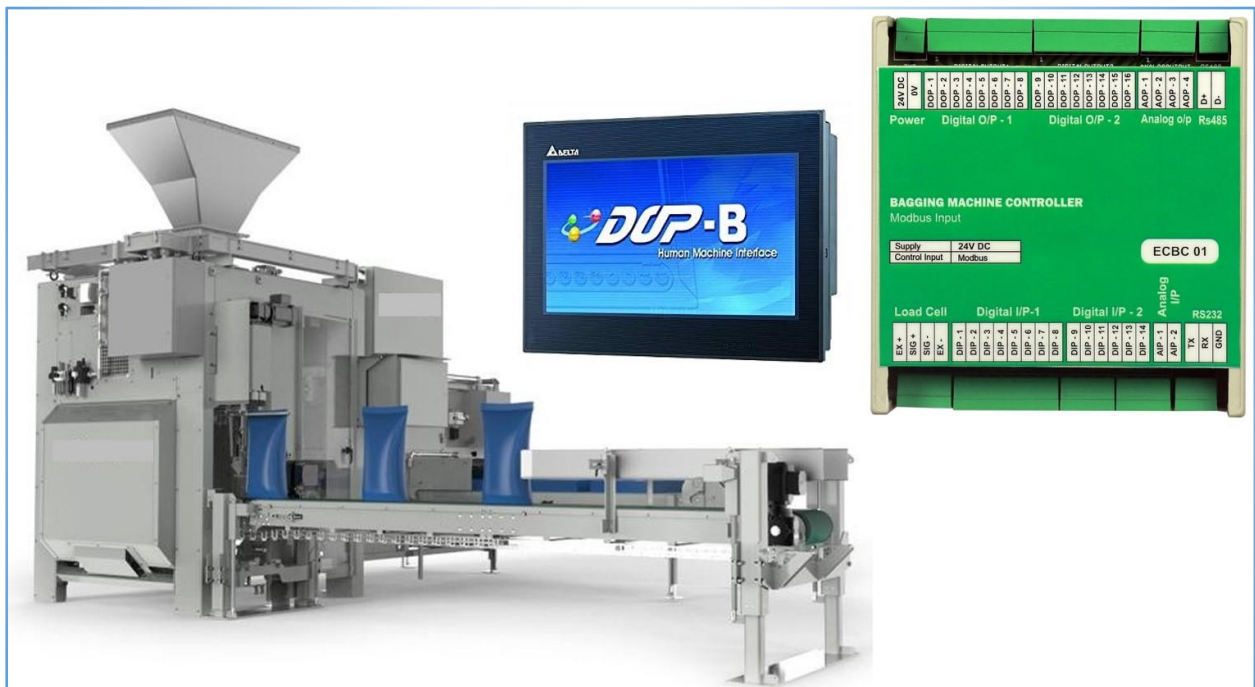




BAGGING MACHINE CONTROLLER – SEMI AUTOMATIC

Hi-Performance Embedded Control Unit for Bagging Machine Automation.

Bagging Machine Controller – Semi Automatic (ECBC01) is specifically designed for Single Hopper Screw Conveyor, Belt Conveyor and Gravity Filling Applications. It can be easily interfaced with any standard HMIs using MODBUS RS232 or RS485, which makes it easier to operate and quick to do changes. It has built-in 32-bit ARM Controller combined with 24-bit Delta Sigma ADC Load Cell Amplifier, with which it delivers high speed, high accuracy and better performance. RS232 port for HMI and RS485 port for MODBUS extension made it connect to with System. Hence it is widely used in various bagging machines for rice, seed, animal feed, chemicals and so.



Features

- Standard 24V Operation.
- Up to Four Load Cells can be interfaced using Junction Box.
- RS232 for HMI interface using MODBUS.
- RS485 for Control unit configuration from PC using our proprietary tool.
- Eight Digital Inputs (Start/Stop Input, Foot switch or Delivery Request, etc.,)
- Eight Digital Outputs (Bucket open/close, Coarse gate, Fine gate, Delivery Ready signal)
- Four Analog outputs (0....10V) to control 230VAC Vibrator Drive or VFD directly.
- Load cell calibration, Target weight, and Coarse, Fine and Super fine settings in HMI.
- Auto tare, Free fall correction and multi-level digital filtering are in built



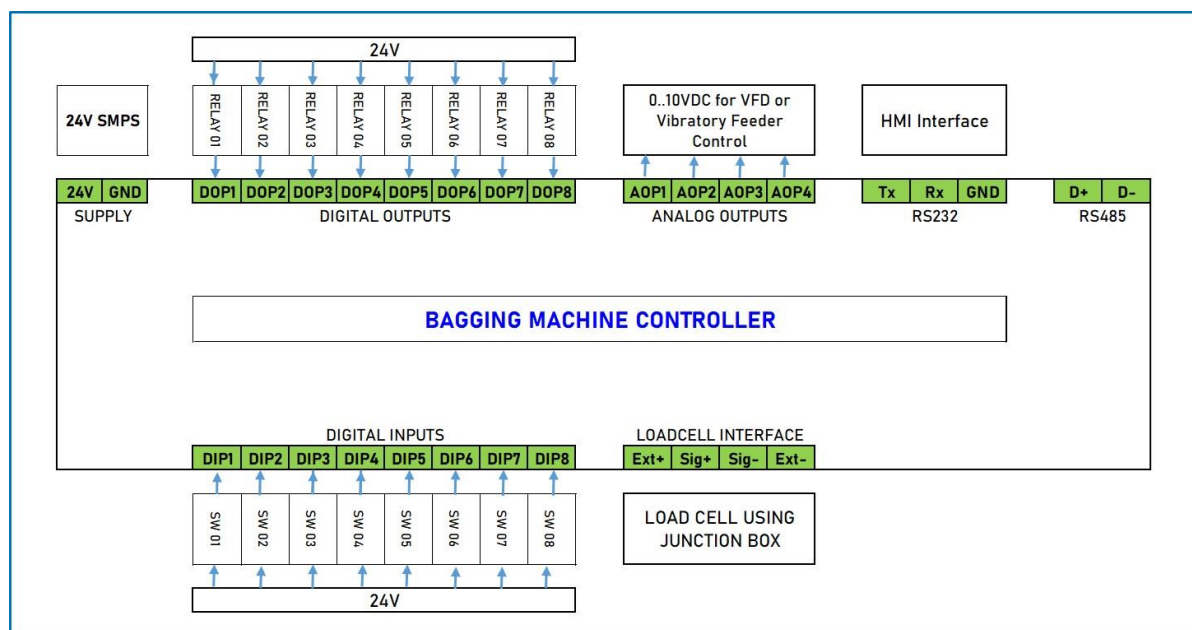
Electrical Characteristics

Supply	:	24V DC
Digital Inputs	:	8 (PNP type)
Digital Output	:	8 (NPN type)
Analog Output	:	4 (0...10VDC)
Communication	:	RS232 , RS485
Load Cell	:	1 Load cell can be connected directly or upto 4 Loadcells using Junction box.

Mechanical Characteristics

Operating temperature	:	0...+65 (°C)
Size (l*b*h)	:	100*105*54 mm ³
Housing	:	DIN Rail ABS Plastic Enclosure
Weight	:	200 grams approx.

Pin Out Diagram



- All the digital inputs are PNP type. All the digital outputs are NPN type.
- Analog Outputs are used to provide Variable Speed setting (Coarse, Fine) of Screw Conveyor using VFD.



Input Pin list with Description

S.no	Inputs	Description
1	DIP1	Emergency Button
2	DIP2	Filling On/Off Input
3	DIP3	Foot Switch-1 for Bag Holder Open / Close Control
4	DIP4	Reserve 1
5	DIP5	Hopper Material Level Sensor (Digital)
6	DIP6	Stitching Sensor 1 (In feed)
7	DIP7	Stitching Sensor 2 (out feed)
8	DIP8	Reserve 2

Output Pin list with Description

S.no	Outputs	Gravity Filling	Screw / Belt Conveyor Filling
1	DOP1	Coarse Gate On/Off Signal	Coarse Conveyor VFD On / Off Signal
2	DOP2	Medium Gate On/Off Signal	Medium Conveyor VFD On / Off Signal
3	DOP3	Bag Holder Open / Close signal	
4	DOP4	Bag Conveyor Run/Stop Control	
5	DOP5	Hopper Stirrer Run/Stop Control	
6	DOP6	Stitching or Sealing Machine On/Off Control	
7	DOP7	Stitching Cutter On/Off Control	
8	DOP8	Dump Yard Screw Conveyor Run/Stop Control	



HMI Screen list with Description

1. HOME Page:



- This page displays the current weight, target weight and production count, and currently running recipe.

2. MENU Page-1:



- This page displays the different settings that need to be configured.



3. MENU Page-2:



- This page displays the different settings that need to be configured.

4. CALIBRATION Page:



- Calibration page is used to calibrate the load cell.
- This page displays the Load cell RAW Count and calibrated weight.
- TARE and CALIBRATE buttons can be used to calibrate the load cell.



5. FILL SETTING Page:

22/10/2020 **FILL SETTINGS** 16:58:57

	COARSE	TARGET	ACTUAL WEIGHT	
WEIGHT	0.000	0.000	0.000	KG
SPEED %	0	0	%	

MANUAL HOME MENU STOPPED

- This page is used to set the filling parameters.
- Coarse weight and Target weight can be set, and Speed for driving VFD can be set here.

6. DELAY TIME SETTING Page:

22/10/2020 **DELAY TIME SETTINGS** 16:59:05

WEIGHT TARE DELAY	0.000	SEC
BAG HOLDER	ON DELAY 0.000	OFF DELAY 0.000 SEC
LOADING CONVEYOR	0.000	0.000 SEC

MANUAL HOME MENU STOPPED

- This page is used to set the Timing control for each outputs like BAG HOLDER, LOADING CONVEYOR, TARE DELAY TIME.



7. PRODUCTION Page:

22/10/2020 PRODUCTION 16:59:39

PRODUCTION COUNT 0 RESET

AUTO TARE DISABLED

MANUAL HOME MENU STOPPED

- This page is used to reset the PRODUCTION COUNT, and Enable/Disable the AUTO TARE Functionality.

8. RECIPE setting page:

22/10/2020 RECIPE 16:59:44

RECIPE NO 1

SAVE LOAD

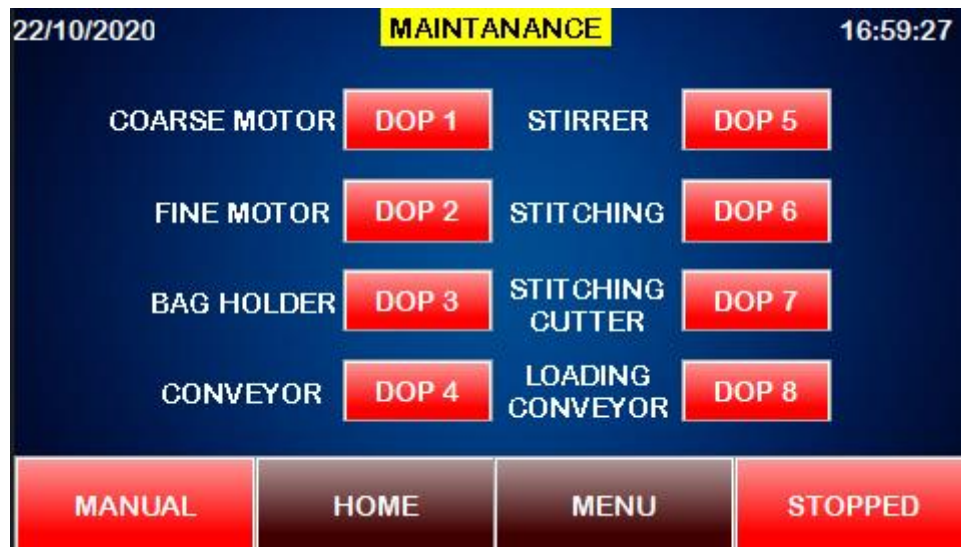
1	
2	
3	
4	
5	

MANUAL HOME MENU STOPPED

- This page is used to save and load the different filling parameters.

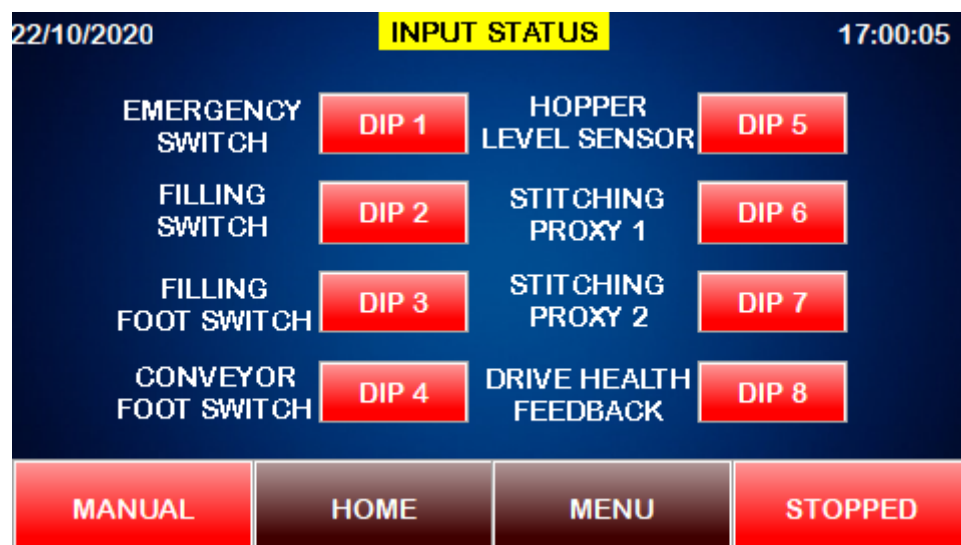


9. MAINTANANCE page:



- This page is be used to Test each Digital outputs for maintenance purpose.

10. INPUT STATUS page:



- This page is be used to Test each Digital inputs for maintenance purpose.