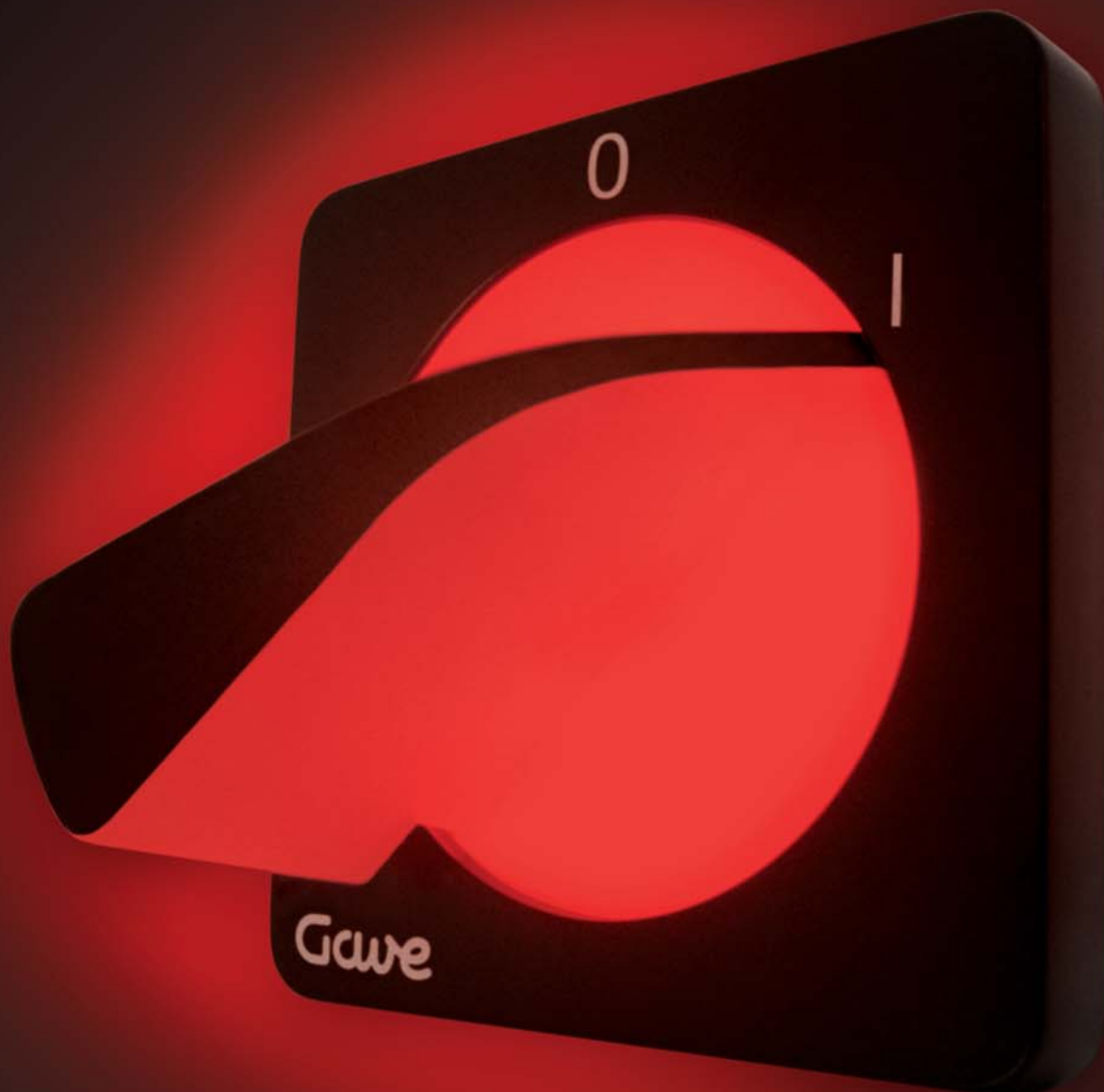




Combilight switches

Gawe

low voltage electrical manufacturer





Company

Gawe Electro is an international manufacturer of electrical control products and solutions with an extensive professional record since it was founded in 1944. It has developed technical capabilities on the low voltage breaking, control and protection fields acquiring strong reputation on its control equipment solutions.

Innovation

Innovative thinking is our philosophy. We create better more effective products and processes applying new ideas that benefit from our longstanding experience. A dedicated engineering team boosting your competitiveness.



*Specialist in electrical
control technology*

Quality & Service Commitment

Gave Electro follows a total quality management (TQM) system as an integrative philosophy of management for continuously improving the quality of products and processes. This system functions on the premise that the quality of products and processes is the responsibility of everyone who is involved with the creation or consumption of the products and involves management, workforce, suppliers, and even customers, in order to meet or exceed customer expectations.

Constant rigorous product testing is undertaken during all production process in order to guarantee product reliability and repeatability. Testing capabilities include:

- Electrical and mechanical endurance
- Ingress protection (IP) testing
- EMC reinforced testing
- Optical and thermal parts analysis
- Dielectric testing
- Flammability and ignitability (glow wire test)

We commit to service our customer by providing support in planning, installation, training, trouble shooting, maintenance, upgrading, and disposal of a product.

Combilight switches



The new generation of illuminated switches revolutionizes design of electrical panels by providing design and installation **simplicity**, electrical and electronic **robustness**, modern ergonomics and high signalling **brightness**.

«The innovation that transforms electrical panel designs»



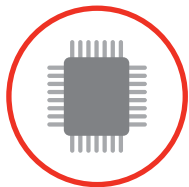
Electrical robustness
Safety and reliability in any circumstance

- According to IEC60947-3
- Electrical endurance (3 times above standard requirements)
- On load switching and circuit isolation



High brightness
Unmatched unit visibility in outdoor or bright environments

- Long life LEDs 100.000 hours
- Visibility throughout 180°
- High intensity LEDs
- True colors complete range
- Black background for enhanced contrast



Electronic robustness
Reliability against disturbances

- Protection against electromagnetic interference
- High resistance to vibration and shock
- High dielectric strength



Ergonomics
Designed for easy of use

- Handle developed for type 2 motion movements
- Surface treatment for a touch of comfort
- Modern look



Simplicity
Guaranteed time saving

- Built-in fixing nuts
- Plug-in power supply terminal
- Clip-together handle system



Connection
Clamping yoke terminal technically recognised as the best connection

- Reliability against temperature changes and vibrations
- Captive screw
- Surface treatment minimizes contact resistance

Additional signalling

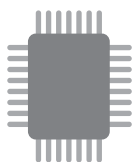
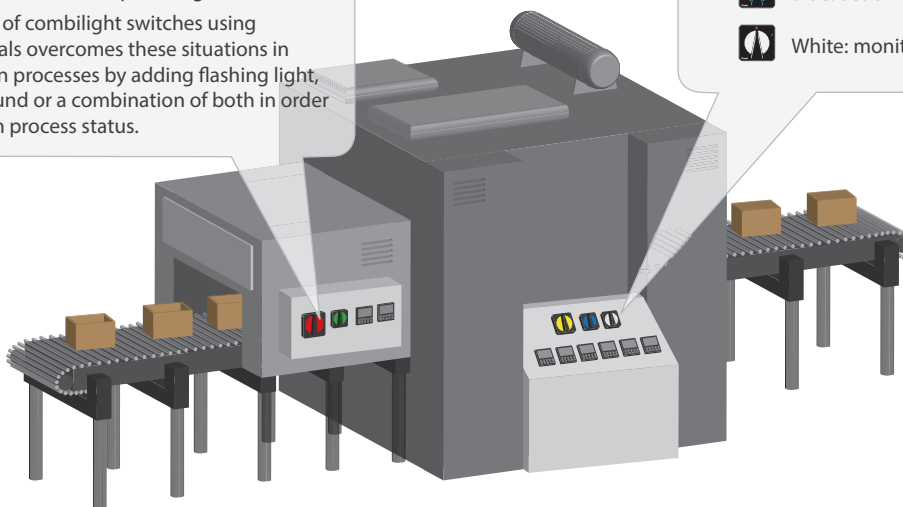
A common signalling need occurs when discrepancies rise between control command and the actual process status. This may indicate, for example, the end of the process cycle where an operator action is required (eg load material).

The range of combilight switches using input signals overcomes these situations in production processes by adding flashing light, buzzer sound or a combination of both in order to warn on process status.

Intuitive indications

Human-machine interface requires a clear understanding of the situation by the operator, colour coding provides a quick understanding.

-  Red: emergency
-  Green: normal status
-  Yellow: anomaly
(check or action required)
-  Blue: action required
-  White: monitoring



Programmable modules

Combilight switches technology distinguishes itself by offering maximum flexibility to OEM designers in the conception of new products and developments. Signalling modules are based on a programmable chip that uses four input signals and combinations thereof.

They can be programmed colour lights, colour sequences, blinking frequencies, buzzer frequencies, ... Each case associated with different machine status and operating conditions.

Environment

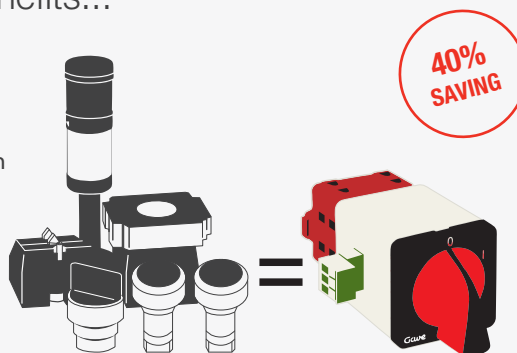
Designed to minimize the impact on the environment

- Materials of low ecological footprint and easy recycling
- Low power consumption electronics



Nothing but benefits...

- ✓ Fewer components
- ✓ Less need for space
- ✓ Economic saving
- ✓ Reduced installation time

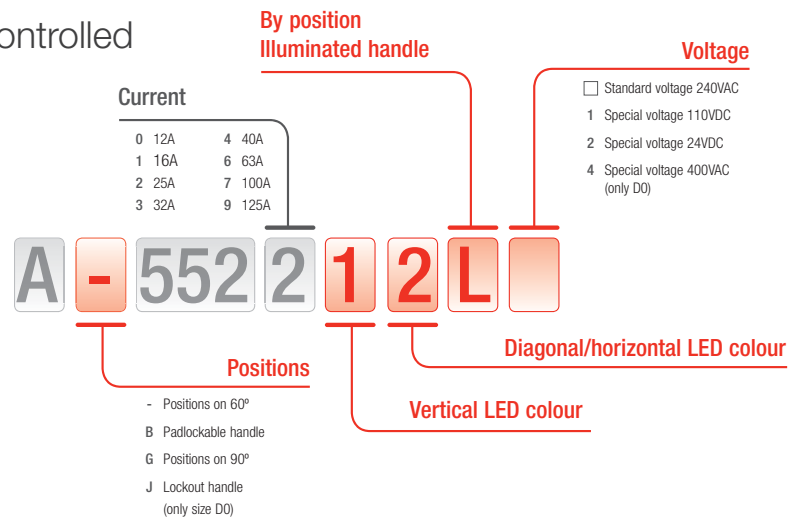


Types and reference system

Combilight switches position controlled

Illuminated cam switches controlled by position define the light color according to the handle position

Based on the reference system we must generate a reference code that indicates the handle color based on its position. We must also indicate the light module supply voltage the standard version being 240VAC.



Colour codes

Standard



1 Red



2 Green

Special



3 Yellow



4 Blue



0 White

Combilight switches signal controlled

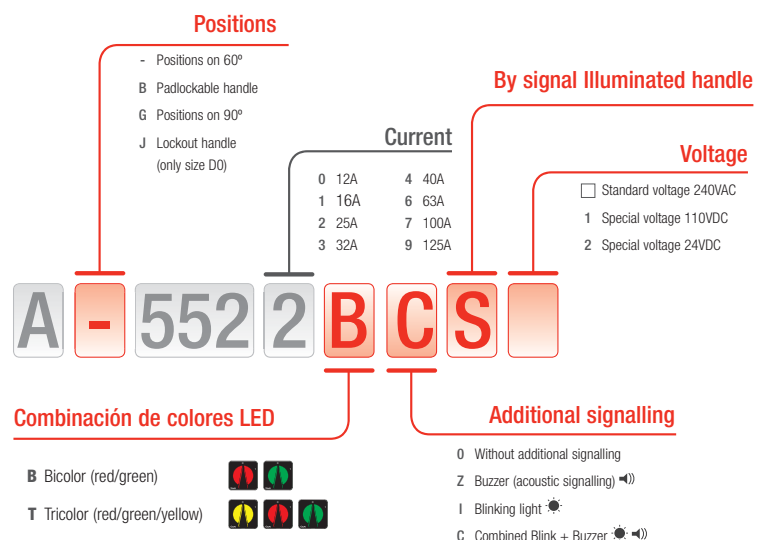
Illuminated cam switches controlled by signal type require the presence of an external input signal to activate light/sound module signalling. The input signal must be steady and in its absence the module remains off.

The module has four voltage free input signals to figure out the handle colour or other signalling.

There are three additional signalling modes:

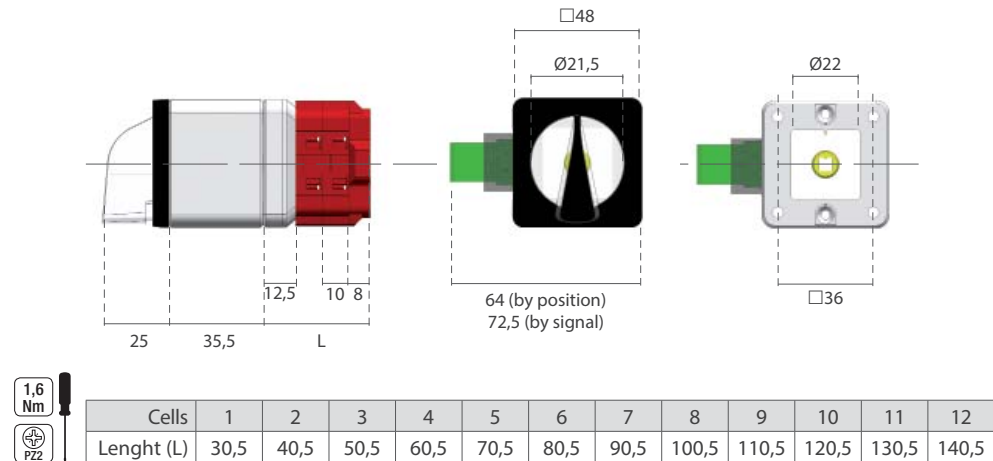
- Audible warning buzzer 📢
- Blinking light 🌟
- Buzzer and blinking combined 📢 🌟

Based on the reference system we indicate the unit supply voltage, being 240VAC the standard module supply.

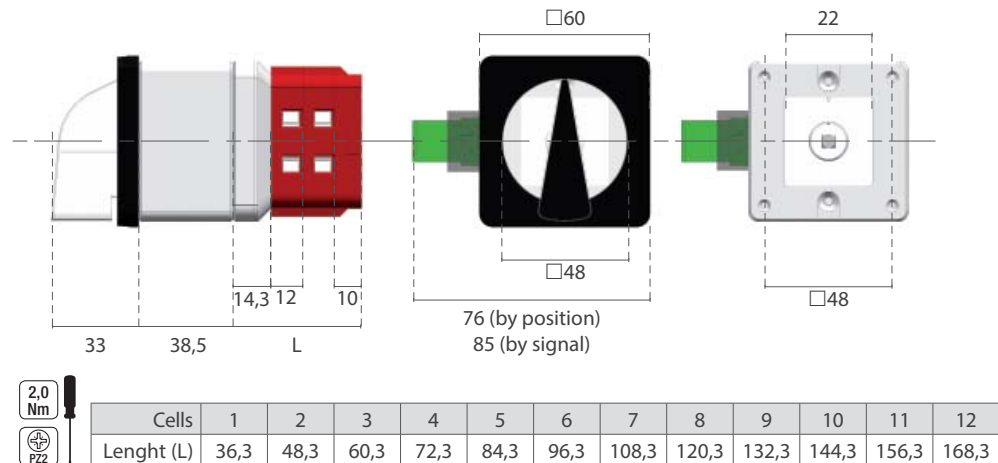


Dimensions

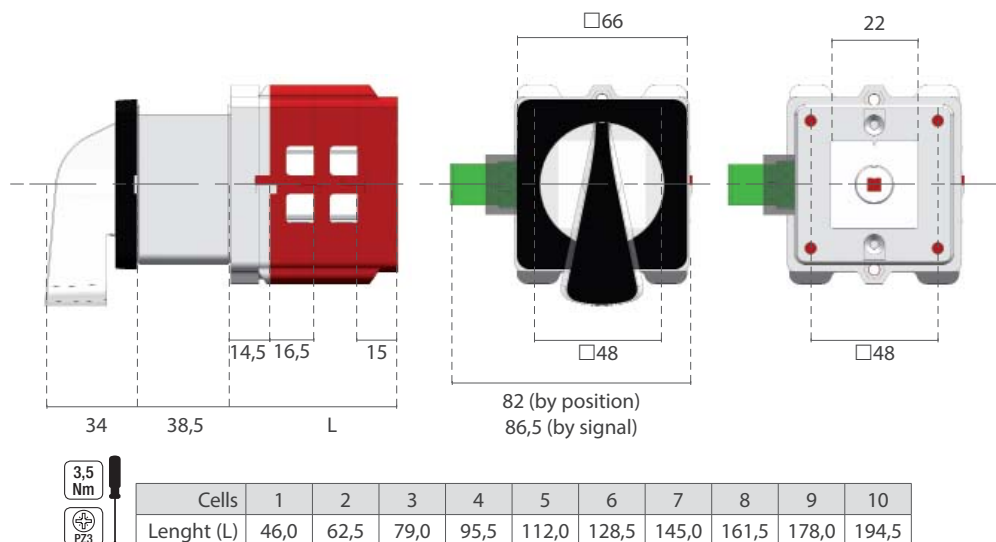
Size D0



Size D1



Size D2



Position controlled references

Switches 240Vac



Size D0

Poles	Cells	Scheme	12A	16A	25A
1 pole	1	550	A-550012L	A-550112L	A-550212L
2 poles	1	551	A-551012L	A-551112L	A-551212L
3 poles	2	552	A-552012L	A-552112L	A-552212L
4 poles	2	553	A-553012L	A-553112L	A-553212L

Size D1

Poles	Cells	Scheme	25A	32A	40A
1 pole	1	550		A-550312L	A-550412L
2 poles	1	551		A-551312L	A-551412L
3 poles	2	552		A-552312L	A-552412L
4 poles	2	553		A-553312L	A-553412L

Size D2

Poles	Cells	Scheme	63A	100A	125A
1 pole	1	550	A-550612L	A-550712L	A-550912L
2 poles	1	551	A-551612L	A-551712L	A-551912L
3 poles	2	552	A-552612L	A-552712L	A-552912L
4 poles	2	553	A-553612L	A-553712L	A-553912L

Switches 24Vdc



Size D0

Poles	Cells	Scheme	12A	16A	25A
1 pole	1	550	A-550012L2	A-550112L2	A-550212L2
2 poles	1	551	A-551012L2	A-551112L2	A-551212L2
3 poles	2	552	A-552012L2	A-552112L2	A-552212L2
4 poles	2	553	A-553012L2	A-553112L2	A-553212L2

Switches 240Vac with padlockable handle



Size D0

Poles	Cells	Scheme	12A	16A	25A
1 pole	1	550	AB550012L	AB550112L	AB550212L
2 poles	1	551	AB551012L	AB551112L	AB551212L
3 poles	2	552	AB552012L	AB552112L	AB552212L
4 poles	2	553	AB553012L	AB553112L	AB553212L

Size D1

Poles	Cells	Scheme	25A	32A	40A
1 pole	1	550		AB550312L	AB550412L
2 poles	1	551		AB551312L	AB551412L
3 poles	2	552		AB552312L	AB552412L
4 poles	2	553		AB553312L	AB553412L

Size D2

Poles	Cells	Scheme	63A	100A	125A
1 pole	1	550	AB550612L	AB550712L	AB550912L
2 poles	1	551	AB551612L	AB551712L	AB551912L
3 poles	2	552	AB552612L	AB552712L	AB552912L
4 poles	2	553	AB553612L	AB553712L	AB553912L

Switches 24Vdc with padlockable handle



Size D0

Poles	Cells	Scheme	12A	16A	25A
1 pole	1	550	AB550012L2	AB550112L2	AB550212L2
2 poles	1	551	AB551012L2	AB551112L2	AB551212L2
3 poles	2	552	AB552012L2	AB552112L2	AB552212L2
4 poles	2	553	AB553012L2	AB553112L2	AB553212L2

Position controlled references (continued)

Changeover switches 1-0-2 240Vac



Size D0

Poles	Cells	Scheme	12A	16A	25A
1 pole	1	560	A-560012L	A-560112L	A-560212L
2 poles	2	561	A-561012L	A-561112L	A-561212L
3 poles	3	562	A-562012L	A-562112L	A-562212L
4 poles	4	563	A-563012L	A-563112L	A-563212L

Size D1

Poles	Cells	Scheme	25A	32A	40A
1 pole	1	560			
2 poles	2	561		A-561312L	A-561412L
3 poles	3	562		A-562312L	A-562412L
4 poles	4	563		A-563312L	A-563412L

Size D2

Poles	Cells	Scheme	63A	100A	125A
1 pole	1	560			
2 poles	2	561	A-561612L	A-561712L	A-561912L
3 poles	3	562	A-562612L	A-562712L	A-562912L
4 poles	4	563	A-563612L	A-563712L	A-563912L

Changeover switches 1-0-2 24Vdc



Size D0

Poles	Cells	Scheme	12A	16A	25A
1 pole	1	560	A-560012L2	A-560112L2	A-560212L2
2 poles	2	561	A-561012L2	A-561112L2	A-561212L2
3 poles	3	562	A-562012L2	A-562112L2	A-562212L2
4 poles	4	563	A-563012L2	A-563112L2	A-563212L2

Signal controlled references

Tricolor switches 240Vac



Standard signalling Size D0

Poles	Cells	Scheme	12A	16A	25A
1 pole	1	550	A-5500T0S	A-5501T0S	A-5502T0S
2 poles	1	551	A-5510T0S	A-5511T0S	A-5512T0S
3 poles	2	552	A-5520T0S	A-5521T0S	A-5522T0S
4 poles	2	553	A-5530T0S	A-5531T0S	A-5532T0S

Size D1

Poles	Cells	Scheme	25A	32A	40A
3 poles	2	552		A-5523T0S	A-5524T0S
4 poles	2	553		A-5533T0S	A-5534T0S

Size D2

Poles	Cells	Scheme	63A	100A	125A
3 poles	2	552	A-5526T0S	A-5527T0S	A-5529T0S
4 poles	2	553	A-5536T0S	A-5537T0S	A-5539T0S

Blinking light signalling Size D0

Poles	Cells	Scheme	12A	16A	25A
1 pole	1	550	A-5500TIS	A-5501TIS	A-5502TIS
2 poles	1	551	A-5510TIS	A-5511TIS	A-5512TIS
3 poles	2	552	A-5520TIS	A-5521TIS	A-5522TIS
4 poles	2	553	A-5530TIS	A-5531TIS	A-5532TIS

Size D1

Poles	Cells	Scheme	25A	32A	40A
3 poles	2	552		A-5523TIS	A-5524TIS
4 poles	2	553		A-5533TIS	A-5534TIS

Size D2

Poles	Cells	Scheme	63A	100A	125A
3 poles	2	552	A-5526TIS	A-5527TIS	A-5529TIS
4 poles	2	553	A-5536TIS	A-5537TIS	A-5539TIS

Signal controlled references (continued)

Tricolor switches 240Vac (continued)

**Acoustic signalling** 🔊**Size D0**

Poles	Cells	Scheme	12A	16A	25A
1 pole	1	550	A-5500TZS	A-5501TZS	A-5502TZS
2 poles	1	551	A-5510TZS	A-5511TZS	A-5512TZS
3 poles	2	552	A-5520TZS	A-5521TZS	A-5522TZS
4 poles	2	553	A-5530TZS	A-5531TZS	A-5532TZS

Size D1

Poles	Cells	Scheme	25A	32A	40A
3 poles	2	552		A-5523TZS	A-5524TZS
4 poles	2	553		A-5533TZS	A-5534TZS

Size D2

Poles	Cells	Scheme	63A	100A	125A
3 poles	2	552	A-5526TZS	A-5527TZS	A-5529TZS
4 poles	2	553	A-5536TZS	A-5537TZS	A-5539TZS

Combined signalling ☀️ 🔊**Size D0**

Poles	Cells	Scheme	12A	16A	25A
1 pole	1	550	A-5500TCS	A-5501TCS	A-5502TCS
2 poles	1	551	A-5510TCS	A-5511TCS	A-5512TCS
3 poles	2	552	A-5520TCS	A-5521TCS	A-5522TCS
4 poles	2	553	A-5530TCS	A-5531TCS	A-5532TCS

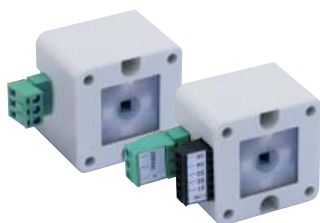
Size D1

Poles	Cells	Scheme	25A	32A	40A
3 poles	2	552		A-5523TCS	A-5524TCS
4 poles	2	553		A-5533TCS	A-5534TCS

Size D2

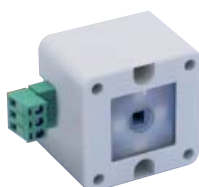
Poles	Cells	Scheme	63A	100A	125A
3 poles	2	552	A-5526TCS	A-5527TCS	A-5529TCS
4 poles	2	553	A-5536TCS	A-5537TCS	A-5539TCS

Replacement light modules



The range of AK24xxxxxB and AK25xxxxxB references are replacement light modules that are based mounted on top of the switch breaking mechanism. After unplugging supply connector module, replacement operation can be done by detaching two fixing screws, removing existing module and fixing again the two screws to the new module.

Position controlled for base mounting



Switches 240Vac

Size D0	Size D1	Size D2	Colour	
AK2400100B	AK2400101B	AK2400106B		Red/white
AK2400120B	AK2400121B	AK2400126B		Red/green
AK2400320B	AK2400321B	AK2400326B		Blue/green
AK2400420B	AK2400421B	AK2400426B		Yellow/green

24Vdc

Size D0	Size D1	Size D2	Colour	
AK2420100B	AK2420101B	AK2420106B		Red/white
AK2420120B	AK2420121B	AK2420126B		Red/green
AK2420320B	AK2420321B	AK2420326B		Blue/green
AK2420420B	AK2420421B	AK2420426B		Yellow/green

Changeover switches 240Vac

Size D0	Size D1	Size D2	Colour	
AK2402120B	AK2402121B	AK2402126B		Green/red/green
AK2403120B	AK2403121B	AK2403126B		Yellow/red/green

24Vdc

Size D0	Size D1	Size D2	Colour	
AK2422120B	AK2422121B	AK2422126B		Green/red/green
AK2423120B	AK2423121B	AK2423126B		Yellow/red/green

Replacement light modules (continued)

Signal controlled for base mounting



Standard signalling

Size D0	Size D1	Size D2	Colour	
AK250-120B	AK250-121B	AK250-126B		Red/green
AK250-420B	AK250-421B	AK250-426B		Blue/green
AK250-320B	AK250-321B	AK250-326B		Yellow/green
AK2503120B	AK2503121B	AK2503126B		Yellow/red/green

Blinking light signalling

Size D0	Size D1	Size D2	Colour	
AK250-120BI	AK250-121BI	AK250-126BI		Red/green
AK250-420BI	AK250-421BI	AK250-426BI		Blue/green
AK250-320BI	AK250-321BI	AK250-326BI		Yellow/green
AK2503120BI	AK2503121BI	AK2503126BI		Yellow/red/green

Acoustic signalling

Size D0	Size D1	Size D2	Colour	
AK250-120BZ	AK250-121BZ	AK250-126BZ		Red/green
AK250-420BZ	AK250-421BZ	AK250-426BZ		Blue/green
AK250-320BZ	AK250-321BZ	AK250-326BZ		Yellow/green
AK2503120BZ	AK2503121BZ	AK2503126BZ		Yellow/red/green

Combined signalling

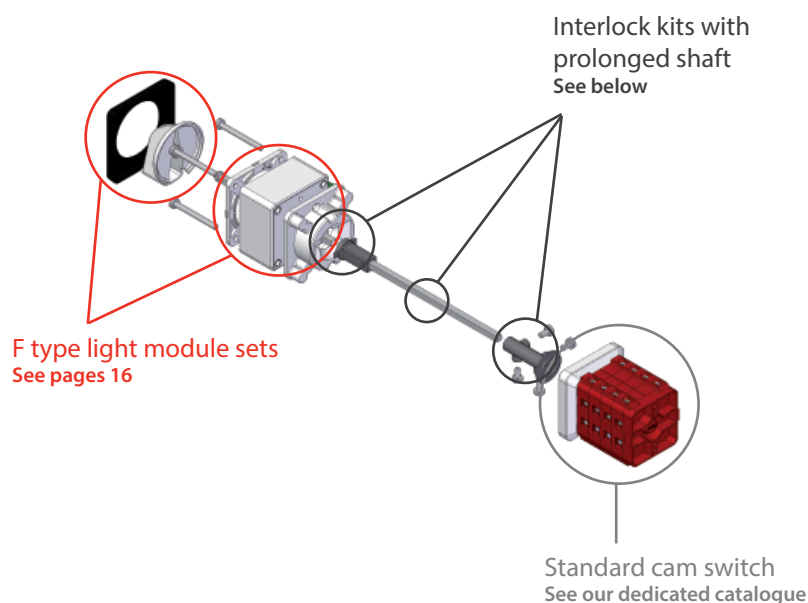
Size D0	Size D1	Size D2	Colour	
AK250-120BC	AK250-121BC	AK250-126BC		Red/green
AK250-420BC	AK250-421BC	AK250-426BC		Blue/green
AK250-320BC	AK250-321BC	AK250-326BC		Yellow/green
AK2503120BC	AK2503121BC	AK2503126BC		Yellow/red/green

Conversion accesories for standard cam switches

Rear mounting and DIN rail mounting switches are compatible with combilight technology.

We can transform a standard switch into a rear/DIN rail mounting combilight switch by

adding F type light module sets plus interlock kits.



Interlock kits with prolonged shaft



Panel safety is guaranteed on rear mounting units by the use of door interlock kits that allow door opening uniquely on 0 disconnect position. The handle and light module unit detaches from the rotary shaft when opening the panel door.

References						
Size D0 and D1	Size D2	Clutch	DIN mount. plate	Base mount. plate	Interlock	Prolonged shaft
AK1730003	AK1730006	●		●	●	●
AK1740003	AK1740006*	●	●		●	●

* Only up to 4 cells 63-125A

Dimensions



F type light module sets



The range of AK24xxxxxF and AK25xxxxxF references known as F type sets are composed by light modules plus actuator and are used to turn standard switches into rear mounted or Din rail mounted combilight switches. The actuator is composed by a transparent handle plus fixing plate with tamper printing indications according to the light module.

We must consider that additionally to the module set a prolonged shaft system is necessary for mechanical connection and transmission between the switch and the actuator.

Position controlled light module sets



Switches 240Vac

Size D0 and D1	Size D2	Colour	
AK2400103F	AK2400106F		Red/white
AK2400123F	AK2400126F		Red/green
AK2400323F	AK2400326F		Blue/green
AK2400423F	AK2400426F		Yellow/green

24Vdc

Size D0 and D1	Size D2	Colour	
AK2420103F	AK2420106F		Red/white
AK2420123F	AK2420126F		Red/green
AK2420323F	AK2420326F		Blue/green
AK2420423F	AK2420426F		Yellow/green

Changeover switches 240Vac

Size D0 and D1	Size D2	Colour	
AK2402123F	AK2402126F		Green/red/green
AK2403123F	AK2403126F		Yellow/red/green

24Vdc

Size D0 and D1	Size D2	Colour	
AK2422123F	AK2422126F		Green/red/green
AK2423123F	AK2423126F		Yellow/red/green

Signal controlled light module sets



Standard signalling 240Vac

Size D0 and D1	Size D2	Colour	
AK250-123F	AK250-126F		Red/green
AK250-423F	AK250-426F		Blue/green
AK250-323F	AK250-326F		Yellow/green
AK2503123F	AK2503126F		Yellow/red/green

Blinking light signalling 240Vac

Size D0 and D1	Size D2	Colour	
AK250-123FI	AK250-126FI		Red/green
AK250-423FI	AK250-426FI		Blue/green
AK250-323FI	AK250-326FI		Yellow/green
AK2503123FI	AK2503126FI		Yellow/red/green

Acoustic signalling 240Vac

Size D0 and D1	Size D2	Colour	
AK250-123FZ	AK250-126FZ		Red/green
AK250-423FZ	AK250-426FZ		Blue/green
AK250-323FZ	AK250-326FZ		Yellow/green
AK2503123FZ	AK2503126FZ		Yellow/red/green

Combined signalling 240Vac

Size D0 and D1	Size D2	Colour	
AK250-123FC	AK250-126FC		Red/green
AK250-423FC	AK250-426FC		Blue/green
AK250-323FC	AK250-326FC		Yellow/green
AK2503123FC	AK2503126FC		Yellow/red/green

Accessories



Lockout transparent handle set

We can add safety features to combilight switches by using lockout handles manufactured with transparent plastic that maintain led light indications. Pushing the projecting piece of the knob we can insert up to 3 padlocks of max. 4mm diameter to lock the knob on 0 position during maintenance operations.

References	Type	Availability		
		Size D0	Size D1	Size D2
AK1330400	Switch 1-0	●		
AK1331400	Changeover switch 1-0-2	●		



Padlockable transparent handle set

We can use padlockable sets with transparent handle that can use up to 4 padlocks of max. 8mm diameter. Locking positions are each 90°. On standard switches the device only locks in the off position which is located at 0°.

References	Type	Availability		
		Size D0	Size D1	Size D2
AK1230503	Switch 1-0	●	●	
AK1230506	Switch 1-0			●



IP65 transparent gasket

Using transparent protection gaskets we can reach a high level of protection without compromising light visibility.

References	Availability		
	Size D0	Size D1	Size D2
AK2260003	●	●	
AK2260006			●

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