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 InputModule[II] (1)G
• CENELEC [EEEx ia] IIC (–20 °C ≤ Ta ≤ +55 °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 Ex 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 50/60 Hz
- Series 4234-500: 230 V AC 50/60 Hz

**Supply limits**
- Voltage variation: ±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 ±0.8 % for:
  - a) Load variation ±15 %
  - b) Supply variation ±6 %
  - c) Ambient temperature ±10 °C (50 °F)

**Ripple**
- Less than 17.5 V across 10 Ω load peak to peak

**Output stability**
- Within ±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 °C (−4 to 131 °F)

**Mounting centres**
- 140 × 110 mm (5.5 × 4.3 in)

**Overall dimensions (h × w × d)**
- 170 × 160 × 110 mm (6.7 × 6.3 × 4.3 in)

**Weight**
- 2.12 kg (0.96 lb) approx.

**Intrinsically safe certification**
- [Ex ia Ga] IIC (−20 °C ≤Ta≤ +55 °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: ±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 ±0.8 % for:
  - a) Load variation ±15 %
  - b) Supply variation ±6 %
  - c) Ambient temperature ±10 °C (50 °F)

**Ripple**
- Less than 17.5 V across 10 Ω load peak to peak

**Output stability**
- Within ±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 °C (−4 to 131 °F)

**Mounting centers**
- 140 × 110 mm (5.5 × 4.33 in)

**Overall dimensions (h × w × d)**
- 160 × 170 × 111 mm (6.3 × 6.7 × 4.4 in)

**Weight**
- 2.12 kg (4.7 lb) approx.
**Overall dimensions**

Dimensions in mm (in)

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4234-500 and 4234-600 Series

4 x M6 screws

4 slots 20 x 10 (0.8 x 0.4)

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4234-500 and 4234-601 with 4234000 mounting adapter kit
## Electrical connections

### DC output current ranges for 4234-500 series

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

### DC output current ranges for 4234-600 series

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

### AC connections for 4234-500/600 series

- **M5 earth stud**
- **115 V AC or 230 V AC supply**

## Ordering information

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