



The Universal Process Control Trainer (52378) is highly flexible and modular system for studying of various feedback and cascade control loops in industrial processes. It has been designed to include these processes in a single structure. The system in fact includes transducers, PID + computerized control with SCADA Software.

#### **Key Words**

- Feedback Level control.
- Feedback Pressure control.
- Feedback Temperature control
- Feedback Flow control.
- Position Measurement.
- Cascade Control

#### **Features**

- Compact Ergonomic Design.
- User Friendly, Self Explanatory Systems.
- Leak proof Safety Measures, sturdy piping.
- Enhanced Electrical Safety Considerations.
- Training Manuals and mimic Charts for Operation Ease.
- System Frame with Caster Wheel Arrangement for ease in movement.
- M.S. powder coated cubical plant with standard Instrument Mountings.
- Inbuilt Safety Measures to avoid improper usage.
- SCADA software connectivity for analysis given feedback system.
- Caster wheel mounted movable frame

#### **Services Required**

- Electric Supply of 1 $\phi$  230 VAC motor.
- Clean, Dry, Compressed Air Supply. Working Pressure: 5-6Kg/cm<sup>2</sup>.

DCS AND SCADA

Hybrid Controller (AI 8, AO4) & (DI16, DO16), Control Loops 8 with RS 232 & RS 485, Ethernet

Note: Specifications are subject to change.

#### **Tesca Technologies Pvt. Ltd.**

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,  
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,  
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com  
Website: www.tescaglobal.com

### Technical Specification

No.	Item Name	Technical Specifications
1.	Type of Control	DCS & SCADA
2.	Control Unit	Hybrid Controller, AI-8, AO-4, DI-16, DO-16, Control loops 8 with
3.	Communication	RS232, RS485, Ethernet
4.	Software Packages	i] DCS: Hybrid Control Designer; ii] SCADA: Wonder ware In touch 64 tags
5.	Temperature Sensor	RTD, PT-100, Range: 0-100°C, 02 Nos.
6.	Temperature Transmitter	PT100, Type-2 wire, Range: 0-100°C, Output: 4-20 mA, 02 Nos.
7.	Flow Transmitter	DPT, Type: 2 wire, Range: 0-200 mm H <sub>2</sub> O, Output: 4-20 mA, Sq. root
8.	Level Transmitter	DPT, Type: 2 wire, Range: 0-500 mm H <sub>2</sub> O, Output: 4-20 mA, Sq. root
9.	Level Transmitter	GPT, Type: 2 wire, Range: 0-600 mm H <sub>2</sub> O, Output: 4-20 mA
10.	Pressure Transmitter	GPT, Type: 2 wire, Range: 0-2.5 bar, Output: 4-20 mA
11.	Position Transmitter	Type Electronic, 2 wire, Output: 4-20 mA
12.	I to P Converter	Input: 4-20 mA, Output: 3-15 psig, 2 Nos.
13.	Heating Control	Proportional power controller (SSR), Input: 4-20 mA
14.	Heater / Geyser	Type: Electrical 2 coil, Capacity: 3 KW
15.	Rotameter	1 No., Range: 40-400 LPH, Glass tube type/acrylic body, Bob Material: SS 304 Connection: 1", Mounting: Inlet- Bottom, Outlet- Top.
16.	Process Tank	Capacity: 7.5 Liter, 0-100% scale, SS304
17.	Interacting Tank	Capacity: 7.5 Liter, 0-500 mm scale, SS304 (02 Nos.)
18.	Supply Tank	Capacity- 27 Liters, Ss304
19.	Float Switch	Type: Magnetic (02 Nos.)
20.	Solenoid Valves	Type: 2/2 way normally closed, ¼" BSP, water (2 Nos.)
21.	Pneumatic Control Valve	2 Nos., Type: Pneumatic, Size: ½", Input: 3-15 psig, Linear & Equal Percentage
22.	Power Supply	Supply: 230 VAC, Output: 24 V DC (02 Nos.)
23.	VFD	Input single phase: 200 VAC, 1.1 A, Output: AC3 phase
24.	Pump	Fractional horse power, Type: centrifugal
25.	Diaphragm pump	Positive displacement diaphragm pump, Cap: 200 Lph
26.	Air Filter Regulator	Range: 0-2.5 Kg/cm <sup>2</sup>
27.	Pressure Gauge	Range: 0-2.5 Kg/cm <sup>2</sup> (03 Nos.), Range: 0-7 Kg/cm <sup>2</sup>
28.	Flow Measurement Devices	Orifice meter (03 Nos.), Venturi meter
29.	Compressor	1 HP, 3.8 CFM
30.	Overall Dimensions	1150mmL×800mmW×1900mmH
31.	Electronic PID Controller	1 No., Single input PID & Dual Input PID, with Serial Interface (ASCII Protocol) RS 232, Cut Out Size; 92'92×144mm, Input: 4-20 mA, Output: 4-20 mA, Display: Dual for PV & SP, Bar graph display for Output & deviation, Hi-Low alarm annunciation.
32.	SCADA Application Soft.	SCADA Wonderware( Ellipse) in Touch 64 Tags, PID control settings (P, PI, PD and PID mode),Auto/Manual Tuning of PID,Data Storage,Off Line analysis, Online Data Acquisition Simulation and Printing of data in Graphical & tabular form. Interactive Graphical. User Interface (GUI) included
33.	Piping	1", Class B GI with 1" SS ball valves
34.	Thyresterized Phase Angle Control Card	Input: 4-20 mA, Output: 0-230 VAC variable, 10 A Max
35.	Electrical Control panel	MS Powder coated panel with switches, indicator, Test Points, Controller on front facia, UK 2.5 Terminal connectors mounted on DIN rail channel, Use of 1sq mm Multistrand wire with proper insulated Lugs, Ferruling & neat wire dressing & clamping Wires & power cables are seated through 1"×1"PVC cable tray. Dimension: 1ft (L) ×1ft (W) ×1ft (H).

Note: Specifications are subject to change.

### Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,  
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,  
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com  
Website: www.tescaglobal.com