

CONTROLLERS

SIMATIC S7-300 CPU 319-3 PN/DP: The controller for fast machines and fast processes

Today's high-end machines place high demands on control systems. Fast response to state changes, fast control with high precision, short cycle times and communication links to the production network are characteristics that such controls need to provide in the basic configuration – without any additional control or communication plug-in modules.

No matter if this is about binary, word, fixed- or floating-point operations: The CPU 319 is outstanding in terms of performance. Much faster processing of application programs enables shorter response times and machine cycle times – and therefore paves the way for greater productivity. Integrated PROFIBUS and PROFINET interfaces with protocols such as S7 communication, TCP/IP, UDP, ISO on TCP based on RFC 1006, PROFINET IO, PROFINET CBA and of course PROFIBUS DP ensure that the control can be integrated flexibly in automation environments. Additional communications processors guarantee significantly higher data throughputs.



Greatly extended quantity frameworks, for example 1.4MB RAM, offer significantly larger resources for complex automation solutions. And they optimally support the use of cost-reducing and task-oriented STEP® 7 Engineering Tools such as SCL (Structured Control Language), CFC (Continuous Function Chart), the programming of sequence chains with S7-Graph etc. In addition, the STEP 7 Engineering Tools also facilitate the legibility, care and documentation of user programs – and therefore reduce the time required for the engineering, testing and commissioning of machines.

Other benefits: Reduced downtimes through detailed device diagnostics in all operating states as well as much faster communication by direct data exchange between DPV1 standard slaves. In addition, the extended block number ranges improve the portability and reusability of SIMATIC programs or program parts of other CPUs – such as the CPU 18 or of smaller S7-300 CPUs all the way to the largest S7-400 CPU.

The CPU 319-3 PN/DP also is an ideal platform for simple technological tasks implemented on a software basis such as Easy Motion Control.

The highlights:

- Maximum command execution performance through powerful processor architecture and optimized language mapping
- 3 integrated interfaces: 1x PROFIBUS DP/MPI, 1x PROFIBUS DP, and 1x PROFINET
- Up to 2 simultaneously active connections – now up to 256 field devices can be connected via PROFINET IO
- Integrated PROFINET ASIC ERTEC 400 enables short response times on Ethernet
- Isochronous mode on the PROFIBUS DP interface – for synchronous and deterministic I/O processing as well as optimized coupling of the user program to the I/O devices