TXB1810 Series

Integrated Ray Source

1kV~80kV,100W,Low Energy Storage

TXB1810 Series of X-rays High-Voltage power supply rated output voltage is 80kV and the power is 100W.Built-in ray tube. Product Small size, with Standard analog interface and RS-232 digital interface and other features can be easy integrated into your X-ray system. The proprietary emission control circuit provides excellent X-ray tube current management and excellent stable performance.

- Integrated high-voltage power supply, filament power supply, X-ray tube, beam port and electronic controller in one
- Compact model and light weight
- Universal input, correcting the power factor through the internal EMI filter
- It can be installed in any physical position.
- Analog control interface and standard RS-232 digital interface

Typical applications:

Thickness measurement, food inspection, liquid level detection, package inspection X-ray scanning - bone density measurement.

Specifications::

Input voltage:
The power factor correction input is 0.98, 100-240Vac±10%, 50-60Hz, maximum 2A.
X-ray tube voltage: X-ray tube voltage adjustable,0 Up to 80kV.
X-ray tube current:
Within the specified ray tube voltage range, the current of the ray tube is from 150 μA to 1.25 mA Adjustable.
X-ray tube power: Maximum continuous power 100W.
Voltage regulation:
Input: When the specified input voltage of ±10% changes, the change of the maximum output voltage is ±0.05%.
Load:
Electric current from 150 μA to 1.25mA changes, the voltage changes by ±0.1% of the maximum rated voltage.
Voltage accuracy: The error of the voltage measured by the X-ray tube is ±2%.
Voltage rise time:
Standard: The maximum rated output voltage is from 10% to 90%, and the rise time should be 500 ms Optional: 5 seconds.
Ripple: Under the rated output condition, it is better than 1% p-p (0.1% p-p optional).
Current regulation:
Input: When the rated input voltage of ±10% changes, the change of the rated output current is ±0.05%.
Load: When the rated output voltage changes from 50% to 100%, the rated output current changes by ±0.1%.
Current accuracy: The error of the current measured by the X-ray tube,Better than±2%.
Current rise time:
Standard: When the maximum rated current changes from 10% to 90%, the rise time less than 500ms.
Optional: 5 seconds.
Analog interface: The ground reference 0 to 9VDC is used for all programming signals and monitoring signals. Relay contacts and collector open signals are used as other signals. See the analog interface connector pin table.
Digital interface:
To enable the RS232 interface, you need to configure the jumper and install the digital interface cable control software.
Ambient temperature: Operational: 0°CUp to +40°C.Storage:-40°CUp to +70°C.
Humidity: The relative humidity is 10% to 95%, and there is no condensation.
Cooling: Forced air and natural convection augmented by customer provided external cooling fan to maintain oil temperature below 55°C.
Analog interface connector:15-pin D-shaped connector, male.
Digital interface connector:9-pin D-type connector, female.
Ground:8-32 grounding studs are available on the chassis.
Dimensions: See figures.
Weight: 14.5Kg.

AC power connector:

Pin	Signal
1	Earth Ground
2	Line
3	Neutral

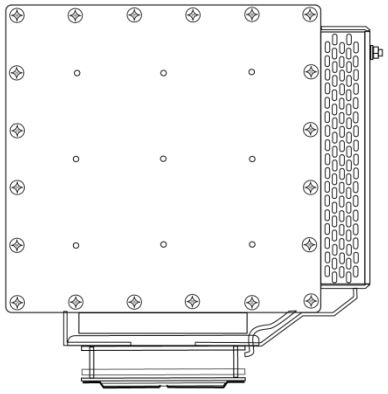
RS-232 communication interface:

Pin	Signal	Parameter
1	N/C	No connection
2	TD	Send data
3	RD	Receive data
4	N/C	No connection
5	SGND	Signal Ground
6	NC	No connection
7	NC	No connection
8	NC	No connection
9	NC	No connection

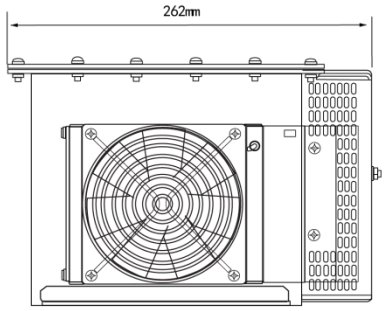
J215Connector:

Pin	Signal	Explain
1	Power Supply Fault Output PARAMETERS	Open collector, 35V @ 10mA max. high = no fault.
2	mA Program Input	0 to 9.00Vdc = 0 to 100% rated output, Zin =10MΩ
3	kV Program Input	0 to 9.00Vdc = 0 to 100% rated output, Zin =10MΩ
4	X-Ray On Lamp Relay Output	Common, dry contacts, 30Vdc @ 1A, max
5	X-Ray On Lamp Relay Output	Normally open, X-Ray ON = closed
6	mA Monitor Output	0 to 9Vdc = 0 to 100% rated output, Zout =10kΩ
7	X-Ray On Lamp Relay Output	Normally closed, X-Ray ON = open
8	kV Monitor Output	0 to 9.00Vdc = 0 to 100% rated output, Zout =10kΩ
9	Signal Ground	Ground
10	Signal Ground	Ground
11	HV Interlock Return Input	Connect to Pin 12 to close HV interlock
12	HV Interlock Output	+15Vdc @ open, 5mA when connected to pin 11
13	X-Ray Enable Output	+15Vdc @ open, 5mA when connected to pin 15
14	X-Ray Status Output	Open collector, 35V @ 10mA max high = X-Ray OFF
15	X-Ray Enable Return Input	Connect to pin 13 to enable X-Ray generation

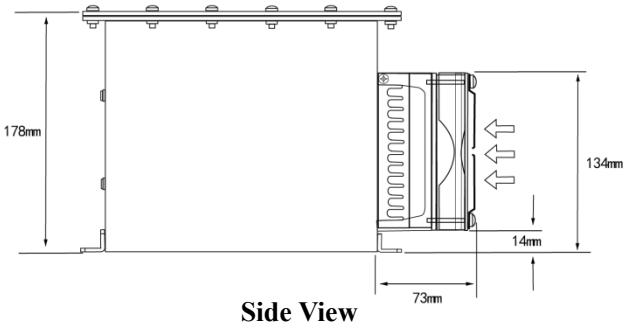
External dimensions:Millimetre



Top View



Front View



Side View