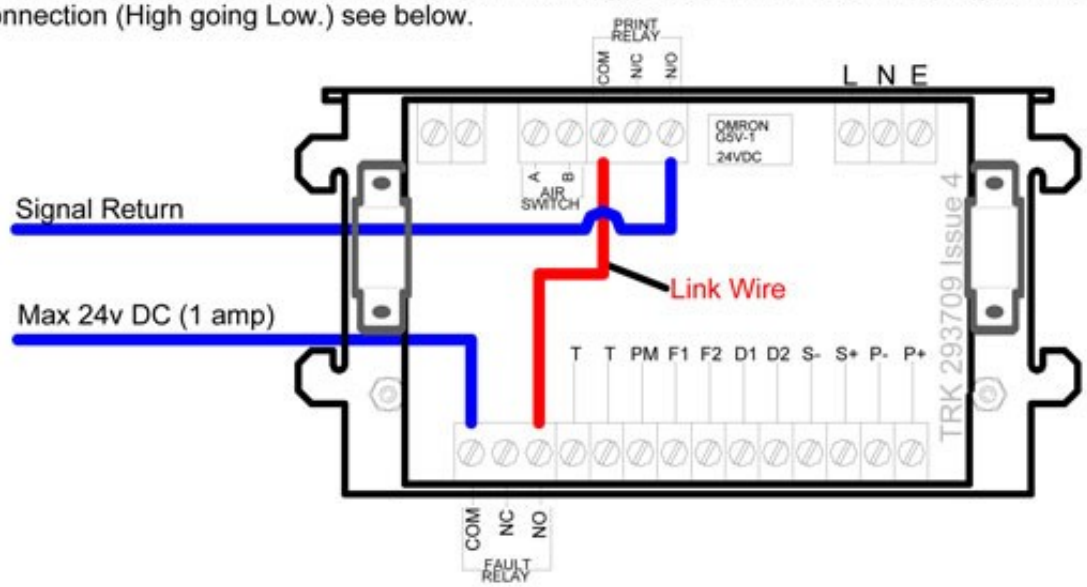
Mains Cable - Three core white.

N.	Blue	Neutral.
L.	Brown	Live.
E.	Yellow/Green	Earth.

DIGI-50 FAULT & PRINT RELAY CONNECTIONS

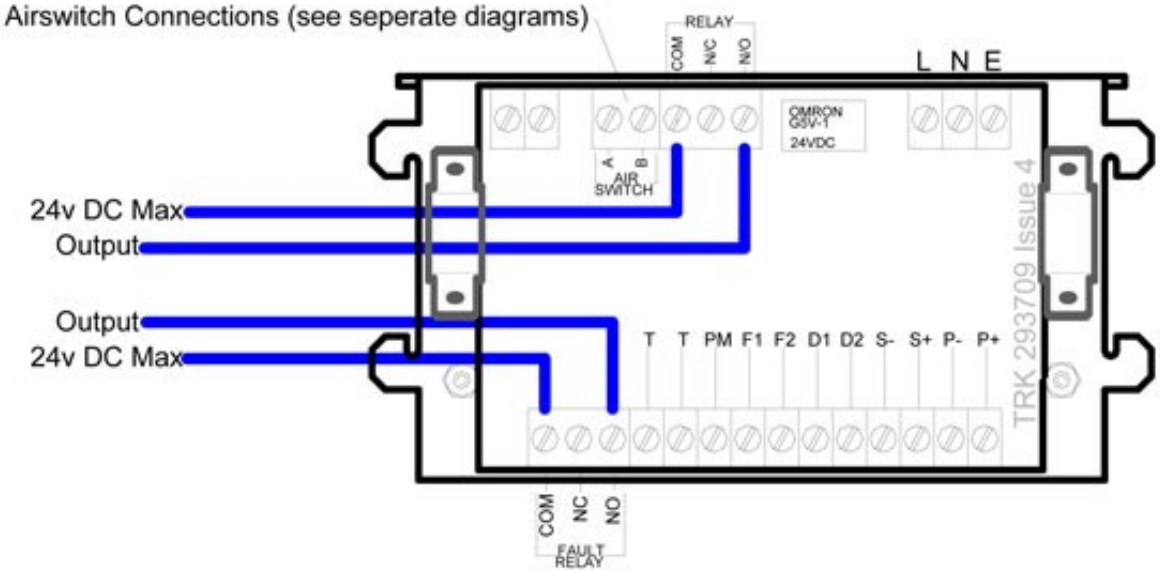
Note.

Linking the Fault & Print Relay will achieve optimum security. If the Print Switch is switched off, or when any printer fault occurs the relays will change state. This will break the Signal Return connection (High going Low.) see below.



Digi50 Individual Relays & Connections

Airswitch Connections (see seperate diagrams)

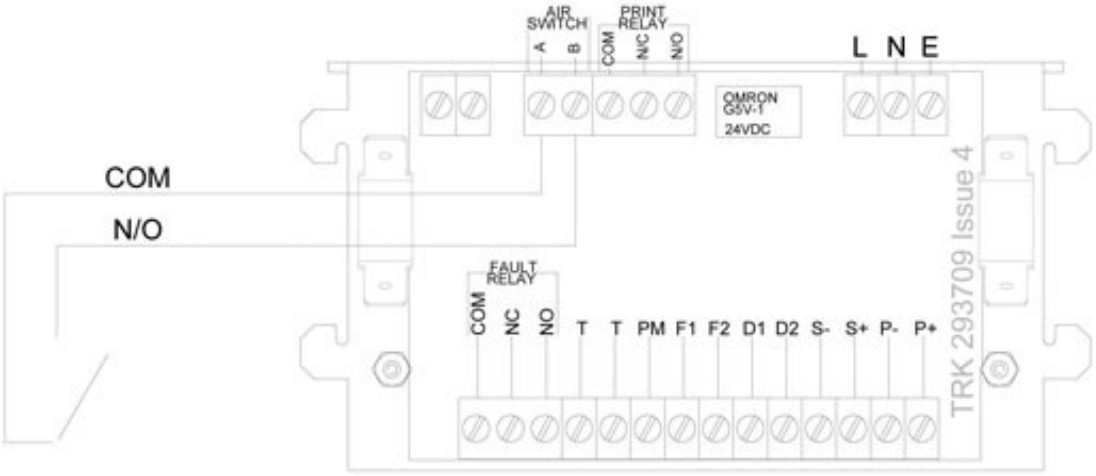


Print Relay:- Rated 24v DC, 1 amp max current

Fault Relay:- Rated 24v DC, 1 amp max current

DIGI-50 LOW AIR PRESSURE OPTION

Note.
The low air pressure switch connections are to Air Switch "A" and "B" and can be found on the terminal board mounted in the rear section of the enclosure. (See Below)



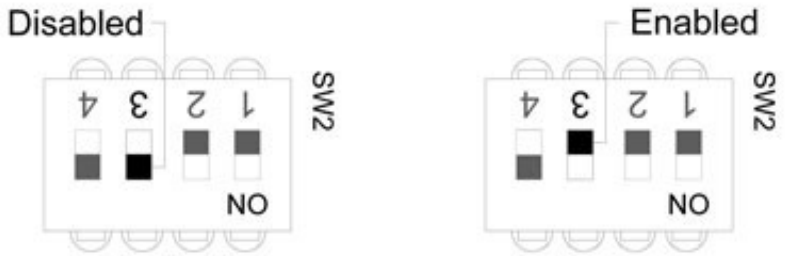
Air Switch Not Supplied

Adjust the Air Pressure Switch to suit the application.

See specification sheet to suit the printer, should be in the front of this manual.

Ensure the Dip Switch settings are correct. (See below)

Low Air Configuration SW2 (No 3)



DIGI-50 CALIBRATION METHOD

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

The control unit is factory calibrated at 130ºC, and is set up in “MODE 1”supplied as standard. See page 13 for a list of the different modes available.

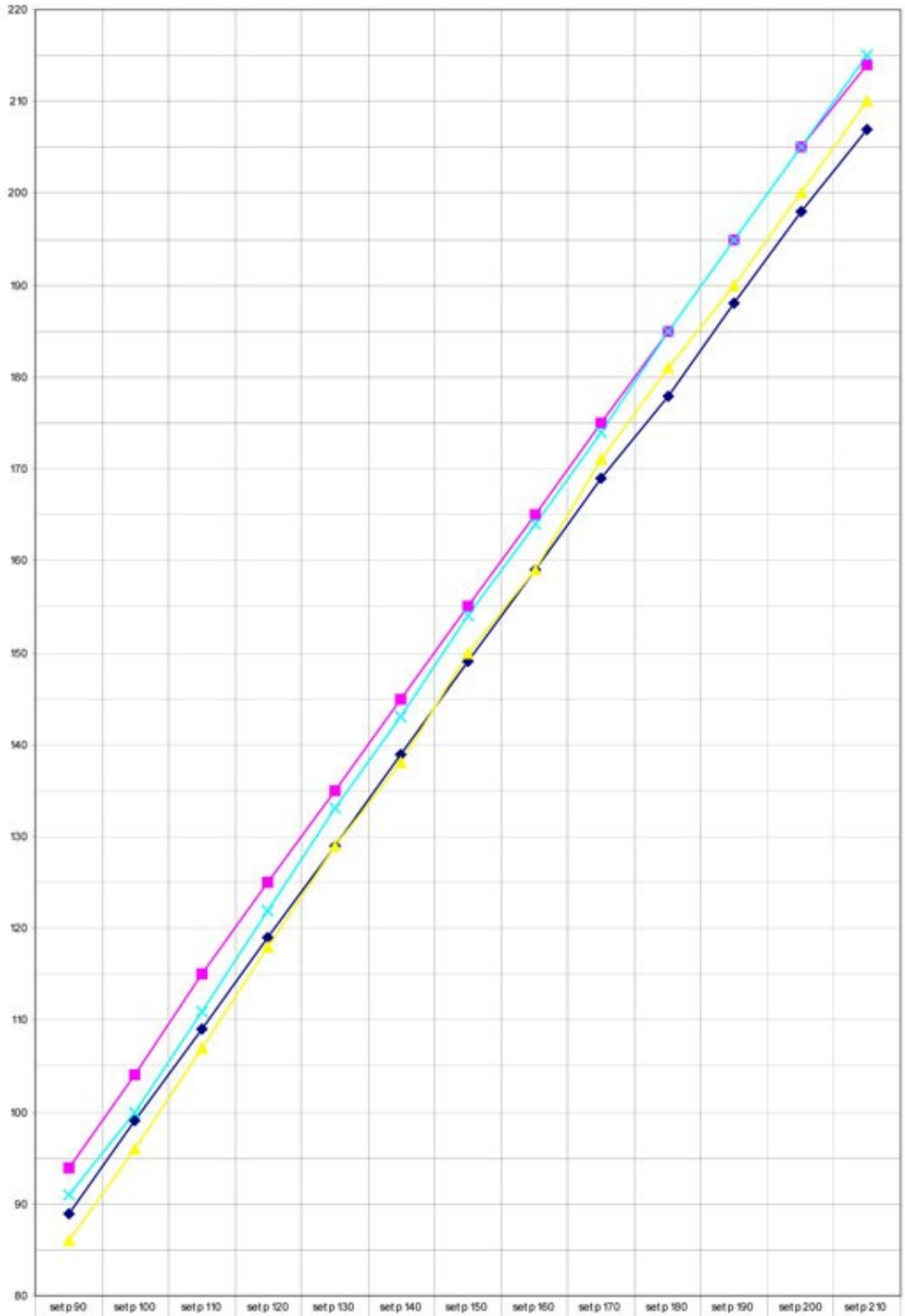
Unless you are running temperatures outside the range 70ºC to 180ºC (158ºF to 356ºF), the default calibration should not be altered.

Fitting of an optional thermistor (THE 515002) will require (SW1) position to be altered (See page 15), again this will be accurate to plus or minus 7°C. If accurate temperatures are needed, you should recalibrate to suit the individual thermistor fitted.

For normal running temperatures above 180°C you should recalibrate at 200°C.

External Calibration Method
Switch the Digi50 unit on and adjust the temperature setting to 130ºc or 266ºF.
Leave on for 10 to 15 minutes, allowing the temperature to stabilise.
Measure the temperature at the type face using a temperature probe.
Allow the temperature probe to stabilise before noting the reading.
Adjust the Digi50’s set point to match the temperature probe reading.
Press the both the up and down arrow keys at the same time then press the print switch.
The controller is now calibrated.

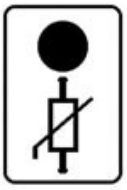
STATIC TEMPERATURE RESULTS
CALIBRATED AT 130°C



	set p 90	set p 100	set p 110	set p 120	set p 130	set p 140	set p 150	set p 160	set p 170	set p 180	set p 190	set p 200	set p 210
display low	89	99	109	119	129	139	149	159	169	178	188	198	207
display high	94	104	115	125	135	145	155	165	175	185	195	205	214
probe low	86	96	107	118	129	138	150	159	171	181	190	200	210
probe high	91	100	111	122	133	143	154	164	174	185	195	205	215

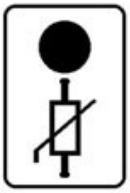
DIGI-50 SYSTEM FAULTS

Thermistor
Thermistor short circuit; the LED is on and digital display reads similar to, or the same as that shown (the figures may be different depend upon calibration values). The heater is switched off. Internal bleeper is sounding.



2.7.1

Thermistor
Thermistor open circuit, the LED is on and the display reads similar to or the same as that shown (the figures may change). The heater is switched off. Internal bleeper is sounding.



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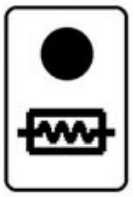
Heater
Heater is open circuit, the LED is on. Internal bleeper is sounding.



Foil Run Out
At end of foil roll, the LED is on. Internal bleeper is sounding.

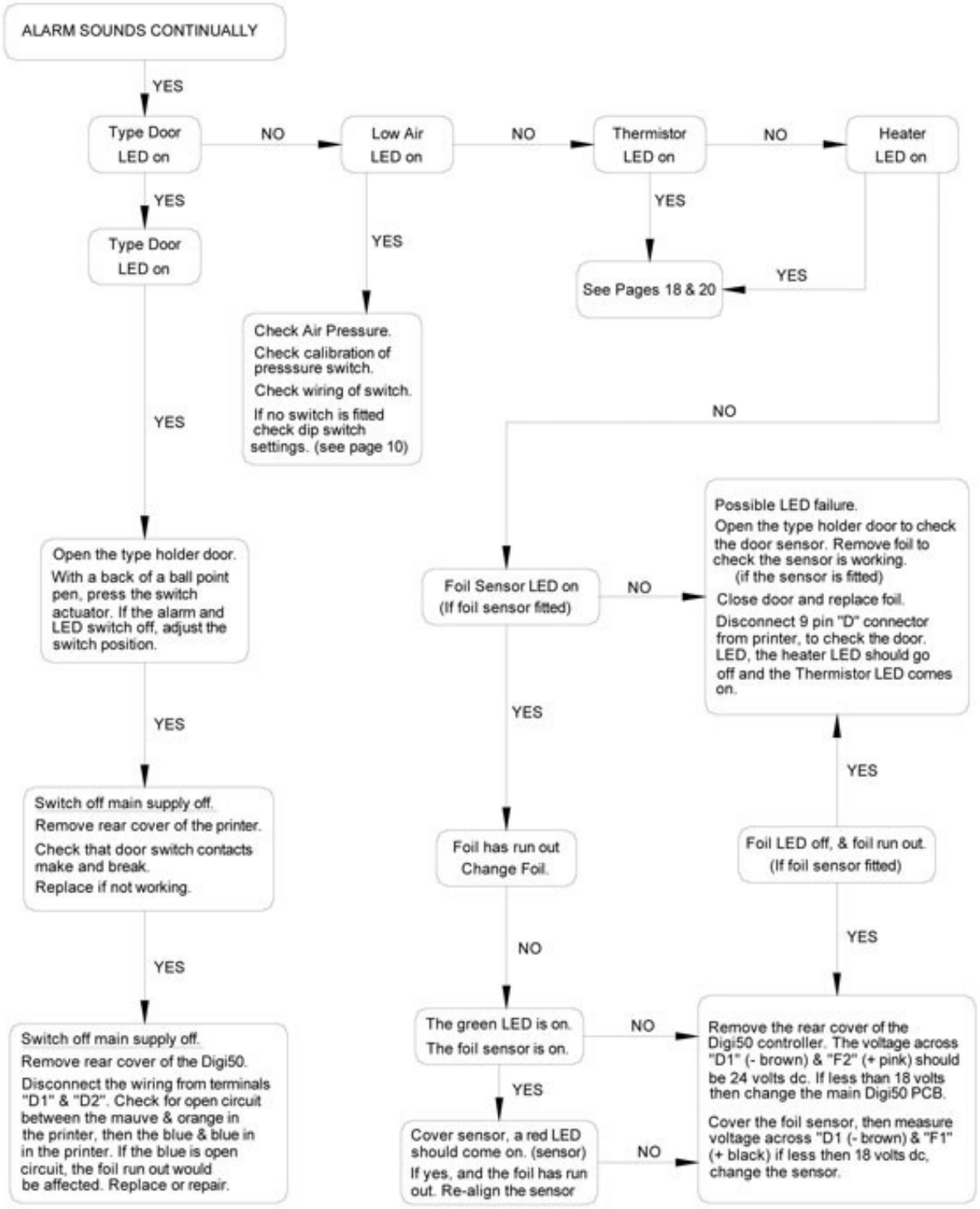
Type Holder Door Opened
Type holder door is open, the LED is on. Print & Test trigger signals, are disabled. Internal bleeper is sounding.

Low Air Pressure Switch (If connected)
When air pressure is low, the LED is on. External Pressure switch required. See separate wiring detail. (see page 19) Internal Bleeper is sounding. Set Dip Switch to enable this function.(see page 14)

In any of the above fault conditions, the fault relay will be de-energised. See pages 16, 18 & 19 for connection details.

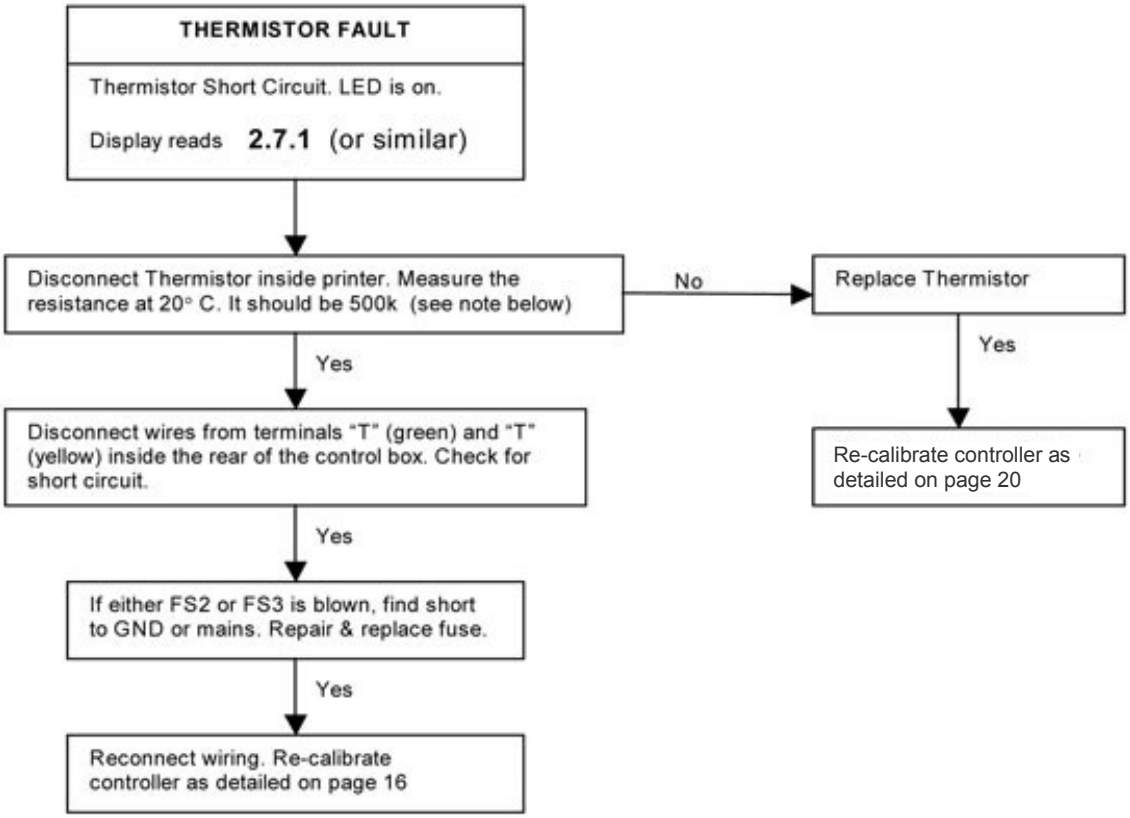
DIGI-50 ALARM SYSTEM FAULTS

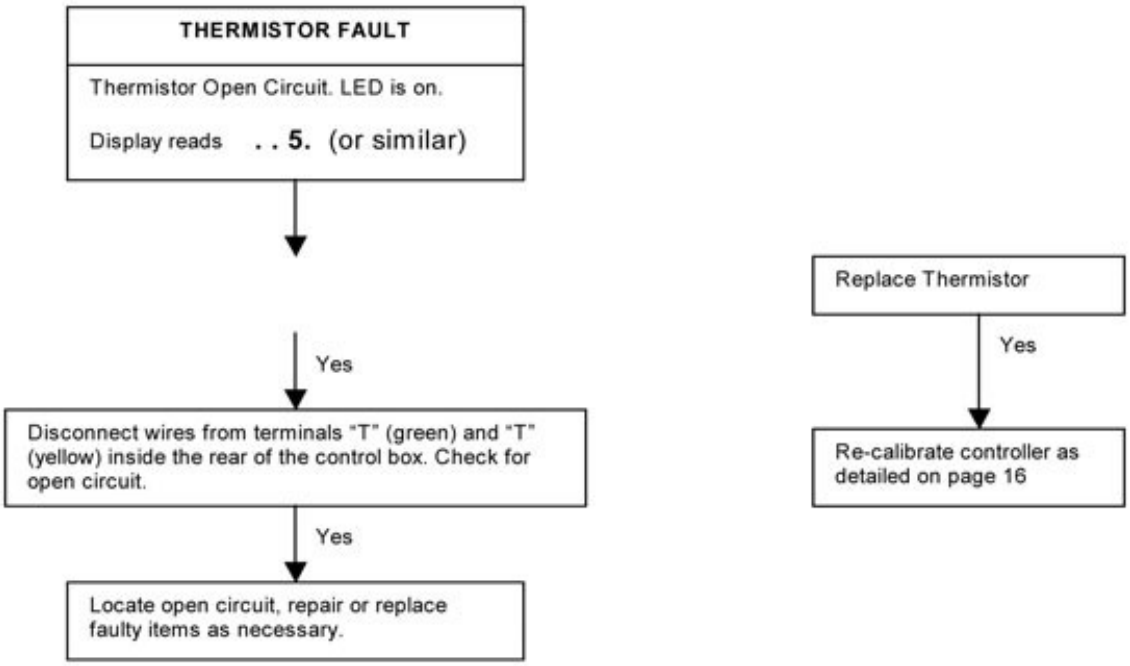
If no LEDs are on, check the mains supply and the fuses on the PCB. For wiring connections see pages 16, 18 & 19.



THERMISTOR FAULTS

Digi50 controller utilising the Open Date printer range and a standard thermistor.





NOTE. Results may vary, depending on type of Thermistor and actual temperature.

MECHANICAL FAULTS

FAULT	POSSIBLE CAUSE
Insufficient foil pull.	• Foil adjusting screw wound in too far. • Pinch roller not engaged. • Foil feed air flow restrictors incorrectly set. • Clutch bearing failure in gear or body. • Drive roller damaged or dirty.
Solenoid operates but printer does not.	• No air. • Air pipe damaged.
Printer operates but does not print, i.e. impression but no print.	• Printing foil has run out. • Printing foil not being driven through. • Printing foil not suitable for substrate. • Little or no heat.
Printing foil tracks over to one side.	• Brake arm loose. • Pinch roller misaligned with drive roller.
Foil rewind is loose.	• Green Drive Belt worn out or dirty. • Foil feed too rapid (slow down return stroke of piston, see page 10). • Foil retaining discs misaligned.
Printer is sluggish.	• Insufficient air pressure. • Faulty valve. • Incorrect flow restrictor settings.

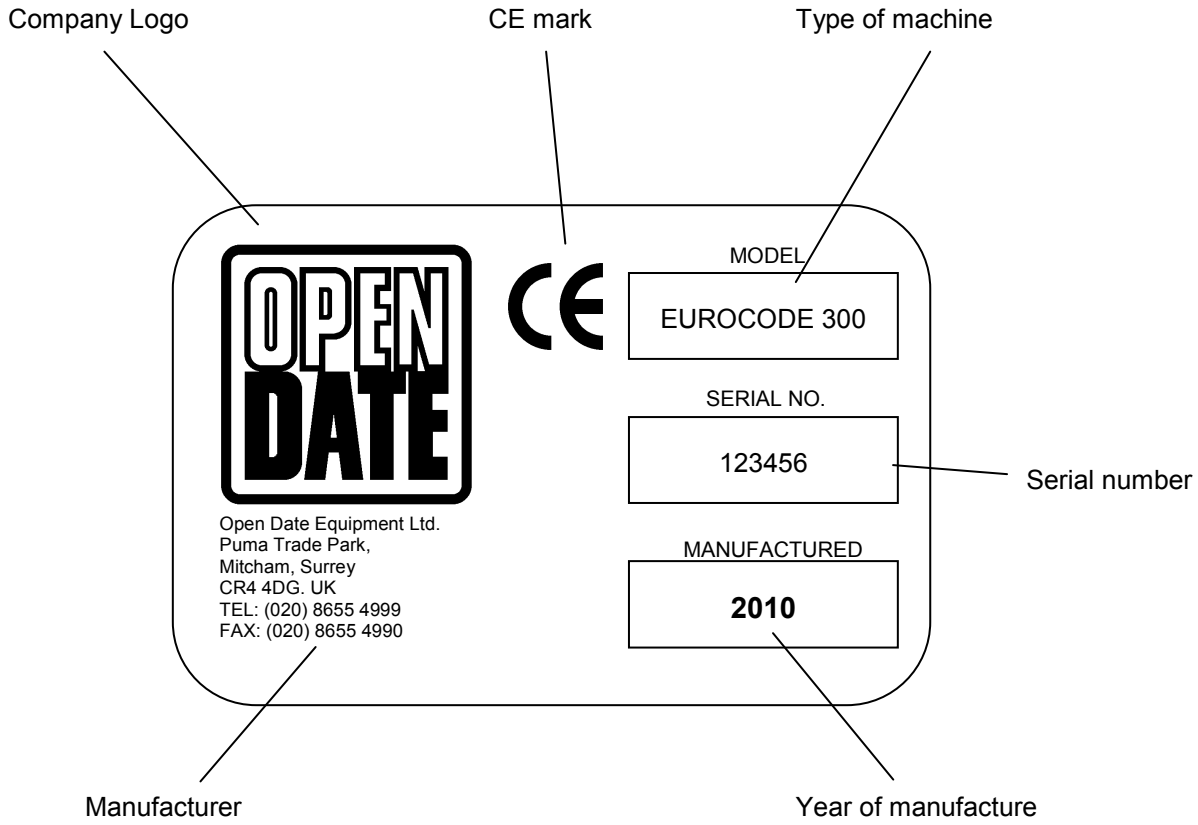
PRINT QUALITY DETERIORATION

POSSIBLE CAUSE	CURE
Insufficient foil pull	See page 8.
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.
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.

MACHINE SERIAL NUMBER IDENTIFICATION

The identification label can be found on the outside of the printer, usually on the rear guard.

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



RECOMMENDED SPARES LIST

Covering:

SPRINT

	MECHANICAL	STOCK REF
1.	Spring Set	SPR135216
2.	Drive Belt	DRI130014
3.	Drive Roller	DRI120019
4.	Fork End Roller Assembly	FOR129506
5.	Brake Pads (pack of 5)	BRA490003
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

ELECTRICAL

1.	Cartridge Heater (240v)	HEA501507
2.	Thermistor Probe	THE500523
3.	Door Switch	SWI395002
4.	Plug-In Control Card (240v)	CPC293504
5.	Pack of Fuses	FUS393504
6.	Solenoid Valve Assembly	VAL400020

Note. The stock reference for the plug-in control card listed above refers to the standard 240v, unit. Other variations are available which your printer may have been supplied with. If in doubt, please advise the serial number of your existing unit to our sales office.

SPRINT PARTS LIST

MECHANICAL

Item numbers refer to those on the assembly drawing. When ordering spare parts please use the Stock Reference.

	ITEM	DESCRIPTION	STOCK REF.	QTY	NOTES
	1	Main Body	N/A	1	
	2	Mounting Bracket	N/A	1	
	3	Foil Adjusting Screw	ADJ130003	1	
	4	Back Disc	DIS130005	1	
	5	Front Guard	GUA130006	1	For R/H printer only.
or		Front Guard	GUA130503	1	For L/H printer only.
	6	Button Screw		2	M4 X 10
	7	Button Screw		4	M4 X 8
	8	Csk. Screws		2	M3 X 6
	9	Microswitch Guard	GUA130007	1	
	10	Door Switch Assembly	SWI395002	1	
	11	Cap Screw		2	M4 x 8
	12	Back Pad	BAC130008	1	
	13	Csk. Screw		6	M4 X 8
	14	Handle	HAN530502	1	Part of item 120.
	15	Magnet	MAG120078	1	Part of item 120.
	16	Cap Screw		2	M3 x 16
	17	Dowel Pin		2	Part of Item 120.
	18	Drive Roller Shaft	SHA130009	1	
	19	Clutch Bearing	BEA521501	2	
	20	Grub Screw		1	M4 x 8
	21	Pan Head Screw		8	No. 2-56 x 1/8"
	22a	Take-Off Hub Assembly	HUB135141	1	Includes items 4,21,23,118.
	22b	Rewind Hub Assembly	HUB135146	1	Includes items 21,23,97,118.
	23	Hub Spindle	SPI130011	2	Part of items 22a & 22b.
	24	Ball Bearing	BEA520502	6	
	25	Main Guard	GUA130012	1	For R/H printer only.
or		Main Guard	GUA130504	1	For L/H printer only.
	26	Pan Head Screw		2	M4 x 10
	27	Drive Boss	BOS130013	1	
	28	Grub Screw		1	M4 X 5
	29	Drive Belt	DRI130014	1	Part of Spring Set.
	30	Grub Screw		1	M4 X 6
	31	Timing Pulley	PUL130015	1	
	32	Cap Screw		3	M3 X 10
	33	Pulley	PUL130016	1	
	34	Needle Bearing	BEA521001	5	
	35	Main Shaft	SHA130017	1	For R/H printer only
	36	Circlip		1	
	37	Washer		1	
	38	Timing Pulley with Clutch	PUL135151	1	For R/H printer only, Includes 19.
or		Timing Pulley with Clutch	PUL135156	1	For L/H printer only, Includes 19.
	39				
	40	Cap Screw		4	M6 x 45
	41	Csk. Screw		1	Part of item 120.
	42	Magnet	MAG531001	1	Part of item 120.
	43				
	44				
	45	Pinch Roller Spindle	SPI130021	1	
	46	Pinch Roller Assembly	ROL135166	1	Includes 2 off item 34.
	47	Grub Screw		1	M4 X 5
	48	Lever	LEV130020	1	
	49	Csk. Screw		1	M4 X 12
	50	Plug Housing	HOU130023	1	
	51	Spring post	SPR130024	1	
	52	Button Screw		2	M3 x 8
	53	Button Screw		3	M4 x 8

SPRINT PARTS LIST

MECHANICAL (continued)

	ITEM	DESCRIPTION	STOCK REF.	QTY	NOTES
	54	Cap Screw		3	M4 X 20
	55	Back Pad	BAC130025	1	
	56	Mounting Plate	N/A	1	
	57	Brake Hub	BRA130026	1	
	58	Grub Screw		1	M4 X 6
	59	Button Screw		3	M3 X 6
	60	Extension Spring	SPR530020	1	Part of Spring Set
	61	Extension Spring	SPR530009	1	Part of Spring Set
	62	Extension Spring	SPR530018	1	Part of Spring Set
	63				
	64	Lever	LEV130028	1	
	65	Dancing Arm Assembly	DAN135186	1	For R/H printer only, Includes 95.
or		Dancing Arm Assembly	DAN135191	1	For L/H printer only, includes 95.
	66	Stop	STO120039	3	
	67	Brake Arm	BRA130030	1	For R/H printer only.
or		Brake Arm	BRA130506	1	For L/H printer only.
	68	Brake Pad	BRA490003	1	Pack of 5.
	69	Spring Post	SPR130031	1	
	70	Extension Spring	SPR530019	1	Part of Spring Set
	71	Manifold Assembly	MAN135181	1	
	72	Cap Screw		4	M3 x 10
	73	Wiring Assembly	PLU399410	1	
	74	Timing Belt	BEL522501	1	
	75	Pan Head Screw		4	No.2-56 x 1/4"
	76	Grub Screw		1	M6 X 6
	77	"O" Ring	O-R512005	1	
	78	Piston Seal & "O"Ring	SEA512006	1	
	79	"O" Ring	O-R512016	1	
	80	Guide Bearing	BEA520009	1	
	81	Nose Seal	SEA512007	1	
	82	Lock Nut		1	
	83	Cap Screw		1	M10
	84	Roller	ROL130033	3	
	85				
	86	Cap Screw		1	M4 X 10
	87	Dowel Pin		1	
	88	Grub Screw		2	M5 x 6
	89	Top Cylinder Bearing	BEA520002	1	
		Nose Bearing	BEA120071	1	
	90	Roll Pin		1	
	91	Nut		2	M3
	92	Washer		4	M3
	93				
	94	Dancing Arm Assembly	DAN135206	1	For R/H printer only. Includes 95.
or		Dancing Arm Assembly	DAN135211	1	For L/H printer only. Includes 95.
	95	Dancing Bar	DAN121006	2	Part of item 65,94
	96	Roller	ROL121007	2	
	97	Back Disc	DIS121009	1	Part of item 22b
	99	Guide Pin	GUI120004	1	
	100	Fork End Assembly	FOR129506	1	Includes items 87,101
	101	Roller		1	Part of item 100.
	102	Cam	CAM120007	1	
	103	Torsion Spring	SPR530006	1	Part of Spring Set.
	104	Piston	PIS120009	1	Piston/Seal Assembly PIS125050
	105	Insulator Plate	INS120012	1	
	106	Heater Block	HEA120013	1	
	107	Side Locator	SID120014	2	
or		Side Locator	SID122503	2	For Sprint Plus only.
	108				
	109	Drive Roller	DRI120019	1	
	110	Pivot Bush	BUS120043	1	

SPRINT PARTS LIST

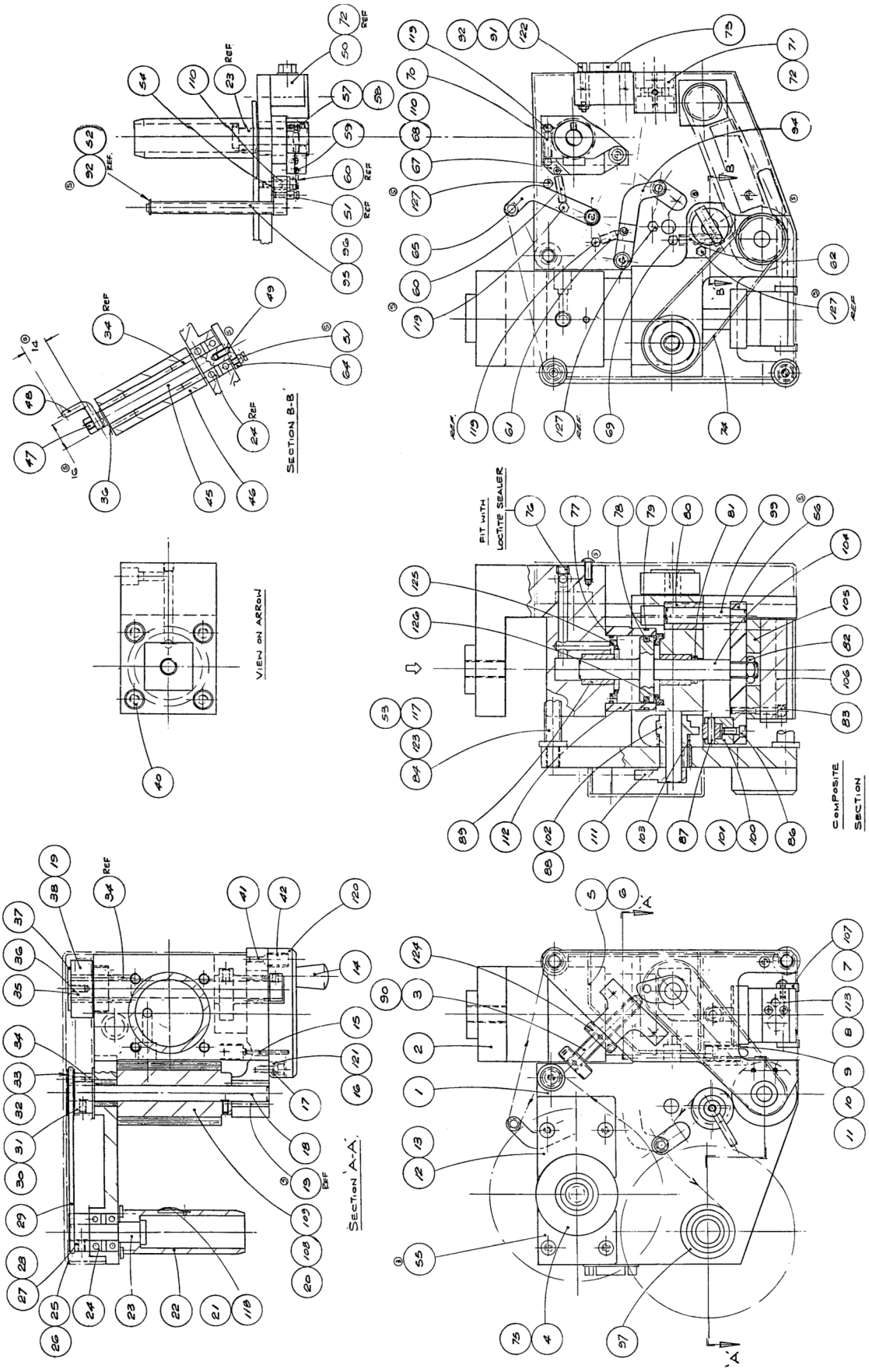
MECHANICAL (continued)

ITEM	DESCRIPTION	STOCK REF.	QTY	NOTES
111	Lever	LEV120028	1	
112	Cylinder Barrel	BAR120029		
113	Keep Plate	KEE120030	1	
114	Pivot Bush	BUS120032	2	
115	Spindle	SPI120044	1	
116				
117	Washer	WAS120035	3	
118	Spring Clip	SPR530001	8	part of items 22a 22b & Spring Set
119	Spring Post	SPR120058	3	
120	Door Assembly	DOO125152	1	INCLUDES ITEMS 14,15,17,42,121
121	Hinge Block	HIN120062	1	Part of item 120.
122	Socket Mounting Screw	SCR120070	2	
123	Roller Spindle	SPI120044	3	
124	Thumb Nut	THU120023	1	
125	Rear Cushion	DAM120074	1	
126	Front Cushion	DAM120075	1	
127	Stop Pin	STO120039	3	

ADDITIONAL SPARE PARTS AND REPAIR KITS

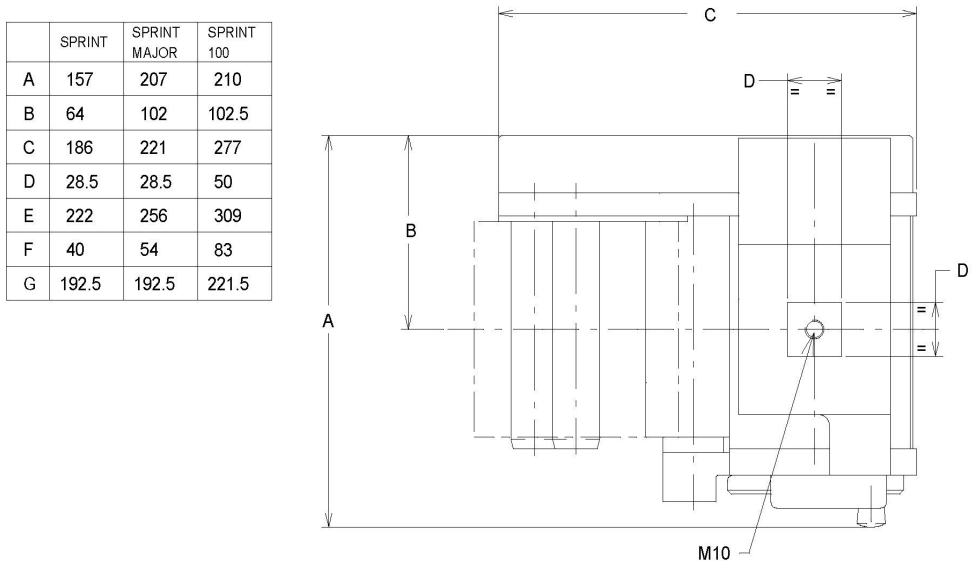
PNEUMATIC	
Solenoid valve without fittings	VAL400020
ELECTRONIC	
Cartridge Heater, 240V, 250w	HEA501507
Thermistor probe	THE500523
Safety proximity switch	SWI395002
"End of foil alarm" sensor (if fitted)	PHO505612
Plug-in printer control card, 240V, box mount (horizontal)	CPC293504
REPAIR KITS	
Spring set containing all springs plus drive belt	SPR135216

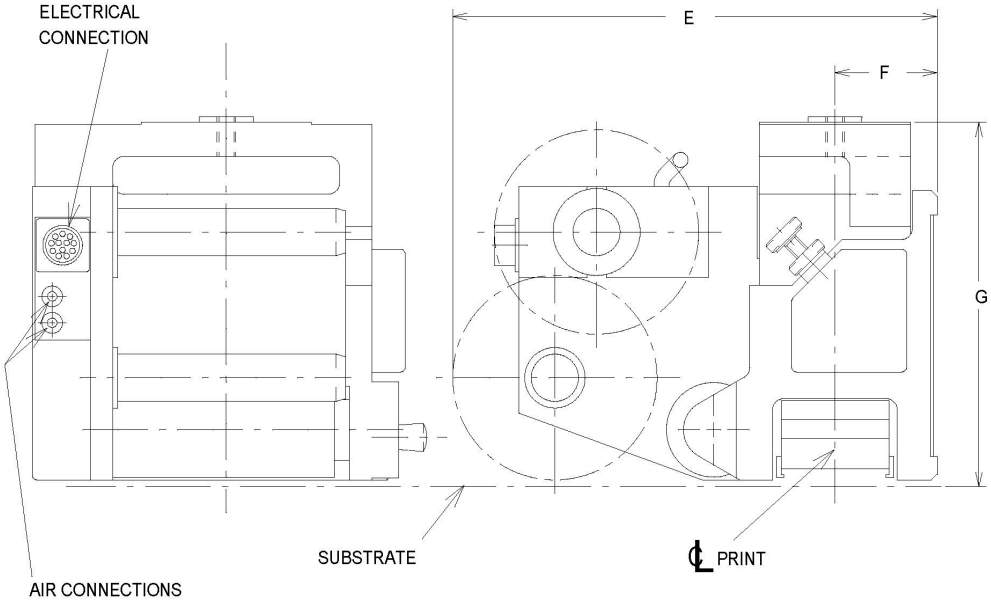
SPRINT ASSEMBLY DETAILS (ISSUE 8)



SPRINT SERIES DIMENSIONAL DRAWING

	SPRINT	SPRINT MAJOR	SPRINT 100
A	157	207	210
B	64	102	102.5
C	186	221	277
D	28.5	28.5	50
E	222	256	309
F	40	54	83
G	192.5	192.5	221.5





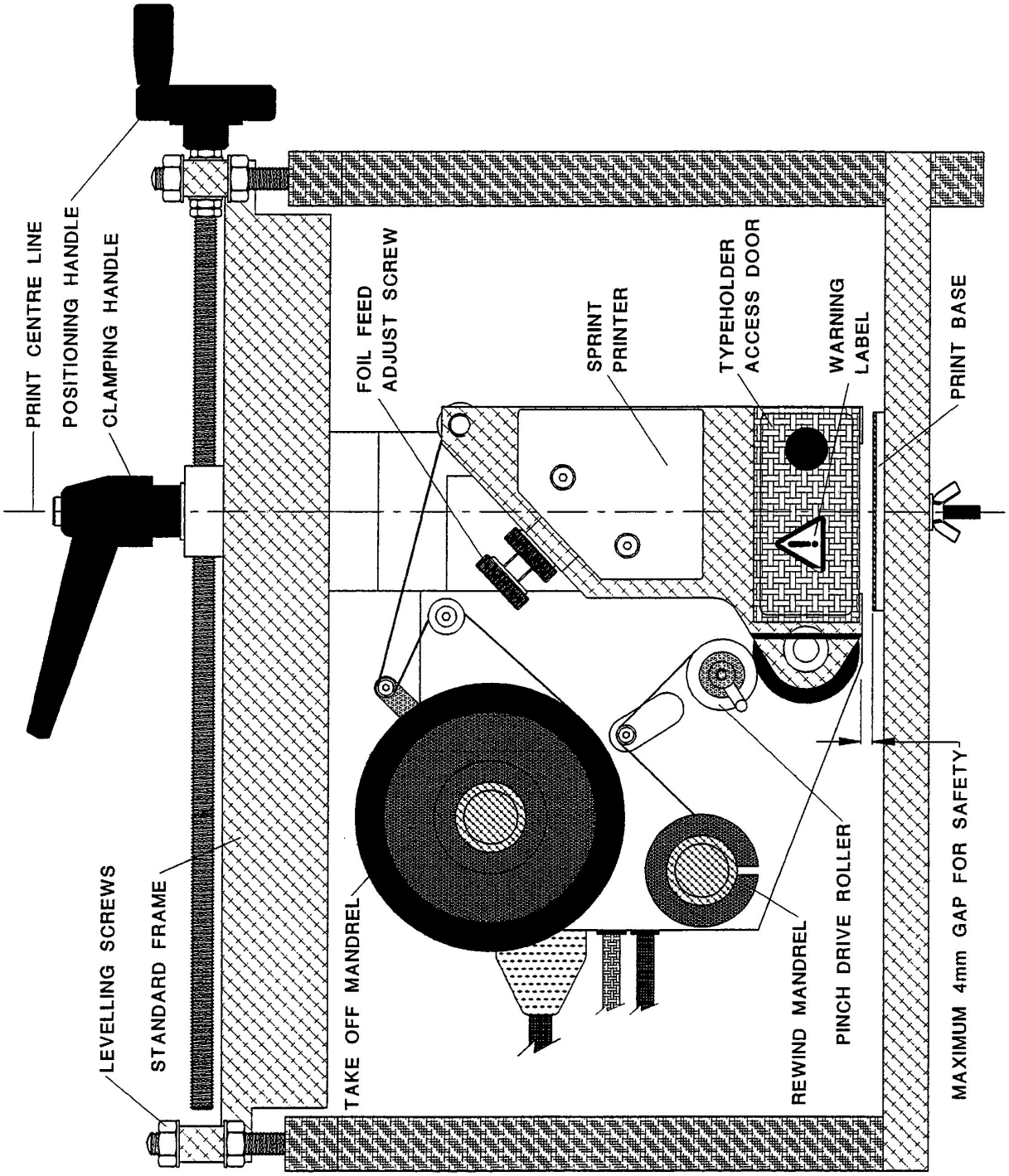
R/H SPRINT, SPRINT MAJOR & SPRINT 100 PRINTERS

OPEN DATE

05/02

MHD4788

SPRINT - STANDARD FRAME INSTALLATION



SPRINT AIRBOURNE NOISE EMISSIONS

Comprehensive tests have been carried out with the Sprint fitted in a standard printer frame and mounted onto a typical label applicator. Measurements were taken at 1.6 metres above floor level and approximately 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 below are based upon a standard type installation for the printer, the operating air pressure was set at 6 bar and the air 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 LEVEL - DECIBELS (dB)
50	65
100	67
150	70
200	71

STANDARD WARRANTY TERMS & CONDITIONS FOR 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. Type characters, dies and rotary databox wheels.

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 problem or fault.

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.

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