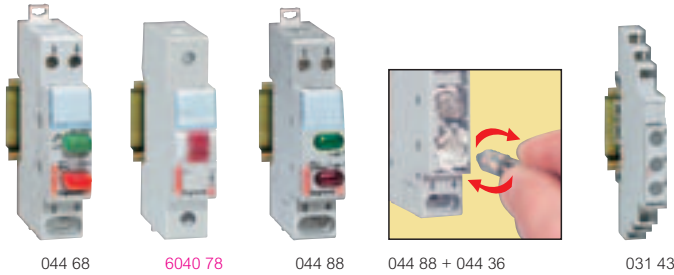


## push-buttons, control switches and indicators



Dimensions (p. 159)

### Pack Cat.Nos Push-buttons and control switches 20 A - 250 V~

Accept insertion of supply busbars  
Conform to IEC 60669-1  
Breaking capacity AC 12 A according to IEC 60947-5-1  
Supplied in push-button position  
Can be converted to control switches

**Single functions**

Pack	Cat.Nos	Function	Diagram	Number of modules
10	044 53	1 N/O		1
10	044 54	1 N/C		1
10	044 55	2 N/O		1
10	044 58	1 N/O + N/C		1

**Dual functions**

Pack	Cat.Nos	Function	Diagram	Number of modules
10	044 63	1 N/O + green indicator <sup>(1)</sup>		1
10	044 64	1 N/C + red indicator <sup>(1)</sup>		1
10	044 68	1 N/O (green) + 1 N/C (red)		1

### Indicators - 250 V~

**One piece indicator - single**  
Supplied with 230 V~ lamps non replaceable

Pack	Cat.Nos	Color	Diagram	Number of modules
12	6040 77	Green		1
12	6040 78	Red		1
12	6040 79	Orange		1

**Double**  
Supplied with diffuser and replaceable lamp E 10 - 230 V~  
Green + red

Pack	Cat.Nos	Diagram	Number of modules
10	044 88		1

**Three-phase voltage indicator**  
Supplied with lamps 230/400 V~ non replaceable  
3 neon lamps colourless

Pack	Cat.Nos	Number of modules
2	031 43	0.5

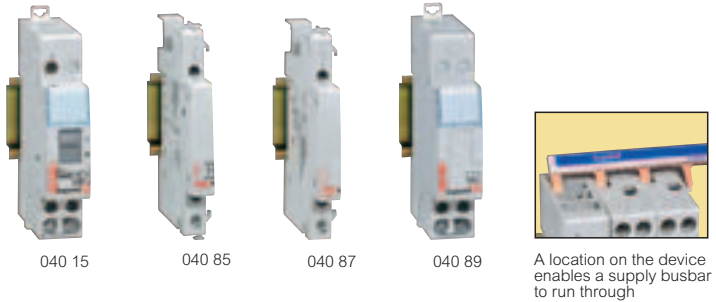
### Accessories

**Replacement lamps E 10 - 1.2 W**

Pack	Cat.Nos	Description
10	044 33	24 V incandescent
10	044 36	230 V neon
10	044 37	230 V fluo for blue and green diffusers

(1) Supplied with E 10 lamps 230 V~

## pulse operated latching relays



Dimensions (p. 159)

### Pack Cat.Nos Pulse operated latching relays

Conform to standard IEC 60669-2-2 via illuminated push-button for control, use compense: Cat.No 040 89

**Single pole - 16 A - 250 V~**

Pack	Cat.Nos	Connection	Number of modules
10	040 15	1 N/O	1

**2-pole - 16 A - 250 V~**

Pack	Cat.Nos	Connection	Number of modules
10	040 16	2 N/O	1

**4-pole - 16 A - 400 V~**  
Can be used for 3-pole assembly

Pack	Cat.Nos	Connection	Number of modules
1	040 19	4 N/O	2

### Auxiliary devices for pulse operated latching relays

Fitted on left-hand side of latching relay  
1 auxiliary per latching relay

#### Auxiliary changeover switch

Used to signal the position status of the contacts on the product with which it is associated

Pack	Cat.Nos	I max.	Voltage	Contact	Number of modules
1	040 85	5 A	250 V~ - 50 Hz	N/C + N/O	0.5

#### Auxiliary device for centralised control<sup>(1)</sup>

Centralized control possible from a specific location (e.g. porter's lodge)

Can be controlled via time switches

One auxiliary per latching relay to control

Pack	Cat.Nos	Description	Number of modules
1	040 86	For latching relays 12 V~ to 48 V~ or latching relays 8 V~ to 24 V~	0.5
1	040 87	For latching relays 230 V~ - 50 Hz	0.5

### Compensator for pulse operated latching relays

Used to control 230 V~ - 50 Hz pulse operated latching relays via illuminated push-buttons without malfunctions

Connects to the terminals of the pulse operated latching relay coil

Connects a compensation modules with 9 to 16 illuminated push-buttons with consumption

of 0.55 mA (or total current consumption of 4.5 mA to 8 mA)

Connects 2 compensation modules with 17 to 24 illuminated push-buttons with consumption

of 0.55 mA (or total current consumption of 8.5 mA to 12 mA)

Pack	Cat.Nos	Description	Number of modules
1	040 89	Impedance compensator for 230 V~ - 50 Hz pulse operated latching relays	1

(1) Possible to control 20 pulse operated latching relays equipped with centralized control

# pulse operated latching relays

## ■ Technical characteristics

Latching relay	Un	Control power		Coil consumption under Un (50/60 Hz)	Connection
		50/60 Hz	DC		
1P	230 V	230 V	110 V	18 VA	4 mm <sup>2</sup> max. flexible or rigid wires
2P	230 V	230 V	110 V	18 VA	
4P	230 V	230 V	110 V	32 VA	

## ■ Lighting

Maximum number of lamps per phase in the circuit: 230 V single phase

### • Incandescent lamps

Tungsten and 230 V halogen filament

Unit power (W)	40	60	75	100	150	200	300	500
Nb of lamps	40	26	21	16	10	8	5	3

Halogen lamps with 12 V ferromagnetic transformer

Unit power (W)	20	35	50	75	100
Nb of lamps	65	45	25	16	12

### • Fluorescent tubes

Single non compensated

Unit power (W)	15	18	20	30	36	40	58	65
Nb of lamps	35	33	32	30	29	26	18	15

Single parallel compensated

Unit power (W)	15	18	20	30	36	40	58	65
Nb of lamps	29	28	27	26	25	23	16	14

Double serial compensated

Unit power (W)	2 x 18	2 x 20	2 x 30	2 x 36	2 x 40	2 x 58	65
Nb of lamps	44	40	27	26	20	14	12

For double parallel compensated divide by 2 these values

4 serial compensated tubes

Unit power (W)	4 x 18
Nb of lamps	22

Compact fluorescent with electronic ballast

Unit power (W)	7	10	18	26
Nb of lamps	45	42	37	23

Compact fluorescent with integrated power supply

Unit power (W)	11	15	20	23
Nb of lamps	75	55	45	35

Single fluorescent with electronic ballast

Unit power (W)	18	36	58
Nb of lamps	28	24	14

Double fluorescent with electronic ballast

Unit power (W)	2 x 18	2 x 36	2 x 58
Nb of lamps	14	12	7

### • Discharge lamps

Low pressure sodium vapour without compensation

Unit power (W)	18	35	55	90	135	150	180	200
Nb of lamps	19	6	5	3	2	2	2	2

Low pressure sodium vapour with compensation

Unit power (W)	18	35	55	90	135	150	180	200
Nb of lamps	15	3	3	2	1	1	1	1

Low pressure sodium vapour or metal iodide without compensation

Unit power (W)	70	150	250	330	400	1000
Nb of lamps	9	5	3	3	2	-

Low pressure sodium vapour or metal iodide with compensation

Unit power (W)	70	150	250	330	400	1000
Nb of lamps	6	6	3	2	2	1

High pressure mercury vapour without compensation

Unit power (W)	50	80	125	250	400
Nb of lamps	11	9	7	3	1

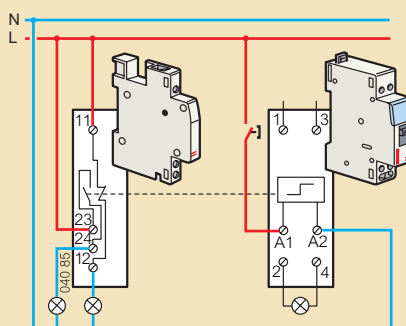
High pressure mercury vapour with compensation

Unit power (W)	50	80	125	250	400
Nb of lamps	9	7	5	3	1

## ■ Schemas

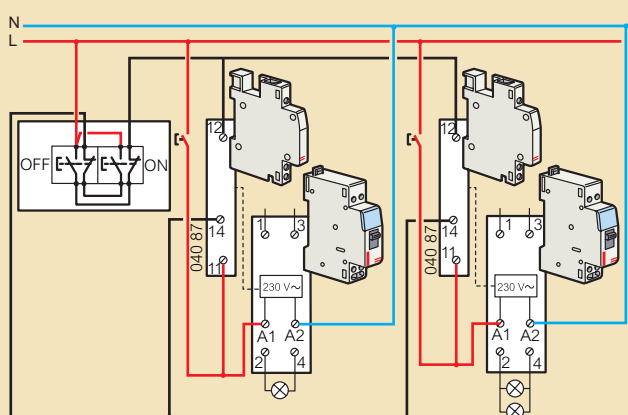
### Signalling

(e.g. with auxiliary Cat.No 040 85)



### Control centralized at one point

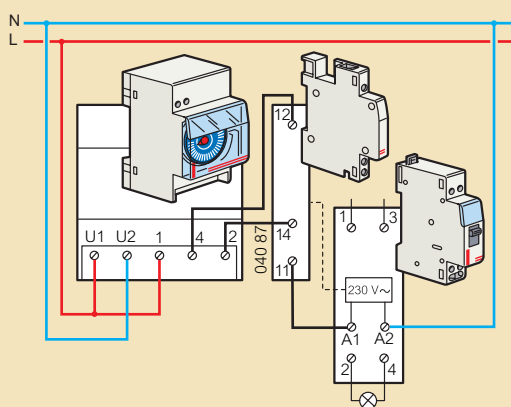
(e.g. using auxiliary device Cat.No 040 87)



Use only non illuminated push-buttons

### Control via maintained contact

(e.g. using auxiliary device Cat.No 040 87 and time switch)

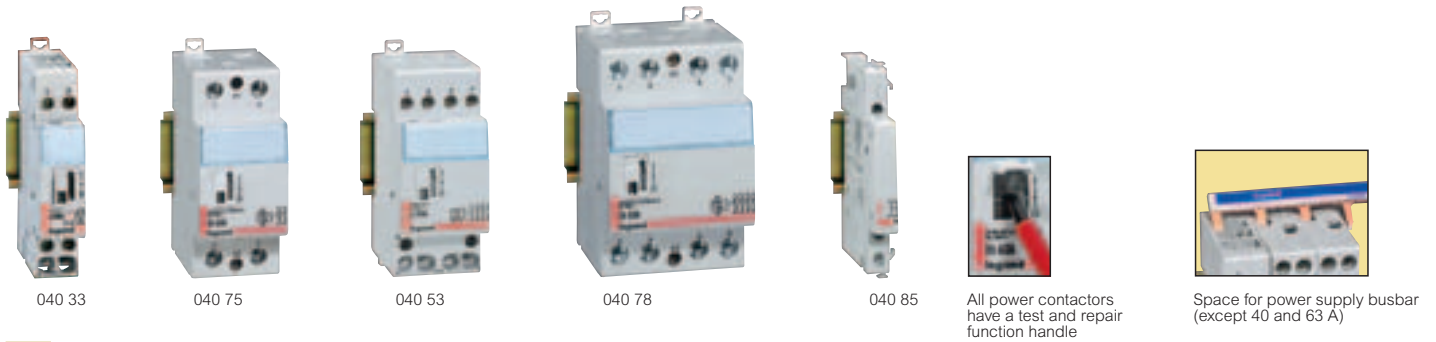


### Control via illuminated push-button

(e.g. compensator Cat.No 040 89)

- Connect a compensation module with 9 to 16 illuminated push-buttons with consumption of 0.55 mA (or total current consumption of 4.5 mA to 8 mA)
- Connect 2 compensation modules with 17 to 24 illuminated push-buttons with consumption of 0.55 mA (or total current consumption of 8.5 mA to 12 mA)

# power contactors



Dimensions (p. 159)

Conform to IEC 61095

Test function: the test and repair function is carried out via the handle (which can be accessed once the blanking plate has been removed)  
A tool forces the device "ON" or "OFF" without the contactor closing automatically  
Space for power supply busbar on top (up to 20 A)

Pack	Cat.Nos	Power contactors with 24 V~ coil			
1	040 33	<b>2-pole - 250 V~</b>			
		I max		Type of contact	
1	040 41	16 A		N/C + N/O	1
1	040 73	20 A		2 N/O	1
1	040 75	63 A		2 N/O	2
1	040 74	<b>4-pole - 400 V~</b>			
		I max		Type of contact	Number of modules
1	040 74	63 A		4 N/O	3

Pack	Noiseless	Standard	Cat.Nos	Power contactors with 230 V~ coil			
1			040 38	<b>2-pole - 250 V~</b>			
				I max		Type of contact	Number of modules
1			040 52	16 A		N/O + N/C	1
1			040 49	20 A		2 N/O	1
1			040 50	20 A		2 N/C	1
1			040 68	40 A		2 N/O	2
1			040 75	63 A		2 N/O	2
1			040 76	<b>2-pole - 400 V~</b>			
				I max		Type of contact	Number of modules
1			040 69	63 A		2 N/C	2
1			040 77	<b>3-pole - 400 V~</b>			
				I max		Type of contact	Number of modules
1			040 69	40 A		3 N/O	3
1			040 77	63 A		3 N/O	3

Pack	Cat.Nos	Power contactors with 230 V~ coil			
1	040 53	<b>4-pole - 400 V~</b>			
		I max		Type of contact	Number of modules
1	040 54	20 A		4 N/O	2
1	040 54	20 A		4 N/C	2
1	040 55	20 A		2 N/O + 2 N/C	2
1	040 70	40 A		4 N/O	3
1	040 78	63 A		4 N/O	3
1	040 79	63 A		4 N/C	3

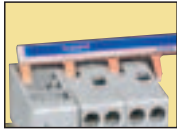
Pack	Cat.Nos	Auxiliary device for contactors			
1	040 85	For contactors up to 63 A Auxiliary changeover switch Fitted on left-hand side of contactor Used to signal the position status of the contacts on the product to which it is connected			
		I max.	Voltage	Changeover switch	Number of modules
1	040 85	5 A	250 V~ - 50 Hz	N/C + N/O	0.5



## electronic time-lag switches



047 02



Space for supply busbar



047 04

Dimensions (p. 159)

Designed for supply busbar compatibility  
Power supply: 230 V~ - 50/60 Hz  
Switches a lighting circuit for a specific time  
Self-protection in the event of blocked pushbutton

Pack	Cat.Nos	Time-lag switch
10	047 02	Resettable 230 V~ - 50/60 Hz Timing adjustable from 0.5 sec to 10 min Manual override contact Output 16 A - 250 V~ - $\mu \cos \varphi = 1$ 2000 W incandescent/halogen 2000 W halogen - 230 V~ 1000 VA fluo - series compensated 120 VA fluo - parallel compensated 14 $\mu$ F 100 VA compact fluorescent 1000 W energy saving lamp automatic 3-wire or 4-wire connection

Numbers of modules  
1

Pack	Cat.Nos	Multi-function time-lag switch
10	047 04	Resettable 230 V~ - 50/60 Hz Timing adjustable from 0.5 sec to 12 min Operation with 3 or 4 wires automatically recognised by the time-lag switch - Inputs for separate control 8-230 V (presence detection, lighting control by door phone etc.) - Switch-off warning function, display of time-lag end - Long duration function (1 hour) and manual switch-off Output 16 A - 250 V~ - $\mu \cos \varphi = 1$ 2000 W incandescent/halogen 1000 VA fluo - parallel compensated $\leq 100 \mu$ F 1000 VA compact fluorescent 500 W halogen lamp + ferromagnetic transformer 2000 W halogen lamp + electronic transformer - Specially suited to energy saving lamps 1000 W energy saving lamp

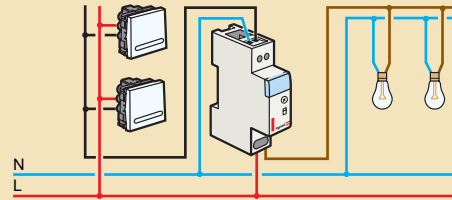
Numbers of modules  
1

## electronic time-lag switches

### Time-lag switch

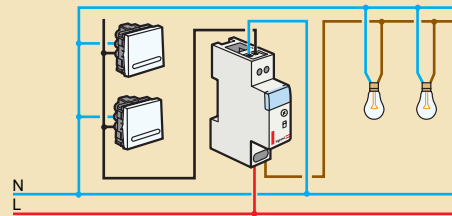
#### 4-wire

Enables any number of non-illuminated pushbuttons or up to 50 illuminated pushbuttons with neon indicator at 1 mA max.  
Constant lighting



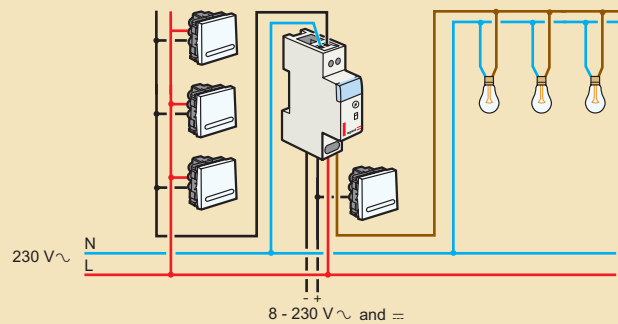
#### 3-wire

Enables any number of non-illuminated pushbuttons or up to 50 illuminated pushbuttons with neon indicator at 1 mA max.  
Constant lighting

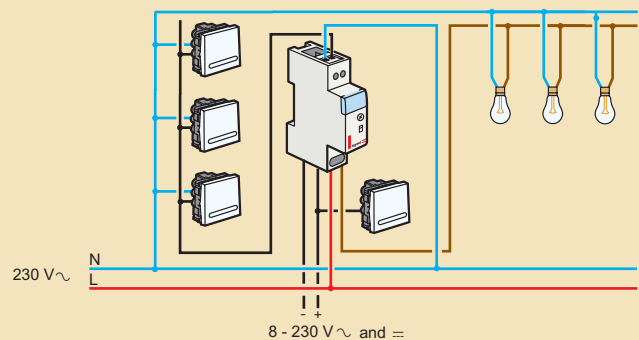


### Multi-function time-lag switch

#### 4-wire



#### 3-wire



Terminal shields

[www.legrandelectric.com](http://www.legrandelectric.com)

see p. 164

# time delay relays



Dimensions (p. 159)

For controlling the switching ON or OFF of a circuit (lighting, ventilation, automation, signalling) in operation for a specific time from 0.1 sec to 100 hrs  
 Supply voltage: 12 to 230 V $\sim$  and  $\equiv$  - 50/60 Hz  
 Output: 8 A - 250 V $\sim$  -  $\mu$  cos  $\varphi$  = 1 per inverter contact

Pack	Cat.Nos	Time delay relays	Number of modules	Pack	Cat.Nos	Time delay relays (continued)	Number of modules
1	047 40	<b>ON delay</b> Delays load switch-on (alarm, lighting, contactor)  The time period starts when the relay is switched ON. At the end of the time period (T), the load is switched ON	1	1	047 43	<b>Timer (pulse)</b> For switching a load ON for a specific time (contactor)  The time period (T) starts with the closing of the non-illuminated switch or pushbutton. At the end of the time period, the load is switched OFF	1
1	047 41	<b>OFF delay</b> Delays load switch-off (ventilation, etc.)  The time period (T) starts with the opening of the non-illuminated switch or pushbutton. At the end of the time period, the load is switched OFF	1	1	047 45	<b>Delay on power-up</b> For switching a load ON for a specific time  The time period (T) starts when the relay is switched ON. At the end of the time period (T), the load is switched OFF	1
1	047 42	<b>Flashing</b> For switching ON and OFF a load (lighting, sounder) for different times and cyclically  For switching ON and OFF a load (lighting, sounder) for different times and cyclically	1	1	047 44	<b>Multifunction</b> <ul style="list-style-type: none"> <li>• ON delay</li> <li>• OFF delay</li> <li>• ON/OFF delay</li> <li>• Timer (pulse)</li> <li>• Timer and passing contact</li> <li>• Delay on power-up</li> <li>• Flashing (open output)</li> <li>• Totalizer on delay</li> <li>• Totalizer delay on power-up</li> </ul>	1
1	047 00	<b>Motor start (star / delta)</b> For starting a load (motor) in 2 steps Double star-delta timing  For starting a load (motor) in 2 steps Double star-delta timing	1				

## programmable time switches with analogue dial



Dimensions (p. 159)

Programmed via captive segment  
1-module device: min. 1 segment  
3-module device: min. 2 segments  
Power supply: 230 V~ - 50/60 Hz  
3-position override switch "ON-AUTO-OFF" on front panel  
Manual changeover to summer/winter time  
1 outlet 16 A - 250 V~ -  $\mu \cos \phi = 1$

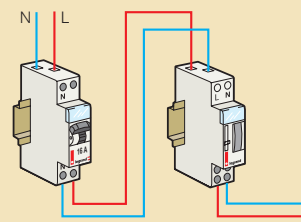
Pack	Cat.Nos	Daily programme	Number of modules
		1 segment = 15 minutes Accuracy: $\pm 5$ minutes	
		<b>Vertical dial</b> Minimum switching time: 15 mn N/O contact	
1	037 30	Without working reserve	1
1	037 40	With 100 h working reserve	1
		<b>Horizontal dial</b> Minimum switching time: 45 minutes Changeover switch	
1	037 52	Without working reserve	3
1	037 53	With 100 h working reserve	3

Pack	Cat.Nos	Weekly programme	Number of modules
		1 segment = 2 hours Accuracy: $\pm 30$ minutes	
		<b>Vertical dial</b> Minimum switching time: 2 h N/O contact	
1	037 44	With 100 h working reserve	1
		<b>Horizontal dial</b> Minimum switching time: 4 h Changeover switch	
1	037 55	With 100 h working reserve	3

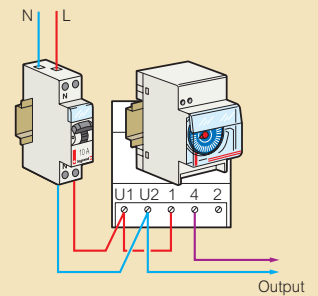
## programmable time switches with analogue and digital dial

### ■ Diagrams

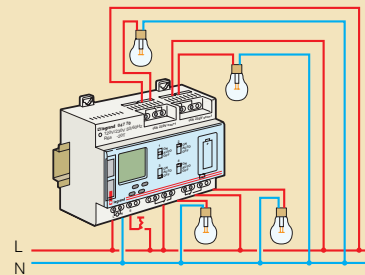
Cat.Nos 037 30/40



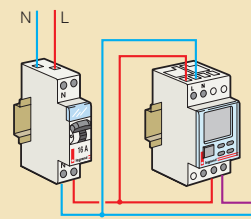
Cat.Nos 037 52/53/55



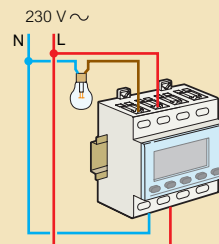
Cat.No 047 70



Cat.Nos 047 61/63, 6047 60



Cat.Nos 037 34/20




Output closing and breaking times are calculated based on the date, the time when the device was switched and on geographical co-ordinates at location

### ■ Technical characteristics

Cat.Nos	Prog. time	Min. programme setting	Working reserve	Summer/winter time	Outputs 16 A	Nb of prog.	Nb of mod.
037 00	7 d	1 mn	100 h	auto	1	8	1
047 61	multi	1 mn	6 years	auto	1	56	2
047 71	multi	1 mn	6 years	auto	2	2 x 28	2
047 63	multi	1 mn	6 years	auto	1	56	2
6047 60	multi	1 mn	6 years	auto	1	56	2

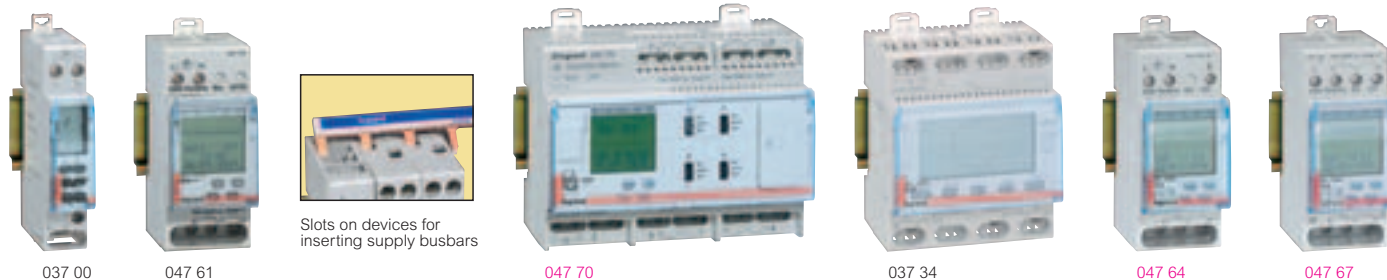
Cat.Nos	Programme	Segment	Min. switching time	Working reserve	16 A output via contact N/O   Chang. S.	Nb of modules
037 30	24 h	15 mn	15 mn	without	1	1
037 40	24 h	15 mn	15 mn	100 h	1	1
037 52	24 h	15 mn	30 mn	without	-	3
037 53	24 h	15 mn	30 mn	100 h	-	3
037 44	7 d	2 h	2 h	100 h	1	1
037 55	7 d	2 h	4 h	100 h	-	3



**Totalising hour counters on door**

see p. 94

# programmable time switches with digital display



Dimensions (p. 159)

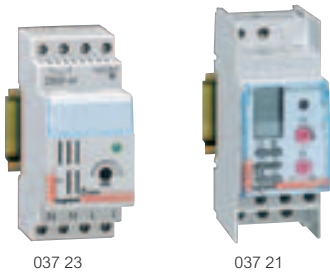
For switching an electric circuit (lighting, heating) ON or OFF at selected times during a pre-programmed time period  
Temporary (automatic return) or permanent (forced switching ON or OFF) override on output

Pack	Cat.Nos	Standard	Number of modules	Pack	Cat.Nos	Multiple functions annual program	Number of modules
1	037 00	<p>Automatic summer/winter changeover and time setting Permanent saving of programmes</p> <p><b>7-day time switch</b> Clock precision: <math>\pm 2.5</math> sec per day Minimum programme setting: 1 min Clock working reserve: 100 hours</p> <p>Power supply 230 V<math>\sim</math> - 50/60 Hz 1 output 16 A - 250 V<math>\sim</math> <math>\mu \cos \phi = 1</math> per 1 inverter contact</p>	1	1	047 70	<p><b>Annual program</b> 4 outputs For programming periods throughout the year Programmed directly on keypad, or using programme transfer key Cat.No 047 81</p> <p><b>Programming transfer key</b> Can be used to store program settings made: • Directly on Cat.No 047 70 (loading on device) • with the programming software installed on a PC running Windows (loading on data loader)</p> <p><b>Battery</b> Working reserve 5 years for Cat.No 047 70</p>	6
1	047 61	<p><b>Multiple functions</b> Programme settings can be made on a daily or weekly basis in 6 languages (GB, F, E, I, D, NL) A programme consists of a on and off time and their assignment to certain days Option to suspend the programme for a specific period to set-up with start and date Supplied with instructions-holder case (1 module) Minimum programme setting: 1 min High precision clock: <math>\pm 0.2</math> sec per day Adjustable impulse duration from 1 sec to 59 min<sup>(1)</sup> Particularly suited to irregular cycles: - security installations (access point, alarms, etc.), - industrial installations (pump stations, etc.) Clock working reserve: 6 years Programmed directly on keypad, or using program transfer key Cat.No 047 72 Additional functions including impulse, random (irregular cycles), holidays, hour counters</p> <p><b>Power supply 230 V<math>\sim</math> - 50/60 Hz</b> 1 output 16 A - 250 V<math>\sim</math> <math>\mu \cos \phi = 1</math> per 1 inverter contact 84 impulses max.</p>	2	1	047 73	<p><b>Programming software</b> Can be used to create, save and transfer program settings for multifunction and multi-program time switches, Cat.Nos 047 61/71/63/70 Data is transferred to the program transfer key Cat.No 047 72, using the data loader connected to the USB port of the PC Kit comprising software on CD-ROM, data loader and transfer key</p>	
1	047 71	<p><b>Power supply 230 V<math>\sim</math> - 50/60 Hz</b> 2 outputs 16 A - 250 V<math>\sim</math> <math>\mu \cos \phi = 1</math> per 2 inverter contacts</p>	2	1	037 20	<p><b>For outdoor illuminations</b> For controlling outdoor illuminations without external accessory Automatic programming: simply initialise the products for the location Power supply 230 V<math>\sim</math> - 50/60 Hz Working reserve 6 years 1 output 16 A - 250 V<math>\sim</math></p>	4
1	6047 60	<p><b>Power supply 120 V<math>\sim</math> - 50/60 Hz</b> 1 output 16 A - 250 V<math>\sim</math> <math>\mu \cos \phi = 1</math> per 1 inverter contact 84 impulses max.</p>	2	1	037 34	<p>2 outputs 16 A - 250 V<math>\sim</math></p>	4
1	047 63	<p><b>Power supply 24 V<math>\sim</math> - 50/60 Hz</b> 1 output 16 A - 24 V<math>\sim</math> <math>\mu \cos \phi = 1</math> per 1 inverter contact 84 impulses max.</p>	2	1	047 64	<p>1 output 16 A - 250 V<math>\sim</math></p>	2
10	047 72	<p><b>Programming transfer key</b> Can be used to store programme settings made: • Directly on a multifunction and multi-programme time switch Cat. No. 047 61/71/63 (loading on device) • with the programming software installed on a PC running Windows (loading on data loader)</p>		1	047 67	<p>2 outputs 16 A - 250 V<math>\sim</math></p>	2

(1) Cat. No. 047 71 does not have this function



## light sensitive switches



037 23

037 21

Dimensions (p. 159)

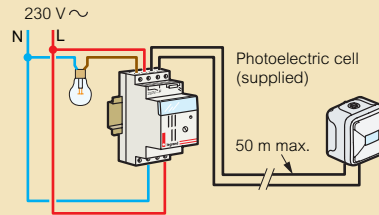
Can be used to switch a lighting circuit "ON" and "OFF" based on light conditions (nightfall, daybreak)  
Supplied with photoelectric cell housed in Plexo weatherproof box  
Power supply: 230 V~ - 50/60 Hz

Pack	Cat.Nos	Standard	Number of modules
1	037 23	Output 5 A - 250 V~ - $\mu \cos \varphi = 1$ 1 200 W incandescent 800 VA fluo serie compensated 300 VA fluo parallel compensated 45 $\mu\text{F}$ Timer response of approx. 45 sec Adjustable from 0.5 to 2 000 lux	2
1	037 25	<b>Preprogrammed</b> 4 possible programmes Output 10 A - 250 V~ - $\mu \cos \varphi = 1$ 2 000 W incandescent 2 000 VA fluo serie compensated 300 VA fluo parallel compensated 45 $\mu\text{F}$ Timer response of approx. 5 sec Adjustable from 0.5 to 2 000 lux	5
1	037 21	<b>Programmable</b> Output 10 A - 250 V~ - $\mu \cos \varphi = 1$ 1 000 W incandescent 2 000 VA fluo serie compensated Timer response: 60 sec Adjustable from 2 to 60 000 lux 8 possible programmes	2
5	695 18	<b>Accessories</b> Photoelectric cell IP55 - IK07 for use with light sensitive switches (Cat.Nos 037 21/23/25)	
10	696 51	1 gang surface mounting box Equipped with removable membrane glands Direct entry of cables (no need to be cut)	

## light sensitive switches

### Standard light sensitive switch (Cat.No 037 23)

Switch "ON" and "OFF" defined by a light level threshold

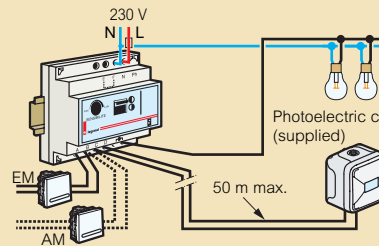


### Preprogrammed light sensitive switch (Cat.No 037 25)

#### 4 possible programmes

- Switches "ON" at sunset and "OFF" at sunrise (e.g. in car parks, green areas, etc.)
- Switches "OFF" when natural light level is low and comes on when natural light level is high (e.g. to imitate daily cycle in battery farming conditions)
- Automatically switches "ON" at sunset following deliberate switching "OFF" by means of a push-button or timer (e.g. shop windows and illuminated signs, etc.)
- Automatically switches "OFF" at dawn following deliberate switching "ON" by means of a push-button or timer at night (e.g. offices, workshops)

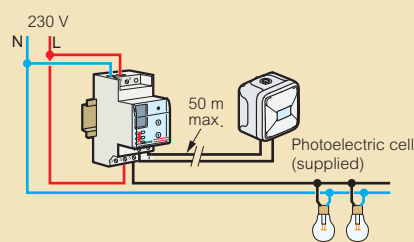
Example of connection of 3<sup>rd</sup> program:



### Programmable light sensitive switch (Cat.No 037 21)

Controls lighting according to the time and light level

- Minimum switching interval: 1 minute
- Working reserve: 100 hrs
- Manual switch: override/programme/stop
- Automatic changeover to summer/winter time
- Temporary override with automatic return to programme



### Example of use



Manual switch "ON"

Switch "ON" when light level is low

Switch "OFF" when light level is high