## Types and Features

<table>
<thead>
<tr>
<th>Ident-No.</th>
<th>Type code</th>
<th>Description</th>
<th>Voltage supply connection</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>6814029</td>
<td>TBEN-S2-2RFID-4DXP</td>
<td>Compact multiprotocol RFID and I/O module with U data interface</td>
<td>5-pin, M8</td>
<td>32 x 130 x 45 mm</td>
</tr>
<tr>
<td>6814120</td>
<td>TBEN-L5-4RFID-8DXP-CDS</td>
<td>Programmable, compact multiprotocol RFID and I/O module with CODESYS 3 and U data interface</td>
<td>5-pin, 7/8”</td>
<td>60.4 x 230.4 x 39 mm</td>
</tr>
<tr>
<td>6814122</td>
<td>TBEN-L5-4RFID-8DXP-WIN</td>
<td>Programmable, compact multiprotocol RFID and I/O module with Windows Embedded Compact 2013 for implementation through system integrators</td>
<td>5-pin, 7/8”</td>
<td>60.4 x 230.4 x 39 mm</td>
</tr>
<tr>
<td>6814124</td>
<td>TBEN-L5-4RFID-8DXP-LNX</td>
<td>Programmable, compact multiprotocol RFID and I/O module with Linux for implementation through system integrators</td>
<td>5-pin, 7/8”</td>
<td>60.4 x 230.4 x 39 mm</td>
</tr>
<tr>
<td>6814126</td>
<td>TBEN-L5-4RFID-8DXP-OPC-UA</td>
<td>Programmable, compact multiprotocol RFID and I/O module with integrated OPC UA server</td>
<td>5-pin, 7/8”</td>
<td>60.4 x 230.4 x 39 mm</td>
</tr>
</tbody>
</table>

### Multiprotocol:
- EtherNet/IP™ device, Modbus TCP slave or PROFINET device
- EtherNet/IP™ device, Modbus TCP master/slave, or PROFINET device
- Communication with higher-level ERP or MES systems via TCP/IP

### Power Supply:
- Power supply via M8 connector
- Power supply via 7/8” connector
- Power supply via 7/8” connector

### Features:
- Multiprotocol: EtherNet/IP™ device, Modbus TCP slave or PROFINET device
- Multiprotocol: EtherNet/IP™ device, Modbus TCP master/slave, or PROFINET device
- Communication with higher-level ERP or MES systems via TCP/IP

- Windows Embedded Compact 2013 or Linux for implementation by system integrators
- CPU 800 MHz, 128 MB DDR3 RAM, flash memory 256 MB
- CPU 800 MHz, 512 MB DDR3 RAM, flash memory 256 MB
- PLC functionality via CODESYS 3 Programming languages: .Net, C++, C#
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### Connectivity:
- 2 x M8, 4-pin, Ethernet connection
- 2 x M12, 4-pin, D-coded, Ethernet fieldbus connection
- 2 x M12, 4-pin, D-coded, Ethernet fieldbus connection

### Interfaces:
- 2 digital channels, configurable as PNP inputs or 0.5 A outputs
- 8 digital channels, configurable as PNP inputs or 2 A outputs
- 8 digital channels, configurable as PNP inputs or 2 A outputs

### LED Displays and Diagnostics:
- LED displays and diagnoses
- LED displays and diagnoses
- LED displays and diagnoses

### Transmission Rates:
- Transmission rate: 10 Mbps/100 Mbps
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### Protection Classes:
- Protection classes IP65/IP67/IP69K
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Compact RFID Modules with I/Os

RFID integration must be easier to ensure seamless transparency in the industrial production of the future. Turck therefore presents new compact Ethernet RFID interfaces based on its block I/O families TBEN-L and TBEN-S. The multiprotocol devices use data from HF or UHF read/write heads for control via Profinet, Ethernet/IP or Modbus TCP.

**Customer benefits**
- **Turck multiprotocol**: EtherNet/IP™, Modbus TCP or PROFINET
- Easy integration with PLC systems with no special function block
- Execution of commands using RFID data interface
- Bus mode for operating up to 32 line-capable HF read/write heads per channel for static applications

**U data interface**
- Cyclical process data transmission
- Up to 128 bytes of user data per read/write cycle per channel and use of fragments for larger data volumes
- Various H/W and UI parameters can be selected depending on the application
- Automatic triggering and execution of commands on the HF/UHF read/write heads
- Evaluation of additional information such as RSSI in UHF applications
- Password functionality for HF and UHF
- Writing with validation of data
- Grouping of similar EPCs with multiple UHF data carriers
- Backup and restoration of the UHF read/write head configuration

**Application examples**
- Automatic identification of vehicles, systems, tools, workpieces and products
- Tracking of production processes
- Pick and place of goods
- Read/write even large data volumes (e.g. > 100)
- Product protection
- Container management
- Order control
- Authentication
- Tool and format changes
- Hose connections
- Gate applications (UHF) and fast recording rates, even with large data carrier volumes
- Industry 4.0 scenarios

**Multiprotocol**
The modules support Turck multiprotocol, and can therefore be integrated into any of the three Ethernet systems EtherNet/IP™, Modbus TCP and PROFINET. They also have an integrated web server.

**Bus mode**
HF bus mode for operating up to 32 line-capable HF read/write heads per channel for static applications.

**Mixed operation of HF and UHF**
HF read/write heads and an UHF read/write head can be operated in parallel on one module. It is also possible to connect additional sensors and tags via UHF.

**PLC functionality**
Decentralized execution of control tasks on CODESYS 3 as Field Logic Controller Function (FLC) in combination with the engineering environment ARGEE to relieve the control or autarkic use without higher-level control.

**Protection classes**
IP65/IP67/IP69K