

The ENSTO logo is rendered in a bold, blue, sans-serif font.

# Designer's Guide to Modular Wiring Installation



**Better life.**  
With electricity.

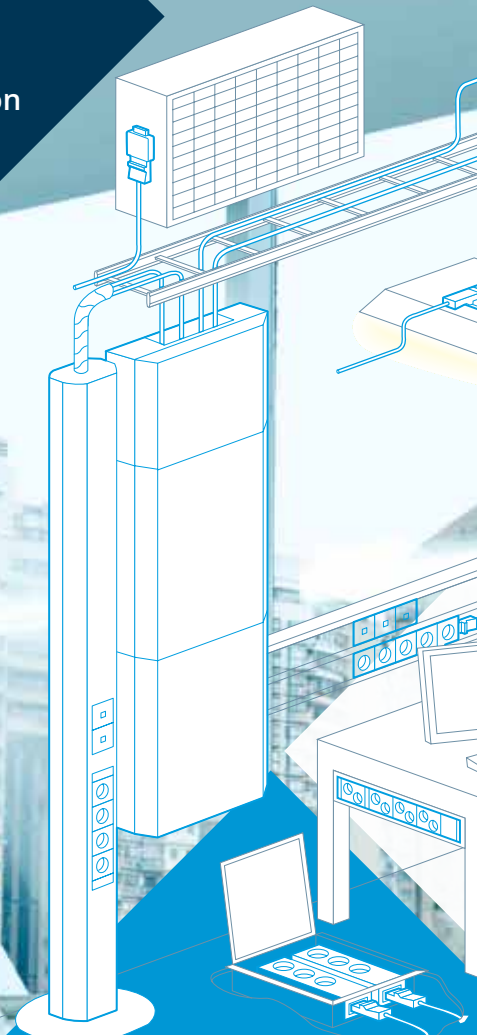
Our systems adapt so you don't have to. Our selection offers comprehensive solutions for commercial building electrical installations.

## Ensto offers its customers

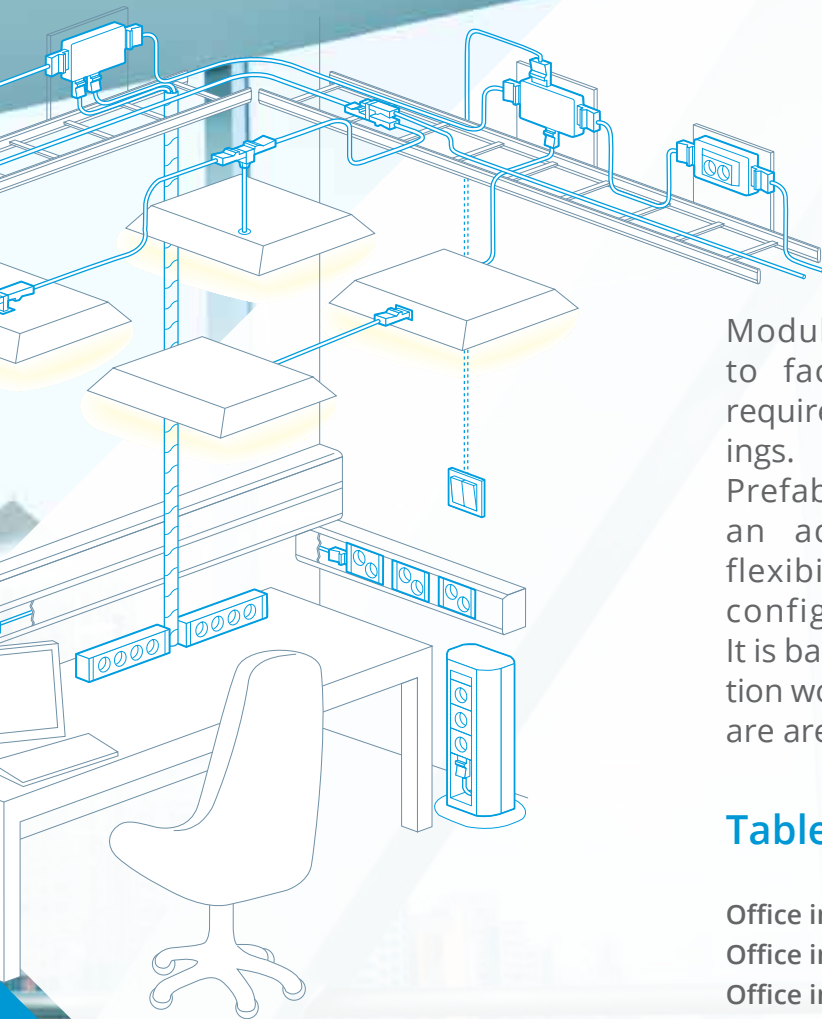
- Consultancy during planning phase of the investment with experts having many years of experience in project implementation
- Support in customizing of solutions in large projects, for technical and financial optimization
- Technical support and professional training during development and implementation of the project

## Benefits of Ensto Net

- Modular design facilitates implementation of large projects
- Easy to plan
- Saves time and money
- Quick installation
- Easy to modify
- Components can be reused
- More accurate estimation of costs at an early stage of investment
- Less design constraints due to decentralization of the installation



# Designer's Guide to Modular Wiring Installation



Modular wiring installation system is used to facilitate installation work and to meet requirements electrical installations in smart buildings.

Prefabricated installation system is a part of an advanced construction process, where flexibility, installation speed, as well as re-configuration possibilities are combined. It is based on prefabricated modules. Thus, installation work is faster and future changes in installation are easy to carry out and free of errors.

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Ensto Net's modular installation system prevents incorrect installation of electrical connections, in accordance with EN61535.

# Office - open space

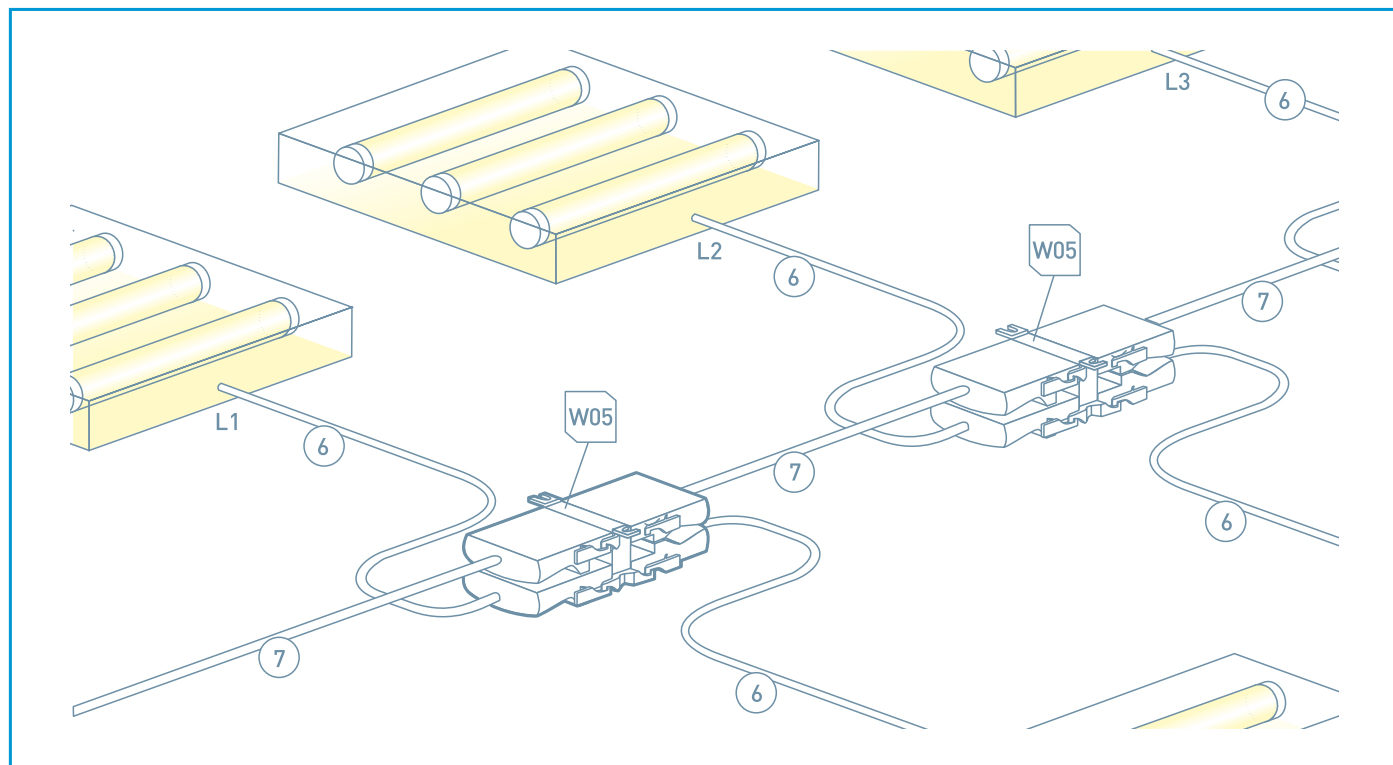
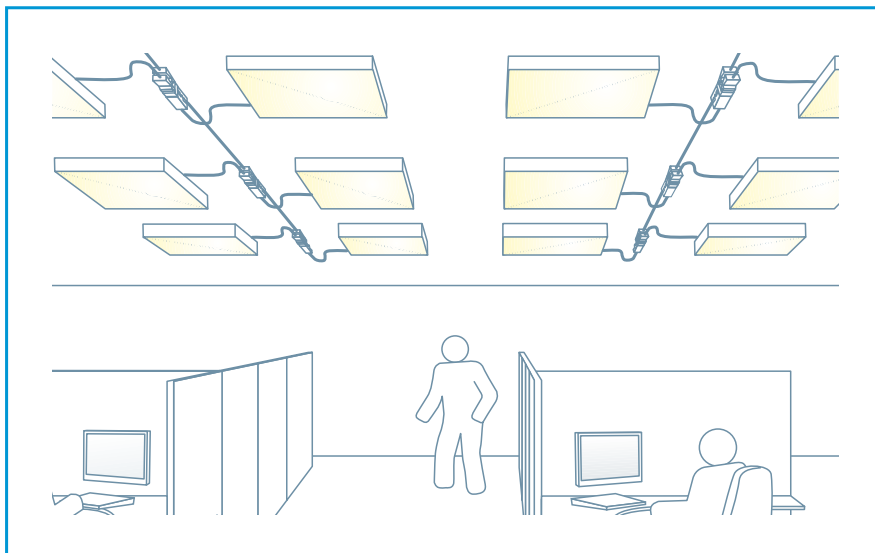
## Lighting Installation with Distribution Block

Luminaire installation with single phase continuous supply and two outputs to light fitting. Light fittings are connected to one phase L1, L2 or L3.

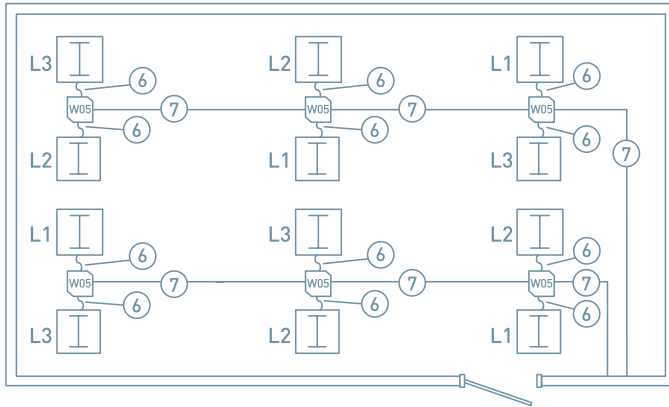
When factory equipped with EnstoNet plug leads or fixed connector the installation of the luminaires can be made without tools very efficiently.

Standard H-type distributors allow continuous feed of luminaire circuit and two adjacent luminaires per unit.

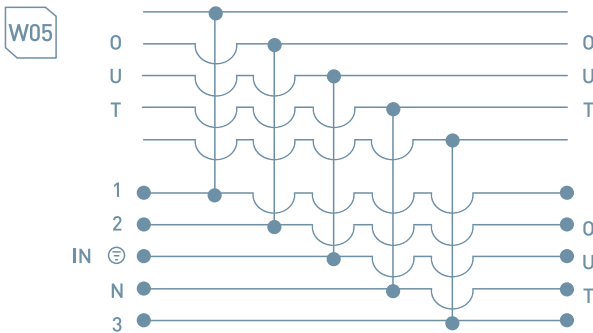
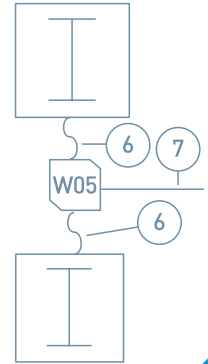
- For larger groups use 6-output distributor (NAD36.\*)
- For controlled luminaires use 5-pole Dali-distributors (NCD5.G).



# Wiring and circuit diagram



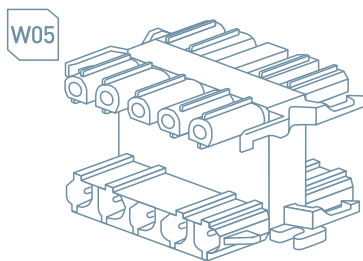
- W05 NAD5.W
- 6 NAL511XXXXXX (L1)  
NAL512XXXXXX (L2)  
NAL513XXXXXX (L3)
- 7 NAL550XXXXXX



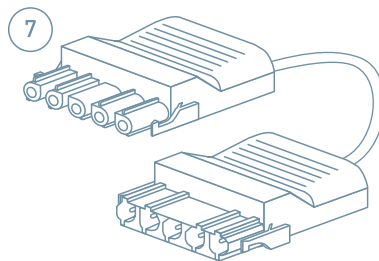
## Office

- This solution can be used in:
- Meeting room
  - Workroom
  - Corridor

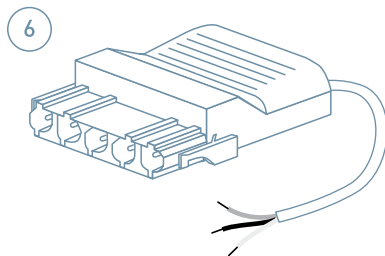
# Products



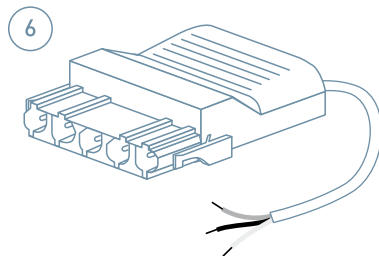
NAD5.W



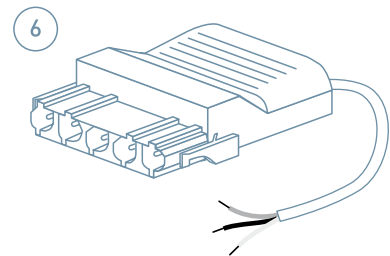
NAL550XXXXXX



NAL511XXXXXX (L1)



NAL512XXXXXX (L2)

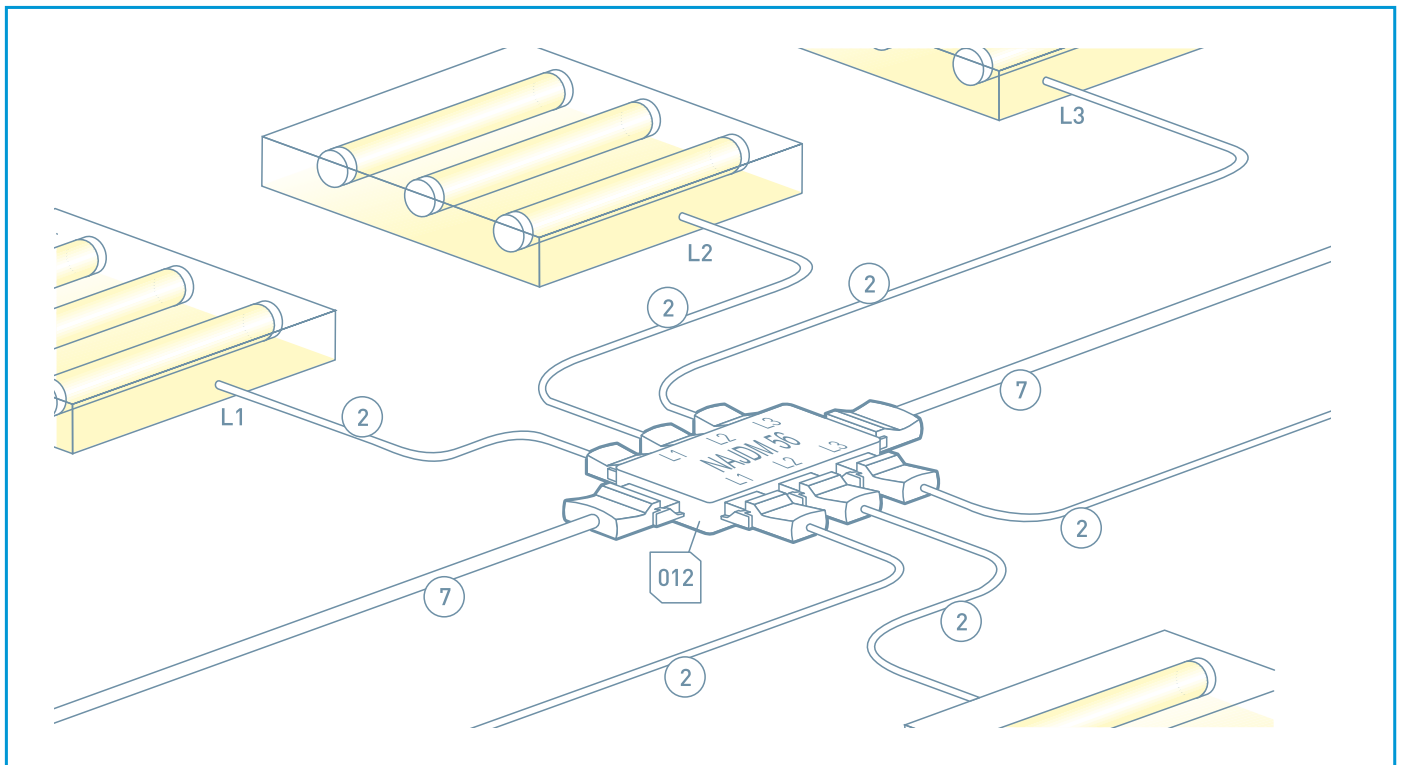
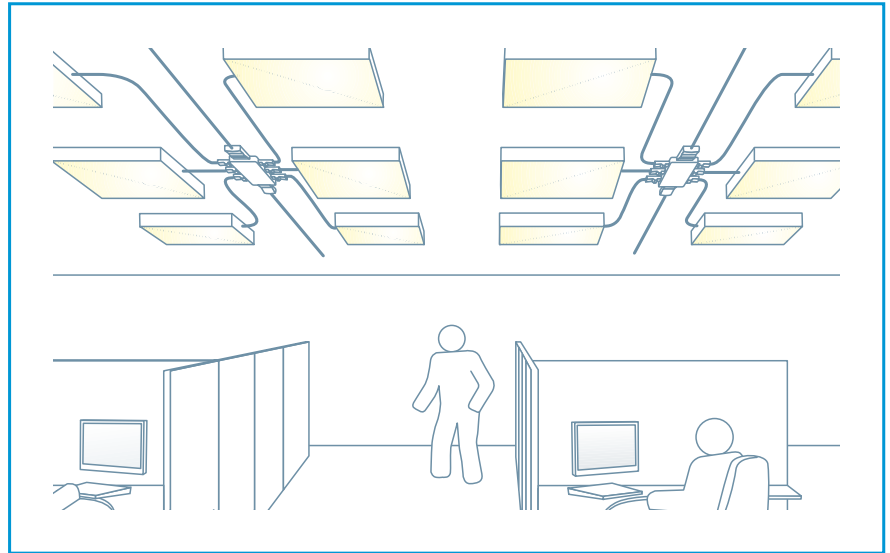


NAL513XXXXXX (L3)

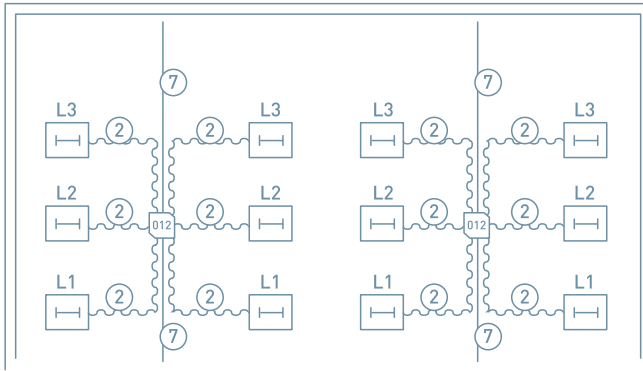
# Office - open space

## Lighting Installation with Distribution Box

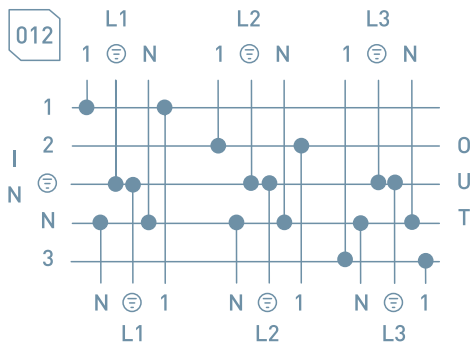
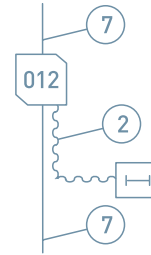
Installation with three phase continuous supply and six single phase outputs to light fittings.



# Wiring and circuit diagram



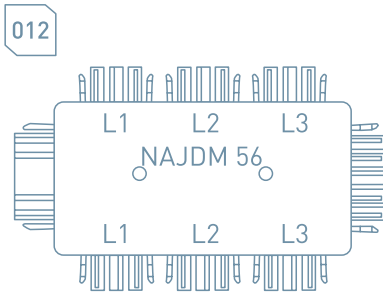
- 012 NAJDM 56
- 2 NAL310XXXXXX
- 7 NAL550XXXXXX



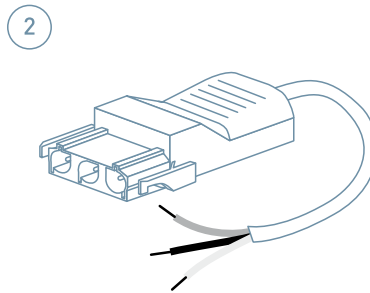
## Office

- This solutions can be used in:
- Meeting room
  - Workroom
  - Corridor

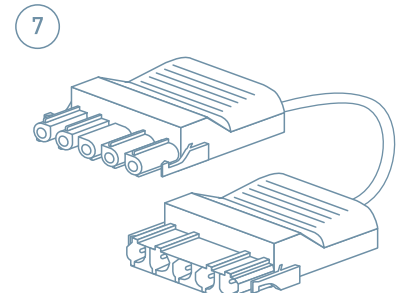
# Products



NAJDM 56



NAL310XXXXXX

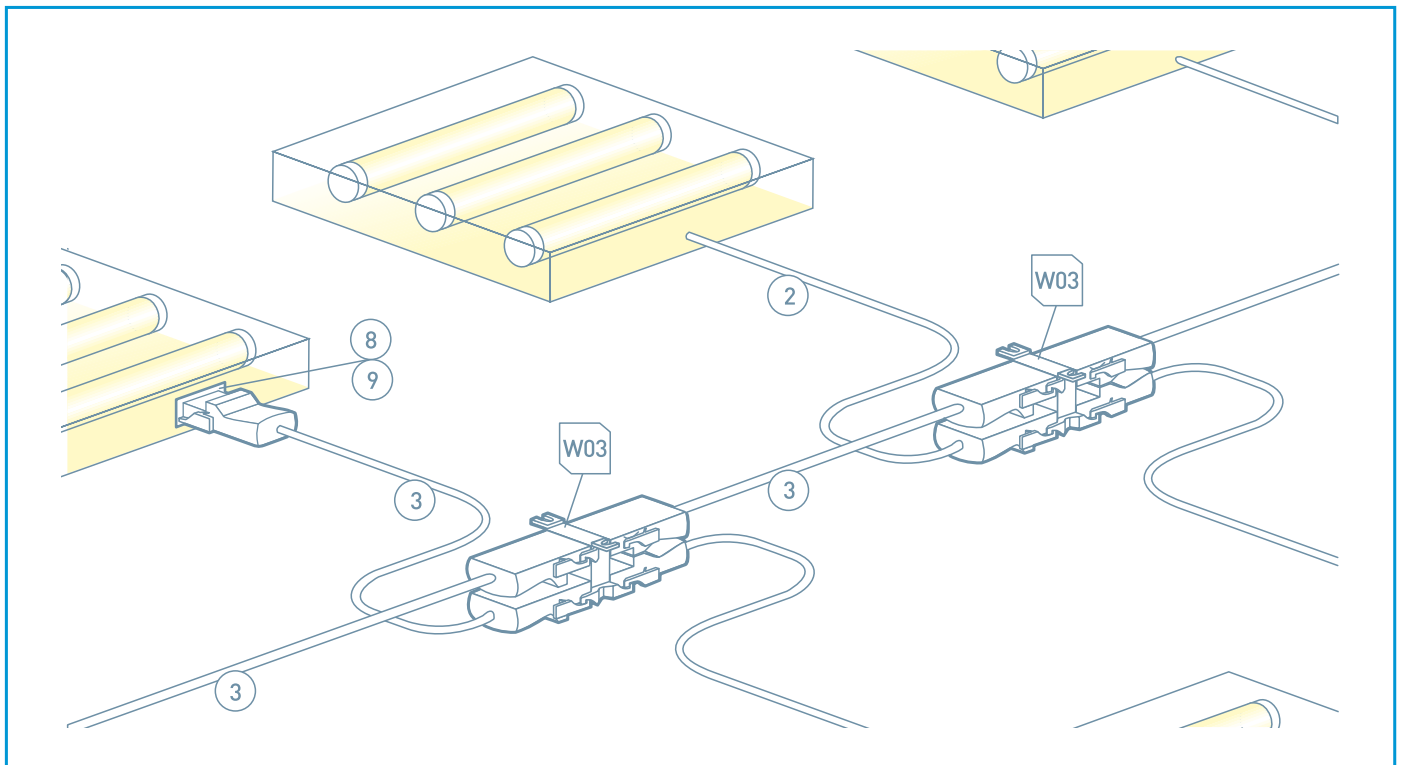
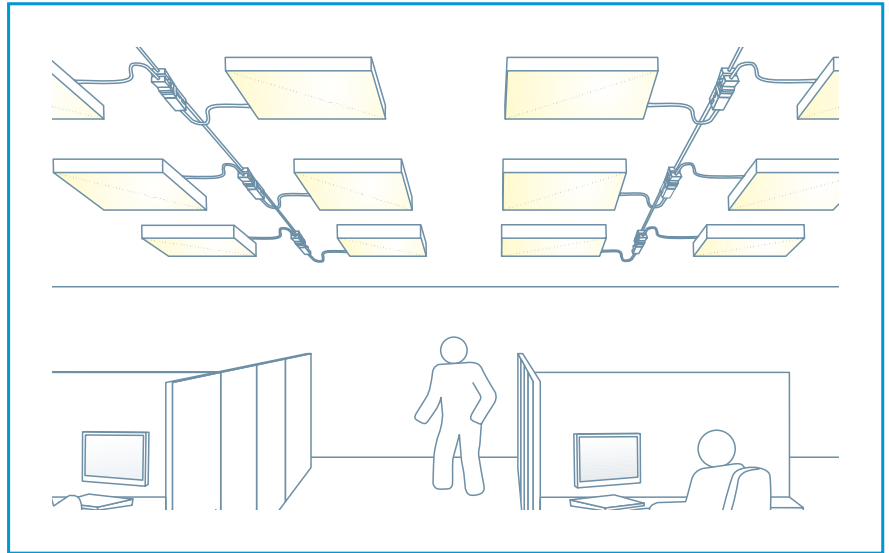


NAL550XXXXXX

# Office - open space

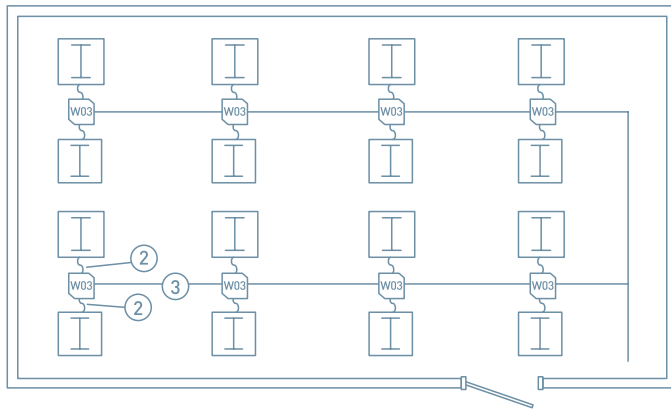
## Lighting Installation with Distribution Block

Installation with one single phase continuous supply and two outputs to light fittings.

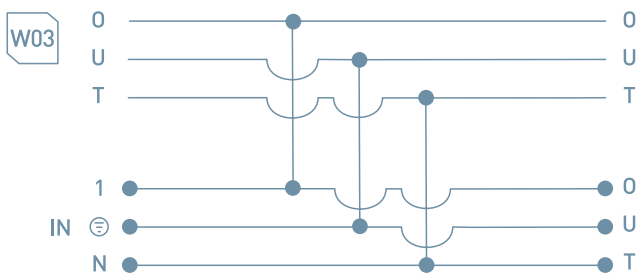
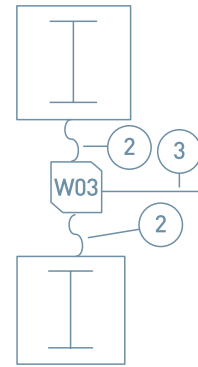




# Wiring and circuit diagram



- W03 NAD3.W
- 2 NAL310XXXXXX
- 3 NAL330XXXXXX

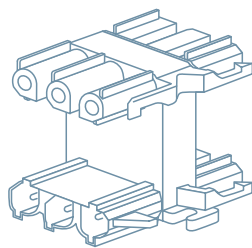


## Office

- This solutions can be used in:
- Meeting room
  - Workroom
  - Corridor

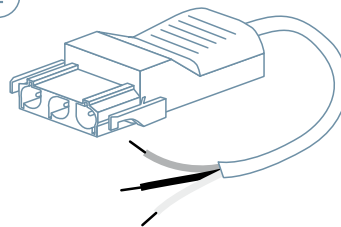
# Products

W03



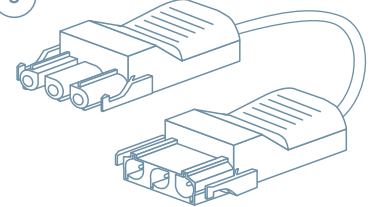
NAD3.W

2



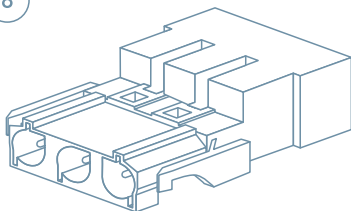
NAL310XXXXXX

3



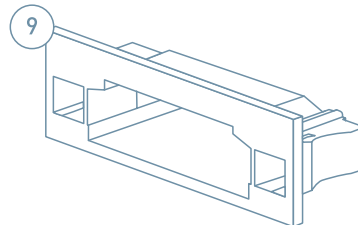
NAL330XXXXXX

8



NAS31.W

9



NK3P.W



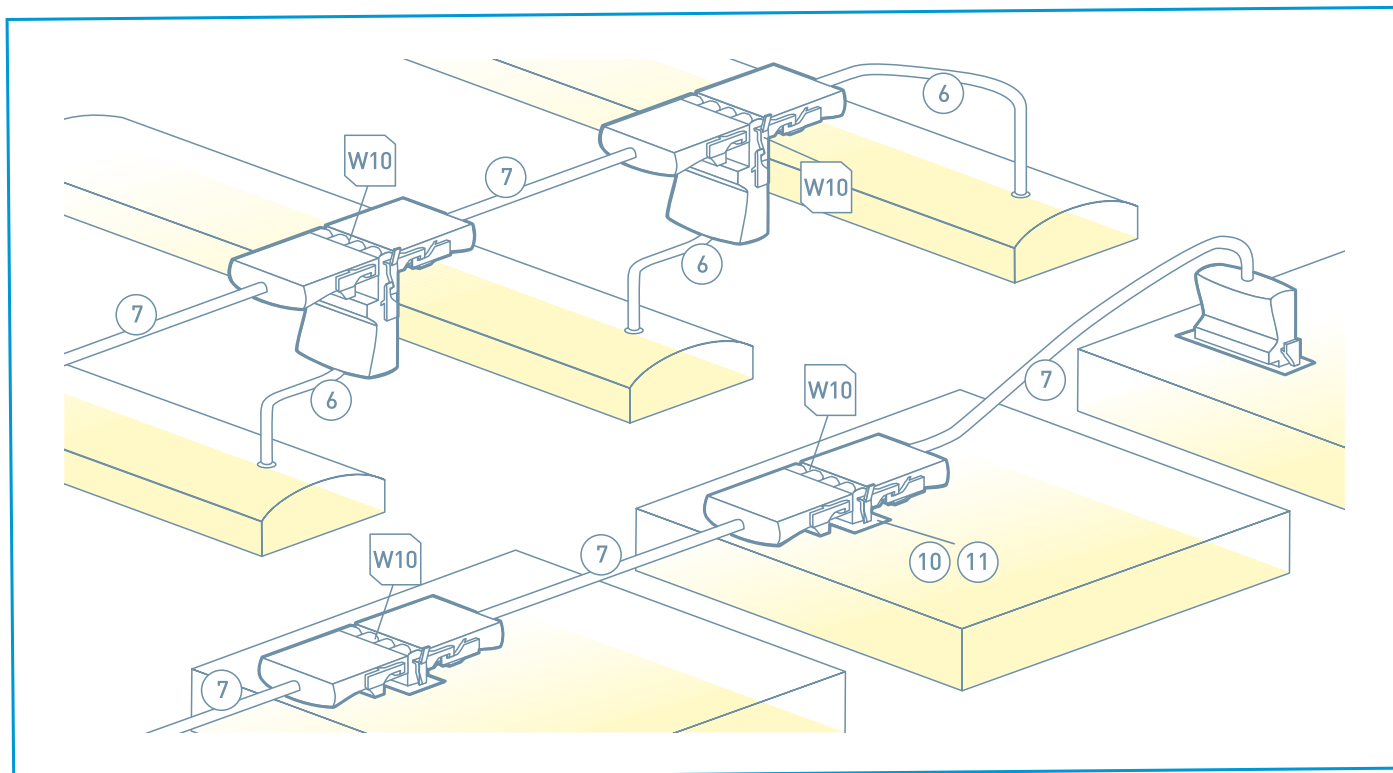
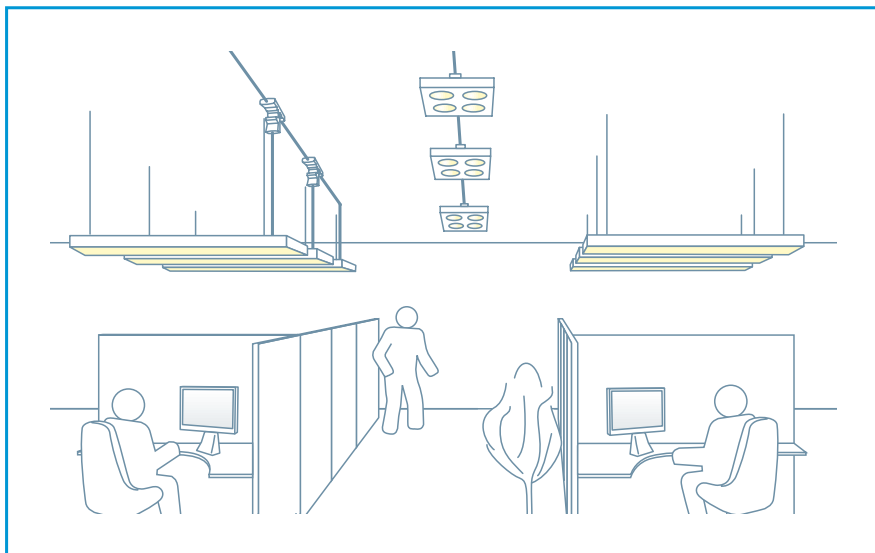
# Office - open space

## Lighting Solution with T-distribution Block and Three Phase Supply

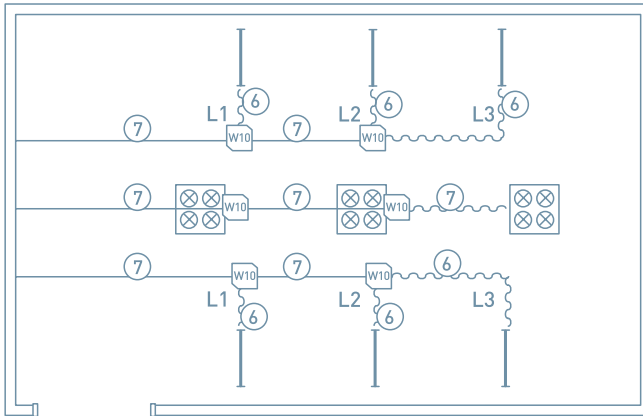
Installation with three phase continuous supply and single branching of phase supply to light fitting.

When factory equipped with EnstoNet plug leads or fixed connector the installation of the luminaires can be made without tools very efficiently.

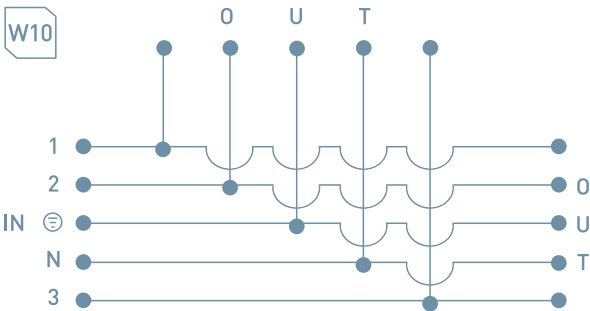
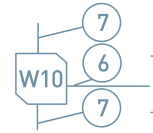
Three phase luminaire circuits can be distributed NAD56.\* with 5-pole continuous and two outputs per phase. This allows connection of up to six luminaires with phase-rotation.



# Wiring and circuit diagram



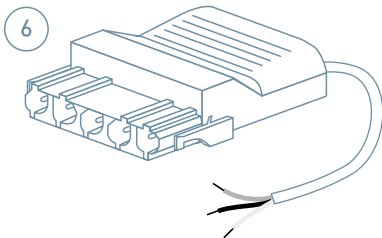
- W10** NAD5T.W
- 7** NAL550XXXXXX
- 6** NAL511XXXXXX (L1)  
NAL512XXXXXX (L2)  
NAL513XXXXXX (L3)



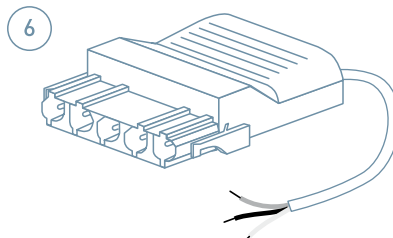
## Office

- This solutions can be used in:
- Meeting room
  - Workroom
  - Corridor

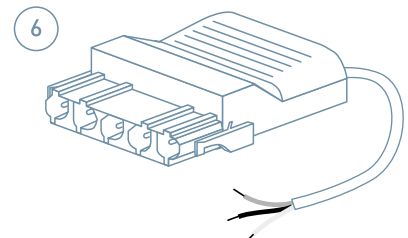
# Products



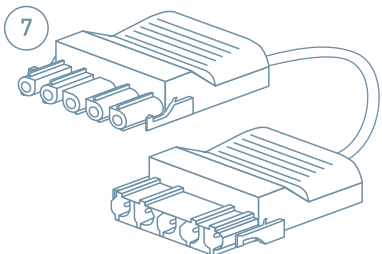
NAL511XXXXX (L1)



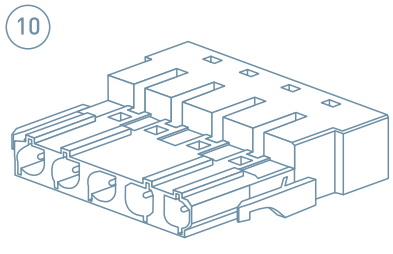
NAL512XXXXX (L2)



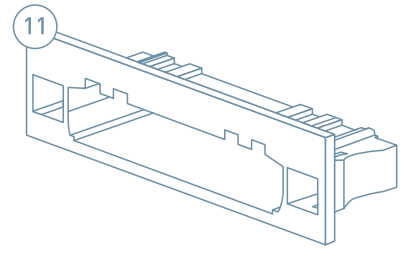
NAL513XXXXX (L3)



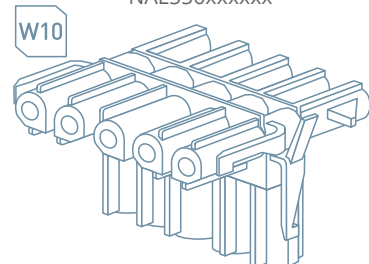
NAL550xxxxxx



NAS51.W



NK5P.W

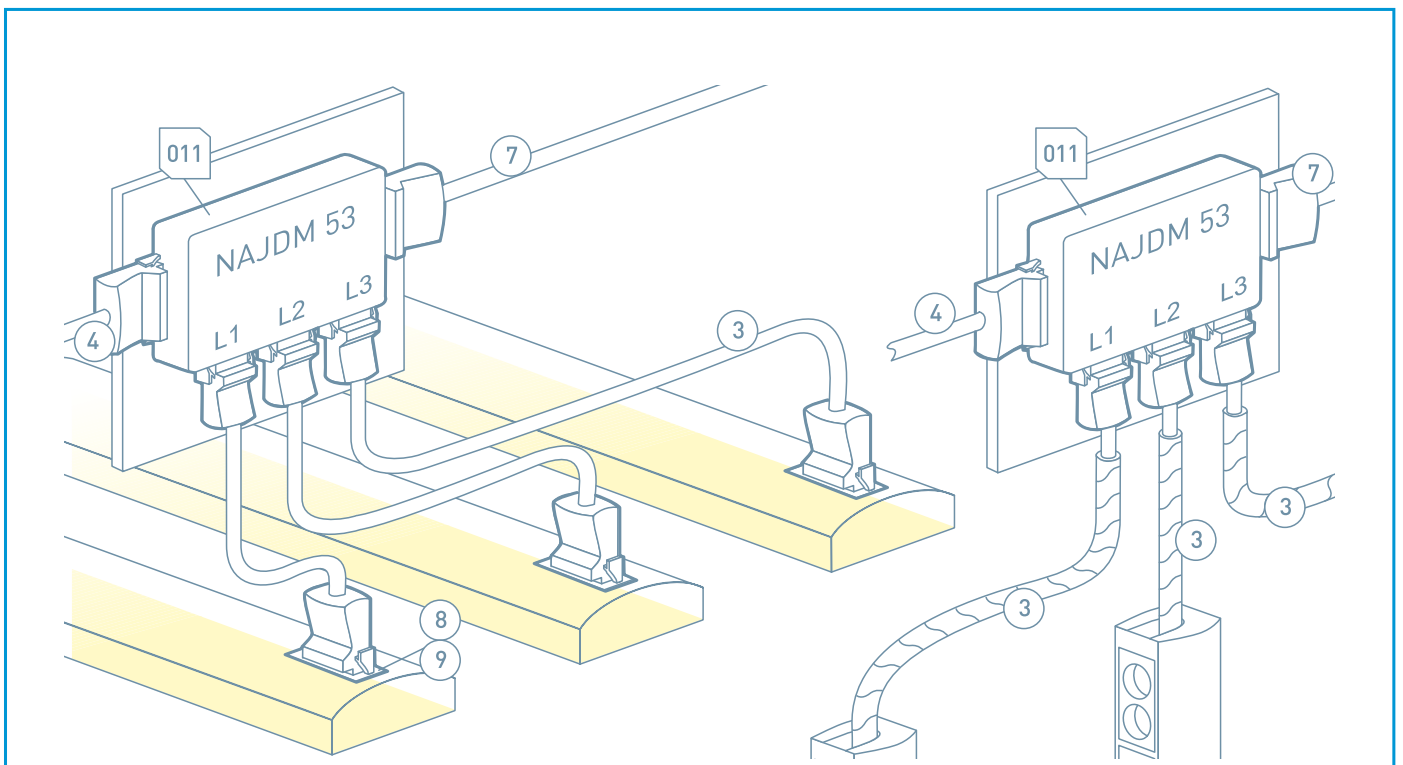
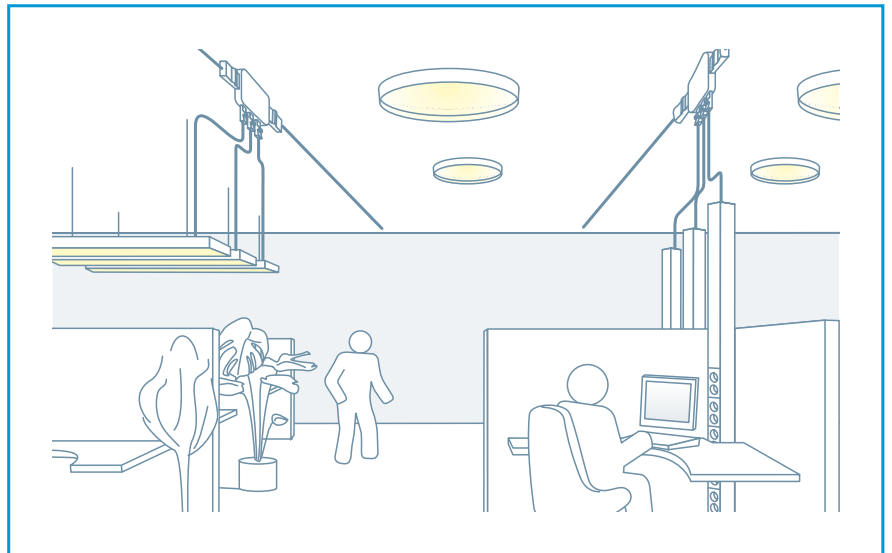


NAD5T.W

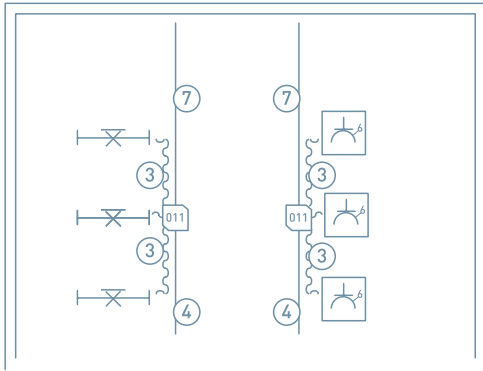
# Office - open space

## Lighting Solution with T-distribution Block and Three Phase Supply

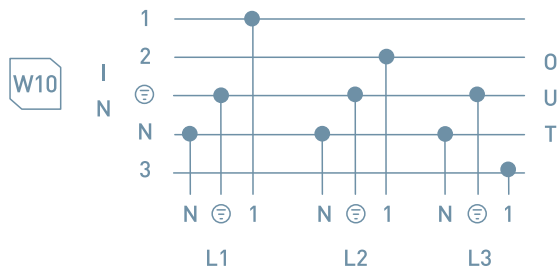
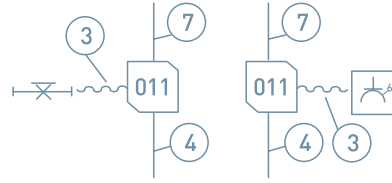
Installation with three phase continuous supply and three one phase branching to light fittings or sockets.



## Wiring and circuit diagram



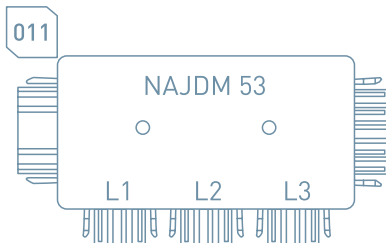
- 011 NAJDM 53
- 3 NAL330XXXXXX
- 4 NAL150XXXXXX
- 7 NAL550XXXXXX
- SOCKET OUTLET



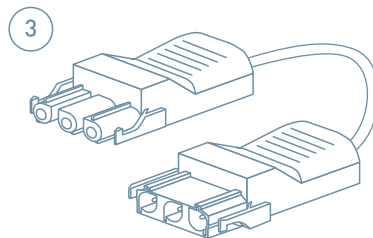
## Office

- This solutions can be used in:
- Meeting room
  - Workroom
  - Corridor

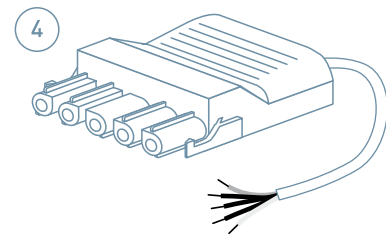
## Products



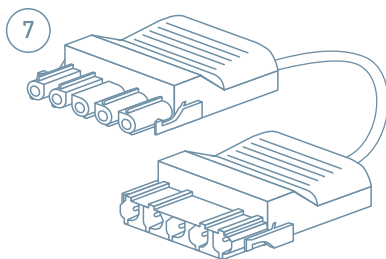
NAJDM 53



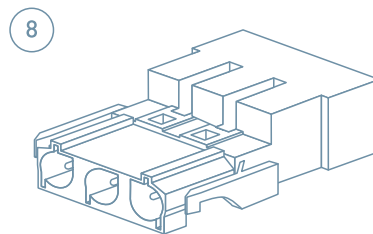
NAL330XXXXXX



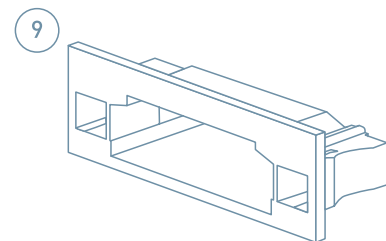
NAL150XXXXXX



NAL550XXXXXX



NAS31.W

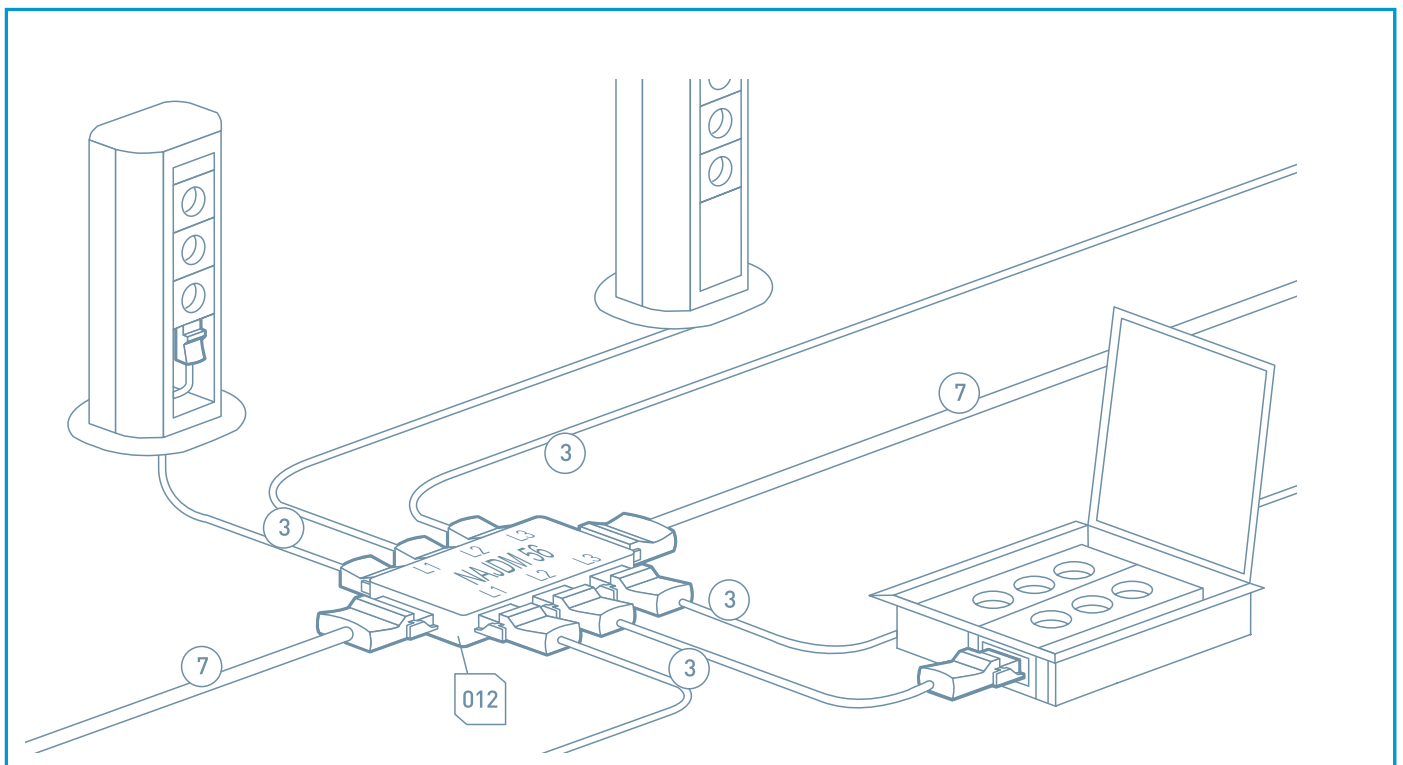
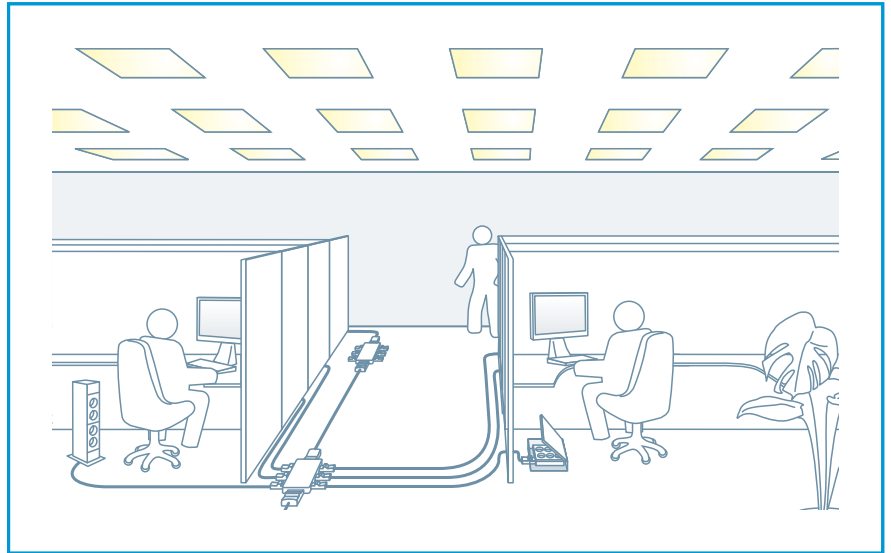


NK3P.W

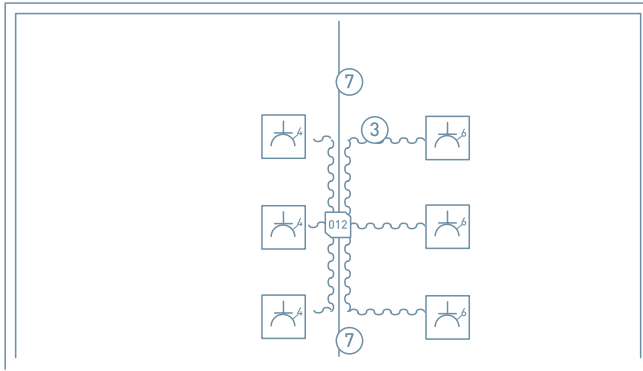
# Office - open space

## Socket Outlet Installation with Distribution Box

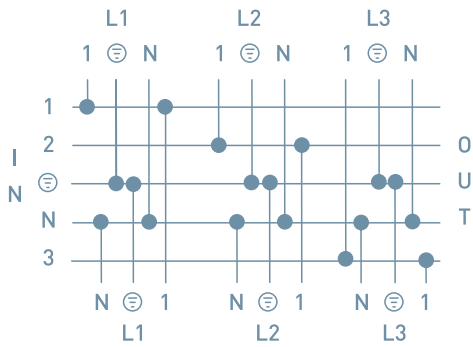
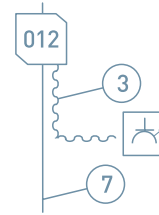
Installation with single phase continuous supply and two single phase outputs to light fittings. Light fitting chain is presence detection controlled.



## Wiring and circuit diagram



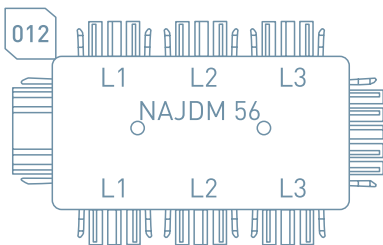
- 012 NAJDM 56
- 3 NAL330XXXXXX
- 7 NAL550XXXXXX
- SOCKET OUTLET



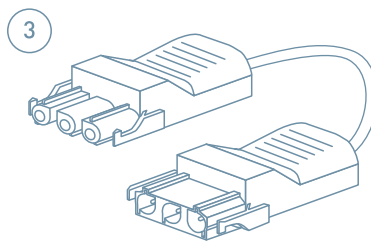
## Office

- This solution can be used in:
- Meeting room
  - Workroom
  - Corridor

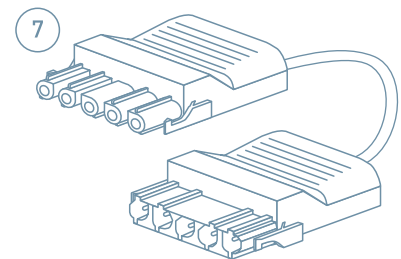
## Products



NAJDM 56



NAL330XXXXXX



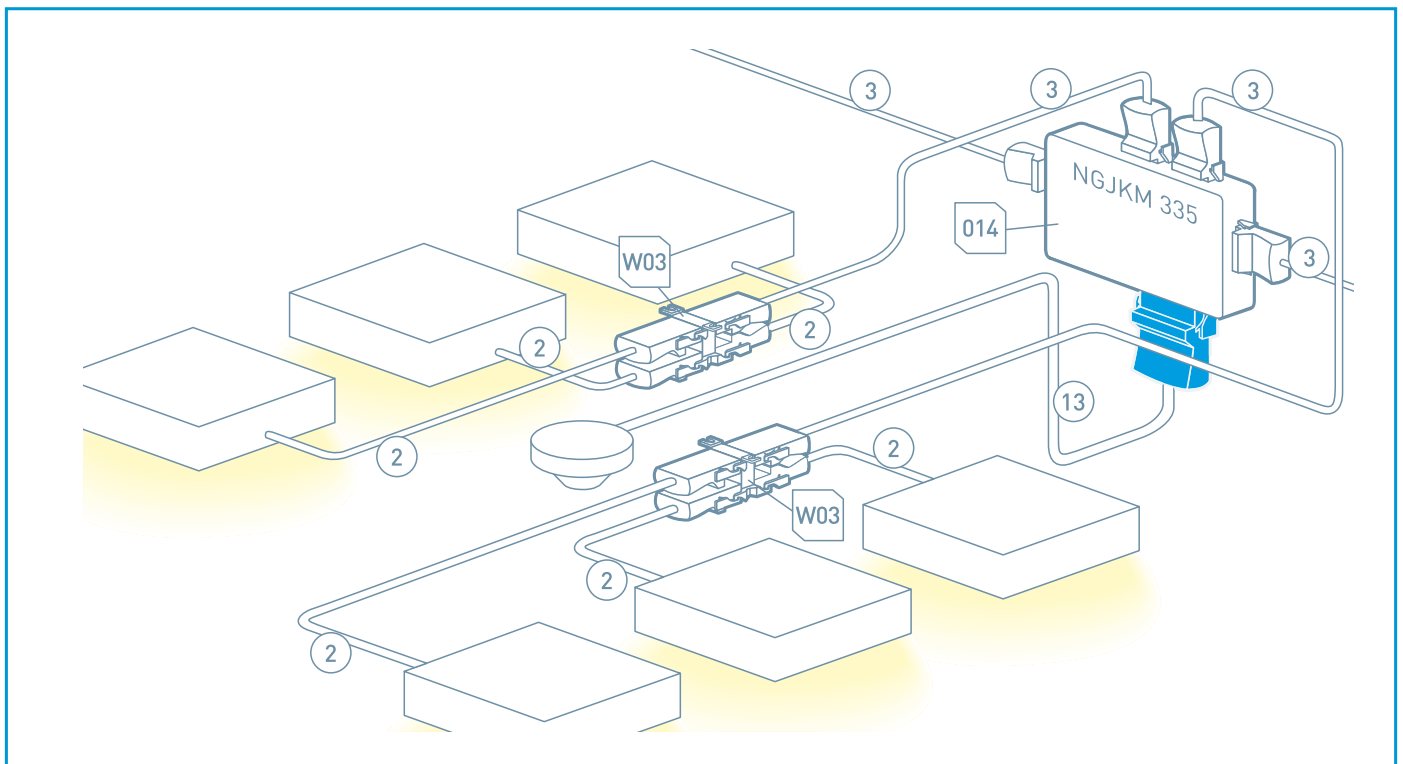
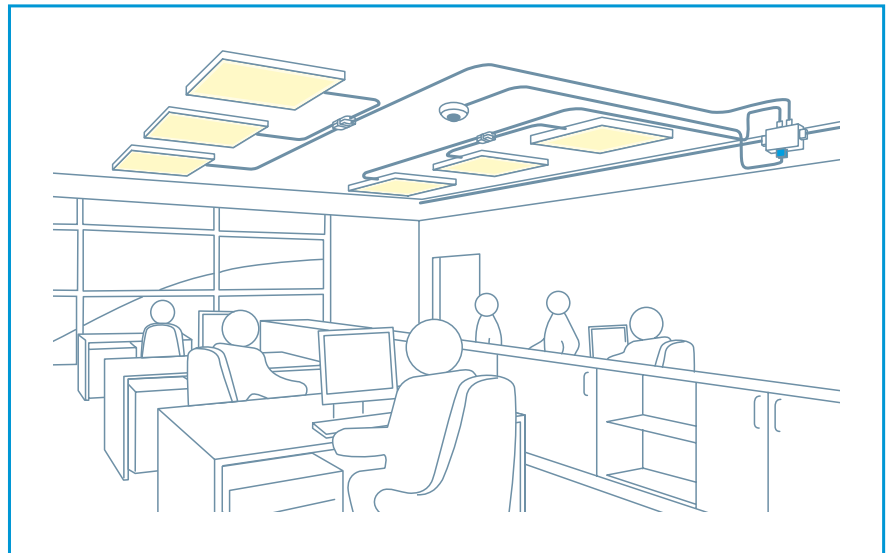
NAL550XXXXXX



# Office - open space

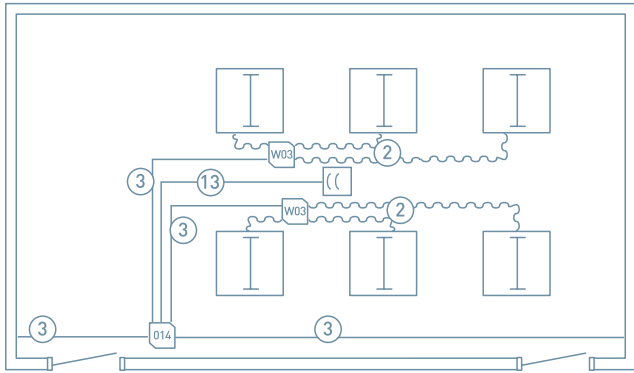
## Energy-saving Solution for Lighting with Switch Box and Presence Detector

Installation with single phase continuous supply and two single phase outputs to light fittings. Light fitting chain is presence detection controlled.

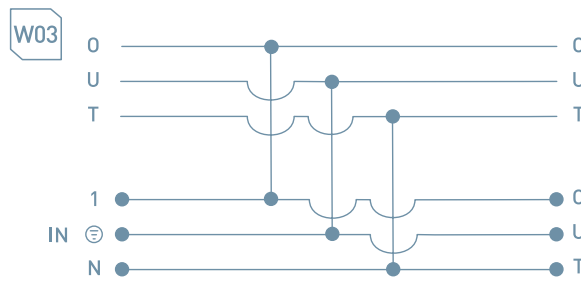
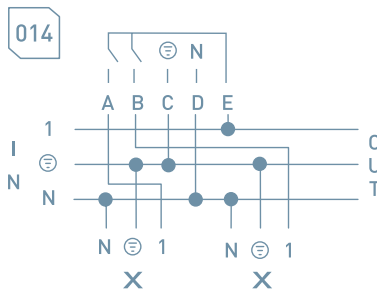
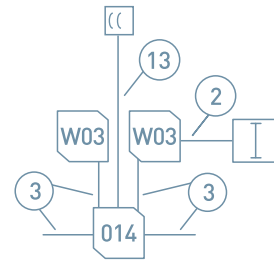




# Wiring and circuit diagram



- 014 NGJKM 335
- W03 NAD3.W
- 2 NAL310XXXXXX
- 3 NAL330XXXXXX
- 13 NBL510XXXXXS
- (C) PIR

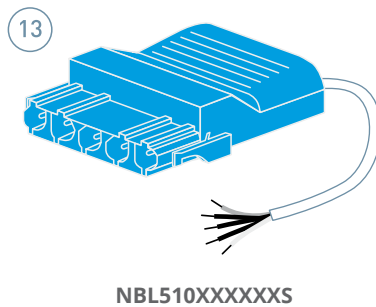
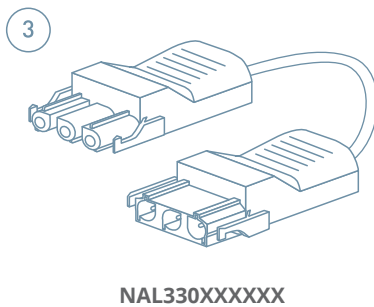
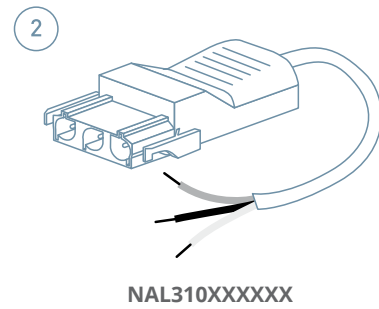
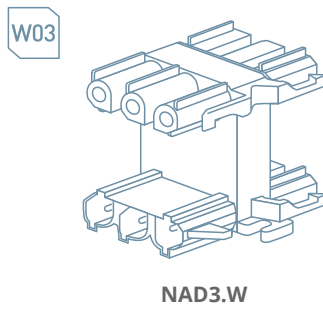
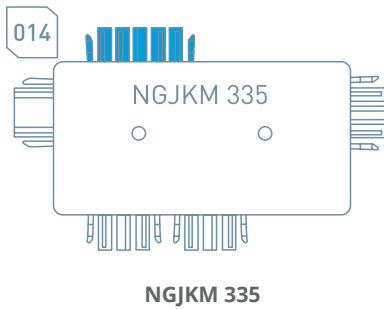


## Office

This solution can be used in:

- Meeting room
- Workroom
- Corridor

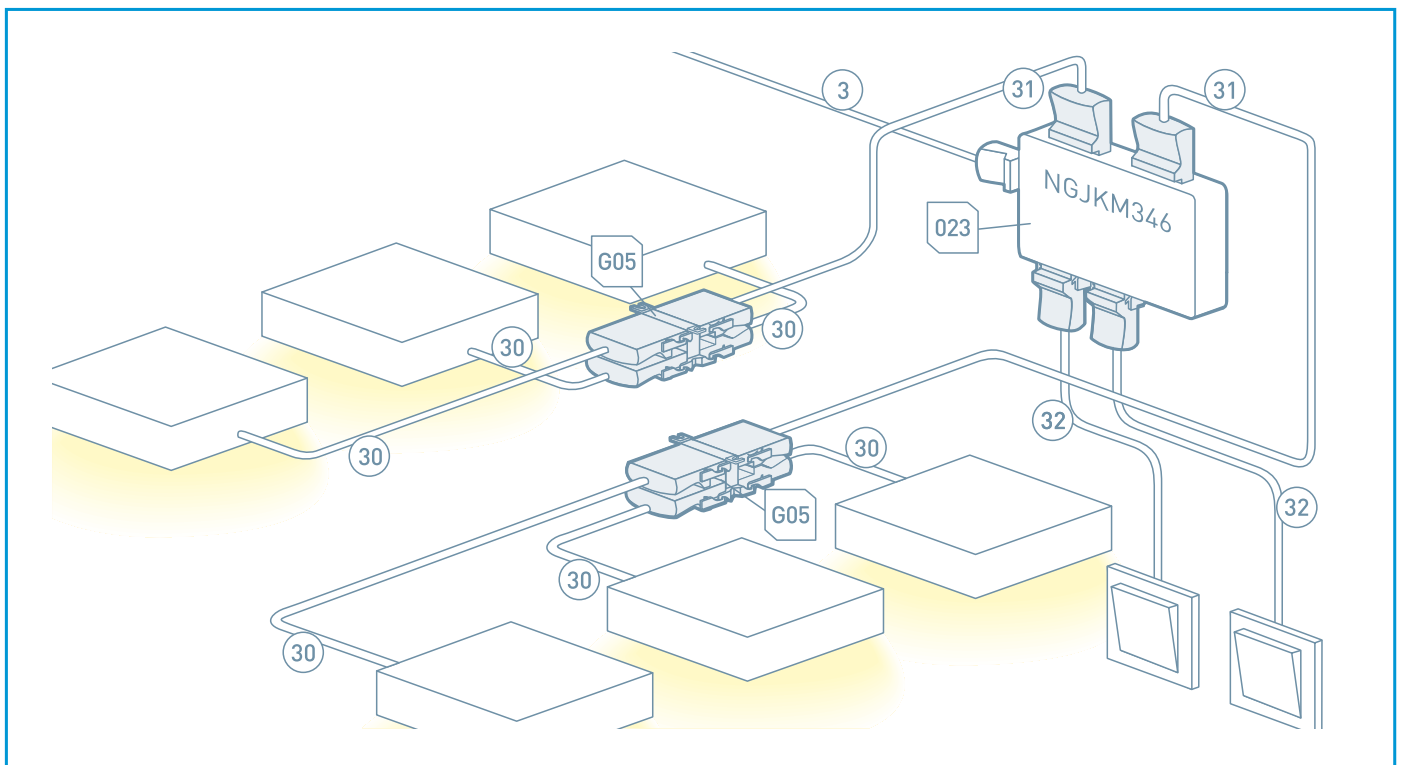
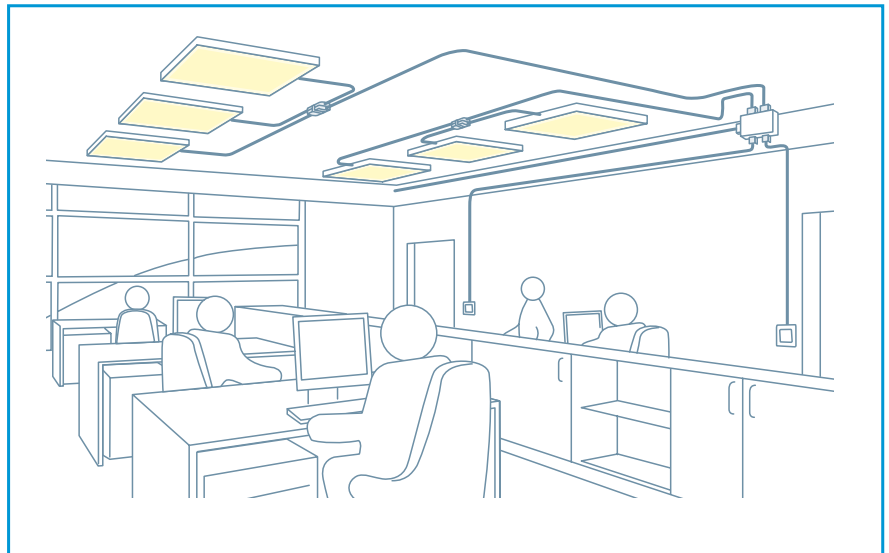
# Products



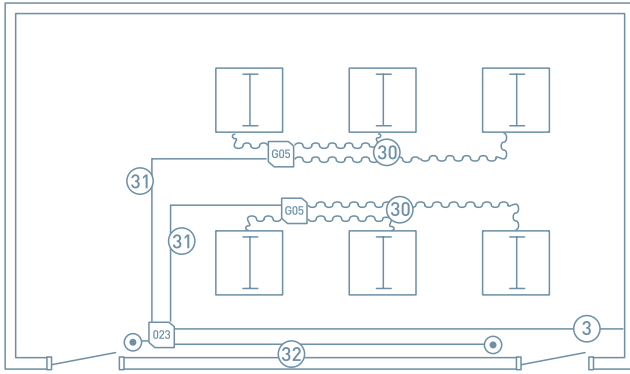
# Office - open space

## Lighting Installation with Control Box by DALI

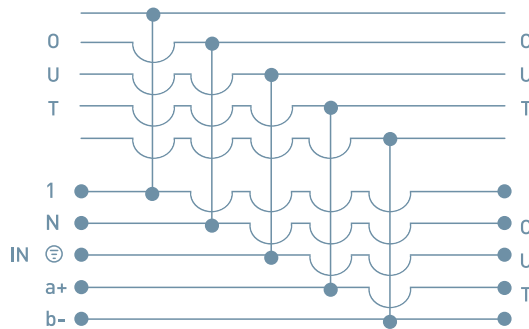
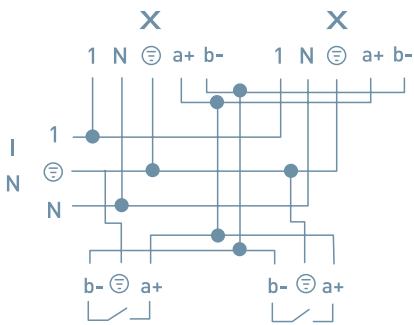
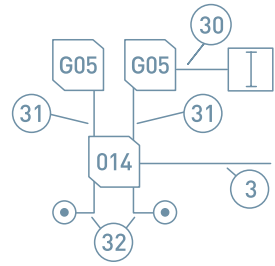
Installation with single phase power supply where supplies for light fittings are dimmer controlled via two parallel connected push buttons by DALI. Power supplies and DALI are branched with five pole cable sets to light fittings.



# Wiring and circuit diagram



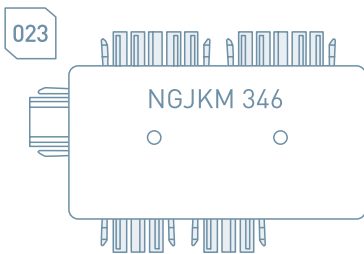
- 023 NGJKM 346
- G05 NCD5.G
- 3 NAL330XXXXXX
- 30 NCL510XXXXXXG
- 31 NCL550XXXXXXG
- 32 NCL310XXXXXXG
- PUSHBUTTON



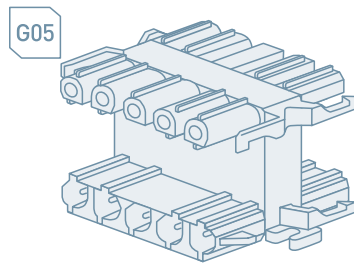
## Office

- This solution can be used in:
- Meeting room
  - Workroom
  - Corridor

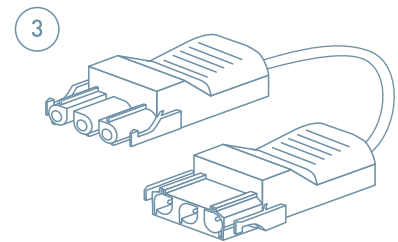
# Products



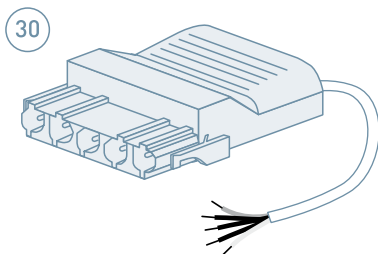
NGJKM 346



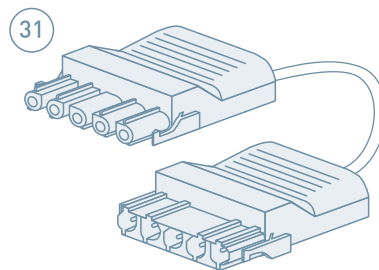
NCD5.G



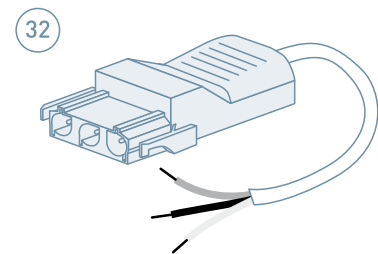
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NCL510XXXXXXG



NCL550XXXXXXG

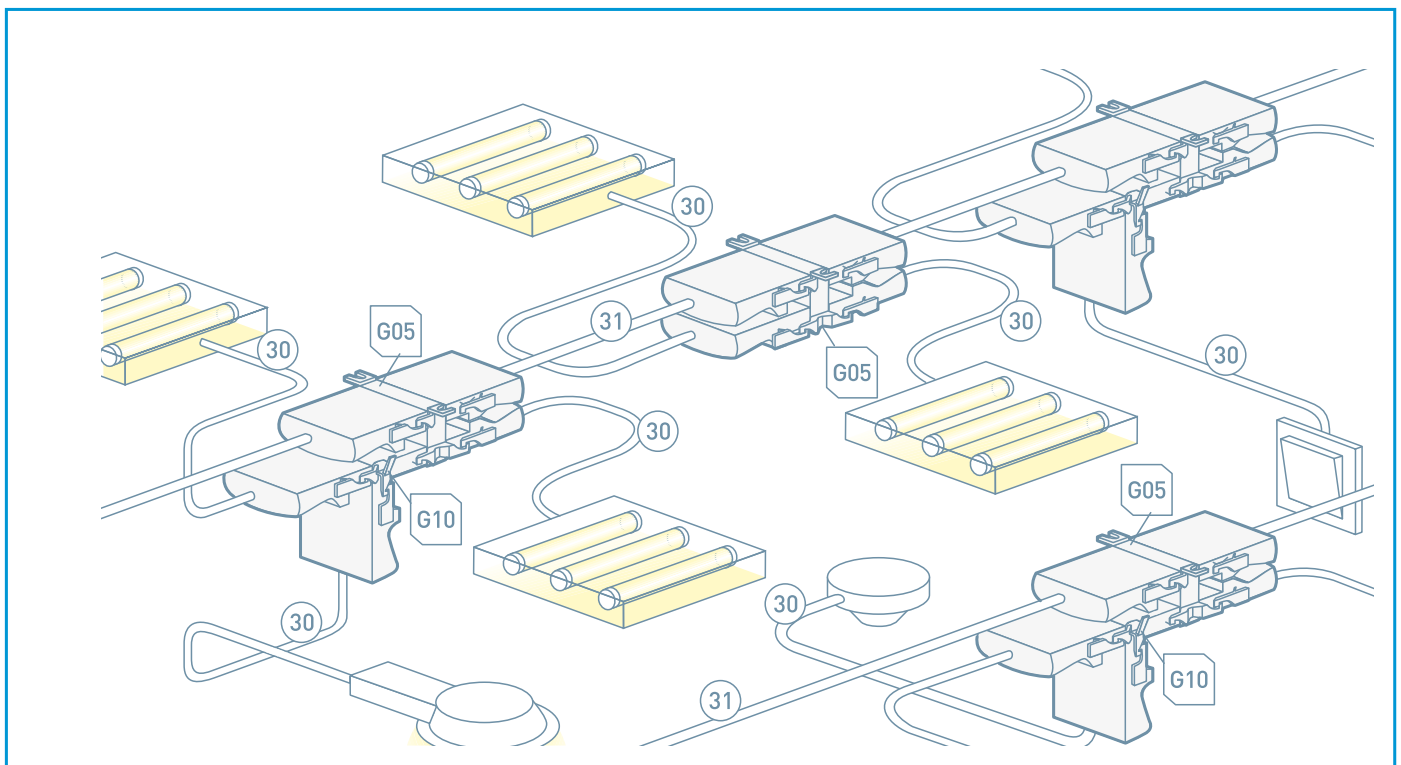
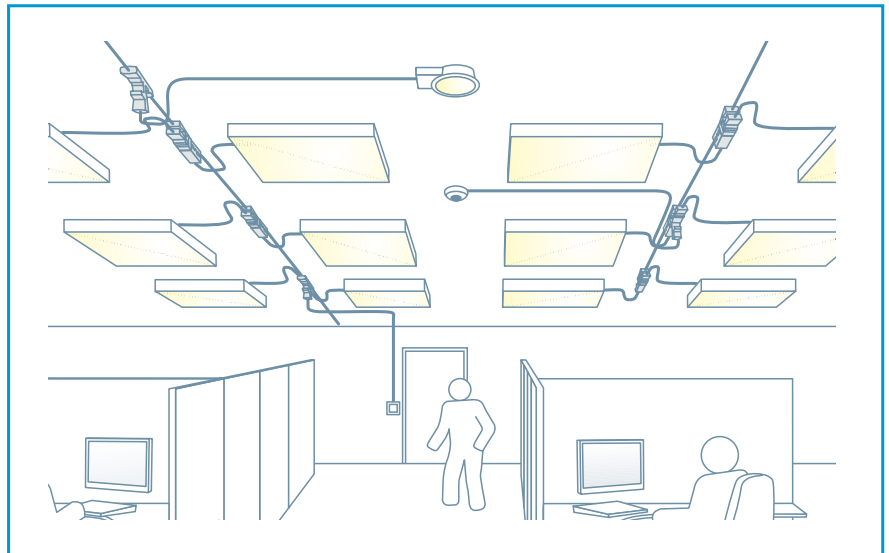


NCL310XXXXXXG

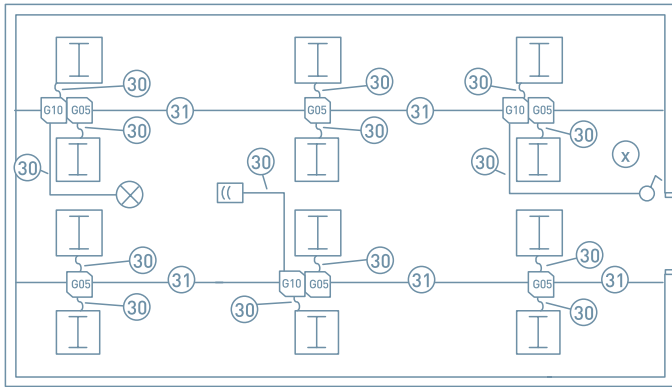
# Office - open space

## Lighting Installation with Distribution Blocks and T-blocks by DALI

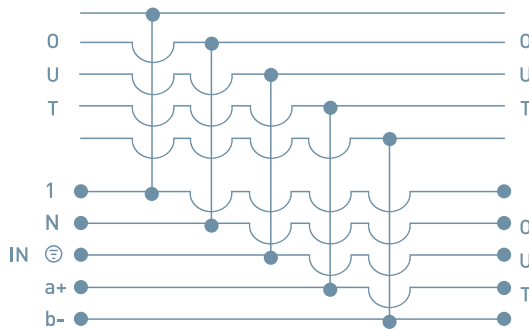
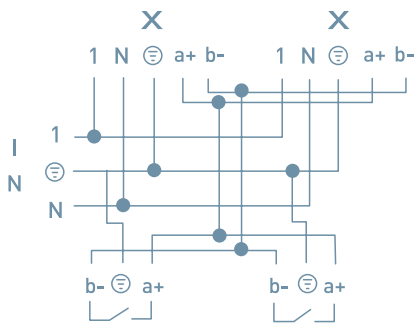
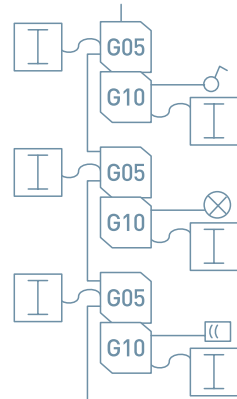
Installation with single phase power supply where supplies for light fittings are dimmer controlled via two parallel connected push buttons by DALI. Power supplies and DALI are branched with five pole cable sets to light fittings.



# Wiring and circuit diagram



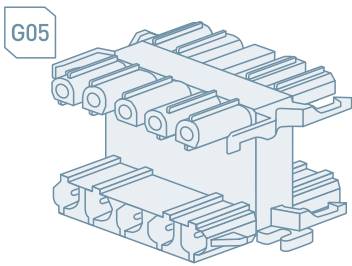
- G05 NCD5.G
- G10 NCD5T.G
- 30 NCL510XXXXXXG
- 31 NCL550XXXXXXG
- ♂ SWITCH
- ⊗ DOWNLIGHT
- ☐ SENSOR



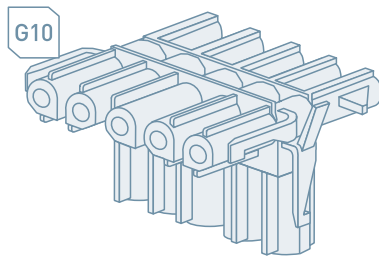
## Office

- This solution can be used in:
- Meeting room
  - Workroom
  - Corridor

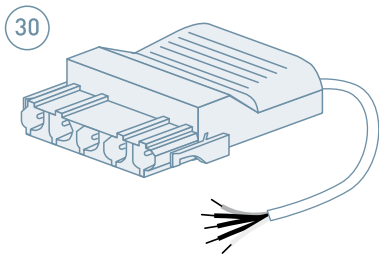
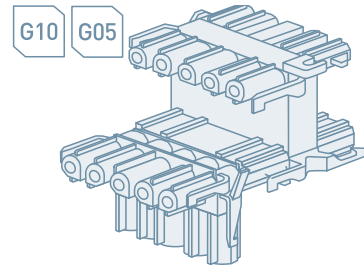
# Products



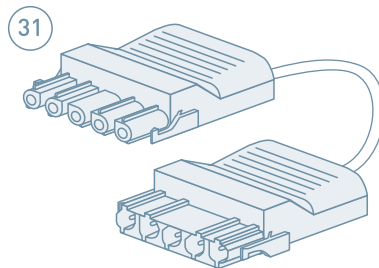
NCD5.G



NCD5T.G



NCL510XXXXXXG



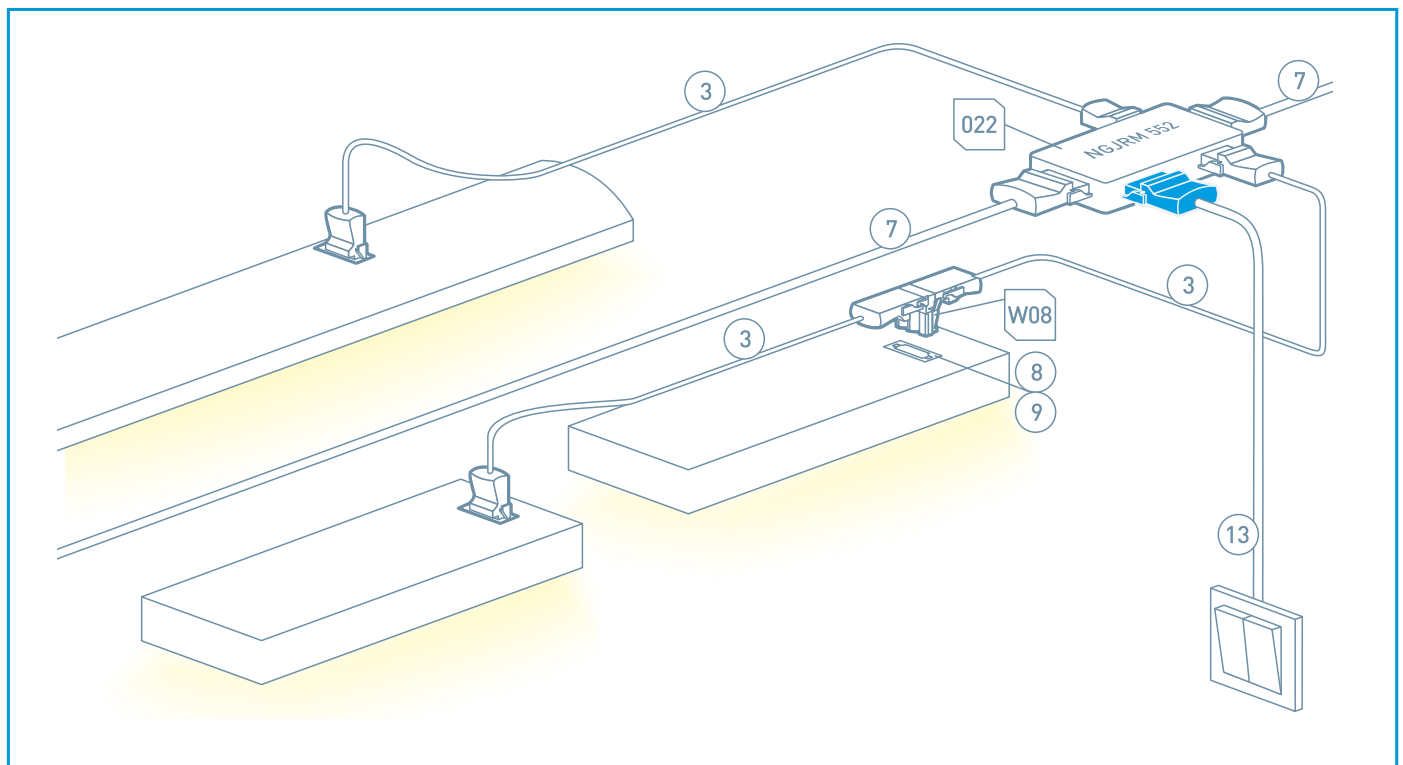
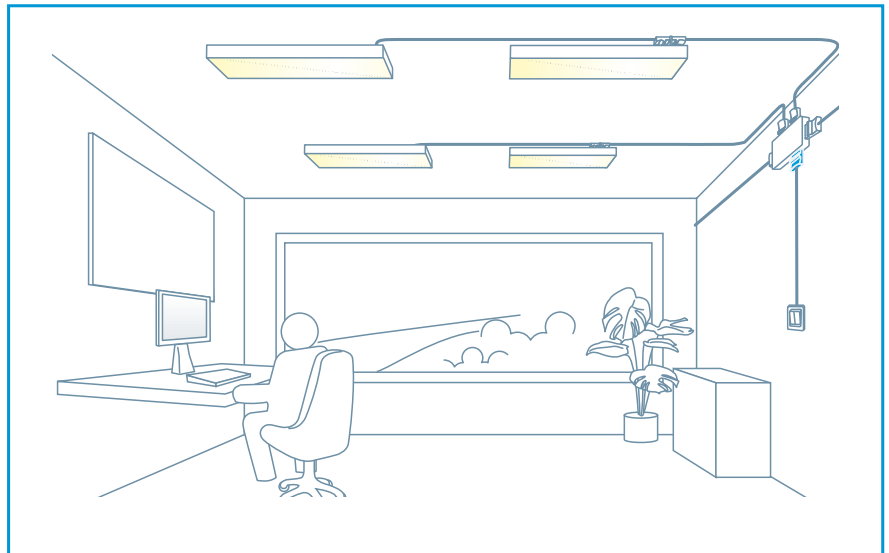
NCL550XXXXXXG



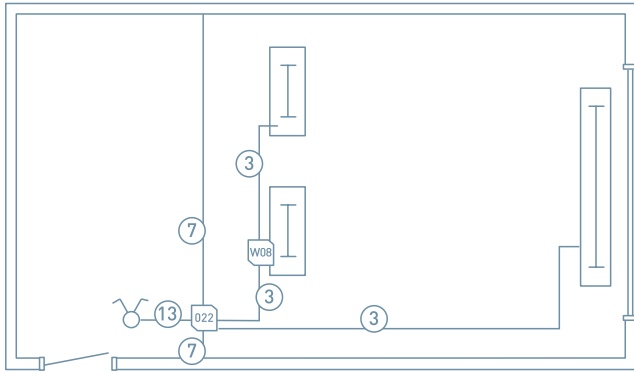
# Office - workroom

## Energy-saving Solution for Lighting with Switch Box and Twilight Switch

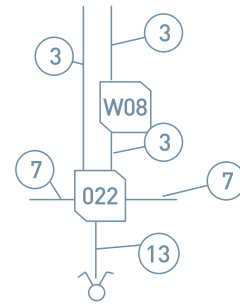
In this energy-saving solution the daylight is used for adjusting the lighting where light fittings near windows are being controlled centralized. The lights close to windows can also be switched off using switches. A double switch controls two light fittings. Installation with three phase continuous supply.



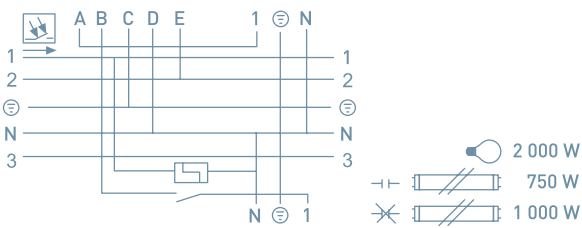
# Wiring and circuit diagram



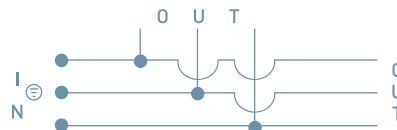
- 022 NGJRM 552
- W08 NAD3T.W
- 3 NAL330XXXXXX
- 7 NAL550XXXXXX
- 13 NBL510XXXXXS
- SWITCH, 2-POLE



022



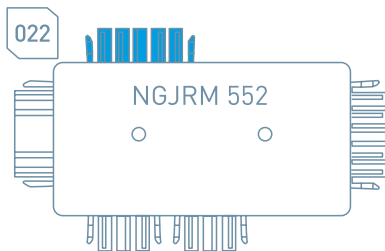
W08



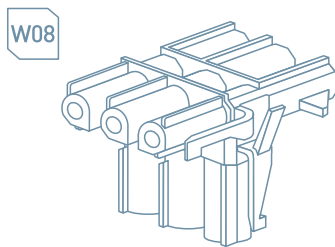
# Office

- This solution can be used in:
- Meeting room
  - Workroom
  - Corridor

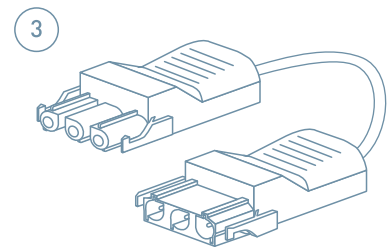
# Products



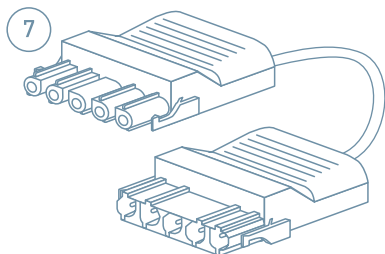
NGJRM 552



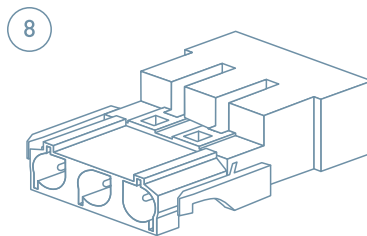
NAD3T.W



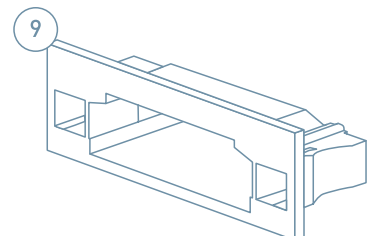
NAL330XXXXXX



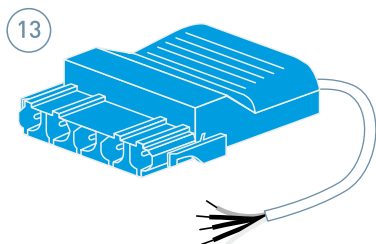
NAL550XXXXXX



NAS31.W



NK3P.W

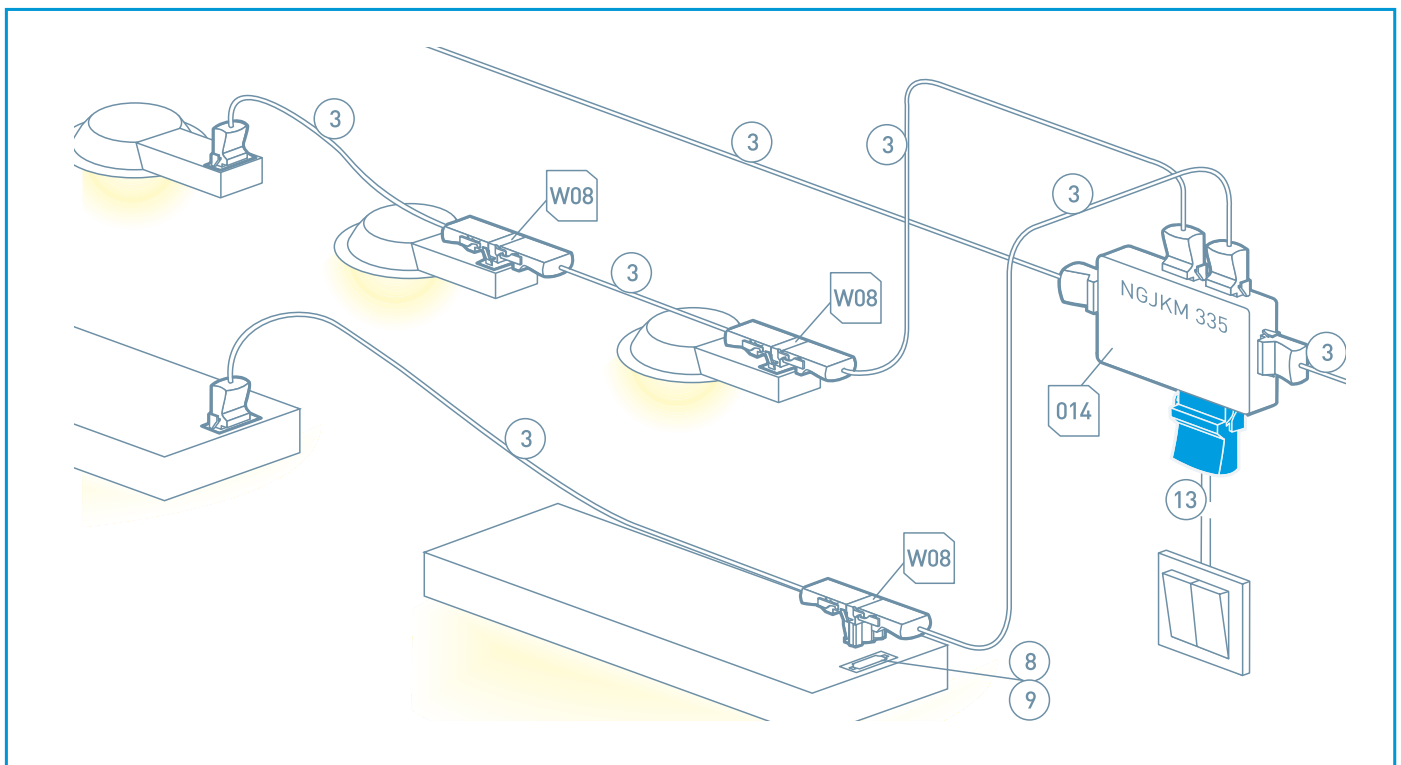
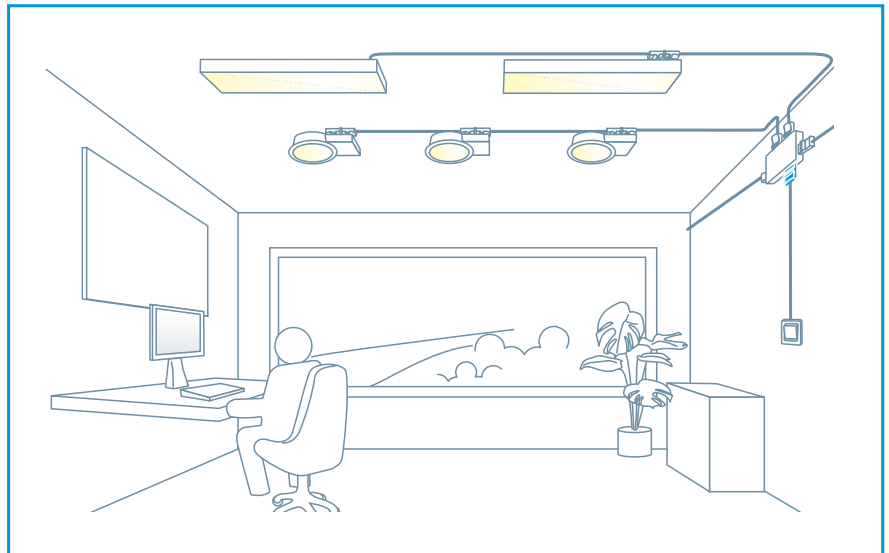


NBL510XXXXXS

# Office - workroom

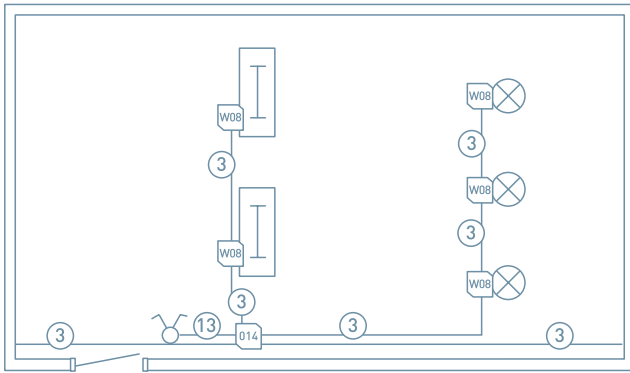
## Lighting Installation with T-distribution Block and Power Control Box

Installation with one phase continuous supply and on/off-switching of two separate light fitting chains. Chain installed with one phase T-distribution blocks.

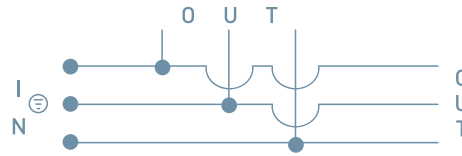
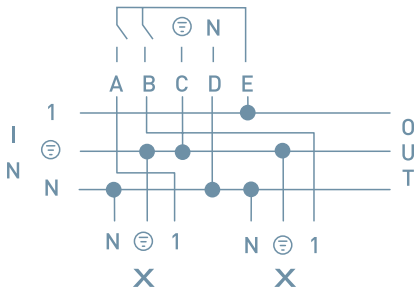
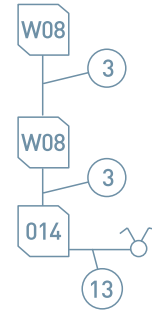




# Wiring and circuit diagram



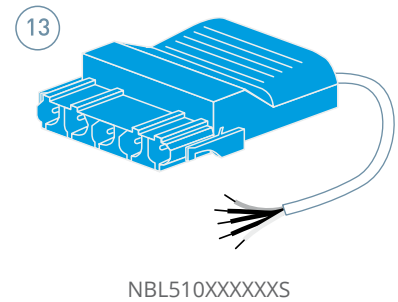
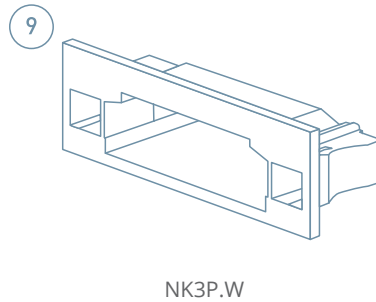
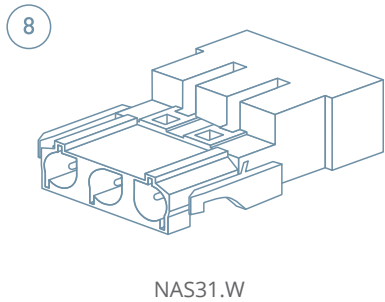
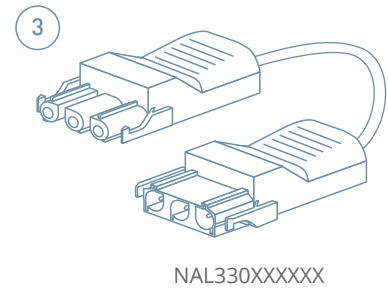
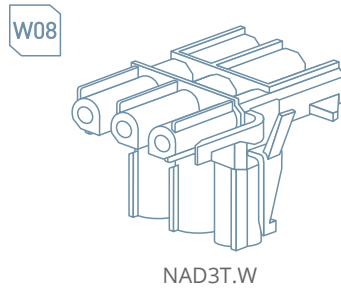
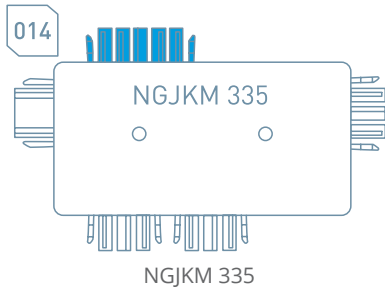
- 014 NGJKM 335
- W08 NAD3T.W
- 3 NAL330XXXXXX
- 13 NBL510XXXXXS
- SWITCH, 2-POLE



## Office

- This solution can be used in:
- Meeting room
  - Workroom
  - Corridor

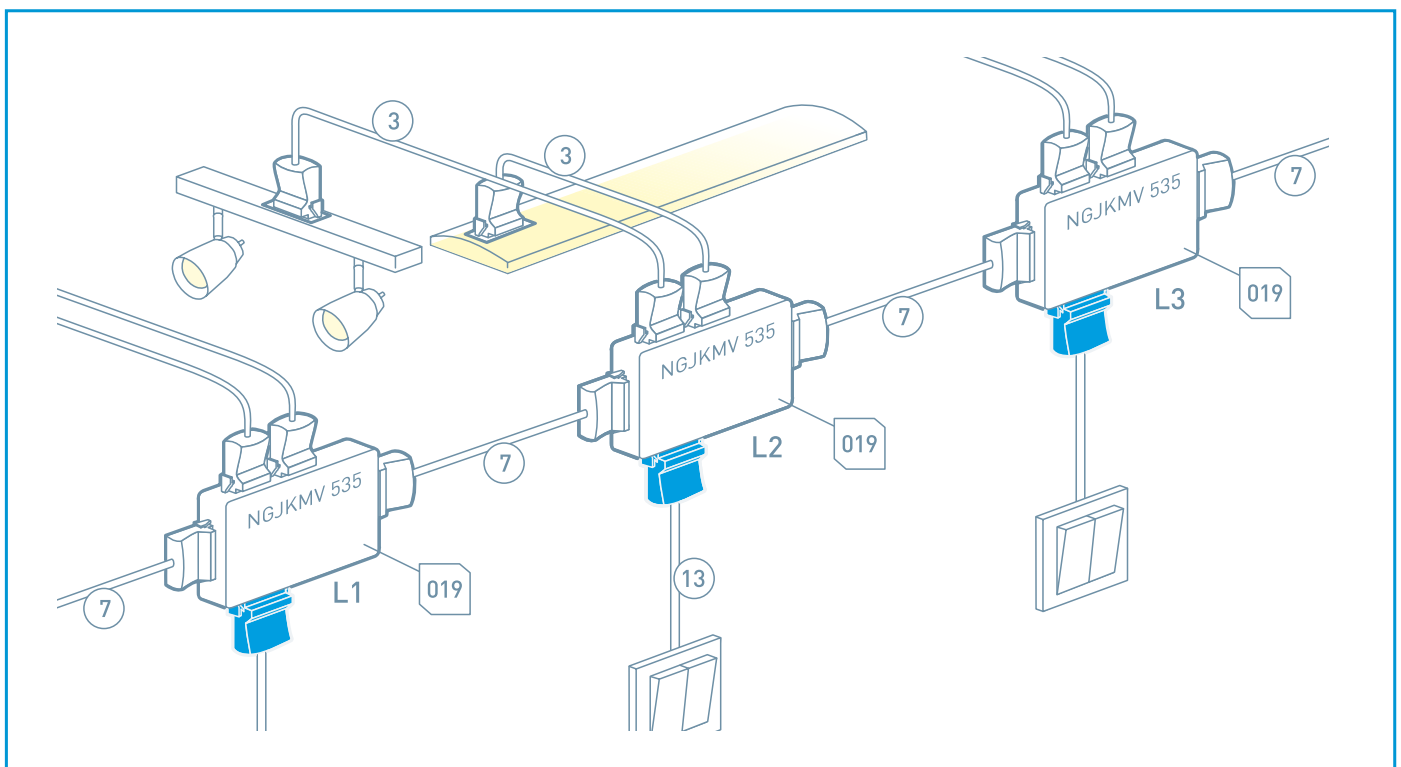
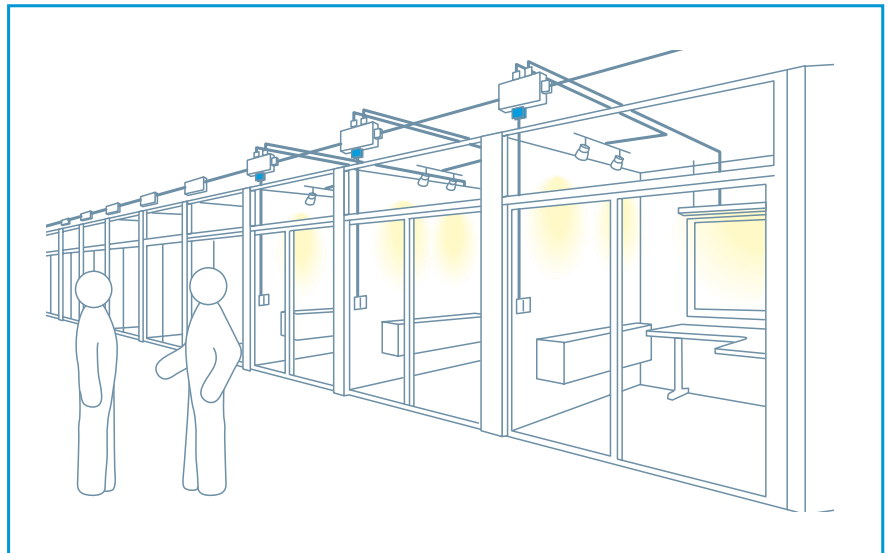
# Products



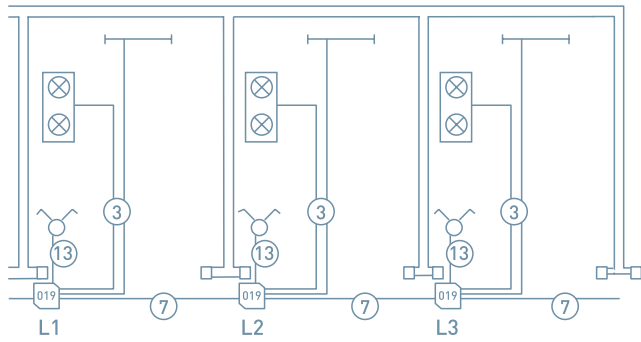
# Office - workroom

## Lighting Installation with Power Control Box

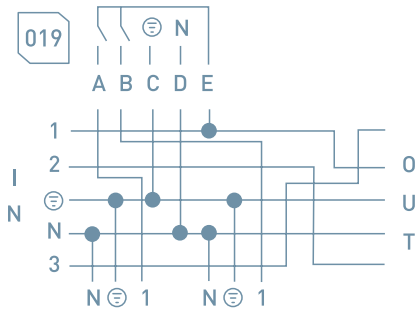
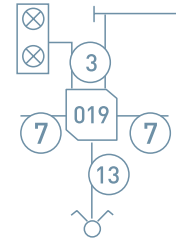
Installation with three phase continuous supply with phase rotation and branching via a double switch to two one phase outgoings to light fittings.



## Wiring and circuit diagram



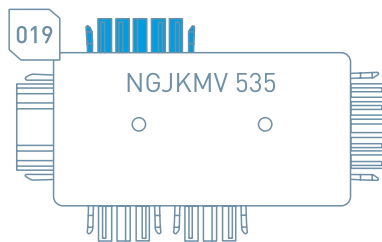
- 019 NGJKMV 535
- 3 NAL330XXXXXX
- 7 NAL550XXXXXX
- 13 NBL510XXXXXS
- SWITCH, 2-POLE



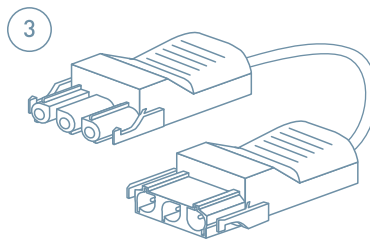
## Office

- This solution can be used in:
- Meeting room
  - Workroom
  - Corridor

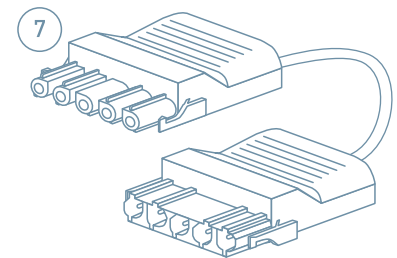
## Products



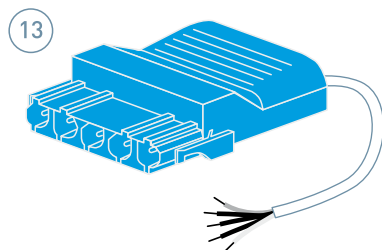
NGJKMV 535



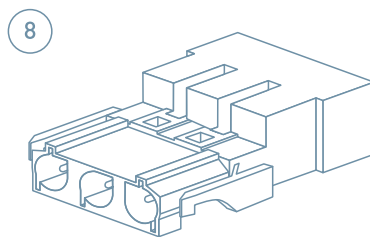
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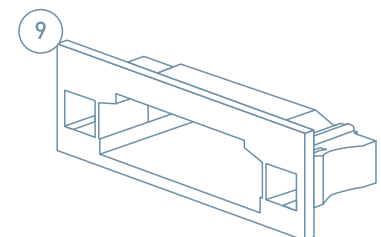
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NBL510XXXXXS



NAS31.W

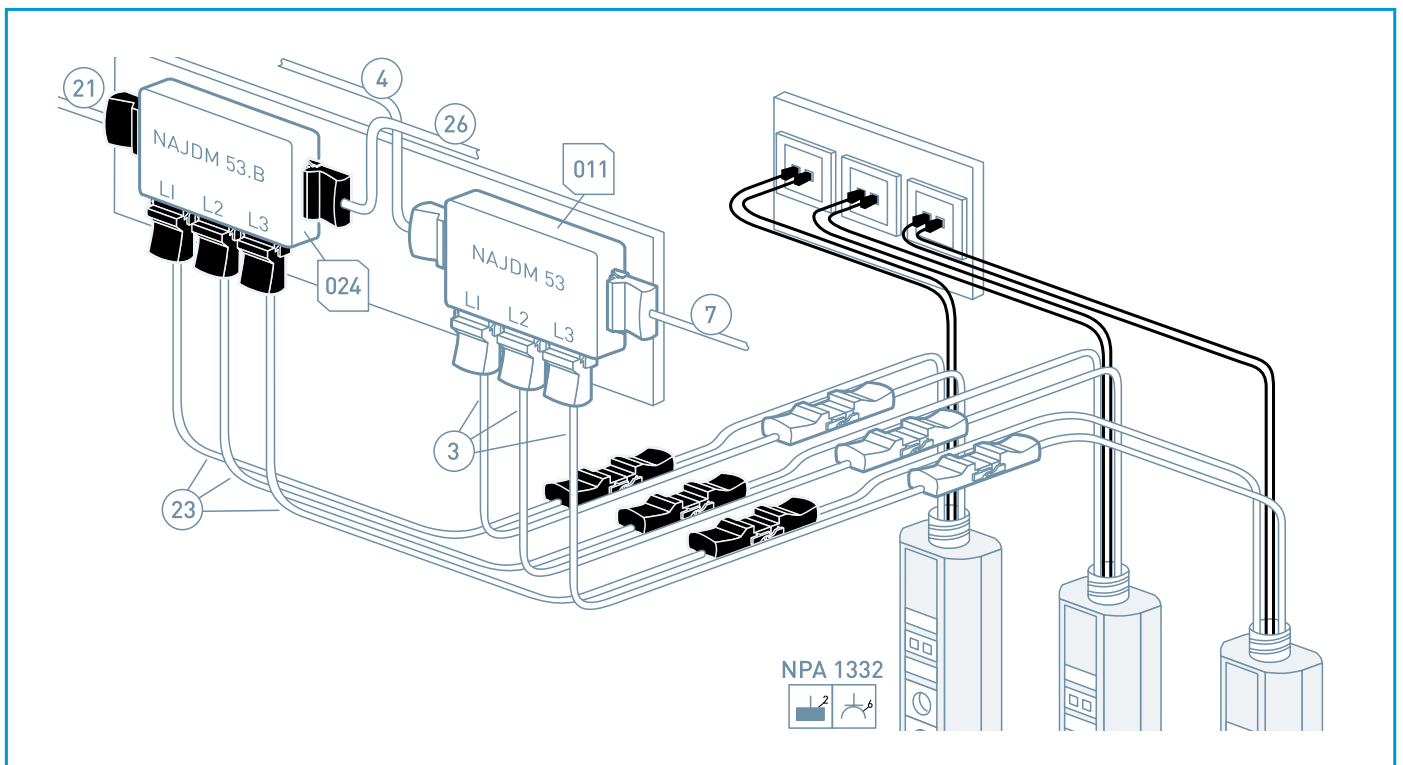
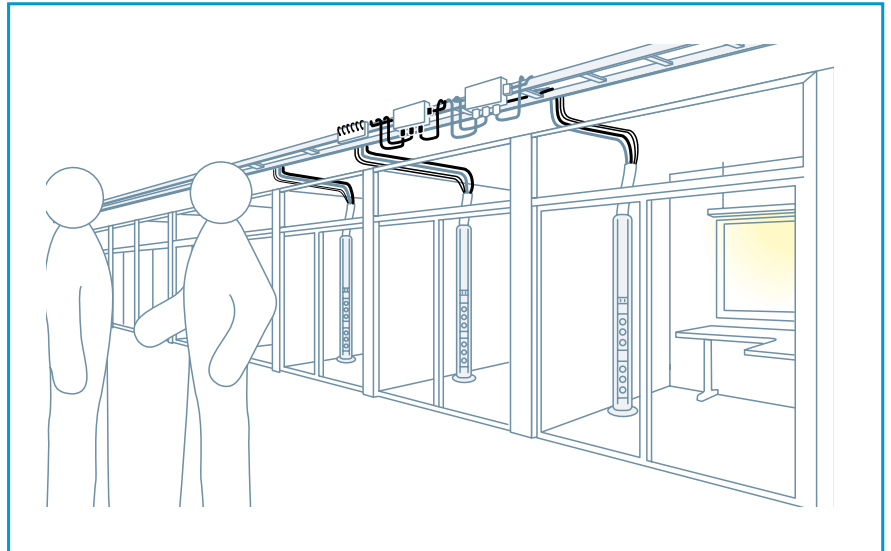


NK3P.W

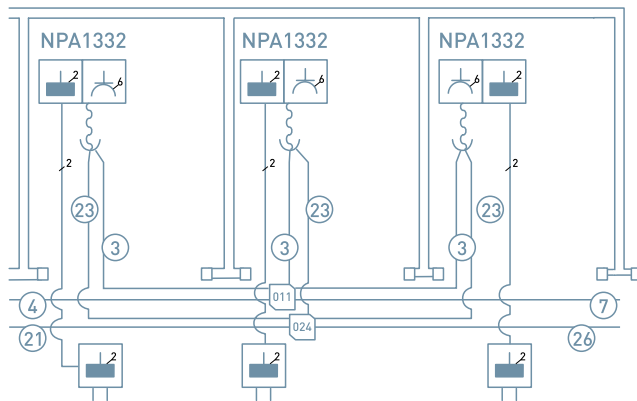
# Office - workroom

## Socket Outlet Installation with Service Pole

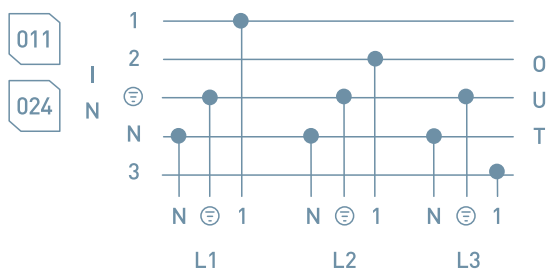
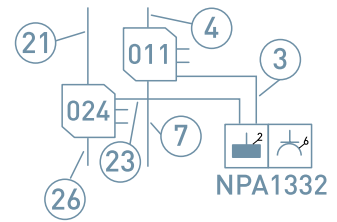
Installation with three phase continuous supply and three one phase branching to service poles.



# Wiring and circuit diagram



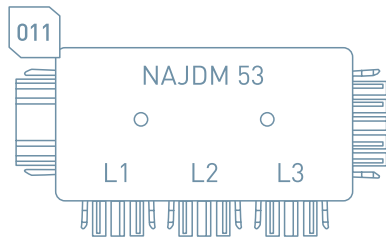
- 011 NAJDM53
- 024 NAJDM53.B
- 03 NAL330XXXXXX
- 04 NAL150XXXXXX
- 07 NAL550XXXXXX
- 21 NAL150XXXXXB
- 23 NAL330XXXXXB
- 26 NAL550XXXXXB
- DATA
- NPA1332



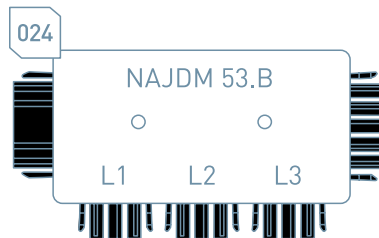
## Office

- This solution can be used in:
- Meeting room
  - Workroom
  - Corridor

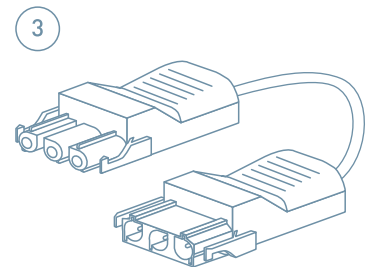
# Products



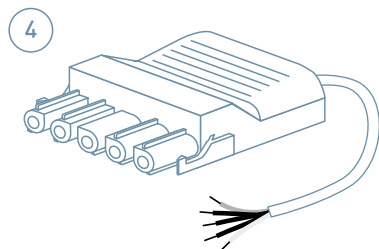
NAJDM 53



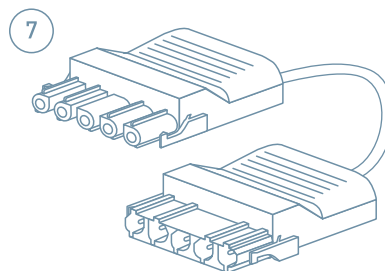
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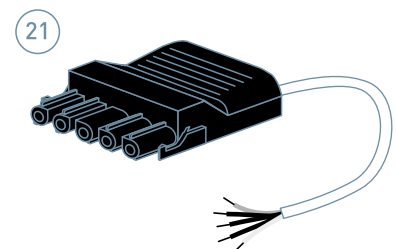
NAL330XXXXXX



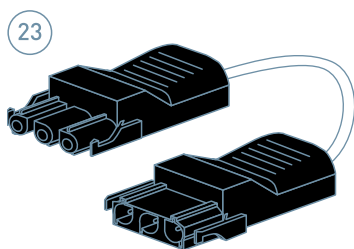
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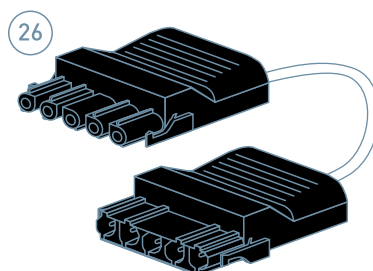
NAL550XXXXXX



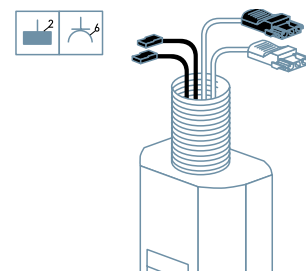
NAL150XXXXXB



NAL330XXXXXB



NAL550XXXXXB

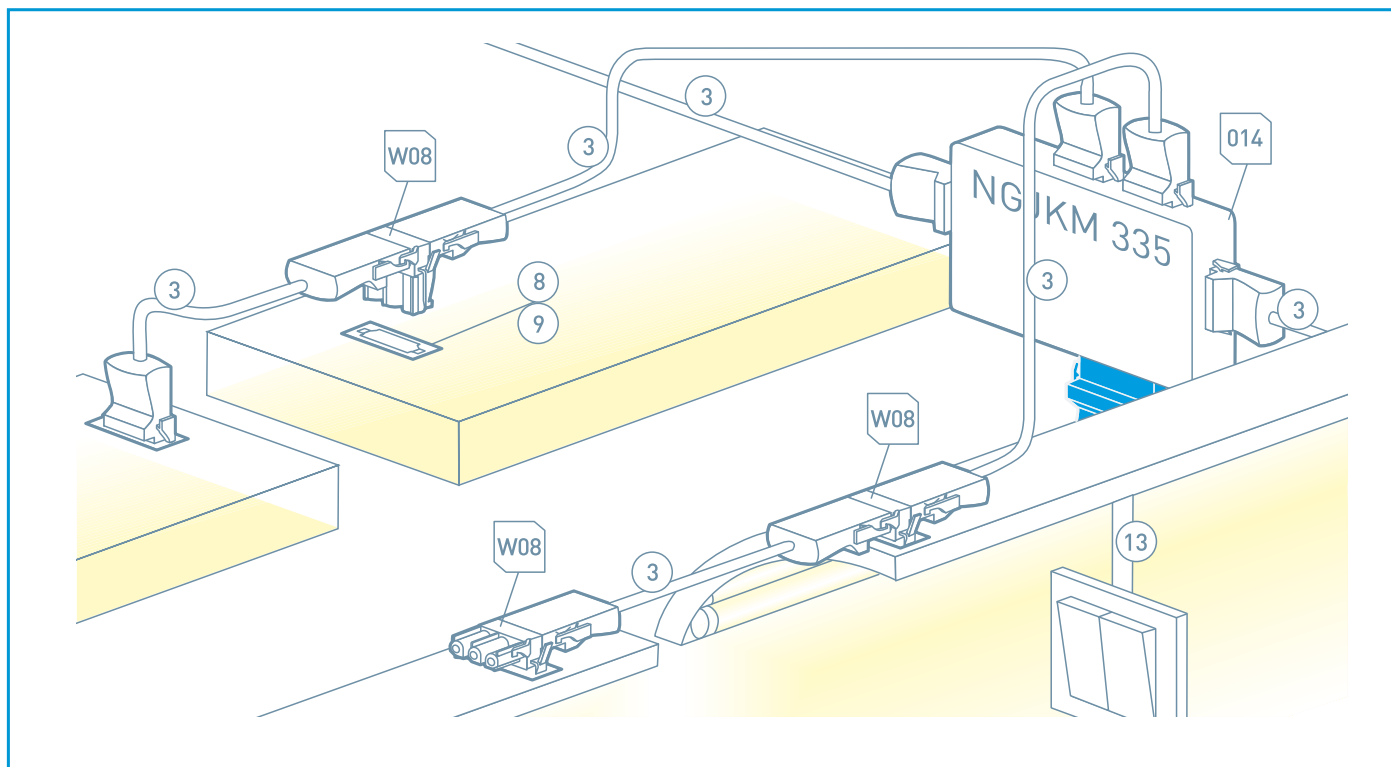
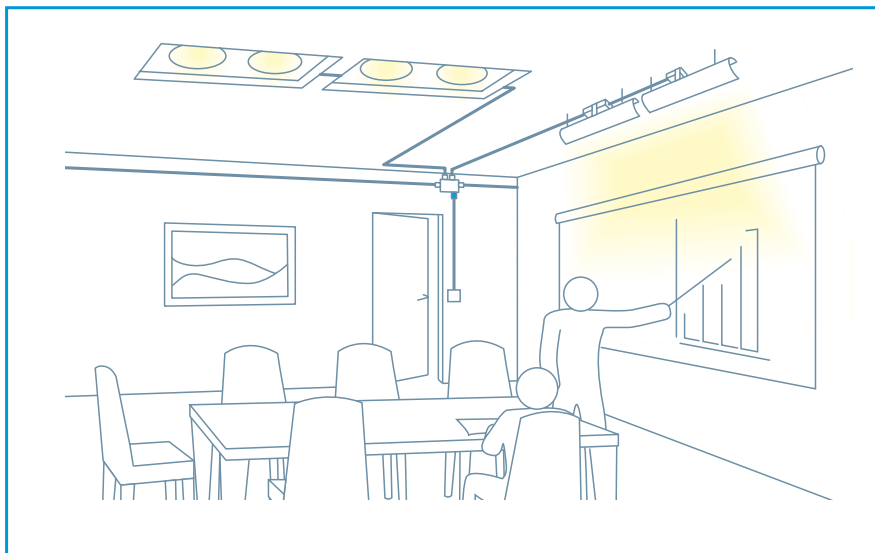


NPA1332

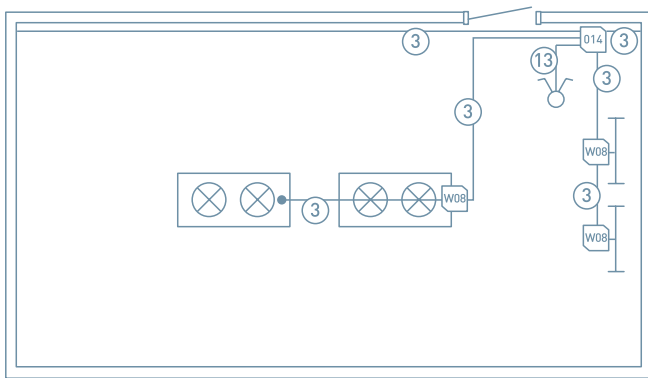
# Office - meeting room

## Lighting Installation with T-distribution Block and Power Control Box

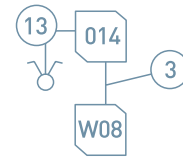
Installation with one phase continuous supply and on/off-switching of two separate light fitting chains. Chain installed with one phase T-distribution blocks.



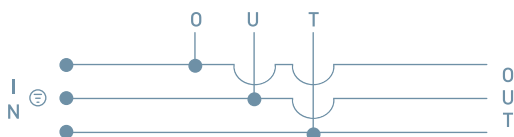
## Wiring and circuit diagram



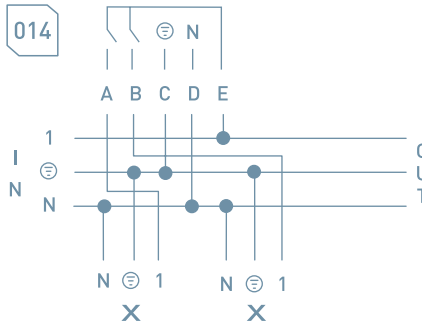
- W08** NAD3T.W
- 014** NGJKM 335
- 3** NAL330XXXXXX
- 13** NBL510XXXXXS
-  SWITCH, 2-POLE  
ŁĄCZNIK GRUPOWY



**W08**



**014**



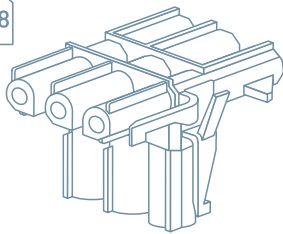
# Office

This solution can be used in:

- Open-office
- Workroom
- Corridor

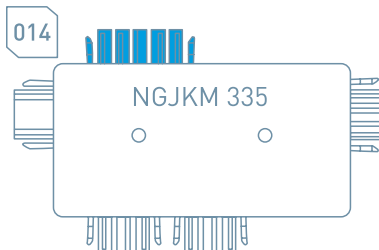
## Products

**W08**



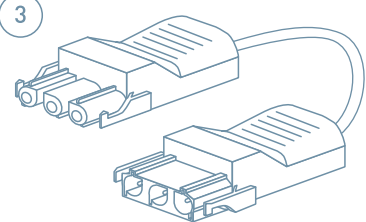
NAD3T.W

**014**



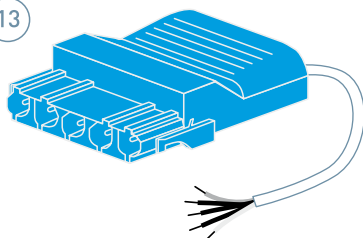
NGJKM 335

**3**



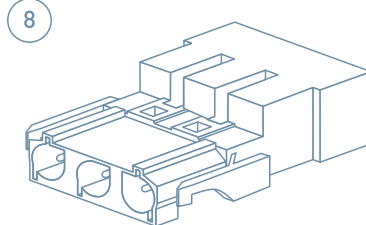
NAL330XXXXXX

**13**



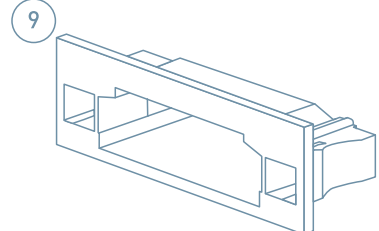
NBL510XXXXXS

**8**



NAS31.W

**9**

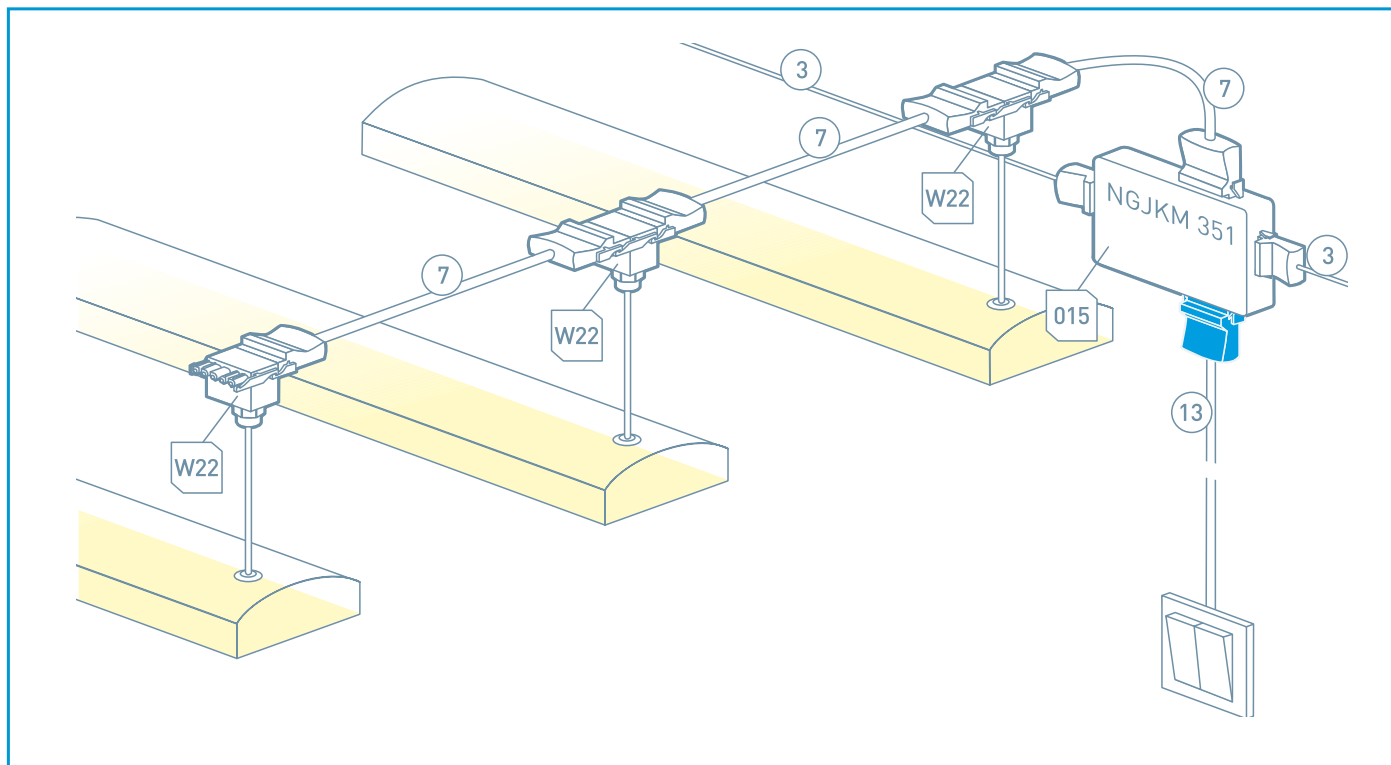
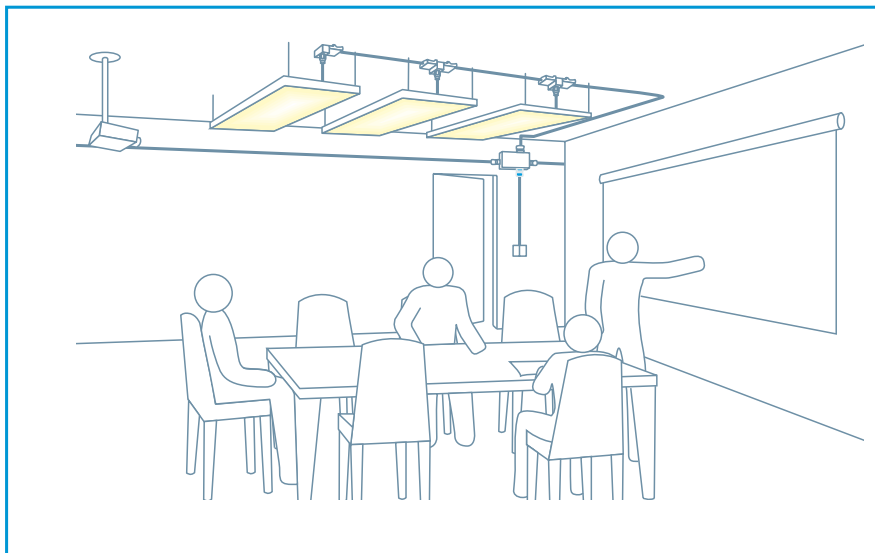


NK3P.W

# Office - meeting room

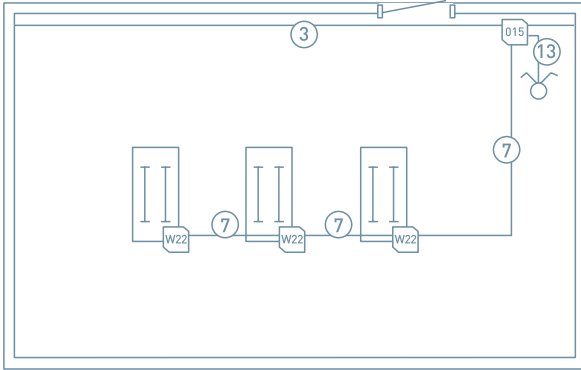
## Lighting Installation with T-distribution Block with Cable and Power Control Box

Installation with one phase continuous supply and on/off-switching of two light fitting chains branched with one outgoing connector. Light fitting chain installed with separate T-distribution block. With this connection two light sources in the same light fitting can be controlled separately.

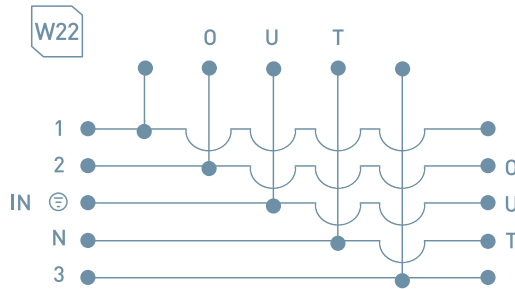
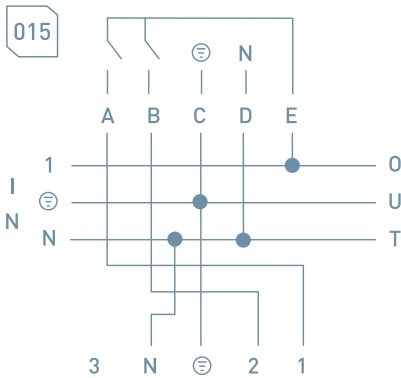
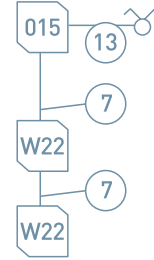




## Wiring and circuit diagram



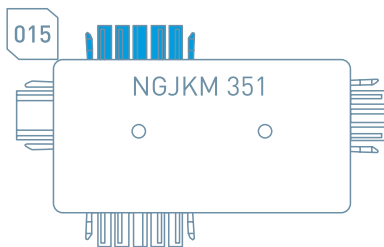
- 015 NGJKM 351
- W22 NAD5BS.WXXX
- 3 NAL330XXXXXX
- 7 NAL550XXXXXX
- 13 NBL510XXXXXXS
- SWITCH, 2-POLE



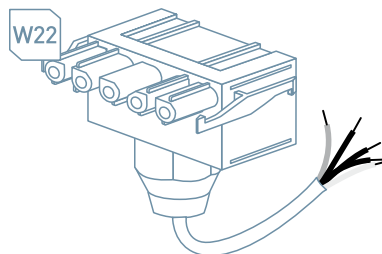
## Office

- This solution can be used in:
- Open-office
  - Workroom
  - Corridor

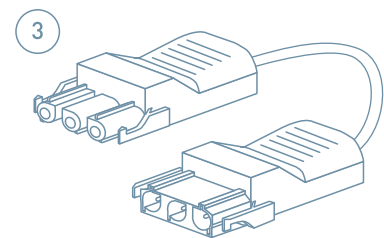
## Products



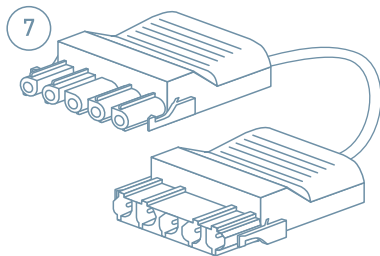
NGJKM 351



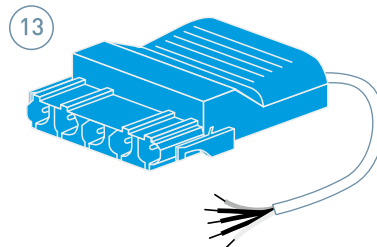
NAD5BS.WXXX



NAL330XXXXXX



NAL550XXXXXX

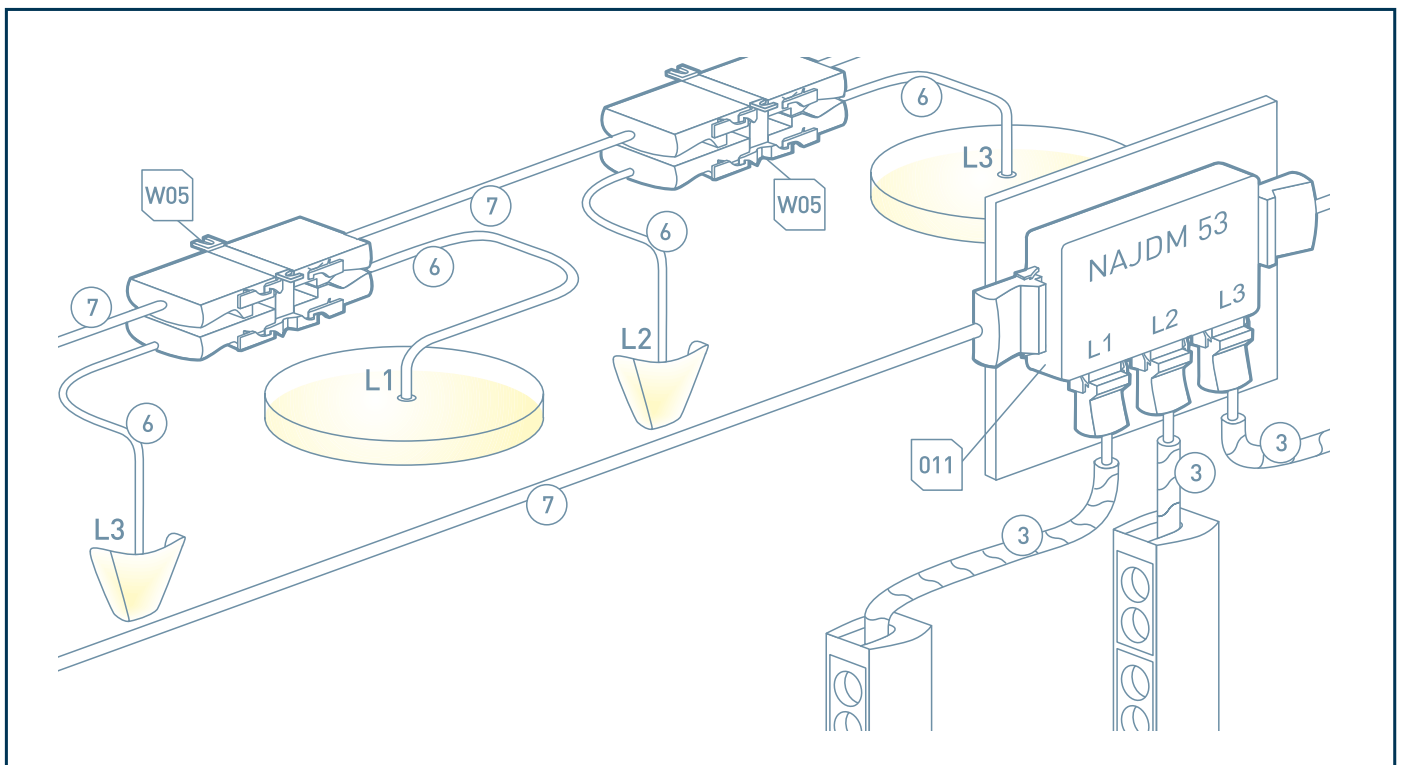
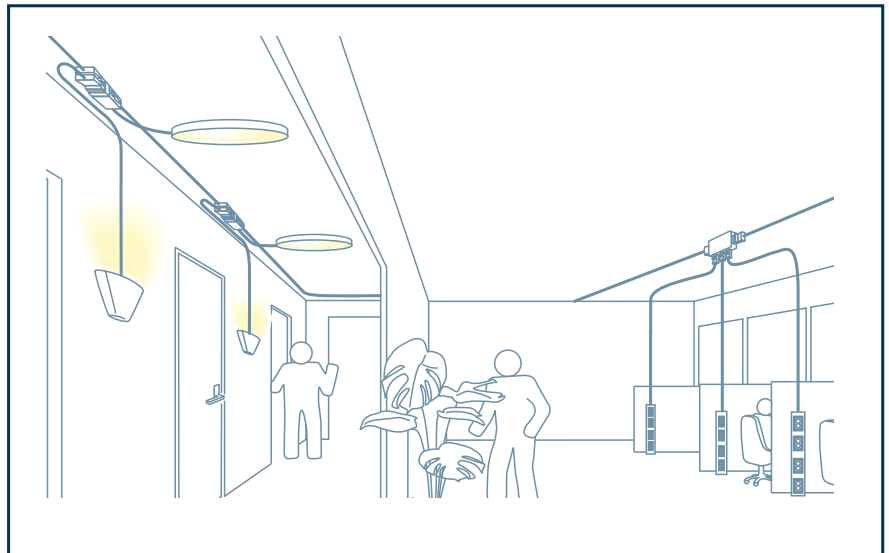


NBL510XXXXXXS

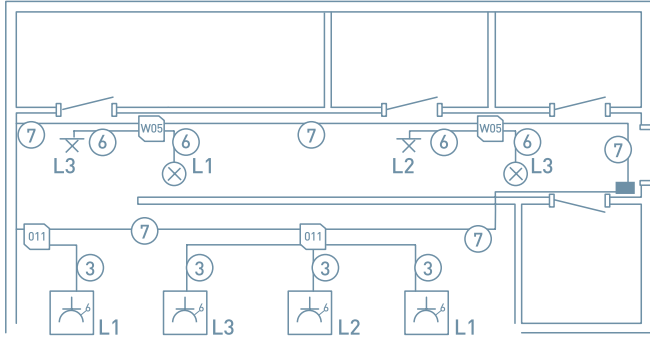
# Corridor

## Installation Solution

Installation with three phase continuous supply and branching to two one phase outgoings to light fittings.



# Wiring and circuit diagram



W05 NAD5.W

011 NAJDM 53

3 NAL330XXXXXX

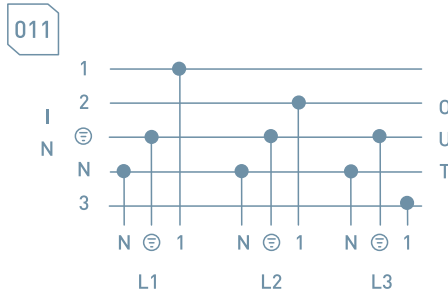
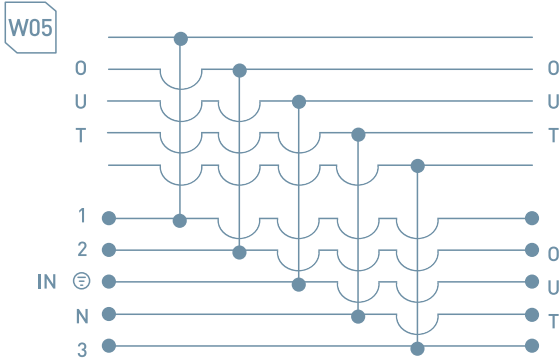
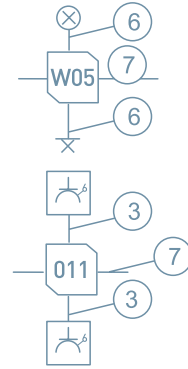
6 NAL511XXXXXX (L1)

6 NAL512XXXXXX (L2)

6 NAL513XXXXXX (L3)

7 NAL550XXXXXX

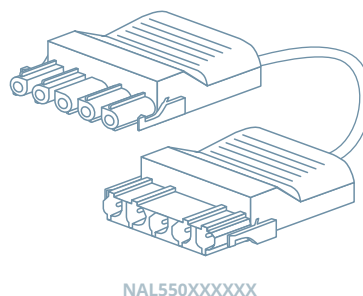
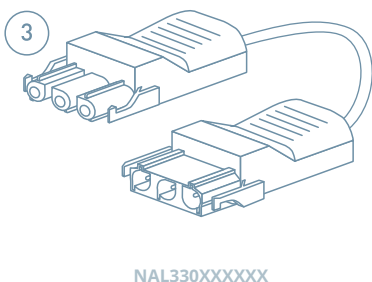
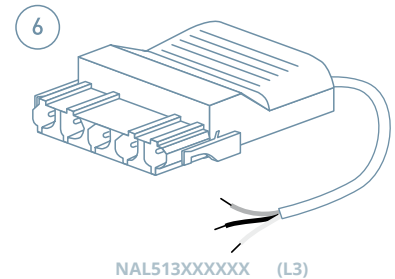
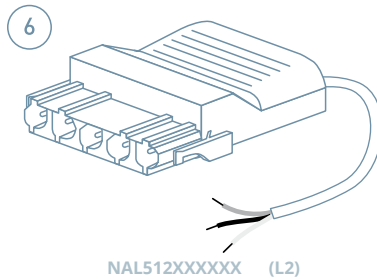
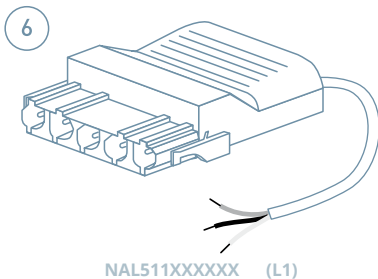
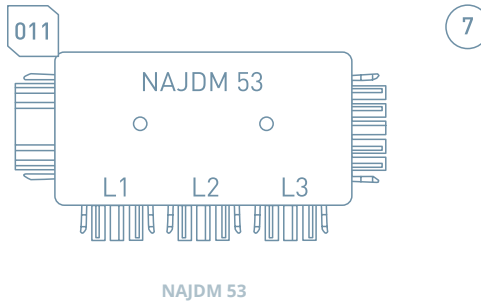
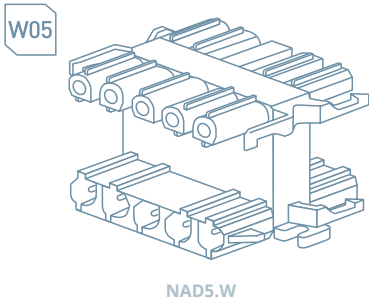
GNIAZDO



## Corridor

- This solution can be used in:
- Meeting room
  - Workroom
  - Open-office

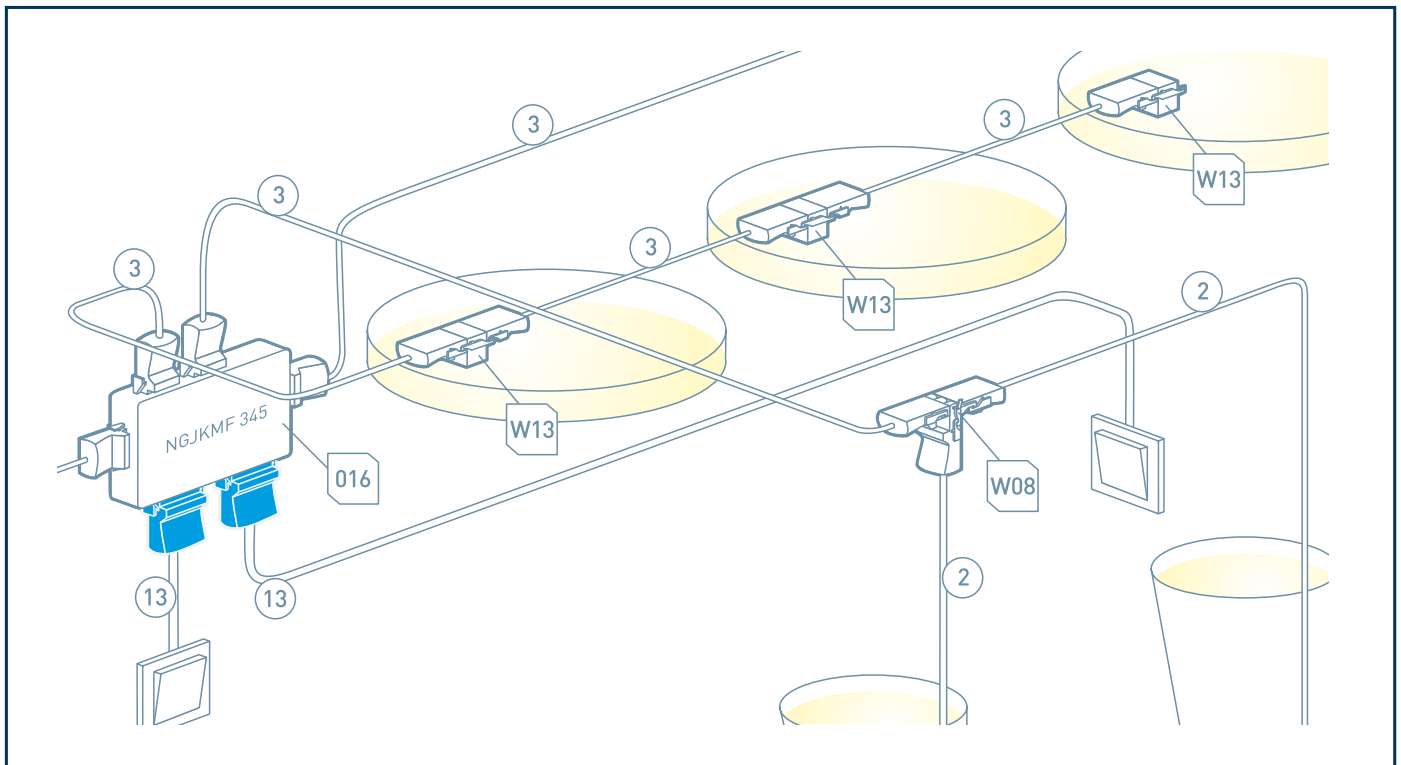
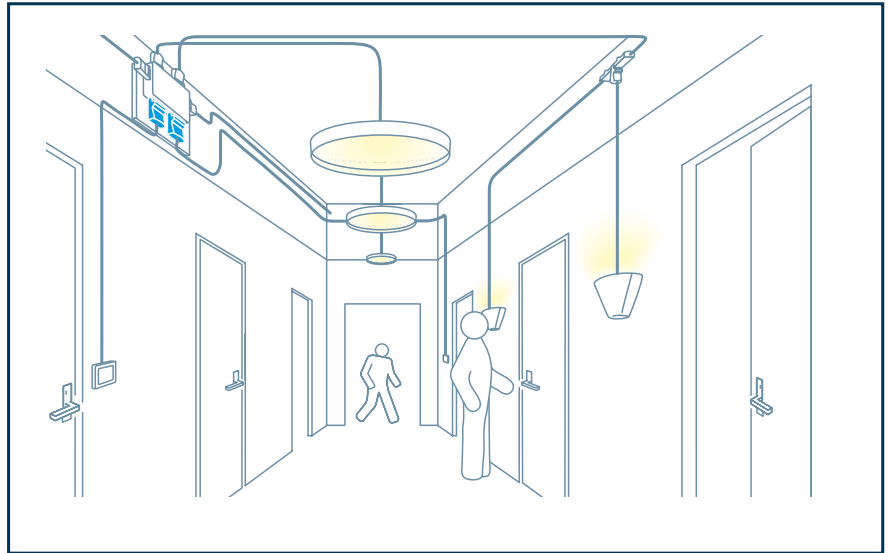
# Products



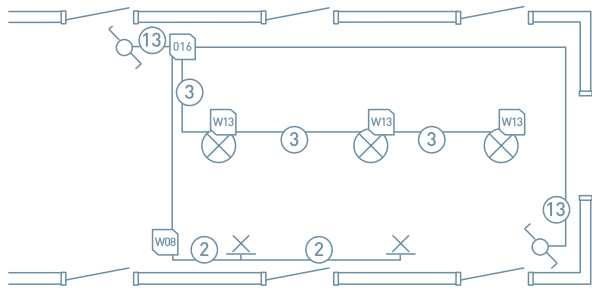
# Corridor

## Lighting Installation with T-distribution Block and Power Control Box for Two Switches

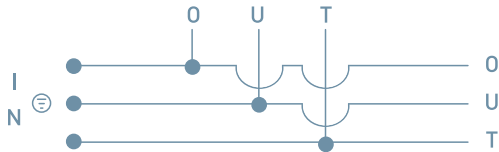
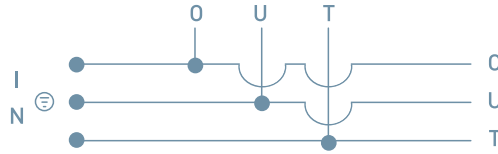
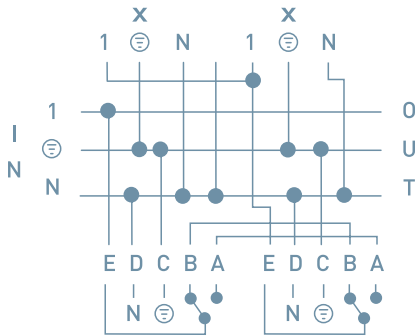
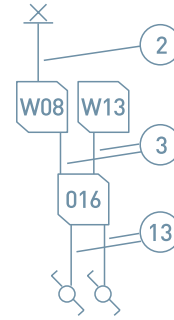
Installation with one phase continuous supply and branching via two change over switches. Outgoings for two separate supplies to light fittings.



# Wiring and circuit diagram



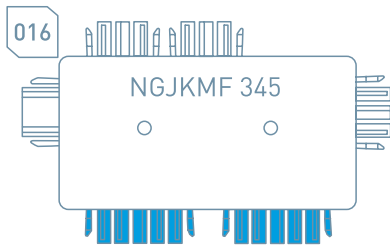
- 016 NGJKMF 345
- W13 NAD3B.W
- W08 NADT3.W
- 2 NAL310XXXXXX
- 3 NAL330XXXXXX
- 13 NBL510XXXXXXS
- SWITCH, 2-WAY



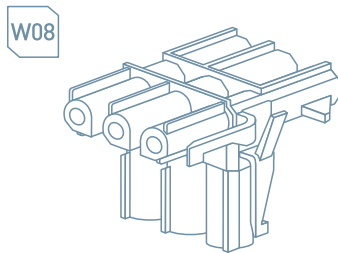
## Corridor

- This solution can be used in:
- Meeting room
  - Workroom
  - Open-office

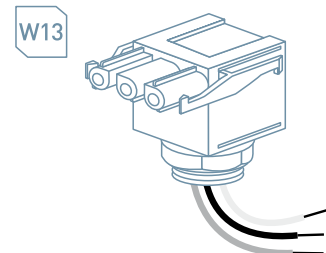
# Products



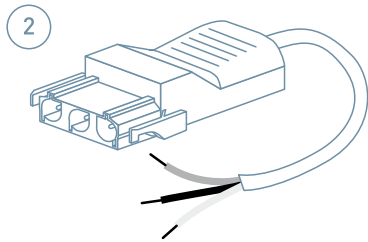
NGJKMF 345



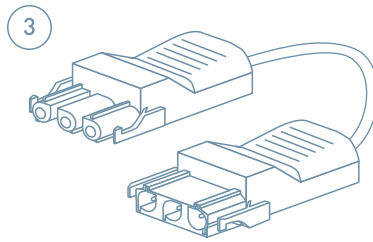
NAD3T.W



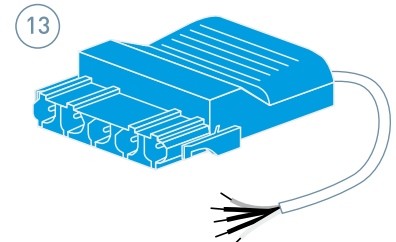
NAD3B.W



NAL310XXXXXX



NAL330XXXXXX

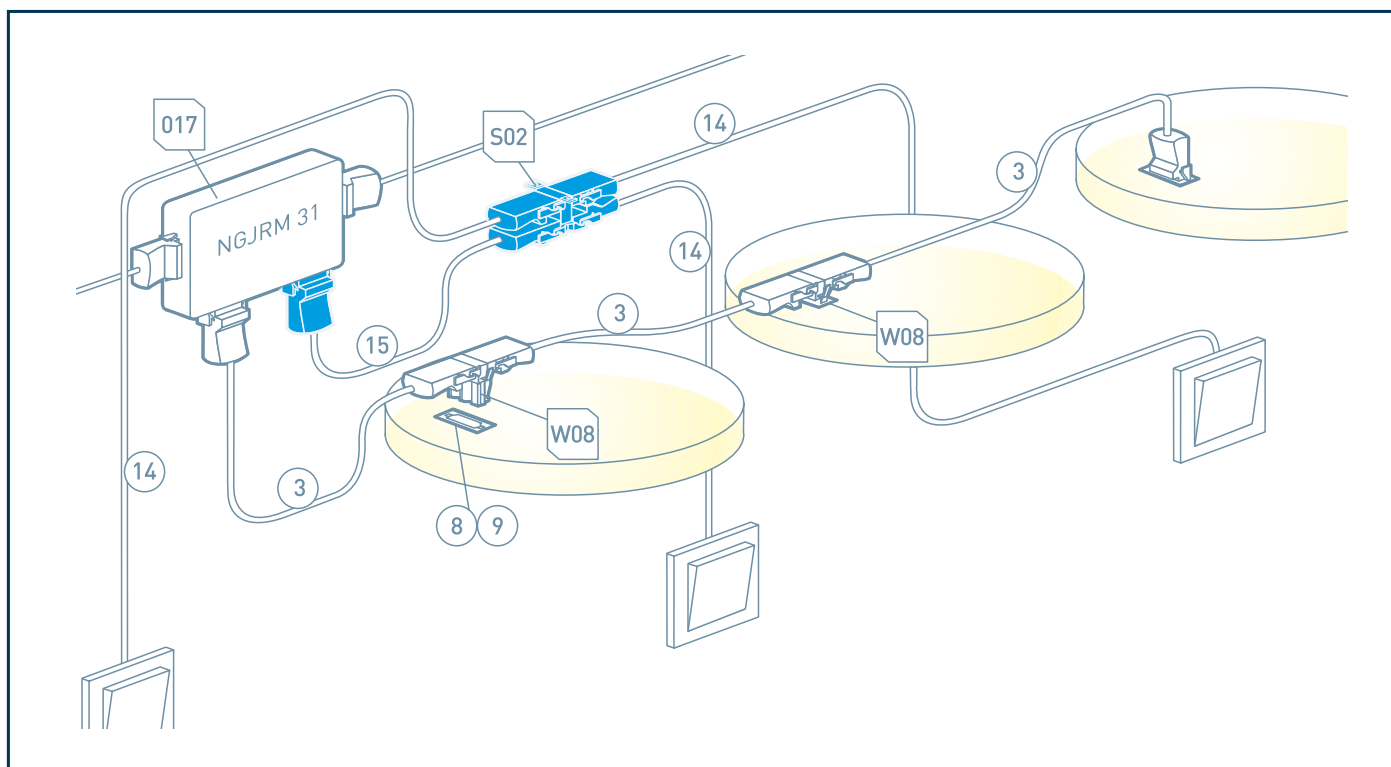
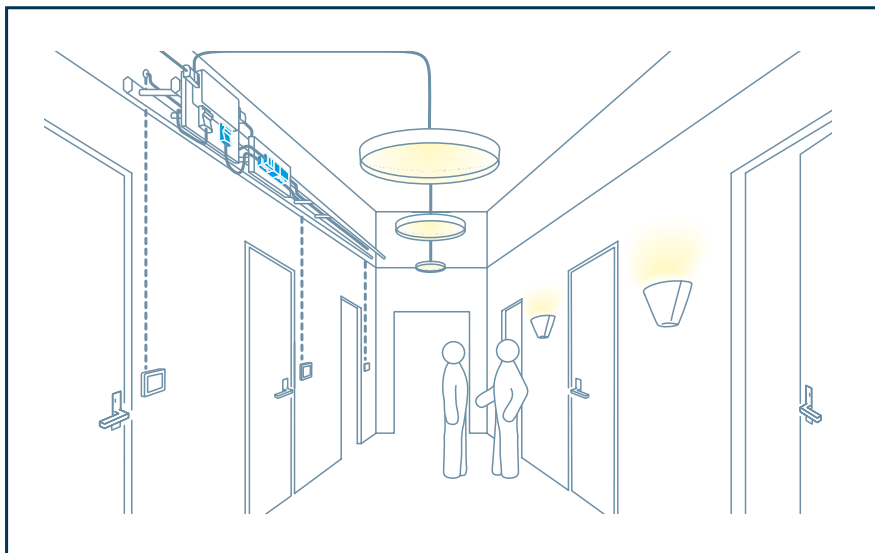


NBL510XXXXXXS

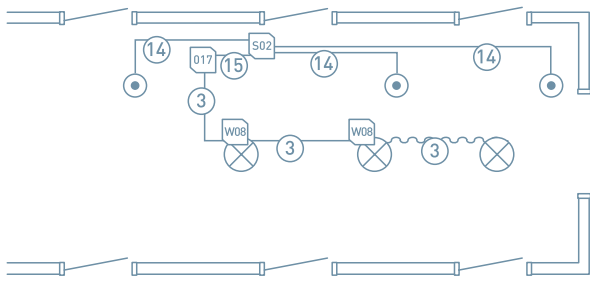
# Corridor

## Lighting Installation with T-distribution Block and Relay Box

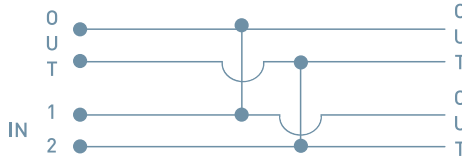
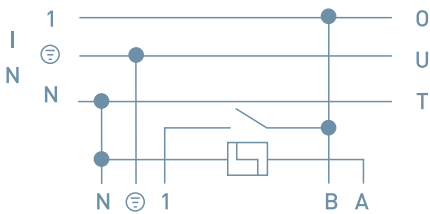
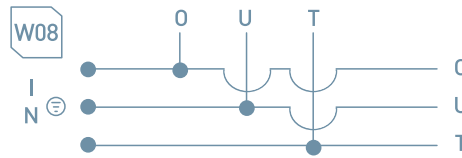
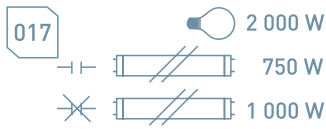
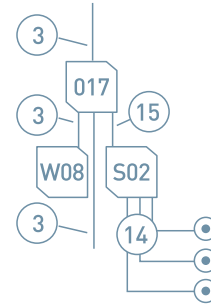
Installation with one phase continuous supply. Parallel connected push switches controls relay which is branching to one one phase outgoing for light fittings.



# Wiring and circuit diagram



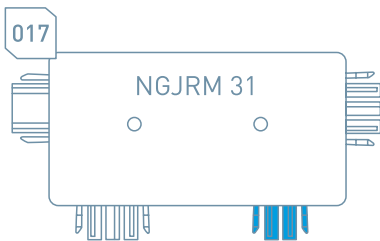
- 017 NGJRM 31
- S02 NBD2.S
- W08 NADT3.W
- 3 NAL330XXXXXX
- 14 NBL210XXXXXXS
- 15 NBL220XXXXXXS
- PUSH BUTTON



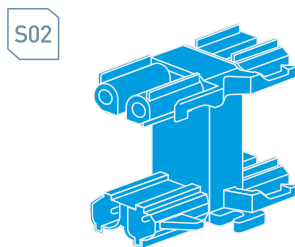
## Corridor

- This solution can be used in:
- Meeting room
  - Workroom
  - Open-office

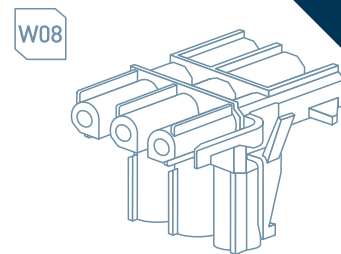
# Products



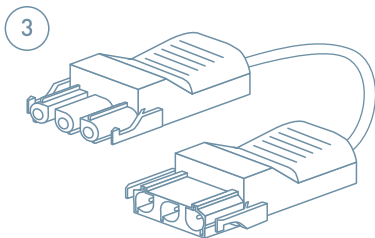
NGJRM 31



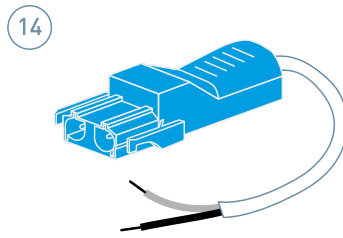
NBD2.S



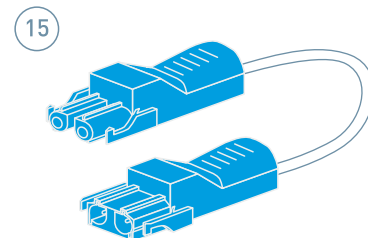
NADT3.W



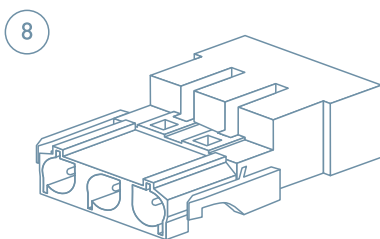
NAL330XXXXXX



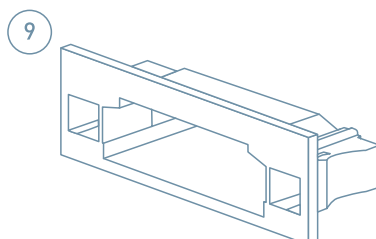
NBL210XXXXXXS



NBL220XXXXXXS



NAS31.W

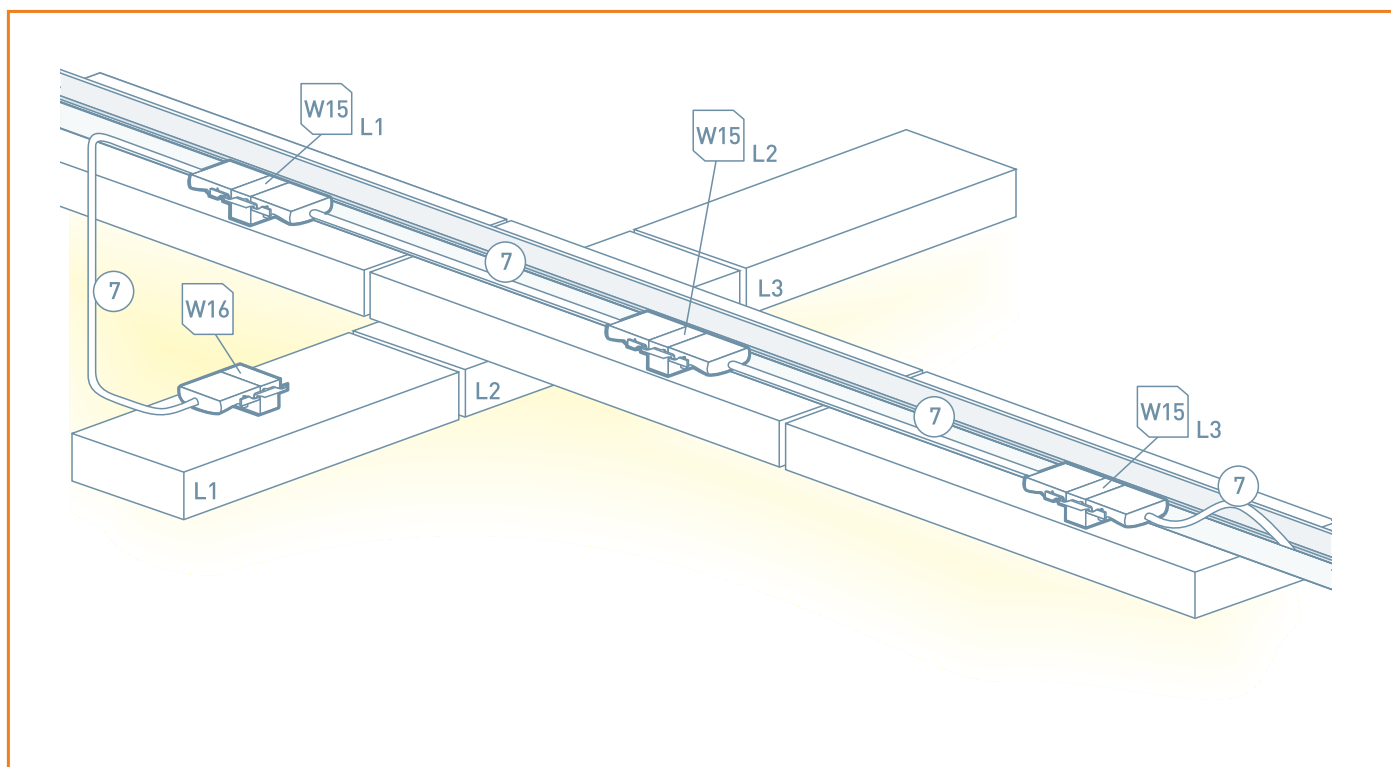


NK3P.W

# Supermarket

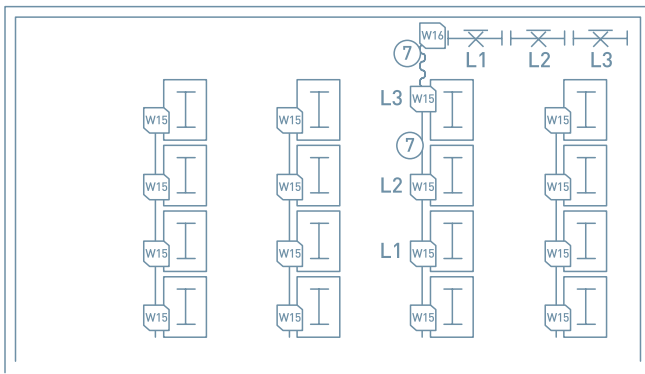
## Lighting Installation with Integrated T-distribution Block

Installation with three phase supply continuous and integrated T-distribution blocks with alternatively one or three phase outgoings.

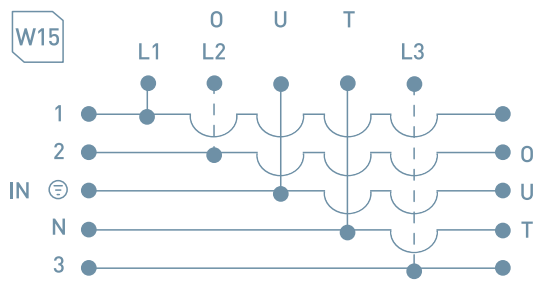
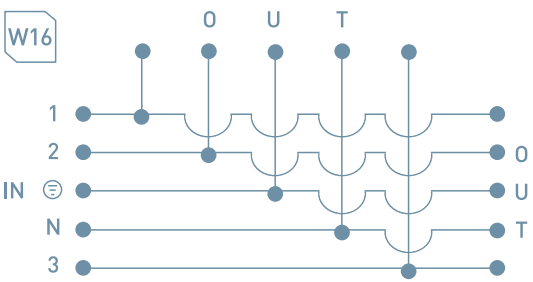
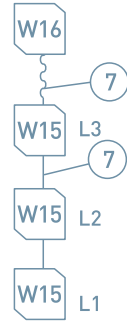




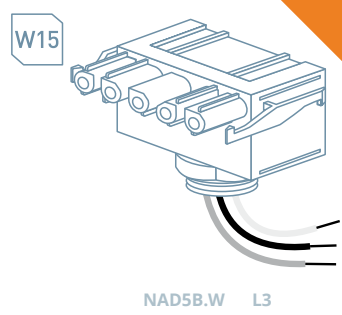
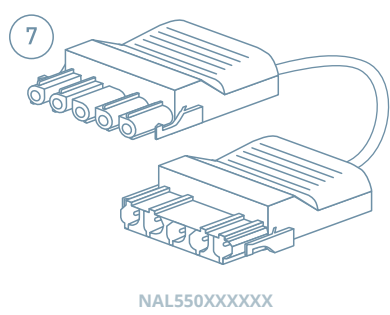
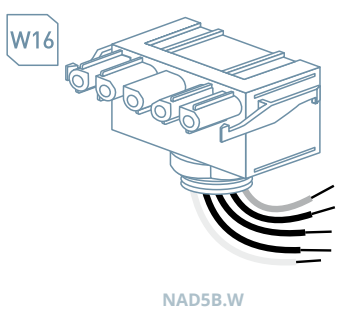
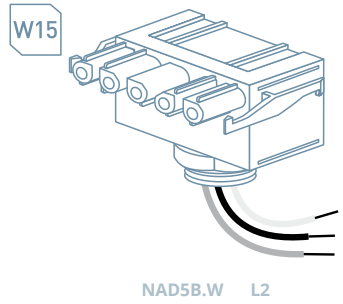
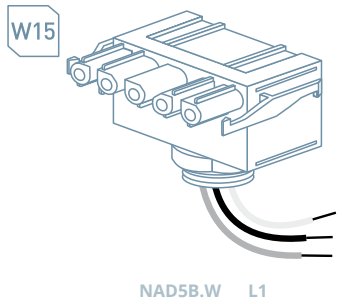
## Wiring and circuit diagram



W16 NAD5B.W  
W15 NAD5B.W- L1, L2, L3  
7 NAL550XXXXXX



## Products



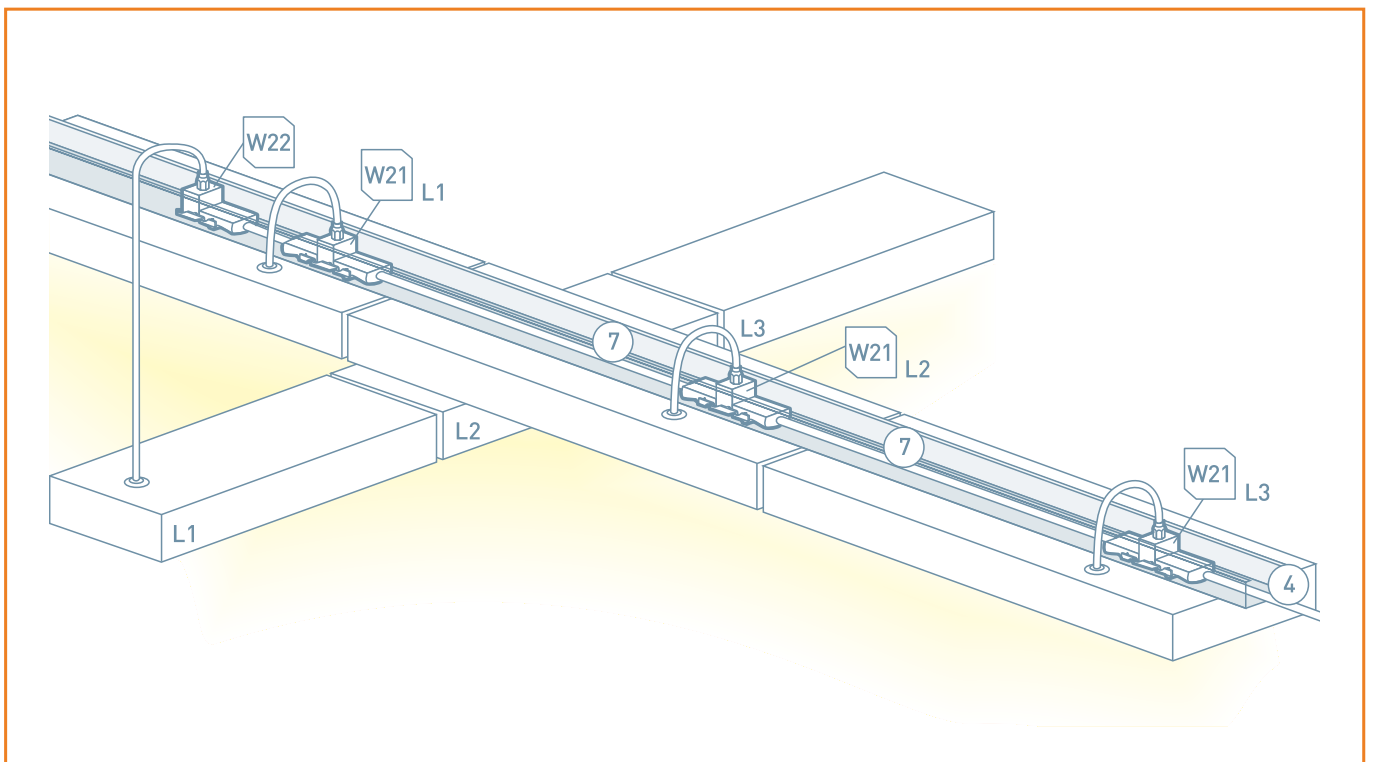
## Shop

- This solution can be used in:
- Shopping centre
  - Meeting room
  - Workroom
  - Corridor

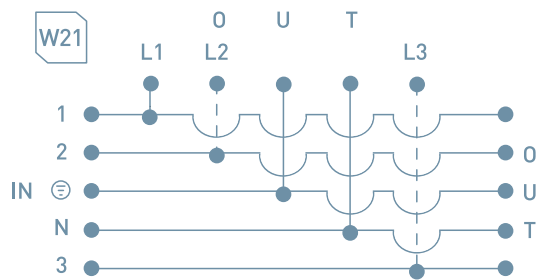
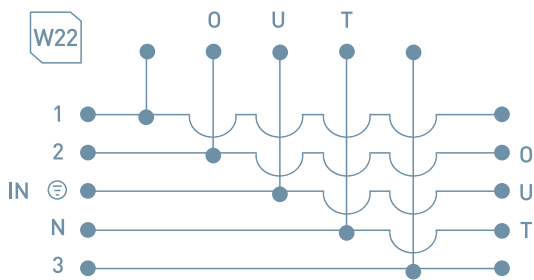
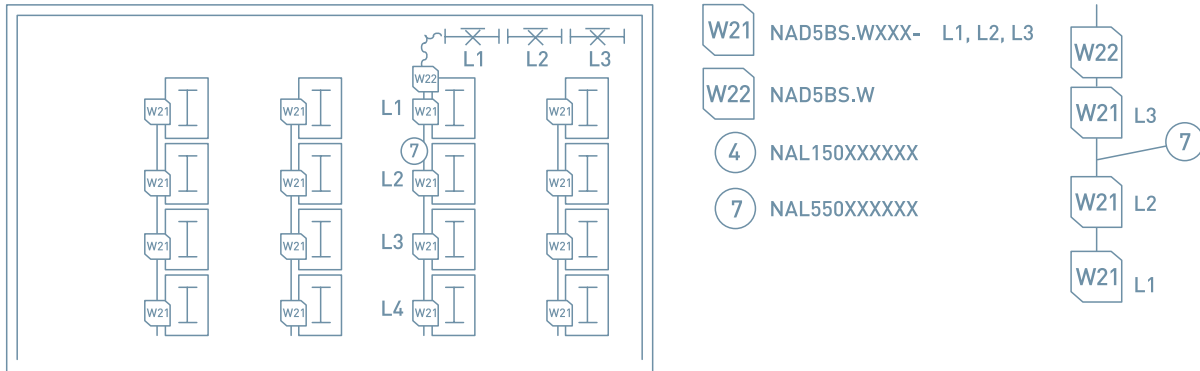
# Supermarket

## Lighting Installation with Flexible T-distribution Block

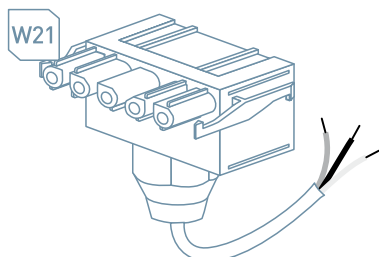
Installation with three phase supply continuous and flexible T-distribution blocks with alternatively one or three phase outgoings.



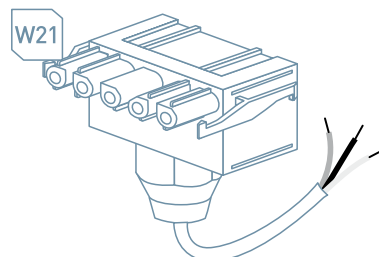
## Wiring and circuit diagram



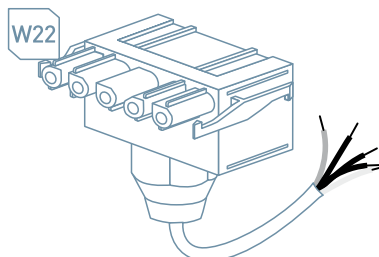
## Products



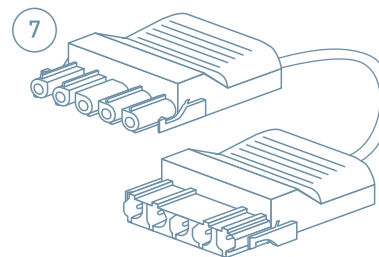
NAD5BS.WXXX- L1



NAD5BS.WXXX- L2



NAD5BS.WXXX



NAL550XXXXXX

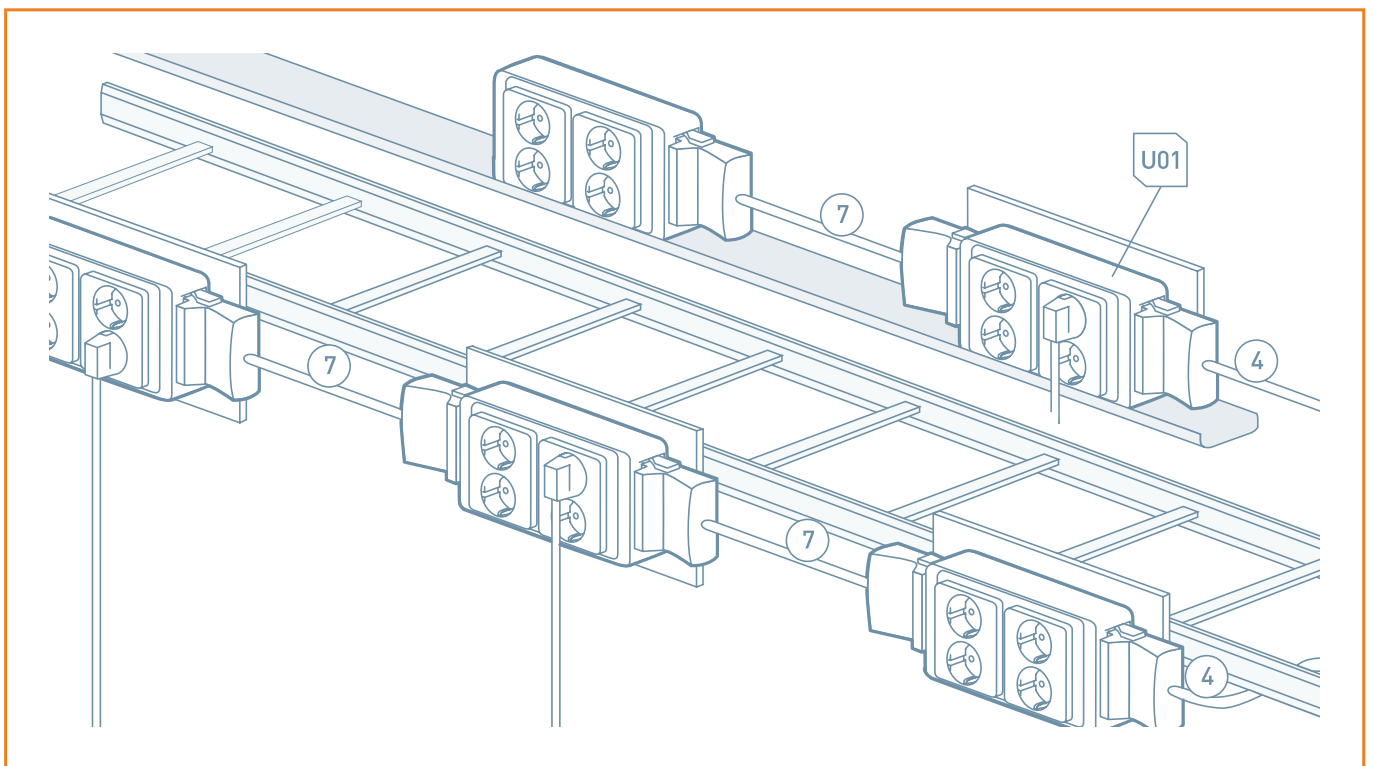
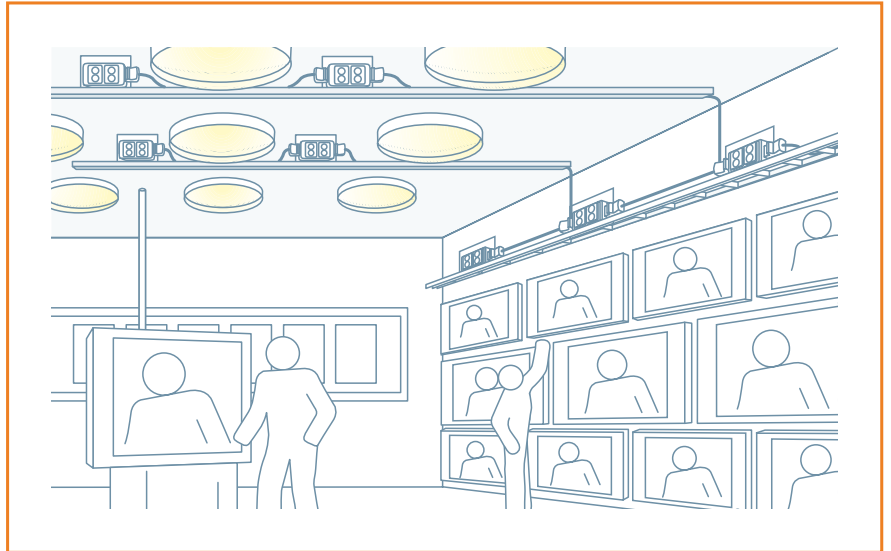
## Shop

- This solution can be used in:
- Shopping centre
  - Meeting room
  - Workroom
  - Corridor

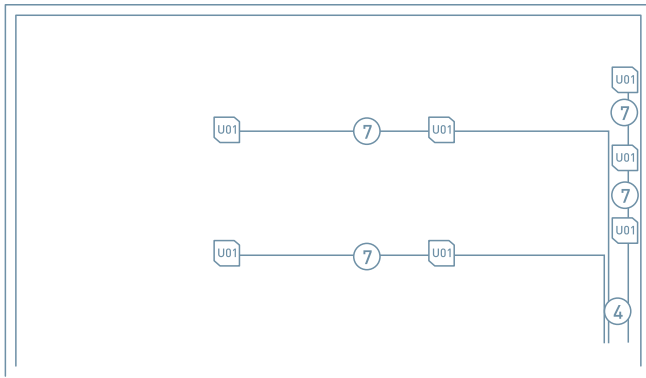
# Supermarket

## Socket Outlet Installation

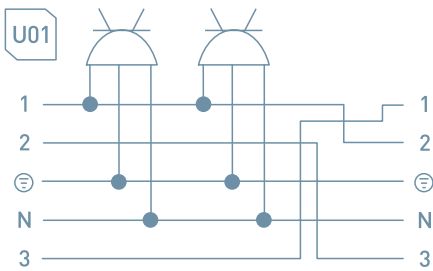
Prefabricated socket boxes with integrated EnstoNet connectors for continuous supply of power.



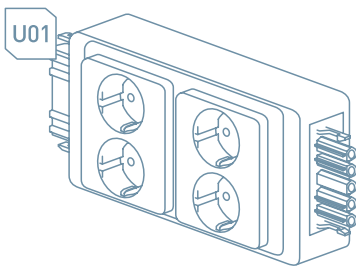
## Wiring and circuit diagram



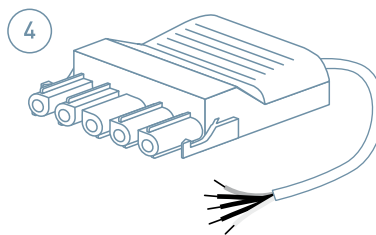
- U01 NAP 500
- 4 NAL150XXXXXX
- 7 NAL550XXXXXX



## Products



NAP 500



NAL150XXXXXX

## Shop

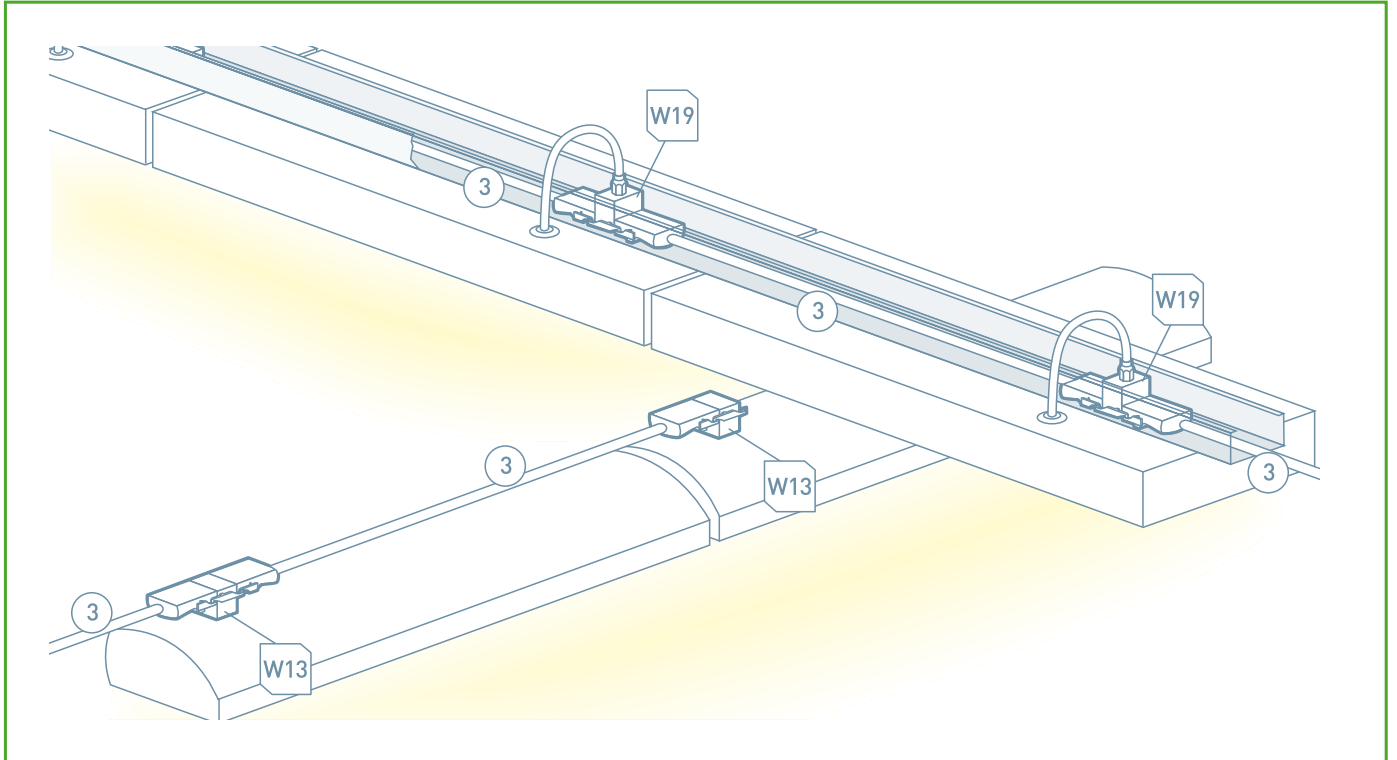
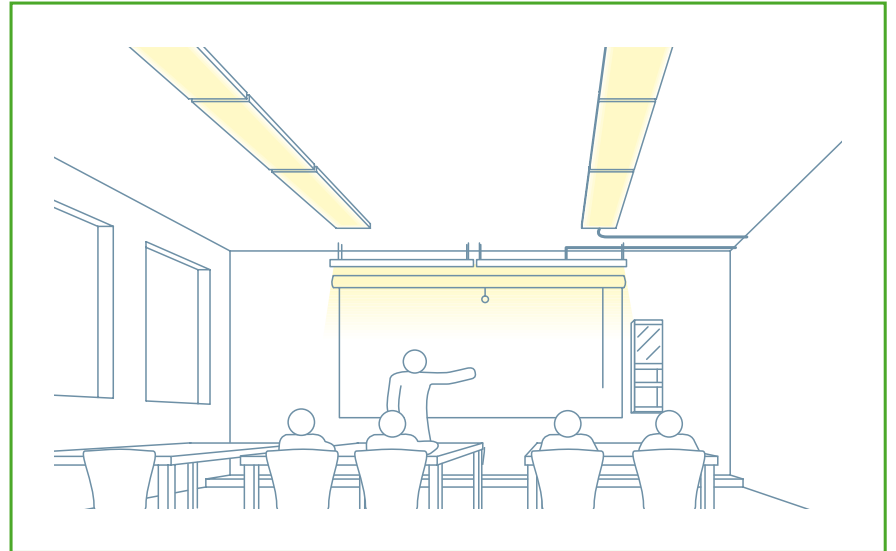
- This solution can be used in:
- Shopping centre
  - Meeting room
  - Workroom
  - Corridor



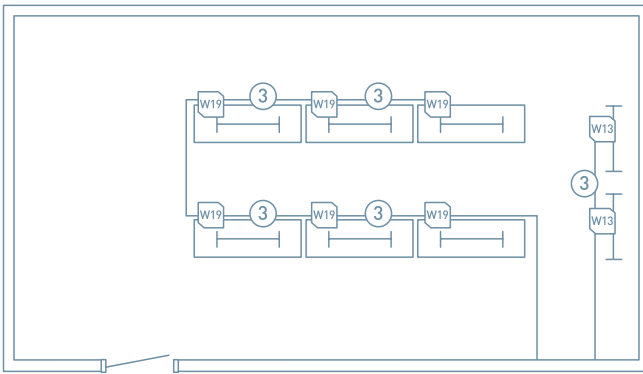
# School

## Lighting Installations with Flexible and Fixed T-distribution Block

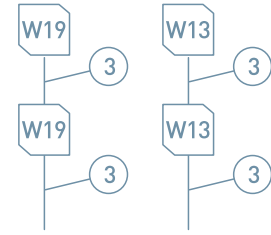
Installation with one phase continuous and integrated or flexible T-distribution block.



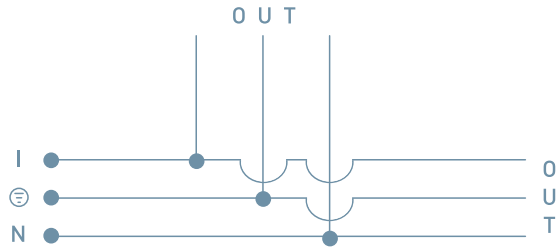
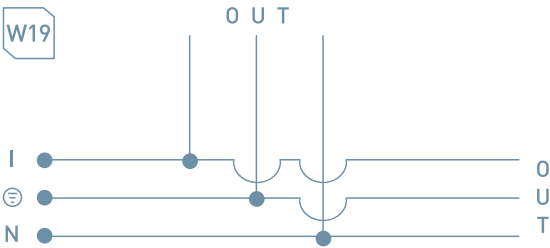
## Wiring and circuit diagram



- W19 NAD3BS.WXXX
- W13 NAD3B.W
- 3 NAL330XXXXXX

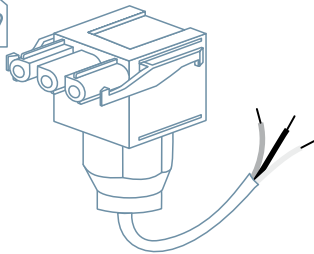


W19

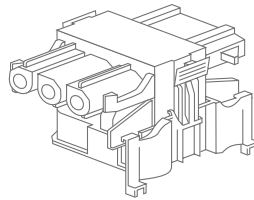


## Products

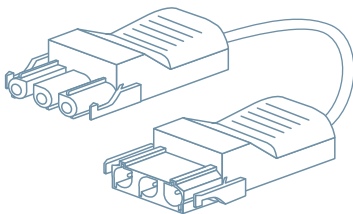
W19



NAD3BS.WXXX



NOD3LA.W



NAL330XXXXXX

# School

This solution can be used in:

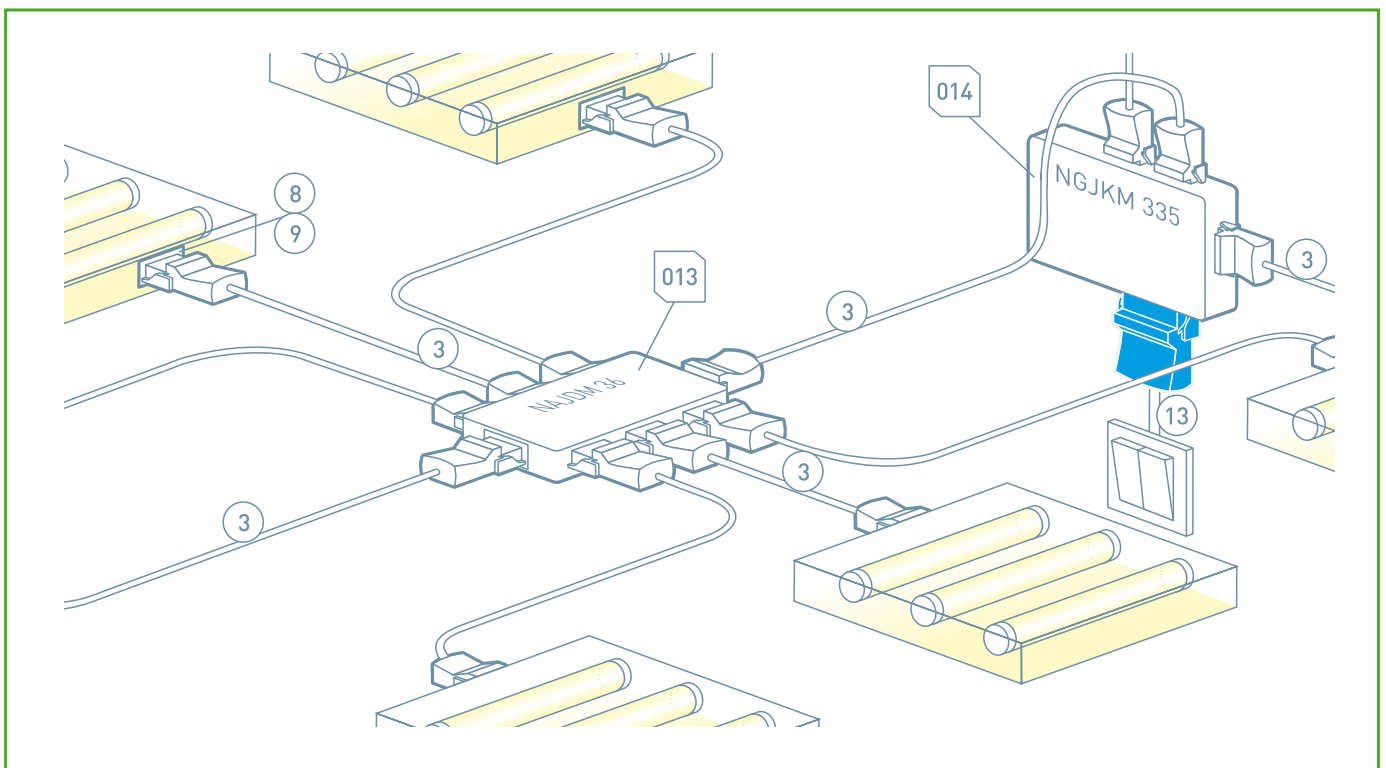
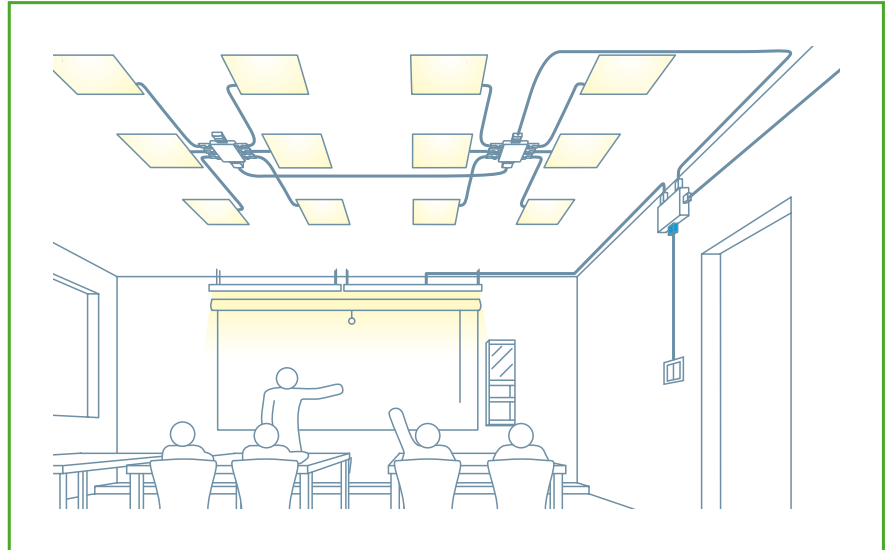
- Shop
- Open-plan office



# School and workroom

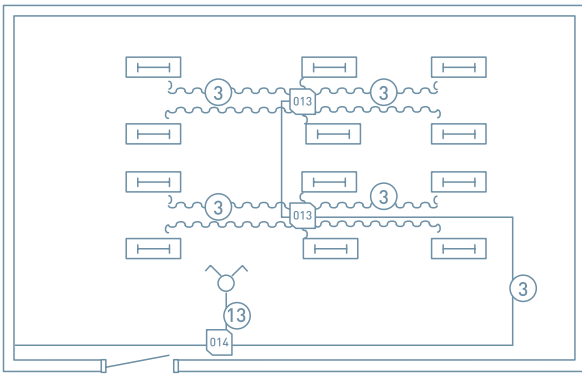
## Lighting Installation with Distribution and Power Control Boxes

Installation with one phase continuous supply and on/off-switching of two separate branching combined with six outgoings to light fittings.

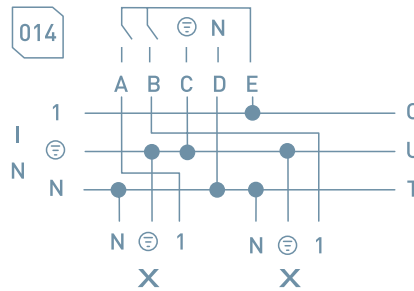
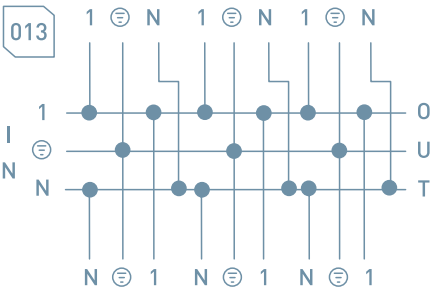
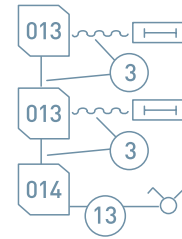




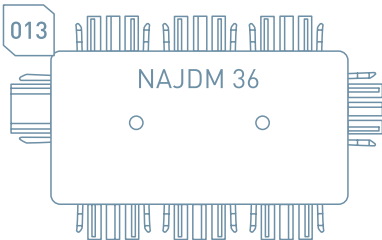
## Wiring and circuit diagram



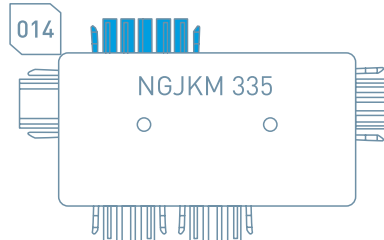
- 013 NAJDM 36
- 014 NGJKM 335
- 3 NAL330XXXXXX
- 13 NBL510XXXXXS
- SWITCH, 2-POLE



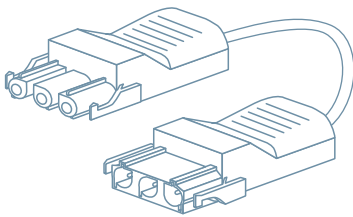
## Products



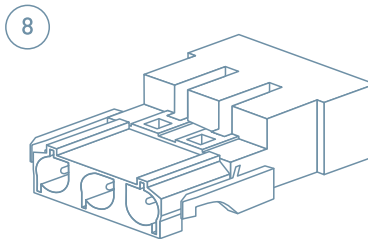
NAJDM 36



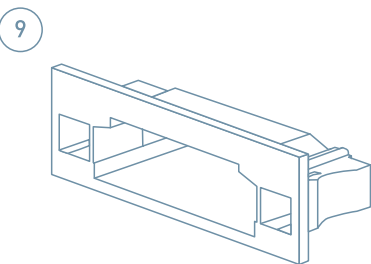
NGJKM 335



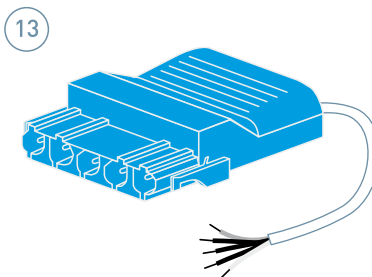
NAL330XXXXXX



NAS31.W



NK3P.W



NBL510XXXXXS

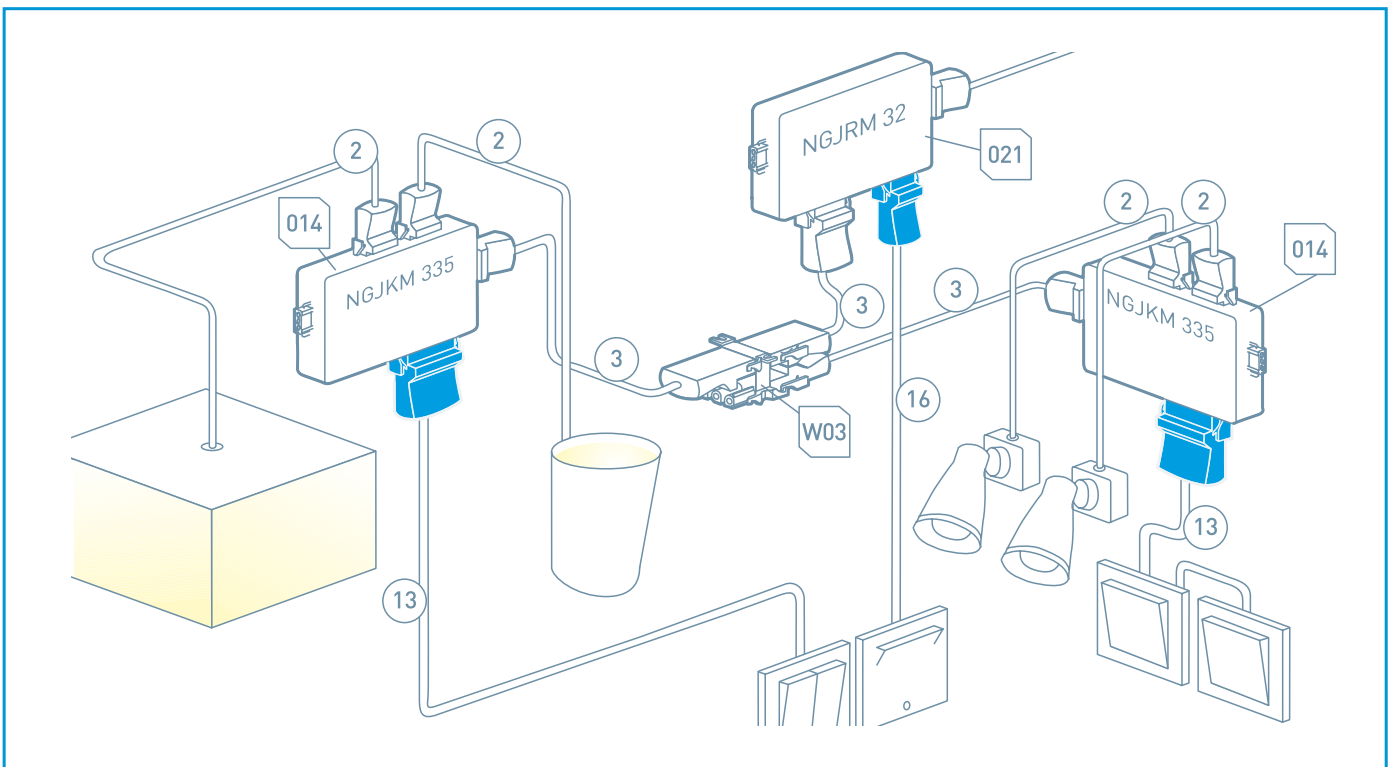
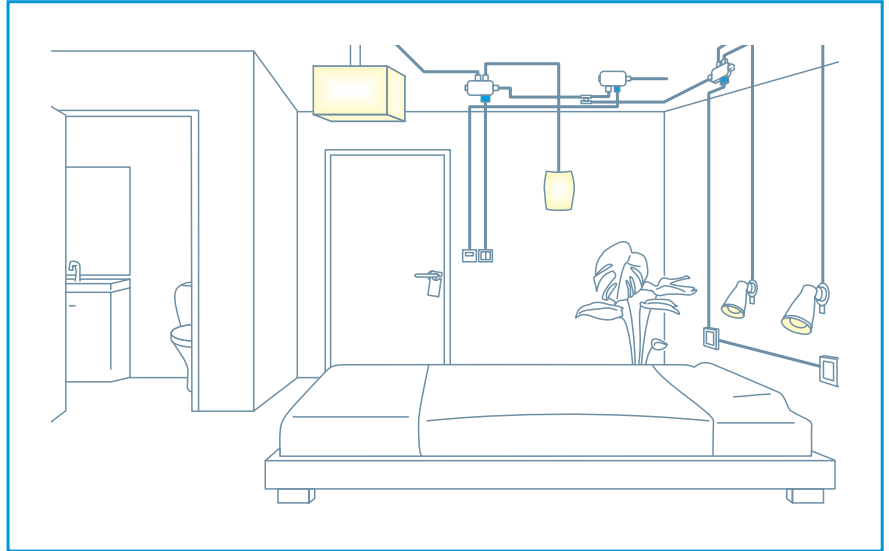
## School

- This solution can be used in:
- Meeting room
  - Shop
  - Hotel
  - Hospital
  - Workroom
  - Corridor

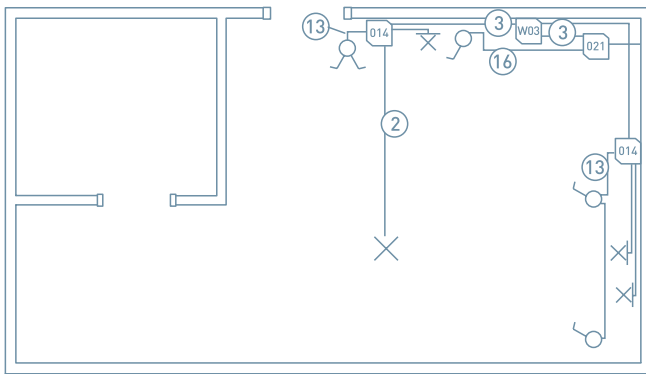
# Hotel Room

## Installation Solution with Relay Switch Box and Power Control Box

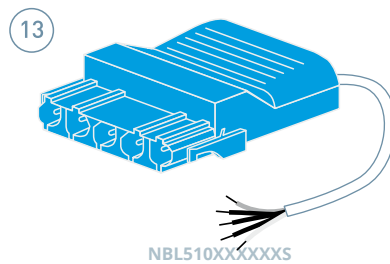
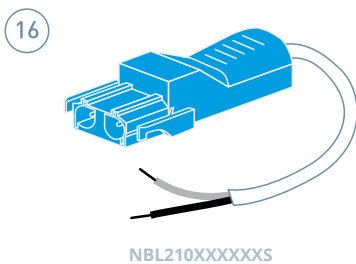
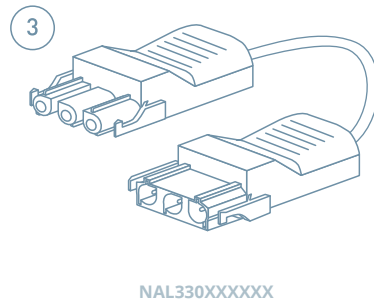
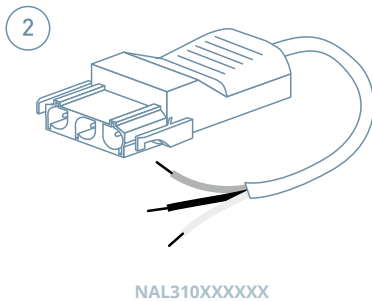
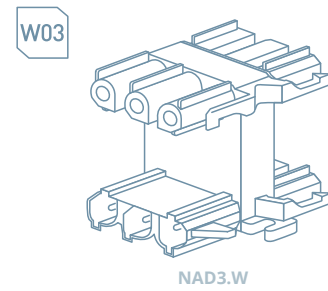
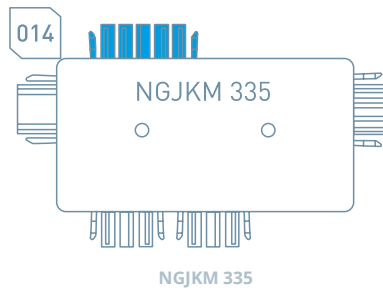
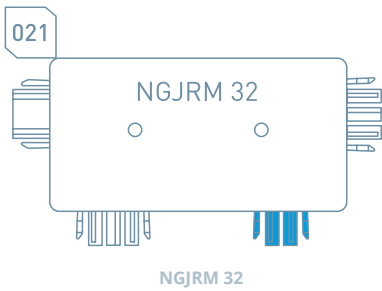
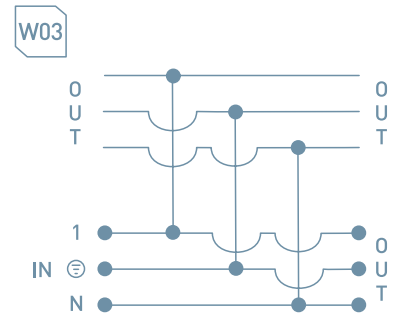
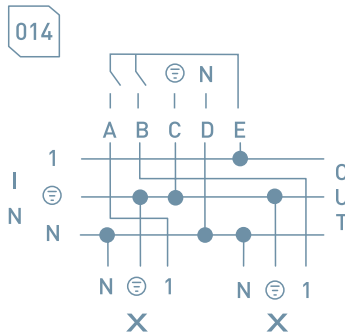
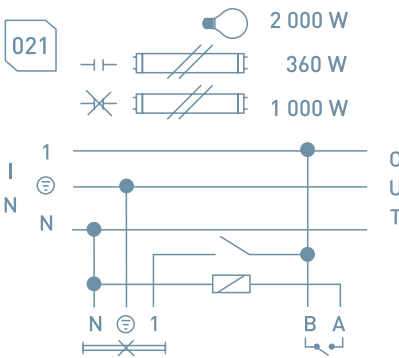
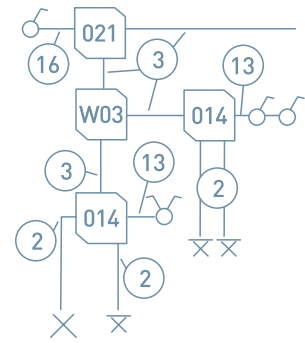
Installation with one phase switch box combined with a key card controlled relay switch box which is working as a main switch.



# Wiring and circuit diagram



- 021 NGJRM 32
- 014 NGJKM 335
- W03 NAD3.W
- 2 NAL310XXXXXX
- 3 NAL330XXXXXX
- 13 NBL510XXXXXS
- 16 NBL210XXXXXS
- KEY CARD SWITCH
- SWITCH, 2-POLE



## Hotel

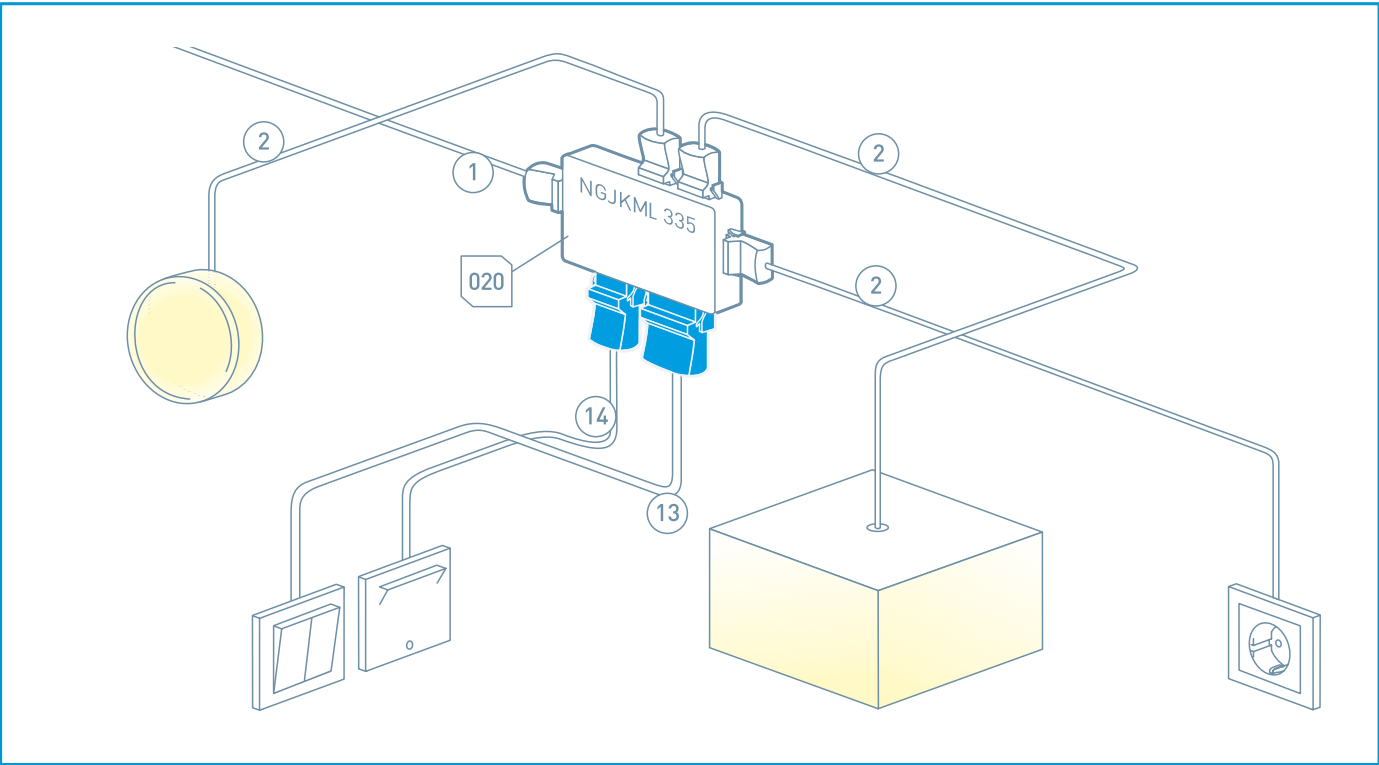
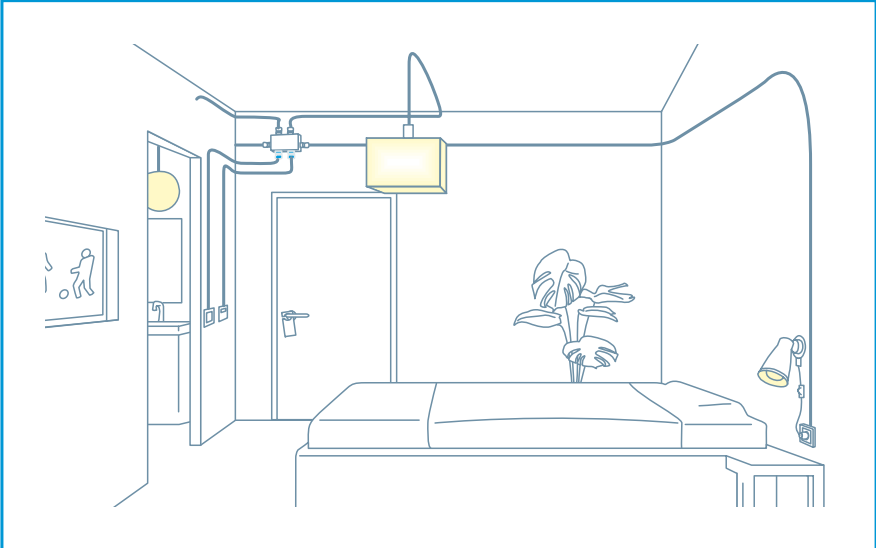
This solution can be used in:

- Cabins in cruise ship

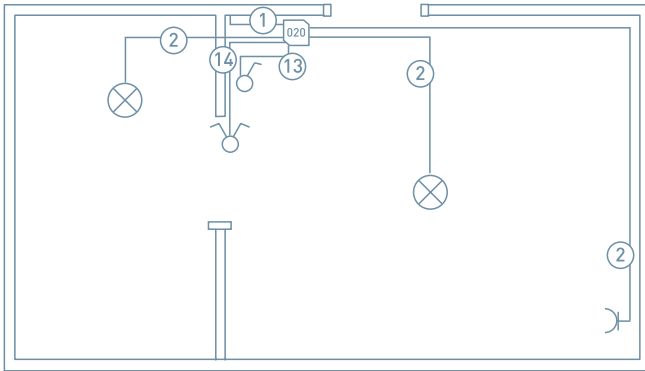
# Hotel Room

## Installation Solution with Power Control Box

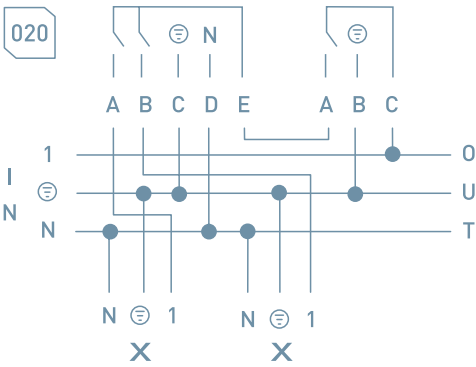
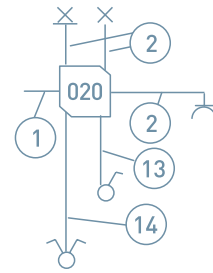
Installation with one phase continuous supply and on/off switching via a key card switch and a double switch. Branching to two separate light fittings.



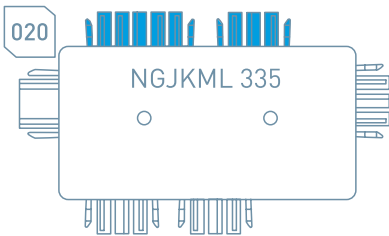
# Wiring and circuit diagram



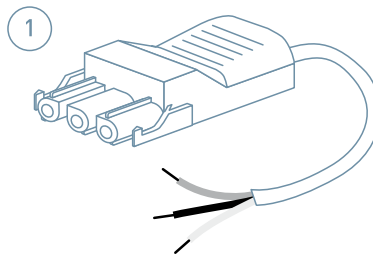
- 020 NGJKML 335
- 1 NAL130XXXXXX
- 2 NAL310XXXXXX
- 13 NBL510XXXXXS
- 14 NBL310XXXXXS
- KEY CARD SWITCH
- SWITCH, 2-POLE



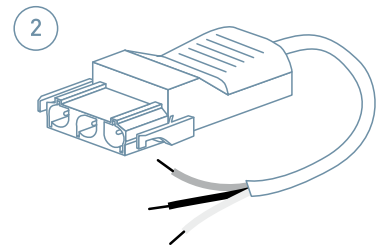
# Products



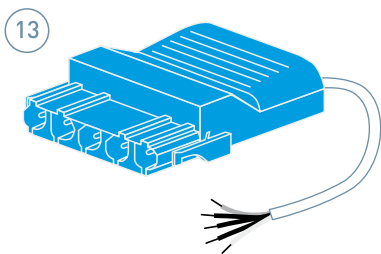
NGJKML 335



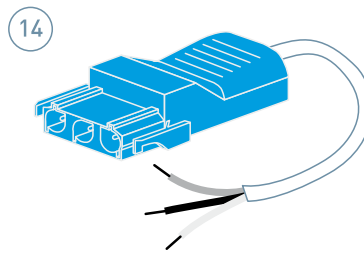
NAL130XXXXXX



NAL310XXXXXX



NBL510XXXXXS



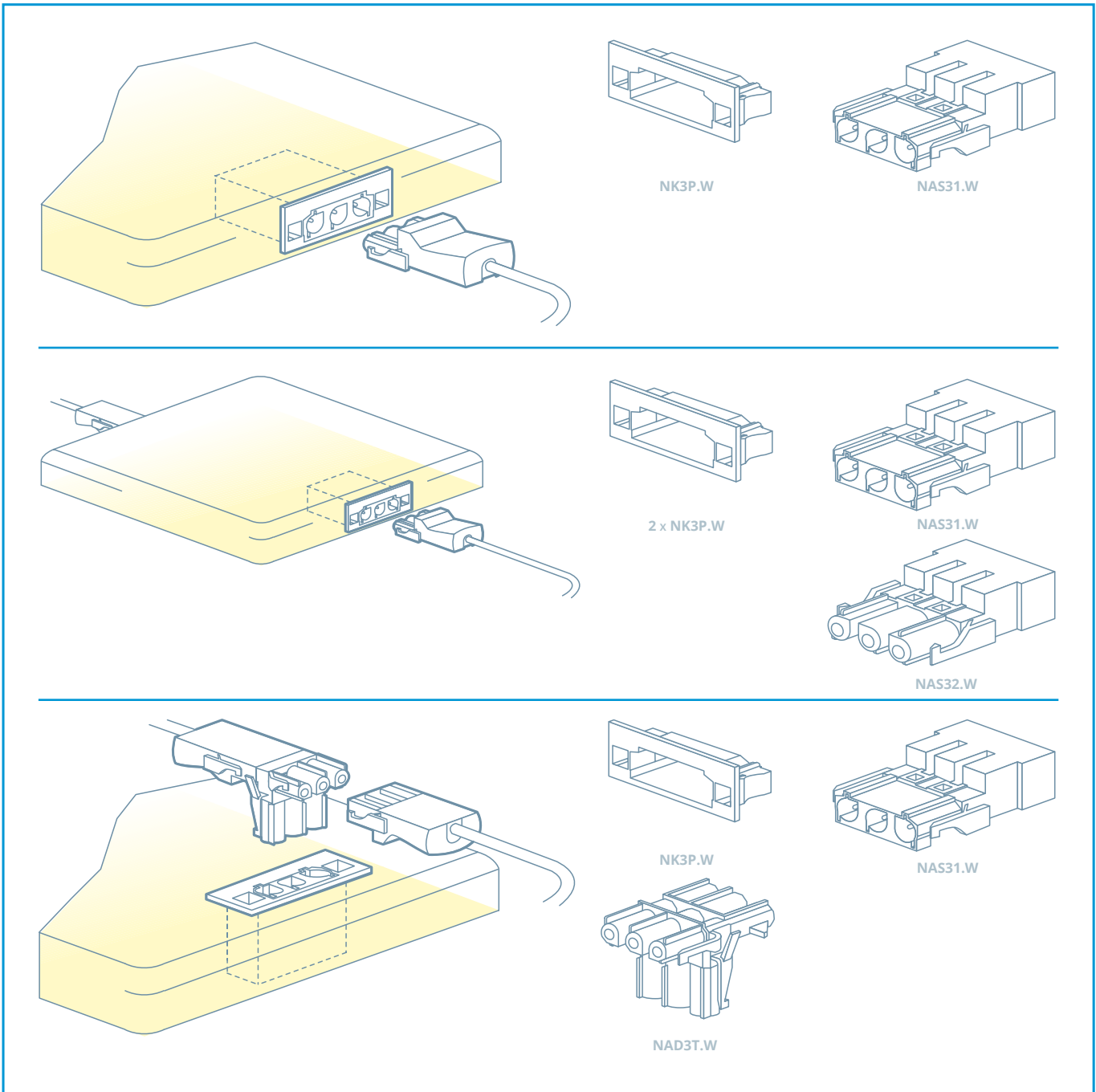
NBL310XXXXXS

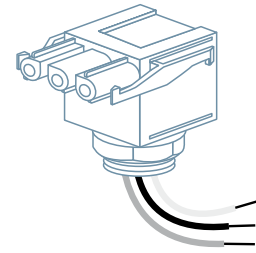
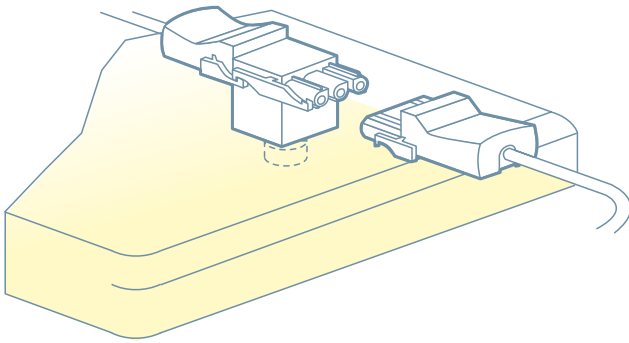
# Hotel

This solution can be used in:

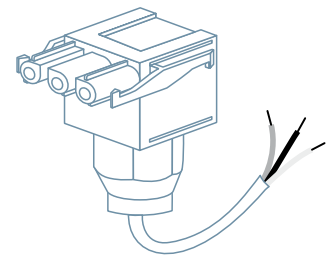
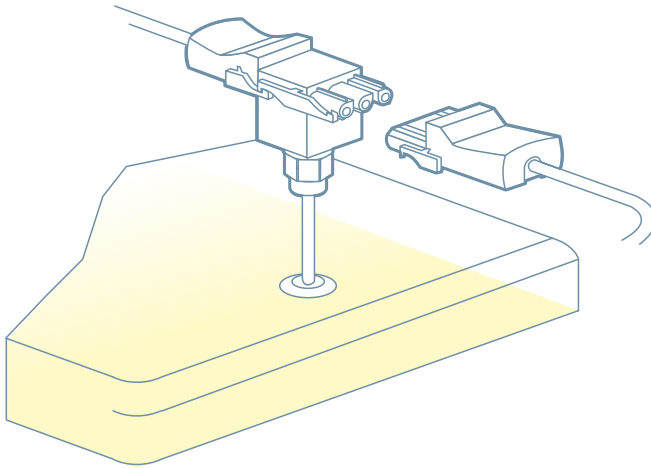
- Cabins in cruise ship

# Light Fitting Connections with Ensto Net

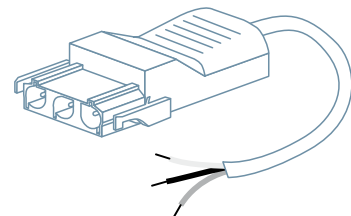
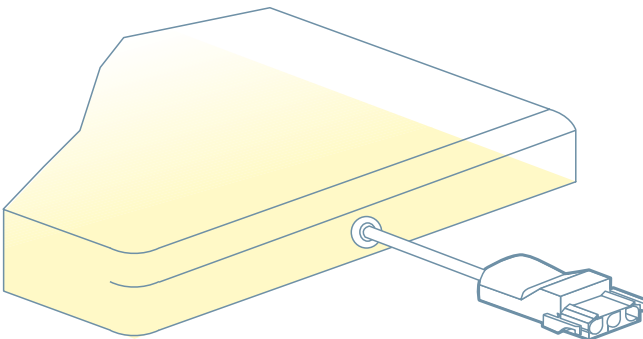




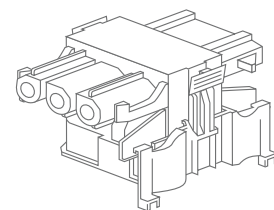
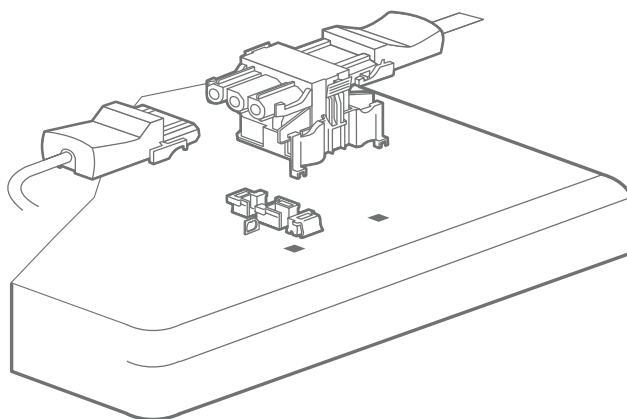
NAD3B.W



NAD3B5.WXXX



NAL310XXXXXX



NOD3LA.W

- in 1 phase installation



# Installation System - tips

## Recommended usage or color codes



NAL....  
• POWER SUPPLY



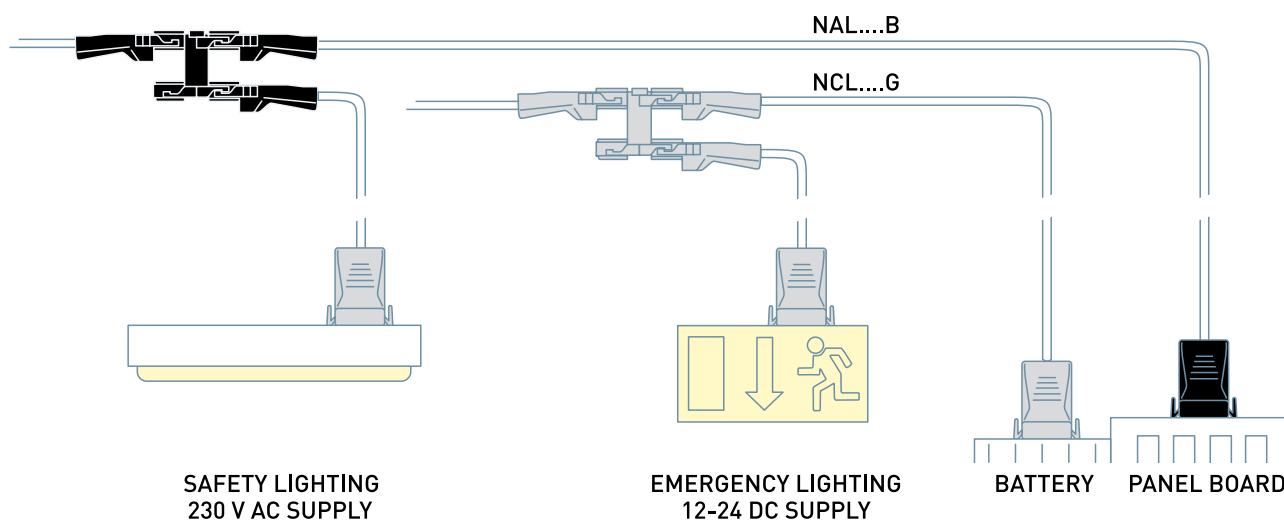
NAL....B  
• SECURED SUPPLY (UPS)  
• SAFETY OR EMERGENCY LIGHTING (230 V SUPPLY)



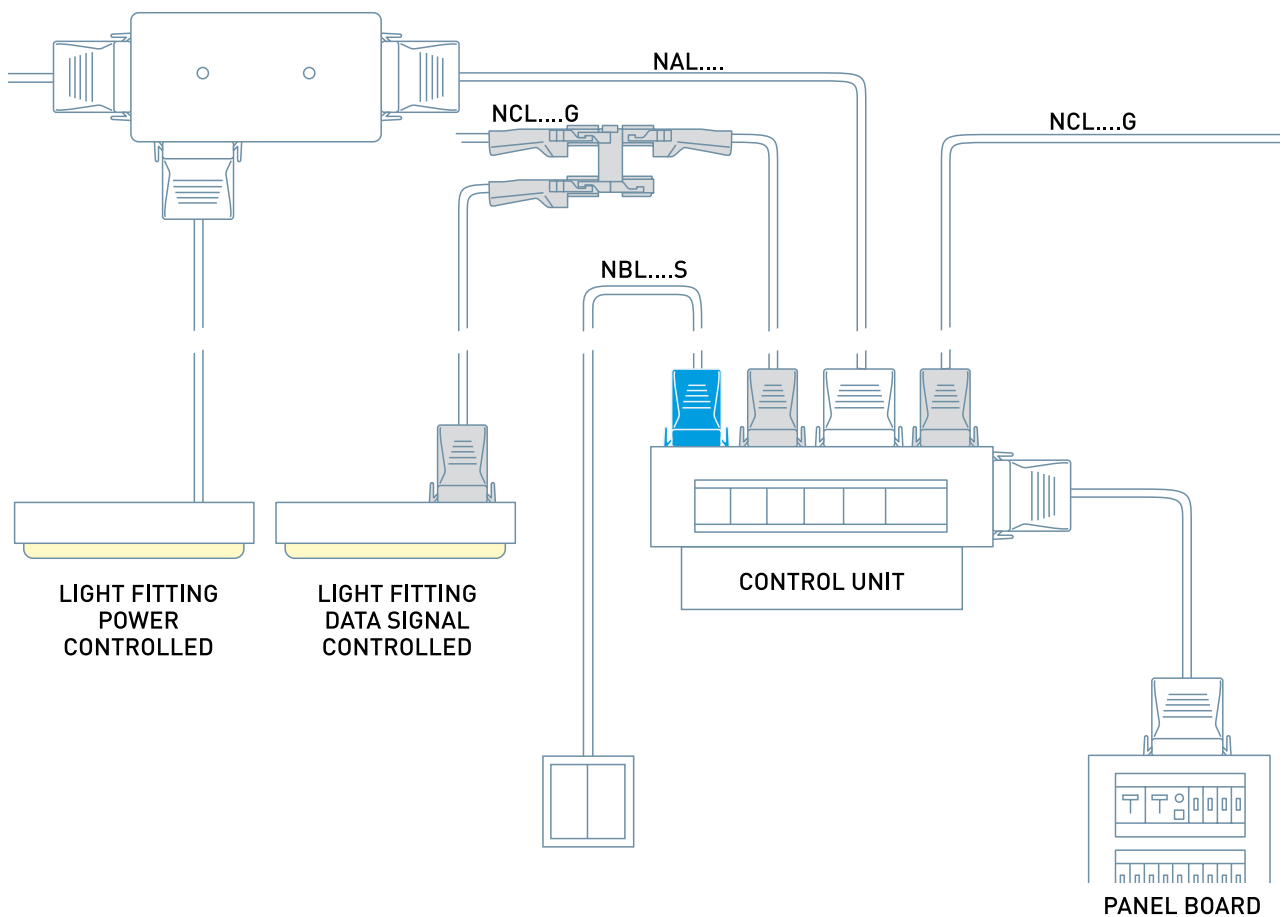
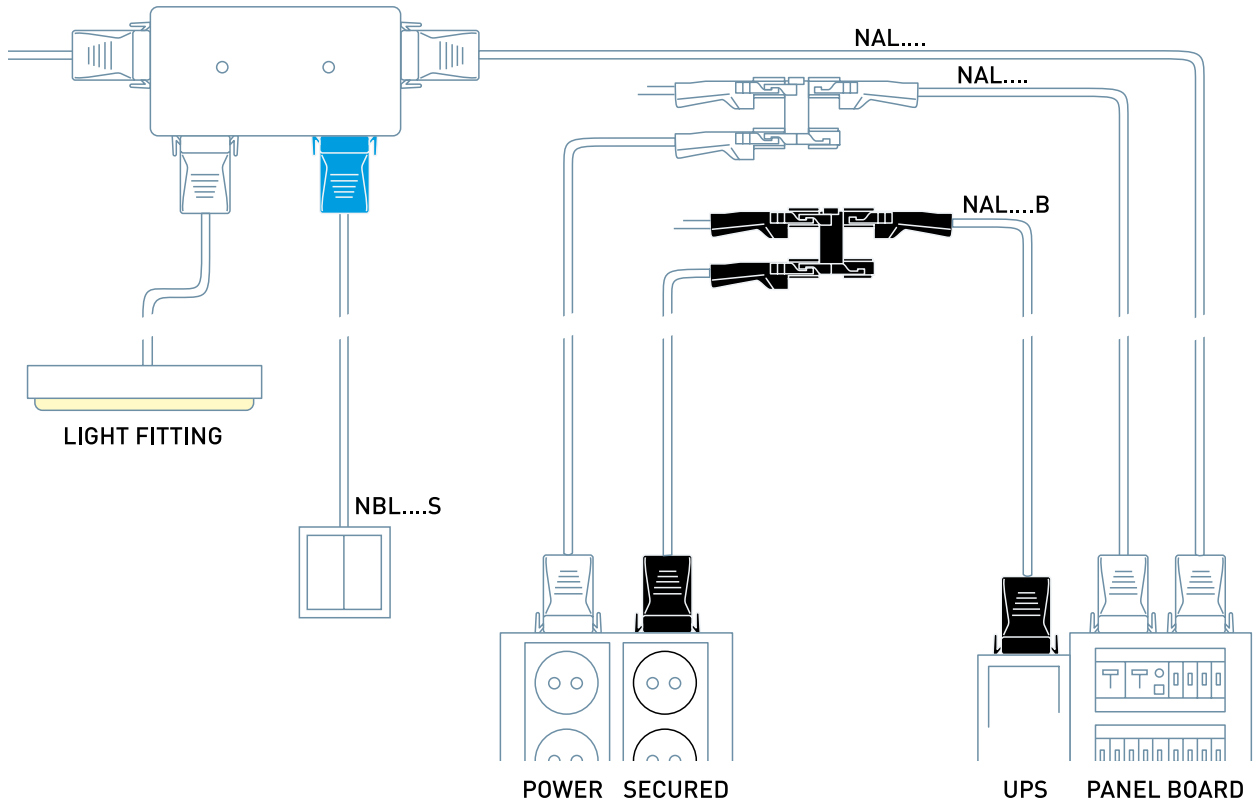
NBL....S  
• CONTROLS (SWITCH, PIR- DETECTOR, OTHER  
POWER CONTROLS)  
• SUPPLY FOR SPECIFIED USE BY DESIGNER







NCL....G  
• POWER / SMALL VOLTAGE CONTROLS (EIB, LON,  
DALI, OTHER DATA SIGNALS, DIMMING, ETC)  
• SAFETY OR EMERGENCY LIGHTING (24 V SUPPLY)



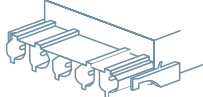
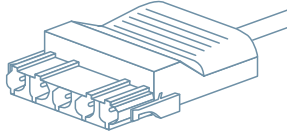
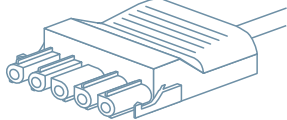







# Product Code Key for Couplers and Accessories

N	A	C	2	1	S	H	W	
N								N = product group (Net)
	A B C G							<p>A = standard coding            B = second mechanical coding            C = third mechanical coding            A is the standard coding and it is marked white or black. These colours are compatible with each other.            B coding is the second mechanical coding. It is marked with blue or beige. Products with the B coding are not compatible A- or C-coded products.            C coding is the third mechanical coding. It is marked with grey or red. Products with the C coding are not compatible A- or B-coded products.            G as the second character denotes a product, such as a junction box, that has both A- and B-coded couplers. Products that are independent of coding are not marked with a second character.</p>
		C E S						<p>C = connector, screw            E = printed circuit board coupler            S = screwless connector</p>
			2					2 = 2-pole coupler, etc
				1 2				<p>1 = plug            2 = socke</p>
					S			<p>S = strain-relief            Meaning of extra characters on boxes</p>
						H		H = narrow coupler without locking latches
							B	<p>W = white  B = black             S = blue  G = grey </p>

# Product Code Key for EnstoNet Prefabricated Leads



N A L 3 3 0 M 1 5 0 1 0 B													
N											N = product group (Net)		
	A B C										A = standard coding B = second mechanical coding C = third mechanical coding	Mechanical coding 	
		L									L = lead		
			1 2 3 4 5								1 = stripped, no coupler 2 = 2-pole plug coupler 3 = 3-pole plug coupler 4 = 4-pole plug coupler 5 = 5-pole plug coupler	Lead's plug end 	
				1 2 3 4 5							1 = stripped, no coupler 2 = 2-pole socket coupler 3 = 3-pole socket coupler 4 = 4-pole socket coupler 5 = 5-pole socket coupler	Lead's socket end 	
					0 1 2 3						0 = all phases connected 1 = L1 connection 2 = L2 connection 3 = L3 connection	Connection	
						M T W					M = H05VV-F = PVC T = H05Z1Z1-F (halogen free) W = H05Z1A7Z1-F (halogen free), shielded	Cable type	
							07 1 2	5 5			07 = 0.75 mm <sup>2</sup> 15 = 1.5 mm <sup>2</sup> 25 = 2.5 mm <sup>2</sup>	Cross-section 	
									0 0	1 1	0 5	010 = 1 metre 015 = 1.5 metres 120 = 12 metres	Length of the prefabricated lead 
												B = black G = grey S = blue	Colour of the coupler 



# Color Codes and Markings for EnstoNet Connectors

## 20 A, 250/400 V

PRODUCT GROUP	CODING	COLOUR	POLE MARKINGS				
			2	3	4	5	
Number of poles							
Prefabricated leads	A	White		1, $\pm$ , N		1, 2, $\pm$ , N, 3	
		Black		1, $\pm$ , N		1, 2, $\pm$ , N, 3	
	B	Blue	A, B	A, B, C		A, B, C, D, E	
	C	Grey		a+, $\pm$ , b-		1, N, $\pm$ , a+, b-	
Distribution blocks	A	White					
		Black					
	B	Blue					
	C	Grey					
T-Connectors	A	White					
		Black					
	B	Blue					
	C	Grey					
T-Connectors with wires	A	White					
		Black					
	B	Blue					
	C	Grey					
T-Connectors with cables	A	White					
		Black					
	B	Blue					
	C	Szary					
Installation Couplers	A	White	1, N	1, $\pm$ , N	1, $\pm$ , N, 2	1, 2, $\pm$ , N, 3	
		Black	1, N	1, $\pm$ , N	1, $\pm$ , N, 2	1, 2, $\pm$ , N, 3	
	B	Blue	A, B	A, B, C		A, B, C, D, E	
	C	Grey	a+, b-	a+, A, b-		1, N, $\pm$ , a+, b-	
Screwless Installation Couplers	A	White	1, N	1, $\pm$ , N	1, $\pm$ , N, 2	1, 2, $\pm$ , N, 3	
		Black	1, N	1, $\pm$ , N	1, $\pm$ , N, 2	1, 2, $\pm$ , N, 3	
	B	Blue	A, B	A, B, C			
	C	Grey	a+, b-	a+, $\pm$ , b-			
PCB Couplers (Socket)	A	White	1, N	1, $\pm$ , N	1, $\pm$ , N, 2	1, 2, $\pm$ , N, 3	
		Blue	A, B	A, B, C		A, B, C, D, E	
	C	Grey	a+, b-	a+, $\pm$ , b-			
PCB Couplers (Plug)	A	White		1, $\pm$ , N		1, 2, $\pm$ , N, 3	
	B	Blue				A, B, C, D, E	

 Special products upon request  
 Not available






































































Specified product information [www.ensto.com](http://www.ensto.com) Please choose Products -> EnstoNet

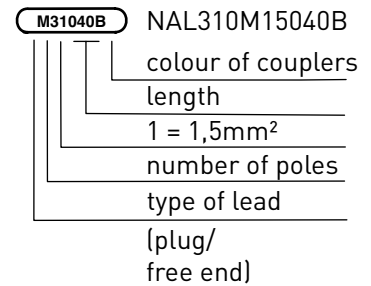
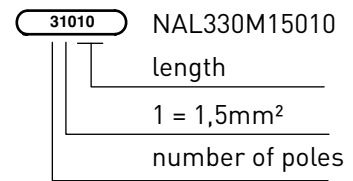
# Technical specifications

Maximum Voltage	250 V~, 250/400 V~ Ignition impulse test 4.5 kV / 250 V and 6 kV/ 400 V AC
Maximum current	20 A , prefabricated leads 16 A
Connector cross-sections	Screw connectors: 0.75 – 4.0 mm <sup>2</sup> , flexible, stranded and solid wires Screwless connectors: 0.5 – 2.5 mm <sup>2</sup> , stranded and solid wires
Number of poles	2 – 5-pole and 6-pole combination couplers
Standards	IEC 61535 and IEC/EN 60998 Linect products additionally: EN 60598:1, EN 61984
Approvals	All product groups: SGS FIMKO In addition for some products: UL, Lloyd's, DNV, EAC Linect products: VDE
IP classification	IP 20C
Materials	Body of couplers and distribution blocks: Polyamide 6.6 Self-extinguishment according to UL94: V2 Tracking index CTIM: 600 V (KB) Halogen-free Cadmium-free Recyclable Terminals: Silver-plated brass Terminal screws: Zinc-coated steel screws, rounded end Strain-relief screws: Zinc-coated steel screws, screw head PZ1
Allowed pull-out force for safety latches	Min. 80 N
Cables	PVC = H05VV-F HF = H05Z1Z1-F (halogen-free) W = H05Z1A7Z1-F (halogen-free, shielded)
Minimum installation temperature	+5 °C
Minimum operating temperature	-30 °C (without mechanical stress)
Maximum operating temperature	+70 °C
Coding	Mechanically and/or colour coded couplers
General	In accordance with standard IEC/EN 61535, EnstoNet installation couplers are not compatible with any other installation coupler series. The EnstoNet installation couplers are not compatible with domestic socket-outlet and plug systems, also not compatible with couplers in accordance with standards IEC 60309, IEC 60320 and IEC 60906.  When dimensioning a network make sure that the nominal values of the installation couplers are not exceeded in different network load situations. When installing, mating or unmating EnstoNet couplers make sure no load is applied.  The correctness of every connected wire, cable and electrical device has to be checked electrically. Foreign objects must not be inserted into the contact parts of EnstoNet couplers.  EnstoNet couplers are not intended for replacing domestic socket and plug connection.  Make sure that a pulling force of over 80 N is not applied to couplers and cables at any time during installation or use. If excess strain is unavoidable, fix the cable.  The use and testing of EnstoNet couplers must comply with the national installation regulations.



# EnstoNet electrical symbols for CAD

	NAD2.B		NCD5T.G		NGUF540.WB		NAD3B.B
	NAD2.W		NCD5T.P		NAP300		NAD3B.W
	NBD2.S		NAJDM33		NAP301		NBD3B.S
	NCD2.G		NAJDM36		NAP304		NCD3B.G
	NCD2.P		NAJDM33.B		NAP500		NAD5B.W
	NAD3.B		NAJDM36.B		NAP504		NBD5B.S
	NAD3.W		NAJDM33		NAP505		NCD5B.G
	NBD3.S		NAJDM36				NAD5BS.W-L1
	NCD3.G		NAJDM53.B		NAC31.W		NAD5BS.W-L2
	NCD3.P		NAJDM56.B		NAS31.W		NAD5BS.W-L3
	NAD5.B		NGJDM56.WB		NAC51.W		NAD3BS.WT004
	NAD5.W		NGJKM335		NAS51.W		NAD3BS.WT010
	NBD5.S		NGJKM346				NAD3BS.WT025
	NCD5.G		NGJKM351		NAC32.W		NAD5BS.WT004
	NCD5.P		NGJKM353		NAS32.W		NAD5BS.WT004-L1
	NAD36.B		NGJDMF345		NAC52.W		NAD5BS.WT004-L2
	NAD36.W		NGJKM571		NAS52.W		NAD5BS.WT004-L3
	NAD3T.B		NGJKM572				NAD5BS.WT010
	NAD3T.W		NGJKM573				NAD5BS.WT010-L1
	NAD56.B		NGJDMV535				NAD5BS.WT010-L2
	NAD56.W		NGJML335				NAD5BS.WT010-L3
	NAD5T.B		NGJKM561				NAD5BS.WT025-L1
	NAD5T.W		NGJRM552				NAD5BS.WT025-L2
	NBD36.S		NGJRM31				NAD5BS.WT025-L3
	NBD3T.S		NGJRM32				
	NBD5T.S		NGJFM335				
	NCD36.G		floor fixed service pole				
	NCD36.P		standalone service pole				
	NCD3T.G		socket box				
	NCD3T.P		data socket boxes				
	NCD56.P						







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