

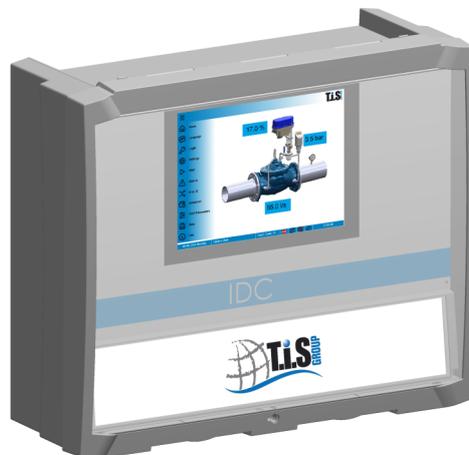
## IDC

Smart and compact microcontroller



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T.I.S. IDC is the compact, smart and flexible microcontroller, available with integrated cloud connectivity: controlling and viewing your application just got easier.

T.I.S. IDC is designed to manage automatic diaphragm/piston control valves and needle (plunger) valves, with an open, modular system and with pre-loaded applications for the main control functions which can be customized by the end user.

The range of applications that can be created with T.I.S. IDC becomes more versatile than ever. The VPN connection for remote desktop/webserver and debug/program update is integrated via pre-installed software service.

T.I.S. IDC allows to send alarms via email or SMS, such as flood signals, threshold exceedances, etc. The functions can be various and configurable according to needs.

Valve control is finally open and based on curves or set-points that can be configured in a simple and intuitive way. The multiple PID type regulators with self-tuning allow accurate positioning of the actuators and digital outputs (controls on solenoid valves).

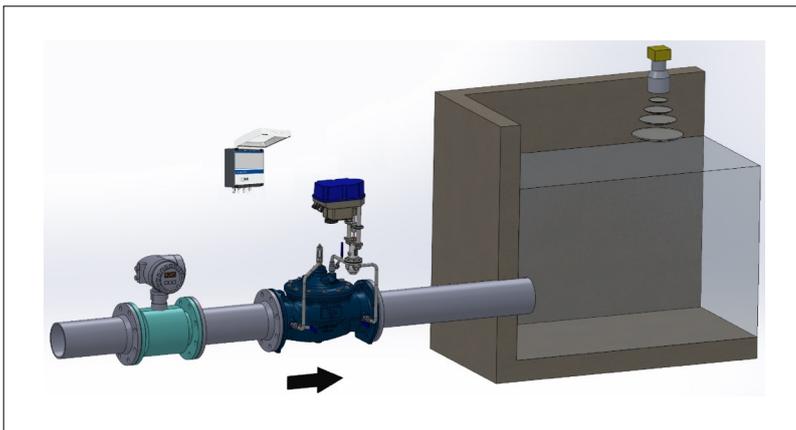
The operating logic is created with intuitive IEC 61131-3 standard languages: "Function Block Diagram" (FBD) or "Ladder Diagram" (LAD).

The availability of multiple analog and digital inputs allows for maximum adaptability of T.I.S. IDC to various regulation applications.

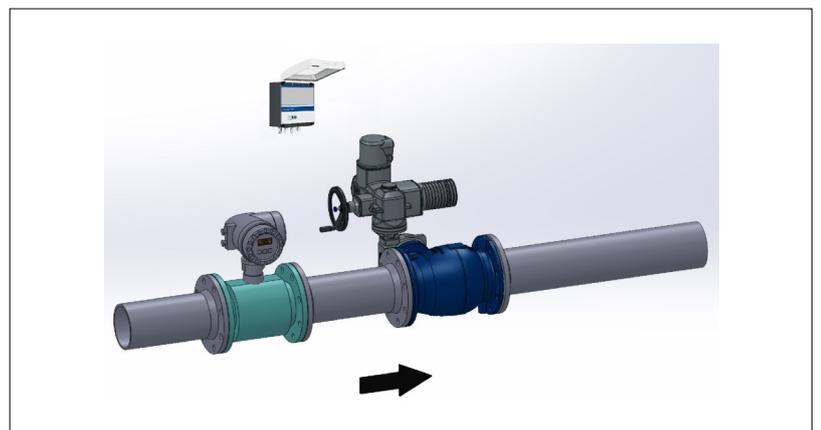
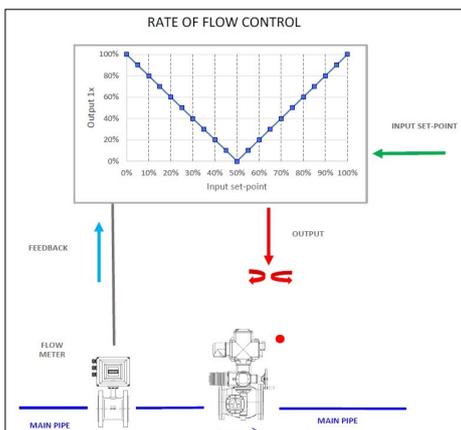
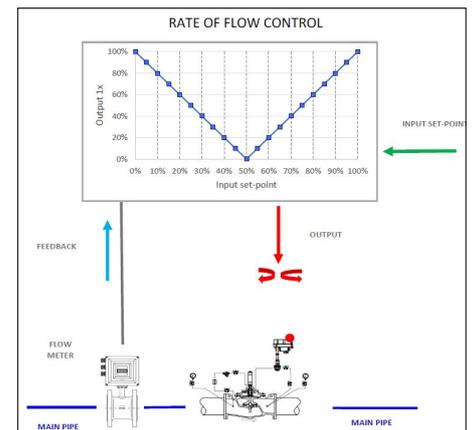
The microcontroller is contained within a sturdy ABS box for wall installation, IP68 certified for immersion at 1.2m (2h), NEMA 3.

## Main control functions:

- Rate of flow control;
- Rate of flow control based on supplied tank level;
- Blending;
- Pressure control;
- Pressure control based on flow rate and/or critical point;
- Opening degree regulation.



*Rate of flow control according to tank level via automatic control valve.*



*Rate of flow control via needle (plunger) valve*



## Main technical specifications

Power supply	12-24 VDC $\pm 15\%$ - galvanic isolation 2.5kV Consumption 7.5 Watt/VA (HMI) - 6.5 Watt/VA (Router) 3V lithium battery for BIOS and system clock
Display	4.3" TFT touch screen LCD display, resolution 480x272 pixels - 16:9 format, 260k colours (16 bit), 280 cd/m <sup>2</sup> , typical lighting duration 20000h @ 25°C, integrated 4-wire resistive touch
Environmental conditions	Enclosure protection rating IP68 Temperature range 0 .. 50°C
Digital Inputs/Outputs	8 configurable and expandable digital inputs 8 relay outputs x 6 A each, extractable and individually replaceable
Analog Inputs/Outputs	4 universal analog inputs RTD/4..20mA/0..10V configurable and expandable 2 configurable and expandable analogue outputs 4..20mA/0..10V
Memory	eMMC 2 GB / RAM 512 MB DDR3
Main features	HMI Embedded Compact Real-Time clock with Back-up battery Configurable data logging from 1s and log files Portal VPN - Remote Control and Assistance tool Freely programmable alarms or actions on events Unlimited number of control curves Configurable unit with multiple decimal points Analogue outputs with adjustable ramp Input signal filtering Input for totalizer Configuration curves Manoeuvring auxiliaries for emergency manual controls (optional)
Control parameters	PI(D) regulators with configurable control parameters Freely configurable control ramps Password protected multi-user access
Communication	1 x Industrial Ethernet Port 10 / 100 Mbit/s 1x RS485 / CAN opto isolated 1 x USB 2.0 Integrated VPN/WEB Server 1 Industrial WiFi Router – GSM/GPRS 4G LTE (cat.4), 3G, 2G (optional) 1 4G GSM antenna (optional) 1 WiFi antenna (optional) Cloud communication via optional 4G network (optional)
Safety certifications and standards	HMI UL 61010-1, 3rd Edition, May 11, 2012, Revised April 29 2016, CAN/CSA-C22.2 No. 61010-1-12, 3rd Edition, Revision dated April 29 2016 Routers - EN IEC 62311:2020, EN 50665:2017, EN IEC 62368-1:2020+A11:2020, IEC 62368-1:2018