Integrated intelligence for enhanced control

PLC + DRIVE IN ONE

3G3MV-P10CDT

Advanced Industrial Automation
With Omron’s combined frequency inverter and PLC option board, you can bring more intelligence to your system by enhancing the speed and positioning control of your application. The PLC option board offers the features of an Omron PLC embedded in an MV inverter. This inverter-based architecture provides wireless installation and seamless access to the inverter parameters and analogue/digital inputs and outputs. Standard Omron tools are used for programming and commissioning.

**Pump sequencer**

This application example shows the MV inverter and PLC option board being used to control water pressure. The 3G3MV-P10CDT provides a continuous closed loop control of the first pump, plus ON/OFF control on the others. The system also allows remote supervision and the sending of SMS warnings to maintenance personnel.
The 3G3MV-P10CDT is the perfect solution for:

- door control
- pump sequencing
- intelligent conveyor
- vertical axis control
- industrial washing machines
- general positioning

Distributed control

In this application example a series of 3G3MV-P10CDTs provide distributed control over the whole line. The PLC/inverter combination gives you precise control over all processes in the transfer line. And because the 3G3MV-P10CDT is modular in concept, your system grows as your needs do.

Key features

- Fully featured Omron PLC embedded into the inverter
- Direct connection to MV inverter via Dual Port RAM
- Complete control of inverter parameters
- Encoder Input, Interrupt inputs and Pulse outputs
- Real-time clock and calendar available
- Control of inverter hardware (analog input, digital I/O)
- Mechatronics functions (counter, PID, filter etc.)
- Single-point programming
- Programmed using the standard Omron PLC software
- RS-422/485 serial port available

Supports CX automation software suite

Via a standard serial RS-232C connection you connect your PC to the 3G3MV-P10CDT for PLC programming and inverter configuration using Omron's CX-programmer and Sysdrive Configurator software.
## Technical specifications

<table>
<thead>
<tr>
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<th>3G3MV-P10CDT-E</th>
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<tbody>
<tr>
<td><strong>Inputs</strong></td>
<td>6 (1 bi-directional pulse input 5 kHz or unidirectional 20 kHz)</td>
</tr>
<tr>
<td><strong>Outputs</strong></td>
<td>4 (1 relay / 3 transistor)</td>
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<tr>
<td><strong>I/O LED signaling</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Programming tool</strong></td>
<td>CX-Programmer</td>
</tr>
<tr>
<td><strong>Basic programming capabilities</strong></td>
<td>Word arithmetics, timers, counters, PID functions</td>
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<tr>
<td><strong>Direct HMI connection</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Communication ports</strong></td>
<td>RS232C (and RS422/485 optional)</td>
</tr>
<tr>
<td><strong>Real time clock</strong></td>
<td>Optional</td>
</tr>
<tr>
<td><strong>Instruction execution time</strong></td>
<td>&lt;8µs</td>
</tr>
<tr>
<td><strong>Ambient operating temperature</strong></td>
<td>-10 to 50°C</td>
</tr>
<tr>
<td><strong>Power supply voltage</strong></td>
<td>No external power supply needed</td>
</tr>
<tr>
<td><strong>External dimensions</strong></td>
<td>68 x 128 x 38 mm (W x H x D)</td>
</tr>
<tr>
<td><strong>Power range 3G3MV</strong></td>
<td>Up to 7.5 kW</td>
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<tr>
<td><strong>Performance type 3G3MV</strong></td>
<td>Advanced, open-loop flux vector frequency inverter</td>
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  - Safety sensors