Module and
Application Description

PROCONTROL P
Transfer

Bus termination

Publication No.
D KWL 6324 93 E, Edition 01/94
Replacing D KWL 6324 93 E, Edition 08/93

88QB03−E/R0100

Application

The module 88QB03−E/R0100 is always installed in the PROCONTROL cabinets 89MS01/R0100/R0200/R0300/R0400 and 89MS02/R0100 in connection with module 88QT03−E/R2111. The module is required to installed directly on the right of the module 88QT03−E/R2111 seen from the front of the cabinet. Both modules shall be installed in a 24 V subrack.

Installation of the module in the subracks together with 89NG03, i.e. 89MS01/R0100/R0200, BGT:D and 89MS01/R0300/R0400, BGT:G is not permissible(standard).

If in contrast with this standard further subracks are retrofit with 89NG03 in these subracks, too installation of this module is not permissible.

Features

The module incorporates the bus termination for connection of 88QT03 to the PROCONTROL−PS bus and/or the input/output station and the central clock−pulse supply for 88QT03.

It is supplied by a dual 24 V (USA, USB) supply.

Power supplies of the termination resistors and the circuit section for the central clock pulse are generated on the module from 24 V by separate power supply modules. The voltage for the termination resistors is monitored.

Connection to 88QT03 is by means of the process connector.

If several 88QB03 modules are installed in a subrack the central clock pulse can be disconnected by removing a plug−in jumper on the module.

For use in the subracks of the different PROCONTROL cabinets the module is provided with an additional plug−in jumper by means of which the termination resistors for the central clock can be switched on or off (see 'Module adjustment').

Design and connection of the module

For the hardware architecture of the module refer to the Function and connection diagram. The connections to 88QT03 and to the PROCONTROL−PS bus are separate. This is to ensure that the connection is interrupted when the module is unplugged and the input circuit of the 70BT01 module de−energized and therefore undefined conditions caused by the missing termination resistors and the power supply are avoided. Interruption is monitored and signalled by module 88QT03.

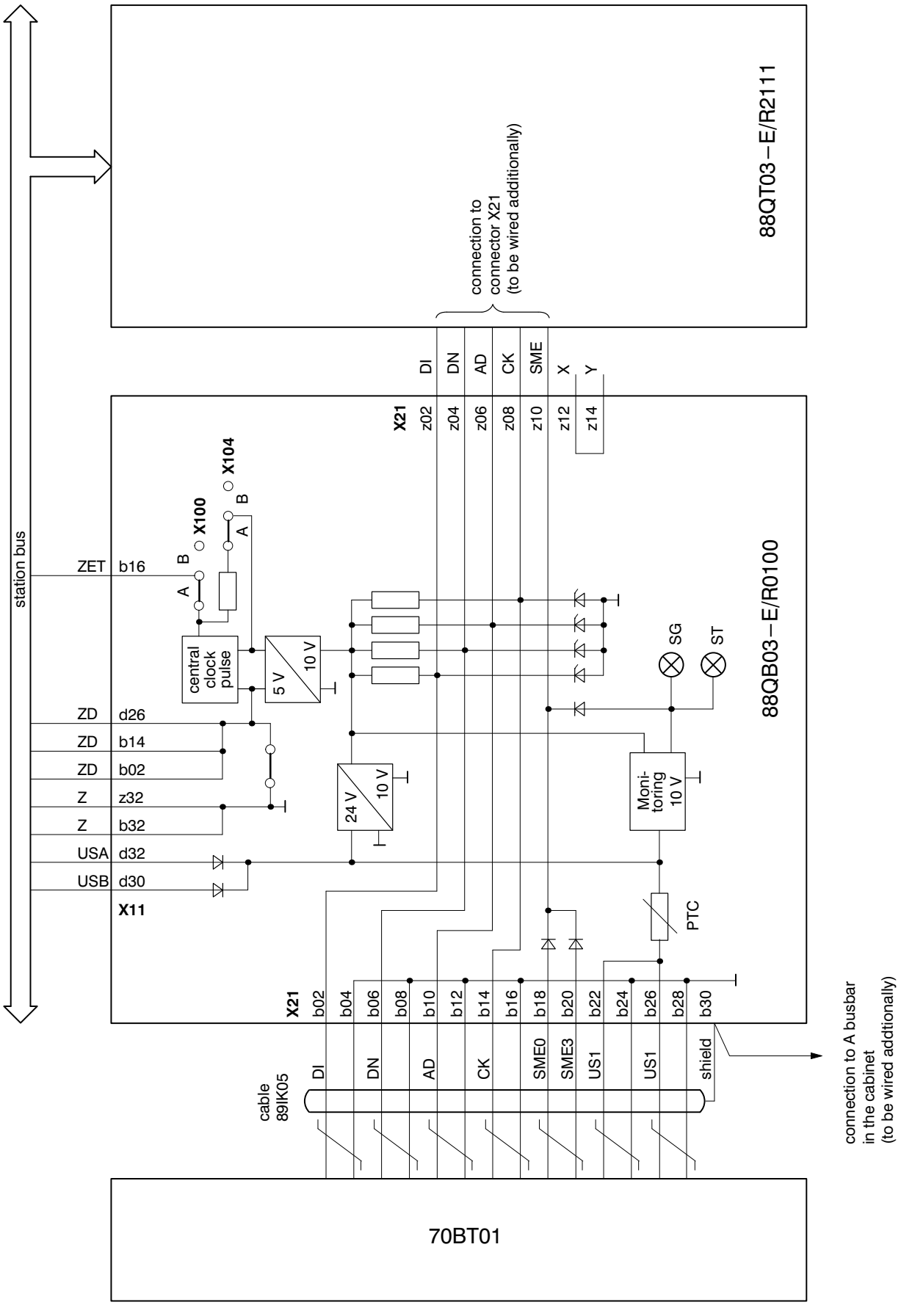
Connection to the 70BK01 module is by means of cable 89IK05.

The shield of the connecting cable shall be wired separately from contact b30 of the process connector to the A busbar in the cabinet.

Diagnostics and annunciation functions

Two red LEDs − ST and SG − are located on the front panel of the module. They are activated when the monitor for the 10 V power supply unit has responded. At the same time the SME signal is generated which is evaluated by the 88QT03 module.

Function and connection diagram



Module setting

For modules with hardware index b

Two plug−in jumpers are located on the module. X100 connects/disconnects the central clock pulse and X104 the appertaining, internal termination resistors.

When the module is installed in the subracks (BGT) of the PROCONTROL cabinets the plug−in jumpers shall be set as follows:

Type of cabinet	Subrack	Positions of plug−in jumpers		Remarks
		X100	X104	
89MS01/R0100	A	B	B	
	G	A	A	1)
	K	A	B	2)
	D	not permissible		
89MS01/R0200	A, K	A	B	2)
	G	A	A	1)
	D	not permissible		
89MS01/R0300 /R0400	D	A	B	2)
	K	A	B	3)
	G	not permissible		
89MS02/R0100	A, D, G, K	A	A	

1) In addition, remove resistors R1 on the connection p.c.b.'s of the station bus cable on the left and the right in this subrack.
2) In addition, remove resistor R1 on the connection p.c.b. of the station bus cable on the left in this subrack.
3) In addition, remove resistor R1 on the connection p.c.b. of the station bus cable on the right in this subrack.

The settings X100:A and X104:A are the settings on delivery.

For modules with hardware index a1

Modules of hardware index a1 do not have plug−in jumper X104 and plug−in jumper X100 can be plugged in only one position. The following setting applies:

Type of cabinet	Subrack	Jumper X100	Remarks
89MS01/R0100	A	open	
	G	inserted	1)
	K	inserted	2)
	D	not permissible	
89MS01/R0200	A, K	inserted	2)
	G	inserted	1)
	D	not permissible	
89MS01/R0300 /R0400	D	inserted	2)
	K	inserted	3)
	G	not permissible	
89MS02/R0200	A, D, G, K	inserted	

Mechanical design

Board size: 6 units, 1 division, 160 mm deep

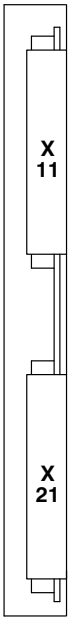
Connector: acc to DIN 41612

1 x for station bus connection,
48−pole, edge connector type F
(connector X11)

1 x for process connection,
32−pole, edge connector type F
(connector X21)

Weight: appr. 0.5 kg

View of connector side:



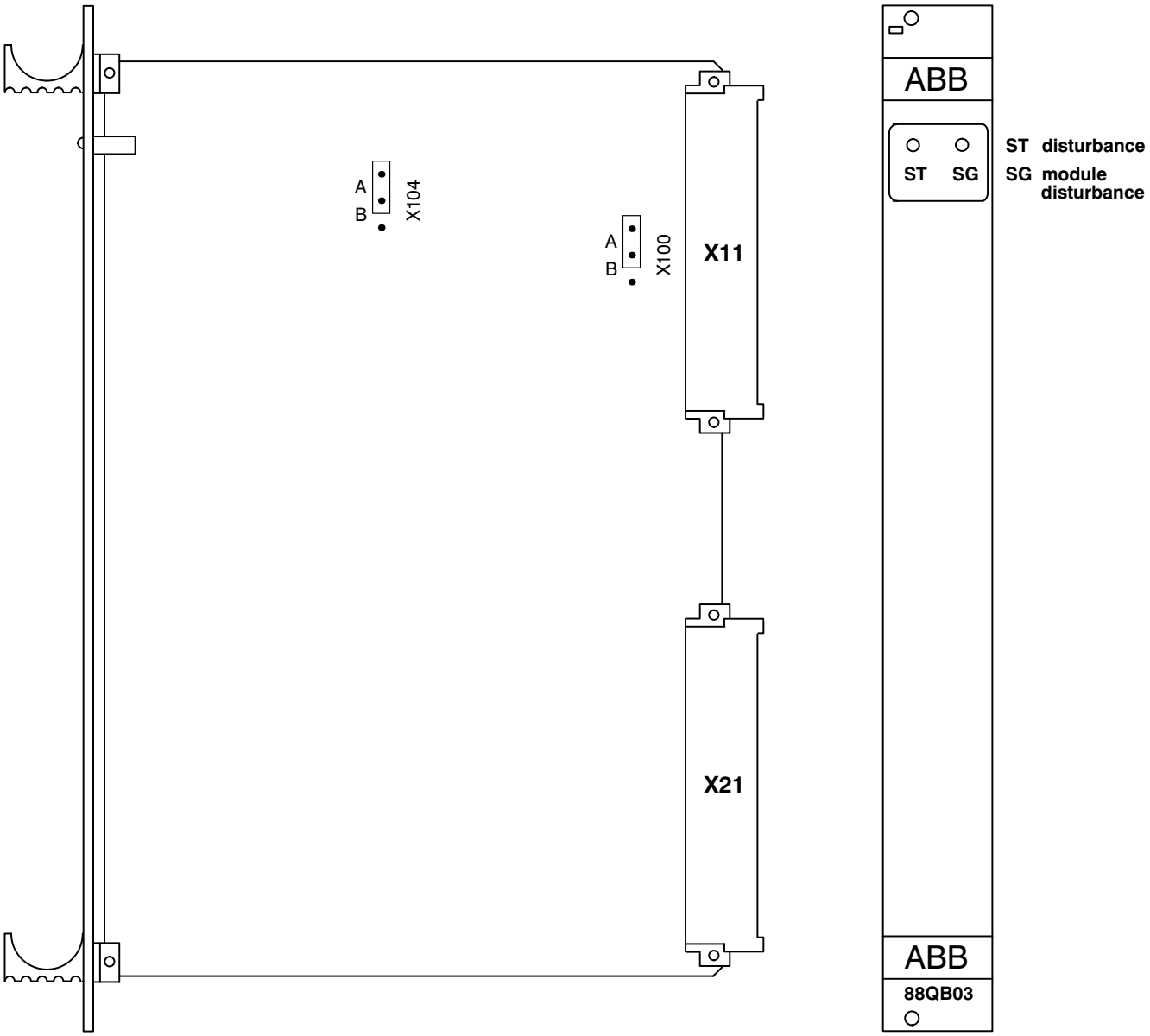
Contact assignment of the process connector X21

View of connector side:

	b	*z*
02	DI	DI
04	Z	DN
06	DN	AD
08	Z	CK
10	AD	SME
12	Z	X
14	CK	Y
16	Z	
18	SME0	
20	SME3	
22	US1	
24	Z	
26	US1	
28	Z	
30	Shield	*)
32		*)

*) Do not connect.

Side view and view of front panel of the module



Technical data

The following values apply in addition to the system data:

Power supply

Operating voltage USA/USB	24 V
Current consumption	210 mA
Power dissipation	5 W

Output values

Power supply (contacts X21:b22 and b26)	24 V / ≤ 100 mA

Noise immunity

ESD acc. to IEC 801/2	8 kV to front panel, severity 3 (air discharge)
EMV acc. to IEC 801/4	0.5 kV, severity 2

ORDER DATA

Complete module: Type designation: 88QB03−E/R0100	Order number: GJR2393800R0100
Cable: Type designation: 89IK05	Order number: GKWE602416Rxxxx (xxxx = length of cable in cm, max. 3,000 cm)

Technical data subject to change without notice!

ABB Kraftwerksleittechnik GmbH

P. O. Box 100351, D−68128 Mannheim
Phone (0621) 381 2712, Telefax (0621) 381 4372
Telex 462 411 107 ab d

Printed in Germany (KWL/E69 1194 0,3 BID)