



ROHDE & SCHWARZ

SERVICE INSTRUCTIONS

IEC Bus/Control Interface Option CM-B4

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5.1 Function Description

This module comprises two subassemblies:

- IEC-bus interface
- Relay interface

The IEC-bus interface enables the instrument to be used as a listener or as a talker together with an IEC-bus controller.

It is also possible to access the eight relays on the module by the CMT. The contacts can be assigned as desired.

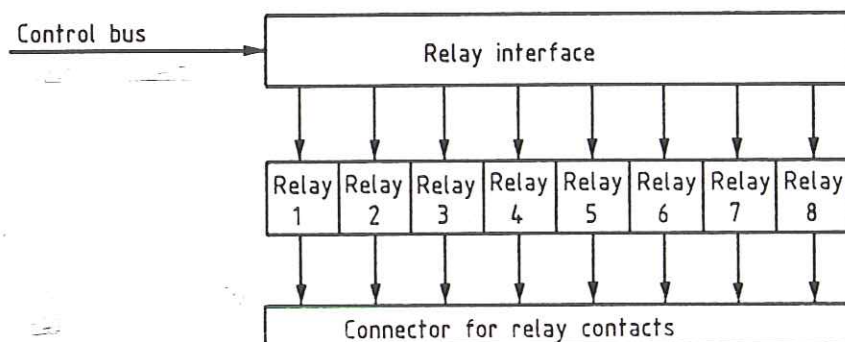
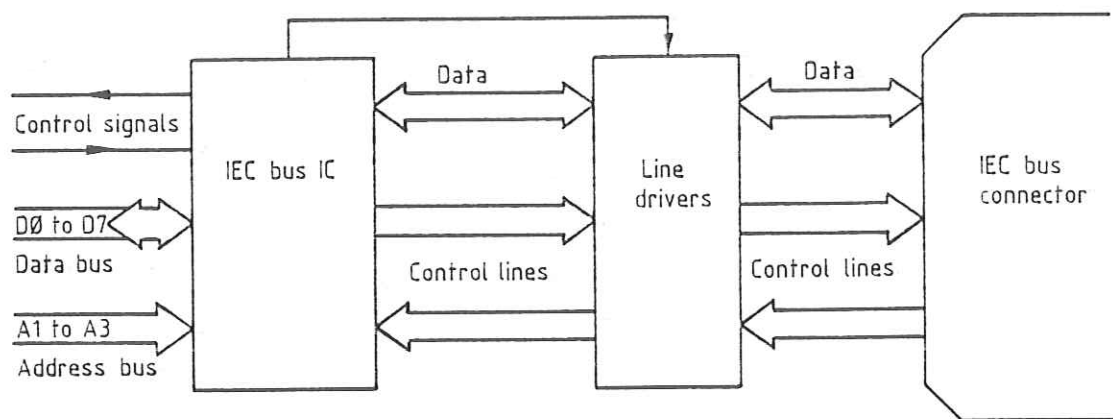


Fig. 5-1 Block diagram of the IEC-bus/control interface

5.1.1 IEC-bus Interface

The IEC-bus interface is based on the talker/listener IC 8291A GPIB. This IC provides all the interface functions which must be carried out between the controller and the IEC-bus output and can be directly addressed by the controller via the data bus and certain system control lines.

Functions:

- Read
- Write
- Load IEC-bus IC

It is possible to set the IC to a particular mode using the load operation. The internal registers of the 8291A IC are selected to this end via the address lines A1, A2, A3.

The controller addresses the IC via its select input $\overline{CS}$ by means of a special range selection line.

All IEC-bus signals pass via bidirectional line drivers before they are applied to the IEC-bus output. Data transfer with the CPU can take place under interrupt control or in DMA mode.

5.1.2 Relay Interface

The interface circuit for triggering the eight relays corresponds to the standard interface circuit with serial-to-parallel data conversion.

The interface circuit provides a control bit for each relay so that the complete interface need only provide eight parallel control lines.

The control bus consists of three lines:

CPS-S	Clock
DO-S	Data (relay control)
IEC	Strobe pulse

5.2 Testing and Adjustment

The module cannot be adjusted. All tests should be carried out using Section 3.

