PLC
(Programmable Logic Controller)

Characteristics:

- Modular design
- HSE controller
- All-in-one CPU
- Universal temperature input module (RTD and thermocouple)
- Online maintenance
- Ethernet communication (FOUNDATION™ HSE and/or Modbus TCP
- Access via internal bus for up to 64 conventional I/O modules
- Discrete control through ladder language in compliance with IEC 61131

As a process control system, SMAR System302 also complies with standard PLC requirements and based on a modular design, there are specific processor modules designed for PLC which performs all functions exposed along this document.

It is well-adapted to a range of automation tasks. These are typically industrial processes in manufacturing where the cost of developing and maintaining a customized automation system is high relative to the total cost of a PLC automation, so the cost is low compared to the cost of a specific custom-built controller design and where changes to the system would be expected during its operational life.

Modular PLCs as SMAR System302 have a chassis (also called a rack) into which are placed modules with different functions. The processor and selection of I/O modules is customized for the particular applications.

Several racks can be administered by a single processor, and may have thousands of inputs and outputs.

A Human-Machine Interface (HMI) is employed for interacting with operation personnel for the purpose of configuration, alarm reporting and everyday control.

Modern PLCs can communicate over a network to some other system, such as a computer running a Supervisory Control and Data Acquisition system or web browser.

PLCs used in larger I/O systems have communication between processors. This allows separate parts of a complex process to have individual control while allowing the subsystems to coordinate over the communication link.

These communication links are also often used for HMI devices such as PC workstations.

Some of today's PLCs can communicate over a wide range of media including RS-485, Coaxial, and even Ethernet.

Under the IEC 61131-3 standard, PLCs can be programmed using standards-based programming languages. Most PLCs utilize Ladder Logic Diagram Programming, a model which emulates electromechanical control panel devices (such as the contact and coils of relays). This model remains common today.

SMAR has been supplying solutions for PLC market in several segments as below:

1. Boiler Automation
2. Sugar Mill Automation
3. Steam Generation
4. Burner Automation
5. Mining Refining
6. Ethanol Production
7. Sugar Production
8. Leak Detection

Characteristic (DF75)	SYSTEM302 Availability
Physical Points (I/O)	1024
Virtual Points	4096
Modbus-RTU	1 x EIA-232 port
Function Blocks for ladder	Up to 2000
Modbus Slave	Yes
Function Blocks (FF)	100
OPC support	Yes
Foundation Fieldbus HSE/ Modbus TCP	2 x 10/100Mbps ports
VAC Power Supply	90 to 264VAC
VDC Power Supply	20 to 30VDC
Redundancy support	Yes (CPU only)

For additional information please contact us.

Specifications and information are subject to change without notice.
Up-to-date address information is available on our website.

www.smar.com