PLC Card for Circular Loom



For fixed orders, a popular trend in circular loom is towards using mechanical loom with AC drive for main motor. So, when there is not much requirement of frequent mesh changing, the mechanical looms are giving good output with less complexity, simple to maintain at less cost.

The increasing cost of spares and increasing cost of production have put tremendous pressure on cost reduction techniques. Use of Technology and innovative methods has lead to provide you a Loom PLC Card, which will reduce your overall panel cost, add more useful features and makes it very easy for troubleshooting and maintenance.

The Loom PLC Card is 'ALL IN ONE' programmed logic controller with the following features:

MAIN FEATURES OF PLC CARD

- Very easy to install and replace with high quality PLUG type connectors. It can fit on all types and make of circular looms.
- > START, STOP, INCH logic is implemented in PLC with proper delay and all interlocks.
- Provision for Star/Delta Starter OR AC Drive for main motor operation (AC Drive operation with single speed or two speeds).
- The Star/Delta change over delay is adjustable by POT.
- Built in Warp Break system on the PLC Card.
- BETA make Weft Break (Magnetic) sensor and

- Weft End (Bobbin) sensor can be directly connected to PLC Card.
- Other make sensor can also be connected by 'NO' contact.
- The zone lamps are used to distinctively indicate all the three faults, namely Warp Break, Weft Break and the Weft End.
- Clutch disconnection in the event of Weft Break to avoid gap in fabric.(Cramming)
- Separate relay for winder motor, so that winder motor AUTO OFF/ON is possible. Auto off delay is adjustable by POT.

ADVANTAGES OF PLC CARD

- PLC Card simplifies panel wiring, saves space, reduces items required.
- The complete operations are through PLC Card. The MAIN, STAR and DELTA contactors are operated with small Time delay, so that contact life of contactor is increased substantially.
- We have provided solid state relay for MAIN and STAR. Even with frequent inching operation, there is no damage to PLC card and high switching current of contactor is avoided.
- The STAR/DELTA changeover time is controlled through the PLC Card. Hence no need for separate STAR / DELTA changeover time.
- The optional feature of 'TWO SPEED operation' of Loom is very useful to operator. After breakages or maintenance, inching at lower speed is desirable. It helps Operator to sort out

- Problems and avoid unnecessary breakages or warp tape cutting / smashing.
- ➤ BETA make Weft Break (Magnetic) sensor and Weft End (Bobbin) sensor can be directly connected to PLC Card, resulting in cost saving of Relay PCB. Other make of sensor can also be used with potential Free 'NO' contact.
- The Weft End fault is displayed with flashing of zone lamps. The zone lamps also display Warp Break faults as usual. This helps Operator to identify the fault very easily.
- With another optional feature, winder motor can be switched OFF/ON automatically. If loom is stopped for longer time, this feature saves the power and also avoid unnecessary running of winder motor when loom is stopped.

The winder roller emery life also increases.

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