SMART SERIES DOAL

CONFIGURATION GUIDE

PART NUMBER	DESCRIPTION	Current Draw @ 24VDC (typ.)	Continuous Mode No Controller Required (Can Be Connected Directly To 24VDC)	Continuous Mode With Dimming Or On-Off Control No Controller Required (Can Be Connected Directly To 24VDC)	High Output Strobe Mode No Controller Required (Can Be Connected Directly To 24VDC)
NER-011660400G	SMART SERIES DOAL-25, RED	.40A	Figure A or D	Figure B	Figure C
NER-011660410G	SMART SERIES DOAL-25, WHITE	.20A	Figure A or D	Figure B	Figure C
NER-011660420G	SMART SERIES DOAL-25, BLUE	.20A	Figure A or D	Figure B	Figure C
NER-011660430G	SMART SERIES DOAL-25, INFRARED	.45A	Figure A or D	Figure B	Figure C
NER-011660500G	SMART SERIES DOAL-50, RED	1.3A	Figure A or D	Figure B	Figure C
NER-011660510G	SMART SERIES DOAL-50, WHITE	1.0A	Figure A or D	Figure B	Figure C
NER-011660520G	SMART SERIES DOAL-50, BLUE	1.0A	Figure A or D	Figure B	Figure C
NER-011660530G	SMART SERIES DOAL-50, INFRARED	1.7A	Figure A or D	Figure B	Figure C
NER-011660600G	SMART SERIES DOAL-75, RED	2.4A	Figure A or D	Figure B	Figure C
NER-011660610G	SMART SERIES DOAL-75, WHITE	1.5A	Figure A or D	Figure B	Figure C
NER-011660620G	SMART SERIES DOAL-75, BLUE	1.5A	Figure A or D	Figure B	Figure C
NER-011660630G	SMART SERIES DOAL-75, INFRARED	2.0A	Figure A or D	Figure B	Figure C
NER-011660700G	SMART SERIES DOAL-100, RED	3.6A	Figure A	Figure B	Figure C
NER-011660710G	SMART SERIES DOAL-100, WHITE	1.6A	Figure A	Figure B	Figure C
NER-011660720G	SMART SERIES DOAL-100, BLUE	1.6A	Figure A	Figure B	Figure C
NER-011660730G	SMART SERIES DOAL-100, INFRARED	2.3A	Figure A	Figure B	Figure C

Hardware Required

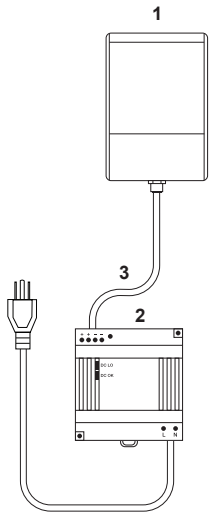| Item	Description	Part Number
1	Smart Series DOAL Lights	NER-011660XXXG
2	Power Supply DSP60 24VDC 2.5A DIN Mount	NER-011504100
2	Power Supply DSP100 24VDC 4.2A DIN Mount	97-000006-01
3	Cable 5 Pin M12 Female To Flying Leads, 3M	61-000186-01
3	Cable 5 Pin M12 Female To Flying Leads, 5M	61-000187-01
4	Cable, Power Smart Series to QX-1	61-000204-01

Figure A
DOAL Series Illuminator
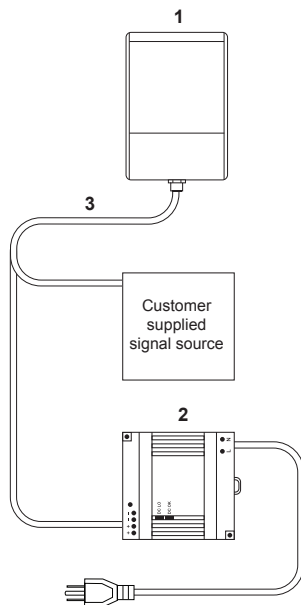with power supply

Figure B
DOAL Series Illuminator
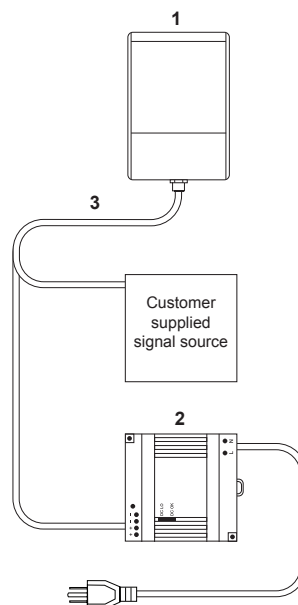with customer supplied
dimming or on-off
signal source

Figure C
DOAL Series Illuminator
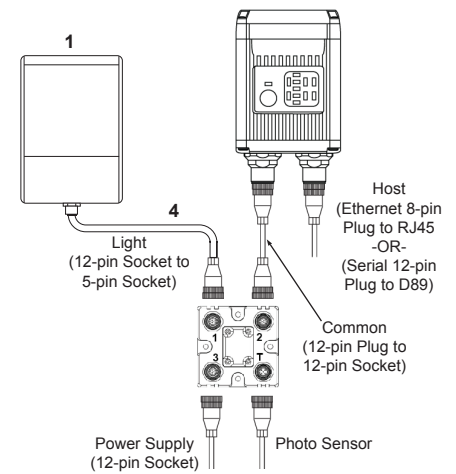with customer supplied
strobe trigger signal source

Host
(Ethernet 8-pin
Plug to RJ45
-OR-
(Serial 12-pin
Plug to D89)

Light
(12-pin Socket to
5-pin Socket)

Common
(12-pin Plug to
12-pin Socket)

Power Supply
(12-pin Socket)

Photo Sensor

Figure D
Doal Series Illuminator with
QX-1 Interface Device
(Not Compatible with DOAL 100 Series)

Customer supplied signal source

Accessories

Description	Part Number	Application
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

Connections:

Input Connector (M12 Male, 5 Circuit, A-Code)	Pin 1	Pin 2	Pin 3	Pin 4	Pin 5	Backshell
Continuous Mode (Figures A & D):	+20.2-28.8VDC	DC GND	DC GND	+20.2-28.8VDC	No Connection	Shield
Continuous Mode With Dimming (Figure B):	+20.2-28.8VDC	DC GND	DC GND & DIM (-)	+20.2-28.8VDC	Dim (+)	Shield
Continuous Mode With On-Off Control (Figure B):	+20.2-28.8VDC	DC GND	DC GND & DIM (-)	+20.2-28.8VDC	Dim (+)	Shield
High Output Strobe Mode (Figure C):	+20.2-28.8VDC	TRIG (-)	DC GND	TRIG (+)	No Connection	Shield

Continuous   Dimming   On-off   Strobe
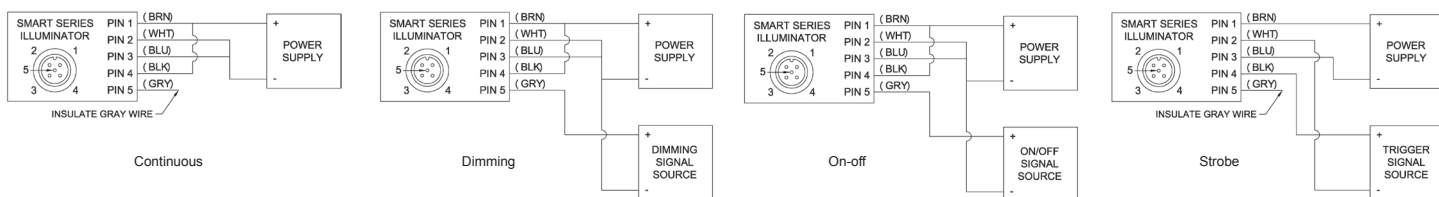
Control Signals

DIM (Continuous Mode With PWM Dimming):
0VDC (LEDs off) to 3.1-3.5VDC (LEDs on) pulse width modulated (PWM) signal , <1mA, Modulation Frequency 2KHz +/- 100Hz

Note: When using Continuous Mode With Dimming, the LED duty cycle will equal the duty cycle of the dimming signal.

DIM (Continuous Mode With On-Off Control): 0VDC (LEDs off), 3.1-3.5VDC (LEDs on), (<1mA)

TRIG (High Output Strobe Mode):
optoisolated, 0VDC (LEDs off) to 3.1-28.8VDC (LEDs on), 10mA max, 20 μs min Trigger pulse width. Note: High Output Strobe internally limits LED frequency and pulse width to a maximum of 90Hz and 1mS respectively. Light output pulse will follow Trigger pulse width from 20 μs to 1ms.

Note: When using Continuous Mode With Dimming, the LED duty cycle will equal the duty cycle of the dimming signal.

Cable Specifications:

Wire colors for flying lead cables:
Pin 1 = Brown
Pin 2 = White
Pin 3 = Blue
Pin 4 = Black
Pin 5 = Gray
Connector Nut = Shield

Note: Non-Microscan cables may use different wire colors. It is the customer's responsibility to make sure the light is connected correctly per the pin numbers in the table above.

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