



SDI-2200-1

Silt Density Indexing Unit

■ Auto Time Test Mode (SDI 75%)

This mode is preferred when the water quality is low (standard SDI >5), or when quality fluctuation is expected. The cycle is continue until one of the following condition is met. (The first of two).

1. The Plugging Percentage is greater then the preset value(75%).
2. Check Time (as programmed at OPERAT screen) is done.

The plugging percentage is calculated and displayed every one min. The value for Tt in the formula for the first case (75%) is the time in minute when the plugging exceeded the set point. The value for Tt in the formula for the second case is the Check Time.

The advantage of this mode is that the filter paper is never fully plugged (HIGH LEVEL alarm is not activated), and the cycle is always completed with a calculated result.

The SDI results are represented on 0-100 scale, and the exact CHECK time has no meaning as in the Standard Test Mode. In general, the higher the SDI result the more silt is in the water.

The Plugging Factor is calculated every one min using the formula:

$$\%P_{30} = \left[1 - \frac{t_i}{t_f} \right] \times 100$$

Where:

$\%P_{30}$: plugging factor at 30 [psi] feed pressure,

Ti: Time required to collect the first 100 cc of sample,

Tf: Time required to collect 100 cc of sample after each min

Sequence Of Cycle Checks Modes.

The SDI-2200 define the sequence of cycle checks in three modes.

■ Manuel Mode

The Manual mode initiate one cycle check of the selected channel

■ Automatic Mode.

The automatic mode initiate a repeated cycle check of the selected channel ,in time interval define at the WAIT time.

■ Remote Mode

In the Remote Mode, each channel can be checked when ever the remote station send the start signal.

External Booster Pump Option

One booster pump ,can be used to boost the incoming pressure of all the four channels. When using this option , the incoming water of the checked channels (After the inlet valve), is flowing out of the analyzer to the pump, and return at higher pressure.

If one or more of the channels are known as " high pressure ", the pump can be switch to OFF , and not be used for this channels. In this case the inlet water flow through the pump without any boost.

SYSTEM SPECIFICATIONS

System characteristics, construction material and utility specifications are provided in the following paragraphs.

SYSTEM CHARACTERISTICS

Overall System Size (including service area)	Wall Mounted H=2.0M, W=1.5M Front= 1.0M.
Control	ABB PLC EXTER T-60 Touch Screen
System Weight	~ 50 Kg
Dimensions (in mm)	D= 310, W= 630, H= 1050
Slit Density Index (SDI) ranges	0.00-99.99
SDI Check time	1-15 Minutes
Repeatability	Less than 0.1 SDI Units
Filter Paper Type	Rolls, length 6 Meter or 20 Ft, 90 measurements per roll MF-Millipore Membrane, mixed cellulose esters, Hydrophilic, 0.45µm, White Plain
Environment protection	IP53. System should be install in door, with no direct sun radiation or rain fall
Digital Input Signal	Six
Digital Output Signal	Eight

Non Isolate analog out per channel represent the SDI results	4-20 ma programmable <i>range (not for use with externally powered circuits)</i>
Data Transmission for TCP/IP protocol (option)	Max. 10 MB/s with 10 Base T and max. 100 MB/s with Fast-Ethernet
IP address configuration	PLC may be configured with static IP, Gateway and mask or alternatively use DHCP on clients site.

CONSTRUCTION MATERIAL

Wetted Parts	Plastic Material.
Cabinet	FM PVC / PPS