Module Description

PROCONTROL 44
Transfer
Coupling Module
for Remote Bus

88 FK01-E/R0100/R0200

Application

The coupling module for remote bus is used to adapt a multi-purpose processing station or master station to a remote bus by means of a high-resistance connection.

Features

The module requires no supply voltage. It can be installed either in a protective moulded plastic casing or in a cubicle. In either case, the module must be mounted insulated. The module must not be grounded.

The module is available in two versions:

88 FK01-E/R0100: Equipped with resistors for continuing the remote bus to other stations

88 FK01-E/R0200: Equipped with resistors / capacitors for terminating the remote bus at the last station.

Description

The module mainly consists of a transformer for potential isolation between the station and the remote bus. Two resistors are installed in the secondary circuit of the transformer for high-resistance connection to the remote bus.

The module is provided with mounting places for soldering in the required components (depending on the application version R0100 or R0200, see "Features") in the factory.

Due to the high-frequency transfer the remote bus cable has to be terminated by the appropriate characteristic impedance. Module version R0200 is used for this purpose.

The screen of the cable from the station is connected with casing ground of the module via a high-frequency RC circuit.
Functional diagrams

Note:
The factory-mounted resistor R1013 is to be removed when a remote bus branching line is connected to the terminals 1, 2 and 3.
Mechanical design

Board size 57.5 mm x 77.5 mm, housed in a metal casing 110 mm x 170 mm.
The casing is to be mounted insulated.

Weight: approx. 0.7 kg

Connections of the remote bus twin axial cables:

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Core Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>red</td>
<td>of the incoming</td>
</tr>
<tr>
<td>5</td>
<td>white</td>
<td>remote bus line</td>
</tr>
<tr>
<td>4</td>
<td>screen</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>red</td>
<td>of the outgoing</td>
</tr>
<tr>
<td>8</td>
<td>white</td>
<td>remote bus line</td>
</tr>
<tr>
<td>7</td>
<td>screen</td>
<td>not used</td>
</tr>
<tr>
<td></td>
<td></td>
<td>with version R0200</td>
</tr>
<tr>
<td>3</td>
<td>red</td>
<td>of the branch line</td>
</tr>
<tr>
<td>2</td>
<td>white</td>
<td>(remote bus junction)</td>
</tr>
<tr>
<td>1</td>
<td>screen</td>
<td></td>
</tr>
</tbody>
</table>
88 FK01/4

Technical data

Coupling attenuation  approx. 20 dB for 50 kHz ... 10 MHz

Potential isolation  2 kV between continuous remote bus line and branching line

The types of remote bus cables must be approved of by ABB.

The colour code described besides "Mechanical design" applies to remote bus cables by SEL.

ORDERING DATA

Complete module:

Without termination resistor:

Type designation: 88 FK01-E/R0100  Order number: GJR2341500R0100

With termination resistor:

Type designation: 88 FK01-E/R0200  Order number: GJR2341500R0200

Technical data are subject to change without notice.