DN-DP
PROFIBUS® DP / DeviceNet™ Gateway

Fast and Reliable Linking PROFIBUS DP and DeviceNet with Data Buffering

- DeviceNet-PLC link, e.g. to SIEMENS S7-1500, S7-1200, S7-400, S7-300
- DeviceNet slave device with up to 240 user data bytes per direction, but limited to a total of 312 user data bytes if using both directions
- Up to 40 DeviceNet slave devices can be addressed
- Operation as DeviceNet scanner or slave

Approved Reliability and Ease of Use

- PROFIBUS DP and DeviceNet interfaces are electrically isolated
- DIN-EN rail mountable housing (TS 35)

Configuration via the Configuration Tool of the PROFIBUS DP Master

Linking DP and DeviceNet

The DN-DP module can link any PROFIBUS DP master to a DeviceNet network. The DN-DP gateway operates as a PROFIBUS DP slave-I/O component.

At the DeviceNet network the DN-DP gateway can operate as a scanner to control several DeviceNet slave devices or as a single slave device to be connected to one DeviceNet scanner.

The DN-DP module is always configured via a PROFIBUS DP master.

Configuration of the DN-DP Gateway as a DeviceNet Scanner

As a DeviceNet scanner, several DeviceNet slave devices can be addressed. The maximum number is between 20 and 40. This number depends on the configured PROFIBUS DP slave I/O type of each DeviceNet slave device.

Up to a total of 312 user data bytes can be configured for each DeviceNet slave device. For each direction up to 240 user data bytes can be set up.

Configuration of the DN-DP Gateway as a Single DeviceNet Slave

The DN-DP gateway can be configured as exactly one DeviceNet slave.

With this configuration, it can be connected to exactly one DeviceNet scanner.

Applications

With the DN-DP gateway you can couple DeviceNet modules to e.g. a SIMATIC-S7.
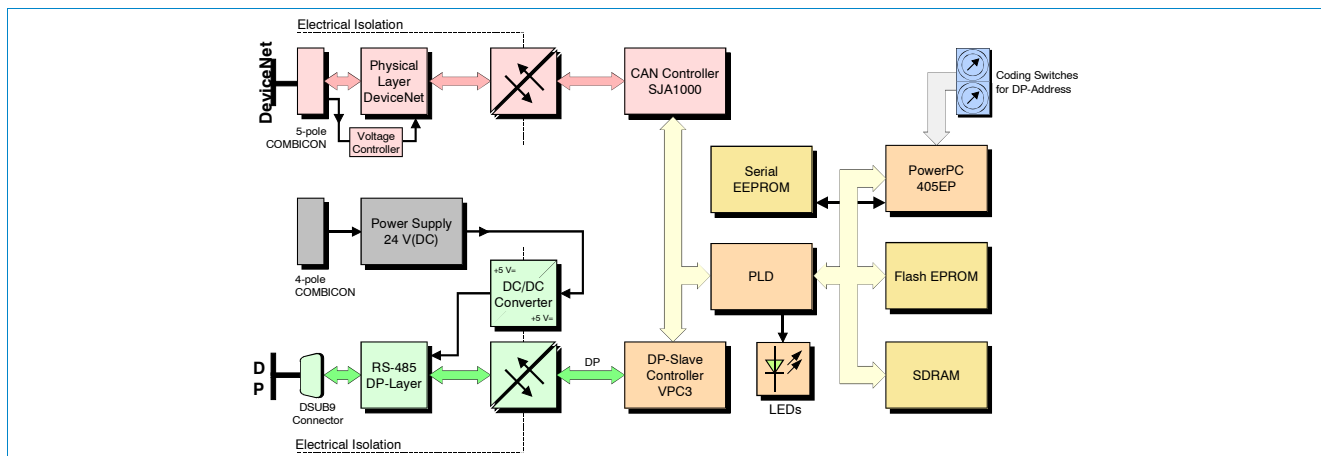
Physical Interfaces

The DN-DP supports all DeviceNet compatible bit rates. The PROFIBUS DP Slave interface automatically recognizes all usual bit rates up to 12 Mbit/s.

The PROFIBUS DP as well as the DeviceNet interface are electrically isolated.

Configuration

The module can be configured via PROFIBUS configuration tool, e.g. the PLC SIMATIC Manager or the TIA Portal.

Technical Specifications:

CPU:	
Microcontroller	PowerPC™ 405 EP, 133 MHz
Memory	4 M x 32 bit SDRAM (16 MB), 512 k x 16 bit Flash EPROM (1 MB)
DeviceNet:	
CAN controller	SJA1000, ISO11898-1 (CAN 2.0)
DeviceNet interface	According to DeviceNet Specification release 2.0, differential, electrically isolated, all DeviceNet bit rates are supported
PROFIBUS DP:	
DP controller	VPC3, DP-Slave
DP interface	RS-485, electrically isolated, max. 12 Mbit/s

General:	
Ambient temperature	0 °C ... +50 °C
Relative humidity	Max. 90 % (non-condensing)
Power supply	24 VDC, $I_{24VTYPICAL}$ = 140 mA, I_{24VMAX} = 150 mA
Connectors	DeviceNet: 5-pin socket connector DP: DSUB9 female Power: 4-pin spring-cage connection plug

Order Information:		
Hardware		Order No.
DN-DP	Gateway DeviceNet / PROFIBUS DP-Slave, ISO11898-2, GSD-file	C.2930.02