

Profibus-DP Slave Unit

CQM1-PRT21

Profibus-DP Slave for CQM1(H) PLCs

- No PLC settings need to be made.
- Auto-detect all Profibus-DP baud rates from 9.6 kbit/s to 12 Mbit/s.
- Slave address setting, selectable from 0 to 99.
- Support and indication of Profibus-DP broadcast functions (Sync/Freeze/Clear).
- Communication status available externally via relay output.



Ordering Information

Product Code	Description
CQM1-PRT21	Profibus-DP slave unit

Specifications

■ Communication Specification

Applicable standard	EN 50170 vol. 2
Station type	Modular station, max. 1 module Configurable with In-, Out- and I/O-modules of 2, 4, 6 or 8 words
Data consistency	By word
Bus connector	9-pin female sub-D connector (RS-485 Profibus connector)
Bus termination	External
Baud rate (auto-detect)	9.6 / 19.2 / 45.45 / 93.75 / 187.5 / 500 kbit/s, 1.5 / 3 / 6 / 12 Mbit/s
Profibus address range	0 to 99, Remote setting not supported
Communication cable	Type A (EN 50170 vol. 2)
Minimum slave interval time	0.5 ms
Watchdog base	10 ms, 1 ms selectable by parameter setting
Supported DP functions	\$ Data_Exchange \$ Slave_Diag \$ Set_Prm \$ Chk_Cfg \$ Global_Control (SYNC, FREEZE, CLEAR) \$ Get_Cfg \$ RD_Inp \$ RD_Outp
Profibus-DP GSD file	OC_054D.GSD

■ Unit Specification

Host PLC system	CQM1, CQM1H
Switch settings	Number I/O words Motorola/Intel data format Profibus-DP address
LED indicators	Unit status : RUN (green LED), ERR (red LED) Network status : COMM (green LED), BF (red LED) WD OFF (yellow LED), CLEAR (yellow LED) SYNC (yellow LED), FREEZE (yellow LED)
No. of occupied words	Configurable by DIP switches (see note) S 2 words in + 2 words out S 4 words in + 4 words out S 6 words in + 6 words out S 8 words in + 8 words out
I/O refresh time (data exchange with CPU)	Max. 0.16 ms
Current consumption (max)	950 mA at 5 V DC (at CQM1 I/O bus)
Weight	170 g
Storage temperature	-20 to +75 °C
Operating temperature	0 to +55 °C
Operating humidity	10% to 90% (non-condensing)
EMC compliance	EN50081-2, EN61131-2
Circuit configuration	<p>The diagram shows the internal circuit of the CQM1-PRT21 unit. It includes an 'Internal circuit' block connected to a relay contact (represented by a circle with an 'X'). This contact is part of a circuit that includes a lamp (represented by a circle with a vertical line) and a power source labeled '2 A at 24 VDC max.'.</p>

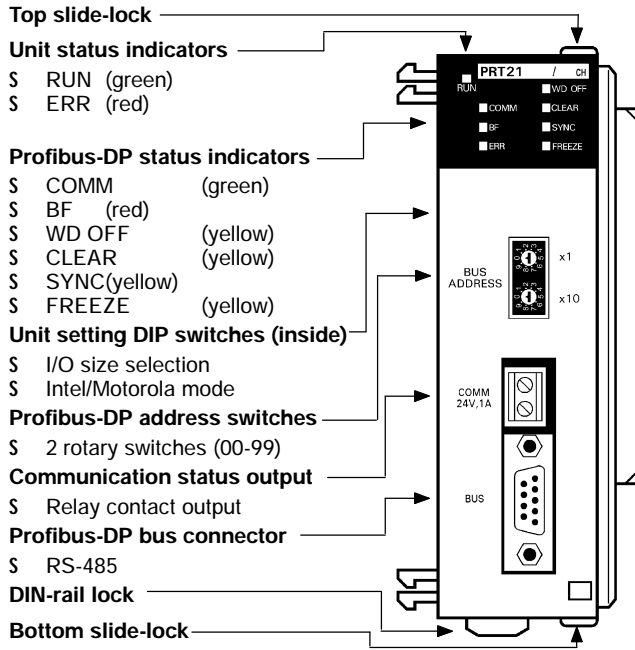
Note: The CQM1-PRT21 can be mounted to any CQM1- or CQM1H-series CPU. The maximum amount of I/O data that can be exchanged with the CPU depends on the selected CPU type, and on the number and type(s) of any additional I/O unit(s). To operate with the Unit's maximum I/O capacity, a CQM1H-CPU51 or CQM1H-CPU61 is required.

■ Communication status output

The COMM relay contact output indicates if data exchange with the Profibus-DP master unit is active. This signal can be connected to a PLC input or external signalling device. It is recommended to use this information in the PLC to judge the validity of the received data.

ON state	S I/O data exchange with the Profibus-DP master is active.
OFF state	S PLC Power OFF S Fatal error in PLC CPU or I/O bus. S No I/O data exchange with Profibus-DP master (check LED indication).
Relay type	OMRON G6H-2F, non-replaceable
Maximum load	1 A at 24 V DC
ON/OFF delay	less than 10 ms
Connector	Phoenix MSTBA 2,5/2-G

Nomenclature



Dimensions

