SIEMENS

## Data sheet 6AU1410-0AB00-0AA0

***SPARE PART*** SIMOTION DRIVE-BASED CONTROL UNIT D410 PN; PROGRAMMABLE SINGLE-AXIS MOTION CONTROLLER; INTERFACES: 4 DI, 4 DI/DO, 1 EP, 1 TEMP, 1 ENCODER, 1 DRIVE-CLIQ, 2 PROFINET PORTS


| | |
|---|---|
| Article number | |
| product brandname | SIMOTION |
| Product type designation | D410 PN |
| Version of the motion control system | Single-axis system |

| PLC and motion control performance | |
|---|---|
| Number of axes / maximum | 1 |
| Maximum number of axes / note | The value indicated refers to real axes; virtual axes can be used additionally. |
| Minimum PROFINET send cycle clock | 0.5 ms |
| Minimum interpolator cycle clock | 2 ms |
| Minimum servo cycle clock | 2 ms |

| Integrated drive control | |
|---|---|
| Maximum number of axes for integrated drive control | |
| • servo | 1 |
| • vector | 1 |
| • V/f | 1 |
| • note | Alternative control modes; drive control based on SINAMICS S120 CU310, firmware version V2.x |

| Memory |
|---|

| | |
|---|---|
| RAM (work memory) | 38 Mbyte |
| Additional RAM work memory for Java applications | 20 Mbyte |
| RAM disk (load memory) | 23 Mbyte |
| Retentive memory | 9 kbyte |
| Persistent memory (user data on CF) | 300 Mbyte |

| Communication | |
|---|---|
| Interfaces | |
| • DRIVE-CLiQ | 1 |
| • PROFINET | 1 |
| — note | 1 interface with 2 ports: - supports PROFINET IO with IRT and RT - can be configured as PROFINET IO controller and/or device |

| General technical data | |
|---|---|
| Fan | Integrated |
| DC supply voltage | |
| • rated value | 24 V |
| • minimum | 20.4 V |
| • maximum | 28.8 V |
| Consumed current / typical | 800 mA |
| • Note | with no load on inputs/outputs, no 24 V supply via DRIVE-CLiQ interface |
| Making current, typ. | 3 A |
| Power loss [W] / typical | 20 W |
| Ambient temperature, during | |
| • storage | -40 ... +70 °C |
| • transport | -40 ... +70 °C |
| • operation | 0 ... 55 °C |
| — note | Maximum 5000 m (16405 ft) above sea level. Above an altitude of 2000 m (6562 ft), the max. ambient temperature decreases by 7 °C (12.6 °F) every 1000 m (3281 ft). |
| Relative humidity | |
| • during operation | 5 ... 95 % |
| • without condensation, tested acc. to IEC 60068-2-38 | Wert fehlt |
| Air pressure | 700 ... 1 060 hPa |
| Degree of protection | IP20 |
| Height | 183.2 mm |
| Width | 73 mm |
| Depth | 89.6 mm |
| Net weight | 990 g |

| Digital inputs | |
|---|---|
| Number of digital inputs | 4 |
| DC input voltage | |

| | |
|---|---|
| • rated value | 24 V |
| • for signal "1" | 15 ... 30 V |
| • for signal "0" | -3 ... +5 V |
| Electrical isolation | Yes |
| • note | Yes, in groups of 4 |
| Current consumption for "1" signal level, typ. | 10 mA |
| Input delay time for | |
| • signal "0" → "1", typ. | 50 µs |
| • signal "1" → "0", typ. | 150 µs |
| **Digital inputs/outputs** | |
| Number of digital I/Os | 4 |
| Parameterization possibility of the digital I/Os | parameterizable as DI, as DO, as measuring input input (max. 3), as output of output cam (max. 4) |
| **If used as an input** | |
| DC input voltage | |
| • rated value | 24 V |
| • for signal "1" | 15 ... 30 V |
| • for signal "0" | -3 ... +5 V |
| Electrical isolation | No |
| Current consumption for "1" signal level, typ. | 10 mA |
| Input delay time for DI 9 to DI 11 for | |
| • signal "0" → "1", typ. | 5 µs |
| • signal "1" → "0", typ. | 50 µs |
| — note | can also be used as probe inputs |
| Input delay time for DI 8 for | |
| • signal "0" → "1", typ. | 50 µs |
| • signal "1" → "0", typ. | 100 µs |
| Measuring input / reproducibility | 5 µs |
| **If used as an output** | |
| Load voltage | |
| • rated value | 24 V |
| • minimum | 20.4 V |
| • maximum | 28.8 V |
| Electrical isolation | No |
| Current carrying capacity for each output, max. | 500 mA |
| Leakage current, max. | 2 mA |
| Output delay for | |
| • signal "0" → "1", typ. | 150 µs |
| • signal "0" → "1", max. | 400 µs |
| • signal "1" → "0", typ. | 75 µs |
| • signal "1" → "0", max. | 100 µs |

| | |
|---|---|
| — note | Data for Vcc = 24 V; load 48 Ohm; "1" = 90 % VOut, "0" = 10 % VOut |
| Cam output | |
| • reproducibility | 200 µs |
| — note | typ. 200 µs for 3 ms bus/servo cycle; typ. 300 µs for 6 ms bus/servo cycle |
| Switching frequency of the outputs for | |
| • resistive load, max. | 100 Hz |
| • inductive load, max. | 0.5 Hz |
| • lamp load, max. | 10 Hz |
| Short-circuit protection | Yes |

| Onboard encoder interface | |
|---|---|
| Encoder interface | optional incremental encoder TTL, incremental encoder HTL or absolute encoder SSI without incremental signals TTL/HTL |
| Encoder supply for | |
| • 24 VDC | 0.35 A |
| • 5 VDC | 0.35 A |
| Limiting frequency, max. | 500 kHz |
| SSI baud rate | 100 ... 250 |
| Resolution of absolute position SSI | 30 bit |
| Cable length for | |
| • TTL incremental encoder, max. | 100 m |
| • HTL incremental encoder for | |
| — unipolar signals, max. | 100 m |
| — bipolar signals, max. | 300 m |
| — note | TTL only bipolar signals; for bipolar signals, the signal lines must be twisted in pairs and shielded |
| • SSI absolute encoder, max. | 100 m |

| Additional technical data | |
|---|---|
| Design of the sensor / to detect the ambient temperature / connectable | KTY84-130 or PTC |
| Back-up of non-volatile data | |
| • of retentive data | unlimited buffer duration |
| • of real-time clock, min. | 5 d |
| • note | Data buffering is maintenance-free |
| Approvals | |
| • USA | cULus |
| • Canada | cULus |