

TPMC118 6 Channel Motion Control

Application Information

The standard single-width 32 bit PMC module TPMC118 is designed for motion control applications offering six independent channels. Each channel consists of an TTL / RS422 compatible encoder interface, one digital 24V input and one +/-10V analog output.

The position feedback for each of the six channels is provided by an encoder interface and a 32 bit up/down counter with preload and latch register. The input level of the encoder signals can be TTL or RS422. All six encoder interfaces are isolated from the local controller unit by high speed optocouplers. An on board DC/DC converter supplies the isolated part. The encoder signals pass a digital filter for noise suppression before they are fed to the counters and reference logic. The counters are programmable for single, double and quadruple analysis of the encoder signals. The maximum frequency of the encoder inputs is 2 MHz.



An 'auto reference mode' provides the possibility of automatic preload of the encoder counter during normal operation, whenever the motion system passes the reference position.

Each of the six motion control channels of the TPMC118 offers one digital 24V input which is galvanically isolated by optocoupler. A high performance input circuit ensures a defined switching point and polarization protection against confusing the pole. The input has an electronic debounce circuit. Each of the six digital 24V inputs can generate an interrupt, triggered on rising or falling edge. Depending on the selected mode the input can be used as general purpose input or reference input.

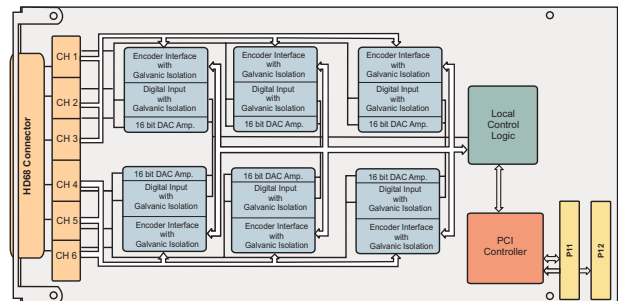
The +/-10V analog output of each channel is realized by a 16 bit digital to analog converter (DAC). An operational amplifier is used to drive high capacitive loads and to protect the DAC's.

For First-Time-Buyers the engineering documentation TPMC118-ED is recommended. The engineering documentation includes TPMC118-DOC, schematics and data sheets of TPMC118.

Driver support (TPMC118-SW-xx) is available for different operating systems.

Technical Information

- Standard single-width 32 bit PMC module conforming to IEEE P1386.1
- PCI 2.1 compliant interface
- 6 channel motion controller with 32 bit up/down counter with preload and output register
- Optocoupler for galvanic isolation
- On board DC/DC converter to supply isolated part of encoder interface
- 6 digital inputs, 24 V: reference input or general purpose input depending on mode
- 6 analog outputs, +/-10V: 16 bit DAC followed by operational amplifier
- Operating temperature 0° to +70°C



Order Information

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| TPMC118-10 | 6 Channel Motion Control |
| TPMC118-DOC | User Documentation for TPMC118 |
| TPMC118-ED | Engineering Documentation, includes TPMC118-DOC |
| TA304-10 | Cable Kit for modules with HD68 connector |
| TPMC118-SW-12 | OS-9 Software Support |
| TPMC118-SW-32 | pSOS Software Support |
| TPMC118-SW-42 | VxWorks Software Support |
| TPMC118-SW-62 | Windows NT 4.0 Software Support |
| TPMC118-SW-65 | Windows XP/2000/98 SE/ME Software Support |
| TPMC118-SW-72 | LynxOS Software Support |
| TPMC118-SW-82 | LiNux Software Support |
| TPMC118-SW-92 | QNX 4 Software Support |
| TPMC118-SW-95 | QNX 6 Software Support |