

DESCRIPTION

DEFLECTION REMOTE CONTROL

AFB 04

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CIRCUIT DIAGRAM

1 EQUIPMENT DESCRIPTION

1.1 Introduction

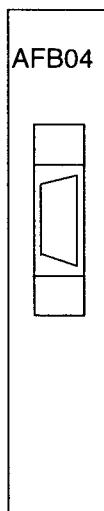
The Remote Control AFB 04 allows for controlling external setpoints for the electron-optical beam deflection and the emission controller.

The complete remote control consists of the AFB 04 (integrated in the frame insert) and the potentiometer set AFB 03.

The potentiometer set AFB 03 is adapted to the front socket strip of the AFB 04. By that the relays K4, K5, and K6 as well as the external setpoints are activated.

2 TECHNICAL DESCRIPTION

2.1 Mechanical Structure



A Europa card 100 x 160 mm with etched circuitry and indirect 48-position multipin connector, type F serves as carrier.

The printed circuit board is equipped with

- relays
- integrated circuits
- solder jumpers.

2.2 Electrical Construction

The printed circuit are designed for an operating voltage of 24 V AC / DC and a current of 2 A.

Design, construction and production conform to VDE 0160.

To protect the circuits, the pcb is lacquered.

3 TECHNICAL DATA

3.1 Electrical Data

Input / Output digital:	15 V and / or 24 V DC
analog	0 ... 10 V DC
Auxiliary voltage	+ 15 V DC
Power dissipation	approx. 2 W

3.2 Mechanical Data

Front panel	3 HE x 8 TE (19" System) (128,5 mm x 41 mm)
Printed circuit board	Europa format (100 x 160 mm)
Connector rear side	48-position multizin connector, type F
Female multipoint connector front side	15-position subminiature female multipoint connector
weight	approx. 200 g

3.3 Environmental Conditions

Protection type	IP 00 according to DIN 40050 (IEC 144)
Operating position	front panel and printed circuit board vertical
Cooling	natural convection
Ambient temperature	0 ... 45' C
Relative humidity	max. 70 %

3.4 Pin Identification Connector designation: X1

d 2	15 V		POWER SUPPLY
d32	0 V		
d30	15 V		
z18	0 V		NOMINAL VALUE X-DEFLECTION
b18	0...10 v		
b16	0 V		
z16	0...10 V		NOMINAL VALUE Y-DEFLECTION
d26	10 V X		
d24	10 V Y		
d24	0 V		INPUT
b28			
d28	10 V		
b22			NOMINAL VALUE EMISSION
d20	0...10 V		
b26	0 V		
z12			REMOTE CONTROL "ON"
b12			
d12			
z10			
b10			
d10			REMOTE CONTROL SELECTION
b32	0 V		
z28	15... 24 V		

3.5 Drawing Numbers

Circuit Diagram	4.275-4679/3
German Description	4.275-4829/4
English Description	4.275-4830/4
Order Number	42 754 669

4 FUNCTIONAL DESCRIPTION

Via the voltage regulator N3 as well as the operational amplifiers N1 the setpoint potentiometers R1 and R3 are supplied with ± 10 V. The AC voltage of 10 V for the potentiometers R2 and R4 is externally supplied.

The setpoint voltage for the X-deflection is generated by the potentiometers R1 (=) and R2 (-), the resistor network R8 and the operational amplifier N2, and is led to X1.b18 (0 V-X1.z18) via the relay K1.

The setpoint voltage for the Y-deflection is generated by the potentiometers R3 (=) and R4 (-), the resistor network R7 and the operational amplifier N3, and is led to X1.z16 (0 V-X1.b16) via the relay K2.

The setpoint voltage for the emission controller is externally fed from the EMK 01 or from the internal power supply via the potentiometer R5 and the relay K4 to X1 d20 (0 V - X1.b26 / 10 V - X1.b28) .

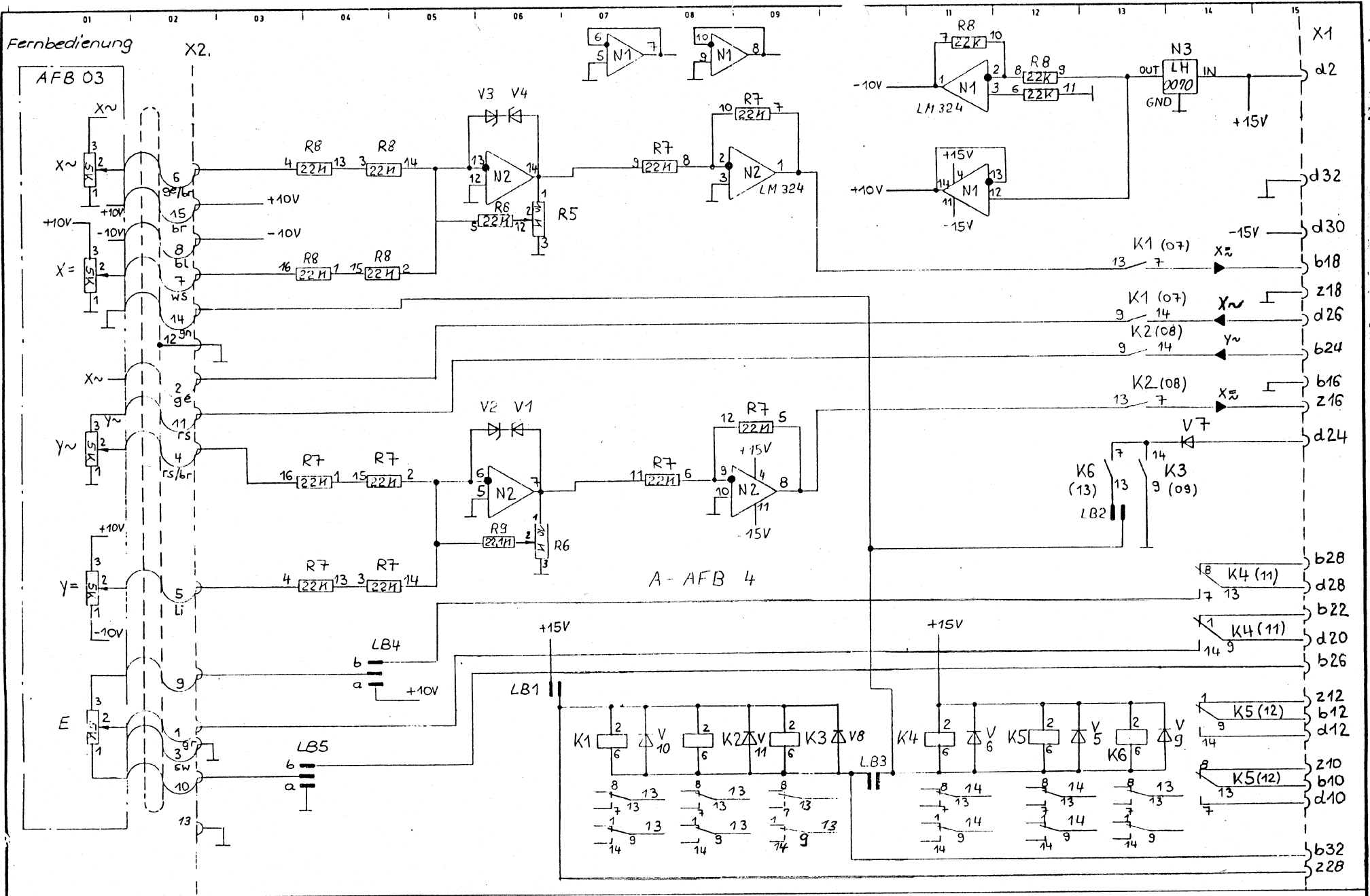
Two dry contacts of the relay K5 are available on X1.d,b,z12 and on X1.d,b,z10.

The relay K6 connects pin X1.d24 via the solder jumper LB2, the relay K3 connects pin X1.d24 directly to 0 V. (Via this pin the external setpoint is activated within the ASG 04 (X1.d18)).

TABLE OF THE SOLDER JUMPERS

(X jumper)

Item	Function	Solder Jumper					
		LB1	LB2	LB3	L B 4	L B 5	
					a b	a b	
1	activation of the external setpoint by AFB 03	x	x				
2	setpoint for emission Kontrolle EMK 01 from EMK 01				x	x	
3	setpoint for emission Kontrolle EMK 01 from AFB 04			x	x		



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Änderungen	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
Beorb. <u>g.l.</u> <u>ka.</u> Geprüft 1984 Datum Name	Benennung AFB 04 Stromlaufplan										Blattzahl 1	Zeichnung-Nr. 4.275-4679/3	Blatt-Nr. 1		



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