ITC 4000 | 7200 | 8000 SERIES

Universal Data Logger | Controller | Display

Level pro

- Up to 72 Universal Channels
- Color Touch Screen
- Trending | Mapping
- Up to 15 GB Data Storage

- Temp
- Flow
- Pressure
- PH
- Level
- Redox
- Current

The ITC series advanced controllers and recorders have been designed for to handle and control advanced industrial applications.

- up to 72 analogue | digital inputs
- IP 65 front panel protection
- Ethernet
- 2 x USB Host ports
- MultiModbus -up to 3 x RS-485 interfaces
- HMI
- Java applets
- a wide range of I/O modules

- max. 10 Hz sampling frequency
- 3.5" | 5.7" LCD touchscreen
- PC keyboard and mouse operation
- PID control
- profiles | timers
- mathematical functions
- visualization as digits, graphs, bargraphs, needles
- 1.5 GB for data
- free DAQ Manager software

1.888.610.7664 www.calcert.com sales@calcert.com

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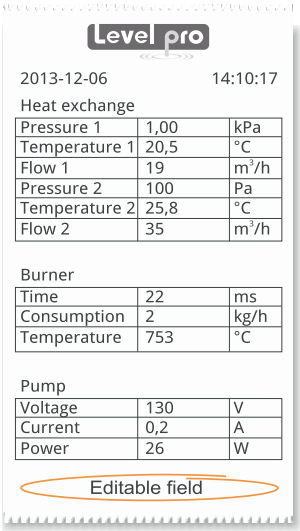
ITC Series with Thermal Printer



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Heat exchange

Pressure 1	1,00	kPa
Temperature 1	20,5	°C
Flow 1	19	m^3/h
Pressure 2	100	Pa
Temperature 2	25,8	°C
Flow 2	35	m^3/h

Burner

Time	22	ms
Consumption	2	kg/h
Temperature	753	°C

Pump

Voltage	130	V
Current	0,2	A
Power	26	W

Editable field

Trend Diagrams

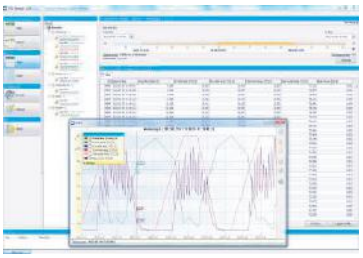
1.5 GB for data!

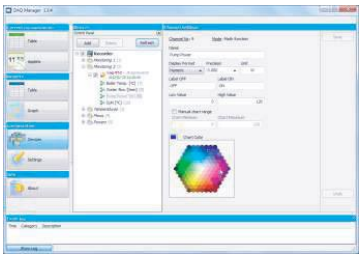
The ITC series data loggers can record any 60 measurement channels at a speed of 10 samples per second. It has 1.5 GB built-in flash memory intended for data registration. .

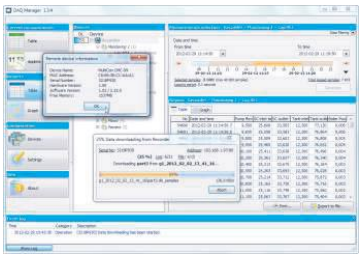
recording mode	intense (every 1 sec.)	medium (every 10 sec.)	economy (every 1 min.)
60 channels	20 days	6 months	3 years
48 channels	30 days	8 months	4 years
24 channels	50 days	15 months	7 years

DAQ Manager

To manage large amounts of data we have designed a software package that is free of charge. The software converts the data into easy viewing graphs and tables, and can provide group measurement results, create reports and export data into other files. Its fully functional free version can be downloaded from our website or ordered as a payable CD-ROM version.







Color LCD Touchscreen

The color touchscreen allows for easier and more efficient use of the device The display reacts accurately to even the slightest touch.

The ITC also allows for the use of a traditional keyboard and a USB mouse

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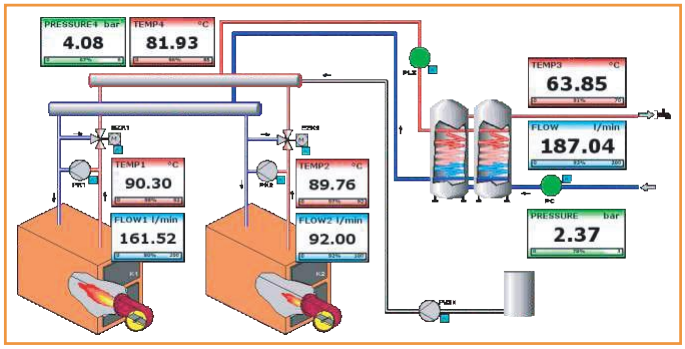
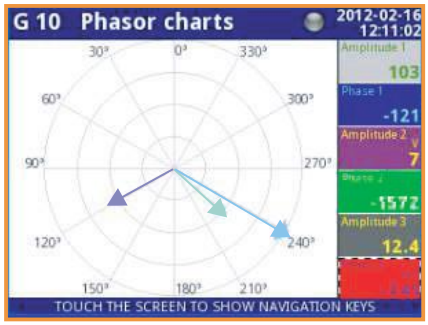
Use Java applets

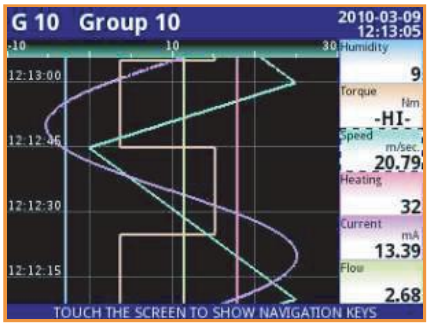
It is possible to create your own website or use one of the templates included in ITC series.
Applications such as tank level via with bar graphs, flow meters indicating flow speed or total liquid flow, a pressure gauge indicating process pressure...all are possible with the ITC series This solution makes monitoring of the entire system much more transparent and simple to use.

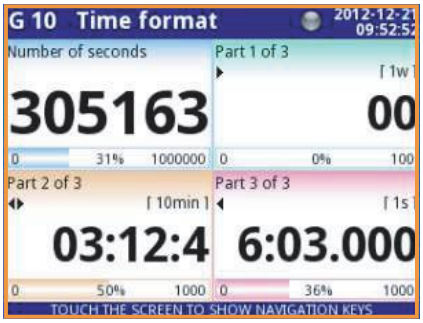


Measure | Recalculate | Control and Display

Calculate the data according to your own requirements; one result can be used as an argument of another action. An example, current measurement from 8 channels and voltage from 8 channels cross checked against the total power from 8 items being measured. All data can be visualized in a range of ways: as numerical values, quasi-analog indicators, phasor charts, horizontal or vertical charts, horizontal or vertical bars.

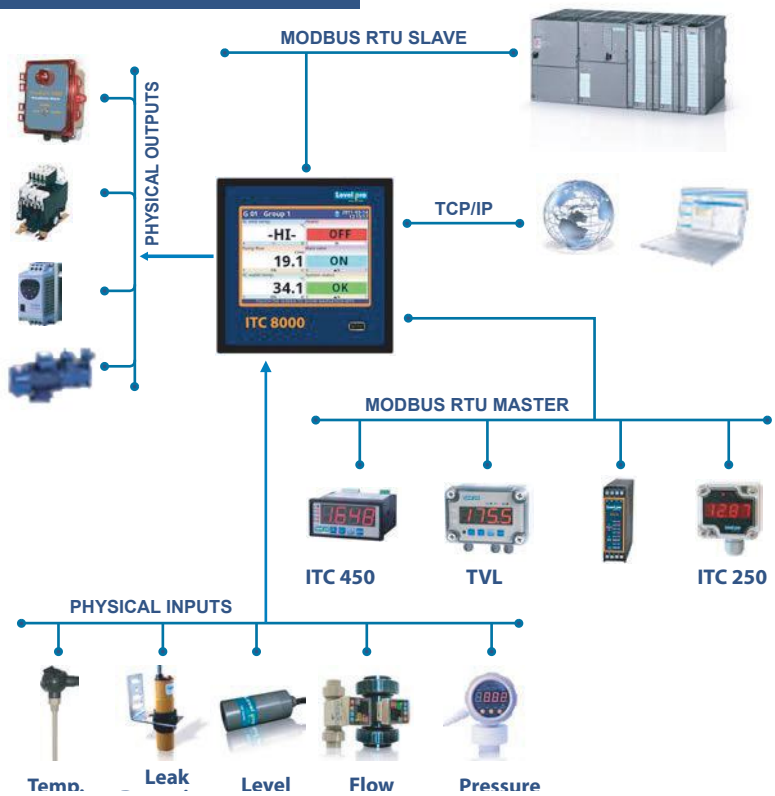






Manage a Developed Network of Devices

For more demanding customers with many needs we have prepared the Advanced Communication Module (ACM). This module includes interfaces such as: Ethernet, USB Host, RS-485 and RS-485 shared with RS-232. All the Modbus interfaces can work in both master and slave mode. Through the utilization of an Ethernet link the user can monitor operation of the entire system via the Internet from anywhere in world, via an INTERNET browser. In addition the data can be monitored via the RS-485 interface along with PC software.



Specification

	ITC 4000	ITC 7200	ITC 8000
Power supply/ consumption	19-50VDC, 16-35VAC or 85-260VAC/DC, typ. 15VA, max. 20VA	19 - 50VDC, 16 - 35VAC or 85 - 260VAC/DC, typ. 15VA, max. 20VA	19 - 50VDC, 16 - 35VAC or 85 - 260VAC/DC, typ. 25VA, max. 35VA
Display	3.5" graphic TFT, 16-bit color, 320 x 240 pxs, touchscreen navigation	3.5" graphic TFT, 16-bit color, 320 x 240 pxs, touchscreen navigation	5.7" graphic TFT, 16-bit color, 320 x 240 pxs, touchscreen navigation
Measurement inputs	• 2 or 4 universal, isolated: 0/4 - 20 mA (also Totalizer mode); 0/1 ÷ 5V, 0/2 - 10V; thermocouples: J, K, S, T, N, R, B, E (PNEN), L (GOST); -10 - 25 mV, -10 - 100 mV, 0 ÷ 600 mV; RTD (2/3 wire): Pt100, Pt500, Pt1000 (PN-EN), Pt'50, Pt'100, Pt'500 (GOST), Ni100, Ni500, Ni1000 (PN-EN), Cu50, Cu100 (PN-83M-53852), Cu'50, Cu'100 (PN-83M-53852); resistance 0 ÷ 300Ω, resistance 0 ÷ 3 kΩ • 2 universal pulse counter / ratemeter (max. freq. 5 kHz)	• up to 9 universal, isolated: 0/4 ÷ 20mA; 0/1- 5V, 0/2 ÷ 10V; thermocouples: J, K, S, T, N, R, B, E (PN-EN), L (GOST); -10 ÷ 25 mV, -10 ÷ 100 mV, 0 ÷ 600 mV; RTD (2/3/4 wire): Pt100, Pt500, Pt1000 (PN-EN), Pt'50, Pt'100, Pt'500 (GOST), Ni100, Ni500, Ni1000 (PNEN), Cu50, Cu100 (PN-83M-53852), Cu'50, Cu'100 (PN-83M-53852); resistance 0 ÷ 300Ω, resistance 0 ÷ 3kΩ • up to 48 analogue: 0/4 ÷ 20 mA, 0/1 ÷ 5V, 0/2 ÷ 10V • up to 24 thermocouples: J, K, S, T, N, R, B, E (PN-EN); L (GOST); ± 25 mV, ± 100 mV, -10 ÷ 25 mV, -10 ÷ 100 mV • up to 12 RTD: Pt100, Pt500, Pt1000 (PN-EN); Pt'50, Pt'100, Pt'500 (GOST); Ni100, Ni500, Ni1000 (PN-EN); Cu50, Cu100 (PN-83M-53852); Cu'50, Cu'100 (PN-83M-53852); resistance 0 ÷ 300 Ω, resistance 0 ÷ 3 kΩ • up to 24 NTC: 0 ÷ 110 k Ω • up to 12 counters: max. freq. 5 kHz • up to 12 digital flowmeter / ratemeter: max. freq. 50 kHz • up to 12 analogue flowmeter: 0/4 ÷ 20 mA • mixed inputs: analogue-NTC temperature or analogue-digital: up to 12 x 0 ÷ 20 mA, 4 ÷ 20 mA and up to 12 x 0 ÷ 5V, 1 ÷ 5V, 0 ÷ 10V, 2 ÷ 10V and up to 24 x NTC or digital	• up to 15 universal, isolated: 0/4- 20 mA; 0/1 ÷ 5V, 0/2 ÷ 10V; thermocouples: J, K, S, T, N, R, B, E (PN-EN), L (GOST); -10 ÷ 25 mV, -10 ÷ 100 mV, 0 ÷ 600 mV; RTD (2/3/4 wire): Pt100, Pt500, Pt1000 (PN-EN), Pt'50, Pt'100, Pt'500 (GOST), Ni100, Ni500, Ni1000 (PNEN), Cu50, Cu100 (PN-83M-53852), Cu'50, Cu'100 (PN-83M-53852); resistance 0 ÷ 300Ω, resistance 0 ÷ 3 kΩ • up to 72 analogue: 0/4 ÷ 20 mA, 0/1 ÷ 5V, 0/2 ÷ 10V • up to 36 thermocouples: J, K, S, T, N, R, B, E (PN-EN); L (GOST); ± 25 mV, ± 100 mV, -10 ÷ 25 mV, -10 ÷ 100 mV • up to 18 RTD: Pt100, Pt500, Pt1000 (PN-EN); Pt'50, Pt'100, Pt'500 (GOST); Ni100, Ni500, Ni1000 (PN-EN); Cu50, Cu100 (PN-83M-53852); Cu'50, Cu'100 (PN-83M-53852); resistance 0 ÷ 300 Ω, resistance 0 ÷ 3 k Ω • up to 24 NTC: 0 ÷ 110 kΩ • up to 12 counters: max. freq. 5 kHz • up to 12 digital flowmeter / ratemeter: max. freq. 50 kHz • up to 12 analogue flowmeter: 0/4 ÷ 20 mA • mixed inputs: analogue-NTC temperature or analogue-digital: up to 24 x 0 ÷ 20 mA, 4 ÷ 20 mA and up to 24 x 0 ÷ 5V, 1 ÷ 5V, 0 ÷ 10V, 2 ÷ 10V and up to 24 x NTC or digital
Digital inputs	• up to 5 *	• up to 49 *	• up to 73 *
Outputs	• 2 or 4 analogue 4 ÷ 20 mA, passive, isolated, resolution 14 bit • 2 or 4 SPST relay 1A/250V • 2 or 4 SSR passive (OC with PWM) • mixed outputs: 2 x REL / 2 x 4 ÷ 20 mA, 2 x REL / 2 x SSR passive, 2 x 4 ÷ 20 mA / 2 x SSR	• up to 8 analogue 4 ÷ 20 mA, passive, isolated, resolution 12 bit • up to 16 SPST relay 1A/250V • up to 4 SPDT relay 5A/250V • up to 16 SSR	• up to 24 analogue 4 ÷ 20 mA, passive, isolated, resolution 12 bit • up to 36 SPST relay 1A/250V • up to 18 SPDT relay 5A/250V • up to 72 SSR
Sensor supply output	• 1 x 24VDC ± 5%, 200 mA max.	• 1 x 24VDC ±5%, 200 mA max.	• 1 x 24VDC ±5%, 200 mA max.
Communication inteface	Basic version: RS-485, 1 x USB Host ETE: 1 x Ethernet wired via gland to RJ45 built-in connector ETEC: 1 x Ethernet wired to M12 connector ETR: 1 x Ethernet wired via gland to RJ45 built-in connector + 2nd RS-485 port ETRC: 1 x Ethernet wired to M12 connector + 2nd RS-485 port	**Basic version:** RS-485, 1 x USB Host, **ETU:** 1 or 2 x USB Host, 1 x Ethernet **ACM:** 2 x RS-485, 1 x RS-485/232, 1 or 2 x USB Host, 1 x Ethernet	**Basic version:** RS-485, 1 x USB Host, **ETU:** 1 or 2 x USB Host, 1 x Ethernet **ACM:** 2 x RS-485, 1 x RS-485/232, 1 or 2 x USB Host, 1 x Ethernet
Protocols	Modbus RTU Master or Slave, Modbus TCP Server, HTTP	Modbus RTU Master or Slave, Modbus TCP Server, HTTP	Modbus RTU Master or Slave, Modbus TCP Server, HTTP
IP rate protection	IP 67	IP 65 or IP 40 (version with front USB), options: frame IP 65 for panel cut-out sealing and transparent door with key (IP 54)	IP 65 or IP 40 (version with front USB), options: frame IP 65 for panel cut-out sealing and transparent door with key (IP 54)
Operating temp. Sto rage temp.	0°C -+50°C (optional -20°C -+50°C) -10°C - +70°C (optional -20°C - +70°C)	0°C- +50°C (optional -20°C - +50°C) -10°C - +70°C (optional -20°C -+70°C)	0°C - +50°C (optional -20°C - +50°C) -10°C - +70°C (optional -20°C- +70°C)
Data memory Data recording speed	internal 1.5 GB from 0.1 s to 24 h with resolution 0.1 s	internal 1.5 GB from 0.1 s to 24 h with resolution 0.1 s	internal 1.5 GB from 0.1 s to 24 h with resolution 0.1 s
Dimensions	case (WxHxD): 166 x 161 x 103 mm (without glands) 166 x 191 x 103 mm (with glands) wall mounted	case (WxHxD): 96 x 96 x 100 mm panel cut-out: 90.5 x 90.5 mm installation depth: min. 102 mm panel thickness: standard 7 mm or other depending on used board thickness brackets	case (WxHxD): 144 x 144 x 100 mm panel cut-out: 137 x 137 mm nstallation depth: min. 102 mm panel thickness: standard 7 mm or other depending on used board thickness brackets

* one digital input is available in standard, integrated on PS3, PS32 or PS4, PS42 power supply.