Switching and controlling in the switch cabinet

| Relays
| Opto-coupler
| Solid state relays
| Intelligent interface technology
MIRO – INTERFACE TECHNOLOGY
MINIMUM SPACE – MAXIMUM FUNCTIONALITY

Application areas

- Manufacturing industry
- Plastic processing
- Building automation
- Automotive industry
- Process technology

MARKET REQUIREMENT

The intelligent modularity saves space and provides easy, flexible replaceability.

Be it in the manufacturing industry, building automation or process technology, the signals that are transferred between process peripherals and control systems must always be transmitted reliably and potential-free. These control concepts can be achieved in extremely confined spaces using Murrelektronik relay and opto-coupler modules.

These products ensure that your costs are reduced by increasing interference immunity and therefore improving the availability of machinery and system components. Slimline housing designs require less space and therefore reduce the size of your switch cabinet. The intelligent modularity of MIRO relays and opto-couplers using plug-on modules makes the replacement of switching elements both easy and low cost.
SWITCHING AND CONTROLLING IN THE SWITCH CABINET – ALL FROM A SINGLE SOURCE

RELAYS
- Single and multiple channels
- Potential bridging link
- Input/output relays
- Control 5...230 V AC/DC
- Slimline housing design
- Pluggable version
- Galvanic separation

OPTO-COUPLER
- Single and multiple channels
- Potential bridging link
- Overload protection
- 0.5...10 A DC
- Slimline housing design
- Pluggable version
- Galvanic separation
SOLID STATE RELAYS
- For AC voltage
- Single and multiple phases
- Zero voltage switch
- 0.5…30 A AC
- Pluggable version

INTELLIGENT INTERFACE MODULES
- Analog converters
- Comparator modules
- Temperature converters
- Pole changing switches
- Motor temperature monitoring
- Timer
**RELAYS**

**MIRO 6.2 pluggable**
- 6.2 mm slimline, pluggable relays
- Potential bridging link to input and output
- Sockets and plug modules available separately
- Input/output relays
- UL-approvals

**MIRO 6.2**
- 6.2 mm slimline coupling relays
- Potential bridging link to input and output
- H-O-A versions
- Input/output relays
- Different input voltages

**MIRO 12.4**
- 12.4 mm slimline, compact coupling relays
- Multi-channel variants
- Input/output relays
- Different input voltages

**OPTO-COUPLERS**

**MIRO 6.2 pluggable**
- 6.2 mm slimline, pluggable relays
- 2 A and 4 A opto-couplers
- Current limitation (4 A)
- Sockets and plug modules available separately
- Potential bridging link to input and output
**MIRO 6.2**
- 6.2 mm slimline coupling relays
- 0.5…10 A
- Potential bridging link
- up to 20 kHz

**SPECIAL VERSIONS**
- 10 A / 1 KHz power opto-coupler
- Multiple voltage versions

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**MIRO – the coupling module in terminal block format**
Coupling modules in the form of relay and opto-coupler modules are indispensable in controller and system construction. Coupling modules are needed for signal amplification, signal adaptation, potential separation, potential-free transfers to other parts of the system and for increasing interference immunity.

Using the MIRO range of modules will cut your costs and block out interference and overvoltage from PLC boards and construction cards. MIRO interface modules will increase the operational reliability of your system and reduce the size of your switch cabinet.

**MIRO – a wide range of products in the housing**
Regardless of whether they are relays (input and output relays), opto-couplers or intelligent converter modules – all modules are available with the same housing concept.

**MIRO – terminal relay – just 6.2 mm wide**
1 relay, 1 C/O contact with bridging link just 6.2 mm wide. The modules are suitable for clipping onto a 35 mm DIN-rail in accordance with EN 60175. The screw terminal or spring clamp terminal connection (Cage Clamp®) leaves nothing to be desired.

**MIRO – easy access**
The terminals are arranged in such a way that the connecting terminals are easy to access, even with high-level cable ducts.

**MIRO – pluggable**
If your application requires frequent switch element replacements, the MIRO 6.2 series is the answer. The relay or opto-coupler can be replaced.
SOLID STATE RELAYS

AC voltages can be switched without causing wear using triacs or thyristors as semiconductor switches. Solid state power switches are often a substitute for contactors in cases where frequent switching occurs. Zero voltage switches minimize the in-rush current and reduce the number of switching torque faults.

Example applications are: plastic processing, rubber processing, building heating, industrial furnace construction, the automotive industry and the food and drink industry.

**MIRO 6.2 triac**
- 6.2 mm wide housing
- Potential bridging link
- Pluggable version available
- With zero voltage switching
- Different input voltages
- 0.5...2 A

**MIRO triac**
- Single-phase
- 5...10 A
- With zero voltage switching
- Switching voltage up to 400 V AC
- Different input voltages

**MIRO triac**
- Single-phase, 2-phase and 3-phase
- 20...30 A
- With zero voltage switching
- Switching voltage up to 660 V AC
In measuring and control technology, many measuring signals occur that are needed for monitoring and indicating the status of mechanical processes. Before these measuring variables can be used by programmable logical controllers and process computers they must be converted into digital informationen or standardized signals (0…20 mA, 4…20 mA or 0…10 V).

**INTELLIGENT INTERFACE TECHNOLOGY**

**MIRO analog modules**
- U/U, U/I, I/I and I/U converters
- Comparator modules
- Temperature converters for PT100
- Potentiometer modules
- Pole-changing switches for DC motors

**MIRO 6.2 timer**
- Relay output and opto-coupler output
- Multifunctional modules
- Galvanic separation
- Adjustment per potentiometer and DIP-switch

**MIRO 6.2 plug module**
- Input/output relays
- Opto-coupler 2 A
- Opto-coupler 4 A with current limiting
- Solid state relays 230 V/0.5 A
- Impulse expansion module

**INFORMATION**
### Relay Modules

#### Output Relays

**MIRO 6.2**

1 C/O contact

**MIRO 6.2**

1 N/O contact

**Circuit Diagram**

Common connection up to max. 50 V AC/DC

At connection voltages of 110 and 230 V A2 does not feature potential sockets

**Ordering Data**

<table>
<thead>
<tr>
<th>Connection Voltage</th>
<th>Spring Clamp/Screw Terminals</th>
<th>Art.-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 V DC</td>
<td>cUL</td>
<td>6652050</td>
</tr>
<tr>
<td>24 V DC</td>
<td>UL + CSA</td>
<td>6652000</td>
</tr>
<tr>
<td>24 V AC/DC</td>
<td>UL + CSA</td>
<td>6652001</td>
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<td>48 V DC</td>
<td>UL + CSA</td>
<td>6652020</td>
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<tr>
<td>110 V AC/DC</td>
<td>UL + CSA</td>
<td>6652030</td>
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<td>230 V AC/DC</td>
<td>UL + CSA</td>
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</table>

**Technical Data**

Switching voltage 12…250 V AC/DC

Switching current 10 mA…6 A (switching capabilities to EN 60947-5-1)

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#### Input Relays

**MIRO 6.2**

1 C/O contact

**MIRO 6.2**

1 N/O contact

**Circuit Diagram**

Common connection up to max. 50 V AC/DC

At connection voltages of 110 and 230 V A2 does not feature potential sockets

**Ordering Data**

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</tr>
</thead>
<tbody>
<tr>
<td>24 V DC</td>
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<td>24 V AC/DC</td>
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<td>48 V DC</td>
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**Technical Data**

Switching voltage 12…250 V AC/DC

Switching current 1 mA…50 mA (when the listed values are exceeded the gold plating is destroyed, then will take on the properties of an output type)
**RELAY MODULES**

**Output relays**
- **MIRO 6.2**
  - 1 N/O contact with protected H-O-A switch
- **MIRO 6.2**
  - 1 C/O contact with isolation function
- **MIRO 6.2**
  - 1 N/O contact with soldering terminal

**Circuit diagram**
- Common connection up to max. 50 V AC/DC
- At connection voltages of 110 and 230 V A2 does not feature potential sockets

**Ordering data**

<table>
<thead>
<tr>
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<td>24 V DC</td>
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<td>3000-16013-2100010</td>
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<tr>
<td>24 V AC/DC</td>
<td></td>
<td>UL + CSA</td>
<td>3000-16013-3100010</td>
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<td>UL + CSA</td>
<td>3000-16013-3100030</td>
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</tbody>
</table>

**Technical data**
- Switching voltage: 12...250 V AC/DC
- Switching current: 10 mA...6 A (switching capabilities to EN 60947-5-1)

**Pluggable relays**
- **MIRO 6.2 pluggable**
  - Output relay, 1 C/O contact
- **MIRO 6.2 Plug module**
  - Output relay, 1 C/O contact
- **MIRO 6.2 Plug module**
  - Input relay, 1 C/O contact

**Circuit diagram**
- To be used with
  - Art.-No. 3000-16013-2100010
  - Art.-No. 3000-16013-3100020

**Ordering data**

<table>
<thead>
<tr>
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<td>24 V DC</td>
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<td>24 V AC/DC</td>
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<td>3000-16013-3100020</td>
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<td>3000-16023-3100020</td>
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<td>60 V DC</td>
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<td>60 V DC</td>
<td>UL + CSA</td>
<td>3000-16013-3100030</td>
<td>UL + CSA</td>
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**Technical data**
- Switching voltage: 12...250 V AC/DC
- Switching current: 10 mA...6 A (switching capabilities to EN 60947-5-1)
## RELAY MODULES

### Output relays

**MIRO 12.4**
- 2 C/O contacts with enhanced features

### Circuit diagram

At connection voltages of 110 and 230 V, A2 does not feature potential sockets.

### Ordering data

<table>
<thead>
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<td>24 V AC/DC cUL</td>
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<td>48 V DC cUL</td>
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<td>230 V AC/DC cUL</td>
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### Technical data

- Switching voltage: 12...250 V AC/DC
- Switching current: 10 mA...6 A (when the listed values are exceeded, the gold plating is destroyed, then will take on the properties of an output type)
- Max. power rating (voltage dependent): 1500 VA/120 W

### Input relays

**MIRO 12.4**
- 2 C/O contacts with enhanced features

### Circuit diagram

At connection voltages of 110 and 230 V, A2 does not feature potential sockets.

### Ordering data

<table>
<thead>
<tr>
<th>Connection voltage</th>
<th>Art.-No.</th>
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<tbody>
<tr>
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<td>24 V AC/DC cUL</td>
<td>6652111</td>
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<td>48 V DC cUL</td>
<td>6652126</td>
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<td>6652136</td>
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<td>230 V AC/DC cUL</td>
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### Technical data

- Switching voltage: 12...250 V AC/DC
- Schaltstrom: 1 mA...50 mA (when the listed values are exceeded, the gold plating is destroyed, then will take on the properties of an output type)
- Max. power rating (voltage dependent): 1500 VA/120 W
**OPTO-COUPLE MODULES**

**Transistor output**
- **MIRO 6.2**
  - Transistor 0.5 A
  - Transistor 2 A
  - Transistor 10 A
- **MIRO 6.2**
  - Transistor 10 A
  - Overload and short-circuit protected

**Circuit diagram**
- Common connection up to max. 50 V AC/DC

**Ordering data**

<table>
<thead>
<tr>
<th>Connection voltage</th>
<th>MIRO 6.2</th>
<th>MIRO 6.2</th>
<th>MIRO 6.2</th>
<th>MIRO 6.2</th>
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<tbody>
<tr>
<td>5 V DC</td>
<td>spring clamp/screw terminals</td>
<td>spring clamp/screw terminals</td>
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<td>spring clamp/screw terminals</td>
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<td>UL + CSA</td>
<td>6652500</td>
<td>UL + CSA</td>
<td>6652501</td>
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<tr>
<td>48 V DC</td>
<td>UL + CSA</td>
<td>6652505</td>
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<td>6652508</td>
</tr>
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<td>110 V AC/DC</td>
<td>UL + CSA</td>
<td>6652506</td>
<td>UL + CSA</td>
<td>6652508</td>
</tr>
<tr>
<td>230 V AC</td>
<td>UL + CSA</td>
<td>6652507</td>
<td>UL + CSA</td>
<td>6652508</td>
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</table>

**Technical data**
- Switching voltage: 5…48 V DC
- Switching current: 0.1 mA…0.5 A  1 mA…2 A  1 mA…10 A  1 mA…10 A

**Fast transistor output**
- **MIRO 6.2**
  - Transistor 2 A
  - Transistor 0.5 A
  - Transistor 0.5 A
  - Transistor 2 A
- **MIRO 6.2**
  - Control current 0.1 mA
  - Short-circuit protected
  - Maximum switching frequency 20 kHz

**Circuit diagram**
- Common return for NC

**Ordering data**

<table>
<thead>
<tr>
<th>Control voltage input</th>
<th>MIRO 6.2</th>
<th>MIRO 6.2</th>
<th>MIRO 6.2</th>
<th>MIRO 6.2</th>
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<tbody>
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<td>spring clamp/screw terminals</td>
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<tr>
<td>10…35 V DC</td>
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<td>6652512</td>
<td>UL + CSA</td>
<td>6652510</td>
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<td>48 V DC</td>
<td>UL + CSA</td>
<td>6652511</td>
<td>UL + CSA</td>
<td>6652503</td>
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</table>

**Technical data**
- Switching voltage: 5…48 V DC
- Switching current: 0.1 mA…2 A overload protection  0.1 mA…0.5 A  1 mA…2 A short-circuit protected
### OPTO-COUPLER MODULES

**Transistor output**
- MIRO 6.2 pluggable
  - Transistor 2 A
- MIRO 6.2 plug module
  - Transistor 2 A
- MIRO 6.2 pluggable
  - Transistor 4 A
- MIRO 6.2 plug module
  - Transistor 4 A

**Circuit diagram**

<table>
<thead>
<tr>
<th>Component</th>
<th>MIRO 6.2 pluggable</th>
<th>MIRO 6.2 plug module</th>
<th>MIRO 6.2 pluggable</th>
<th>MIRO 6.2 plug module</th>
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**Ordering data**

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<th>MIRO 6.2 plug module</th>
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<tbody>
<tr>
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<td>24 V</td>
<td>30 V</td>
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**Technical data**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>MIRO 6.2 pluggable</th>
<th>MIRO 6.2 plug module</th>
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<th>MIRO 6.2 plug module</th>
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<tbody>
<tr>
<td>DC</td>
<td>24 V</td>
<td>24 V</td>
<td>24 V</td>
<td>30 V</td>
</tr>
</tbody>
</table>

### SOLID STATE RELAYS

**Triac output**
- MIRO 6.2 pluggable
  - Triac 0.5 A
- MIRO 6.2 plug module
  - Triac 0.5 A
- MIRO 6.2
  - Triac 0.5 A
- MIRO 6.2
  - Triac 1 A

**Zero voltage switch**

**Circuit diagram**

<table>
<thead>
<tr>
<th>Component</th>
<th>MIRO 6.2 pluggable</th>
<th>MIRO 6.2 plug module</th>
<th>MIRO 6.2</th>
<th>MIRO 6.2</th>
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</thead>
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**Ordering data**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>MIRO 6.2 pluggable</th>
<th>MIRO 6.2 plug module</th>
<th>MIRO 6.2</th>
<th>MIRO 6.2</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC</td>
<td>5 V</td>
<td>5 V</td>
<td>115 V</td>
<td>230 V</td>
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</table>

**Technical data**

<table>
<thead>
<tr>
<th>Voltage</th>
<th>MIRO 6.2 pluggable</th>
<th>MIRO 6.2 plug module</th>
<th>MIRO 6.2</th>
<th>MIRO 6.2</th>
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<tbody>
<tr>
<td>AC</td>
<td>5 V</td>
<td>5 V</td>
<td>115 V</td>
<td>230 V</td>
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- To be used with
  - Art.-No. 3000-32512-2100010
  - Art.-No. 3000-32522-2100010
  - Art.-No. 3000-32512-2100020
  - Art.-No. 3000-34013-2100010
- UL

- To be used with
  - Art.-No. 3000-69012-2100050

- To be used with
  - Art.-No. 3000-69011-2100050

- To be used with
  - Art.-No. 3000-69012-2100050

- To be used with
  - Art.-No. 3000-32512-2100020
SOLID STATE RELAYS

Triac output

Zero voltage switch

Circuit diagram

Ordering data

Control voltage input  
24 V DC  
UL  
<table>
<thead>
<tr>
<th>Screw terminals</th>
<th>Art.-No.</th>
<th>Screw terminals</th>
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<tbody>
<tr>
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<td>UL</td>
<td>50092</td>
<td>3000-36001-2000020</td>
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</tbody>
</table>

Technical data

Switching voltage  
24 V…280 V AC  
12 V…400 V AC

Surge current  
10 mA…5 A  
100 mA…10 A

MIRO triac

Triac 2 x 25 A

MIRO triac

Triac 3 x 20 A

Ordering data

Control voltage input  
24 V DC  
UL/cUL  
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>24 V DC</td>
<td>UL/cUL</td>
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<td>3000-36001-2000050</td>
<td>3000-36001-2000060</td>
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</tr>
</tbody>
</table>

Technical data

Switching voltage  
42 V…660 V AC

Switching current  
30 A  
2 x 25 A  
3 x 20 A

Surge current  
400 A  
500 A
### Analog Converters

#### Wood 6.2
- **Input**: 0...10 V DC

#### Mak 6.2
- **Input**: 0...20 mA

#### Mik 6.2
- **Input**: 4...20 mA

#### Circuit Diagram

#### Ordering Data

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>0...10 V DC/20 mA</td>
<td>6644205</td>
<td>6644212</td>
<td>6644213</td>
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<tr>
<td>0...20 mA</td>
<td>6644232</td>
<td>6644226</td>
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<tr>
<td>4...20 mA</td>
<td>6644233</td>
<td>6644228</td>
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</table>

#### Technical Data
- **Supply Voltage**: 24 V DC
- **Input Resistance**: approx. 200 kOhm; approx. 250 Ohm
- **Output Load**: $R_L \geq 500$ Ohm at output voltage; $R_L \leq 500$ Ohm at output current

### Comparator Modules

#### MAK
- **Input Signal, Voltage DC**

#### Miro 12.4
- **Potentiometer**

#### Circuit Diagram

#### Ordering Data

<table>
<thead>
<tr>
<th>Input, Voltage DC</th>
<th>Art.-No.</th>
<th>Art.-No.</th>
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</thead>
<tbody>
<tr>
<td>Spring clamp/screw terminals</td>
<td>6644110</td>
<td>3000-62004-8200010</td>
</tr>
</tbody>
</table>

#### Technical Data
- **Supply Voltage**: 24 V DC
- **Input Resistance**: > 2.5 Mohm
- **Input Range**: 470 Ohm...10 kOhm
- **Output**: 3 transistor outputs
- **Description**: The comparator is designed to convert resistive load into a voltage signal. A higher linearity will be achieved due to a lower loop stream. The sensor cables are monitored for line breaks and short-circuits.

### Potentiometer Converter

#### Circuit Diagram

#### Ordering Data

<table>
<thead>
<tr>
<th>Input, Voltage DC</th>
<th>Art.-No.</th>
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<tbody>
<tr>
<td>Spring clamp/screw terminals</td>
<td>6644110</td>
</tr>
</tbody>
</table>

#### Technical Data
- **Supply Voltage**: 24 V DC
- **Input Range**: 0...10 V
- **Description**: The potentiometer converter is designed to convert resistive load into a voltage signal. A higher linearity will be achieved due to a lower loop stream. The sensor cables are monitored for line breaks and short-circuits.
INTELLIGENT INTERFACE TECHNOLOGY

Temperature converters for PT100 sensors

MTW 12.4
2/3-wire

Ordering data

<table>
<thead>
<tr>
<th>Temperature Range</th>
<th>Art.-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>−50...+50 °C</td>
<td>6644330</td>
</tr>
<tr>
<td>−50...+150 °C</td>
<td>6644331</td>
</tr>
<tr>
<td>0...100 °C</td>
<td>6644332</td>
</tr>
<tr>
<td>0...200 °C</td>
<td>6644334</td>
</tr>
<tr>
<td>0...600 °C</td>
<td>6644336</td>
</tr>
</tbody>
</table>

Technical data

- Supply voltage range: 20...30 V DC, smoothed
- Cable resistance (without PT100) at 3-wire technology max. 100 Ohm
- Output signals at 0...10 V DC max. 25 mA, overload protected
- At 4...20 mA max. 500 Ohm R_L
- Tolerance: ±1 % from end value

Circuit diagram

Motor control

Pole changing switches

MIRO 12.4
Pole changing switches for DC motors

Ordering data

<table>
<thead>
<tr>
<th>Control Voltage</th>
<th>Art.-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V DC</td>
<td>6650140</td>
</tr>
</tbody>
</table>

Technical data

- Switching voltage: 19.2...30 V DC
- Switching current: 3 A

Circuit diagram
**INTELLIGENT INTERFACE TECHNOLOGY**

**MCVO Motor monitoring with thermal triggering**

1 relay; 2 C/O contacts

**Ordering data**

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Supply voltage</th>
<th>Technical data</th>
<th>Function diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>51010</td>
<td>screw terminals</td>
<td>Switching voltage 250 V AC/DC</td>
<td>The thermal triggering device monitors motors which are equipped with PTC resistor sensors to DIN 44081. Temperature resistors will be serial switched and galvanically isolated connected to terminals T1 and T2. Minimal changes of temperature will trip the relay. A red LED shows the fault optically. A bridge link X1/T2 enables fault latching. Via bridge S1/T2, remote resetting can be realized.</td>
</tr>
<tr>
<td></td>
<td>24 V DC</td>
<td>Switching current 10 mA…8 A</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total cold resistance (between T1 and T2) ≤ 1.5 kOhm</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Operate / reset 2.5…3.6 kOhm (relay de-energize) / 1.5…2.3 kOhm (relay energize)</td>
<td></td>
</tr>
</tbody>
</table>

**Circuit diagram**

![Circuit diagram](image)

**Ordering data**

<table>
<thead>
<tr>
<th>Art.-No.</th>
<th>Supply voltage</th>
<th>Technical data</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>spring clamp terminals</td>
<td>Switching voltage 24 V DC</td>
</tr>
<tr>
<td></td>
<td>24 V DC</td>
<td>Switching current 0.1 mA...100 mA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Time range 40 ms</td>
</tr>
</tbody>
</table>
**INTELLIGENT INTERFACE TECHNOLOGY**

**Timer**
- **MIB 6.2 mm**
  - Transistor output
  - One shot

- **MIRO 6.2 timer**
  - Relay output
  - Switch on delay

- **MIRO 6.2 timer**
  - Relay output
  - Switch off delay

**Circuit diagram**

**Ordering data**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V DC</td>
<td>spring clamp/screw terminals</td>
<td>spring clamp/screw terminals</td>
<td>spring clamp/screw terminals</td>
</tr>
<tr>
<td>UL + CSA</td>
<td>6652320</td>
<td>UL + CSA</td>
<td>6652300</td>
</tr>
</tbody>
</table>

**Technical data**

<table>
<thead>
<tr>
<th>Switching voltage</th>
<th>Switching current</th>
<th>Time range</th>
</tr>
</thead>
<tbody>
<tr>
<td>12...250 V AC/DC</td>
<td>1 mA...100 mA</td>
<td>100 ms...10 sec</td>
</tr>
<tr>
<td>10 mA...6 A</td>
<td></td>
<td>10 ms...10 sec</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ms...100 sec</td>
</tr>
</tbody>
</table>

**Timer multifunction**

- One shot
- Switch on delay
- Switch off delay
- Modulation

**Circuit diagram**

**Ordering data**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V DC</td>
<td>3000-18512-0200010</td>
<td>3000-18513-0200013</td>
<td>6652350</td>
</tr>
<tr>
<td>24 V DC</td>
<td>3000-18502-0200010</td>
<td>3000-18503-0200012</td>
<td></td>
</tr>
</tbody>
</table>

**Technical data**

<table>
<thead>
<tr>
<th>Switching voltage</th>
<th>Switching current</th>
<th>Time range</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 V DC</td>
<td>1 mA...100 mA</td>
<td>10 ms...10 sec</td>
</tr>
<tr>
<td>10 mA...6 A</td>
<td></td>
<td>100 ms...100 sec</td>
</tr>
<tr>
<td></td>
<td></td>
<td>100 ms...300 sec</td>
</tr>
</tbody>
</table>
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