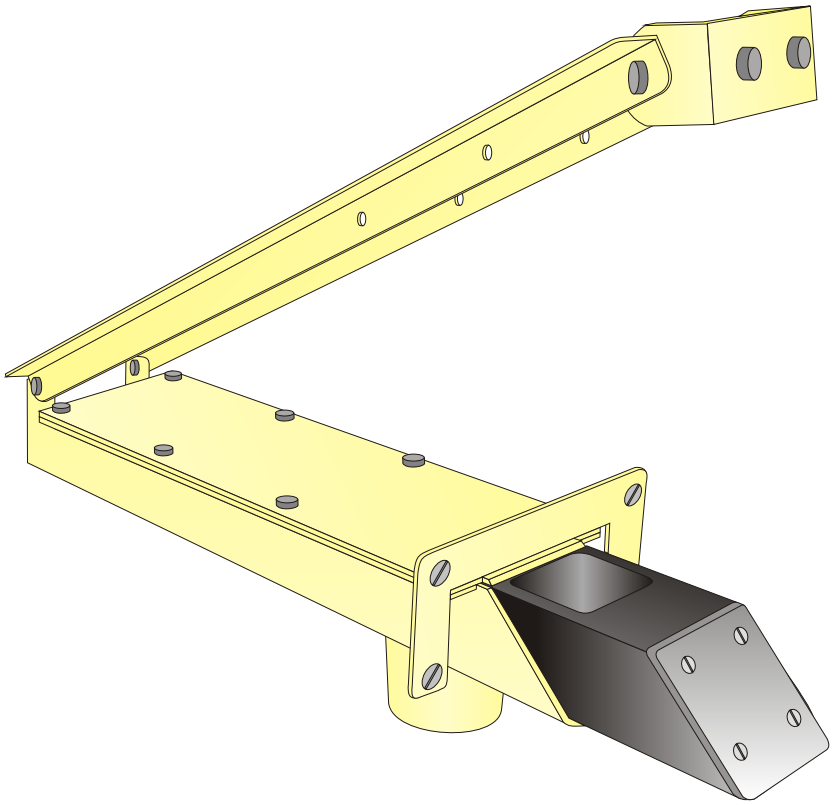
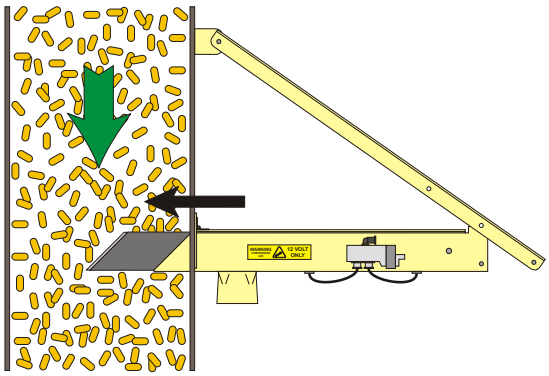
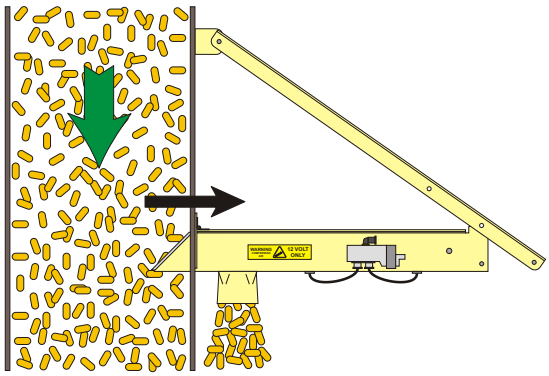
INSTALLATION AND OPERATION MANUAL
IL50 IN-LINE SAMPLER







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INSTALLATION AND OPERATION MANUAL
IL50 IN-LINE SAMPLER

General Description
The IL50 Sampler provides a versatile and low cost means of automated sampling. Powered by compressed air the sample collector enters the flow of product and catches a sample. The sample collector then returns and empties the product through the outlet spout below.

Benefits of the IL50 Sampler
Repeatable sampling is guaranteed.
The same volume of sample is taken to enable accurate comparison of results.
Reduction in labour input = reduction in human error.
Minimisation of Health & Safety risks associated with manual sampling.

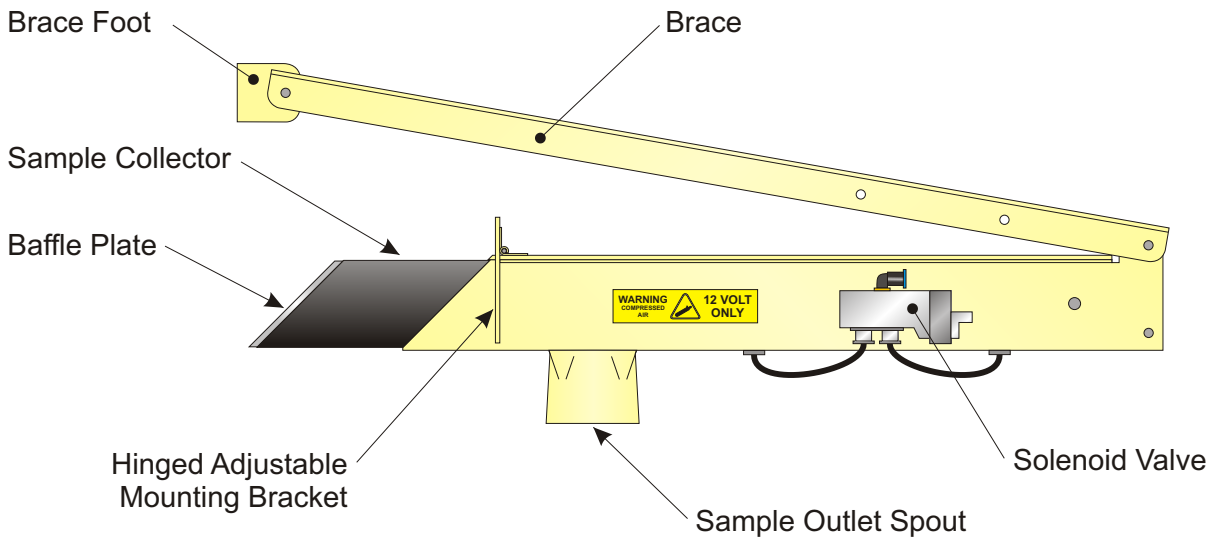


Fig 1
IL50 Sampler Pictorial Description

The Sampler Collector is manufactured from Nylotron GSM plastic with a Stainless Steel (304 grade) baffle plate on the leading edge.

The Control Unit supplied with the IL50 Sampler allows for a manual single sample operation or fully automatic sampling by using the sequence timer.
The Control Unit also has the ability to be interfaced with existing mill control systems.

The Hinged Adjustable Mounting Bracket allows for installation into ducts angled up to 45 degrees. The Brace provides a support for the IL50 which can be mounted onto the ducting or any alternative nearby structures. Examples of mounting positions can be seen in figures 2 & 3.

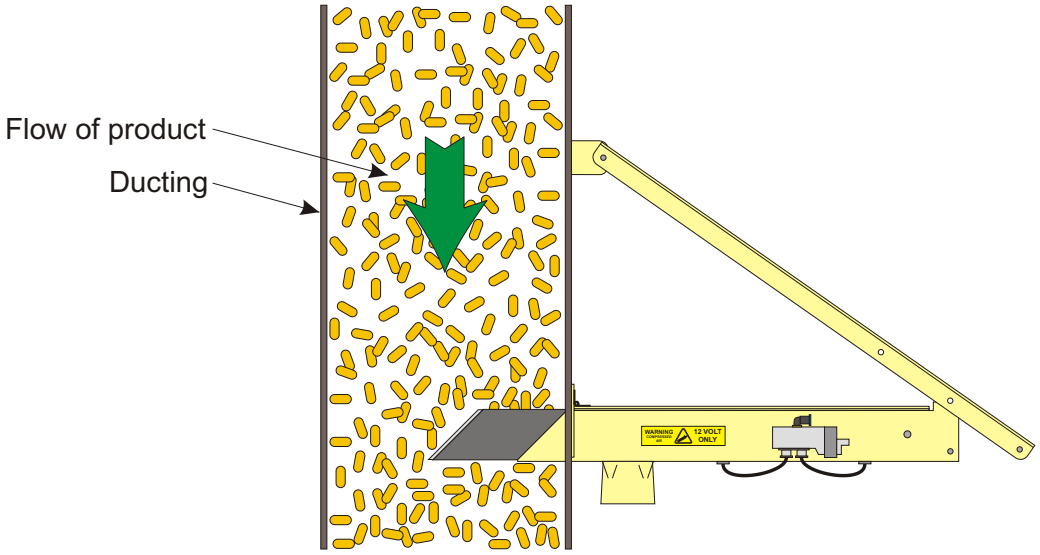


Fig 2
Vertical Ducts

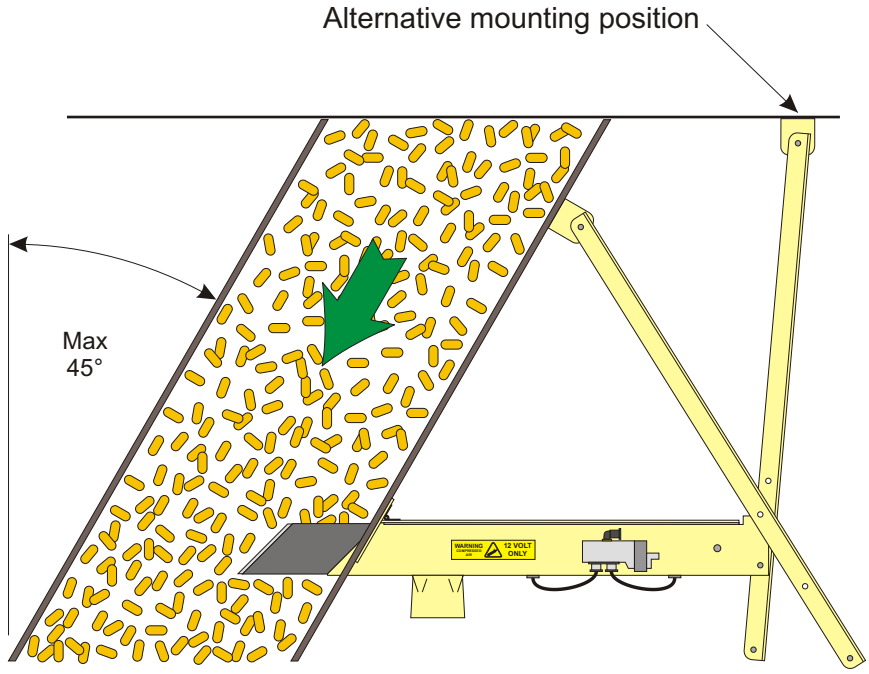


Fig 3
Angled Ducts

Installation Instructions

The installation of the IL50 Sampler can easily be carried out by any competent engineer.

Decide on the position for the IL50 in the duct.
If installing into a **vertical duct** make a cutout as shown in figure 4.
If installing into an **angled duct** it is recommended that the IL50 is mounted onto the vertical side of the duct, as this is likely to give a more representative sample. If however this is not possible then the cutout shown in figure 4 will vary in size depending on the angle of the duct. The easiest way to achieve the cutout is to remove the Mounting Bracket, offer up and mark out the position of the IL50. Use a spirit level to keep the IL50 horizontal as shown in figure 5.
If installing the IL50 into a **round duct** then the minimum radius must be no less than 1 metre (39 ½") otherwise a round to square adapter may need to fitted. These adapters can be supplied as an optional extra with the IL50.

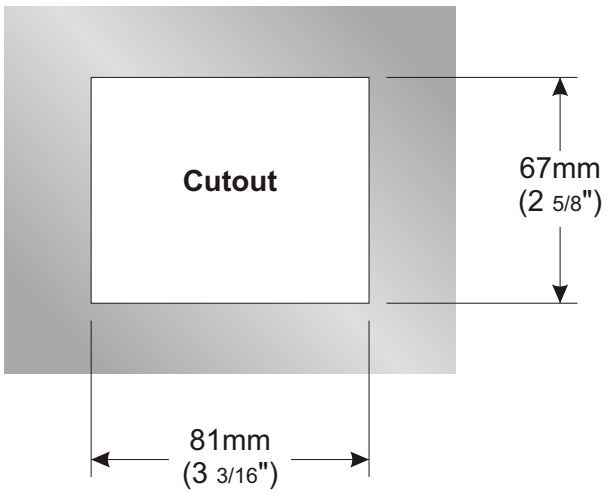


Fig 4
Cutout in vertical ducts

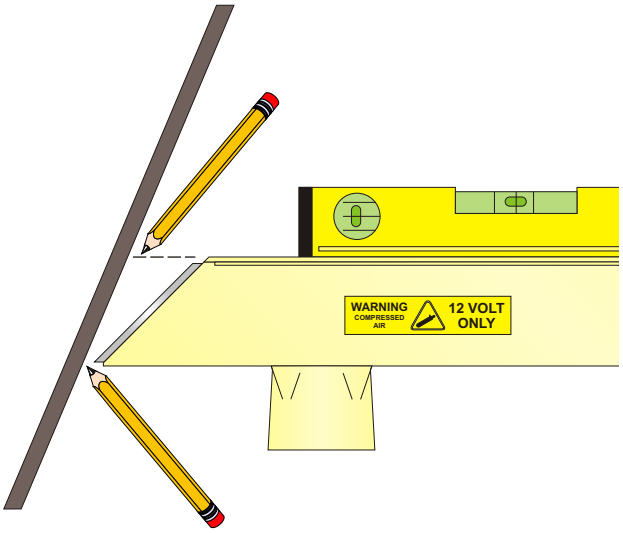


Fig 5
Cutout in angled ducts

Refit the Mounting Bracket, if necessary, and slide the IL50 into position in the duct.
Mark through the holes in the Mounting Bracket and drill.
Position the Brace so that the Brace Foot can sit flat against the duct (or nearby structure) maintaining the IL50 in a horizontal position. Mark through the Brace foot and drill.
Remove Mounting Bracket and Brace Foot from the IL50 and mount onto the duct in their respective positions.
Slide the IL50 back into the duct and secure onto the Mounting Bracket and Brace Foot (see figure 6)
Check that the sample collector moves freely within the body.
DO NOT WELD THE SAMPLER TO THE DUCT

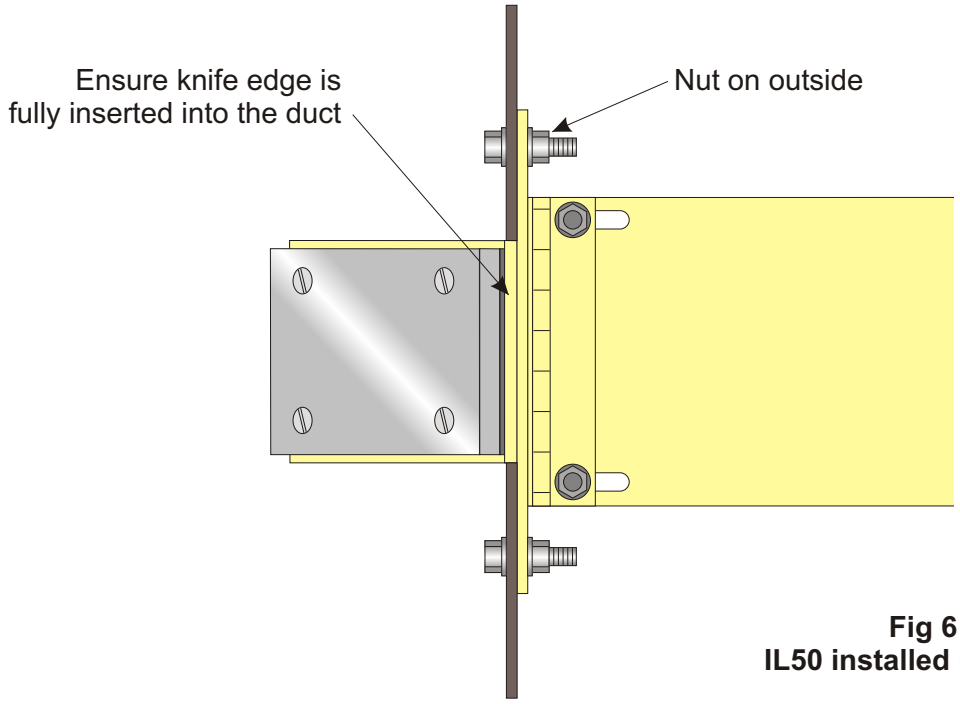


Fig 6
IL50 installed into duct

Air Supply
The IL50 runs on a clean oil free supply of compressed air operating between 6 and 7 Bar. Air connections for the IL50 are made to the Solenoid Valve using 6mm O/D (1/4") tubing. The installation length of this 6mm O/D tubing should be **no longer that 2m**.
All pneumatics comply to DIN Standards.

Electrical Supply
The IL50 can operate on either a 110v or 240v AC electrical supply with a control circuit of 12v DC, complying with the EC Directive on low Voltage 73/23/EEC. Please ensure that the unit supplied conforms to the electrical supply being used.

Maintenance
With the IL50 being totally enclosed no maintenance is required, but checking air and electrical connections and cleaning the outlet spout from time to time would be good practice.

Operating Instructions

Once the IL50 has been installed it can be operated as follows :

Control unit with sequence timer (see figure 7)

1. Switch `ON' the control unit via the mains connector on the side of the control box. The control unit is also fitted with a Mini Circuit Breaker (MCB) that may need to reset if the there is power surge or power cut.
2. Place a container to catch the sample under the outlet spout.

Operating without timer function.

3. Ensure that the Timer Toggle Switch is turned `OFF' so that the green Sequencing LED **is not illuminated.**
4. **Press and hold** the sample button on the front of the control box. The green Sample LED will illuminate and the sample collector will enter the product flow for the duration of the factory default timer settings*.
5. Once the sample LED goes `OFF' the sample will discharge from the bottom of the outlet spout. The sample button can now be released.

* Factory default settings for the Timer are:
Pulse (time between samples) - 20 seconds
Pause (time that the sample collector is in the product flow) - 5 seconds

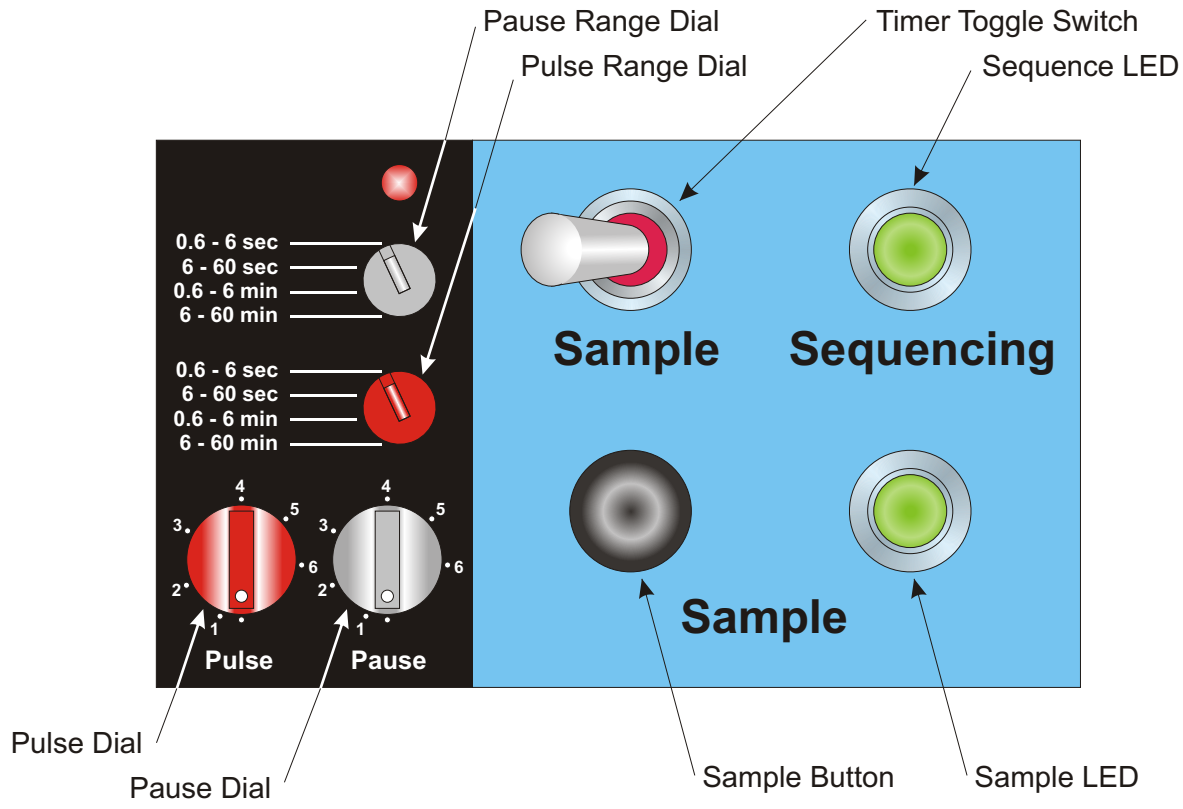


Fig 7 : Control Unit with sequence timer

Operating <u>with</u> timer function.

1. Ensure that the Timer Toggle Switch is turned `ON' so that the green Sequencing LED **is illuminated.**
2. Set the Pulse Range Dial for the amount of time that you want between samples.
3. Set the Pulse Dial (in increments of 10) for the actual time between samples.
4. Set the Pause Range Dial for the amount of time that the Sample Collector is in the product flow catching the sample.
5. Set the Pause Dial (in increments of 10) for the actual time that the Sample Collector is in the product flow catching the sample.
6. The IL50 will now take continuous samples as set by the timer, with the Sample LED illuminating each time a sample is being taken.

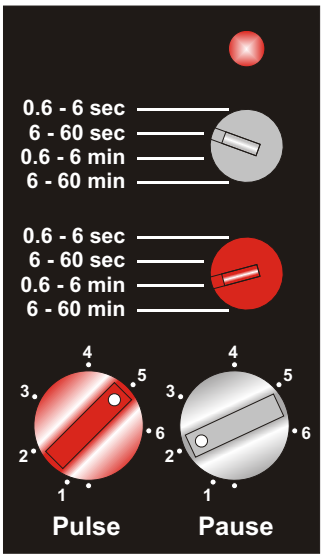


Fig 8
Example of setting timer

Example of setting timer

Sample required every 5 minutes with Sampler Collector in the product flow for 20 seconds.

Set the Pulse Range Dial to 0.6 - 6 min.

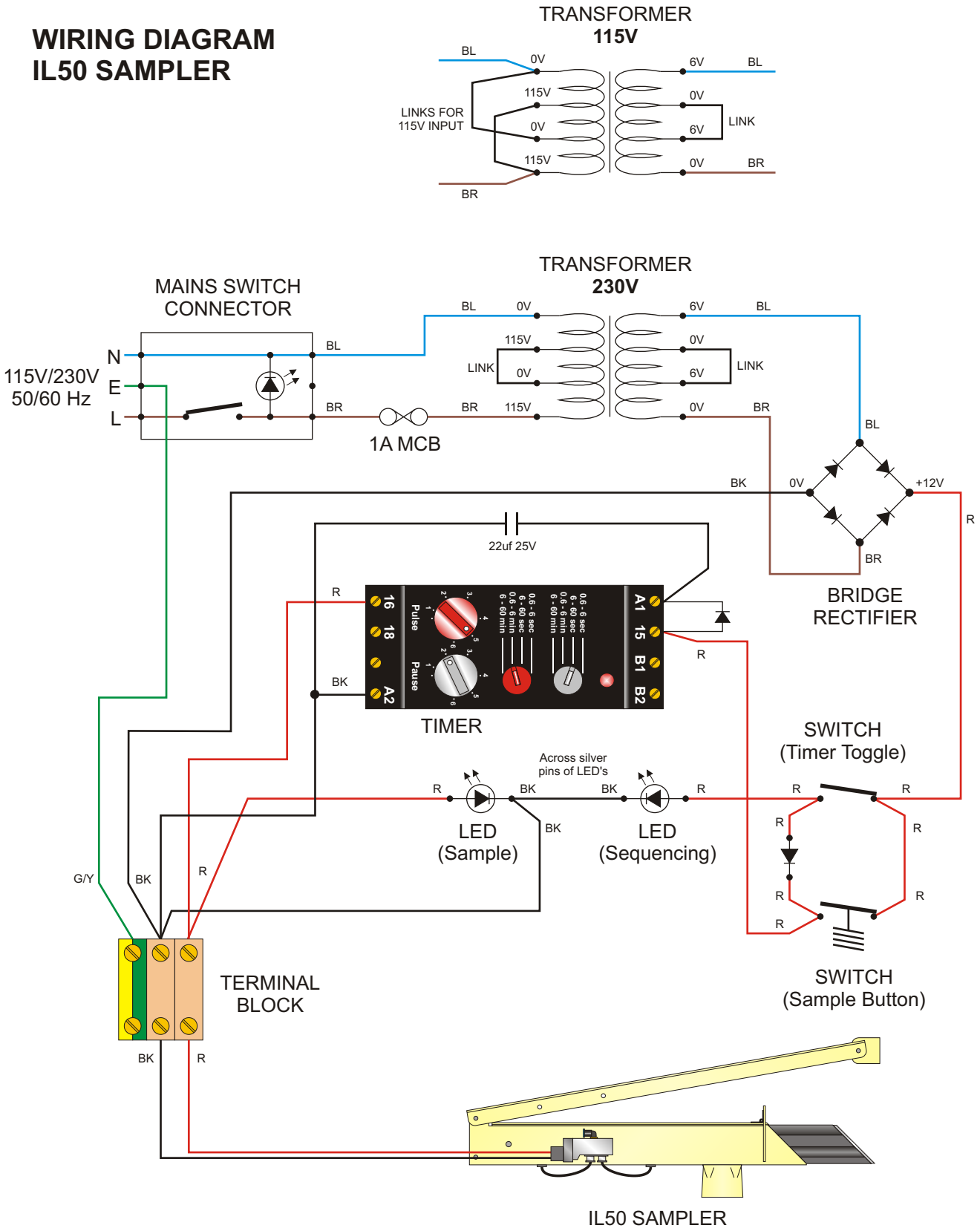
Set the Pulse Dial to 5. (5 minutes)

Set the Pause Range Dial to 6 - 60 sec.

Set the Pause Dial to 2. (20 seconds)

(See figure 8)

WIRING DIAGRAM
IL50 SAMPLER



WIRING DIAGRAM
Drg No. ILS4042 / 04

Declaration of Conformity

Equipment Description : IL 50 IN-LINE SAMPLER

Manufacturer :
TekPro Limited
Willow Park
North Walsham
Norfolk
NR28 0BD
United Kingdom

This Declaration is valid for product manufactured from January 17th 2006

United Kingdom regulations

The Supply of Machinery (Safety) Regulations 1992 (S.I. 1992/3073) as amended.
The Electrical Equipment (Safety) Regulations 1994 (S.I. 1994/3260) as amended.
The Electromagnetic Compatibility Regulations 1992 (S.I. 1992/2372) as amended.

European Directives

Council Directive 98/37/EC for Machinery as amended.
Council Directive 73/23/EEC for Low Voltage Directive as amended.
Council Directive 89/336/EEC for Electromagnetic Compatibility as amended.

Declaration : We hereby declare that the IL-50 IN LINE SAMPLER complies with the Council Directives stated above.

Date : 1st January 2005

Signed : ……. D. Catchpole - Technical Director

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