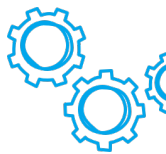


PBM V0060

The power distribution system has been designed to accommodate plug-in type thermal 1170-21, 1180 and 1610 circuit breakers. It is designed as printed circuit board module for rail mounting. Typical applications are mainly in control cabinets for utility vehicles and special vehicles and for mobile construction machinery. The current supplied by a power supply is distributed onto 5 ways/slots. There are two LEDs for each circuit breaker. When the circuit breaker has tripped, the red LED lights up. The green LED is lighted when the circuit breaker is in ON condition. The distribution module generates a group signalling. This signal can be enquired via a potential-free relay. The jumpers allow bridging the signalling for individual circuit breakers if those are not fitted.



### TYPICAL FEATURES

- Power distribution system for rail mounting
- Rated voltage DC 12 V / DC 24 V
- max. 25 A per load channel
- Different circuit breakers can be plugged in
- Signalling via relays and LEDs

### YOUR BENEFITS

- Space savings through PCB technology
- Clear circuit breaker status indication
- Quick and easy mounting
- Easy and weight-optimised cable management

### PREFERRED TYPES

Preferred types are E-T-A products, which are most frequently used by our customers. We manufacture these preferred types in substantial quantities. [You can find an overview of our preferred types here \(Page 3\).](#)

### TYPICAL APPLICATIONS

Automation technology, boats & vehicles, motor vehicles, utility vehicles, rail vehicles

### COMPLIANCE



### WEB LINKS

[Further information](#), [International approvals](#), [Technical basics](#), [REACH](#), [RoHS](#), [Contact](#)

### GENERAL INFORMATION

#### SAFETY AND INSTALLATION INSTRUCTIONS



- The circuit breakers must only be plugged in or removed in the OFF condition!
- The max. supply current of the individual printed circuit boards must be observed when looping through several distribution modules!
- The LEDs and the signalling require a mass potential (0 V), max. 2 A connected via spring-loaded terminals up to 2.5 mm<sup>2</sup> (1.5 mm<sup>2</sup> with wire end ferrule with plastic collar), a second terminal allows looping through.
- Other population versions or voltage ratings are available upon request.
- Circuit breakers are not included in the scope of delivery.

### TECHNICAL DATA

#### ELECTRICAL DATA

**Rated voltage U<sub>n</sub>** 12 V DC, 24 V DC

#### MECHANICAL DATA

**Mounting dimensions (WxHxD)** 121 x 92.3 x 66.2 bis 94 mm (l x w x h)

#### SUPPLY

**Total current per supply** Max. 75 A

**Terminals / Cable cross section** Spring-loaded terminals up to 16 mm<sup>2</sup>  
(10 mm<sup>2</sup> with wire end ferrule with plastic collar), a second terminal enables further looping

#### LOADS

**Rated current per load channel** Max. 25 A

**Terminals / Cable cross section** 5 channels per channel 3 terminals  
Spring-loaded terminals up to 6 mm<sup>2</sup>  
(Spring-loaded terminals up to 4 mm<sup>2</sup> for wire end ferrule with plastic collar)

#### GROUP SIGNALLING

**Parallel connection** Changeover contact 0.5 A (12 V DC / 24 V DC)  
Spring-loaded terminal up to 2.5 mm<sup>2</sup>  
(Spring-loaded terminals 1.5 mm<sup>2</sup> for wire end ferrule with plastic collar)

#### AMBIENT CONDITIONS

**Ambient temperature** -20...+70 °C (PCB protected against condensation by surface coating)

### ORDERING NUMBER CODE

P	B	M	-	1	1	7	0	-	0	5	-	V	0	0	6	0	-	A		
				1					2			3				4				5

#### 1 TYPE NUMBER

PBM Power distribution system

#### 2 DEVICE TYPE

1170 Thermal circuit breaker

#### 3 VERSION, MAX. NUMBER OF CIRCUIT PROTECTORS ON THE DISTRIBUTION SYSTEM

05 Number of slots

#### 4 VERSION

V0060 Special version

### 5 SIGNALLING

A	Version A with signalling, red LED, 24 V DC
B	Version B with signalling, green and red LED, 24 V DC
C	Version C without signalling, without LED, 12 V DC / 24 V DC
D	Version D with signalling, green and red LED, 12 V DC

Looking for a customer-specific version you cannot find in our ordering number code? Please get in touch with us. Circuit protectors are not included in the delivery scope.

### PREFERRED TYPES

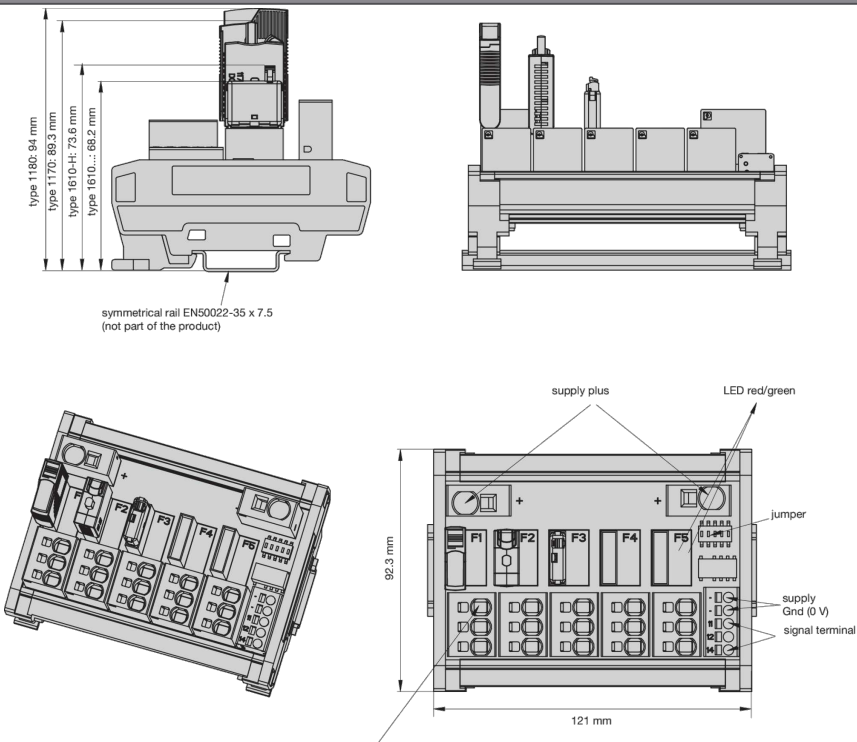
Preferred types	Short description
PBM-1170-05-V0060-B	With signalling (relay). With green and red LED 24 V DC
PBM-1170-05-V0060-D	With signalling (relay). With green and red LED 12 V DC

### TIME-/CURRENT CHARACTERISTICS

Rated current $I_n$ [A]	Max. load current at 100 % ED [A]		
	Ambient	$T_a = 60\text{ °C}$	$T_a = 70\text{ °C}$
Supply Rated current $I_n$ [A]	75 A	60 A	50 A
Load output Rated current $I_n$ [A]	25 A	18.5 A	16 A

### DIMENSIONS

#### DIMENSIONS

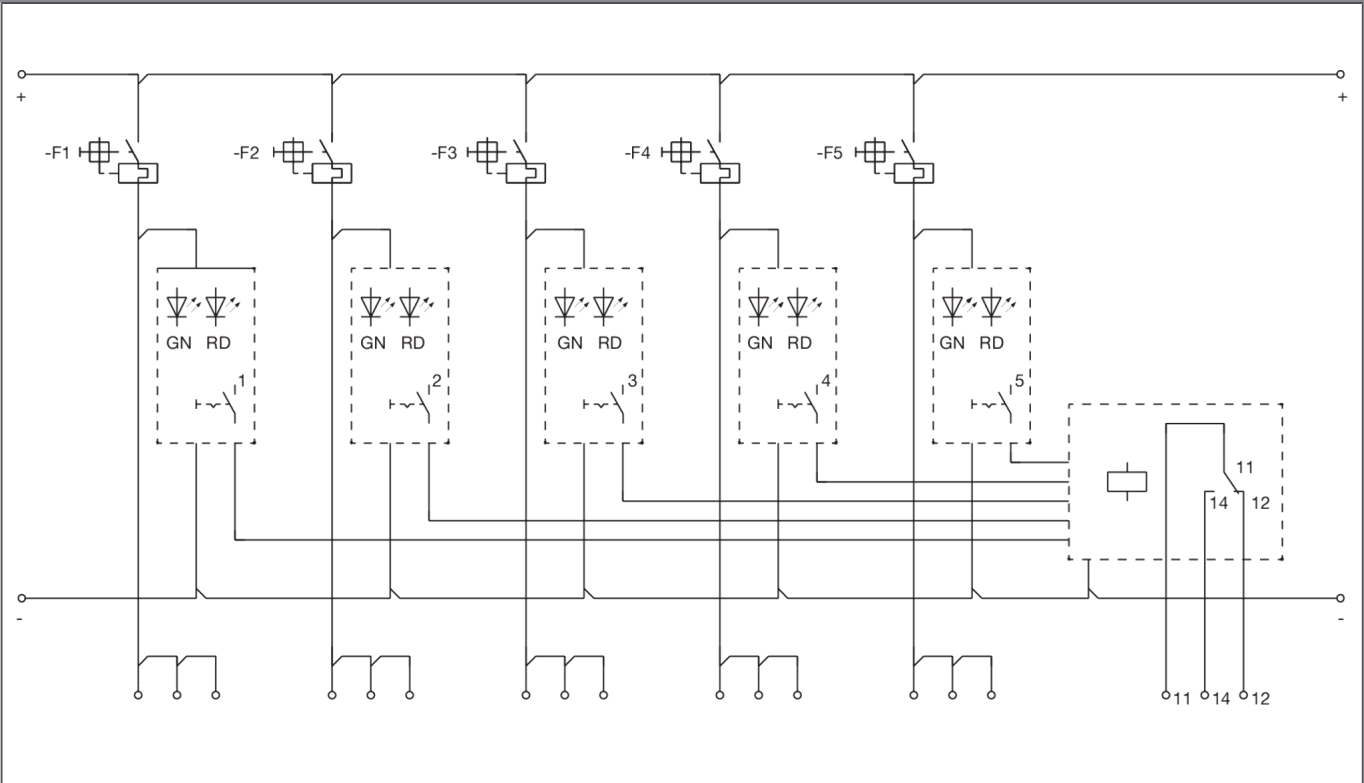


Technical drawings showing dimensions and components of the power board module:

- Dimensions for different types:
  - type 1160: 94 mm
  - type 1170: 89.3 mm
  - type 1610-H: 73.6 mm
  - type 1610...: 68.2 mm
- symmetrical rail EN50022-35 x 7.5 (not part of the product)
- Dimensions: 92.3 mm (height), 121 mm (width)
- Components labeled: supply plus, LED red/green, jumper, supply Gnd (0 V), signal terminal, load terminals, Plug-in modules (circuit breakers) have to be ordered separately.






### SCHEMATIC DIAGRAMS

#### SCHEMATIC DIAGRAM



### FURTHER PRODUCTS

#### RELATED PRODUCTS

<p><a href="#">1170</a></p>	<p>Compact single pole thermal circuit breaker with colour coded manual release. Independent trip-free and snap action mechanisms ensure a reliable switching behaviour. Plug-in type for standard automotive fuse blocks.</p> <p>The 1176 device version is specifically designed for the automotive sector (rated currents correspond to those of the flat fuse series).</p>	
<p><a href="#">1180</a></p>	<p>Miniaturised single pole thermal circuit breaker with switching function optional (push-push actuation). Independent trip-free and snap action mechanisms ensure a reliable switching behaviour. Corresponds to the EN 60934 (IEC 60934) standard: S-type, TO. Can be plugged into fuse terminal blocks for DIN rail mounting.</p>	
<p><a href="#">1610-21</a></p>	<p>Single pole thermal automotive circuit breaker in a miniaturised design, colour coded housing caps or manual release buttons are optionally available. Also available with automatic reset for 12 V. In the terminal area optionally with blade fuse inserts according to DIN 72581 part 3.</p>	
<p><a href="#">1610-92</a></p>	<p>Single pole thermal automotive circuit breaker in a miniaturised design, colour coded housing caps or manual release buttons are optionally available. Also available with automatic reset for 12 V. In the terminal area optionally with blade fuse inserts according to DIN 72581 part 3.</p>	
<p><a href="#">1610-H2</a></p>	<p>Single pole thermal automotive circuit breaker in a miniaturised design, colour coded housing caps or manual release buttons are optionally available. Also available with automatic reset for 12 V. In the terminal area optionally with blade fuse inserts according to DIN 72581 part 3.</p>	

*All information and data given on our products are accurate and reliable to the best of our knowledge, but E-T-A does not accept any responsibility for the use in applications which are not in accordance with the present specification. E-T-A reserves the right to change specifications at any time in the interest of technical improvement. Dimensions are subject to change without notice. Please enquire for the latest dimensional drawing with tolerances if required. All dimensions, data, pictures and descriptions are for information only and are not binding. Amendments, errors and omissions excepted. Ordering part numbers may differ from the device marking.*