

DAIRY PLANT – CREAM, BUTTER, CHEESE & PACKAGING

Complete Automation & Monitoring with Multiple I/O

RAW MILK RECEIVING & STORAGE

- 1 Lorry In / Gate Open
- 2 Milk Unloading Pump
- 3 Milk Flow Meter
- 4 Milk Weighbridge
- 5 Milk Sampling Valve
- 6 Milk Quality Sensor (Temp, SNF, Fat)
- 7 Milk Filter
- 8 Raw Milk Storage Tank (LT)
- 9 Tank Level (LT)
- 10 Tank Temperature (TT)
- 11 Agitator Motor
- 12 CIP Spray Ball
- 13 CIP Return Flow
- 14 Tank Pressure (PT)



LORRY IN / OUT

TESTING LAB (QUALITY CONTROL)

- 1 pH Meter
- 2 Fat Analyzer
- 3 SNF Analyzer
- 4 Lactometer
- 5 Milk Temperature
- 6 Water Activity Meter
- 7 Microbiological Incubator
- 8 Lab Refrigerator Temp
- 9 Sample Tracking System

MILK METERING SYSTEM



- 1 Milk Flow Meter
- 2 Flow Totalizer
- 3 Batch Controller
- 4 Auto Sampling
- 5 Temperature Sensor
- 6 Valve Control
- 7 Data Logger

RAW MILK STORAGE TANK (LT)



- 1 Level Transmitter (LT)
- 2 Temperature (TT)
- 3 Agitator Motor
- 4 High Level Alarm
- 5 Low Level Alarm
- 6 Pressure Relief Valve
- 7 CIP System

MULTIPLE I/O SUMMARY

ANALOG INPUTS (AI)

- Level (LT)
- Temperature (TT)
- Pressure (PT)
- Flow (FT)
- pH
- Fat / SNF
- Conductivity
- Moisture
- Weight

DIGITAL INPUTS (DI)

- Motor Overload
- Pump Run Status
- Valve Open/Close
- High/Low Level
- Door Open
- Emergency Stop
- Pressure Switch
- Flow Switch
- Limit Switch

ANALOG OUTPUTS (AO)

- Speed Reference
- Valve Positioning
- Chemical Dosing
- Temperature Control
- Pressure Control

DIGITAL OUTPUTS (DO)

- Motor Start/Stop
- Valve Open/Close
- Alarm Buzzer
- Tower Light
- Solenoid Valve
- Heater On/Off

- (LT) Level Transmitter
- (TT) Temperature Transmitter
- (PT) Pressure Transmitter
- (FT) Flow Transmitter
- (M) Motor
- (V) Valve
- (P) Pump
- (S) Sensor
- (CP) Control Panel
- (A) Alarm

KEY FEATURES

- ✓ Complete Automation & SCADA Monitoring
- ✓ Real-time Data Logging & Reports
- ✓ Batch Management & Traceability
- ✓ Alarm Notification (SMS/Email)
- ✓ Energy & Utility Monitoring
- ✓ CIP Automation
- ✓ Remote Access & Cloud Support



PROCESS FLOW DIAGRAM



COLD STORAGE

- 1 Cold Room Temp (TT)
- 2 Evaporator Fan
- 3 Defrost Heater
- 4 Door Open Switch
- 5 Humidity Sensor

LORRY OUT / DISPATCH

- 1 Dispatch Gate Open
- 2 Loading Conveyor
- 3 Lorry Weighbridge
- 4 Dispatch Documentation
- 5 Seal Verification

UTILITY & CIP SYSTEM

- 1 CIP Supply Pump
- 2 CIP Return Pump
- 3 Hot Water Tank (LT, TT)
- 4 Steam Pressure (PT)
- 5 Boiler Status
- 6 Chilled Water Temp
- 7 Compressed Air Pressure
- 8 RO Plant Status
- 9 RO Permeate Flow
- 10 Chemical Dosing Pump
- 11 Water Flow Meter