

# EL1809 | EtherCAT Terminal, 16-channel digital input, 24 V DC, 3 ms

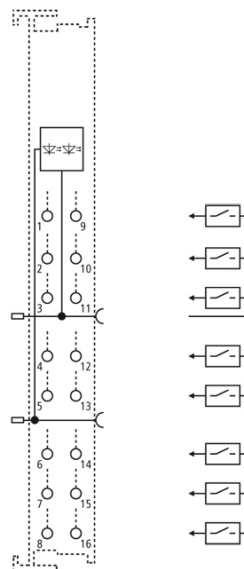
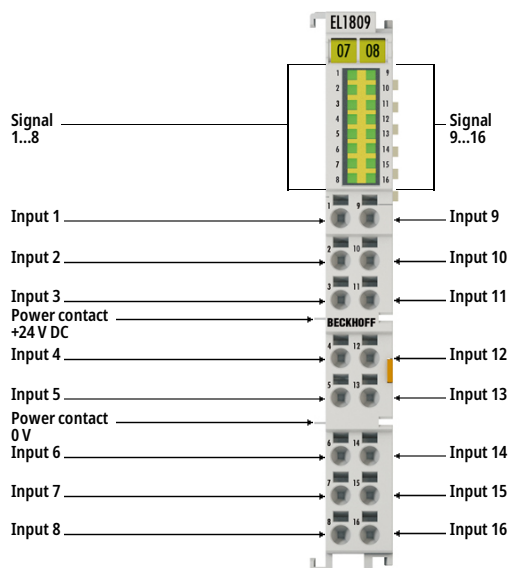


Image similar, may contain optional accessories

**i** **Product status:** regular delivery

The EL1809 digital input terminal acquires the binary 24 V control signals from the process level and transmits them, in an electrically isolated form, to the higher-level automation unit. The EtherCAT Terminal has 16 channels, whose signal states are indicated by LEDs. The power contacts are connected through. With the EL1809, the reference ground for all inputs is the 0 V power contact.

Special features:

- input specification type 1/3
- no bouncing due to mechanical switches thanks to 3 ms input filter
- tool-free connection by direct plug-in technique for solid wire conductors
- space-saving use in the control cabinet
- direct connection of multi-channel sensors in 1-wire connection technology in the smallest space
- increased packing density with 16 connection points in the housing of a 12 mm terminal block

## Product information

### Technical data

| Technical data        | EL1809               |
|-----------------------|----------------------|
| Connection technology | 1-wire               |
| Specification         | EN 61131-2, type 1/3 |

|                                    |                                                                                                 |
|------------------------------------|-------------------------------------------------------------------------------------------------|
| Number of inputs                   | 16                                                                                              |
| Nominal voltage                    | 24 V DC (-15%/+20%)                                                                             |
| "0" signal voltage                 | -3...+5 V (EN 61131-2, type 1/3)                                                                |
| "1" signal voltage                 | 11...30 V (EN 61131-2, type 3)                                                                  |
| Input current                      | typ. 3 mA (EN 61131-2, type 3)                                                                  |
| Input filter                       | typ. 3.0 ms                                                                                     |
| Distributed clocks                 | –                                                                                               |
| Current consumption power contacts | typ. 4 mA + load                                                                                |
| Current consumption E-bus          | typ. 100 mA                                                                                     |
| Electrical isolation               | 500 V (E-bus/field potential)                                                                   |
| Configuration                      | no address or configuration setting                                                             |
| Special features                   | standard terminal with high number of channels for slow 24 V DC edges, direct plug-in technique |
| Weight                             | approx. 65 g                                                                                    |
| Operating temperature              | -25...+60°C                                                                                     |
| Storage temperature                | -40...+85°C                                                                                     |
| Relative humidity                  | 95%, no condensation                                                                            |
| Vibration/shock resistance         | conforms to EN 60068-2-6/EN 60068-2-27                                                          |
| EMC immunity/emission              | conforms to EN 61000-6-2/EN 61000-6-4                                                           |
| Protect. rating/installation pos.  | IP20/variable (see documentation)                                                               |
| Approvals/markings                 | CE, CCC, UL, ATEX, IECEx                                                                        |
| Ex marking                         | ATEX:<br>II 3 G Ex ec IIC T4 Gc<br>IECEx:<br>Ex ec IIC T4 Gc                                    |

|                                   |                                                                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Housing data                      | EL-12-16pin                                                                                                                    |
| Design form                       | HD (High Density) housing with signal LEDs                                                                                     |
| Material                          | polycarbonate                                                                                                                  |
| Installation                      | on 35 mm DIN rail, conforming to EN 60715 with lock                                                                            |
| Side by side mounting by means of | double slot and key connection                                                                                                 |
| Marking                           | labeling of the BZxxxx series                                                                                                  |
| Wiring                            | solid conductors (s): direct plug-in technique; fine-stranded conductors (st) and ferrule (f): spring actuation by screwdriver |
| Connection cross-section          | s*: 0.08...1.5 mm <sup>2</sup> ,<br>st*: 0.25...1.5 mm <sup>2</sup> ,<br>f*: 0.14...0.75 mm <sup>2</sup>                       |

|                              |                                                       |
|------------------------------|-------------------------------------------------------|
| Connection cross-section AWG | s*: AWG28...16,<br>st*: AWG22...16,<br>f*: AWG26...19 |
| Stripping length             | 8...9 mm                                              |
| Current load power contacts  | I <sub>max</sub> : 10 A                               |
| Dimensions (W x H x D)       | 12 mm x 100 mm x 68 mm                                |

\*s: solid wire; st: stranded wire; f: with ferrule