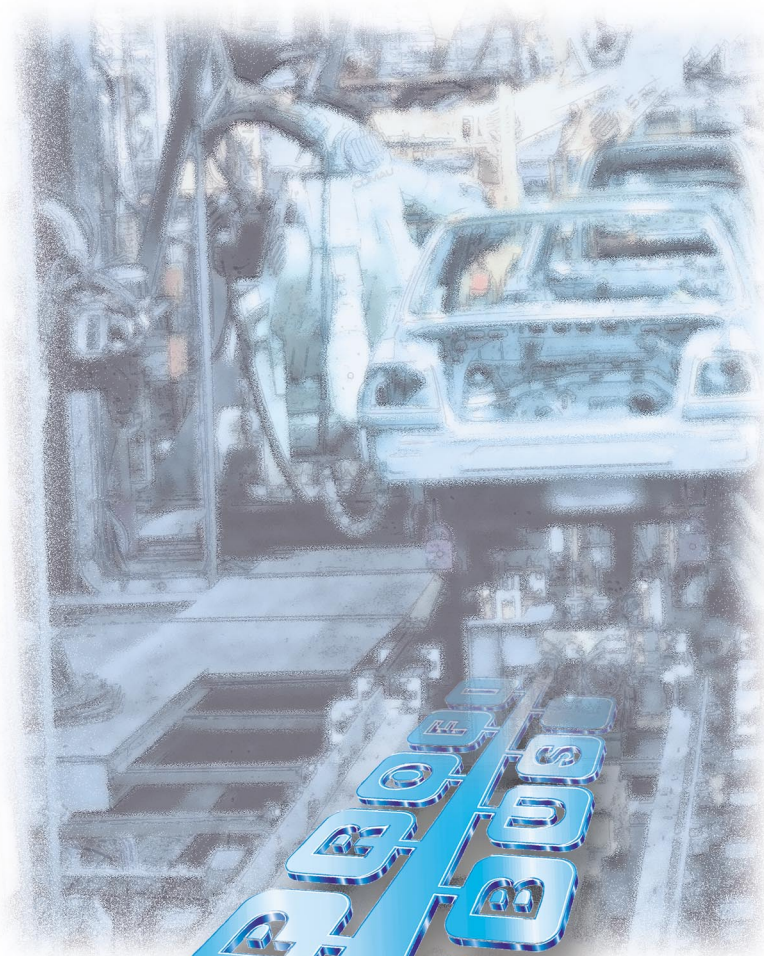


**Network
Technology**

Profibus/DP



**All Systems Go
with Profibus**

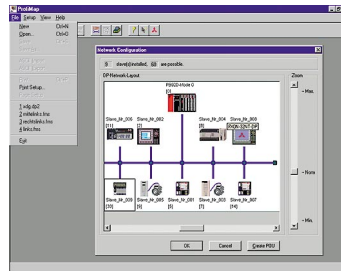




Profibus is the choice of the pros, and Mitsubishi gives you complete, user-friendly Profibus solutions with an unusually high level of functional reliability.

Open network architecture with components from a single supplier

Mitsubishi makes the choice easy with the concentrated 32-bit power of our user-friendly ProfiMap configuration software for open networks. Full support for all Profibus modules in the MELSEC AnS/QnAS and AnU/QnA series. Easy integration of third-party products – just import the GSD files. The configuration is transferred to the master module either via the PLC's CPU port or via networks like Ethernet or MELSECNET.



ProfiMap configuration software

Comfortable Plug & Play technology makes it very easy for users to integrate all their peripheral components.

Use modular FX[_]N series I/O systems with the FX2N-32DP-IF

Remote I/O stations to which you can connect up to 256 I/Os of the FX[_]N series. Integrated 230 V power supply unit and 24 V output. Control unit connection option for diagnostics.



Extremely compact MC series I/O systems with IP67 protection rating

Signal data acquisition directly at the relevant machine points. The sensor/actuator lines are connected directly to the relevant I/O module via standard M12 connectors installed on the machine. This cuts costs by making system installation simpler and faster. The MC series modules are fully encapsulated for maximum protection against environmental influences.



Compact AJ95 series I/O systems

Remote I/Os on the Profibus/DP with minimum space requirements. Power supply with non-reversible polarity connector and output overload protection. Removable terminal block for 3-wire connection and DIN tophat rail installation.

Compact FX[]N series PLCs

Using the FX0N-32NT-DP module you can integrate this powerful compact PLC with up to 256 I/Os and 16,000 program steps in a Profibus/DP network as a slave station.

Modular PLCs of the AnS/QnAS and AnU/QnA series

Profibus/DP master modules are available for both controller families. You can use a wide variety of different communications modules simultaneously for easy integration of the different network hierarchies in a single PLC.

Connectivity:
ProfiCon T is a Profibus network connector from Mitsubishi with an integrated terminating resistor with an activation/deactivation switch.



MAC E series operator and terminals units

Functional transparency for your systems and a process-oriented dialogue between man and machine. Easy operation, instantly comprehensible displays and data exchange via additional interfaces.

Series FR-E 500 and FR-A 500 frequency inverters

Versatile and compact, these units are the ideal solution for individual drive applications. Soft PWM for super-quiet motor running, specially adapted compact RF suppression filters for perfect EMC performance and user-selectable positive or negative switching logic are just a few of the many impressive features of these units.

A simple comparison of the basic specifications of different networks clearly demonstrates Profibus/DP's strengths and potential applications:

Modular MT series I/O systems

Connect up to 256 I/Os using 3-wire technology. Both digital and analog modules are available. DIN tophat rail installation in one or two rows. Protection against overvoltage, overload, short circuits and reverse polarity. Screw or spring terminal connections.

Network	Level	Topology	Medium	Transfer Rate	Stations	Range
Profibus/DP	I/O	Bus	Twisted pair	12 Mbps	60	4,800 m
CC-Link	I/O, Control	Bus	Twisted pair	10 Mbps	64	1,200 m
DeviceNet	I/O	Bus	Twisted pair	0.5 Mbps	64	500 m
ModBus	I/O	Bus	RS485	0.0192 Mbps	32	500 m
ControlNet	Control	Bus	Coax or fibre-opt.	5 Mbps	99	1,000 m
Interbus	I/O	Loop	Twisted pair	0.5 Mbps	256	400 m
SDS	I/O	Bus	Twisted pair	0.5 Mbps	64	500 m



Mitsubishi's Profibus/DP network technology gives you all these unique benefits:

- **Simple configuration with ProfiMap**
- **Comprehensive range of products**
- **All components support 12 Mbps**
- **Extensive diagnostics options**
- **An open network solution with components from a single supplier**

Mitsubishi makes Profibus/DP networks extremely simple, inexpensive and reliable

Intelligent Profibus/DP technology

The configuration tool ProfiMap makes it easy to integrate all Profibus/DP components from Mitsubishi into a powerful network system. All components support transfer rates up to 12 Mbps and a wealth of diagnostics functions. To configure the network you just select the images of the individual devices on screen and install them virtually on the Profibus/DP line. Then you reserve station numbers for the devices and define which PLC addresses are to be allocated to the remote Profibus slave units. That's it. The ProfiMap software also automatically generates a program module that can be integrated with the MELSEC MEDOC *plus* programming software so that the user no longer needs to distinguish between I/Os on the module rack and remote peripherals.

Profibus/DP Time Criteria

Transfer rates in relation to distance

Transfer Rate	Range (up to 4.8 km with repeaters)
156 bps	1,200 m
625 bps	600 m
2.5 Mbps	200 m
5 Mbps	110-150 m
10 Mbps	50-100 m

Components Overview

PLC Systems

Master systems:
AnS/QnAS series,
AnU/QnA series

Slave systems:
FX0N/FX2N series

I/O Systems

Compact I/Os:
AJ95 series, MC series (IP67)

Modular I/Os:
FX0N/FX2N family, MT series

Operator Terminals

MAC E series

Frequency Inverters

FR-E 500, FR-A 500

Connectors

ProfiCon T

Software

ProfiMap

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