

9111-NI FNICO POWER SUPPLY - IIC / GROUPS A-D



- ◆ **180mA output current: supports 12 x 15mA fieldbus devices per power supply**
- ◆ **Fieldbus repeater allows connection to an uncertified host**
- ◆ **250V ac input/output/power supply isolation**
- ◆ **Switch selectable terminator on host side**
- ◆ **Fixed terminator on NI side**
- ◆ **Switch selectable power for host side**
- ◆ **Mountable in Zone 2/Division 2**

MODULE SPECIFICATION

See also *Common Specification*

OUTPUT

Number of channels

One

Voltage

12.4V (min.) at 25°C (see note)

Design current

0 to 180mA

Current limit

>200mA

Output ripple

Complies with clause 22.6.2 of the fieldbus standard†

Minimum load

No load

Maximum cable length

Determined by NI load

Isolation

Input to output: 250V ac rms
Input and output to power supply: 250V ac rms

INPUT

Input voltage

20 - 30V dc

Current consumption:

300 mA (typical) 330 mA (max.) at 20V
250 mA (typical) 280 mA (max.) at 24V
210 mA (typical) 235 mA (max.) at 30V

Power dissipation with 180mA field load + 30mA host load:

3.3 W (typical) 4.5 W (max.)

Input protection

Fuse + supply reversal diode

SAFETY

Location of module

Safe area, Zone 2, IIC T4 hazardous area or Class 1, Div 2, Groups A, B, C, D T4 hazardous location.

Location of field wiring

Zone 2, IIC T4 hazardous area or Class 1, Div 2, Groups A, B, C, D T4 hazardous location.

Field wiring protection

Non-incendive

Certification Code

II 3 G EEx nA[L] IIC T4

Safety description

14.0V, 233mA

FM entity parameters

14.0V, 233mA

FM Certificate number

FM3016981

ATEX Certificate number

MTL03ATEX9111X

Certification is compatible with:

IEC60079-27/CDV: 2004
EC Directive 94/9/EC (ATEX100A)

MECHANICAL

Mounting

DIN rail/surface mounting

Module width

42mm

Weight

360g

LED INDICATORS

	OFF	ON
Power (green)	Power fail	Power OK
Fault (red)	Normal	Fault
Host Comm (yellow)	Comms failure	Comms OK
NI Comm (yellow)	Comms failure	Comms OK

Note: Temperature coefficient 12mV/°C. If the power supply and fieldbus cable are operated at low temperatures, the reduced resistance of the cable more than compensates for the reduction in output voltage.

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† The applicable fieldbus specifications and standards are:
— FOUNDATION™ Fieldbus 31.25 kb/s Physical Layer Profile Specification, document FF-816.
— IEC 61158-2: 2000.
— ISA-S50.02-1992 for 31.25 kb/s fieldbus systems.



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9112-NI FNICO POWER SUPPLY - IIB / GROUPS C, D

- ◆ 320mA output current: supports more than 20 x 15mA fieldbus devices per power supply
- ◆ Fieldbus repeater allows connection to an uncertified host
- ◆ 250V ac input/output/power supply isolation
- ◆ Switch selectable terminator on host side
- ◆ Fixed terminator on NI side
- ◆ Switch selectable power for host side
- ◆ Mountable in Zone 2/Division 2

MODULE SPECIFICATION

See also Common Specification

OUTPUT

Number of channels

One

Voltage

13.1V (min.) at 25°C (see note)

Design current

0 to 320mA - 60°C maximum ambient temperature

Current limit

>340mA

Output ripple

Complies with clause 22.6.2 of the fieldbus standard†

Minimum load

No load

Maximum cable length

Determined by NI load

Isolation

Input to output: 250V ac rms

Input and output to power supply: 250V ac rms

INPUT

Input voltage

20 - 30V dc

Current consumption

490 mA (typical) 550 mA (max.) at 20V

400 mA (typical) 460 mA (max.) at 24V

320 mA (typical) 370 mA (max.) at 30V

Power dissipation with 320mA field load + 30mA host load

4.5 W (typical) 6 W (max.)

Input protection

Fuse + supply reversal diode



SAFETY

Location of module

Safe area, Zone 2, IIB T4 hazardous area or Class 1, Div 2, Groups C, D T4 hazardous location.

Location of field wiring

Zone 2, IIB T4 hazardous area or Class 1, Div 2, Groups C, D T4 hazardous location.

Field wiring protection

Non-incendive

Certification Code

II 3 G EEx nA[L] IIB T4

Safety description

14.8V, 380mA

FM entity parameters

14.8V, 380mA

FM Certificate number

FM3016981

ATEX Certificate number

MTL03ATEX9112X

Certification is compatible with:

IEC60079-27/CDV: 2004

EC Directive 94/9/EC (ATEX100A)

MECHANICAL

Mounting

DIN rail/surface mounting

Module width

42mm

Weight

360g

LED INDICATORS

	OFF	ON
Power (green)	Power fail	Power OK
Fault (red)	Normal	Fault
Host Comm (yellow)	Comms failure	Comms OK
NI Comm (yellow)	Comms failure	Comms OK

Note: Temperature coefficient 12mV/°C. If the power supply and fieldbus cable are operated at low temperatures, the reduced resistance of the cable more than compensates for the reduction in output voltage.

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