

# NERLITE DARK FIELD LIGHT SERIES ILLUMINATORS CONFIGURATION GUIDE

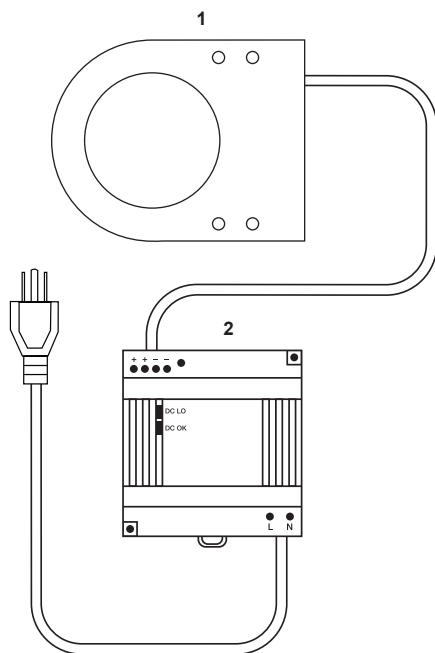


Part Number	Description	Strobe Current				Continuous Operation		Strobe Operation NL-2XX (Required)	Connection Notes Reference Number (See the Connection Notes on back of the Page)
		Continuous Current	Ring 1 & 2 Where Applicable	Ring 3	Fan Cooled	No Controller Required (Can be Connected Directly to 24VDC)	NL-2XX Optional (Used only if Intensity And/Or Ethernet Control is Desired)		
NER-011609311	DF-50 Red Continuous, Non-Diffuse	69mA	NA	NA		Figure A	Figure B		1
NER-011609312	DF-50 Red Strobe, Non-Diffuse	NA	1.20A	NA			Figure B		1
NER-011609321	DF-50 White Continuous, Non-Diffuse	120mA	NA	NA		Figure A	Figure B		1
NER-011609322	DF-50 White Strobe, Non-Diffuse	NA	2.40A	NA			Figure B		1
NER-011609331	DF-50 Blue Continuous, Non-Diffuse	120mA	NA	NA		Figure A	Figure B		1
NER-011609332	DF-50 Blue Strobe, Non-Diffuse	NA	2.40A	NA			Figure B		1
NER-011601520	DF-100-1 Red Continuous, Non-Diffuse	100mA	NA	NA		Figure A	Figure B		1
NER-011601521	DF-100-1 Red Continuous, Diffuse	100mA	NA	NA		Figure A	Figure B		1
NER-011601502	DF-100-1 Red Strobe, Diffuse	NA	200A	NA			Figure B		1
NER-011600020	DF-150-1 Red Continuous, Non-Diffuse	100mA	NA	NA		Figure A	Figure B		1
NER-011600004	DF-150-1 Red Strobe, Non-Diffuse	NA	200A	NA			Figure B		1
NER-011600031	DF-150-1 White Continuous, Non-Diffuse	196mA	NA	NA		Figure A	Figure B		1
NER-011600032	DF-150-1 White Strobe, Non-Diffuse	NA	400A	NA			Figure B		1
NER-011600070	DF-150-1 Blue Continuous, Non-Diffuse	196mA	NA	NA		Figure A	Figure B		1
NER-011600080	DF-150-1 Blue Strobe, Non-Diffuse	NA	400A	NA			Figure B		1
NER-011600021	DF-150-1 Red Continuous, Diffuse	100mA	NA	NA		Figure A	Figure B		1
NER-011600007	DF-150-1 Red Strobe, Diffuse	NA	200A	NA			Figure B		1
NER-011600041	DF-150-1 White Continuous, Diffuse	196mA	NA	NA		Figure A	Figure B		1
NER-011600042	DF-150-1 White Strobe, Diffuse	NA	400A	NA			Figure B		1
NER-011600208	DF-150-3 Red Continuous, Non-Diffuse	300mA	NA	NA		Figure A	Figure B		1
NER-011600209	DF-150-3 Red Strobe, Non-Diffuse	NA	7.14A	NA			Figure B		1
NER-011600206	DF-150-3 White Continuous, Non-Diffuse	450mA	NA	NA		Figure A	Figure B		1
NER-011600207	DF-150-3 White Strobe, Non-Diffuse	NA	8.00A	4.00A			Figure B		6
NER-011603300	DF-200-1 Red Continuous, Diffuse	200mA	NA	NA		Figure A	Figure B		1
NER-011603301	DF-200-1 Red Strobe, Diffuse	NA	4.00A	NA			Figure B		1

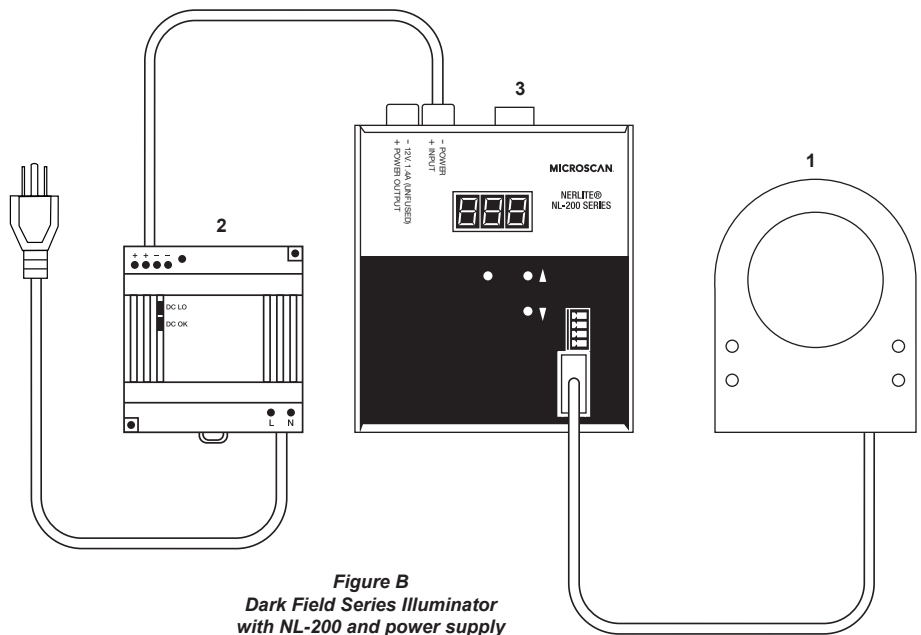
**⚠** If using this product in strobe mode with an NL-2XX Series Lighting Controller, refer to the warning on the back of this document.

## Hardware Required

Item	Description	Part Number
1	DF Series Illuminators	NER-01160XXXX
2	Power Supply DSP60 24VDC 2.5A DIN Mount	NER-011504100
3	NL-200 Current Controller Series	98-000152-0X



**Figure A**  
Dark Field Series Illuminator  
with power supply



**Figure B**  
Dark Field Series Illuminator  
with NL-200 and power supply

## Accessories

AC Power Cord US	NER-030028300	Power Cord For Power Supply
AC Power Cord EU	NER-030028400	Power Cord For Power Supply
AC Power Cord UK	NER-030028500	Power Cord For Power Supply

**WARNING!** When connecting a strobe light to an NL-2XX Series Lighting Controller, you must set the current rating to 10% of the current specified for the light in this document.

The NL-2XX Series Controller allows the operator to set the brightness (current) to 1000% in strobe mode. By setting the initial current rating to 10% of the light's specified current, a brightness setting of 1000% results in the light receiving 100% of its rated current. This will provide maximum light output without damaging the light.

**Note:** Certain lights require both channels of the NL-2XX Series Lighting Controller. Channel 1 and Channel 2 may have different current specifications on some models. Be sure each channel is set correctly as specified in this document.

### General Notes:

1. Those lights that do not require a controller require 24VDC +/- 1%.
2. The NL-2XX series controllers require 24 to 48VDC.
3. The cable on all flying lead models is terminated with three, five, or seven leads. Each lead is labeled. See "Connection Notes" for connection instructions.
4. For all models with M12 connectors, the connector is a 4 pin, male, M12 connector. See "Connection Notes" for connector pin out and connection instructions.
5. All models with separate fan circuits must have 24VDC connected to the fan circuit at all times when the light is operating.
6. When operating in strobe mode at the maximum rated current, the maximum pulse width = 1mS and the maximum duty cycle = 6%. See the NL-2XX series controllers' manual for pulse width and duty cycle limitations under various conditions.

### Connection Notes:

1. Connect the lead labeled "V+" to the positive(+) output terminal of the power supply or controller. Connect the lead labeled "GND" to the negative(-) output terminal of the power supply or controller. Connect the lead labeled "Shield" or "SHLD" to chassis ground.
2. Connect the lead labeled "V+" to the positive(+) output terminal of the power supply or controller. Connect the lead labeled "GND" to the negative(-) output terminal of the power supply or controller. Connect the lead labeled "Fan V+" to the positive(+) output terminal of a 24VDC power supply. Connect the lead labeled "Fan GND" to the negative(-) output terminal of a 24VDC power supply. Connect the lead labeled "Shield" to chassis ground.
3. Connect the lead labeled "V+1" to the positive(+) output terminal of channel 1 on an NL-2XX series controller. Connect the lead labeled "GND1" to the negative(-) output terminal of channel 1 on the NL-2XX series controller. Connect the lead labeled "V+2" to the positive(+) output terminal of channel 2 on the NL-2XX series controller. Connect the lead labeled "GND2" to the negative(-) output terminal of channel 2 on the NL-2XX series controller. Connect the lead labeled "Shield" to chassis ground.
4. Connect the lead labeled "+" to the positive(+) output terminal of the power supply or controller. Connect the lead labeled "-" to the negative(-) output terminal of the power supply or controller. Connect the cable's braided shield to chassis ground.
5. Connect the lead labeled "DOAL V+" to the positive(+) output terminal of channel 1 on an NL-2XX series controller. Connect the lead labeled "DOAL GND" to the negative(-) output terminal of channel 1 on the NL-2XX series controller. Connect the lead labeled "Ring V+" to the positive(+) output terminal of channel 2 on the NL-2XX series controller. Connect the lead labeled "Ring GND" to the negative(-) output terminal of channel 2 on the NL-2XX series controller. Connect the lead labeled "Fan V+" to the positive(+) output terminal of a 24VDC power supply. Connect the lead labeled "Fan GND" to the negative(-) output terminal of a 24VDC power supply. Connect the lead labeled "Shield" to chassis ground.
6. Connect the two leads labeled "RING 1, 2 V+" & "RING 3 V+" to the same positive(+) output terminal of the power supply or controller. Connect the two leads labeled "RING 1, 2 -" & "RING 3 -" to the same negative(-) output terminal of the power supply or controller. Connect the lead labeled "Shield" to chassis ground.
7. Connect Pin 1 of the M12-M connector to the positive(+) output terminal of the power supply or controller. Connect Pin 3 of the M12-M connector to the negative(-) output terminal of the power supply or controller. Connect the shell of the M12-M connector to chassis ground. Pins 2 and 4 are not used.