

DL05/06 Data Communications Module

Data Communications Module

D0-DCM <--->



Overview

The D0-DCM Data Communications Module offers two communication ports for a variety of simultaneous communications possibilities:

- Extra communications port to connect a PC, operator interface, etc.
- Network interface to **DirectNET**
- Network interface to a Modbus network using the RTU protocol

The top RJ12 RS-232 port (Port 1) can be used for PLC programming, connection to an OI panel or as a single K-sequence, **DirectNet** or Modbus RTU slave. The 15-pin front port (Port 2) can be used for RS-232/422/485 communications and supports the following protocols: K-sequence slave, **DirectNET** master/slave and Modbus RTU master/slave.

Module Configuration

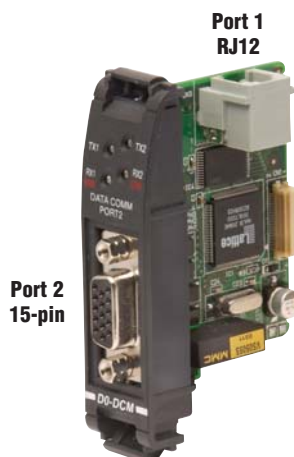
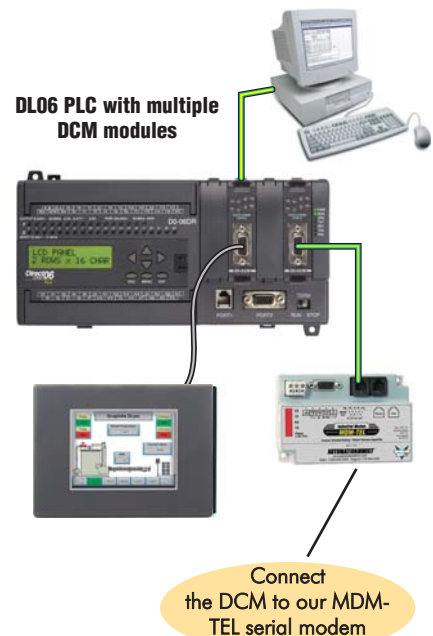
Since the D0-DCM does not have DIP switches to set baud rate, station address, parity, etc., ladder logic programming is required to configure its communication parameters, unless the default settings are acceptable for your application. If the D0-DCM is to be used as a network master, you must use ladder logic code to configure these parameters.

Specifications	
Module Type	Intelligent
Modules per CPU	DL05: one; DL06: up to four
Field Wiring Connectors	
Port 1: 6-pin RJ12 RS-232 Port 2: 15-pin HD-sub connector RS-232, RS-422/485	
Communications	Port 1
	Port 2
RS-232 signal levels, DirectNET slave, K-sequence slave, Modbus RTU slave protocols, baud rate selectable from 9.6K to 115.2K baud, odd or no parity, selectable address, 8 data bits, one start/stop bit, DirectNET HEX or ASCII mode. (Defaults: slave, 9600bps, odd parity, address 1, auto-detect protocols)	
RS-232/422/485 signal levels, DirectNET master/slave, K-sequence slave, Modbus RTU master/slave protocols, baud rate selectable from 300 to 115.2K baud, odd/even/no parity, selectable address, 7 or 8 data bits, one start bit, 1 or 2 stop bits, selectable timeout/response-delay times, DirectNET HEX or ASCII mode. (Defaults: slave, 19200bps, odd parity, address 1, eight data bits, one stop bit, auto-detect protocols)	
Recommended Cable	RS-422: Belden 9729 or equivalent; RS-485: Belden 9841 or equivalent
Internal Power Consumption	250mA maximum at 5VDC (supplied by base)
Operating Environment	0°C to 60°C (32°F to 140°F), 5% to 95% humidity (non-condensing)
Manufacturer	Koyo Electronics

CPU	Firmware Required	DirectSOFT Required
DL05	Version 5.00 or later	Version 3.0c or later
DL06	Version 1.90 or later	Version 4.0, Build 16 or later. ASCII functions require version 5.1 or higher.

Extra communications ports for DL05/06

If additional communication ports are needed in the PLC, they can easily be added by installing DCM modules. Connect additional devices such as operator interfaces, PCs, etc. Set the DCM communication parameters using **DirectSOFT** programming software, connect the cables, and start transferring data. Make sure the connected device has a DL05/06 compatible driver.

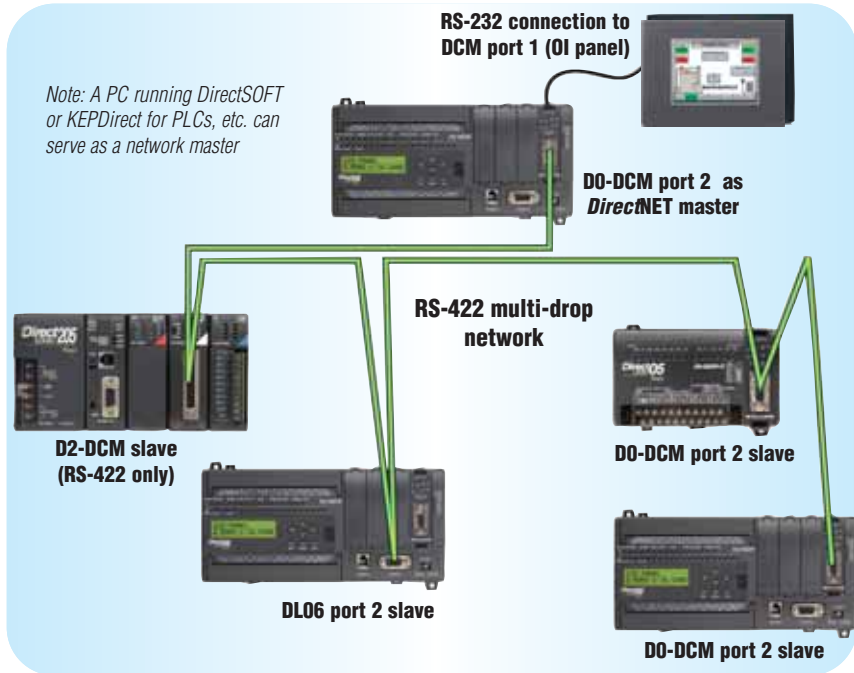


DL05/06 Data Communications Module

DirectNET network interface

The DCM can be used as a network interface for applications requiring data to be shared between PLCs, or between PLCs and an intelligent device such as a host PC. **DirectNET** allows you to upload or download virtually any type of system data including Timer/Counter data, I/O information, and V-memory information from any **DirectLOGIC** or compatible PLC. Port 2 on the DCM allows the DL05/06 to function as a **DirectNET** network master or slave using RS-422 communications (RS-232 can be used for single slave networks). Use RX and WX instructions in your RLL program to initiate communications.

DirectNET network



Modbus RTU interface

The DCM can be used as a master or slave station interface to connect your DL05/06 system to a Modbus® network using the Modbus RTU protocol. Port 2 on the DCM allows the DL05/06 to function as a Modbus RTU network master or slave using RS-422 or RS-485 communications (RS-232 can be used for single slave networks). Use RX and WX instructions in your RLL program to initiate communications.

Modbus RTU networks

