H 7020

# H 7020: Terminal Module

- For connection between the I/O modules and the field level
- For DIN-Rail mounting

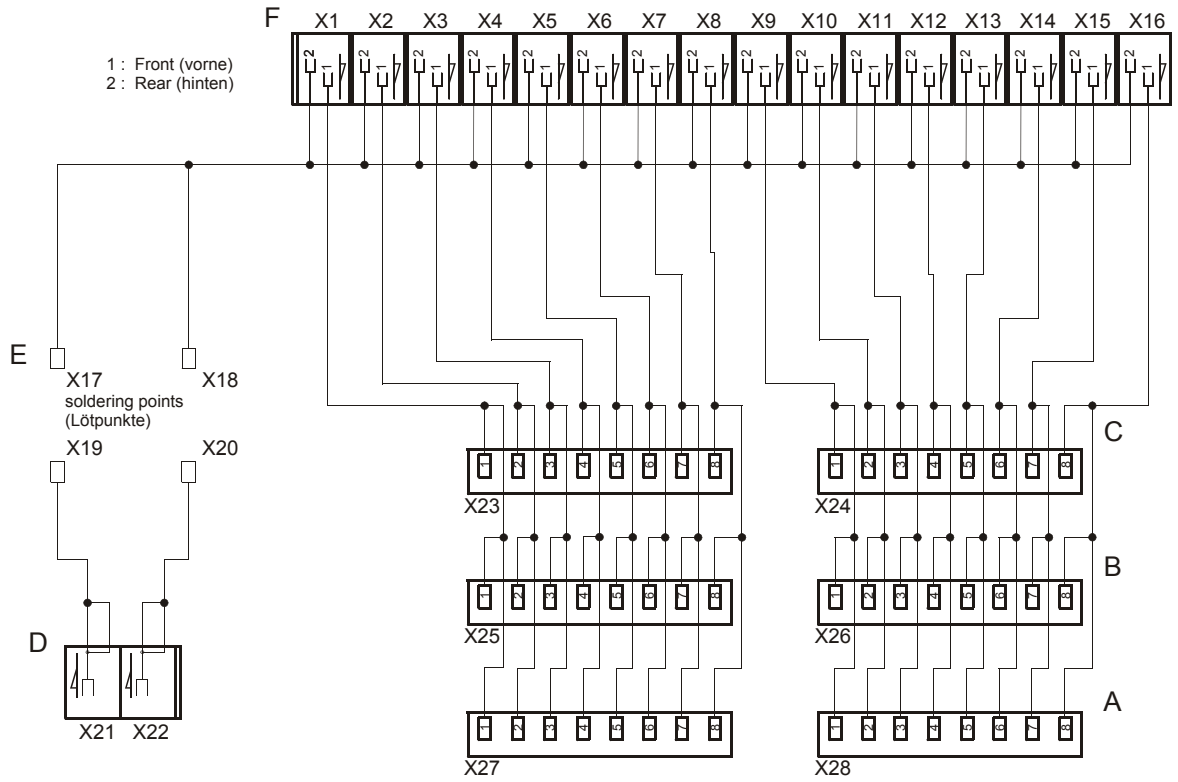


**Figure 1: Block Diagram**

## Technical Data

| | | |
|---|---|---|
| Permissible voltage | | max. 48 VDC, 30 VAC SELV or PELV |
| Current per channel | X1...X16 | 2 A |
| | X21...X22 | 4 A |
| Total current (X1-X16) | | max. 16 A |
| Cross section | A, B, C | 0.2...1.5 $mm^2$ (Combicon Connector) |
| | D, F | 0.2...1.5 $mm^2$ |
| Ambient temperature range | | -20°C to +50°C |
| Dimension (L x W x H) | | 90 mm x 91.5 mm x 60 mm |
| Mounting | | on 35 mm DIN-Rail |
| Weight | | ca. 130 g |
| Installation orientation | | horizontally or vertically, installation clearance is not necessary |

### Wiring on the Terminal Module

| Designator | Type | | Contact | |
|---|---|---|---|---|
| F | X1 - X16 | double-level terminal<br>spring-cage connection | 16x | 1-pin |
| E | X17 - X20 | soldering points (for soldering of jumpers or diodes) | 4x | |
| D | X21 - X22 | terminal<br>spring-cage connection | 2x | 1-pin |
| A, B, C | X23 - X28 | Phoenix Headers<br><br>Accessories:<br>Phoenix Combicon Connector<br>FK-MCP 1,5/8-ST-3,81<br>HIMA Part-No. 52 0000 002 | 6x | 8-pin |

**Table 1: Wiring on the Terminal Module**

### Diodes for inverse polarity protection

For wiring with input modules diodes are soldered between X17/X19, X18/X20.

| | |
|---|---|
| Diode | 1N5624 3A / 200 VDC<br>HIMA Part-No. 26 8200 015 |

### Mechanical Design

The designators (L+,L-) on the labels D and F are project dependent.

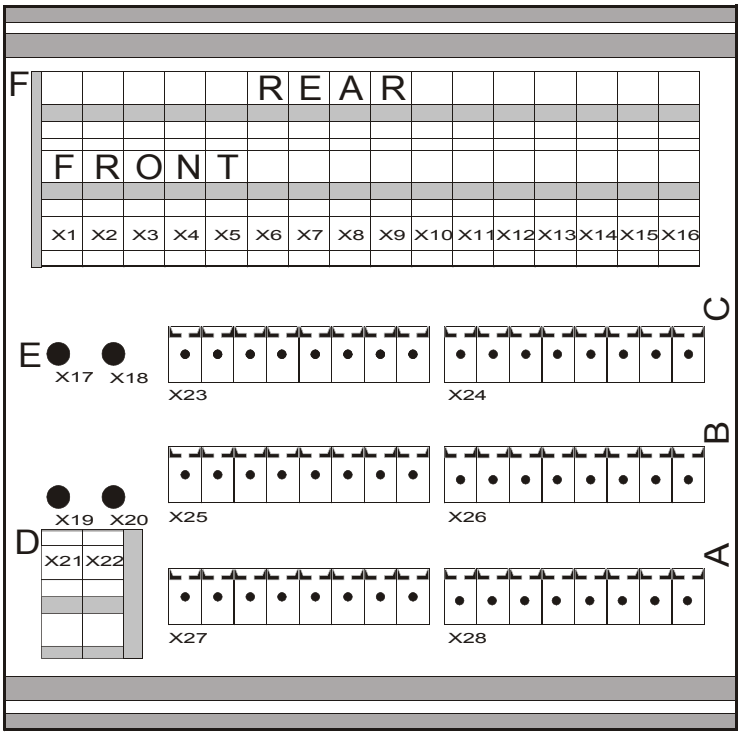


**Figure 2: Mechanical Design H 7020**

**Applications for the Terminal Module H 7020**

The terminal module is used to interconnect I/O modules single pole or double pole, redundant or mono and connect them with the field level. The terminal module can be mounted on DIN-Rails in control cabinets or in marshalling cabinets. Field cables can be attached directly from the field level to the clamps "F" of the terminal module. The advantage of the H 7020 terminal module is the complete connection of the I/O modules to the terminal module via confectioned Combicon connectors. The Combicon connector is used for a fast connection between the Terminal Module and other modules.

**Wiring of H 7020 single pole redundant with F 3236 input modules**

Both digital input modules F 3236 are each redundantly connected single pole to the terminal module via a 16-wire system cable. The following figures show redundant wiring of F 3236 input modules in a combined control and marshalling cabinet or in separate cabinets.

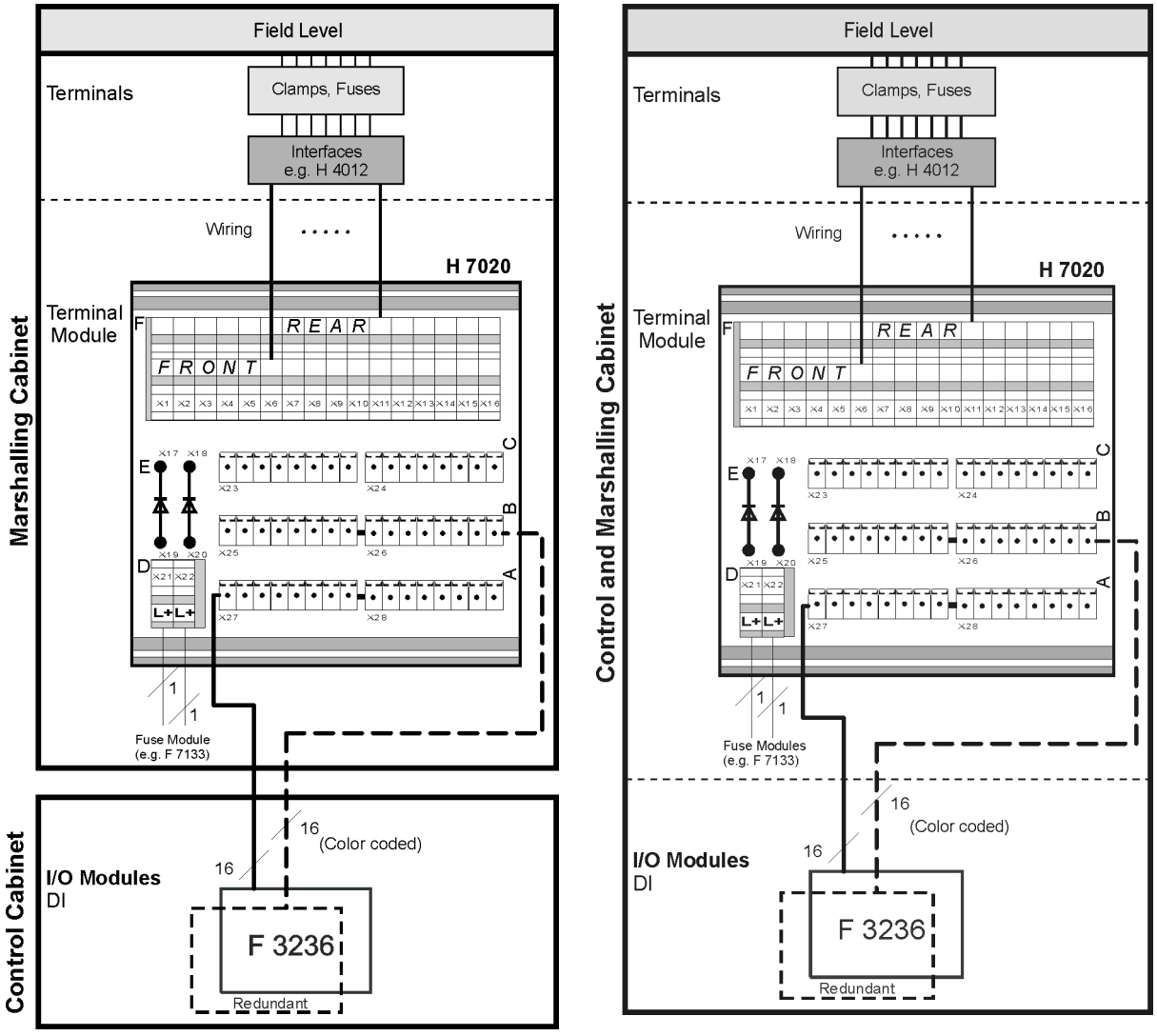


**Figure 3: Single pole redundant wiring via H 7020**

| | |
|---|---|
| **Note** | The voltage supply L+ for the sensors and contact makers must be wired separately to the fuse module (e.g. F 7133). The fuse module is connected to clamp "D". |

The wires of the two system cables are color coded and are clamped to Combicon connectors. For inverse polarity protection diodes are soldered between soldering points (X17/X19 and X18/X20) of the terminal module, if input modules are connected to the terminal module. The clamps "D" (headers X23 and X24) are used for test purposes.

**Wiring of H 7020 single pole mono with output modules F 3330**

Two digital output modules F 3330 are connected to the field level via terminal module H 7020. The two 8-wire system cables are connected single pole to the clamps "A" of the terminal module. The following figures show single pole wiring of two F 3330 output modules in a combined control and marshalling cabinet or in separate cabinets.

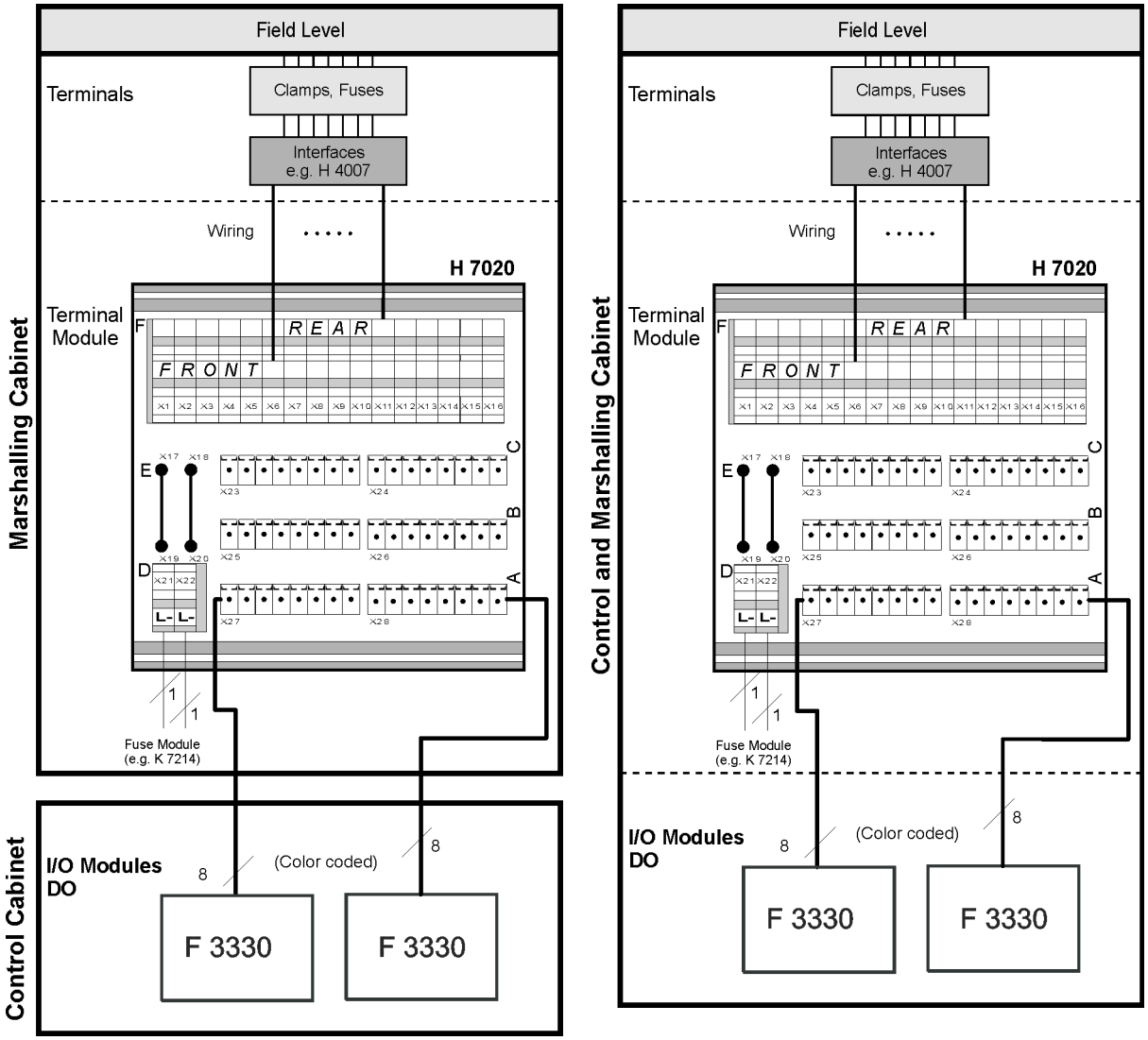


**Figure 4: Single pole mono wiring via H 7020**

| | |
|---|---|
| **Note** | The reference potential L- should be wired separately to a central distribution (e.g. K 7214). The distribution is connected to clamp "D". |

The wires of the two system cables are color coded and are clamped to Combicon connectors. For output modules the soldering points are only jumpered, different than for input modules.

**Wiring of H 7020 redundant with analog output modules F 6217**

Analog modules can be connected to the field level by the terminal module H 7020 the same way as digital modules. In the following example, the analog input modules F 6217 are connected redundantly to each other by the cable plug Z 7127 and the system cable. It is also possible to connect the I/O modules redundantly via voltage divider or transmitter. For information about redundant current and voltage connection of the analog output module F 6217 and the cable plugs, refer to the respective documentation.

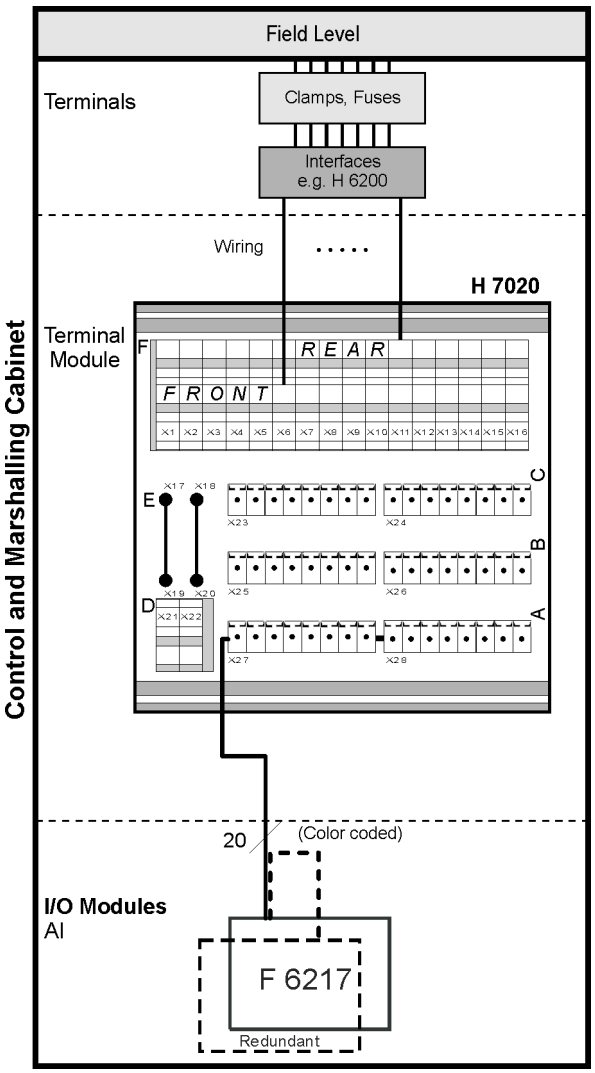


**Figure 5: Redundant wiring of analog output modules F 6217**

The soldering points are jumpered in case of connecting analog I/O modules.