



# Andhra Pradesh State Skill Development Corporation



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# INDUSTRIAL AUTOMATION WITH PLC HARDWARE SPECIFICATIONS

## PLC HARDWARE SPECIFICATIONS



Basically, the delta PLCs are divided into AH, AS, and DVP Series.

Here the model is **DVP20EX200R**

- ❖ DVP- It belongs to the DVP family
- ❖ 20 means the total no of inputs and outputs
  1. The input address is starting from x0 to x7 so the total digital inputs are 8
  2. Coming to output y0 to y5 so total digital outputs are 6.
  3. Coming to analog inputs AD0 to AD3. So 4.
  4. Coming to analog outputs- 2

So total inputs and outputs are 20

- ❖ EX2 means its series name
- ❖ 00 indicates that the input supply is AC
- ❖ If it has 11 then it indicates that the input supply is DC
- ❖ Here R indicates that output is relay based
- ❖ If there is T instead of R that means output is transistor-based.

If any series has contained X letter in their series that means it has an extension port for input and output channels. So we can extend inputs and outputs through this port.

## How a PLC works?

### How is the Program Processed in the PLC?

The program is processed in the PLC cyclically, in the following sequence:

1. First, the status is transferred from the process image of the inputs to the input terminals.
2. The processor examines the individual inputs for high voltage or low voltage. The status of the inputs is stored in the process image of the inputs. For the inputs with the rated voltage a 1 or HIGH is stored, for those that don't the 0 or LOW is stored.
3. This processor then processes the program stored in the program memory. The program consists of a list of logic operations and instructions that are processed one after the other. For the required input information, the processor accesses the input table entered previously and the result of the logic operation is written into a process image of the outputs. If necessary, the processor also accesses other memory areas during program processing; for example, for local data of subprograms, data blocks, and flags.
4. Then, internal operating system tasks such as self-tests and communication are performed. Then we return to the item

### Additional Features:

- Standard PLCs with integrated communication and highly efficient processing ability for your control systems
- 32-bit CPU for high-speed processing
- Standard PLC DVP-ES2 Series: 16 / 20 / 24 / 32 / 40 / 60 / 80 I/O points for a variety of applications
- Analog I/O PLC DVP-EX2: - Built-in 12-bit 4 analog inputs / 2 analog output; and 14-bit analog I/O extension module - Built-in PID auto-tuning function for a complete analog control solution
- Built-in 1 RS-232 and 2 RS-485 ports
- Program capacity: 16 k steps
- Data register: 10 k words
- Max. execution speed of basic instructions: 0.35  $\mu$ s
- RTC function and file register (5 k words) (hardware version 2.0 and above)
- Highly efficient processing ability: 1 k steps of programs can be completed within 1ms
- Max. 100 kHz pulse control; specific motion control instructions (mark/masking and instant frequency-changing) available for multi-axis applications.
- Up to 4 levels of password protection secure your source programs and intellectual property

### The Perfect Small PLC Revolution!

After launching our first DVP series PLCs for industrial automation applications, Delta has been devoted to delivering more innovative products that satisfy customers' needs and meet the requirements of a wide variety of applications.

Delta PLCs offer a broad range of controllers and modules which all feature high performance, multiple functions and efficient program editing tools. In addition to the user-friendly programming software and faster execution speed, we also provide complete industry-focused solutions, motion control solutions, and industrial Fieldbus solutions with Delta's new PLC series