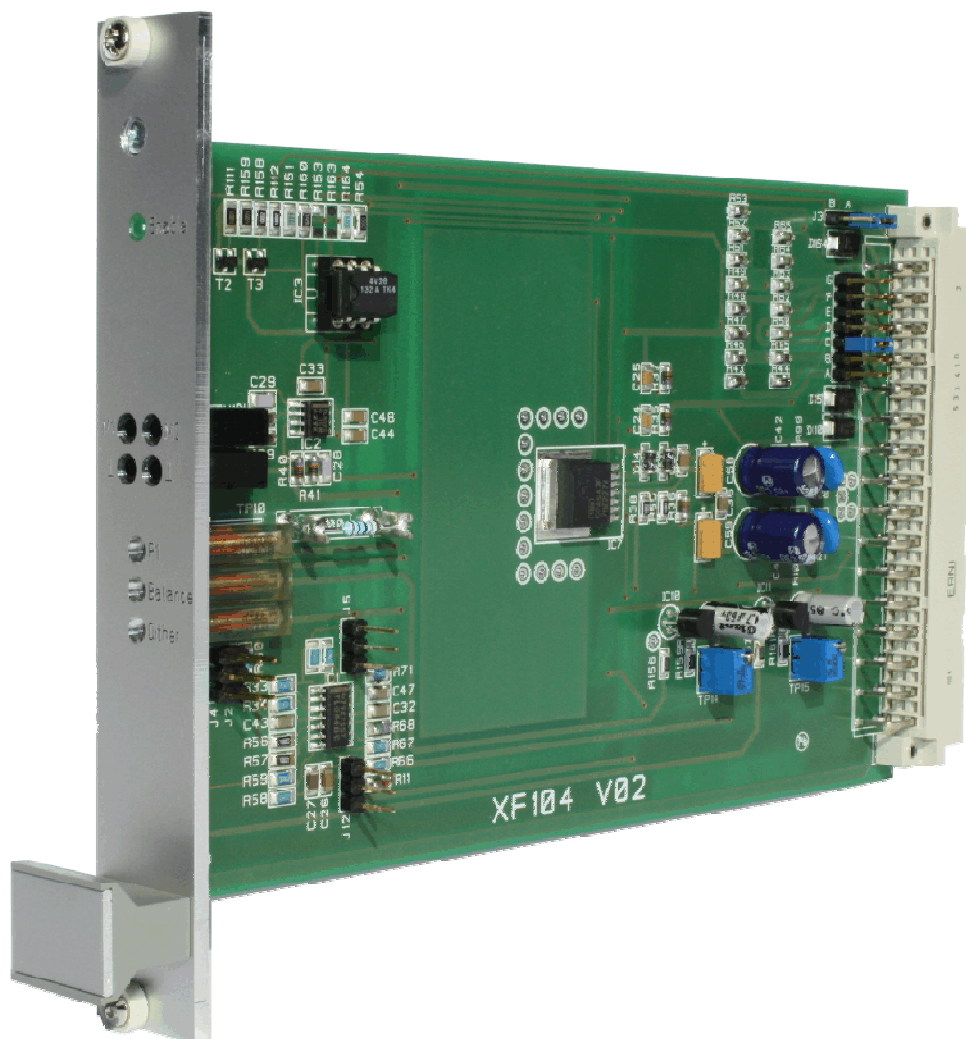


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Front View



Overview

The servo amplifier XF104 is designed for driving servo valves with a current range between ± 10 und ± 400 mA. The implemented linear output stage is protected by a thermal shutdown and is suitable for resistive and inductive loads. The input signal consists of an analogue set value of $\pm 10V$.

Technical Data

Output Stage

- Linear output stage for resistive and inductive loads
- Thermal shutdown
- Selection of the current range by jumpers
- Standard current ranges of ± 10 / ± 20 / ± 30 / ± 50 / ± 75 / ± 100 / ± 400 mA
- Selectable dither signal, amplitude adjustable by front plate potentiometer
- Dither frequency selectable as 150 or 200 Hz

Signal Characteristics

- Output stage enable by 24V input signal, alternative permanent enable by jumper
- Card status shown by green LED (Enable)
- Analogue set value as ± 10 V input signal, adjustable level by front plate potentiometer
- Additional set value adjustment by resistor mounting on solder pins
- Selectable zero adjustment (Balance), adjustable by front plate potentiometer
- Selectable set value inversion
- Test jacks in 2 mm format for set value and valve current

Voltage Supply

- Power supply ± 15 VDC $\pm 10\%$
- Current consumption minimum ca. 50 mA
- Internal created ± 10 V reference for adjustments

Mechanical Specifications

- Front plate 3HE x 4TE (128.4 x 20 mm)
- Single euroboard (160 x 100 mm) with D32 connector according to DIN 41612
- Mounting into a 19" rack, alternatively with D32 card holder
- Weight 107 g

Environmental Specifications

- Operation temperature 0..+70°C, optionally -25..+85°C, 10 m³/h airflow
- Storage temperature -40..+105°C
- Relative humidity max. 95% non-condensing

Front Plate Elements

At the front plate there are a green LED to signalize the active enable signal (Enable), 4 test jacks in 2 mm format and 3 trim-potentiometer. The test jacks and potentiometers are described in the table below.

Test Jack	Signal Level	Designation
M1	$\pm 10 \text{ V} = \pm \text{Nominal Current}$	Set value of the valve current, measurement reading inverted (J5A)
M2	$\pm 5 \text{ V} = \pm \text{Nominal Current}$	Actual value of the valve current
\perp		Ground / reference potential

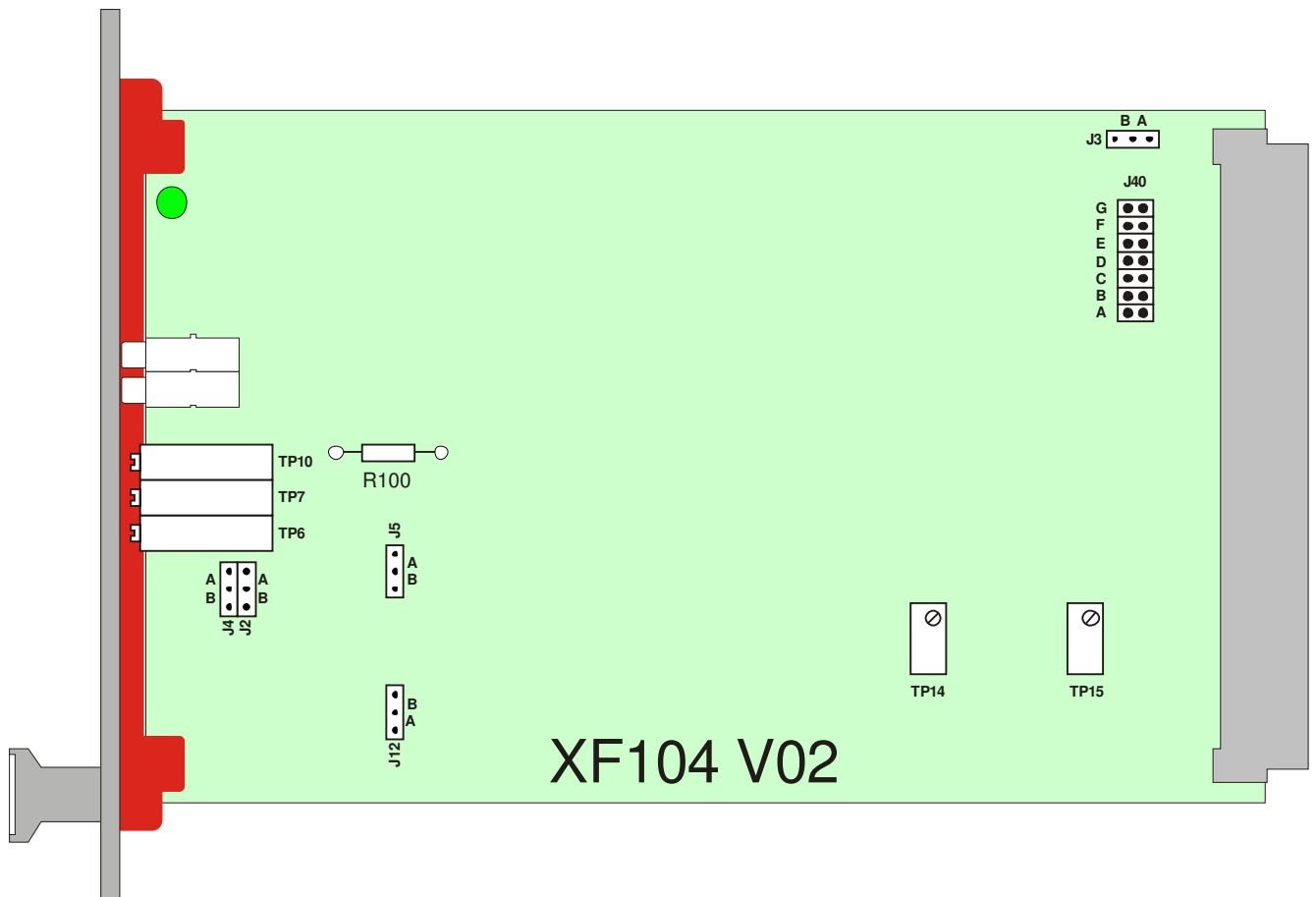
Pot	Sense of Rotation	Designation
P1	Plus = Left	Set value level
Balance	Plus = Right	Zero point adjustment
Dither	Plus = Right	Dither amplitude

Pin Assignment of the D32 Connector

Kontakt Pin	c-Reihe c-Row	a-Reihe a-Row
2		
4	Ventilspule Valve out	Freigabe Enable in
6	Ventilspule Valve out	
8	Ventilspule Valve out	
10		$\pm 10\text{V}$ Sollwert Set Value in
12		
14	+15V Versorgung Supply in	+15V Versorgung Supply in
16	\perp	\perp
18	\perp	\perp
20	-15V Versorgung Supply in	-15V Versorgung Supply in
22		
24		
26		
28		
30		PE
32		

Backside view on the soldering side of the connector in the rack

Lay-Out for the Board Components



Component lay-out with jumpers

Adjustment Elements of the Card

Component	Function
J2	A: Balance pot passive B: Balance pot active
J3	A: Enable by 24V input signal by connector pin a4 B: Enable active permanently
J4	A: Dither pot passive B: Dither pot active
J5	A: Set value not inverted B: Set value inverted
J12	A: Dither frequency ca. 200 Hz B: Dither frequency ca. 150 Hz
J40	A: Valve current ± 10 mA B: Valve current ± 20 mA C: Valve current ± 30 mA D: Valve current ± 50 mA E: Valve current ± 75 mA F: Valve current ± 100 mA G: Valve current ± 400 mA
R100	Resistor on solder pins for adaption of the OP input stage of the ±10V set value, gain $g = 100k\Omega / R100$, standard mounting with $R100 = 100k\Omega$ results $g = 1$

Block Diagram

