TICKETFLEX HOPPER CONTROLLER BOARD TFB1-AS

CONFIGURATION FOR THE MONEY CONTROLS COMPACT HOPPER (FOR PULSE INPUT OPERATION)

PINOUT OF THE STANDARD HARNESS

MALE 4 PIN MOLEX PLUG WITH FEMALE PINS (CONNECTION TO THE HOPPER)
(NOTE! THIS PLUG IS NOT MADE TO MATCH THE HOPPER CONNECTOR)

PIN 1 BLUE = PIN4 OF THE HOPPER CONNECTOR (COIN COUNT)
PIN 2 BLK= PIN2 OF THE HOPPER CONNECTOR (GND)
PIN 3 WHT = RELAY COIL (EXTERNAL RELAY)
PIN 4 ORG = RELAY COIL (EXTERNAL RELAY)

THE CONTACT OF THE RELAY SWITCHES THE 24V (OR 12V DEPENDING ON THE TYPE OF THE HOPPER) TO THE PIN 1 OF THE HOPPER CONNECTOR

FEMALE 4 PIN MOLEX PLUG (WITH MALE PINS)

PIN 1 BLUE = NOT USED
PIN 2 BLK = GND
PIN 3 WHITE = DIRECT PULSE INPUT (FROM OPEN COLLECTOR OR GROUNDED SWITCH -ACTIVE LOW)
PIN 4 ORG = +12V POWER INPUT

DIP SWITCH

DIP SWITCH 7 AND 8 MUST STAY IN OFF POSITION

JUMPER SELECTOR (NEXT TO THE DIP SW 8)

MUST STAY IN "UP" POSITION (FURTHER AWAY FROM THE EDGE OF THE BOARD) OTHERWISE THE CPU IC COULD GET DAMAGED

PULSE INPUT OPERATION

THERE ARE TWO WAYS TO TRIGGER COIN PAYOUT

1. **DIRECT INPUT** – APPLY ACTIVE LOW PULSES FROM A GROUNDED SWITCH OR AN OPEN COLLECTOR NPN OUTPUT TO THE WHITE WIRE (PIN 3) OF THE 4 PIN FEMALE MALE MOLEX PLUG

2. **OPTO ISOLATED INPUT (RECOMMENDED)** THIS INPUT CAN BE CONNECTED STRAIGHT ACROSS THE COIN COUNTER OF THE HOST MACHINE. PIN 11 OF JST 12 IS POSITIVE (+12V). PIN 10 OF JST 12 IS NEGATIVE (SWITCHED GND).

CLEARING ERROR

INSTALL PUSH BUTTON BETWEEN PIN 4 (COIN COUNT OUTPUT) OF THE HOPPER CONNECTOR AND GND. IF THE HOPPER RUNS OUT OF COINS DURING DISPENSING, THE HOPPER CONTROLLER BOARD WILL STOP THE MOTOR AND COME TO AN ERROR. AFTER REFILLING THE HOPPER, PUSH THE BUTTON, THE CONTROLLER BOARD WILL RESUME NORMAL OPERATION . THE ERROR CAN ALSO BE CLEARED BY SWITCHING THE POWER OFF/ON.

NOTE: THAT THE HOPPER COIN COUNT OUTPUT WILL STAY “HIGH” WHEN THE HOPPER MOTOR STOPS (WITH THE PIN 3 – OPTO SUPPLY NOT CONNECTED). PRESSING THE PUSH BUTTON WILL ASSERT “LOW” – WHICH CLEARS THE ERROR.

OTHER RECOMMENDATIONS

1. INSTALL A DIODE ACROSS THE HOPPER SUPPLY (1N4007) TO SUPPRESS BACK EMF (CATHODE TO PIN 1, ANODE TO PIN 2 OF THE HOPPER CONNECTOR).

2. INSTALL A DIODE ACROSS THE RELAY COIL (1N4007) TO SUPPRESS BACK EMF (CATHODE TO 12V PIN 4 OF THE 4 WAY MOLEX CONNECTOR , ANODE PIN 3 OF THE 4 WAY MOLEX CONNECTOR).

3. CONSIDER INSTALLING RC NETWORK (RESISTOR AND CAPACITOR IN SERIES) ACROSS THE RELAY CONTACT TO SUPPRESS ARCING. THIS WILL INCREASE THE LIFE OF THE CONTACT.

IF THE RC NETWORK AFFECTS THE EFFECTIVENESS OF THE MOTOR BRAKE CIRCUIT (CAUSING COIN OVER RUN), REDUCE THE VALUE OF THE CAPACITOR OR/AND INCREASE THE VALUE OF THE RESISTOR. THE SUGGESTED VALUES ARE: CAPACITOR IS 1MF (BIPOLAR), THE RESISTOR IS 3.9 OHMS/3W.