

VETAL

THE TECH - *Knowledge* COMPANY

PHOTO CELL UNITS

for

**Blow Room Machines • Carding Machines
Draw Frame Machines • Ribbon / Sliver Lap Machines
Comber Machines • Speed Frame Machines**



1. BLOW ROOM MACHINES

1.1 BLOW ROOM PHOTO CONTROL UNIT

Model : ERM-1001 (for all Blowroom lines)

Specifications

Operating Voltage	: 220 V AC, 50 Hz.
Power Consumption	: 15 Watts (Max.)
Sensing distance	: 2 Metres (Max.)
Reflection	: 400 MM (Max.)
Contact rating for the output	: 220 V, 5 A, 1 Set of change over contacts
Mounting	: DIN RAIL

Application

It is an Electronic stop motion unit used in ERM, MBO & UNIMIX machines to regulate the flow of cotton so that Cotton level maintaining in the chute carried out perfectly to achieve uniform feed.

Advantages

- Long life & Compact size.



1.2 AEROFEEED PHOTO CONTROL UNIT

Model : APC-05 (improved version of APC-01 & APC-02)

Specifications

Operating Voltage	: 220 V AC, 50 Hz.
Power Consumption	: 15 Watts (Max.)
Sensing distance	: 0.3 Metres (Max.)
Contact rating for the output	: 220 V, 5 A, 2 Sets of change over contacts
Mounting	: DIN RAIL

Application

It is an Electronic stop motion unit consists of one control unit and two sensor assemblies (TOP & BOTTOM) The sensors are mounted at the Top and Bottom of the transparent chute face (Glass Panel) to maintain the cotton level. The TOP sensor switches off the feed motor when blocked by cotton. When both the sensors are unblocked the feed motor runs at full speed.

Advantages

- The unit controls the feeding system to attain uniform, continuous output
- Choking of cotton fibres is completely avoided
- Automatic control of feed motor to regulate the cotton flow is achieved



1.3 AEROFEEED MULTI LEVEL PHOTO CELL UNIT

Model : MLC-03 Control Unit • MLS-03 Sensors (S1,S2,S3)

Specifications

Operating Voltage	: +24 V DC (Vin)
Power Consumption	: 20 Watts (Max.)
Sensing distance	: 125 MM to 250 MM (Max.)
Mounting	: DIN RAIL

Application

It is an Electronic Photocell unit to regulate the flow of cotton in the chute. This unit consists of one control unit and three sensor assemblies. The two sensors are mounted at the Top level and third at the Bottom level of the transparent chute face (Glass Panel) to maintain the cotton level. The TOP sensors (S1/S2) switches off the feed motor when blocked by cotton within a preset time. The BOTTOM sensor (S3) switches the motor from high speed to slow speed when blocked by cotton within a preset time.

Advantages

- Automatic control of feed motor to regulate the cotton flow is achieved
- The unit controls the feeding system to attain uniform, continuous output
- Choking of cotton fibres is completely avoided.



2. CARDING MACHINES

2.1 CARDING SLIVER STOP MOTION UNIT

Model : OF-01 (U-Type Sensor) • OF-02 (Seperate Transmitter & Receiver)

Specifications

Operating Voltage	: 220 V AC 50 Hz.
Power Consumption	: 20 Watts (Max.)
Activation Time	: 0 to 5 Secs.+ 2 Secs. (Max.) (Variable) (Model : OF-01)
Sensing distance	: 1 Metre (Max.) (Model : OF-02)
Contact rating for the output	: 220 V AC, 5 A One set of change over (1 NO + 1 NC + 1 POLE)

Application

Immediate stopping of the machine for a Sliver break Mounted on the coiler stand For web detection.

Advantages

- Stray fluffs will not interrupt the operation.
- Ambient light or Sunlight does not affect the performance.



2.2 SLIVER STOP MOTION UNIT FOR TEXMACO CARDING

Model : SBD-01 ("U" type sensor) for Texmaco Carding Machine.

Specifications

Operating Voltage	: 12 V AC 50 Hz
Power Consumption	: 10 Watts (Max.)
Contact rating for the Output	: 110 V AC, 0.5 Amp. (1 NO & POLE)

Application

Stops the machine for a Sliver break with adjustable time delay. Mounted on the coiler stand For web detection.

Advantages

- Non-Contact detector.
- Stray fluffs will not interrupt the operation.
- Ambient light or Sunlight does not affect the performance.



2.3 ELECTRONIC SPEED GOVERNOR

Model : ESC-01 (400 - 1000 r.p.m) • ESC-02 (400 - 1600 r.p.m)

Specifications

Operating Voltage	: 220 V AC, 50 Hz. (ESC - 01)
Operating Voltage	: 110 V AC, 50 Hz. (ESC - 02)
Power Consumption	: 20 Watts (Max.)
Sensing Distance	: 3 to 5 mm (Max.)
Contact rating for the Output	: 220 V AC, 5 Amps. : One set of change over contacts (1 NO + 1 NC + 1 POLE)

Application

Governs the speed of Lickerin through reduction gear monitoring and trips whenever the speed is beyond the set r.p.m. Double lap or empty lap changes drastically the speed of Lickerin. So this unit also checks for excess or no lap at the feed end.

Advantages

- Avoids motor burn out due to excess speed or loading of cotton at the feed end.
- Easy installation.





3. DRAW FRAME MACHINES

3.1 DRAW MASTER UNIT FOR DRAW FRAME



- Model : a) DM-01 - Long creel Table feed Draw frame machine
 b) DM-02 - Short creel Table feed Draw frame machine

Specifications

Operating Voltage	: 220 V AC, 50 Hz.
Power Consumption	: 20 Watts (Max.)
Sensing distance	: 10 cm (Max.)
Contact rating for the output	: 220 V AC, 5 Amp.
	One set of change over contacts (1NO + 1NC + POLE)

DM-01

This particular design suits for the Draw Master machines having long feed table and for single sliver entry from the drums consists of 2 control unit & 16 "U" sensors. The Sliver is guided blocking the signal path and breakage resumes the signal path stopping the machine.

DM-02

Suitable for Draw frame with short creel and Double Sliver entry from the Drum - Consists of 2 control unit & 8 "W" - Sensors.

Advantages

- Calender roller stop motions are subjected to oxidisation due to expose to atmosphere which fails to contact on sliver break.
- Since this is a Non-contact detector, senses the breakage of Sliver immediately.
- All Slivers stopped within a drum distance.



3.2 DRAW MASTER UNIT FOR TEXMACO DRAW FRAME

- Model : PC-03 - Loose creel free rollers Draw Frame Coiler side
 PC-04 - Loose creel free rollers Draw Frame Creel side

Specifications

Operating Voltage	: 12 V AC, 50 Hz.
Power Consumption	: 20 Watts (Max.)
Sensing distance	: 2 Metres (Max.)
Contact rating for the output	: 220 V AC, 5 Amp
	One set of change over contacts

Application

PC-03

This unit used for Draw frames on the coiler side, Loose creel. Stops the machine whenever the Sliver laps around the flute rollers. Photo control unit consists of control unit, Transmitter & Receiver.

PC-04

Find use on the Creel side of Draw frame with free rollers. Sliver break interrupts the sensor beam path to stop the machine. Photo control unit consists of control unit, Transmitter & Receiver.

Advantages

- Calender roller stop motions are subjected to oxidisation due to exposure to atmosphere which fails to contact on sliver break.
- Since this is a Non-contact detector, senses the breakage of Sliver immediately.



3.3 DRAW FRAME COILER END STOP MOTION UNIT

Model : DFC-01

Specifications

Operating Voltage	: 8.5 V AC, 50 Hz
Power Consumption	: 15 Watts (Max.)
Contact rating for the output	: 220 V AC, 5 AMps
	One set of change over contacts (Resistive Load) (1 No + NC + 1 Pole)

Application

This unit consists of one Control unit & two Reflective type sensors assemblies which stops the machine immediately for a sliver breakage at the drafting zone.

This eliminates the conventional earthing (using of Calender roller) stop motions which oxidises due to exposure to atmospheres which fails to contact on Sliver break.

Advantages

- Avoid the damages of Coiler Calender roller and Fibre wheel.
- Roller lapping is totally eliminated.
- Cotton spreading avoided as the Machine is stopped immediately.
- Prevent fire accident due to chocking.
- Work load of the tenter can be increased.
- Productivity increased.
- Easy installation.
- Mounted on the coiler side door.



4. RIBBON / SLIVER LAP MACHINES

4.1 RIBBON / SLIVER LAP STOP MOTION UNIT

Model : RBP - 01 for Ribbon Lap Machine
SBP - 01 for Sliver Lap Machine

Specifications

Operating Voltage	: 220 V AC 50 Hz.
Power Consumption	: 15 Watts (Max.)
Sensing distance	: 4 Metres (Max.)
Contact rating for the output	: One set of Change over contacts (1 No + NC + 1 Pole)
Mounting	: Din Rail

Application

Ribbon Lap stop motion unit (RBP - 01) consists for One Control Unit & Two sets of Transmitter, Receiver to stop the machine whenever there is a break of Lap on the feed end or breakage of fleece on the Table end.

Sliver Breakage Photo cell unit (SBP - 01) consists of one Control Unit & One set of Transmitter, Receiver to stop the machine whenever there is a breakage of Slivers.

Advantages

- Piecing can be done easily to achieve continuity thereafter improves the quality of output.





6. SPEED FRAME MACHINES

6.1 SLIRO MASTER UNIT (Patent Registered)

(Roving cum Sliver Stop motion unit)

Model : SM-02 (2 Channel) • SM-03 (3 Channel)

Specifications

Operating Voltage	: 220 V AC, 50Hz.
Power Consumption	: 25 Watts (Max.)
Sensing distance	: 20 Metres (Max.)
Sensing diameter	: 5 mm and above
Contact rating for the output	: 1. 230 V AC/24 V DC, 5 Amp. (Resistive load) for Machine stop. (1 NO + 1 POLE + 1 NC)
	: 2. One change over relay for CH 1 break indication (1 POLE + 1 NO)
	: 3. One change over relay for CH 2 break indication (1 POLE + 1 NO)
	: 4. One change over relay for CH 3 break indication (1 POLE + 1 NO)

Application

Operates for a Roving breakage at the Roving end and Sliver breakage at the creel end by stopping the machine immediately.

Effective for 20 Metres range.

Advantages

- Piecing can be done easily to achieve continuity thereafter improves the quality of output.
- No Pneumofil is required.

6.2 PHOTO MASTER UNIT

(Creel End Stop Motion Unit)

Model : PM-02/PM-05 for Speed Frame

Specifications

Operating Voltage	: 220 V AC, 50Hz.
Power Consumption	: 20 Watts (Max.)
Sensing distance	: 20 Metres (Max.)
Sliver diameter	: 2 mm and above
Contact rating for the output	: 230 V, 5 Amp. (1 NO + 1 NC + 1 POLE)

Application

Operates for Sliver break at any point on the creel by stopping the machine immediately.

Effective for 20 Metres range.

Advantages

- Piecing of the sliver is easy as the machine stops before sliver enters the drafting.
- Machine can be started from the creel side itself.
- Productivity increased by 50%.





6.3 PNEUMO STOP MOTION UNIT FOR SPEED FRAME

PNEUMO STOP UNIT

Model : PS-04 for LF 1400 : PS-02 for any Speed Frame

Specifications

Operating Voltage	: 220 V AC 50 Hz.
Power Consumption	: 30 Watts (Max.)
Sensing distance	: 4 Metres (Max.)
Contact rating for the Output	: 250 V AC, 5 Amp.
	One set of Change over contacts (1 NO + 1 NC + 1 POLE)

Application

Stop the machine whenever there is a "Roving Break".

The broken roving is carried along with the suction into the pneumofil and reaches the Filter box.

The pneumo stop is fixed in the filter box so that whenever roving interrupts the optical screen of Pneumo stop, the machine is stopped.

Advantages

- Stops the machine for Roving break in any spindle.
- Productivity increased by 50%.
- Quality improved Work load of the operator can be increased.
- Fly waste scattering avoided as machine is stopped immediately and so increase in the efficiency.



7. THERMISTOR PROTECTION UNIT

Model : TPU-01, TPU-04, TPU-06 (One/Four/Four Channel)

Specifications

Operating Voltage	: 220 V AC, 50 Hz.
Model	: TPU-01/04
	: 24 V DC (TPU-06)
Power Consumption	: 20 Watts (Max.)
Contact rating for Output (Resistive)	: 5 Amp. 220 V AC,
	: (1 NC + 1 NO)
Ambient Temperature	: 50°C
Thermistor Type	: PTC Thermistors.

Application

Used for protection of motors with thermistor built in the motor coil.

Advantages

- Trips the motor on excessive heat due to loading by sensing the change in resistance of thermistors, thereby preventing the motor from burn out.



OTHER PRODUCTS

- Flickering Unit • Timers • O.E. Control Panel/ PCB's
- Aerofeed (N) Control Panel and Spare PCB's

VETAL TEXTILES & ELECTRONICS PVT LTD.

Plot No.1, Industrial Estate for Electrical & Electronics
Civil Aerodrome Post, Coimbatore - 641 014 • INDIA

Tel : 91 - 422 - 4030 500

Fax : 91 - 422 - 4030555 / Mobile : 99655 83825

E-Mail : info@vetal.com / v.service@vetal.com



Print-Rite - 0422-4367317

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