

WH-3 COMPACT HOPPER

1.0 GENERAL SPECIFICATIONS

- 1.1 **Supply Voltage:** 220vac (with thermal protection)
24vdc
- 1.2 **Current Consumption (peak):** 220vac - 1.2A (operating)
24vdc – 4.0A
- 1.3 **Environment:**
- Operating Temperature: -10° C to +60° C
Maximum Humidity: 90% RH

2.0 COIN SPECIFICATIONS

- 2.1 **Applicable Coin Size Range:** Diameter: 24.5mm – 39.0mm
Thickness: 1.5mm – 3.0mm
- 2.2 **Dispensing Speed:** 900 coins per minute approximately
- 2.3 **Coin Capacity:** 30.8mm diameter: 550 coins approx.
38.0mm diameter: 220 coins approx.
- 2.4 **Counting Method:** The WH-3 hopper is fitted with a proximity sensor as standard. The speed of dispensing prohibits the use of microswitches.
- 2.5 **Life Expectancy:** 2,000 hours continuous usage.
- 2.6 **Number of Dispenses:** 2,000,000 coins

3.0 ELECTRICAL INFORMATION

3.1 Motor Power Connections

3.1.1 220v AC and 110v AC Models

These models are supplied to cater for both 50 Hz and 60 Hz supplies and the wire colours are allocated as follows:

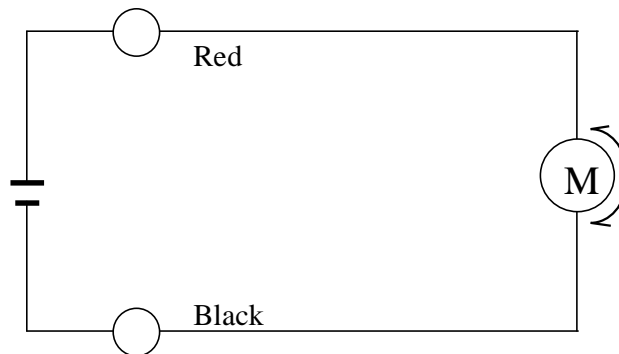
WHITE	COMMON
PINK	50Hz frequency
BLUE	60Hz frequency

N.B. is important to select the correct wire for the frequency of the supply and to insulate the unused one. (Contact with the unused wire will give an electric shock or blow the supply fuse if earthed).

The chassis of the coin hopper must be bonded to the supply earth and surrounding metal cabinet.

3.1.2 24v DC Model

This model is supplied with two wires, red and black. To ensure correct directional rotation of the mechanism the red wire must be connected +ve in relation to the black wire across a 24v \pm 10% DC supply.



3.2 Proximity Sensor Features and Specifications

3.2.1 Features

The sensor currently used on the compact hopper range is the AYS-02 which is a long life “non contact switch” with a quick response time and 40mA switching capabilities, making it suitable for direct interface with controllers.

3.2.2 Technical Specifications

Detecting Distance:	4.5 ± 0.5mm
Supply Voltage:	4.5v DC to 15v DC
Current Consumption:	10mA maximum at 15v DC
Response Frequency:	500Hz approximately
Output Logic:	Active High
Control Output:	40mA maximum (switching capability)
Residual Voltage:	1.0v maximum
Output Impedance:	4.7KΩ
Operating Temperature:	10°C to +60°C
Storage Temperature:	-20°C to +85°C

3.3 DC Motor Brake (DCMB) specification

The DCMB-9101A is a brake circuit board which stops DC motors instantaneously by applying a short pulse of reverse current. Electrical connection is by two AMP E1 series connectors.

Connector	Pin	Signal Name	Signal Type	Detail
J1	1	Motor On -ve	Input	Connect to 0v
J1	2	Motor On +ve	Input	Pull up 5v – 12v
J1	3	0v	Supply	Connect to 0v
J1	4	24v DC	Supply	Connect to 24v DC*
J2	1	Motor -	Output	Connect to motor
J2	2	Motor +	Output	Connect to motor**

Table 3.3 (Wiring details)

* The unit draws 2 -5mA when idle and 300mA(max) when driving the motor.

** Drive capability: 5A (max).

4.0 SAFETY AND MAINTENANCE

- 4.1 Control circuitry must be arranged to disconnect power to the mechanism when the host machine is opened for servicing.
- 4.2 Servicing and maintenance staff must be adequately trained and aware of the hazards presented by moving parts and high voltages.

Particular attention should be paid to the following areas:

- Motor connections and wiring (Particularly 220v model).
- Coin disc (High torque created by drive through the gearbox).
- Cooling fan (Metal blades rotating at high speed).

Fingers, long hair and loose clothing must be kept clear at all times when the mechanism is powered up.

- 4.3 Handle the mechanism with a firm grip on the frame as it is heavy. Particularly avoid moving the mechanism when the bowl is full as injury or damage could result.
- 4.4 Avoid the inclusion of damaged coins and foreign objects such as matches, elastic bands, paper clips and screws during operation, as these could cause jams.
- 4.5 Wiring errors or incorrect supply voltages can seriously damage the motor or sensors (See Section 3.0 for wiring details)
- 4.6 Routine maintenance should undertaken every 2 months or after 50,000 coins have been dispensed whichever is the sooner:
 - Examine the wiring and sensor for damage.
 - Check for loose screws and damaged components paying particular attention to the coin disc and wiper assembly.
 - Clean the bowl with a damp cloth and detergent ensuring that it is fully dried.
 - Dust should be brushed from the mechanism with a soft brush and if necessary dirt deposits can be removed with alcohol impregnated wipes.
 - Dust should be removed from the sensor with a small soft brush.

- Escalators if fitted should be cleaned with an alcohol impregnated wipe paying particular attention to the ball in the non return mechanism in the centre of the escalator.

5.0 DIMENSIONAL DRAWING

Dimensional Drawing of WH-3 24vdc

