

ABB MEASUREMENT & ANALYTICS | DATA SHEET

Series 4234-500 and 4234-600

Katharometer power supply units



Measurement made easy

The constant-current supply for all your katharometer applications

Constant-current DC supply

- for use with the ABB range of katharometers

Certified intrinsically safe (option)

- ATEX  II (1)G
- CENELEC [EEx ia] IIC ($-20\text{ °C} \leq T_a \leq +55\text{ °C}$)


Can replace earlier power supply models

- mounting-strap adapters available for ease of installation

General

The 4234-500 and 4234-600 series of katharometer power supply units are constant-current DC supplies, designed for use with the ABB range of katharometers.

- **Models 4234-500 and 4234-501:**

- are certified intrinsically safe ATEX  II (1)G CENELEC [EEx ia] IIC (–20 °C ≤ Ta ≤ +55 °C) for use with the ABB intrinsically safe katharometers types 6539960/J or K and 6548001.
- are available as 350 mA DC (or lower) constant-current output units only. Other versions have the option of higher or lower outputs to suit the katharometer duty and calibration, plus an additional 10 V DC supply for temperature-controlled katharometers.
- replace the earlier models 4234-000/02 and 4234-000/01 respectively and variations to the earlier BASEEFA Certification to SFA 3012 permit use of the new units as replacements in systems certified to that earlier standard. Where such requirements are to be met a mounting strap adapter kit (part no. 4234519) is required to enable use of the existing 4234000 mounting centers.

- **Models 4234-600 and 4234-601:**

- are uncertified and are intended for use with all other models of katharometer in the 6700, 6510/6515 and 6517 series.

Full details of all the available options are shown in **Specification** on page 4.

Specification

4234-500 and 4234-501

Power supply

- Series 4234-501 115 V AC 50/60Hz
- Series 4234-500 230 V AC 50/60Hz

Supply limits

- Voltage variation $\pm 15\%$
- Frequency range 46 to 64 Hz

Power consumption

30 W max.

Fuse ratings

- L & N (F2 and F3) 250 mA (T) (20 x 5 mm) 250 V A, 1500 A h.b.c. cartridge type
- DC line (F1) 400 mA (F) (250 V AC)

Load

One katharometer (12.5 Ω max.)
plus interconnecting cable (1.5 Ω max.)

Output

Output

180, 250 or DC (constant current)

Output regulation

Within $\pm 0.8\%$ for:

- Load variation $\pm 15\%$
- Supply variation $\pm 6\%$
- Ambient temperature $\pm 10\text{ }^\circ\text{C}$ (50 $^\circ\text{F}$)

Ripple

Less than 17.5 V across 10 Ω load peak to peak

Output stability

Within $\pm 0.7\%$ of initial setting over a period of one month with load resistance, supply voltage and ambient temperature at nominal stated values

Maximum load

12.5 Ω (one katharometer)

Environmental

Protection

IP30 (NEMA 1)

Ambient temperature range

-20 to $55\text{ }^\circ\text{C}$ (-4 to $131\text{ }^\circ\text{F}$)

Mounting centres

140 x 110 mm (5.5 x 4.3 in)

Overall dimensions (h x w x d)

170 x 160 x 110 mm (6.7 x 6.3 x 4.3 in)

Weight

2.12 kg (0.96 lb) approx.

Intrinsically safe certification

[Ex ia Ga] IIC ($-20\text{ }^\circ\text{C} \leq T_a \leq +55\text{ }^\circ\text{C}$)
BASEEFA Certificate No. BAS01 ATEX7041

4234-600 and 4234-601

Power supply

- Series 4234-601 115 V AC 50/60 Hz
- Series 4234-600 230 V AC 50/60 Hz

Supply limits

- Voltage variation $\pm 15\%$
- Frequency range 46 to 64 Hz

Power consumption

- Katharometer 3.5 W max.
- Katharometer with temperature control 13 W max.

Fuse ratings

- L and N 250 mA (T) (20 x 5 mm) 250 V A, 1500 A h.b.c. cartridge type
- DC line 400 mA (F) (250 V AC)
- Auxiliary 10 V DC line 1 A (F) (250 V AC)

DC output

Optional, stabilized 500, 400, 350, 250 or 180 mA

Load

One katharometer (12.5 Ω max.)
plus interconnecting cable (1.5 Ω max.)

Output

Output

180, 250, 350, 400 or 500 mA DC (constant current)

Output regulation

Within $\pm 0.8\%$ for:

- Load variation $\pm 15\%$
- Supply variation $\pm 6\%$
- Ambient temperature $\pm 10\text{ }^\circ\text{C}$ (50 $^\circ\text{F}$)

Ripple

Less than 17.5 V across 10 Ω load peak to peak

Output stability

Within $\pm 0.7\%$ of initial setting over a period of one month with load resistance, supply voltage and ambient temperature at nominal stated values

Auxiliary output

10 V DC nominal at 1 A for katharometer temperature control

Environmental

Protection

IP30 (NEMA 1)

Ambient temperature range

-20 to $55\text{ }^\circ\text{C}$ (-4 to $131\text{ }^\circ\text{F}$)

Mounting centers

140 x 110 mm (5.5 x 4.33 in)

Overall dimensions (h x w x d)

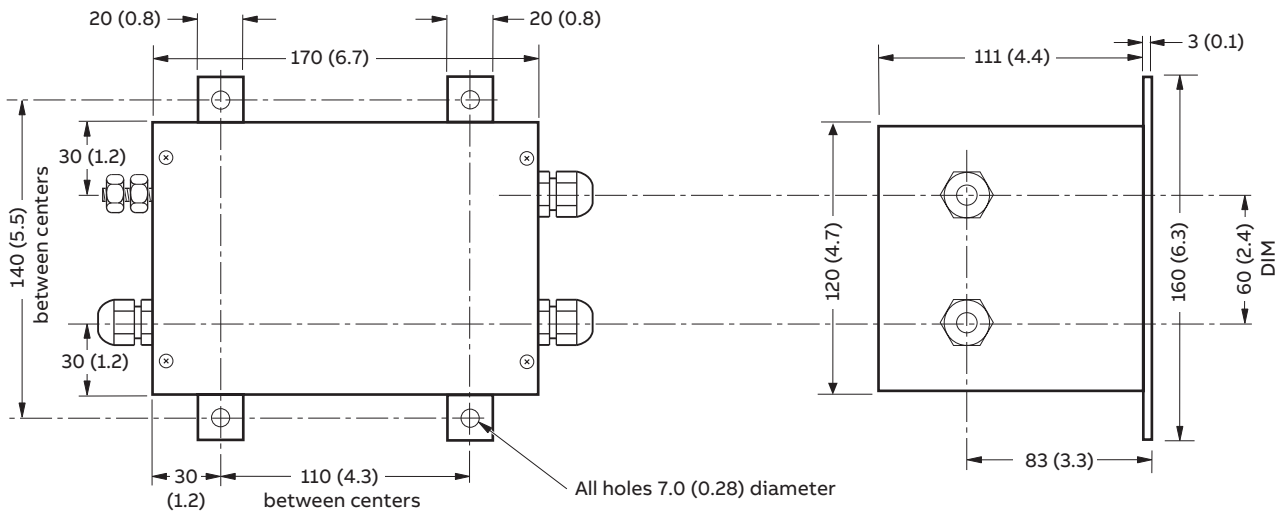
160 x 170 x 111 mm (6.3 x 6.7 x 4.4 in)

Weight

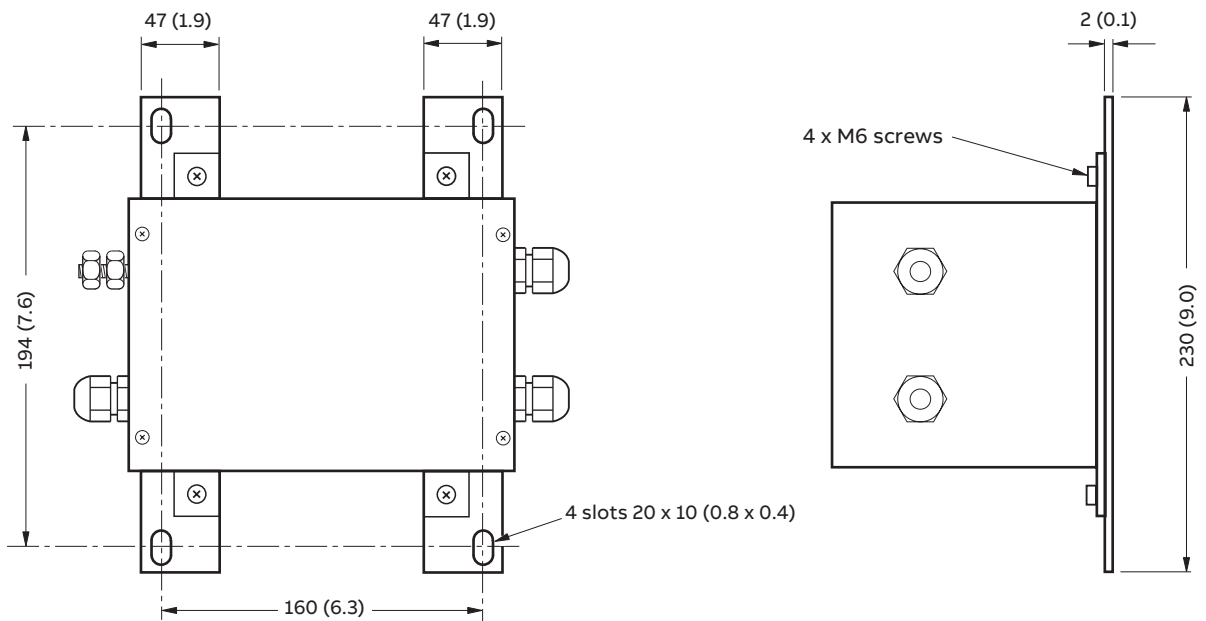
2.12 kg (4.7 lb) approx.

Overall dimensions

Dimensions in mm (in)

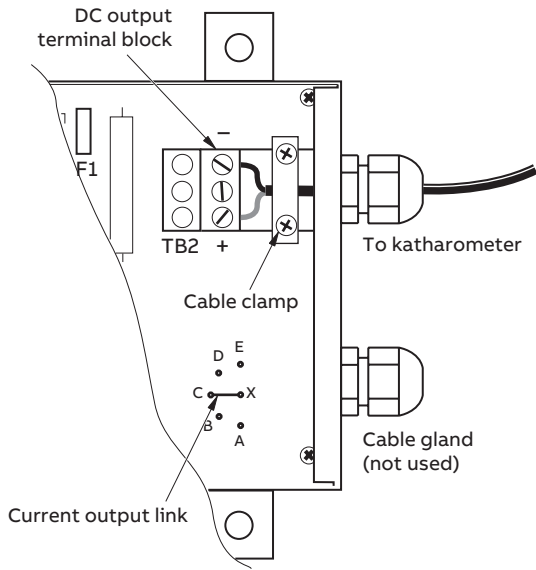


4234-500 and 4234-600 Series



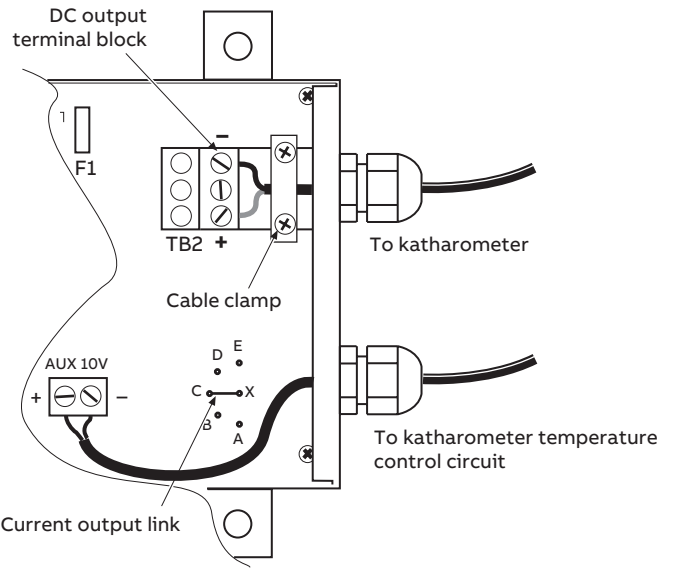
4234-500 and 4234-501 with 4234000 mounting adapter kit

Electrical connections



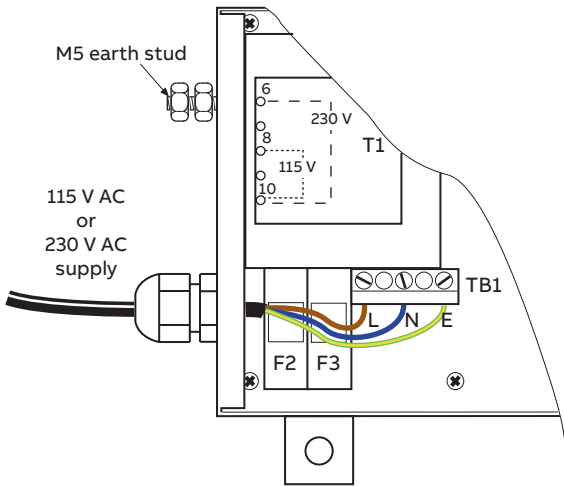
Output current (mA)	Links
350	C to X
250	D to X
180	E to X
Do not connect to points A or B	

DC output current ranges for 4234-500 series



Output current (mA)	Links
500	A to X
400	B to X
350	C to X
250	D to X
180	E to X

DC output current ranges for 4234-600 series



AC connections for 4234-500/600 series

Ordering information

Series 4234-500 or 4234-600 katharometer power supply unit	4234/	XX	X	X	X
Approval					
Intrinsically safe		50			
Non-intrinsically safe		60			
Power supply					
230 V AC			0		
115 V AC			1		
Output mA					
350*					0
180*					1
250*					2
400					3
500					4
Manual					
English					0
German					1
French					2
Spanish					3
Italian					4

* Applicable only to intrinsically safe (4234/50X) power supply units

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