

Ex i Power Supply

Series 8510



- > Output, intrinsically safe
- > Stable output voltage
- > Galvanic isolation between output and power supply

www.stahl.de



12661E00

Basic function: The power supplies are used for the intrinsically safe operation of field devices e.g. 3- or 4-wire transmitters, solenoid valves, light barriers, controllers and more.

| | ATEX / IECEx | | | | | |
|------------|--------------|---|---|----|----|----|
| Zone | 0 | 1 | 2 | 20 | 21 | 22 |
| For use in | | x | x | | | |

Explosion Protection

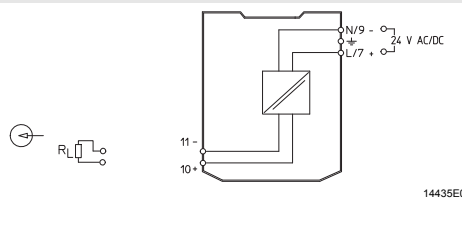
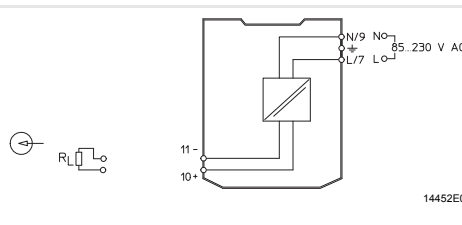
| | |
|---------------------------------|--|
| Global (IECEx) | |
| Gas | IECEx BVS 07.0029U Ex d e IIC, Ex d e I |
| Europe (ATEX) | |
| Gas | DMT 00 ATEX E 073 U ⊕ II 2G Ex d e IIC ⊕ I M2 Ex d e I |
| Certifications and certificates | |
| Certificates | ATEX, IECEx, Belarus (operating authorisation) |

E9

WebCode 8510T

Ex i Power Supply Series 8510

Selection Table

| Version | Circuit diagram | Fitted device | Order number | Weight kg |
|---|---|---------------------|--------------------|--------------|
| 1-channel AC 20 ... 28 V (48 ... 62 Hz) DC 18 ... 35 V |  | 9143/10-114-200-10 | 8510/122-20-001-00 | 1.600 |
| | | 9143/10-187-050-10 | 8510/122-20-003-00 | 1.600 |
| | | 9143/10-104-220-10s | 8510/122-20-005-00 | 1.600 |
| | | 9143/10-065-220-10 | 8510/122-20-007-00 | 1.600 |
| | | 9143/10-156-065-10 | 8510/122-20-011-00 | 1.600 |
| | | 9143/10-156-160-10 | 8510/122-20-013-00 | 1.600 |
| | | 9143/10-244-060-10 | 8510/122-20-018-00 | 1.600 |
| 1-channel AC 85 ... 230 V (48 ... 62 Hz) |  | 9143/10-114-200-20 | 8510/122-20-002-00 | 1.600 |
| | | 9143/10-104-220-20s | 8510/122-20-006-00 | 1.600 |
| | | 9143/10-065-200-20 | 8510/122-20-008-00 | 1.600 |
| | | 9143/10-124-150-10 | 8510/122-20-009-00 | 1.600 |
| | | 9143/10-124-150-20 | 8510/122-20-010-00 | 1.600 |
| | | 9143/10-156-065-20 | 8510/122-20-012-00 | 1.600 |
| | | 9143/10-156-160-20 | 8510/122-20-014-00 | 1.600 |
| 9143/10-187-050-20 | 8510/122-20-015-00 | 1.600 | | |
| 9143/10-244-060-20 | 8510/122-20-019-00 | 1.600 | | |

Order Number Supplement

| Ex i output | | Safety data | | | | | | | | | | | Fitted device | Installed in |
|-----------------|-----------------|----------------|----------------|----------------|----------------|----------------|--------------------|--------------------|--------------------|--------------------|----------------|----------------|---------------------|--------------------|
| U _A | U _N | I _N | P ₀ | I ₀ | U ₀ | U _m | C ₀ IIB | C ₀ IIC | L ₀ IIC | L ₀ IIB | C _i | L _i | | |
| 9.5 ... 10.5 V | 9.4 ... 10.4 V | 180 mA | 2.28 W | 200 mA | 11,4 V | 250 V AC | 11,2 μF | 1,64 μF | 0,16 mH | 1,4 mH | negligible | | 9143/10-114-200-10 | 8510/122-20-001-00 |
| 9.5 ... 10.5 V | 9.4 ... 10.4 V | 180 mA | 2.28 W | 200 mA | 11,4 V | 250 V AC | 11,2 μF | 1,64 μF | 0,16 mH | 1,4 mH | negligible | | 9143/10-114-200-20 | 8510/122-20-002-00 |
| 14.8 ... 17.8 V | 14.6 ... 17.6 V | 35 mA | 0.935 W | 50 mA | 18,7 V | 250 V AC | 1,64 μF | 0,27 μF | 0,06 mH | 15,5 mH | negligible | | 9143/10-187-050-10 | 8510/122-20-003-00 |
| 4.2 ... 5.8 V | 4.0 ... 5.6 V | 130 mA | 0.975 W | 150 mA | 6,5 V | 250 V AC | 570 μF | 25 μF | 1,43 mH | 6,25 mH | negligible | | 9143/10-065-150-10 | 8510/122-20-004-00 |
| 8.8 ... 9.6 V | 8.7 ... 9.5 V | 200 mA | 2.288 W | 220 mA | 10,4 V | 250 V AC | 18,6 μF | 2,5 μF | 0,24 mH | 1,5 mH | negligible | | 9143/10-104-220-10s | 8510/122-20-005-00 |
| 8.8 ... 9.6 V | 8.7 ... 9.5 V | 200 mA | 2.288 W | 220 mA | 10,4 V | 250 V AC | 18,6 μF | 2,5 μF | 0,24 mH | 1,5 mH | negligible | | 9143/10-104-220-20s | 8510/122-20-006-00 |
| 4.2 ... 5.8 V | 4.0 ... 5.6 V | 160 mA | 1.3 W | 200 mA | 6,5 V | 250 V AC | 570 μF | 25 μF | 0,82 mH | 3,71 mH | negligible | | 9143/10-065-200-10 | 8510/122-20-007-00 |
| 4.2 ... 5.8 V | 4.0 ... 5.6 V | 160 mA | 1.3 W | 200 mA | 6,5 V | 250 V AC | 570 μF | 25 μF | 0,82 mH | 3,71 mH | negligible | | 9143/10-065-200-20 | 8510/122-20-008-00 |

- U_A → No-load voltage
- U_N → Nominal voltage
- U_m → Isolation voltage
- U₀ → Max. voltage
- I_N → Max. nominal current
- I₀ → Max. current
- P₀ → Max. power
- C₀ → Max. external capacitance
- L₀ → Max. external Inductance
- C_i → Internal capacitance
- L_i → Internal inductance

Ex i Power Supply

Series 8510



Order Number Supplement

| Ex i output | | Safety data | | | | | | | | | | Order number | Installed in | |
|--------------------|--------------------|----------------|----------------|----------------|----------------|----------------|--------------------|--------------------|--------------------|--------------------|----------------|--------------|--------------------|--------------------|
| U _A | U _N | I _N | P ₀ | I ₀ | U ₀ | U _m | C ₀ IIB | C ₀ IIC | L ₀ IIC | L ₀ IIB | C _i | | | L _i |
| 9.6 ... 11.9 V | 9.5 ... 11.8 V | 130 mA | 1.86 W | 150 mA | 12,4 V | 250 V AC | 7.9 μF | 1.24 μF | 0.17 mH | 2.08 mH | negligible | | 9143/10-124-150-10 | 8510/122-20-009-00 |
| 9.6 ... 11.9 V | 9.5 ... 11.8 V | 130 mA | 1.86 W | 150 mA | 12,4 V | 250 V AC | 7.9 μF | 1.24 μF | 0.17 mH | 2.08 mH | negligible | | 9143/10-124-150-20 | 8510/122-20-010-00 |
| 12.6 ... 14.8 V | 12.5 ... 14.7 V | 45 mA | 1.014 W | 65 mA | 15,6 V | 250 V AC | 3.03 μF | 0.497 μF | 0.445 mH | 11.2 mH | negligible | | 9143/10-156-065-10 | 8510/122-20-011-00 |
| 12.6 ... 14.8 V | 12.5 ... 14.7 V | 45 mA | 1.014 W | 65 mA | 15,6 V | 250 V AC | 3.03 μF | 0.497 μF | 0.445 mH | 11.2 mH | negligible | | 9143/10-156-065-20 | 8510/122-20-012-00 |
| 12.6 ... 14.8 V | 12.5 ... 14.7 V | 140 mA | 2.496 W | 160 mA | 15,6 V | 250 V AC | 3.03 μF | -- | -- | 0.351 mH | negligible | | 9143/10-156-160-10 | 8510/122-20-013-00 |
| 12.6 ... 14.8 V | 12.5 ... 14.7 V | 140 mA | 2.496 W | 160 mA | 15,6 V | 250 V AC | 3.03 μF | -- | -- | 0.351 mH | negligible | | 9143/10-156-160-20 | 8510/122-20-014-00 |
| 14.8 ... 17.8 V | 14.6 ... 17.6 V | 35 mA | 0.935 W | 50 mA | 18,7 V | 250 V AC | 1.64 μF | 0.27 μF | 0.06 mH | 15.5 mH | negligible | | 9143/10-187-050-20 | 8510/122-20-015-00 |
| 19.1 ... 23.2 V | 18.9 ... 23.0 V | 15 mA | 0.854 W | 35 mA | 24,4 V | 250 V AC | 0.88 μF | -- | -- | 26.3 mH | negligible | | 9143/10-244-035-10 | 8510/122-20-016-00 |
| 19.1 ... 23.2 V | 18.9 ... 23.0 V | 15 mA | 0.854 W | 35 mA | 24,4 V | 250 V AC | 0.88 μF | -- | -- | 26.3 mH | negligible | | 9143/10-244-035-20 | 8510/122-20-017-00 |
| 19.1 ... 23.2 V | 18.9 ... 23.0 V | 40 mA | 1.464 W | 60 mA | 24,4 V | 250 V AC | 0.88 μF | -- | -- | 534 μH | negligible | | 9143/10-244-060-10 | 8510/122-20-018-00 |
| 19.1 ... 23.2 V | 18.9 ... 23.0 V | 40 mA | 1.464 W | 60 mA | 24,4 V | 250 V AC | 0.88 μF | -- | -- | 534 μH | negligible | | 9143/10-244-060-20 | 8510/122-20-019-00 |

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- U_N → Nominal voltage
- U_m → Isolation voltage
- U₀ → Max. voltage
- I_N → Max. nominal current
- I₀ → Max. current
- P₀ → Max. power
- C₀ → Max. external capacitance
- L₀ → Max. external Inductance
- C_i → Internal capacitance
- L_i → Internal inductance

Ex i Power Supply

Series 8510

Technical Data

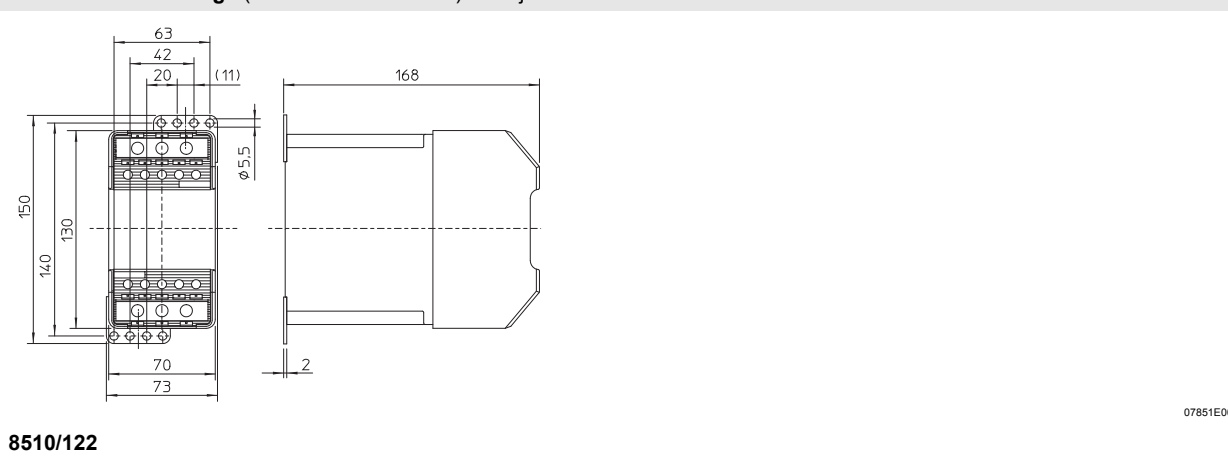
Ambient conditions

| | |
|---------------------|------------------|
| Ambient temperature | |
| Storage | - 50 ... + 80 °C |
| Operation at Uc | - 20 ... + 40 °C |

Mechanical data

| | |
|-------------------------|--|
| Material | |
| Enclosure material | Epoxy resin |
| Terminal cover | Polyamide; IP20, protection against direct contact acc. to IEC/EN 60529 |
| Conductor cross-section | |
| Main contacts | 1,5 ... 6 mm ² flexible 1,5 ... 10 mm ² solid |
| Auxiliary contacts | 0.75 ... 1.5 mm ² finely stranded 0.75 ... 2.5 mm ² solid |

Dimensional Drawings (All Dimensions in mm) - Subject to Alterations



We reserve the right to make alterations to the technical data, weights, dimensions, designs and products available without notice. The illustrations cannot be considered binding.