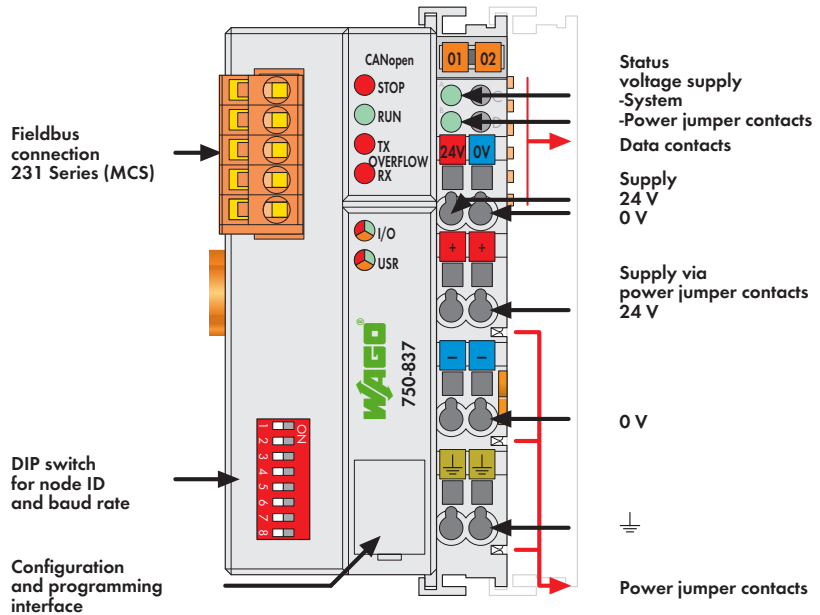


# PLC - CANopen Programmable Fieldbus Controller, MCS

16-bit CPU



The CANopen PLC combines control functionality, I/O interface and fieldbus in one device.

Programming PLC applications is performed in compliance with IEC 61131-3. The programmer can access all fieldbus and I/O data.

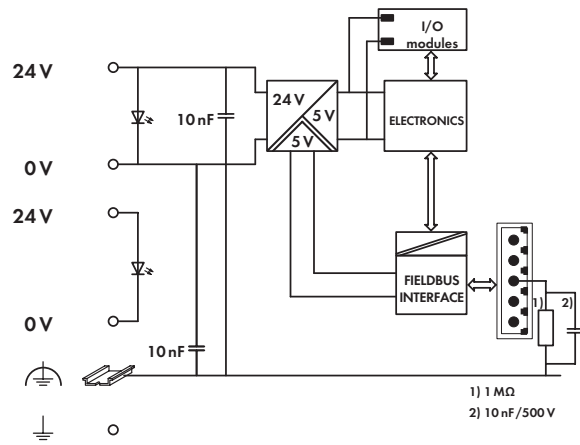
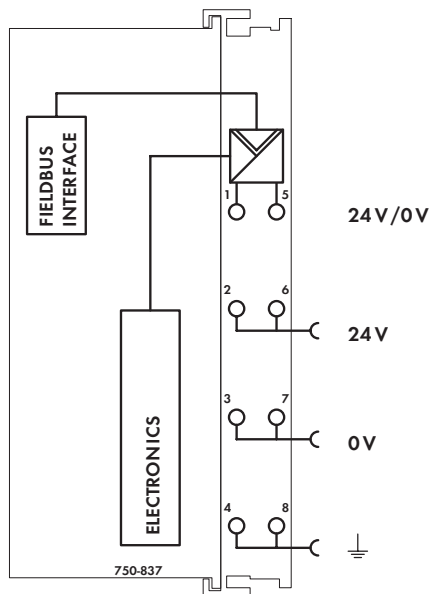
Features and applications:

- Use of decentralized control can better support a PLC or PC
- Complex applications can be divided into individually testable units
- Programmable fault response in the event of a fieldbus failure
- Signal pre-processing reduces fieldbus transmissions
- Peripheral equipment can be controlled directly, resulting in faster system response times
- Stand-alone, compact controller

**Note: EDS files required**

| Description  | Item No.   | Pack. Unit |
|--|--|------------|
| <b>CANopen Controller MCS</b>                        | <b>750-837</b>   | 1          |
| <b>CANopen Controller MCS</b>                        | <b>750-837/020-000</b>                                   | 1          |
| Program memory 256 Kbytes;<br>Data memory 192 Kbytes |  |            |
| <b>CANopen Controller MCS</b>                        | <b>750-837/021-000</b>                                   | 1          |
| Program memory 640 Kbytes;<br>Data memory 832 Kbytes |  |            |
| <b>Accessories</b>                                   |  |            |
| <b>EDS files</b>                                     | Download: <a href="http://www.wago.com">www.wago.com</a> |            |
| <b>WAGO-I/O-PRO V2.3, RS-232 kit</b>                 | <b>759-333</b>   | 1          |
| <b>Miniature WSB Quick marking system</b>            |  |            |
| plain  | <b>248-501</b>   | 5          |
| with marking   | see pages 352 ... 353                                    |            |
| <b>Approvals</b>                                     |  |            |
|  | Also see "Approvals Overview" in Section 1               |            |
| Conformity marking                                   | CE   |            |
| Shipbuilding (versions upon request)                 | ABS, BV, DNV, GL, KR, LR, NKK, PRS, RINA                 |            |
| UL 508   |  |            |
| ANSI/ISA 12.12.01                                    | Class I, Div. 2, Grp. ABCD, T4                           |            |
| IEC 60079-0, -15                                     | BR-Ex nA II T4   | 750-837    |
| EN 60079-0, -15                                      | I M2 / II 3 GD Ex nA nL IIC T4                           |            |
| EN 61241-0, -1                                       |  |            |

| System Data                            |   |
|--|---|
| No. of controllers connected to Master | 110   |
| Transmission medium                    | Shielded Cu cable 3 x 0.25 mm <sup>2</sup>  |
| Max. length of bus line                | 30 m ... 1000 m (depends on baud rate/<br>cable)  |
| Baud rate                              | 10 Kbaud ... 1 Mbaud  |
| Buscoupler connection                  | 5-pole male connector, 231 Series (MCS),<br>female connector 231-305/ 010-000<br>(included) |
| Programming                            | WAGO-I/O-PRO 32 (as of firmware<br>SW 11 also programmable with<br>WAGO-I/O-PRO V2.3)       |
| IEC 61131-3                            | IL, LD, FBD, ST, FC   |



| Technical Data                           |  | General Specifications                  |  |
|--|--|---|--|
| Number of I/O modules                    | 64   | Operating temperature                   | 0 °C ... +55 °C  |
| Fieldbus                                 |  | Wire connection                         | CAGE CLAMP®  |
| Max. input process image                 | 512 bytes  | Cross sections                          | 0.08 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> / AWG 28 ... 14 |
| Max. output process image                | 512 bytes  | Stripped lengths                        | 8 ... 9 mm / 0.33 in   |
| Max. input variables                     | 512 bytes  | Dimensions (mm) W x H x L               | 51 x 65 x 100  |
| Max. output variables                    | 512 bytes  |   | Height from upper-edge of DIN 35 rail                        |
| Configuration                            | automatic  | Weight                                  | 200 g  |
| Program memory                           | 128 Kbytes   | Storage temperature                     | -25 °C ... +85 °C  |
| Data memory                              | 64 Kbytes  | Relative air humidity (no condensation) | 95 %   |
| Non-volatile memory (retain)             | 8 Kbytes   | Vibration resistance                    | acc. to IEC 60068-2-6  |
| Cycle time                               | < 3 ms for 1,000 statements /<br>256 dig. I/Os     | Shock resistance                        | acc. to IEC 60068-2-27                                       |
| No. of PDOs                              | 32 Tx / 32 Rx                                      | Degree of protection                    | IP20   |
| No. of SDOs                              | 2 server SDOs / 16 client SDOs                     | EMC: CE - immunity to interference      | acc. to EN 61000-6-2 (2005)                                  |
| Communication profile                    | DS-301 V4.01                                       | EMC: CE - emission of interference      | acc. to EN 61000-6-4 (2007)                                  |
| Device profile                           | DS-401 V 2.0                                       | EMC: marine applications                |  |
|  | Marginal check                                     | - immunity to interference              | acc. to Germanischer Lloyd (2003)                            |
|  | Edge-triggered PDOs                                | EMC: marine applications                |  |
|  | Programmable error response                        | - emission of interference              | acc. to Germanischer Lloyd (2003)                            |
|  | DSP 405  |   |  |
|  | using function blocks NMT master can be programmed |   |  |
| COB ID distribution                      | SDO, standard                                      |   |  |
| Node ID distribution                     | DIP switches                                       |   |  |
| Other CANopen features                   | NMT slave  |   |  |
|  | Minimum boot-up                                    |   |  |
|  | Variable PDO mapping                               |   |  |
|  | Emergency message                                  |   |  |
|  | Life guarding / heartbeat                          |   |  |
|  | Configuration of virtual modules                   |   |  |
| Power supply                             | 24 V DC (-25 % ... +30 %)                          |   |  |
| Max. input current (24 V)                | 500 mA   |   |  |
| Efficiency of the power supply           | 87 %   |   |  |
| Internal current consumption (5 V)       | 350 mA   |   |  |
| Total current for I/O modules (5 V)      | 1650 mA  |   |  |
| Isolation                                | 500 V system/supply                                |   |  |
| Voltage via power jumper contacts        | 24 V DC (-25 % ... +30 %)                          |   |  |
| Current via power jumper contacts (max.) | 10 A DC  |   |  |