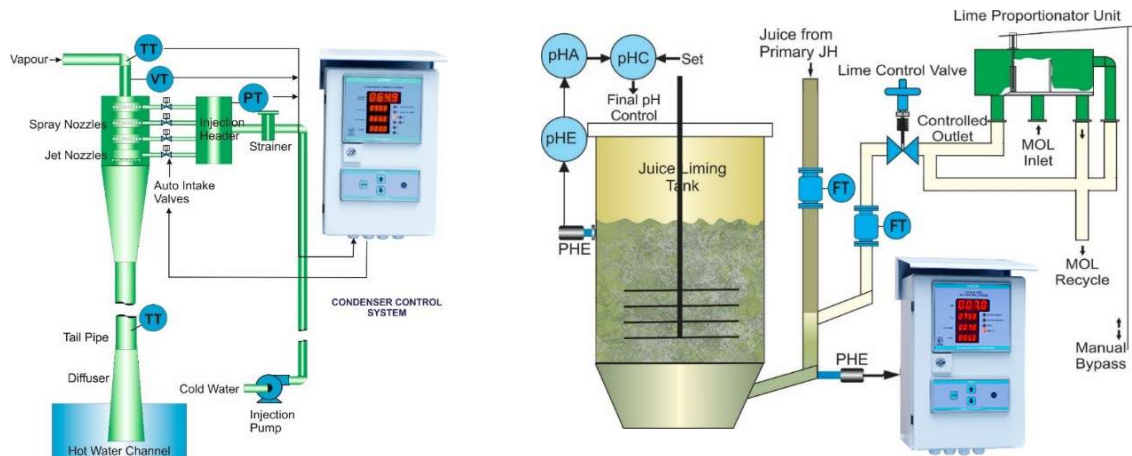
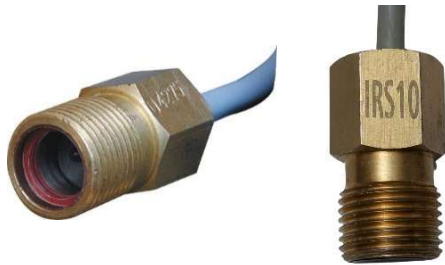


SUGAR MILL PROCESS INSTRUMENTS

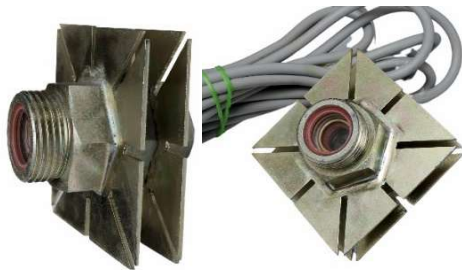


DONNELLY CHUTE LEVEL SENSING AND TRANSMISSION SYSTEM

INFRA-RED DONNELLY CHUTE LEVEL SENSORS



ASDDCLIRS10



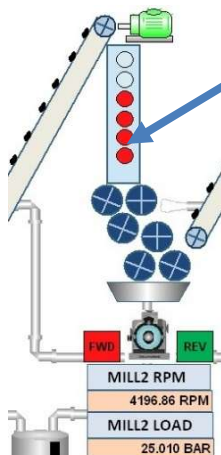
ASDDCLIRS12D



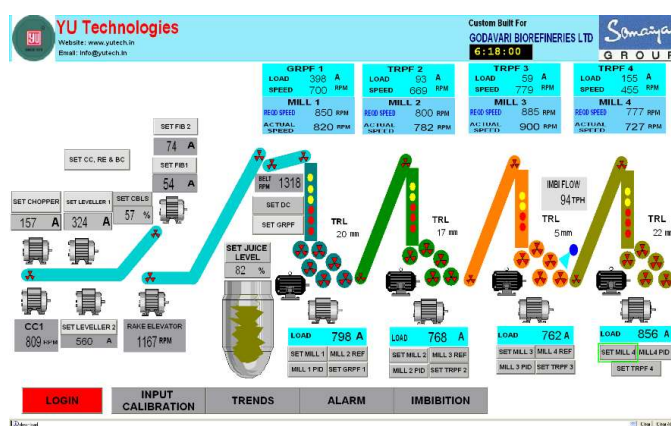
YUTECH INFRA RED LEVEL SENSORS:

- YUTECH INVENTED THIS TECHNIQUE IN 1986
- 100% TRUE DONNELLY CHUTE LEVEL DETECTION
- NO FALSE INDICATIONS DUE TO BAGASSE POWDER
- NO FALSE INDICATIONS DUE TO CANE PIECES
- NO FALSE INDICATIONS DUE TO JUICE MIST, WATER MIST, STICKY JUICE RESIDUES, JUICE FILMS AND DIRT, BAGASSE POWDER & JUICE MIX FORMED ON THE DONNELLY CHUTE WALLS
- TRUE CHUTE LEVEL DETECTION LEADS TO EXCELLENT CONTROL
- WATER INGRESS AND DIRT PROOF
- YUTECH IR SENSORS HAVE BUILT-IN RAINING BAGASSE COMPENSATION AND EASILY SENSE LEVEL THROUGH RAINING BAGASSE AND JUICE MOISTURE
- INFRA-RED LIGHT IS KNOWN FOR DEEP PENETRATION. IT IS USED IN MILITARY APPLICATIONS FOR NIGHT VISION AND MEDICAL APPLICATIONS LIKE DEEP FOMENTATION HENCE THE CHOICE OF IR FOR THIS CRITICAL APPLICATION.
- 500+ SUGAR MILLS USE YUTECH IR SENSORS IN INDIA, ASIA PACIFIC, AFRICAN REGIONS , USA.

MILL AUTOMATION LIVE SCREENSHOT SHOWING CHUTE LEVEL INDICATION AND LIVE SCREENSHOT:



Level Sensed in the Donnelly Chute is used for Speed Control of:
Cane Carrier
Rake Carrier
Mill / GRPF / TRPF



MILL AUTOMATION SCREENSHOT

DONNELLY CHUTE LEVEL SENSING AND TRANSMISSION SYSTEM

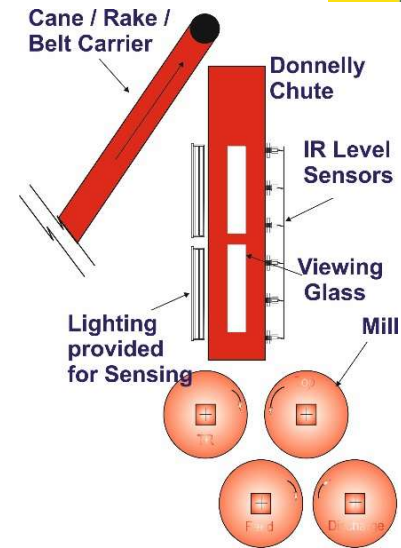
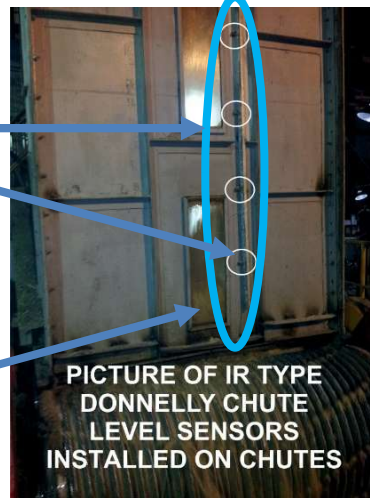
INFRA-RED DONNELLY CHUTE LEVEL SENSORS



INFRA RED LEVEL SENSOR INSTALLATION ON DONNELLY CHUTE:
SCHEMATIC DIAGRAM AND INSTALLATION PICTURE

Sensor Mounting Plate welded on the Chute / Silo. Please see Operating Instructions for Installation Procedure and Guidance.

Proper Donnelly Chute Level Sensing Results in Continuous and Maintained Fuel Feeding to Mills and avoids Stoppage due to Chute overflow



BUILT-IN RAINING BAGASSE COMPENSATION: TO ACCURATELY SENSE, ANALYZE, CALCULATE AND DERIVE ACCURATE CHUTE LEVEL WITHIN A VERY CHALLENGING ENVIRONMENT OF RESIDUAL JUICE DIRT, STICKY BAGASSE DUST AND VIBRATION

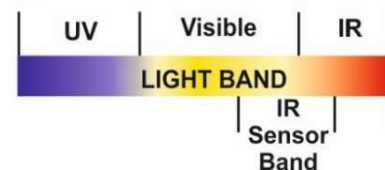
TECHNICAL SPECIFICATIONS FOR DONNELLY CHUTE LEVEL SENSING AND TRANSMISSION SYSTEM :

- **POWER SUPPLY:** 85 - 265 VAC, 50 – 60HZ
- **ANALYZER ENCLOSURE:** IP67 FIELD MOUNTED DUST AND MOISTURE-PROOF
- **INPUT:**
 - IR SENSOR SIGNALS
- **CALIBRATION CAN BE DONE FROM :**
 - **KEYBOARD:** KEYBOARD WITH 5 KEYS IS PROVIDED IN THE ANALYZER
- **DISPLAY:** 4 DIGIT LED DUAL DISPLAY, LED AS PER NUMBER OF LEVELS
- **SIGNAL OUTPUT:**
 - 4 - 20 MA PROCESSED MEASURED OR ANALYZED VARIABLE OUTPUT
 - POTENTIAL-FREE RELAY OUTPUT FOR EACH SENSOR INPUT

PRODUCT CODES FOR DONNELLY CHUTE LEVEL SENSING AND TRANSMISSION SYSTEM OF VARIOUS SENSOR COMBINATIONS ARE GIVEN BELOW:

A15DCAACIR4C1R4FM (4 LEVEL SYSTEM)
A15DCAACIR6C1R6FM (6 LEVEL SYSTEM)
A15DCAACIR8C1R8FM (8 LEVEL SYSTEM)
A15DCAACIR10C1R10FM (10 LEVEL SYSTEM)
A15DCAACIR12C1R12FM (12 LEVEL SYSTEM)
A15DCAACIR16C1R16FM (16 LEVEL SYSTEM)

IR Sensor's Light Sensing Band for IR Type Donnelly Chute Level Sensors



PRODUCT CODES FOR INFRA-RED DONNELLY CHUTE / BAGASSE SILO LEVEL SENSOR:

ASDDCLIRS10: USE FOR CHUTE LEVEL SENSING BEFORE MACERATION WATER IS APPLIED.

ASDDCLIRS12D: USE FOR CHUTE LEVEL SENSING AFTER HOT WATER MACERATION IS APPLIED. IT IS THE HIGH-TEMPERATURE VARIANT WHICH CAN WITHSTAND OPERATING TEMPERATURES UP TO 90°C.

DONNELLY CHUTE LEVEL SENSING AND TRANSMISSION SYSTEM

CAPACITIVE DONNELLY CHUTE SENSORS

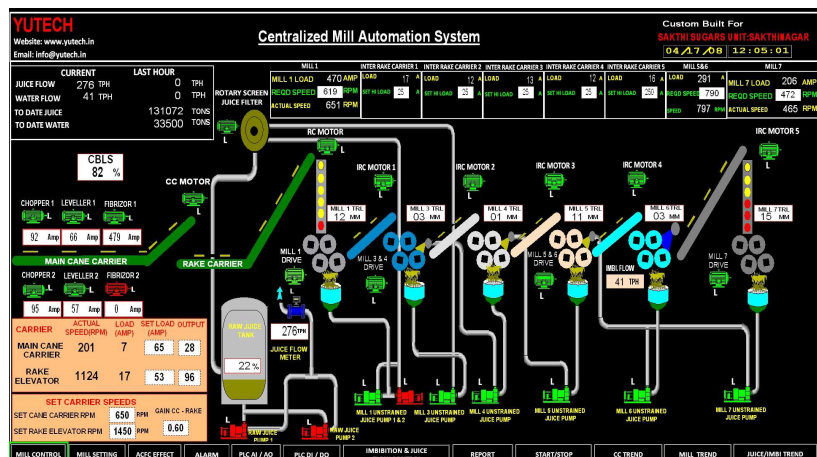
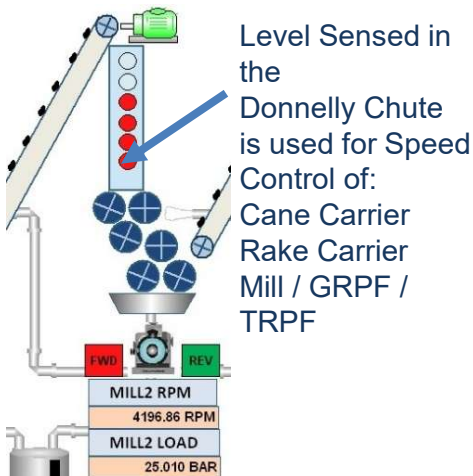


ASDCDCLS1210



YUTECH CAPACITIVE LEVEL SENSORS:

- YUTECH INVENTED THIS TECHNIQUE IN 1983
- HOWEVER, IT WAS DISCONTINUED IN 1984 AFTER THE INVENTION OF IR SENSORS AND WAS PRODUCED ONLY ON SPECIFIC DEMAND.
- IN 2015 ENTIRE PRODUCT RANGE WAS REDESIGNED TO MOVE TO MICRO-CONTROLLER BASED SOLUTIONS.
- IN 2017 CAPACITIVE SENSORS AND TRANSMITTERS WERE INTRODUCED.
- SENSOR DESIGN WAS CHANGED FOR BETTER CAPACITIVE LEVEL SENSING IN THE CHUTE.
- ALGORITHM TO REMOVE EARLIER DISADVANTAGES OF THIS TECHNOLOGY SUCH AS RAINING BAGASSE FLUCTUATIONS, AND FALSE READINGS DUE TO JUICE MIST WAS INTRODUCED TO MINIMIZE THIS EFFECT.
- YUTECH NOW REGULARLY PRODUCES BOTH CAPACITIVE AND CONDUCTIVITY AS WELL AS IR SENSORS.
- MOC: COPPER ALLOY AND VIRGIN PTFE.



MILL AUTOMATION SCREENSHOT

DONNELLY CHUTE LEVEL SENSING AND TRANSMISSION SYSTEM

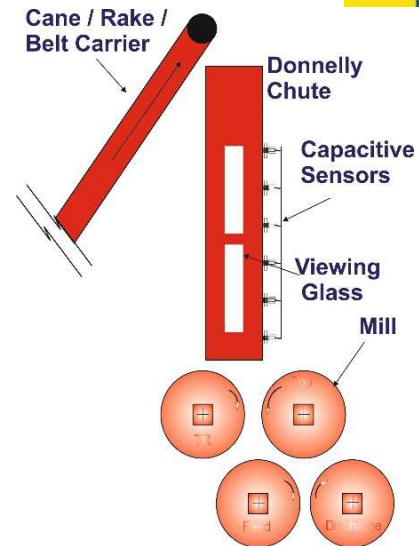
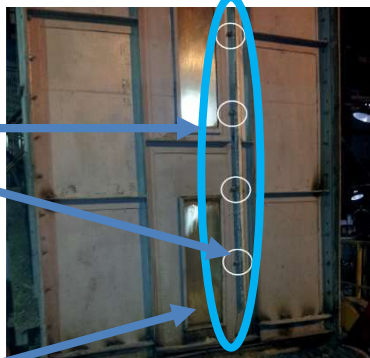
CAPACITIVE DONNELLY CHUTE SENSORS



CAPACITIVE SENSOR INSTALLATION ON SUGAR MILL DONNELLY CHUTE:
SCHEMATIC DIAGRAM AND INSTALLATION PICTURE

Sensor Mounting Plate
welded on the Chute /
Silo. Please see
Operating Instructions
for Installation
Procedure and Guidance.

Proper Donnelly Chute
Level Sensing Results in
Continuous and
Maintained Fuel Feeding
to Mills and avoids
Stoppage due to Chute
overflow



BUILT-IN RAINING BAGASSE COMPENSATION: TO ACCURATELY SENSE, ANALYZE, CALCULATE AND DERIVE ACCURATE CHUTE LEVEL WITHIN A VERY CHALLENGING ENVIRONMENT OF RESIDUAL JUICE DIRT, STICKY BAGASSE DUST AND VIBRATION

TECHNICAL SPECIFICATIONS FOR DONNELLY CHUTE LEVEL SENSING AND TRANSMISSION SYSTEM :

- **POWER SUPPLY:** 85 - 265 VAC, 50 – 60HZ
- **ANALYZER ENCLOSURE:** IP67 FIELD MOUNTED DUST AND MOISTURE-PROOF
- **INPUT:**
 - IR SENSOR SIGNALS
- **CALIBRATION CAN BE DONE FROM :**
 - **KEYBOARD:** KEYBOARD WITH 5 KEYS IS PROVIDED IN THE ANALYZER
- **DISPLAY:** 4 DIGIT LED DUAL DISPLAY, LED AS PER NUMBER OF LEVELS
- **SIGNAL OUTPUT:**
 - 4 - 20 MA PROCESSED MEASURED OR ANALYZED VARIABLE OUTPUT
 - POTENTIAL-FREE RELAY OUTPUT FOR EACH SENSOR INPUT

PRODUCT CODES FOR DONNELLY CHUTE LEVEL SENSING AND TRANSMISSION SYSTEM OF VARIOUS SENSOR COMBINATIONS ARE GIVEN BELOW:

A15DCAACCS4C1R4FM (4 LEVEL SYSTEM)
A15DCAACCS6C1R6FM (6 LEVEL SYSTEM)
A15DCAACCS8C1R8FM (8 LEVEL SYSTEM)
A15DCAACCS10C1R10FM (10 LEVEL SYSTEM)
A15DCAACCS12C1R12FM (12 LEVEL SYSTEM)
A15DCAACCS16C1R16FM (16 LEVEL SYSTEM)

PRODUCT CODES FOR INFRA-RED DONNELLY CHUTE / BAGASSE SILO LEVEL SENSOR:

ASDCDCLS1210: FOR SUGAR MILL DONNELLY CHUTES

SUGAR MILL ROLLER LIFT AND CANE BLANKET LEVEL SENSORS HALL'S EFFECT TYPE DISPLACEMENT SENSING AND TRANSMISSION SYSTEM



TOP ROLLER LIFT SENSORS



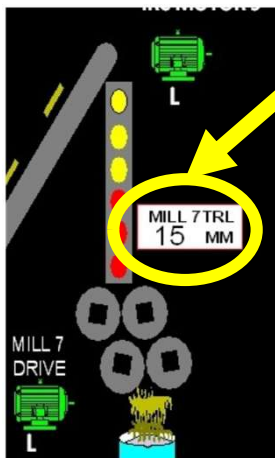
TOP ROLLER LIFT INDICATOR CUM TRANSMITTER



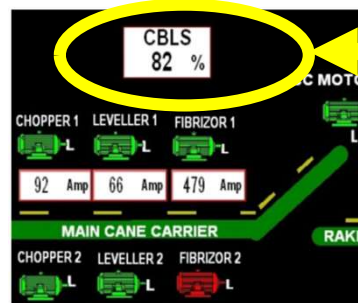
CANE BLANKET LEVEL INDICATOR CUM TRANSMITTER



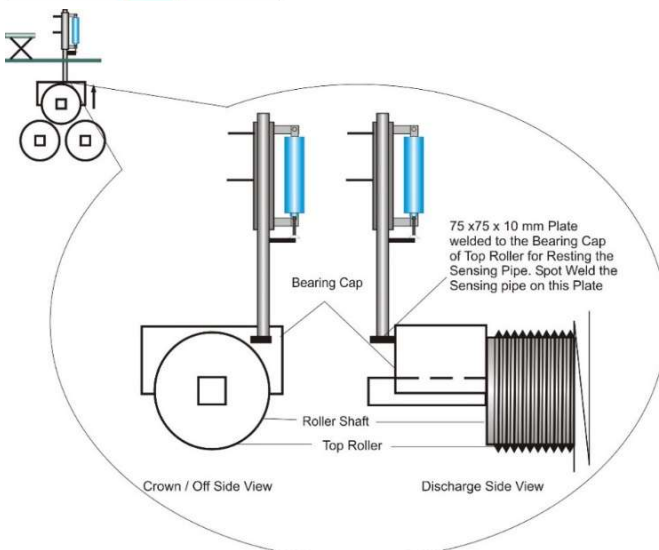
CANE BLANKET LEVEL SENSORS



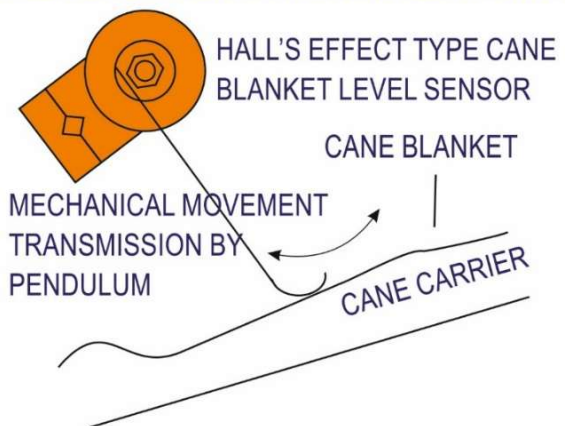
Mill Top Roller Lift Sensed is used for Monitoring Top Roller Float Balance



Cane Blanket Level Sensed in the Cane Carrier is used for Speed Control of: Cane Carrier



HALL'S EFFECT SENSOR WORKING ILLUSTRATION



**CANE BLANKET LEVEL SENSOR AND TOP ROLLER LIFT SENSOR:
SCHEMATIC INSTALLATION AND WORKING DIAGRAM**

SUGAR MILL ROLLER LIFT AND CANE BLANKET LEVEL SENSORS

HALL'S EFFECT TYPE DISPLACEMENT SENSING AND TRANSMISSION SYSTEM



HALL'S EFFECT POSITION SENSOR:

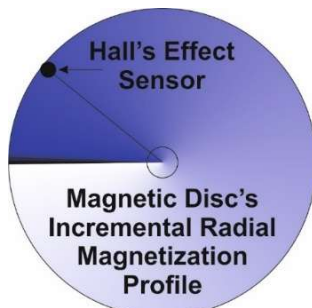
- Hall's Effect Technology is based on the Electromagnetic Principle; this type of Electronic Sensing is essentially Contactless. Where the Sensor's Wiper glides over a Radial Strip of incrementally varying Electro-Magnetism, and this Electro-Magnetism induces the Wiper with a Voltage corresponding to its position over the Radial Strip. This induced voltage is the Sensor Output which varies with change in Wiper's position.

YUTECH CANE BLANKET LEVEL SENSING SYSTEM:

- Cane Level in Carrier is Primarily Sensed by a Pendulum riding on Cane Blanket which Mechanically Transmits the actual Blanket Level or Height to a Contact-less Hall's Effect Sensor.
- 100% True Level Detection through Shocks and Vibrations.
- Extremely Rugged, Heavy Duty, Water-Proof, Ingress Protected Enclosure Protects the Sensor against all external abuse of being hit by Flying Cane pieces, Moisture, Dirt, Juice Mist, and Wash Water AND Cane Carrier's Vibrations.
- YUTECH's founder Mr. Arun Dalvi originally invented this Technique way back in 1986 and later upgraded it to Hall's Effect in 2006.
- More than 400 Sugar Mills use YUTECH CBL Sensors and Transmitters in India, Asia Pacific, West Asia, and the African Continent.
- Specs: 230 VAC Power Supply, Input: CBL Sensor Dual Channel, Output: Dual Channel 4-20mA.Contactless

YUTECH TOP ROLLER LIFT SENSING SYSTEM:

- Mill Top Roller Lift is Sensed by a Primary Telescopic Sensor whose Sensing End Rests on the Mill Pressure Plate, which Mechanically Transmits the actual Lift to a Contactless Hall's Effect Sensor.
- In an Ultra-Sonic Type Sensor, the Primary Sensor's Mechanical Movement is sensed by an Ultrasonic Sensor, which is then transmitted as a Top Roller Lift (4-20mA from the Indicator). Ultrasonic Sensing was added in 2019.
- Very Rugged, Heavy Duty, Water-Proof, Ingress Protected Enclosure provides 100% True Lift Detection even during Shocks and
- The Enclosure is very well capable of Protecting the Sensor against all external abuse of being hit by Cleaning Sticks by Workers trying to remove stuck Bagasse and from Direct Hot Wash Water / Steam Spray during Mill Cleaning / Vibrations generated by Full Load Milling Operation. The heavy-duty enclosure, also Protects the Sensor against Moisture, Dirt, Juice Mist, and Powdered Bagasse Particles.
- YUTECH's founder Mr. Arun Dalvi originally invented this Technique way back in 1992 and upgraded to Hall's Effect in 2006,
- Specs: 85 - 265 VAC, 50 – 60Hz Power Supply, Input: TRL Sensor Dual Channel, Output: Dual Channel 4-20mA.



**HALL'S EFFECT SENSOR
WORKING SCHEMATIC DIAGRAM:**

**Mill Top
Roller Lift
Sensed
Installation**



BOILER BAGASSE SILO LEVEL SENSING AND TRANSMISSION SYSTEM INFRA-RED OR IR BAGASSE SILO LEVEL SENSORS

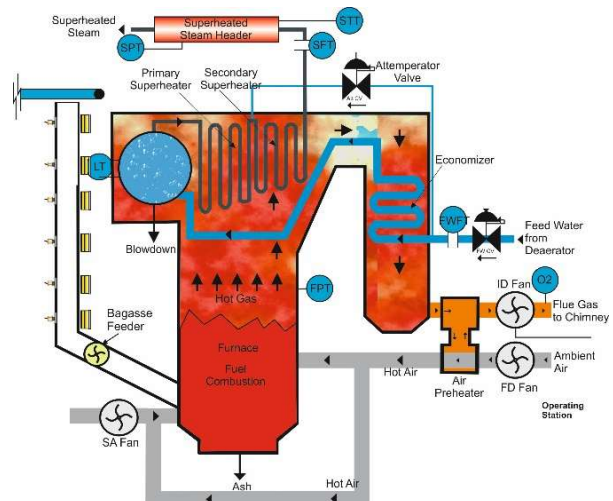
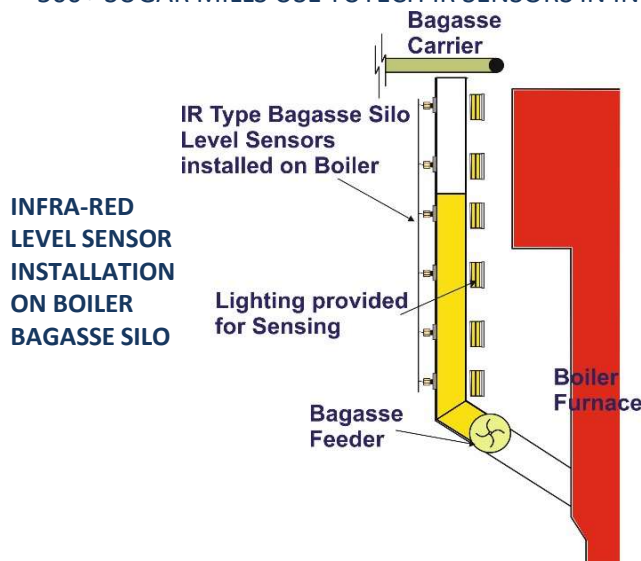


ASDBSLIRS12B



YUTECH INFRA RED LEVEL SENSORS:

- YUTECH INVENTED THIS TECHNIQUE IN 1986
- 100% TRUE DONNELLY CHUTE LEVEL DETECTION
- NO FALSE INDICATIONS DUE TO BAGASSE POWDER
- NO FALSE INDICATIONS DUE TO CANE PIECES
- NO FALSE INDICATIONS DUE TO JUICE MIST, WATER MIST, STICKY JUICE RESIDUES, JUICE FILMS AND DIRT, BAGASSE POWDER & JUICE MIX FORMED ON THE DONNELLY CHUTE WALLS
- TRUE CHUTE LEVEL DETECTION LEADS TO EXCELLENT CONTROL
- WATER INGRESS AND DIRT PROOF
- YUTECH IR SENSORS HAVE BUILT-IN RAINING BAGASSE COMPENSATION AND EASILY SENSE LEVEL THROUGH RAINING BAGASSE AND JUICE MOISTURE
- INFRA RED LIGHT KNOWN FOR DEEP PENETRATION AND USED IN MILITARY APPLICATIONS FOR NIGHT VISION, MEDICAL APPLICATIONS LIKE DEEP FOMENTATION HENCE THE CHOICE OF IR FOR THIS CRITICAL APPLICATION.
- 500+ SUGAR MILLS USE YUTECH IR SENSORS IN INDIA, ASIA PACIFIC AND AFRICAN REGIONS



BAGASSE SILO LEVEL SENSING AND TRANSMISSION SYSTEM

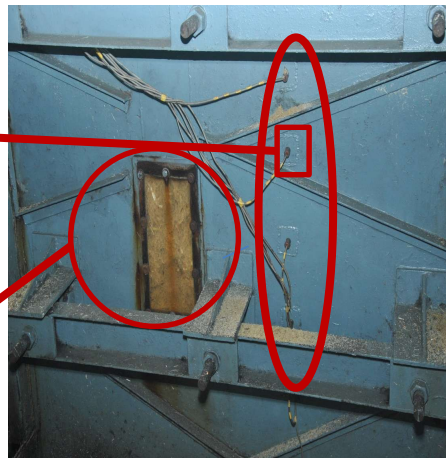
INFRA-RED OR IR BAGASSE SILO LEVEL SENSORS



INFRA RED LEVEL SENSOR INSTALLATION PICTURE

SENSOR MOUNTING PLATE WELDED ON THE CHUTE / SILO. PLEASE SEE OPERATING INSTRUCTIONS FOR INSTALLATION PROCEDURE AND GUIDANCE.

PROPER BAGASSE SILO LEVEL SENSING RESULTS IN CONTINUOUS AND MAINTAINED FUEL FEEDING TO BOILER AND AVOIDS SILO OVERFLOW / CHOKING



BUILT-IN RAINING BAGASSE COMPENSATION: TO ACCURATELY SENSE, ANALYZE, CALCULATE AND DERIVE ACCURATE CHUTE LEVEL WITHIN A VERY CHALLENGING ENVIRONMENT OF RESIDUAL JUICE DIRT, STICKY BAGASSE DUST AND VIBRATION

TECHNICAL SPECIFICATIONS FOR BAGASSE SILO LEVEL SENSING AND TRANSMISSION SYSTEM :

- **POWER SUPPLY:** 85 - 265 VAC, 50 – 60HZ
- **ANALYZER ENCLOSURE:** IP67 FIELD MOUNTED DUST AND MOISTURE-PROOF
- **INPUT:**
 - IR SENSOR SIGNALS
- **CALIBRATION CAN BE DONE FROM :**
 - **KEYBOARD:** KEYBOARD WITH 5 KEYS IS PROVIDED IN THE ANALYZER
- **DISPLAY:** 4 DIGIT LED DUAL DISPLAY, LED AS PER NUMBER OF LEVELS
- **SIGNAL OUTPUT:**
 - 4 - 20 MA PROCESSED MEASURED OR ANALYZED VARIABLE OUTPUT
 - POTENTIAL-FREE RELAY OUTPUT FOR EACH SENSOR INPUT

PRODUCT CODES FOR BAGASSE SILO LEVEL SENSING AND TRANSMISSION SYSTEM OF VARIOUS SENSOR COMBINATIONS ARE GIVEN BELOW:

A15BSAACIR4C1R4FM (4 LEVEL SYSTEM)
A15BSAACIR6C1R6FM (6 LEVEL SYSTEM)
A15BSAACIR8C1R8FM (8 LEVEL SYSTEM)
A15BSAACIR10C1R10FM (10 LEVEL SYSTEM)
A15BSAACIR12C1R12FM (12 LEVEL SYSTEM)
A15BSAACIR16C1R16FM (16 LEVEL SYSTEM)

PRODUCT CODE FOR INFRA-RED BAGASSE SILO LEVEL SENSOR:

ASDBSLIRS12B (SPECIALLY DESIGNED TO SUIT BOILER BAGASSE SILO)

BRIX ANALYZER (HIGH-FREQUENCY BRIX ANALYZER) AND AUTO-RETRACTABLE SELF-CLEANING BRIX SENSOR



BRIX ANALYZER



BRIX SENSOR



**BRIX ANALYZER
CONTROLLER**

Brix Analyzer and Sensor combination targets sensing of Suspended Solid Content (Brix) in Slurries or Syrups like Sugar Massecuite, Sugar Syrup, Sugar Melt and Molasses. Brix Analyzer plays a crucial role in Sugar Process Automation and helps in Stabilizing the overall Sugar Process.

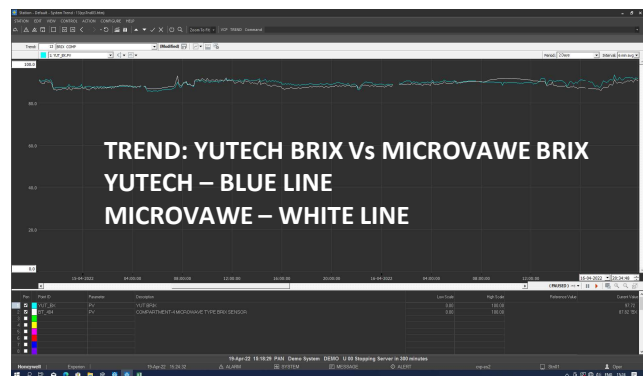
The YUTECH Intelligent Programmable Brix Analyzer is a State-of-the-Art System having Built-in Fuzzy Logic for Automatic Purity Compensation to Accurately Sense, Analyze, Calculate and Derive Massecuite Brix within a Band of varying Purity with Temperature Compensation. This Logic is called Brix Equation and it results in accurate Brix Sensing.

The YUTECH Brix Sensor is Auto-Retractable Self-Cleaning and Self-Washing Brix Sensor. This technique prevents Media Deposits on Sensor Electrode thus always results in Accurate Readings.

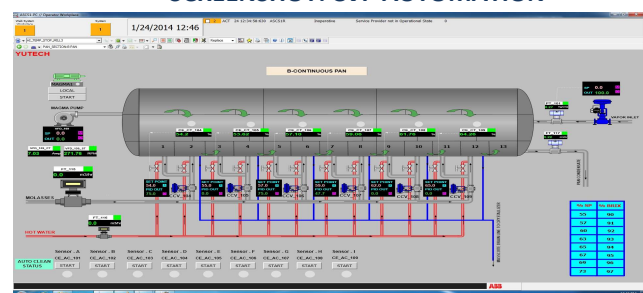
Accurate Brix reading ensures better Process Control and helps to maintain constant Massecuite / Melt / Molasses / Syrup Quality and Steam / Vapour Requirement thus results in Higher Sugar Production Efficiency and Minimum Process Losses.

SALIENT FEATURES:

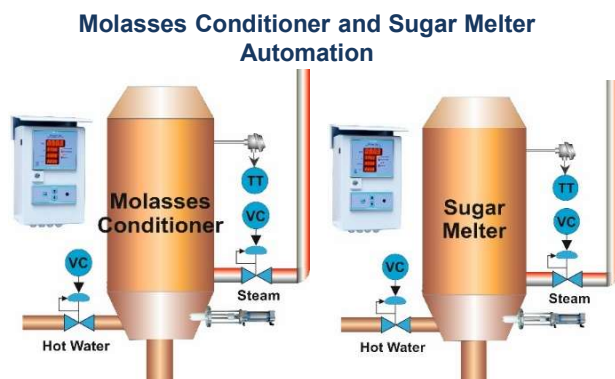
- The Brix Sensor Detects Deviation in Electric Signal with respect to changes in the Brix of a Solution whose Brix is to be measured
- This Signal Deviation is then Processed in the Analyzer to obtain a Brix Reading
- YUTECH Brix Analyzer is equipped with Intelligent Auto Purity Compensation Algorithm to derive the Brix accurately in Massecuites of varying Purity
- Very Easy Calibration and Online Brix Compensation Recalibration
- In-Built Automatic Temperature Compensation
- In-Built Self Cleaning and Washing of Sensor with pre-adjustable timing cycle
- 4-20 mA Output, Separate Modbus and Ethernet Communications
- On-line Calibration Software "YUTECH-AccessApp" provides Remote Access to the Brix Analyzer for Calibration, Compensation, and Trouble Shooting.



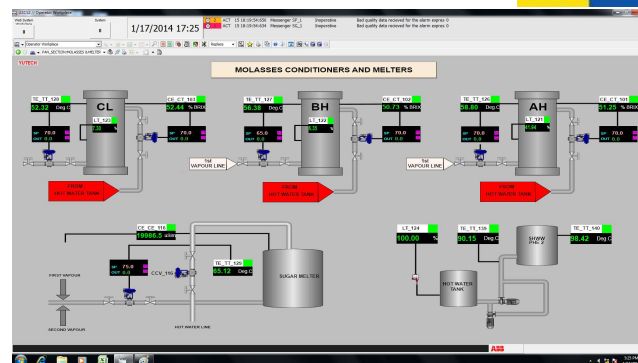
SCREENSHOT: CVP AUTOMATION



BRIX ANALYZER (HIGH-FREQUENCY BRIX ANALYZER) AND AUTO-RETRACTABLE SELF-CLEANING BRIX SENSOR



Using Brix Analyzer



SCREENSHOT: MOLASSES CONDITIONER AND SUGAR MELTER AUTOMATION

INNOVATIVE FEATURES FOR EASE OF OPERATION AND TO SAVE ON INSTALLATION COST AND MATERIALS:

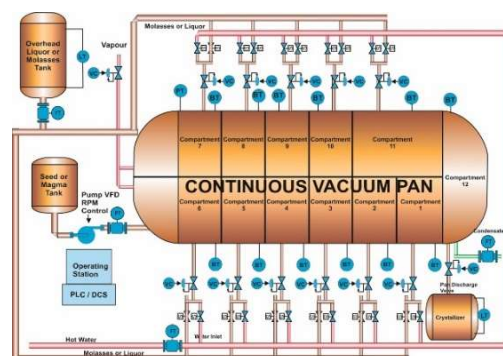
- **BUILT-IN BRIX EQUATION FOR PURITY COMPENSATION:** TO ACCURATELY SENSE, ANALYZE, CALCULATE AND DERIVE BRIX WITHIN A BAND OF VARYING SLURRY, MASSECUITE OR SYRUP MEDIA PURITY.
- **BUILT-IN TEMPERATURE COMPENSATION:** TO ACCURATELY SENSE, ANALYZE, CALCULATE, AND DERIVE BRIX WITHIN A BAND OF VARYING TEMPERATURE.
- **BUILT-IN PID CONTROLLER AND ETHERNET COMMUNICATION FOR CONTROLLER MODELS:**
 - HIGHLY ACCURATE FUZZY LOGIC PID CONTROLLER DEVELOPED ESPECIALLY FOR PROCESS CONTROL AND FLOW CONTROL APPLICATIONS.
 - CVP PAN CHAMBER CONTROL LOGIC BUILT ESPECIALLY FOR CONTINUOUS VACUUM PAN OPERATIONS
 - SUGAR MELTER AND MOLASSES CONDITIONER CONTROL LOGIC
 - REMOTE SET VARIABLE FACILITY
- **BUILT-IN 3-POINT AUTO/MANUAL STATION TO SELECT CONTROL OUTPUT FROM:**
 - a. SELECTOR SWITCH FOR LOCAL PID OUTPUT OR DCS/PLC PID OUTPUT
 - b. MANUAL OUTPUT FOR TROUBLESHOOTING

THIS FEATURE SIMPLIFIES INSTALLATION BY ELIMINATING NEED FOR INSTALLING A JUNCTION BOX AND EXTRA WIRING.

TECHNICAL SPECIFICATIONS:

- **POWER SUPPLY:** 85 - 265 VAC, 50 – 60HZ
- **ANALYZER ENCLOSURE:** IP67 FIELD MOUNTED DUST AND MOISTURE-PROOF
- **INPUT:**
 - BRIX AND TEMPERATURE SIGNALS FROM THE SENSOR
- **CALIBRATION CAN BE DONE FROM :**
 - **KEYBOARD:** KEYBOARD WITH 5 KEYS IS PROVIDED IN THE ANALYZER
 - **USB PORT:** FOR WINDOWS / ANDROID-BASED YUTECH-ACCESS-APP
- **DISPLAY:** 4 DIGIT LED DUAL DISPLAY, LED
- **SIGNAL OUTPUTS:**
 - 4 - 20 MA ANALYZED BRIX OUTPUT
 - 4 - 20 MA CONTROLLER OUTPUT (IN CONTROLLER MODELS)
 - 2 POTENTIAL-FREE RELAY OUTPUTS

SCHEMATIC DIAGRAM: CVP AUTOMATION



BRIX ANALYZER AND FLUID DENSITY BRIX SENSOR

ACCURATELY SENSES BRIX AND DENSITY IN KG/M³ WITH VACUUM, LEVEL AND TEMPERATURE COMPENSATION



DENSITY BRIX SENSOR GUARANTEES EXCELLENT PROCESS EFFICIENCY AND INCREASES PROFITS

BRIX ANALYZER CUM CONTROL SYSTEM

DISPLAYS BRIX
DISPLAYS FLUID DENSITY IN KG/M³ WITH
WITH LEVEL, TEMPERATURE, AND VACUUM
COMPENSATION



FLUID DENSITY SENSORS:

A24FDSRS1

A24FDSRS2

A24FDSRS3

A24FDSL



APPLICATIONS IN THE SUGAR INDUSTRY:

- BRIX OF SYRUP, MASSECUTE, AND MELT OF ALL BATCH PANS, VERTICAL AND HORIZONTAL CONTINUOUS PANS, MOLASSES CONDITIONERS, SUGAR MELTERS
- BAUME OF MILK OF LIME
- PLEASE SEE OUR BRIX ANALYZER BROCHURE FOR SUGAR PROCESS, REFINERY, AND DISTILLERY APPLICATIONS

APPLICATIONS IN DISTILLERIES, BREWERIES, WINERIES:

- BRIX OF SLOPE OR SPENT WASH
- BRIX OF MOLASSES
- BRIX OR WORT OF FERMENTATION TANKS
- BRIX OF MUST, WINE

FOOD AND BEVERAGES INDUSTRIES

- BRIX OF SAUCE, SLURRY, FRUIT PULP

APPLICATIONS IN DAIRY INDUSTRY:

- DENSITY OF MILK, SKIMMED MILK

APPLICATIONS IN THE PULP AND PAPER INDUSTRY:

- DENSITY OF PULP

BRIX ANALYZER AND FLUID DENSITY BRIX SENSOR

ACCURATELY SENSES BRIX AND DENSITY IN KG/M³ WITH VACUUM, LEVEL AND TEMPERATURE COMPENSATION



APPLICATION IN SUGAR PROCESS OR SUGAR REFINERY:

FOR MEASURING FLUID-DENSITY-BRIX OF MASSECUTE / SYRUP / SLOPE / MELT / LIQUOR / MAGMA / SEED IN:

- VERTICAL AND HORIZONTAL CONTINUOUS VACUUM PAN (VKT OR CVP) CHAMBERS
- BATCH-TYPE VACUUM PANS (GRAINING, AND DROPPING PANS) OF A, B, AND C MASSECUTES.
- SUGAR MELTERS AND MOLASSES CONDITIONERS
- EVAPORATOR BODIES
- OPEN PANS OR BOILING VESSELS IN KHANDSARIS OR MINI SUGAR PLANTS / JAGGERY OR MUSCOVADO PLANTS
- BOILING VESSELS IN JAGGERY OR MUSCOVADO PRODUCTION
- LIME BAUME MEASUREMENT

APPLICATION IN OTHER PROCESS INDUSTRIES:

THE FLUID-DENSITY-BRIX ANALYZER SENSES THE DENSITY OF ANY FLUID. HENCE IT HAS NUMEROUS APPLICATIONS IN A RANGE OF PROCESS INDUSTRIES.

- **FOOD & BEVERAGES:** IN VESSELS OR PANS FOR MONITORING THE CONSISTENCY OF SAUCES / SLURRIES / PASTES ETC.
- **CHEMICAL / PHARMA / FERTILIZERS:** IN THICKENING / THINNING VESSELS OR PANS FOR MONITORING THE CONSISTENCY OF CHEMICAL SLURRIES / PASTES
- **DISTILLERIES:** IN FERMENTATION / MATURATION VESSELS AND SLOPE / SPENT-WASH EVAPORATORS FOR MONITORING BRIX
- **BREWERIES:** IN FERMENTATION VESSELS FOR MONITORING BRIX FERMENTATION VESSELS, MATURATION TANKS

INNOVATIVE FEATURES FOR EASE OF OPERATION AND TO SAVE ON INSTALLATION COST AND MATERIALS:

- **FLUID-DENSITY AND LEVEL AND TEMPERATURE COMPENSATED DENSITY-BRIX ARE DERIVED BY THE BUILT-IN FLUID-DENSITY-BRIX EQUATION**
- **BUILT-IN 3-POINT AUTO/MANUAL STATION TO SELECT CONTROL OUTPUT FROM:**
 - SELECTOR SWITCH FOR LOCAL PID OUTPUT OR DCS/PLC PID OUTPUT
 - MANUAL OUTPUT FOR TROUBLESHOOTING
 - **THIS FEATURE SIMPLIFIES INSTALLATION BY ELIMINATING THE NEED FOR A JUNCTION BOX AND EXTRA WIRING.**
- **BUILT-IN CONTROL LOGIC WITH YEARS OF SUGAR PROCESS & REFINERY EXPERIENCE**
 - HIGHLY ACCURATE FUZZY LOGIC PID CONTROLLER DEVELOPED ESPECIALLY FOR PROCESS FLOW CONTROL APPLICATIONS.
 - BATCH PAN CONTROL LOGIC BUILT ESPECIALLY FOR BATCH-TYPE VACUUM PAN OPERATIONS
 - BUILT-IN PID CONTROL LOOP (BRIX VALUE IS INTERNALLY TAKEN AS PROCESS VARIABLE)

BRIX ANALYZER AND FLUID DENSITY BRIX SENSOR

ACCURATELY SENSES BRIX AND DENSITY IN KG/M³ WITH VACUUM, LEVEL AND TEMPERATURE COMPENSATION



SALIENT FEATURES OF FLUID-DENSITY-BRIX ANALYZER SYSTEM:

- FLUID-DENSITY TYPE BRIX ANALYZER SYSTEM TARGETS SENSING THE FLUID-DENSITY OF LIQUIDS, SLURRIES, OR SYRUPS LIKE SUGAR MASSECUITE, SUGAR SYRUP, SUGAR MELT, LIQUORS, AND MOLASSES.
- THE MOTORIZED FLUID-DENSITY SENSOR IS SPECIALLY DESIGNED TO BE INSERTED IN A VESSEL TO STIR THE FLUID MEDIA AND MEASURE ITS FLUID-DENSITY WHICH CAN BE EXPRESSED IN SIMPLE TERMS AS THE TIGHTNESS OR THINNESS OF A FLUID MEDIA. IT CAN ALSO BE INFORMALLY REFERRED TO AS THE CONSISTENCY OF THE FLUID AND IS A MECHANICAL PROPERTY OF A FLUID.
- MOTORIZED SENSOR'S TORQUE AND POWER WHICH IS REQUIRED TO STIR THE FLUID VARIES WITH VARYING FLUID-DENSITY. SO THE MOTORIZED FLUID-DENSITY SENSOR'S POWER CONSUMPTION IS DIRECTLY PROPORTIONAL TO THE FLUID'S DENSITY.
- THE VARIATION IN SENSOR'S POWER CONSUMPTION IS SENSED BY THE FLUID-DENSITY TYPE BRIX ANALYZER'S HIGHLY ACCURATE SENSING CIRCUITRY, THIS VALUE IS MEASURED AND PROCESSED IN THE **FLUID-DENSITY-BRIX EQUATION**, TO DERIVE THE ACTUAL VALUE OF **DENSITY IN KG/M³ AND TEMPERATURE, LEVEL AND VACUUM COMPENSATED BRIX VALUE**.
- **COMPENSATED BRIX VALUE IS DISPLAYED OR TRANSMITTED AS 4-20mA CURRENT OUTPUT.**
- EASY AND USER-FRIENDLY CALIBRATION AND ONLINE COMPENSATION.

BASIC SCIENCE BEHIND FLUID-DENSITY-BRIX:

- **FLUID-DENSITY:** THE DENSITY OF A PARTICULAR FLUID.
- **DENSITY IS DEFINED AS "MASS PER UNIT VOLUME," MEANING** THE MASS CONTAINED IN A FIXED VOLUME. IT IS DENOTED BY " **ρ** ", A GREEK LETTER CALLED "**RHO**".
- **DENSITY:** CAN BE DERIVED USING THE FORMULA " **$\rho = M/V$** " WHERE **ρ** IS THE FLUID-DENSITY, M IS THE MASS AND V IS VOLUME. THE UNIT TO MEASURE FLUID-DENSITY IS **KG/M³** (KILOGRAM PER CUBIC METER).
- **BRIX:** THIS IS THE PERCENTAGE MEASUREMENT BY SUCROSE WEIGHT IN PURE WATER SOLUTION.
- **THE MOST POPULAR WAYS OF MEASURING BRIX ARE:**
 - **HYGROMETRIC AND REFRACTOMETRIC (LAB METHODS)**
 - **HIGH-FREQUENCY OR RADIO-FREQUENCY CONDUCTIVITY TYPE BRIX SENSING. THIS ANALYZER SENSES THE CHANGE IN AMPLITUDE OF THE SIGNAL PROPAGATED IN THE MEDIA WHICH IS PROPORTIONAL TO THE MEDIA'S WATER CONTENT.**
 - **MICROWAVE TYPE BRIX SENSING. THIS ANALYZER SENSES THE PHASE SHIFT OF THE SIGNAL PROPAGATED IN THE MEDIA WHICH IS PROPORTIONAL TO THE MEDIA'S WATER CONTENT.**
 - **YUTECH'S INNOVATIVE FLUID-DENSITY BRIX SENSOR, SENSES THE MOTORIZED STIRRER'S POWER REQUIRED TO STIR THE MEDIA AND SENDS THIS SIGNAL TO BRIX ANALYZER, WHERE, A COMPLEX MATHEMATICAL EQUATION WITH LINEARIZATION AND COMPENSATION FORMULAE ACCURATELY DERIVES TEMPERATURE, LEVEL AND, VACUUM COMPENSATED BRIX AND DENSITY IN KG/M³.**
- WHILE CONDUCTIVITY OR MICROWAVE METHODS MEASURE THE FLUID'S ELECTRICAL CHARACTERISTIC, THEY ARE SUCCESSFUL IN MEASURING BRIX OF "B AND C" MASSECUITE IN CVP, BRIX OF SUGAR MELT, AND BRIX IN A MOLASSES CONDITIONER UNIT.
- "A" MASSECUITE HOWEVER, HAS A MIX OF MATERIALS LIKE SYRUP, MELT AND MOLASSES WHOSE PURITIES ARE DIFFERENT, THIS AFFECTS THE FLUID OR MEDIA'S ELECTRICAL CHARACTERISTIC WHICH IS VARIABLE FOR MASSECUITES OF DIFFERENT PURITY THUS ADVERSELY AFFECTING BRIX MEASUREMENT.
- FLUID-DENSITY MEASUREMENT USES A MOTORIZED STIRRING SENSOR AND PROVES VERY SUCCESSFUL, AS IT DIRECTLY MEASURES THE FLUID'S DENSITY (TIGHTNESS OR THINNESS) IRRESPECTIVE OF ITS ELECTRICAL CHARACTERISTICS.

BRIX ANALYZER AND FLUID DENSITY BRIX SENSOR

ACCURATELY SENSES BRIX AND DENSITY IN KG/M³ WITH VACUUM, LEVEL AND TEMPERATURE COMPENSATION



FLUID DENSITY BRIX ANALYZER TECHNICAL SPECIFICATIONS:

PRODUCT CODE: A15FDACFM1230 / A24FDACFMEM1230

- POWER SUPPLY: 85 - 265 VAC, 50 – 60HZ
- INPUTS:
 - FLUID-DENSITY SENSOR
 - RTD PT100 TEMPERATURE SENSOR
 - 8-POINT LEVEL SENSORS (CONDUCTIVITY-BASED DIGITAL SWITCH TYPE)
 - 4-20MA: INPUT FROM VACUUM TRANSMITTER (OPTIONAL, NOT A PART OF STANDARD SUPPLY)
 - 4-20MA: INPUT FROM DIFFERENTIAL PRESSURE TRANSMITTER WITH EXTENDED DIAPHRAGM WITH CAPILLARY TUBES (OPTIONAL, NOT A PART OF STANDARD SUPPLY)
- OUTPUTS:
 - TRANSMISSION OUTPUTS: 4-20MA, BRIX OUTPUT, AND 4-20MA, LEVEL OUTPUT (REQUIRED FOR BATCH PAN APPLICATION)
 - PID CONTROL OUTPUT: 4-20MA FOR BRIX CONTROL
 - 2 POTENTIAL-FREE RELAY OUTPUTS
- DISPLAY:
 - FOR PRODUCT CODE - A15FDACFM1230: 7-SEGMENT LED DISPLAY
 - FOR PRODUCT CODE - A24FDACFMEM1230: 7-SEGMENT LED DISPLAY AND LCD DISPLAY
- ENCLOSURE: FIELD MOUNTED MS POWDER COATED, INGRESS PROTECTION CLASS IP67
- COMMUNICATION:
 - ETHERNET: MODBUS TCP/IP (PRODUCT CODE: A24FDACFMEM1230)

FLUID DENSITY SENSOR TECHNICAL SPECIFICATIONS:

PRODUCT CODE: A24FDSRS1, A24FDSRS2, A24FDSRS3

- TYPE: MOTORIZED FLUID DENSITY SENSOR
- POWER SUPPLY: 24VDC FROM THE ANALYZER (NOT TO BE CONNECTED TO ANY EXTERNAL SOURCE).
- BUILT-IN THERMOWELL WITH RTD PT100
 - MATERIAL OF CONSTRUCTION: SS304 / SS316L
- PTFE SHEATHED CONDUCTIVITY PROBE 8 NOS.: SS304 / SS316L WITH PTFE SHEATH
 - MATERIAL OF CONSTRUCTION:
- MATERIAL OF CONSTRUCTION:
 - WETTED ROTARY PARTS: SS304 / SS316L
 - WETTED STATIONARY PARTS: MS CHROME PLATED / SS304 / SS316L
- FOR FOOD-GRADE, SS-304 FULL SENSOR BODY: ADD FGSS TO THE PC. EX: A24FDSRS3FGSS
- FOR ACIDIC CHEMICALS, SS-316L FULL SENSOR BODY: ADD SSL TO THE PC. EX: A24FDSRS3SSL

FLUID DENSITY SENSOR MODEL GUIDANCE FOR VARIOUS APPLICATIONS:

A24FDSRS1: BATCH PAN, VERTICAL CONTINUOUS PAN

A24FDSRS2: HORIZONTAL CONTINUOUS PAN

A24FDSRS3: EVAPORATOR, FALLING FILM EVAPORATOR, JUICE AND SYRUP MIXING VESSEL, SUGAR MELT, MOLASSES CONDITIONER, LIME BAUME

A24FDSRS3FGSS: BREWERIES, FOOD & BEVERAGES, DAIRY

A24FDSRS3FGSSL: CHEMICALS, DISTILLERY SLOPE / SPENTWASH

A24FDSL: SWITCHING LEVEL SENSOR

PLEASE GIVE INFORMATION OF MEDIA BRIX RANGE, DENSITY RANGE, pH, TEMPERATURE

CONDENSER AUTOMATION

MULTI-ENTRY AND SINGLE-ENTRY CONDENSER AUTOMATION SYSTEM

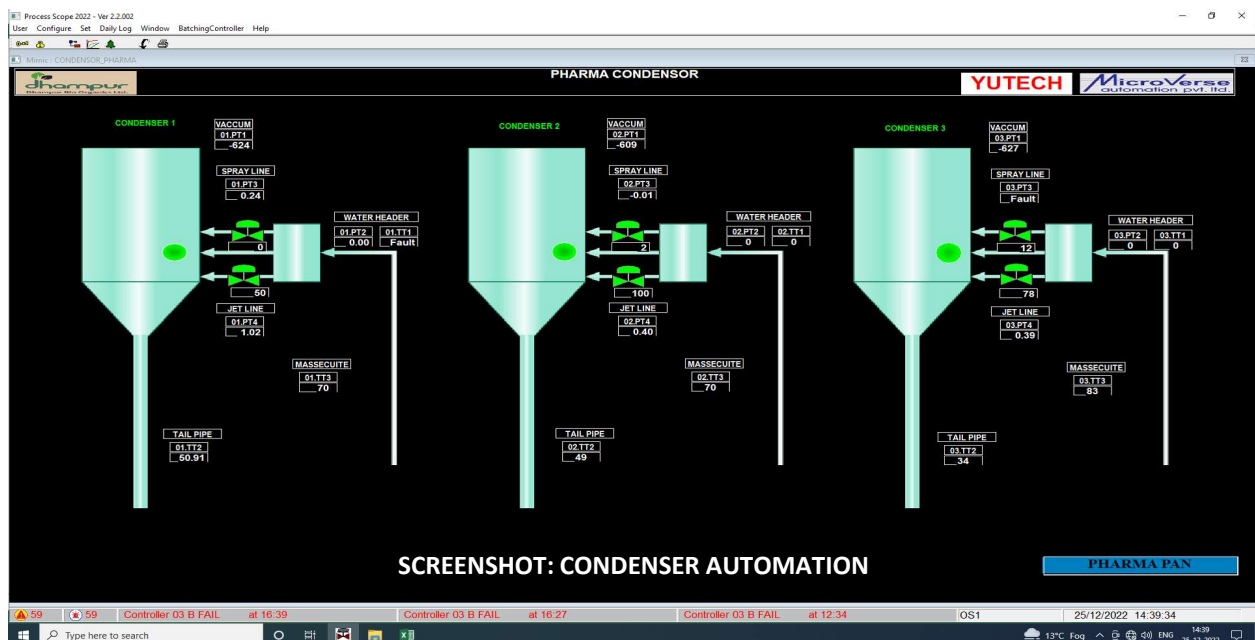
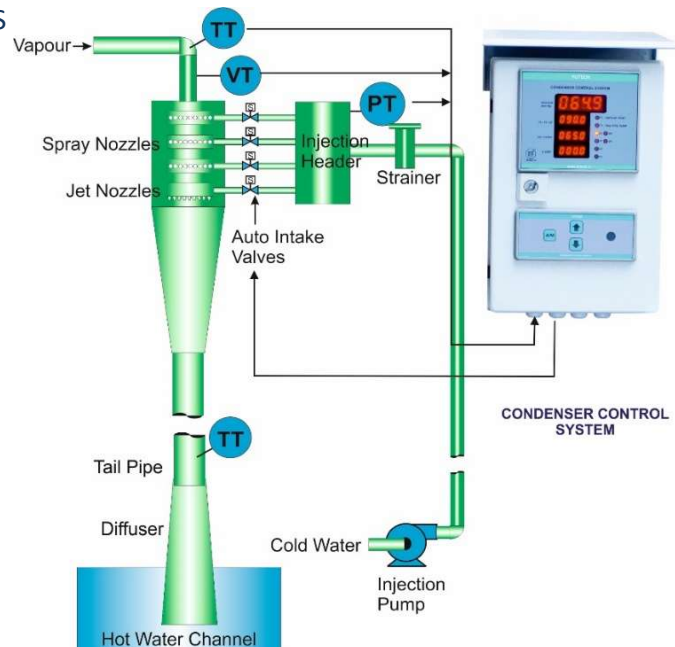


CONDENSER AUTOMATION ADVANTAGES:

- CONSTANT VACUUM
 - ENSURES PROPER EVAPORATION IN EVAPORATORS AND PROPER BOILING IN PANS. STABLE VACUUM AS PER SET POINT AVOIDS FALSE GRAINING CONDITIONS IN A PAN
 - ENSURES STABILIZED VAPOUR LOAD THUS HEATING EFFICIENCY IS INCREASED
- ENTRAINMENT IS AVOIDED HENCE SUGAR LOSSES ARE AVOIDED
- HUGE WATER SAVING AS WATER QUANTITY IS OPTIMIZED
- HUGE POWER SAVING AS POWER WASTAGE IN EXCESS WATER PUMPING IS AVOIDED
- HUGE MONETARY BENEFITS DUE TO SAVINGS

CONDENSER AUTOMATION:

- FOR SEPARATE WATER ENTRY FOR DIFFERENT SETS OF SPRAY NOZZLES AND SPRAY JETS WATER QUANTITY IS AUTOMATICALLY CONTROLLED BY THE ON/OFF VALVE FOR THE RESPECTIVE NOZZLE SET VALVE WITH VACUUM AND TEMPERATURE DIFFERENCE BETWEEN THE VAPOUR AND CONDENSATE TAIL PIPE
- WATER PRESSURE IN THE COMMON INJECTION HEADER MAINTAINED BY CONTROLLING INJECTION PUMP VFD
- JET COMPARTMENT CONTROLLED BY SEPARATE VALVE
- VAPOUR AND TAIL PIPE TEMPERATURE MEASURED



CONDENSER AUTOMATION

MULTI-ENTRY AND SINGLE-ENTRY CONDENSER AUTOMATION SYSTEM



CONDENSER AUTOMATION:

- Single Entry and Multiple Entry Condensers have the same Control Philosophy but a different Control Method.
- A Single-Entry Condenser's Water Intake is Controlled by a Control Valve in a PID Loop with the Vacuum and Temperatures being the Remote Set Variables.
- In a Multiple-Entry Condenser, every Set or Compartment of Nozzles has an On/Off Type Control Valve to start or stop its water intake.
- The number of Jets and Nozzles and their Diameter is designed as per Condenser Capacity, the Control Valve is designed to suit this size and flow rate.
- Water Pressure in the Common Injection Header maintained by Controlling Injection Pump VFD
- Jet Compartment Controlled by Separate Valve
- Vapour and Tail Pipe Temperature Measured

AUTOMATION PHILOSOPHY:

- Vapour Vacuum and Temperature sensed
- Condensate Temperature Sensed in Tail Pipe
- Temperature Difference Calculated
- Vacuum and Temperature Difference are both Analyzed to derive Remote Dynamic Set Point
- Spray Water is controlled as below:
 - Multi-Entry System:
 - Spray Jets are controlled by separate ON/OFF type Control Valves as per the Remote Dynamic Set-Point
 - 2, 3, or 4 Sets of Nozzles for Spray as per Design
 - 1 or 2 Sets of Jet Nozzles as per Design are controlled only if necessary
 - Single-Entry System:
 - Spray Jets are controlled by a Control Valve in PID Action as per the Remote Dynamic Set-Point
 - 1 or 2 Sets of Jet Nozzles as per Design are controlled only if necessary

Product Code: A15COAACC4RC2D4R4FMC

- **A15COA**ACC4RC2D4R4FMC – A15COA means Condenser Automation System of A15 Product Family. Ethernet Communications is in the A24 Model.
- A15COA**ACC**4RC2D4R4FMC – AC Power Supply
- A15COAACC**4RC2**D4R4FMC – Analog Inputs and Outputs
 - AI (**C4R**): 4-20mA Current and RTD PT100, 4 Channels;
 - AO (**C2**): 2 Ch. 4-20mA (Ch. 1: Spray and Ch. 2: Spare can be used for Spray / Jet)
- A15COAACC4RC2**D4R4**FMC: Digital Inputs and Outputs
 - DI (**D4**): 4 DIs (24VDC); DO (**R4**): 4 Relay Outputs (24VDC, 1A)
- A15COAACC4RC2D4R4**FM**C – Field Mounted Enclosure
- A15FDAAC**SCTR**C2D4R4F**M**C – Controller
- A24FDAAC**SCTR**C2D4R4F**MCEM** – Analyzer with Controller and Ethernet Model, EM: Modbus TCP/IP Communication (Ethernet)

THE CONDENSER AUTOMATION SYSTEM IS AVAILABLE AS A STANDALONE LOCAL CONTROL SYSTEM (OPTIONALLY WITH ETHERNET COMMUNICATION FOR DCS) OR IMPLEMENTED IN PLC-SCADA OR PLC-HMI OR DCS.

YUTECH pH ANALYZER AND pH CONTROL SYSTEM

JUICE LIMING, AND FINAL JUICE pH CONTROL



pH ANALYZER



**pH ANALYZER AND
CONTROL SYSTEM**

SALIENT FEATURES:

- pH ANALYZER AND ELECTRODE COMBINATION TARGETS SENSING OF HYDROGEN ION CONCENTRATION (pH) WHICH DEFINES THE ALKALINITY OR ACIDITY OF LIQUIDS OR SYRUPS.
- YUTECH pH ANALYZER WORKS WITH ANY COMBINATION TYPE pH ELECTRODE AND CAN ACCEPT RTD PT-100 SIGNAL EITHER FROM SEPARATE SENSOR OR RTD EMBEDDED IN pH ELECTRODE.
- pH ANALYZER PLAYS A CRUCIAL ROLE IN SUGAR PROCESS AUTOMATION AND HELPS IN STABILIZING THE OVERALL SUGAR PROCESS AS WELL AS SUGAR COLOUR AND QUALITY. THE YUTECH INTELLIGENT PROGRAMMABLE pH ANALYZER IS A STATE-OF-THE-ART SYSTEM HAVING ALGORITHM TO ACCURATELY SENSE, ANALYZE, CALCULATE AND DERIVE MEDIA pH WITH TEMPERATURE COMPENSATION. FURTHERMORE, THE ALGORITHM CAN ALSO DETECT pH ELECTRODE DECAY AND RAISE ALARM AS WELL AS NOTIFY THE SCADA / PLC / DCS.
- ACCURATE pH READING ENSURES BETTER PROCESS CONTROL AND HELPS TO MAINTAIN CONSTANT MASSECUTE / MELT / MOLASSES / SYRUP pH THUS RESULTS IN BETTER SUGAR COLOUR AND QUALITY AND PRODUCTION EFFICIENCY AND MINIMUM PROCESS LOSSES.

INNOVATIVE FEATURES FOR EASE OF OPERATION AND TO SAVE ON INSTALLATION COST AND MATERIALS:

- **BUILT-IN pH EQUATION**
- **BUILT-IN TEMPERATURE COMPENSATION**
- **BUILT-IN PID CONTROLLER:**
 - HIGHLY ACCURATE FUZZY LOGIC PID CONTROLLER DEVELOPED ESPECIALLY FOR PROCESS CONTROL AND FLOW CONTROL APPLICATIONS.
 - PH CONTROL LOGIC BUILT ESPECIALLY FOR JUICE LIMING PROCESS
 - REMOTE SET VARIABLE FACILITY
- **BUILT-IN 3-POINT AUTO/MANUAL STATION TO SELECT CONTROL OUTPUT FROM:**
 - SELECTOR SWITCH FOR LOCAL PID OUTPUT OR DCS/PLC PID OUTPUT
 - MANUAL OUTPUT FOR TROUBLE SHOOTING

THIS FEATURE SIMPLIFIES INSTALLATION BY ELIMINATING NEED FOR INSTALLING A JUNCTION BOX AND EXTRA WIRING.

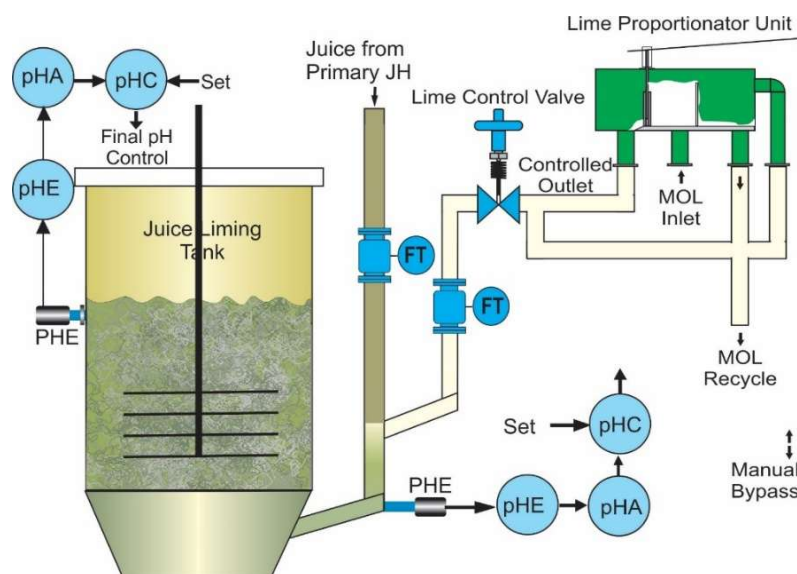
YUTECH pH ANALYZER AND pH CONTROL SYSTEM

JUICE LIMING, AND FINAL JUICE pH CONTROL



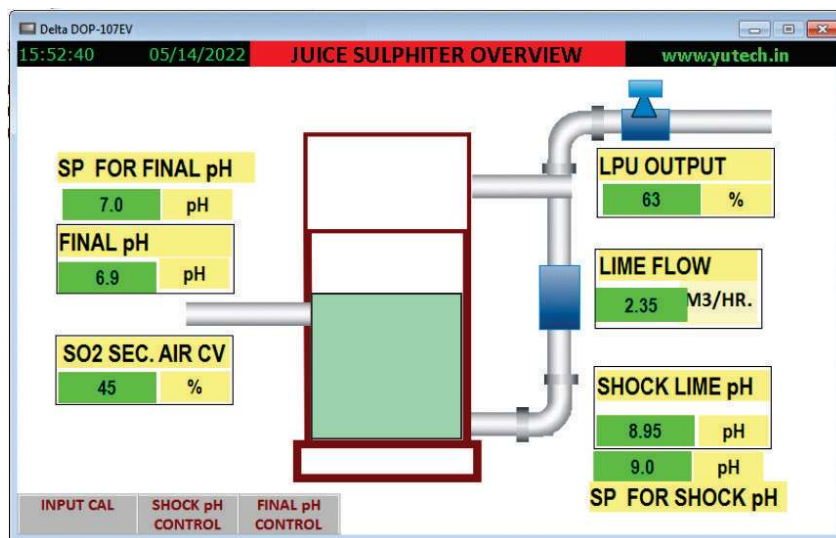
- pH SENSOR OR ELECTRODE DETECTS HYDROGEN ION CONCENTRATION AS A FUNCTION OF EMF. THIS SIGNAL IS THEN PROCESSED IN ANALYZER TO OBTAIN PH READING ON A SCALE OF 0 – 14PH.
- pH ANALYZER IS EQUIPPED WITH INTELLIGENT ELECTRODE DECAY CALCULATION ALGORITHM WHICH GENERATES ALARM WHEN ELECTRODE WEAKENS AND ALSO GENERATES ALARM WHEN CHANGE OF ELECTRODE IS NEEDED.
- VERY EASY CALIBRATION AND ONLINE ELECTRODE RECALIBRATION USING SET-7 FUNCTION
- IN-BUILT AUTOMATIC TEMPERATURE COMPENSATION
- IN-BUILT SELF CLEANING AND WASHING OF ELECTRODE WITH PRE-ADJUSTABLE TIMING CYCLE
- 4-20 MA OUTPUT, SEPARATE MODBUS AND ETHERNET COMMUNICATIONS
- ON-LINE CALIBRATION SOFTWARE “YUTECH-ACCESSAPP-PH” PROVIDES REMOTE ACCESS TO PH ANALYZER FOR CALIBRATION, COMPENSATION AND TROUBLE SHOOTING.

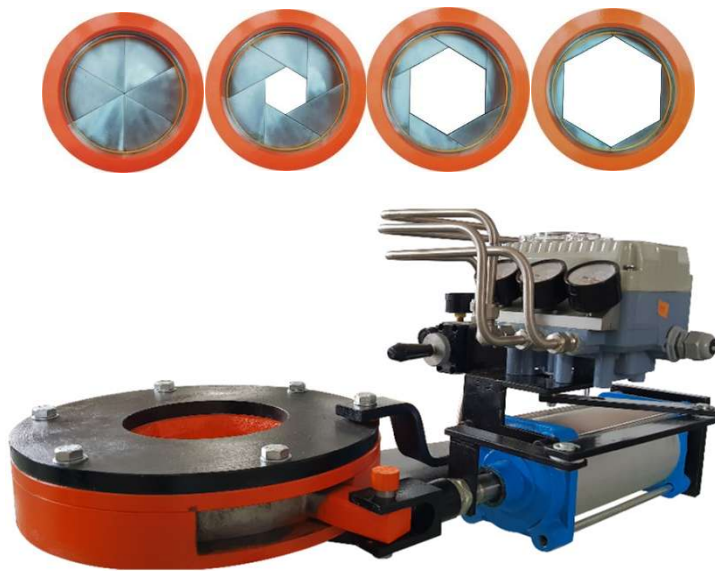
JUICE LIMING AND FINAL JUICE pH CONTROL SYSTEM: SCHEMATIC DIAGRAM



JUICE LIMING AND SULPHITOR AUTOMATION:

- SHOCK LIMED JUICE pH SENSING
- SHOCK LIMED JUICE TEMPERATURE SENSING
- FINAL JUICE pH SENSING
- FINAL JUICE TEMPERATURE SENSING
- LIME PROPORTIONATOR CONTROL WITH RESPECT TO TEMPERATURE COMPENSATED SHOCK LIMED JUICE pH
- SECONDARY AIR OR MOLTEN SULPHUR PUMP VFD CONTROL WITH RESPECT TO TEMPERATURE-COMPENSATED FINAL JUICE pH





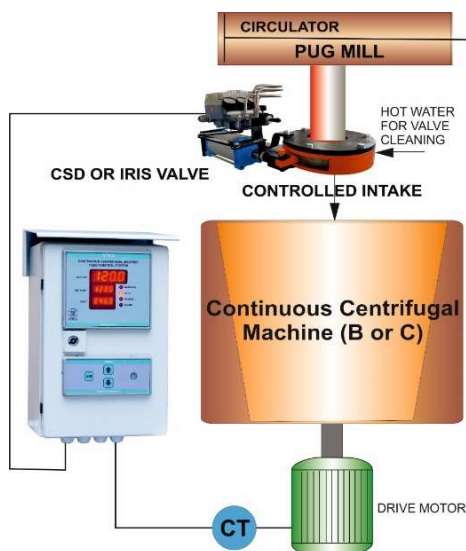
CSD OR IRIS VALVE



**CONTINUOUS CENTRIFUGAL MACHINE
AUTOMATIC FEED CONTROL SYSTEM**

CSD OR IRIS VALVE BASED CONTINUOUS CENTRIFUGAL MACHINE AUTOMATION ADVANTAGES:

- Constant Load on the Machine Basket Drive results in Constant Machine Operation and Optimum Current Consumption of the Drive Motor thus Saving Power and Maximizing Capacity Utilization at the Same Time.
- Constant Load on the Machine Basket results in Improved Molasses Purity as well as Increased Throughput at the same time.
- Concentric and Uniform Material Intake Ensures uniform layer of Massequite over the surface of the Basket thus it results in Excellent Purging, leading to higher efficiency and increased throughput
- A Uniform layer of Massequite over the surface of the Basket also results in Power, Water, and Steam Saving. **Power Saving of up to 20% for total Massequite Curing. Thus, it ensures a Very Attractive payback. INFACCT CONTINUOUS CENTRIFUGAL MACHINE AUTOMATION WORKS LIKE A "MULTIBAGGER".**
- Concentric and Uniform Material Intake also ensures Proper Basket Balance, reducing Wear and Tear.
- Higher Capacity Utilization of Continuous Centrifugal Machines and Operational life improvement and Reduced Cost of Ownership.
- Eliminates Human Errors, Overflows, and Stoppages. **THUS, WORKS AS A "STOP LOSS AUTOMATION"!**



CSD OR IRIS VALVE BASED CONTINUOUS CENTRIFUGAL MACHINE FEED AUTOMATION SYSTEM:

- MACHINE DRIVE LOAD CURRENT SENSING
- FEED CONTROL WITH RESPECT TO DRIVE LOAD CURRENT

Power Saving of up to 20% for total Massequite Curing.

**CONTINUOUS CENTRIFUGAL MACHINE ATOMATION
WORKS LIKE A "MULTIBAGGER".**

**STOP LOSSES
REDUCE COST OF OWNERSHIP
INCREASE RETURN ON INVESTMENT
INCREASE PROFITABILITY**



YUTECH Engineered Automation System in Continuous Centrifugal Machines:

- Reduce Process Time and Increase Throughput
- Maximize Machine Capacity Utilization
- Eliminate Stoppages due to Human Errors
- Eliminate Wastage through Basket Overflows
- Reduce Power, Steam and Water Consumption
- Proper Basket Balance results in Reduced Wear and Tear
- In some cases, it is observed that One or Two Machines have been kept spare as total load is taken care of by 4 Machines instead of 6
- Thus, we can Conclude that Continuous Centrifugal Machine Automation can get more Work Done from the Same Mechanical Equipment and:
- **REDUCE COST OF OWNERSHIP**
- **INCREASE RETURN ON INVESTMENT**
- **INCREASE PROFITABILITY**



Controlled Quantity of Massecuite drops from the Concentric Opening (Split opening from the Centre of the Valve)
Hence No Spilling, No Splattering, No Unbalance, No Overflow, No Underfeeding

Innovative Features for Ease of Operation and to save on Installation Cost and Materials:

Built-in Communication Links: See Product Code to select desired protocol

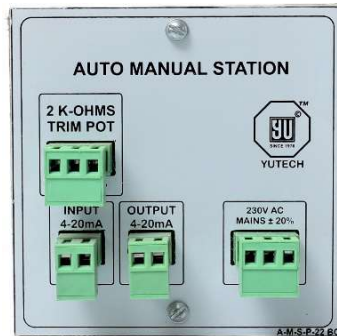
Ethernet:

- a. Modbus TCP/IP Ethernet Communication Protocols
- b. External PID Controller Calibration Facility from DCS / PLC- SCADA / HMI System via Ethernet. Control Variables can be accessed and changed from DCS / PLC- SCADA / HMI.
- c. Machine Drive Load Current Data is Communicated for Data Acquisition and Data Storage within DCS / PLC- SCADA / HMI.

RS485: Modbus RTU on request in Base Model.

USB Communication Facility: For Calibration from PC or Android using System's USB Port. (This facility is available only in Controller with Ethernet Models). **YUTECH Access App:** Calibration Software can be installed in a PC or Android.

AUTO-MANUAL STATION



PRODUCT CODE: A10DAM2
AUTO MANUAL STATION
WITH EXTERNAL POT
CONNECTION
POWER SUPPLY: 230VAC
INPUT:
CH-1, 4-20mA FOR
EXTERNAL CONTROL SIGNAL
(AUTO MODE)
CH-2 FOR EXTERNAL 2K
POTENTIOMETER (MANUAL)
OUTPUT:
1-CHANNEL, 4-20mA
RELAY: OPTIONAL
(ONE POTENTIAL-FREE)
ENCLOSURE: DIN 96 x 96

TECHNICAL SPECIFICATIONS:

- **Power Supply:** 85 - 265 VAC, 50 – 60Hz
- **Enclosure:** ABS Panel Mounted DIN 96 x 96
- **Input:**
 - **Analog Input (Standard Input): 16-Bit Resolution**
 - 4-20mA Current (Control Variable from the External Controller like PLC / DCS, this Signal will go to the Final Control Element such as Valve or VFD)
 - Resistance Input (2K-Ohm). A potentiometer can be connected externally. (Pot is supplied optionally at extra cost).
- **Calibration:** A keyboard is provided on the Facia for Calibration and Tuning.
- **Auto Manual Operation:**
 - Output can be Switched from Auto to Manual Mode using the A/M Key.
 - Output can be Manually Increased or Decreased by using the Up, and Down Keys in the Manual Mode.
 - External Pot when connected can Manually Increase or Decrease the Output.
 - This facility is provided so the user can easily change the damaged pot after prolonged usage without opening up the Auto-Manual Station.
- **Display**
 - 4 Digit 7-Segment LED Display for Channel-1
 - LED for Alarms
- **Output:**
 - **Analog Output: 12-Bit Resolution**
 - 4 - 20mA (PID Control Output)
 - **Potential-Free Relay Output: Contact Current Rating: 2 Amps @230VAC (OPTIONAL)**
 - Relay Output can be Programmed from the Keyboard as High Alarm (triggers when the Process Variable rises above the Alarm Setpoint)

PROCESS INDICATOR FIELD MOUNTED



PRODUCT CODE: A10DPI1FMP
PROCESS INDICATOR
POWER SUPPLY: 24VDC
INPUT: 1-CHANNEL, UNIVERSAL
OUTPUT: 1-CHANNEL, 4-20mA
RELAY: 2 POTENTIAL-FREE
ENCLOSURE: ABS PLASTIC FIELD MOUNTED IP67

TECHNICAL SPECIFICATIONS:

- **Power Supply:** 24VDC
- **Enclosure:** ABS Plastic Field Mounted IP67 with ABS Plastic Glands
- **Input:**
 - **Analog Input (Standard Input): 16-Bit Resolution**
 - Universal (4-20mA, 0-10VDC, RTD-PT100, Thermo-Couple K Type / J Type)
 - **Other Input Types provided on Request may involve additional costs:**
 - Thermocouples: S, R, and T
- **Calibration:**
 - **Keyboard:** is provided on the Facia for Calibration and Tuning
- **Display**
 - 4 Digit 7-Segment LED Display of Scaled Process Variable
 - LED for Alarms
- **Output:**
 - **Analog Output: 12-Bit Resolution**
 - 4 - 20mA (Scaled and Retransmitted Output of Input Channel-1)
 - **Potential-Free Relay Output: Contact Current Rating: 2 Amps @230VAC**
 - 2 Relays
 - Relay Output can be Programmed as High Alarm (triggers when the Process Variable rises above the Alarm Setpoint) or Low Alarm (triggers when the Process Variable dips below the Alarm Setpoint) from the Keyboard.

PROCESS INDICATOR WITH LARGE DISPLAY FIELD MOUNTED



PRODUCT CODE: A10DPILD
PROCESS INDICATOR WITH LARGE DISPLAY
POWER SUPPLY: 85 - 265VAC
INPUT: 1-CHANNEL, UNIVERSAL
OUTPUT: 1-CHANNEL, 4-20mA
RELAY: ONE POTENTIAL-FREE
DISPLAY: 7-SEGMENT LED, 4-DIGIT
DIGIT SIZE: 1", 1.8", 2.8"
ENCLOSURE: ABS PLASTIC

TECHNICAL SPECIFICATIONS:

- **Power Supply:** 85 - 265 VAC, 50 – 60Hz
- **Enclosure:** ABS Plastic. Field Mounted with Glands on request.
- **Mounting:** Nylon Mounting Brackets.
- **Mounting Canopy:** MS Powder Coated (Please place additional accessory order)
- **Input:**
 - **Analog Input (Standard Input): 16-Bit Resolution**
 - Universal (4-20mA, 0-10VDC, RTD-PT100, Thermo-Couple K Type / J Type)
 - Modbus RTU Input for Jumbo Displays (On Special Request)
- **Calibration:** A keyboard is provided on the Facia for Calibration and Tuning.
- **Display:**
 - 7-Segment LED Display (4 Digit Standard, you may request for up to 12 Digits)
 - LED for Alarms
- **Output:**
 - **Analog Output: 12-Bit Resolution**
 - 4 - 20mA
 - **Potential-Free Relay Output: Contact Current Rating: 2 Amps @230VAC**
 - Relay Output can be Programmed as High Alarm (triggers when the Process Variable rises above the Alarm Setpoint) or Low Alarm (triggers when the Process Variable dips below the Alarm Setpoint) from the Keyboard.

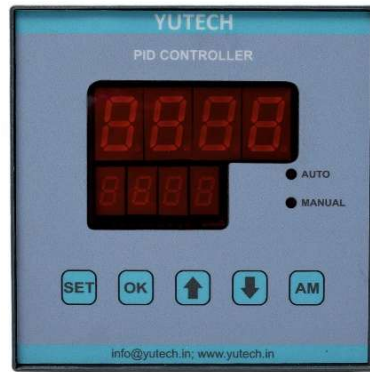
Please enquire with us about your Specific Needs of Jumbo Display like:

- Multiple Rows of Displays
- Flow + Totalizer
- Flow + Last Hour Flow Rate + Totalizer
- Real-Time Clock
- Multiple Inputs and their respective Displays
- Counter with Sensing Switch
- Alpha-Numeric LCD Display

Large Display		Enclosure Dimensions		
Display Size Inches	Display Side	Width mm	Height mm	Depth mm
1	Front	140	190	70
1.8	Front	160	250	100
2.8	Front	160	250	100

PID CONTROLLER

IDEAL FOR ACCURATE RATIO CONTROL APPLICATIONS



A10DPC2

PID CONTROLLER

POWER SUPPLY: 230VAC

INPUT:

CHANNEL-1, UNIVERSAL,
CHANNEL-2, 4-20mA

OUTPUT:

1-CHANNEL 4-20mA

RELAY:

2 POTENTIAL-FREE

ENCLOSURE: DIN 96 x 96

TECHNICAL SPECIFICATIONS:

- **Power Supply:** 85 - 265 VAC, 50 – 60Hz
- **Enclosure:** ABS Panel Mounted DIN 96 x 96
- **Input:**
 - **Analog Input (Standard Input): 16-Bit Resolution**
 - Channel-1: Universal (4-20mA, 0-10VDC, RTD-PT100, Thermo-Couple K Type / J Type)
 - Process Variable for PID Control
 - Channel-2: 4-20mA Current
 - Secondary Process Variable for Ratio or Remote Set Variable for PID Control
 - **Other Input Types provided on Request may involve additional cost:**
 - Thermocouples: S, R, and T (Only for Channel-1)
- **Calibration:**
 - **Keyboard:** is provided on the Facia for Calibration and Tuning
- **Display**
 - 4 Digit 7-Segment LED Display for Channel-1
 - Process Variable for PID Control)
 - 4 Digit 7-Segment LED Display for Channel-2
 - Secondary Process Variable for Ratio or Remote Set Variable for PID Control
 - LED Bar Graph for Control Output
 - LED for Alarms
- **Output:**
 - **Analog Output: 12-Bit Resolution**
 - 4 - 20mA (PID Control Output)
 - **Potential-Free Relay Output: Contact Current Rating: 2 Amps @230VAC**
 - 2 Relays
 - Relay Output can be Programmed as High Alarm (triggers when the Process Variable rises above the Alarm Setpoint) or Low Alarm (triggers when the Process Variable dips below the Alarm Setpoint) from the Keyboard.

PROCESS INDICATOR



PRODUCT CODE: A10DPI1
PROCESS INDICATOR
POWER SUPPLY: 230VAC
AUX PS: 24VDC
INPUT: 1-CHANNEL, UNIVERSAL
OUTPUT: 1-CHANNEL, 4-20mA
RELAY: 2 POTENTIAL-FREE
ENCLOSURE: DIN 48 x 96

TECHNICAL SPECIFICATIONS:

- **Power Supply:** 85 - 265 VAC, 50 – 60Hz
- **Enclosure:** ABS Panel Mounted DIN 48 x 96
- **Input:**
 - **Analog Input (Standard Input): 16-Bit Resolution**
 - Universal (4-20mA, 0-10VDC, RTD-PT100, Thermo-Couple K Type / J Type)
 - **Other Input Types provided on Request may involve additional costs:**
 - Thermocouples: S, R, and T
- **Calibration:**
 - **Keyboard:** is provided on the Facia for Calibration and Tuning
- **Display**
 - 4 Digit 7-Segment LED Display of Scaled Process Variable
 - LED for Alarms
- **Output:**
 - **Analog Output: 12-Bit Resolution**
 - 4 - 20mA (Scaled and Retransmitted Output of Input Channel-1)
 - **Potential-Free Relay Output: Contact Current Rating: 2 Amps @230VAC**
 - 2 Relays
 - Relay Output can be Programmed as High Alarm (triggers when the Process Variable rises above the Alarm Setpoint) or Low Alarm (triggers when the Process Variable dips below the Alarm Setpoint) from the Keyboard.

JUMBO DISPLAY



PRODUCT CODE: A10DPIJDM
JUMBO DISPLAY
POWER SUPPLY: 230VAC
INPUT: 1-CHANNEL, UNIVERSAL
OUTPUT: 1-CHANNEL, 4-20mA
RELAY: ONE POTENTIAL-FREE
DISPLAY: 7-SEGMENT LED, SINGLE AND
DOUBLE SIDED, DIGIT SIZE: 4", 6", 8", 10"
ENCLOSURE: MS POWDER COATED



TECHNICAL SPECIFICATIONS:

- **Power Supply:** 85 - 265 VAC, 50 – 60Hz
- **Enclosure:** MS Powder Coated
- **Input:**
 - **Analog Input (Standard Input): 16-Bit Resolution**
 - Universal (4-20mA, 0-10VDC, RTD-PT100, Thermo-Couple K Type / J Type)
 - Modbus RTU Input for Jumbo Displays (On Special Request)
- **Calibration:** A keyboard is provided on the Facia for Calibration and Tuning.
- **Display:**
 - 7-Segment LED Display (4 Digit Standard, you may request for up to 12 Digits)
 - LED for Alarms
- **Output:**
 - **Analog Output: 12-Bit Resolution**
 - 4 - 20mA
 - **Potential-Free Relay Output: Contact Current Rating: 2 Amps @230VAC**
 - Relay Output can be Programmed as High Alarm (triggers when the Process Variable rises above the Alarm Setpoint) or Low Alarm (triggers when the Process Variable dips below the Alarm Setpoint) from the Keyboard.

Jumbo Display		Enclosure Dimensions		
Display Size Inches	Display Side	Width mm	Height mm	Depth mm
4	Front	419	175	90
4	Double	419	175	120
6	Front	524	250	90
6	Double	524	250	120
8	Front	630	275	90
8	Double	630	275	120
10	Front	810	370	90
10	Double	810	370	120
12	Front	970	430	90
12	Double	970	430	120

Please enquire with us about your Specific Needs of Jumbo Display like:

- Multiple Rows of Displays on One Side or Both Sides
- Flow + Totalizer
- Flow + Last Hour Flow Rate + Totalizer
- Max Number of Digits per Row: 12
- Real-Time Clock
- Multiple Inputs and their respective Displays
- Counter with Sensing Switch
- Alpha-Numeric Display
- Alpha-Numeric Rolling Display

SIGNAL ISOLATORS

ISOLATING CURRENT TRANSMITTER / REPEATER / ISOLATION BARRIER / CONVERTER



SIGNAL ISOLATOR: CURRENT TRANSFORMER SIGNAL CONVERTER ISOLATING TRANSMITTER (CTIT)
PRODUCT CODE: A-ISO-AC-LTCT-C1-S, A-ISO-DC-LTCT-C1-S, A-ISO-AC-HTCT-C1-S, A-ISO-DC-HTCT-C1-S
INPUT: 0-1A AC OR 0-5A AC FROM HT OR LT CURRENT TRANSFORMER

OUTPUT: ISOLATED 4-20mA

POWER SUPPLY: CHOICE OF AC OR DC POWER SUPPLY

DC POWER SUPPLY: 16VDC TO 36 VDC, RECOMMENDED - 24VDC

AC POWER SUPPLY: 85VAC TO 265VAC, 50Hz / 60Hz

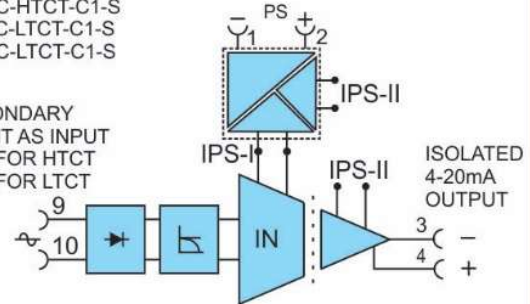
THRESHOLD VOLTAGE OF THE ISOLATION BARRIER: 5KV RMS



PRODUCT CODE:
A-ISO-AC-HTCT-C1-S
A-ISO-DC-HTCT-C1-S
A-ISO-AC-LTCT-C1-S
A-ISO-DC-LTCT-C1-S

CTIT

**CT SECONDARY
CURRENT AS INPUT**
0-1A AC FOR HTCT
0-5A AC FOR LTCT

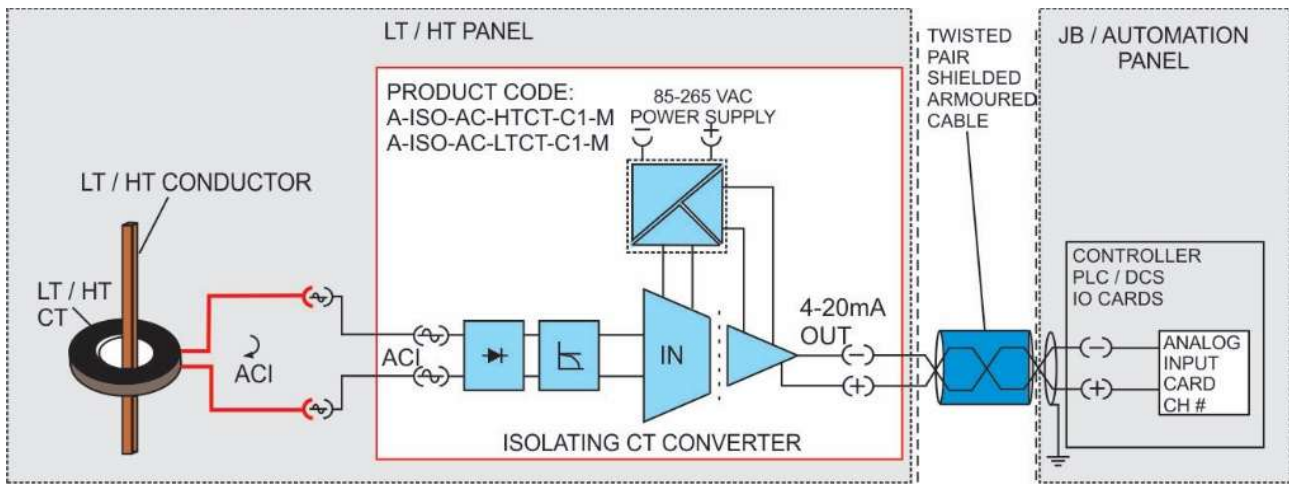


APPLICATION NOTES: SIGNAL ISOLATOR CAN BE USED IN THE PLC / DCS INPUT LOOP TO SAFELY SENSE THE CURRENT OF HIGH-TENSION OR LOW-TENSION MOTORS OR OTHER HIGH-CURRENT DEVICES, USING A CURRENT TRANSFORMER. AS SHOWN IN THE EXAMPLE BELOW.

THE **CURRENT TRANSFORMER SIGNAL CONVERTER ISOLATING TRANSMITTER** IS DESIGNED TO BE INSTALLED IN THE MOTOR CONTROL PANEL OR LT / HT PANEL ITSELF. IF YOU SELECT THE AC-POWERED MODEL, THEN POWER CAN BE TAKEN FROM THE PANEL ITSELF. THE CT SECONDARY WINDING CAN BE CONNECTED DIRECTLY TO THE **ISOLATING HT OR LT CT CONVERTER**. ISOLATING CT CONVERTER VERY PRECISELY CONVERTS THIS SIGNAL TO ISOLATED 4-20MA SIGNAL. THIS CURRENT SIGNAL IS THEN GIVEN TO THE CONTROLLER.

THE **CURRENT TRANSFORMER SIGNAL CONVERTER ISOLATING TRANSMITTER** NOT ONLY PROTECTS THE PLC / DCS / CONTROLLER CIRCUITRY BUT ALSO ACTS AS A VERY EFFECTIVE FILTER OF EMI AND RFI NOISE AND GROUNDING FAULTS. IT ALSO AVOIDS BURSTING OF CURRENT TRANSFORMER DUE TO OPEN CIRCUIT AS IT'S CONNECTION REMAINS INSIDE THE LT OR HT PANEL.

PLEASE TAKE NOTICE THAT THE SHIELDING IS ALWAYS GROUNDING ON THE SIDE THAT RECEIVES THE SIGNAL.



SIGNAL ISOLATORS

ISOLATING CURRENT TRANSMITTER / REPEATER / ISOLATION BARRIER



SIGNAL ISOLATOR: ISOLATING TEMPERATURE TRANSMITTER WITH 3-WIRE RTD Pt100 INPUT (ITTR)

PRODUCT CODE: A-ISO-AC-RT-C1-S, A-ISO-DC-RT-C1-S

INPUT: 3-WIRE RTD Pt-100

OUTPUT: 4-20mA

POWER SUPPLY: CHOICE OF AC OR DC POWER SUPPLY

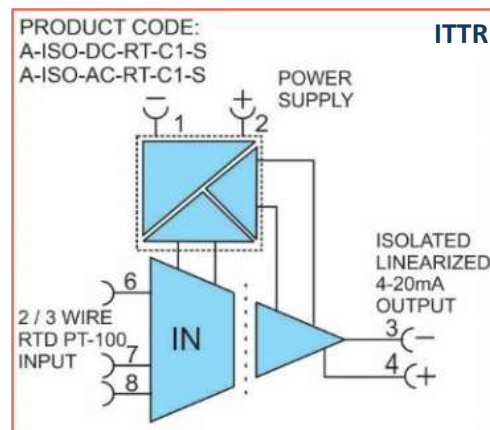
DC POWER SUPPLY: 16VDC TO 36 VDC, RECOMMENDED - 24VDC

AC POWER SUPPLY: 85VAC TO 265VAC, 50Hz / 60Hz

THRESHOLD VOLTAGE OF THE ISOLATION BARRIER: 5KV RMS

OTHER RTD PRODUCTS, WHERE ALL OTHER SPECIFICATIONS ARE THE SAME BUT FOR INPUT AND OUTPUT.

- **ISOLATING TEMPERATURE TRANSMITTER WITH 3-WIRE RTD Pt100 INPUT AND DUAL 4-20mA OUTPUT:**
 - **PRODUCT CODE: A-ISO-AC-RT-C2-S, A-ISO-DC-RT-C2-S**
- **ISOLATING TEMPERATURE TRANSMITTER WITH 4-WIRE RTD Pt100 INPUT AND 4-20mA OUTPUT:**
 - **PRODUCT CODE: A10-ISO-AC-RT4-C1-S, A-ISO-DC-RT4-C1-S**
- **ISOLATING TEMPERATURE TRANSMITTER WITH 4-WIRE RTD Pt1000 INPUT AND 4-20mA OUTPUT:**
 - **PRODUCT CODE: A10-ISO-AC-RTK-C1-S, A-ISO-DC-RTK-C1-S**

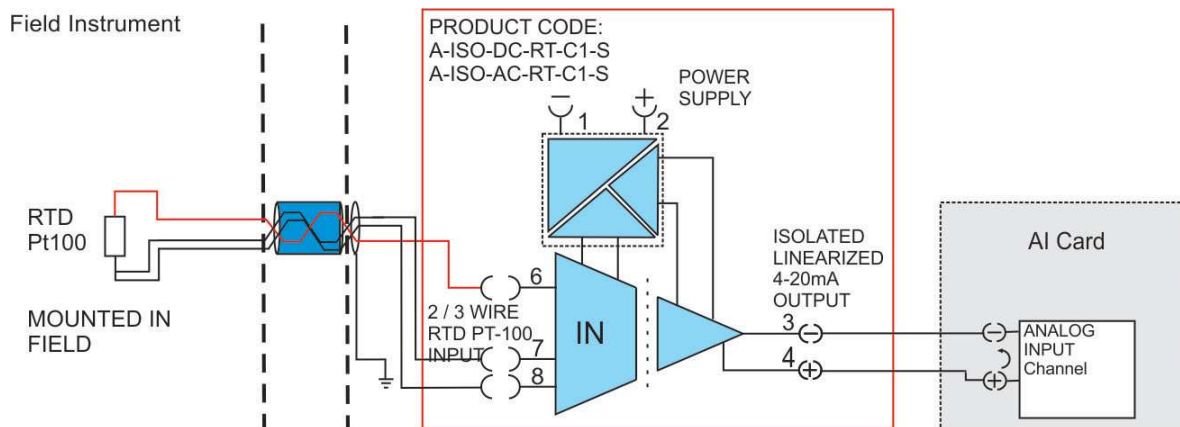


RTD ISOLATING TEMPERATURE TRANSMITTER APPLICATION: (A-ISO-DC-RT-C1-S or A-ISO-AC-RT-C1-S)

THIS SIGNAL ISOLATOR CAN BE USED IN THE PLC / DCS INPUT LOOP OR OUTPUT LOOP, AS SHOWN IN THE EXAMPLES BELOW.

PLEASE TAKE NOTICE THAT THE SHIELDING IS ALWAYS GROUNDDED ON THE SIDE THAT RECEIVES THE SIGNAL.

3-WIRE RTD PT-100 ISOLATING TEMPERATURE TRANSMITTER USED IN PLC / DCS INPUT LOOP



ISOLATING CURRENT TRANSMITTER / REPEATER / ISOLATION BARRIER



SIGNAL ISOLATOR: ISOLATING TEMPERATURE TRANSMITTER WITH THERMOCOUPLE INPUT (ITTC)

PRODUCT CODE: A-ISO-AC-TC#-C1-S, A-ISO-DC-TC#-C1-S

INPUT: THERMOCOUPLE K TYPE IS BY DEFAULT, J, R, T, AND S ON SPECIAL ORDER

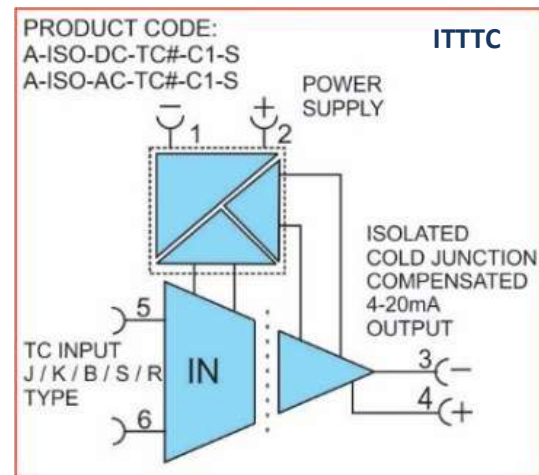
OUTPUT: 4-20mA

POWER SUPPLY: CHOICE OF AC OR DC POWER SUPPLY

DC POWER SUPPLY: 16VDC TO 36 VDC, RECOMMENDED - 24VDC

AC POWER SUPPLY: 85VAC TO 265VAC, 50Hz / 60Hz

THRESHOLD VOLTAGE OF THE ISOLATION BARRIER: 5KV RMS

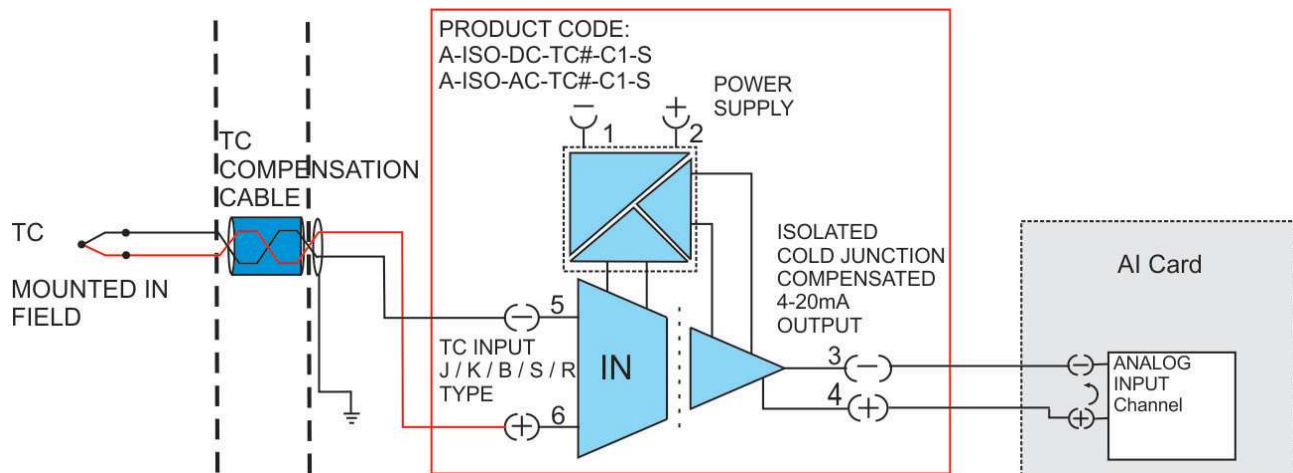


RTD ISOLATING TEMPERATURE TRANSMITTER APPLICATION: (A-ISO-DC-RT-C1-S or A-ISO-AC-RT-C1-S)

THIS SIGNAL ISOLATOR CAN BE USED IN THE PLC / DCS INPUT LOOP OR OUTPUT LOOP, AS SHOWN IN THE EXAMPLES BELOW.

PLEASE TAKE NOTICE THAT THE SHIELDING IS ALWAYS GROUNDED ON THE SIDE THAT RECEIVES THE SIGNAL.

THERMOCOUPLE ISOLATING TEMPERATURE TRANSMITTER USED IN PLC / DCS INPUT LOOP. THIS TRANSMITTER IS MOUNTED IN THE FIELD AND THUS REDUCES THE LENGTH OF EXPENSIVE THERMO-COUPLE COMPENSATING. THE PROCESSED SIGNAL IS TRANSMITTED TO THE PLC / DCS CONTROL ROOM VIA REGULAR ARMoured AND SHIELDED CABLE.



SIGNAL ISOLATORS

ISOLATING CURRENT TRANSMITTER / REPEATER / ISOLATION BARRIER



SIGNAL ISOLATOR: DC CURRENT ISOLATOR DUAL INDEPENDANT INPUT AND OUTPUT (DIDO)

PRODUCT CODE: A-ISO-AC-C2-C2-S, A-ISO-DC-C2-C2-S, A-ISO-XX-C2-C2-S

INPUT: TWO CHANNELS OF INDEPENDENT 4-20mA INPUTS

OUTPUT: RESPECTIVE 4-20mA OUTPUTS REPEATED ACROSS THE BARRIER FOR TWO CHANNELS OF INDEPENDENT 4-20mA OUTPUT

POWER SUPPLY:

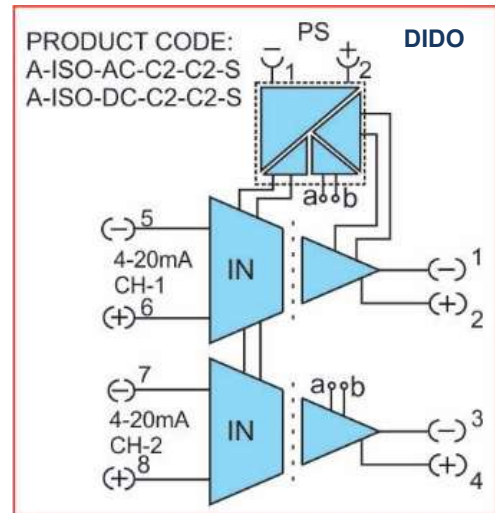
1. CHOICE OF AC OR DC POWER SUPPLY

2. LOOP POWERED WITHOUT EXTERNAL POWER SUPPLY. IT USES SIGNAL POWER. JUST CONNECT INPUT AND OUTPUT. RANGE RESTRICTION UPTO 100mt. CANNOT BE USED IN HIGH NOISE ENVIRONMENT.

DC POWER SUPPLY: 16VDC TO 36 VDC, RECOMMENDED - 24VDC

AC POWER SUPPLY: 85VAC TO 265VAC, 50Hz / 60Hz

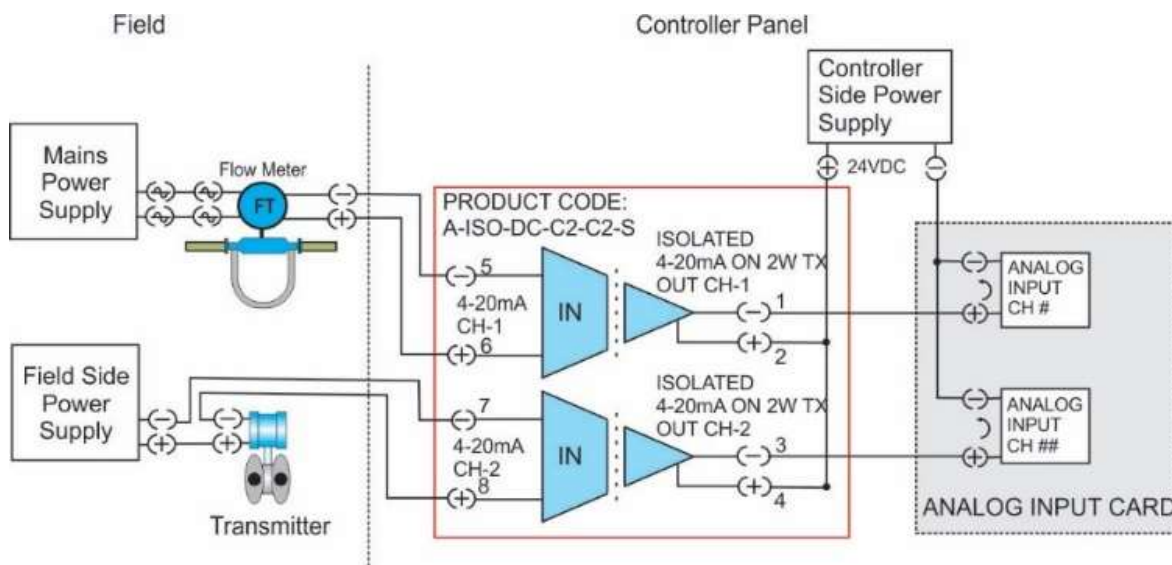
THRESHOLD VOLTAGE OF THE ISOLATION BARRIER: 5KV RMS



APPLICATION NOTES: (A-ISO-DC-C2-C2-S or A-ISO-AC-C2-C2-S) DIDO SIGNAL ISOLATOR CAN BE USED IN ANY PLC / DCS PANEL. IT ISOLATES AND REPEATS TWO SIGNALS ACROSS THE 5KV ISOLATION BARRIERS INDEPENDENT OF AND ISOLATED FROM EACH OTHER.

IT DOES THE WORK OF TWO ISOLATORS IN SPACE OF ONE, THUS RETURNING HUGE SAVINGS.

PLEASE TAKE NOTICE THAT THE SHIELDING IS ALWAYS GROUNDED ON THE SIDE THAT RECEIVES THE SIGNAL.



SIGNAL ISOLATORS

ISOLATING CURRENT TRANSMITTER / REPEATER / ISOLATION BARRIER



SIGNAL ISOLATOR: DC CURRENT ISOLATOR SINGLE INPUT SINGLE OUTPUT WITH AUXILIARY POWER SUPPLY (SISOAP)

PRODUCT CODE: A-ISO-DC-C1-C1-S-AP24

INPUT: 4-20mA

OUTPUT: 4-20mA

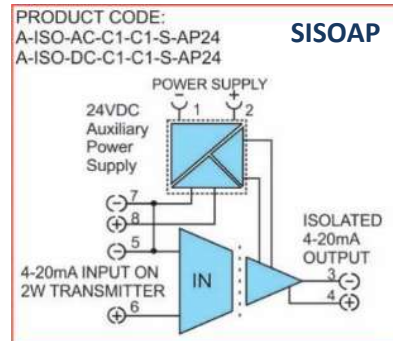
POWER SUPPLY: CHOICE OF AC OR DC POWER SUPPLY

DC POWER SUPPLY: 16VDC TO 36 VDC, RECOMMENDED - 24VDC

AC POWER SUPPLY: 85VAC TO 265VAC, 50Hz / 60Hz

AUXILIARY POWER SUPPLY: 24VDC TO POWER 24VDC 2-WIRE TRANSMITTER

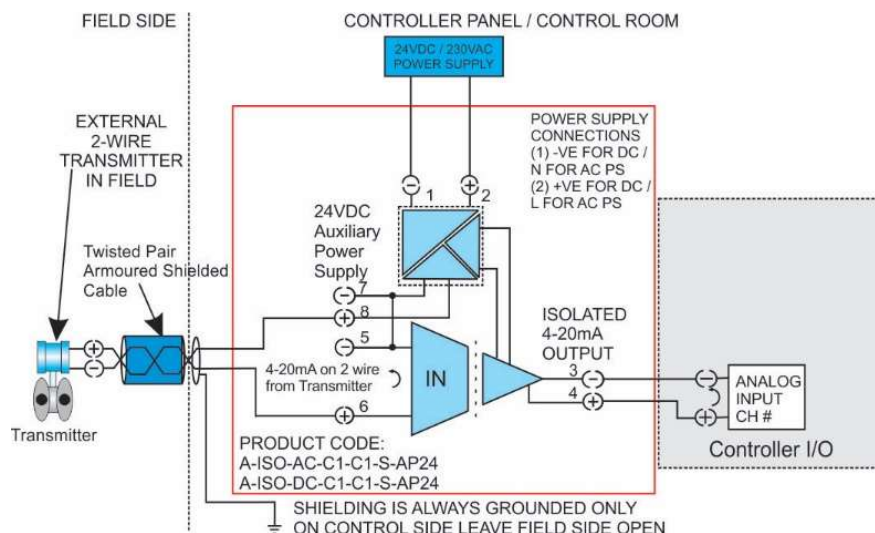
THRESHOLD VOLTAGE OF THE ISOLATION BARRIER: 5KV RMS



SISO APPLICATION: THIS SENSING LOOP USES (A-ISO-DC-C1-C1-S-AP24) SISO-AP24 DC CURRENT ISOLATOR POWERED BY A 24 VDC POWER SUPPLY. IT IS INSTALLED IN THE CONTROLLER PANEL AND SHARES THE POWER SUPPLY WITH THE CONTROLLER AND ITS IOS. IT ISOLATES THE SIGNAL COMPLETELY BEFORE GIVING IT TO THE CONTROLLER.

THIS PRODUCT ELIMINATES THE ADDITIONAL POWER SUPPLY TO POWER THE 2-WIRE TRANSMITTER.

PLEASE TAKE NOTICE THAT THE SHIELDING IS ALWAYS GROUNDED ON THE SIDE THAT RECEIVES THE SIGNAL.



PLEASE CHECK THE DATASHEETS AND APPLICATION NOTES FOR VARIOUS ISOLATION PRODUCTS AND ORDERING INFORMATION.

PLEASE VISIT OUR WEBSITE www.yutechautomation.com.

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