

TOWER & SIGNAL LIGHTS CONTROL SWITCHES



PTE Ø56mm *LED Modular Style* Steady & Flashing with Buzzer

TOWER LIGHTS



- LED modular components
- Bright & even light distribution through prism-cut lenses
- Fast & easy assembly with inter-locking construction
- 3 base body options
- Optional 85dB Buzzer (fixed or adjustable volume)
- NEMA 4x / IP65 rated
- RoHS compliant



Order Information

Body Units

Body Type		Voltage	Part Number	
			Steady	Steady & Flashing
Lead Wire Connection	Pole Mounting	AC 90~240V	PTE-A-FF	PTE-AF-FF
		DC/AC 24V	PTE-A-02	PTE-AF-02
	Surface Mounting	AC 90~240V	PTE-S-FF	PTE-SF-FF
		DC/AC 24V	PTE-S-02	PTE-SF-02
Terminal Connection	Pole Mounting	AC 90~240V	PTE-TP-FF	PTE-TPF-FF
		DC/AC 24V	PTE-TP-02	PTE-TPF-02
	Surface Mounting	AC 90~240V	PTE-TC-FF	PTE-TCF-FF
		DC/AC 24V	PTE-TC-02	PTE-TCF-02

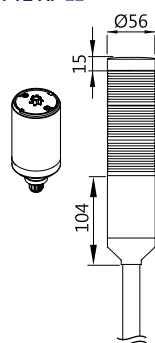
Dimensions

unit: mm

Lead Wire Connection

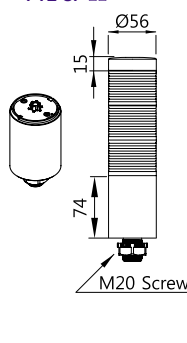
Pole Mounting

PTE-A-□□
PTE-AF-□□



Surface Mounting

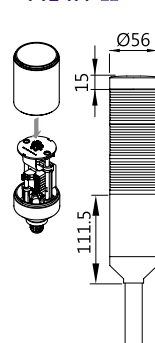
PTE-S-□□
PTE-SF-□□



Terminal Connection

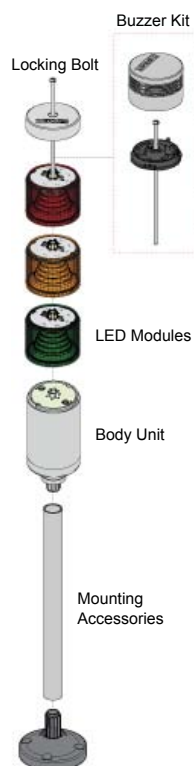
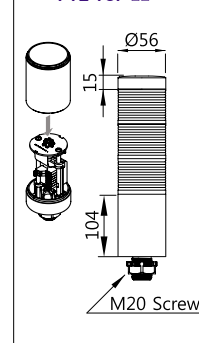
Pole Mounting

PTE-TP-□□
PTE-TPF-□□



Surface Mounting

PTE-TC-□□
PTE-TCF-□□



LED Modules

LED Color	Part Number	
	Standard Module	Dome Head Module
RED	PTE-02R	PTD-02R
Yellow	PTE-02Y	PTD-02Y
Green	PTE-02G	PTD-02G
Blue	PTE-02B	PTD-02B
*Clear	PTE-02C	PTD-02C

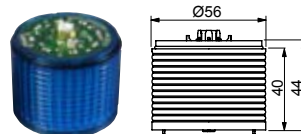
*Clear Module cannot be used with Buzzer.

Locking Bolts

Number of LED Stacks	Part Number	Size
1 Stack	B-PTE-1	M4, 65mm
2 Stacks	B-PTE-2	M4, 105mm
3 Stacks	B-PTE-3	M4, 145mm
4 Stacks	B-PTE-4	M4, 185mm
5 Stacks	B-PTE-5	M4, 225mm

*Note: Do NOT count Buzzer as a stack.

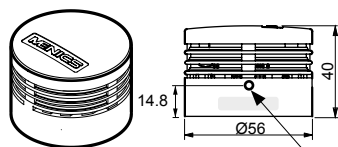
Standard Modules



Dome Head Modules



Buzzer Kits



Sound Level Adjuster

Buzzer Kits (Optional)

Buzzer Style	Part Number
Fixed Sound Level	MPZ-56F
Adjustable Sound Level	MPZ-56G

*Note: Max. number of tier including Buzzer is 5.

See Page 13-14
for Mounting Options and Accessories.

Specifications

Body Units

Operation/Function	Steady/ Flashing	
Power Supply	AC/DC 24V (±10%)	AC 90~240V 50/60 Hz (±10%)
Buzzer Sound Level	Fixed: 85dB Adjustable: 10~85dB	
Lens Color	Red, Yellow, Green, Blue & Clear	
Lens Diameter	56 mm (2.2 inch)	
Maximum Tier	5	
Flash Rate	80 times/ minute	
Vibration	3mm at 10~55Hz	
Ambient Temperature	-15°C~40°C	
Storage Temperature	-40°C ~ 70°C	
Ambient Humidity	45~85% RH	
Degree of Protection	NEMA 4x, IP65 / IP50 (with Buzzer)	
Approvals	CE , UL, RoHS	
Recommended Wire Size	1007 UL / 22 AWG	

LED Modules

		Red	Yellow	Green	Blue	Clear
Current / Power	Standard Module	27mA / 0.65W		35mA / 0.84W		
	Dome Head Module	58mA / 2.64W		52mA / 1.25W		53mA / 1.27W
Weight		Standard Module: 42.8g Dome Head Module: 53g				

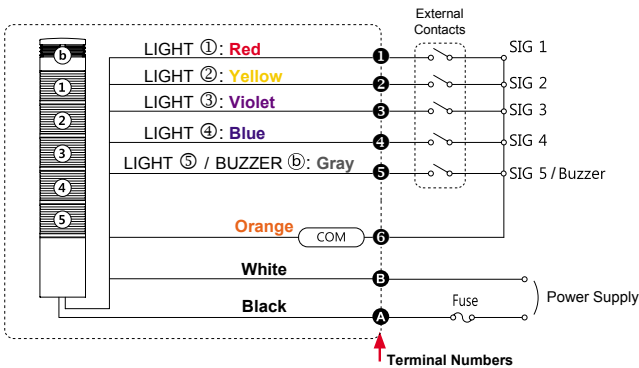
Buzzer Kits

Model	MPZ-56F	MPG-56G
Style	Fixed Sound Level	Adjustable Sound Level
Sound Level	85 dB	10~85 dB
Current Consumption / Power	30mA / 0.72W	30mA / 0.72W
Weight	32.2g	33g

Wiring Diagram

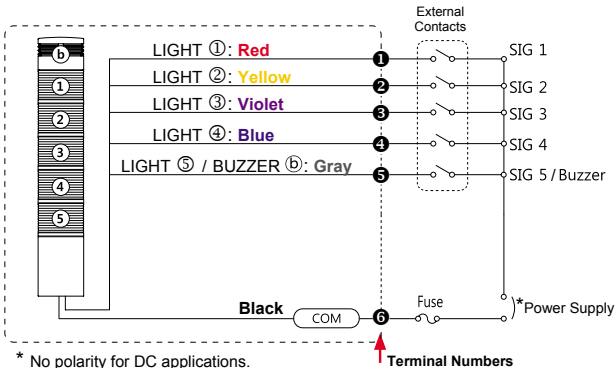
AC 90~240V
Steady Lights

PTE-A-FF PTE-S-FF PTE-T□-FF



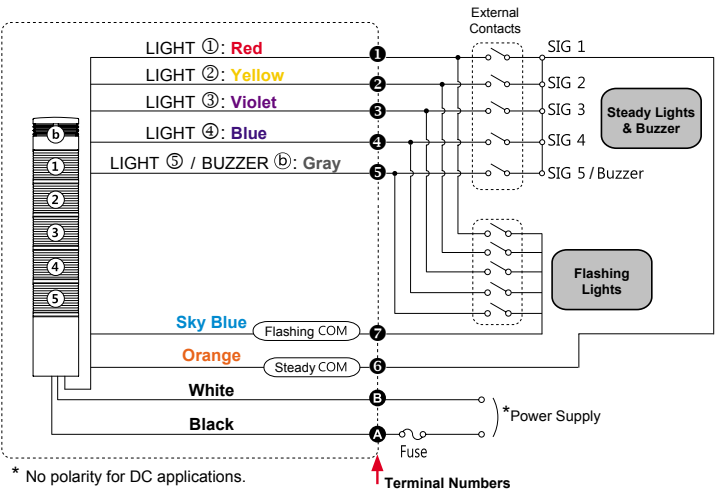
DC/AC 24V
Steady Lights

PTE-A-02 PTE-S-02 PTE-T□-02

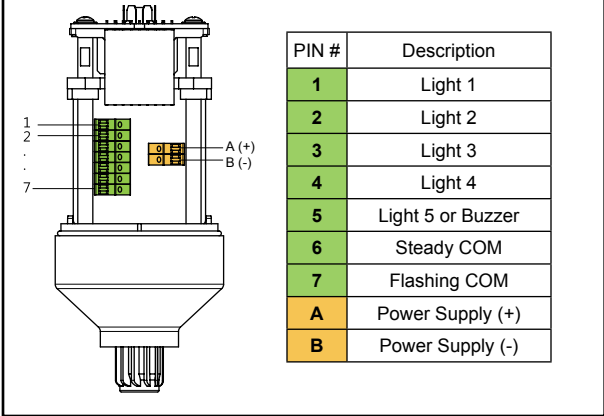


AC 90~240V
DC/AC 24V
Steady & Flashing Lights

PTE-AF-02 PTE-AF-FF
PTE-SF-02 PTE-SF-FF
PTE-T□F-02 PTE-T□F-FF



Terminal Connections



PIN #	Description
1	Light 1
2	Light 2
3	Light 3
4	Light 4
5	Light 5 or Buzzer
6	Steady COM
7	Flashing COM
A	Power Supply (+)
B	Power Supply (-)

PTM Ø56mm *LED 3 colors in 1* Steady & Flashing with Buzzer

TOWER LIGHTS



- 3 colors in 1 LED modular components
- Bright & even light distribution through prism-cut lenses
- Fast & easy assembly with inter-locking construction
- 3 base body options
- Optional 85dB Buzzer (fixed or adjustable volume)
- NEMA 4x / IP65 rated
- RoHS compliant



Order Information

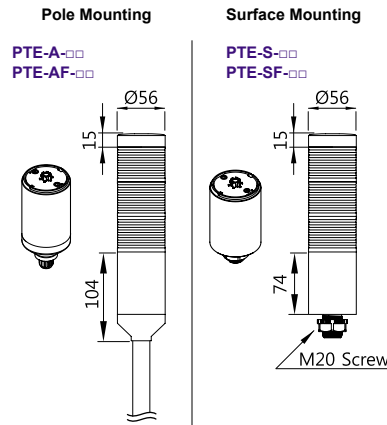
Body Units

Body Type		Voltage	Part Number	
			Steady	Steady & Flashing
Lead Wire Connection	Pole Mounting	AC 90~240V	PTE-A-FF	PTE-AF-FF
		DC/AC 24V	PTE-A-02	PTE-AF-02
	Surface Mounting	AC 90~240V	PTE-S-FF	PTE-SF-FF
		DC/AC 24V	PTE-S-02	PTE-SF-02
Terminal Connection	Pole Mounting	AC 90~240V	PTE-TP-FF	PTE-TPF-FF
		DC/AC 24V	PTE-TP-02	PTE-TPF-02
	Surface Mounting	AC 90~240V	PTE-TC-FF	PTE-TCF-FF
		DC/AC 24V	PTE-TC-02	PTE-TCF-02

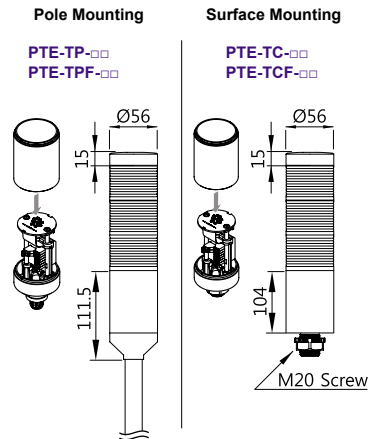
Dimensions

unit: mm

Lead Wire Connection



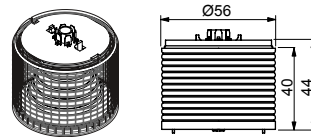
Terminal Connection



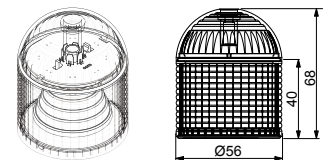
LED Modules

LED Color		Part Number	
		Standard Module	Dome Head Module
3 colors in 1	R/Y/G	PTM-02RYG	PTMD-02RYG
	R/B/G	PTM-02RBG	PTMD-02RBG

Standard Modules



Dome Head Modules



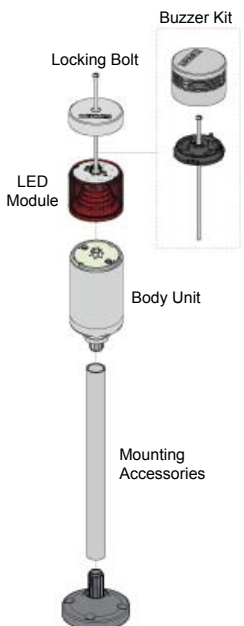
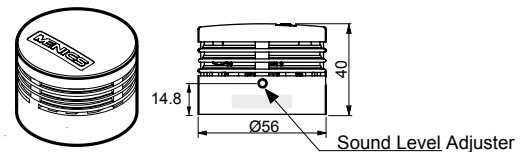
Locking Bolts

Part Number	Size
B-PTE-1	M4, 65mm

Buzzer Kits (Optional)

Buzzer Style	Part Number
Fixed Sound Level	MPZ-56F
Adjustable Sound Level	MPZ-56G

Buzzer Kits



See **Page 13-14**
for Mounting Options and Accessories.

Specifications

Body Units

Operation/Function	Steady/ Flashing	
Power Supply	AC/DC 24V (±10%)	AC 90~240V 50/60 Hz (±10%)
Buzzer Sound Level	Fixed: 85dB Adjustable: 10~85dB	
Lens Color	3 colors in 1 module: Red/Yellow/Green, Red/Blue/Green	
Lens Diameter	56 mm (2.2 inch)	
Maximum Tier	2	
Flash Rate	80 times/ minute	
Vibration	3mm at 10~55Hz	
Ambient Temperature	-15°C~40°C	
Storage Temperature	-40°C ~ 70°C	
Ambient Humidity	45~85% RH	
Degree of Protection	NEMA 4x, IP65 / IP50 (with Buzzer)	
Approvals	CE , UL, RoHS	
Recommended Wire Size	1007 UL / 22 AWG	

LED Modules

Color		3 colors in 1			
		R/Y/G		R/B/G	
Current / Power	Standard Module	R	30mA / 0.72W	R	30mA / 0.72W
		Y		G	
		G	25mA / 0.6W	B	25mA / 0.6W
	Dome Head Module	R	58mA / 2.64 W	R	58mA / 2.64 W
		Y		G	
		G	52mA / 1.25W	B	52mA / 1.25W
Weight		Standard Module: 42.8g		Dome Head Module: 53g	

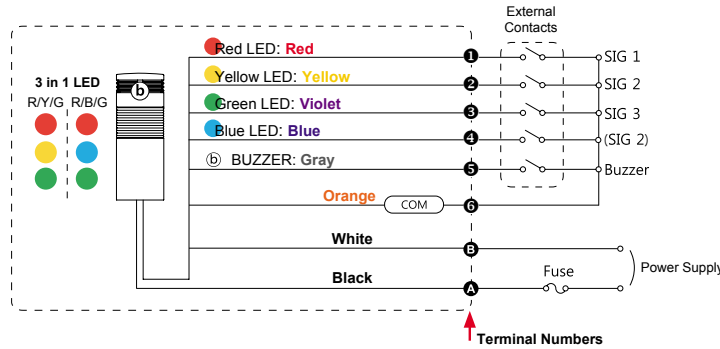
Buzzer Kits

Model	MPZ-56F	MPG-56G
Style	Fixed Sound Level	Adjustable Sound Level
Sound Level	85 dB	10~85 dB
Current Consumption / Power	30mA / 0.72W	30mA / 0.72W
Weight	32.2g	33g

Wiring Diagram

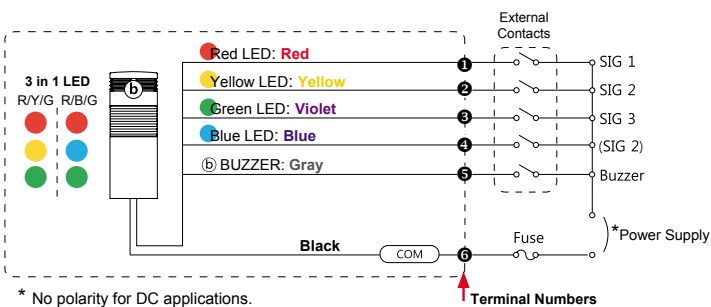
AC 90~240V
Steady Lights

PTE-A-FF PTE-S-FF PTE-T□-FF



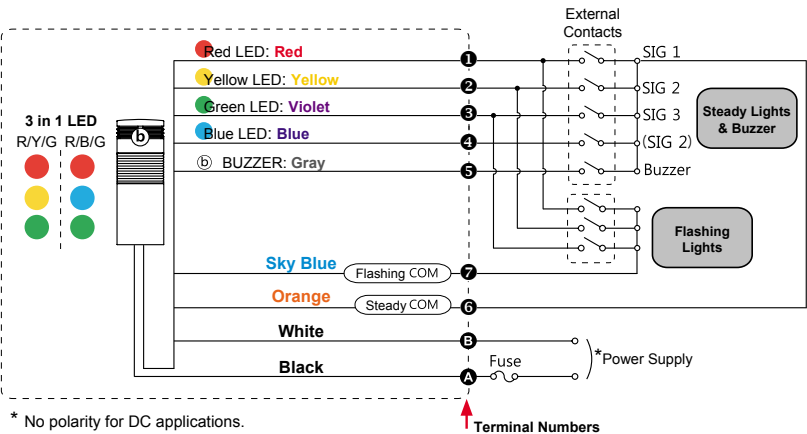
DC/AC 24V
Steady Lights

PTE-A-02 PTE-S-02 PTE-T□-02

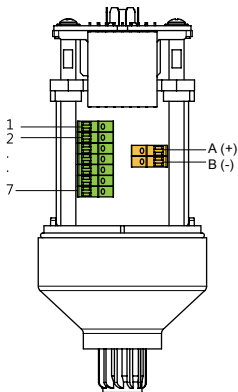


AC 90~240V
DC/AC 24V
Steady & Flashing Lights

PTE-AF-02 PTE-AF-FF
PTE-SF-02 PTE-SF-FF
PTE-T□F-02 PTE-T□F-FF



Terminal Connections



PIN #	Description
1	Red LED
2	Yellow LED
3	Green LED
4	Blue LED
5	Buzzer
6	Steady COM
7	Flashing COM
A	Power Supply (+)
B	Power Supply (-)

PRE Ø56mm LED Steady & Flashing with Buzzer

TOWER LIGHTS



- Long life and reliability
- Prism-cut lenses for even light distribution
- Surface, Pole or Wall Mounted (Order poles & bases separately)
- Wire leads
- Add-on Buzzer (80 dB) kit available



Order Information

PRE	F	5	01	RYGBC
①	②	③	④	
① Light Style			Steady	
	F		Steady & Flashing	
② Number of Stacks	1		1 Light	
	2		2 Lights	
	3		3 Lights	
	4		4 Lights	
	5		5 Lights	
③ Power Supply	01		DC/AC 12V	
	02		DC/AC 24V	
	10		AC 110V	
	20		AC 220V	
④ Lens Colors (top to bottom)	R		Red	
	Y		Yellow	
	G		Green	
	B		Blue	
	C		Clear	

Optional Orders

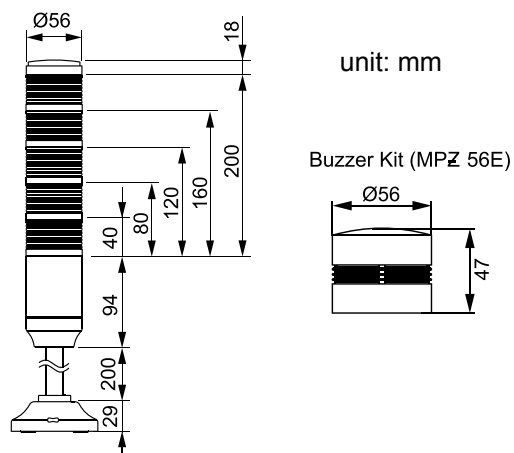
PART	PART NUMBER	DESCRIPTION
Buzzer	MPZ-56E	Ø56mm, 80dB (30mA), 24~240V DC/AC *Buzzer is not available for 12V DC/AC.

Replacement Parts

LED	PRELED-5(□)	24~240V AC/DC
	PRELED-5(□)-12	12V AC/DC
Lens	PEL-5(□)	—

(□): indicates color of LED or Lens; R, Y, G, B or C

Dimensions



Specifications

Power Supply		12V AC/DC	24V AC/DC	120/240V AC
Current Draw	1 Stack	54 mA	28 mA	25 mA
	2 Stack	109 mA	62 mA	57 mA
	3 Stack	169 mA	102 mA	91 mA
	4 Stack	223 mA	136 mA	124 mA
	5 Stack	275 mA	169 mA	155 mA
	Buzzer	—	30 mA	—
Sound Level		—	80 dB	—
Flashing rate		80 times/minute		
Rating		IP 56		

See Page 13-14
for Mounting Options and Accessories.

PME Ø45mm LED Steady & Flashing

TOWER LIGHTS

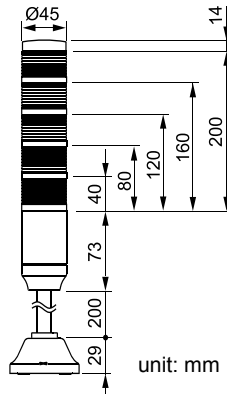


- Long life and reliability
- Prism-cut lenses for even light distribution
- Surface, Pole or Wall Mounted (Order poles & bases separately)
- Wire leads



Specifications

Power Supply		12V AC/DC	24V AC/DC	100-220V AC
Current Draw	1 Stack	41 mA	27 mA	28 mA
	2 Stack	89 mA	57 mA	60 mA
	3 Stack	149 mA	95 mA	99 mA
	4 Stack	204 mA	125 mA	131 mA
	5 Stack	240 mA	155 mA	163 mA
Flashing rate		80 times/minute		
Rating		IP 56		



Order Information

PME	F	5	01	RYGBC
①	②	③	④	
① Light Style			Steady	
	F		Steady & Flashing	
② Number of Stacks	1		1 Light	
	2		2 Lights	
	3		3 Lights	
	4		4 Lights	
	5		5 Lights	
③ Power Supply	01		DC/AC 12V	
	02		DC/AC 24V	
	FF		AC 90~240V	
④ Lens Colors (top to bottom)	R		Red	
	Y		Yellow	
	G		Green	
	B		Blue	
	C		Clear	

Replacement Parts

LED	PMELED-4(□)	24~240V AC/DC
	PMELED-4(□)-12	12V AC/DC
Lens	PML-4(□)	—

(□): indicates color of LED or Lens; R, Y, G, B or C

See Page 13-14
for Mounting Options and Accessories.

PAE Ø25mm LED Steady & Flashing

TOWER LIGHTS

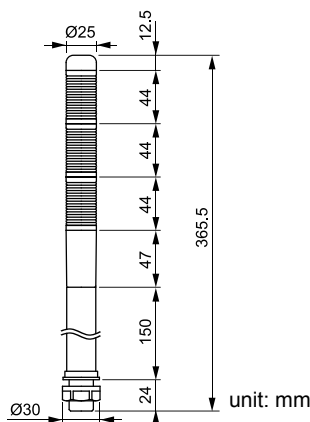


- Long life and reliability
- Prism-cut lenses for even light distribution
- Surface, Pole or Wall Mounted (Order poles & bases separately)
- Wire leads



Specifications

Power Supply		12V AC/DC	24V AC/DC
Current Draw	1 Stack	30 mA	25 mA
	2 Stack	65 mA	60 mA
	3 Stack	100 mA	90 mA
	4 Stack	135 mA	120 mA
	5 Stack	170 mA	150 mA
Flashing rate		80 times/minute	
Rating		IP 56	



Order Information

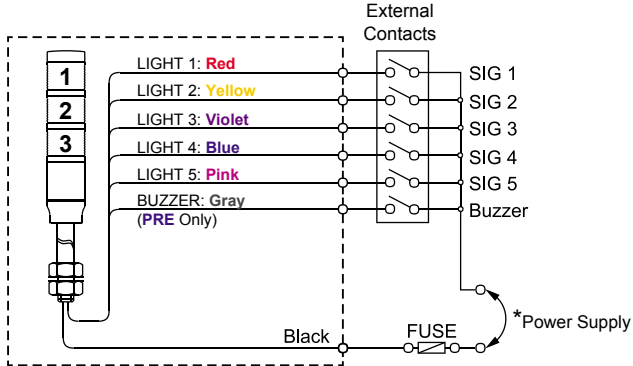
PAE	F	M	G	5	01	RYGBC
①	②	③	④	⑤	⑥	
① Light Style					Steady	
	F				Steady & Flashing	
② Mounting					Standard	
	M				Pole Mount	
	R				90° Bracket	
③ Pole Length					No Pole	
	G				51mm pole	
	P				150mm pole	
④ Number of Stacks	1				1 Light	
	2				2 Lights	
	3				3 Lights	
	4				4 Lights	
	5				5 Lights	
⑤ Power Supply	01				DC/AC 12V	
	02				DC/AC 24V	
⑥ Lens Colors (top to bottom)	R				Red	
	Y				Yellow	
	G				Green	
	B				Blue	
	C				Clear	

PRE / PME / PAE Wiring Diagram

Steady Lights

DC/AC 12V

PRE-01-00000
PME-01-00000
PAE-01-00000

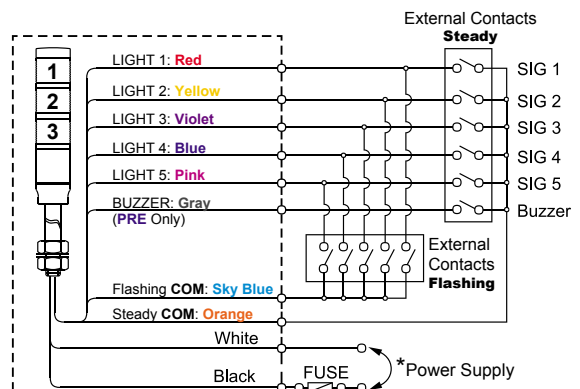


* No polarity for DC applications.

Steady & Flashing Lights

DC/AC 12V

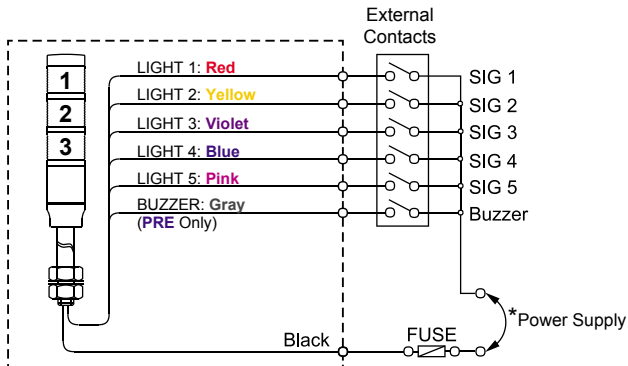
PREF-01-00000
PMEF-01-00000
PAEF-01-00000



* No polarity for DC applications.

DC/AC 24V

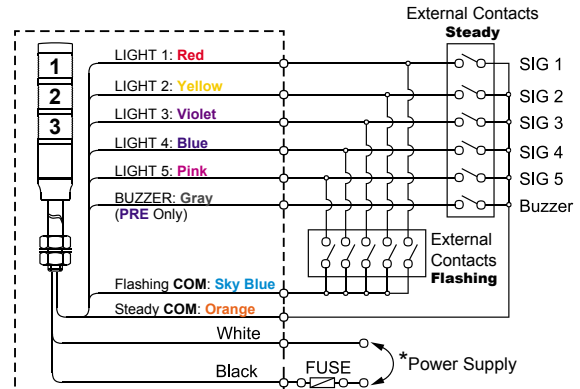
PRE-02-00000
PME-02-00000
PAE-02-00000



* No polarity for DC applications.

DC/AC 24V

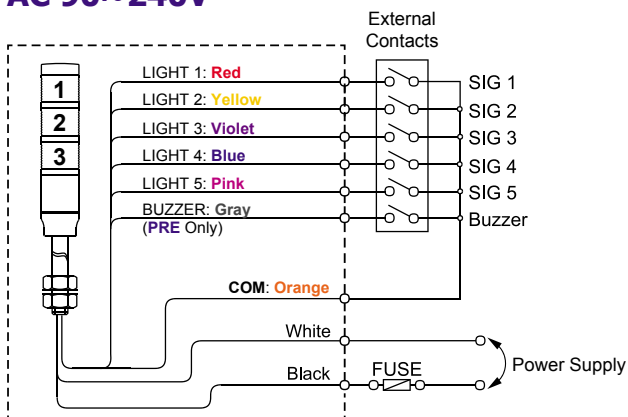
PREF-02-00000
PMEF-02-00000
PAEF-02-00000



* No polarity for DC applications.

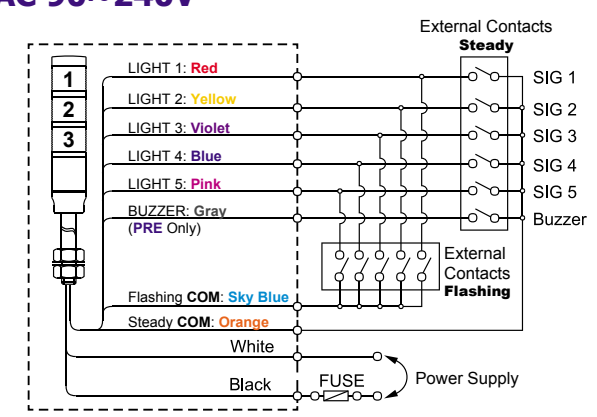
AC 110V
AC 220V
AC 90~240V

PRE-10-00000
PRE-20-00000
PME-FF-00000



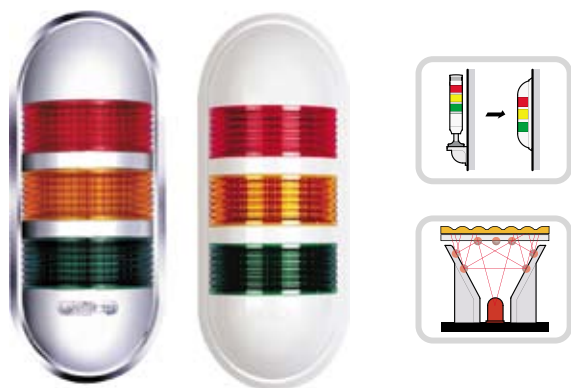
AC 110V
AC 220V
AC 90~240V

PREF-10-00000
PREF-20-00000
PMEF-FF-00000



PWE Wall Mounted **LED** Tower Lights with Buzzer

TOWER LIGHTS



- Slim Profile Wall Mount
- Easy Mounted vertically and horizontally
- Equivalent brightness in every angle
- Steady and flashing lights
- Vibration and moisture resistant
- Chrome or tan colored body

Order Information

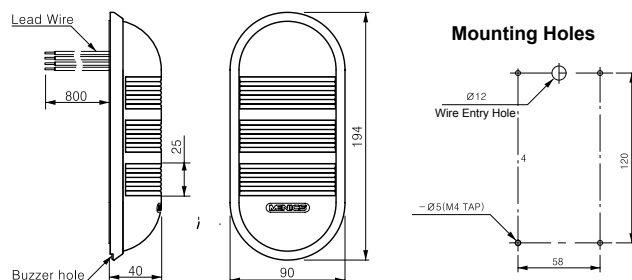
PWE **C** **F** - **3** **02** - **RYG**
 ① ② ③ ④ ⑤

① Housing Color		Cream
	C	Chrome
② Light Style		Steady
	F	Steady & Flashing
	B	Steady with Buzzer
	Z	Steady & Flashing with Buzzer
③ Number of Stacks	1	1 Light
	2	2 Lights
	3	3 Lights
④ Power Supply	02	DC/AC 24V
	FF	AC 90~240V
⑤ Lens Colors (top to bottom)	R	Red
	Y	Yellow
	G	Green

Specifications

Power Supply		24V AC/DC	90~240V AC
Current Draw	1 Stack	28 mA	30 mA
	2 Stack	63 mA	65 mA
	3 Stack	103 mA	100 mA
Sound Level		85 dB	
Flashing rate		80 times/minute	
Rating		IP 65/ IP 56 with Buzzer	

Dimensions

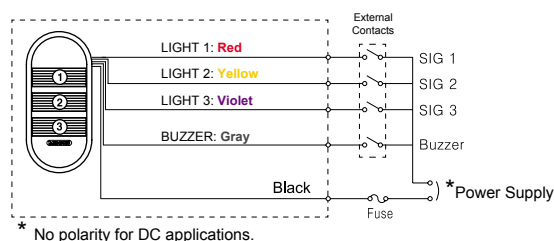


Wiring Diagram

DC/AC 24V

Steady Lights (with Buzzer)

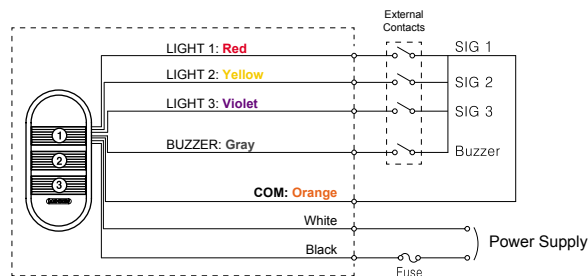
PWE-002-000 PWEB-002-000



AC 90~240V

Steady Lights (with Buzzer)

PWE-0FF-000 PWEB-0FF-000



AC 90~240V

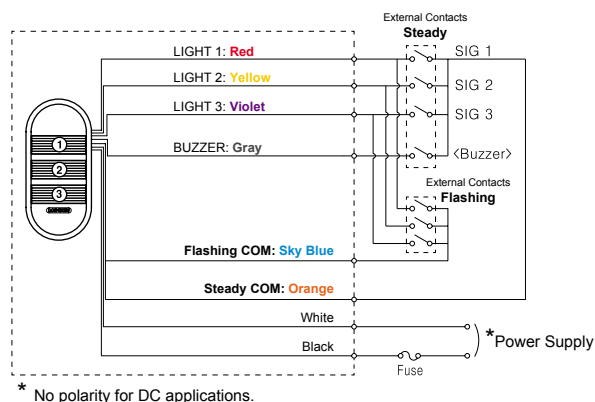
DC/AC 24V

Steady & Flashing Lights (with Buzzer)

PWEF-002-000

PWEZ-002-000

PWEF-0FF-000



MT5C/8C Ø56mm / Ø85mm Steady & Flashing with Buzzer

TOWER LIGHTS



Incandescent or **LED**

- Optional LED bulbs available
- Selectable Steady or Flashing Modes
- Prism-cut lenses for even light distribution
- Surface, Pole or Wall Mounted (Order poles & bases separately)
- Wire leads or Terminal connection
- Add-on Buzzer (80 dB) kit available
- NEMA 12, 3R / IP56 rated



Order Information

MT	5	C	5	A	L	-	RYGBC
	①	②	③	④	⑤		⑥

① Lens Diameter	5	Ø56mm
	8	Ø85mm
② Light Style	C	Steady & Flashing
③ Number of Stacks	1	1 Light
	2	2 Lights
	3	3 Lights
	4	4 Lights
	5	5 Lights
④ Power Supply	A	DC/AC 24V
	B	AC 110~120V
	C	AC 220~240V
⑤ Connection	L	Lead Wires
	T	Screw Terminals
⑥ Lens Colors (top to bottom)	R	Red
	Y	Yellow
	G	Green
	B	Blue
	C	Clear

Optional Orders

Buzzer Kits

MPZ - 56 A

Power Supply	
A	DC/AC 24V, 80dB (30mA)
B	AC 110~120V, 80dB (30mA)
C	AC 220~240V, 80dB (30mA)
Buzzer Size (Diameter)	
56	Ø56mm (for MT5C Series)
85	Ø85mm (for MT8C Series)

Replacement Parts

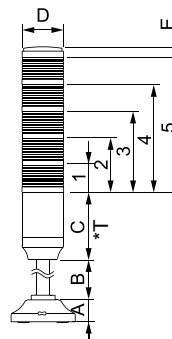
LED		LED-T15-D-24-(□)	DC 24V
		LED-T15-D-110-(□)	AC 110~120V
		LED-T15-D-220-(□)	AC 220~240V
BULB		MAB-T15-D-024-10	DC/AC 24V, 10W
		MAB-T15-D-120-10	AC 110~120V, 10W
		MAB-T15-D-240-10	AC 220~240V, 10W
Lens	—	MAL-5(□)	Ø56mm
		MAL-8(□)	Ø85mm

(□): indicates color of LED or Lens; R, Y, G, B or C

Specifications

Power Supply		24V AC/DC	110~120V AC	220~240V AC
Current Draw	Bulb	1 Stack	54 mA	28 mA
		2 Stack	109 mA	57 mA
		3 Stack	169 mA	91 mA
		4 Stack	223 mA	124 mA
		5 Stack	275 mA	155 mA
	LED	Per Stack	180 mA	35 mA
Buzzer		28 mA		
LED Life-Span		10,000 hours (minimum)		
Sound Level		80 dB		
Flashing rate		80 times/minute		
Rating		NEMA 12, 3R / IP 56		
Approvals		UL, cUL, CE		

Dimensions



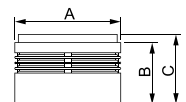
Symbol	Model	
	MT5C	MT8C
A	29	29
B	185	185
C	95	108
*T	173	188
D	56	85
E	15	15
1	68	68
2	136	136
3	204	204
4	272	272
5	340	340

*T: Terminal board style

unit: mm

Buzzer Kit

MPZ-56
MPZ-85



Symbol	MPZ-56	MPZ-85
A	56	86
B	48	50
C	54	56

See Page 13-14
for Mounting Options and Accessories

MT4B/5B/8B Ø45mm / Ø56mm / Ø86mm Steady

TOWER LIGHTS



Incandescent or LED

- Optional LED bulbs available (12VDC & 24VDC ONLY)
- Long life and reliability
- Prism-cut lenses for even light distribution
- Surface, Pole or Wall Mounted
(Order poles & bases separately)
- Wire leads or Terminal connection
- NEMA 12, 3R / IP56 rated



Order Information

MT	4	B	5	A	L	-	RYGBC
	①	②	③	④	⑤		⑥
① Lens Diameter		4	Ø45mm				
		5	Ø56mm				
		8	Ø85mm				
② Light Style		B	Steady				
③ Number of Stacks		1	1 Light				
		2	2 Lights				
		3	3 Lights				
		4	4 Lights				
		5	5 Lights				
④ Power Supply		D	DC/AC 12V				
		A	DC/AC 24V				
		B	AC 110~120V				
		C	AC 220~240V				
⑤ Connection		L	Lead Wires				
⑥ Lens Colors (top to bottom)		R	Red				
		Y	Yellow				
		G	Green				
		B	Blue				
		C	Clear				

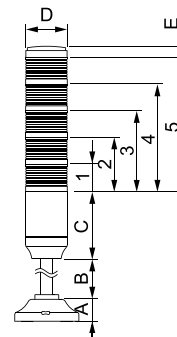
Optional Orders

Replacement Parts

MT4B	LED		LED-T09-S-12-(□)	DC 12V
			LED-T09-S-24-(□)	DC 24V
	BULB		MAB-T09-S-012-05	DC/AC 12V, 5W
			MAB-T09-S-024-05	DC/AC 24V, 5W
			MAB-T09-S-130-05	AC 110~120V, 5W
			MAB-T09-S-240-05	AC 220~240V, 5W
Lens	—	MAL-4(□)	Ø45mm	
MT5B MT8B	LED		LED-T15-D-12-(□)	DC 12V
			LED-T15-D-24-(□)	DC 24V
			LED-T15-D-110-(□)	AC 110~120V
			LED-T15-D-220-(□)	AC 220~240V
	BULB		MAB-T15-D-012-10	DC/AC 12V, 10W
			MAB-T15-D-024-10	DC/AC 24V, 10W
			MAB-T15-D-120-10	AC 110~120V, 10W
			MAB-T15-D-240-10	AC 220~240V, 10W
	Lens	—	MAL-5(□)	Ø56mm
			MAL-8(□)	Ø86mm

(□): indicates color of LED or Lens; R, Y, G, B or C

Dimensions



unit: mm

Symbol	Model		
	MT4B	MT5B	MT8B
A	29	29	29
B	185	185	185
C	72	95	108
D	45	56	86
E	10.5	15	15
1	46	68	68
2	92	136	136
3	138	204	204
4	184	272	272
5	230	340	340

Specifications

Power Supply		12V AC/DC	24V AC/DC	100-220V AC
Current Draw	1 Stack	41 mA	27 mA	28 mA
	2 Stack	89 mA	57 mA	60 mA
	3 Stack	149 mA	95 mA	99 mA
	4 Stack	204 mA	125 mA	131 mA
	5 Stack	240 mA	155 mA	163 mA
Flashing rate		80 times/minute		
Rating		IP 56		

See Page 13-14
for Mounting Options and Accessories

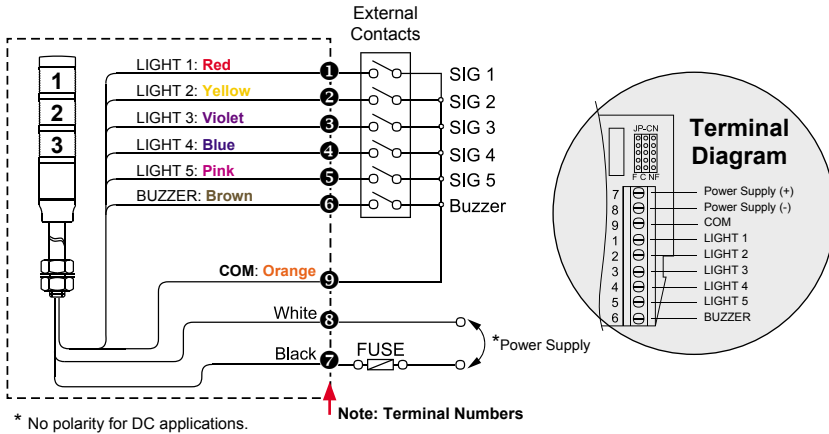
MT5C/8C & MT4B/5B/8B Wiring Diagram

MT5C/8C

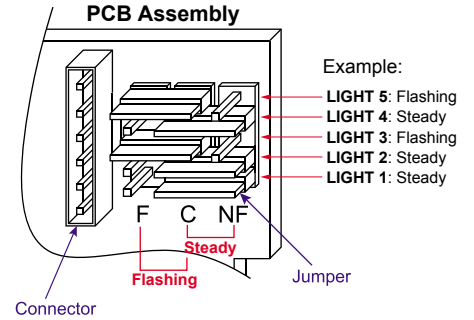
DC/AC 24V

Steady or Flashing (with Buzzer)

MT5C□AL-□□□□ MT8C□AL-□□□□
MT5C□AT-□□□□ MT8C□AT-□□□□



Steady/Flashing Selection

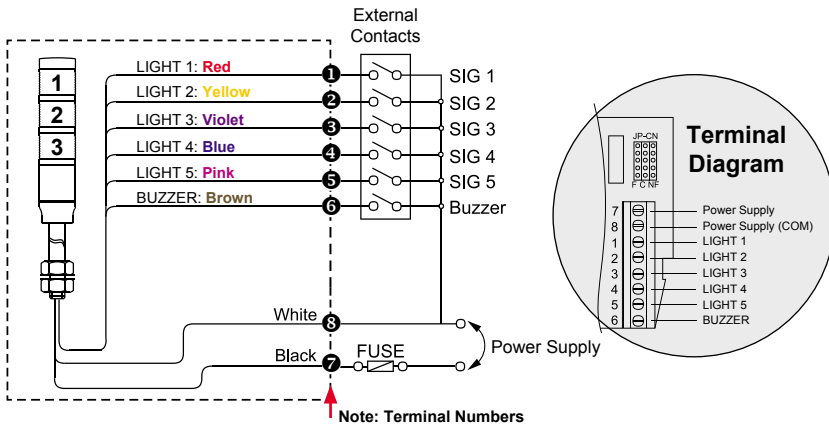


AC 110~120V

AC 220~240V

Steady or Flashing Lights (with Buzzer)

MT5C□BL-□□□□ MT8C□BL-□□□□
MT5C□BT-□□□□ MT8C□BT-□□□□
MT5C□CL-□□□□ MT8C□CL-□□□□
MT5C□CT-□□□□ MT8C□CT-□□□□



MT4B/5B/8B

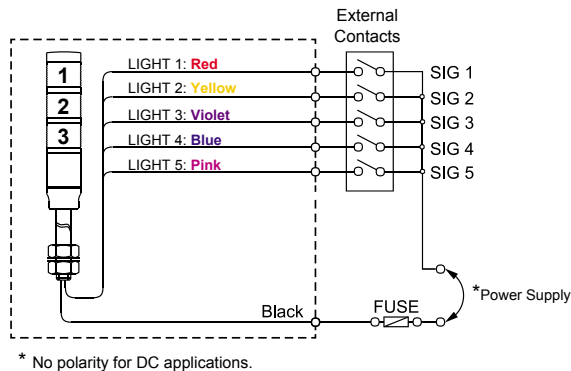
AC/DC 12V

AC/DC 24V

Steady Lights

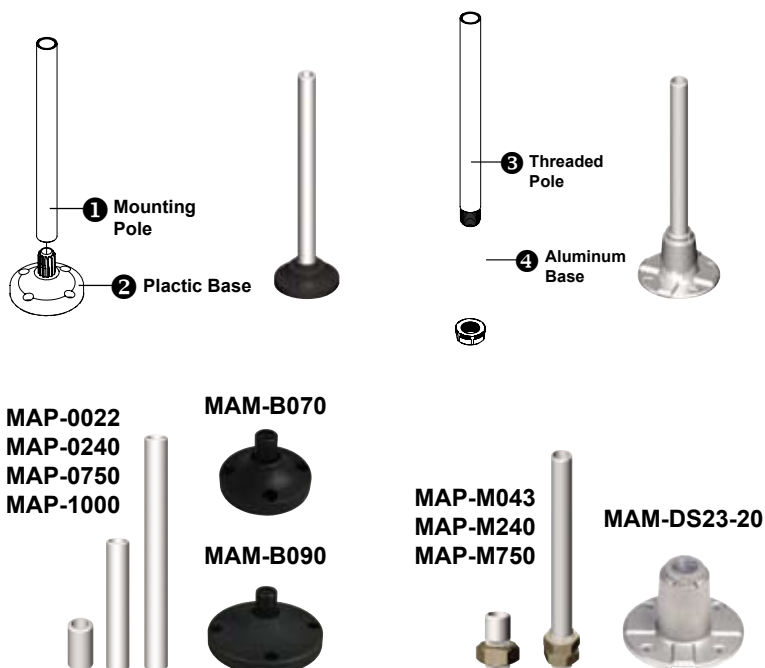
AC 110~120V

AC 220~240V



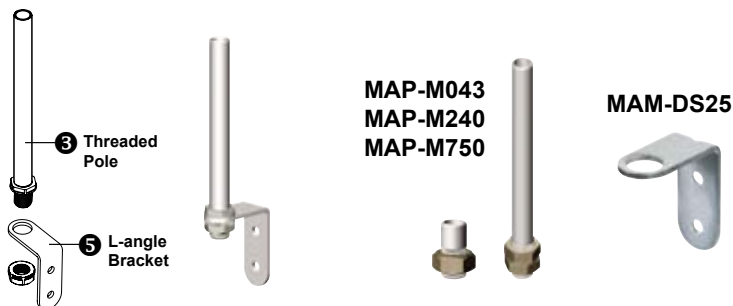
Pole Mounting with Base

Part	Part #	Description
1	MAP-0022	Ø20mm, 0.87 in (22 mm) pole
	MAP-0240	Ø20mm, 9.45 in (240 mm) pole
	MAP-0750	Ø20mm, 29.53 in (750 mm) pole
	MAP-1000	Ø20mm, 39.37 in (1000 mm) pole
2	MAM-B070	Ø70mm Plastic Base
	MAM-B090	Ø90mm Plastic Base
3	MAP-M043	Ø20mm, 1.69 in (43 mm) threaded pole with 1 nut
	MAP-M240	Ø20mm, 9.45 in (240 mm) threaded pole with 2 nuts
	MAP-M750	Ø20mm, 29.53 in (750 mm) threaded pole with 1 nut
4	MAM-DS23-20	Aluminum Base



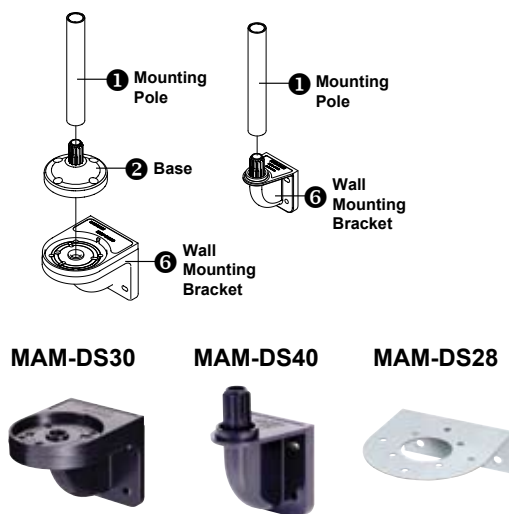
L-angle Mounting with Bracket

Part	Part #	Description
3	MAP-M043	Ø20mm, 1.69 in (43 mm) threaded pole with 1 nut
	MAP-M240	Ø20mm, 9.45 in (240 mm) threaded pole with 2 nuts
	MAP-M750	Ø20mm, 29.53 in (750 mm) threaded pole with 1 nut
5	MAM-DS25	L-angle Bracket



Wall Mounting with Bracket

Part	Part #	Description
1	MAP-0022	Ø20mm, 0.87 in (22 mm) pole
	MAP-0240	Ø20mm, 9.45 in (240 mm) pole
	MAP-0750	Ø20mm, 29.53 in (750 mm) pole
	MAP-1000	Ø20mm, 39.37 in (1000 mm) pole
2	MAM-B070	Plastic Base
6	MAM-DS30-BLK	Plastic Wall Mounting Bracket, Black (Pole & Base required)
	MAM-DS30-BGE	Plastic Wall Mounting Bracket, Beige (Pole & Base required)
	MAM-DS40-BLK	Plastic Wall Mounting Bracket, Black (Pole required)
	MAM-DS40-BGE	Plastic Wall Mounting Bracket, Beige (Pole required)
	MAM-DS28	Metal Wall Mounting Bracket (Pole & Base required)



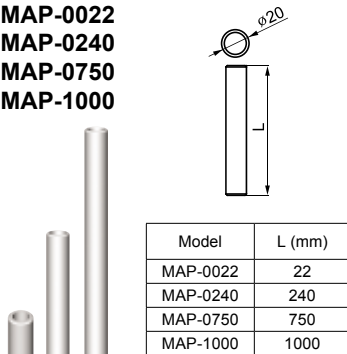
NPT Mounting with NPT Adaptor



Accessories

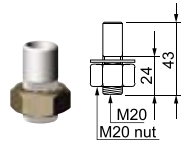
Mounting Poles

MAP-0022
MAP-0240
MAP-0750
MAP-1000

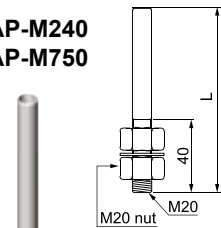


Threaded Poles

MAP-M043



MAP-M240
MAP-M750



Model	L (mm)
MAP-M240	240
MAP-M750	750

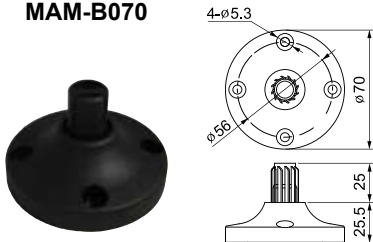
NPT Adaptor

MAP-NPT1/2



Mounting Bases

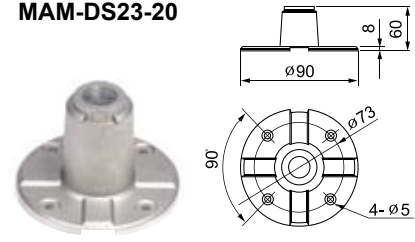
MAM-B070



MAM-B090

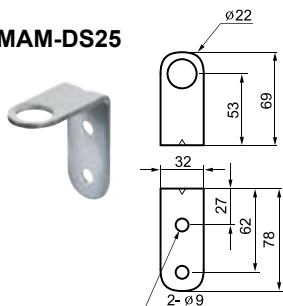


MAM-DS23-20

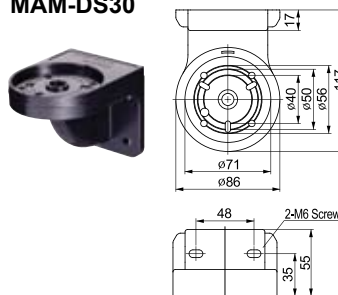


Wall Mount Brackets

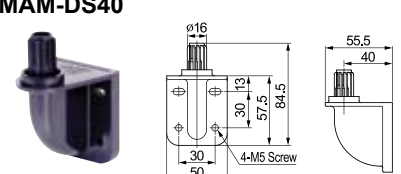
MAM-DS25



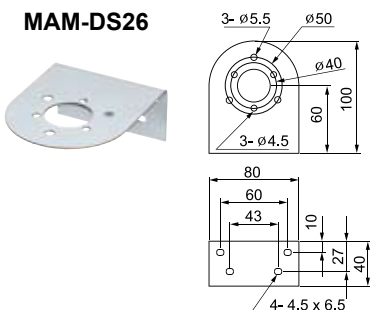
MAM-DS30



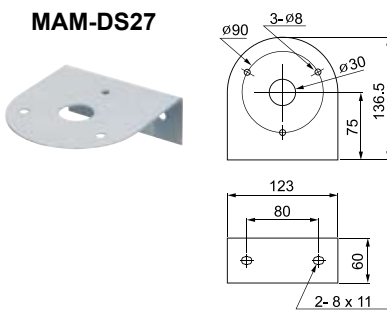
MAM-DS40



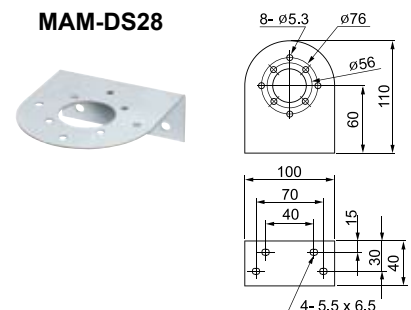
MAM-DS26



MAM-DS27



MAM-DS28



MS86 Ø86mm **LED** Steady & Flashing / Xenon Strobe Lights

SIGNAL LIGHTS



- Ultra bright LED or Xenon lights
- Wide light distribution with prism-cut dome-shaped lens
- Outstanding visibility at distance
- Selectable Steady or Flashing Modes for LED lights
- PCB module style Xenon lamp
- Fast and easy replacement of lamp
- Red, Yellow, Green, Blue and lens available
- IP65 rated



Order Information

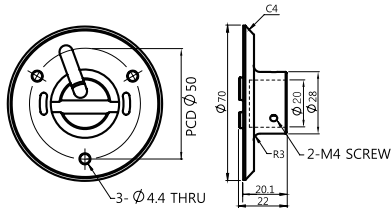
MS86	L-F	02	-	R												
<table><tr><th colspan="2">Lens Colors</th></tr><tr><td>R</td><td>Red</td></tr><tr><td>Y</td><td>Yellow</td></tr><tr><td>G</td><td>Green</td></tr><tr><td>B</td><td>Blue</td></tr><tr><td>C</td><td>Clear</td></tr></table>					Lens Colors		R	Red	Y	Yellow	G	Green	B	Blue	C	Clear
Lens Colors																
R	Red															
Y	Yellow															
G	Green															
B	Blue															
C	Clear															
<table><tr><th colspan="2">Power Supply</th></tr><tr><td>02</td><td>AC/DC 12~24V (AC/DC 24V for LED Style)</td></tr><tr><td>10</td><td>AC 110V</td></tr></table>					Power Supply		02	AC/DC 12~24V (AC/DC 24V for LED Style)	10	AC 110V						
Power Supply																
02	AC/DC 12~24V (AC/DC 24V for LED Style)															
10	AC 110V															
<table><tr><th colspan="2">Light Style</th></tr><tr><td>L-F</td><td>LED Steady & Flashing</td></tr><tr><td>L-B</td><td>LED Steady & Flashing with Buzzer</td></tr><tr><td>S-SD</td><td>Xenon Strobe</td></tr></table>					Light Style		L-F	LED Steady & Flashing	L-B	LED Steady & Flashing with Buzzer	S-SD	Xenon Strobe				
Light Style																
L-F	LED Steady & Flashing															
L-B	LED Steady & Flashing with Buzzer															
S-SD	Xenon Strobe															

Optional Orders

Pole Mount Adaptor



MAM-DS31



Pole Mounting Example

Wall Mount Brackets



MAM-DS30-BLK (Black)
MAM-DS30-BGE (Beige)



MAM-DS26

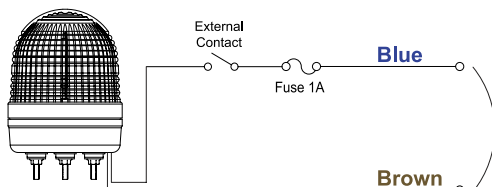
NOTE: See Page 13 & 14 for Mounting Options and Dimensions.

Replacement Parts

Xenon PCB Module	MS86S-LAMP-02	AC/DC 12~24V
	MS86S-LAMP-10	AC 110V
Lens	LENS-MS86-(□)	Dome Lens

(□): indicates color of Lens; R, Y, G, B or C

Wiring Diagram



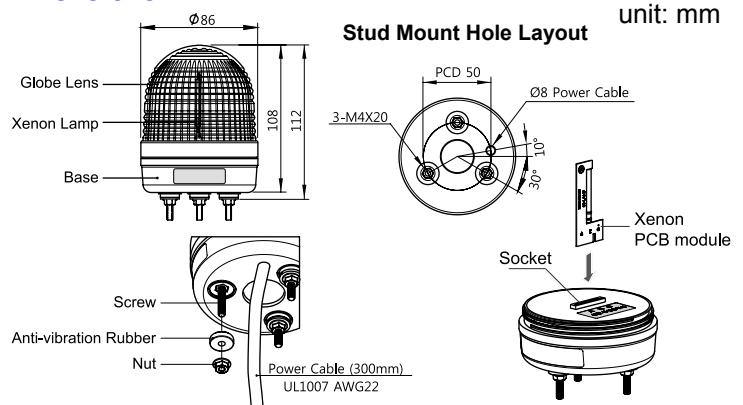
*Power Supply
AC/DC 12~24V
AC 110V

* No polarity for DC applications.

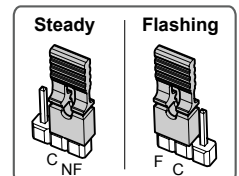
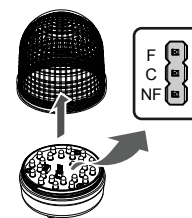
Specifications

Model	MS86L		MS86S	
Style	LED Steady/Flashing		Xenon Strobe	
Power Supply	AC/DC 24V	AC 110V	AC/DC 12-24V	AC 110V
Current Consumption	Red	120mA	200mA max. dash current: 600mA	220mA 6W
	Yellow	120mA		
	Green	140mA		
	Blue	140mA		
	Clear	140mA		
Flash (Strobe Pulse) Rate	80 time/minute ± 3%		60 times/minute ± 3%	
Sound Level	max. 85dB at 1m		—	
Dielectric Strength	500VAC for 1 min.			
Vibration	15~55 Hz; xyz/60min (70m/s², 7G)			
Insulation Resistance	1MΩ (at 500VDC mega)			
Ambient Temperature	-30~40°C		-20~70°C	
Storage Temperature	-25~85°C			
Ambient Humidity	45~85% RH			
Degree of Protection	IP65 (IP52 with Buzzer)		IP65	
Recommended Wire Size	PUR Ø5/PVC Ø5 2P/0.3SQ			
Weight	0.3kg ± 5%			

Dimensions



LED Light Steady/Flashing Selection



SIGNAL LIGHTS



- Incandescent or Xenon type
- Red, Yellow, Green and Blue lens available
- Smooth or Prism lens
- Stud or Pole mounted
- Wide range of power supply

Order Information

The diagram illustrates the configuration of a traffic signal head using the code **ML-G-F-012-R**. Each character in the code corresponds to a specific feature, which is detailed in the tables below.

Mounting

G	Stud Mount
P	Pole Mount

Lens Colors

R	Red
Y	Yellow
G	Green
B	Blue

Power Supply

012	DC 12V
024	DC 24V
110	AC 110V
220	AC 220V

Light Style

	Rotating Light
F	Flashing Light
S	Strobe Light with Xenon Bulb

AC 110 or 220V Only ►

Optional Orders

Replacement Parts

Bulb	MAB-T15-S-012-08	12V DC, 8 Watt
	MAB-T15-S-024-08	24V DC, 8 Watt
	MAB-T15-S-130-08	110V AC, 8 Watt
	MAB-T15-S-240-08	220V AC, 8 Watt
Xenon Bulb	MAB-STROBE-110-06	110/220V AC, 6 Watt
Lens	LENS-MLG-(□)	Smooth Lens for Rotating Lights
	LENS-MLGF/S-(□)	Prism Lens for Flashing/Strobe Lights

(□): indicates color of Lens; R, Y, G or B

Wall Mount Brackets



MAM-DS26

MAM-DS30-BLK (Black)

MAM-DS30-BGE (Beige)

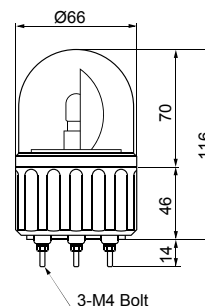
NOTE: See **Page 14** for Dimensions.

Specifications

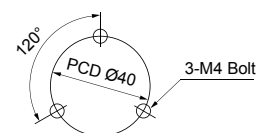
Model		MLG/MLP	MLGF/MLPF	MLGS/MLPS
Bulb Type		Incandescent		Xenon
Power Supply		12VDC, 24VDC, 110VAC, 220VAC		110VAC, 220VAC
Current Draw & Wattage	12VDC	0.7A, 8W		—
	24VDC	0.3A, 8W		—
	110VAC	0.7A, 8W		0.22A, 6W
	220VAC	0.03A, 8W		0.11A, 6W
Rotation Rate		130 times/minute	—	
Flashing rate		—	80 times/minute	

Dimensions

unit: mm



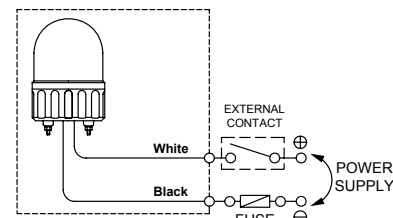
Stud Mount Hole Layout



Wiring Diagram

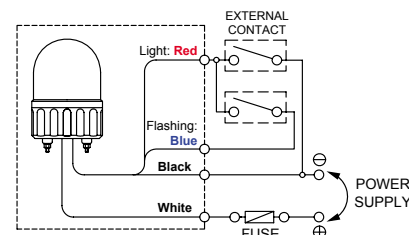
Rotating & Strobe Lights

MLG-□□□-□ MLGS-□□□-□
MLP-□□□-□ MLPS-□□□-□



Flashing Lights

MLGF-□□□-□ MLPF-□□□-□



ASG Ø86mm Rotating/Flashing/Strobe Beacons with Buzzer

SIGNAL LIGHTS



- Incandescent or Xenon type
- Red, Yellow, Green and Blue lens available
- Smooth lens
- Stud mounted
- Optional Wall Mounting Brackets available
- Wide range of power supply

Order Information

ASG **B** - **012** - **R**

Lens Colors	
R	Red
Y	Yellow
G	Green
B	Blue
Power Supply	
012	DC 12V
024	DC 24V
110&220	AC 110/220V
110	AC 110V
220	AC 220V
Light Style	
	Rotating Light
B	Rotating Light with Buzzer
F	Flashing Light
S	Strobe Light with Xenon Bulb

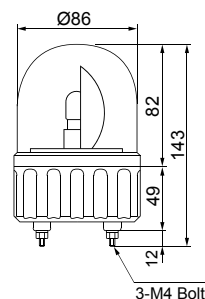
Strobe Light Only [

AC 110 or 220V Only ▶

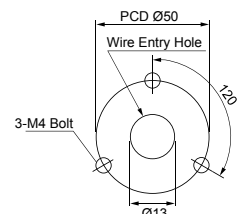
Specifications

Model	ASG/ASGB	ASGF	ASGS
Bulb Type	Incandescent		Xenon
Power Supply	12VDC, 24VDC, 110/220VAC		110VAC, 220VAC
Current Draw & Wattage	12VDC	0.7A, 8W	—
	24VDC	0.3A, 8W	—
	110/220VAC	0.03A, 5W	—
	110VAC	—	0.22A, 6W
	220VAC	—	0.11A, 6W
	Sound Level	80 dB	—
Rotation Rate	130 times/minute		—
Flashing rate	—		80 times/minute

Dimensions



unit: mm
Stud Mount Hole Layout



Optional Orders

Replacement Parts

Bulb	MAB-T15-S-012-08	12V DC, 8 Watt
	MAB-T15-S-024-08	24V DC, 8 Watt
	MAB-T15-S-012-05	110/220V AC, 5 Watt
Xenon Bulb	MAB-STROBE-110-06	110/220V AC, 6 Watt
Lens	LENS-ASG-(□)	Smooth Lens for Rotating Lights
	LENS-ASGF-(□)	Smooth Lens for Flashing/Strobe Lights

(□): indicates color of Lens; R, Y, G or B

Wall Mount Brackets



MAM-DS30-BLK (Black)
MAM-DS30-BGE (Beige)



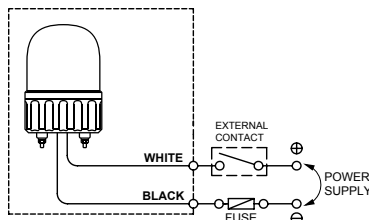
MAM-DS26

NOTE: See Page 14 for Dimensions.

Wiring Diagram

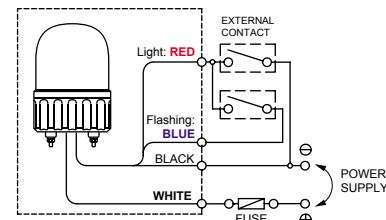
DC Rotating Lights

ASG-012-□ ASGB-012-□
ASG-024-□ ASGB-024-□



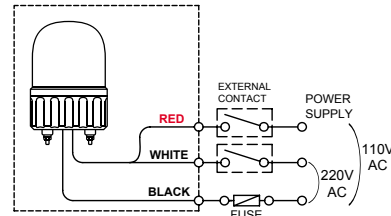
DC & AC Flashing Lights

ASGF-012-□ ASGF-110&220-□
ASGF-024-□



AC Rotating & Strobe Lights

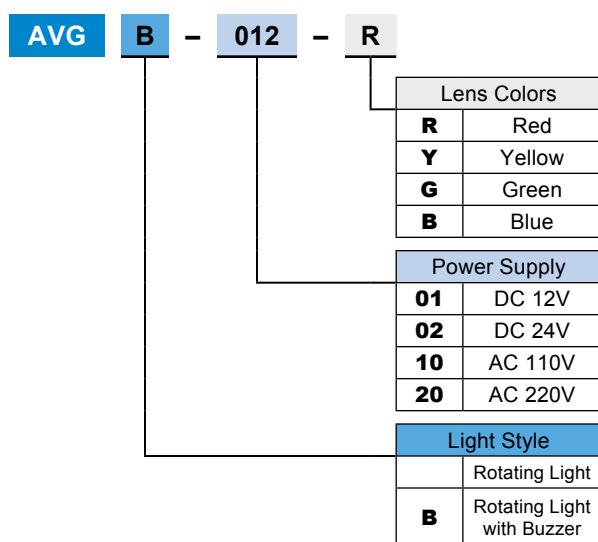
ASG-110&220-□ ASGS-110-□
ASGB-110&220-□ ASGS-220-□



Three LED navigation lights are shown side-by-side. From left to right, they are red, yellow, and green. Each light has a translucent colored top cap and a white base with four mounting pins. The internal LED components are visible through the clear lens in the center of each cap.

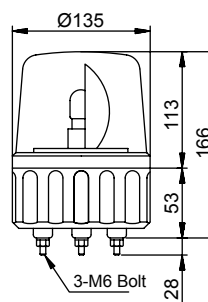
- Incandescent type
- Red, Yellow, Green and Blue lens available
- Smooth lens
- Large rotating reflector
- Long life
- Stud mounted
- Optional Wall Mounting Bracket (MAM-DS27) available
- Buzzer (80dB) model available

Specifications



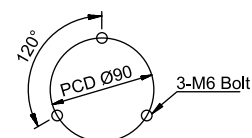
Model		AVG	AVGB
Bulb Type		Incandescent	
Power Supply		12VDC, 24VDC, 110VAC, 220VAC	
Current Draw & Wattage	12VDC	2.08A, 25W	
	24VDC	1.04A, 25W	
	110VAC	0.22A, 25W	
	220VAC	0.11A, 25W	
Sound Level		—	80 dB
Rotation Rate		150 times/minute	

Dimensions



unit: mm

Stud Mount Hole Layout



Optional Orders

Replacement Parts

Bulb	MAB-T15-D-012-25	12V DC, 25 Watt
	MAB-T15-D-024-25	24V DC, 25 Watt
	MAB-T15-D-130-25	110V AC, 25 Watt
	MAB-T15-D-240-25	220V AC, 25 Watt
Lens	LENS-AVG-(□)	Smooth Lens for Rotating Lights

(□): indicates color of Lens; R, Y, G or B

Wall Mount Brackets



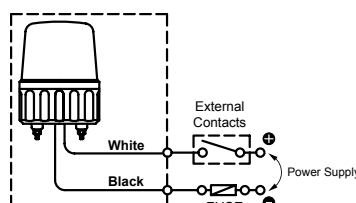
MAM-DS27

NOTE: See **Page 14** for Dimensions.

Wiring Diagram

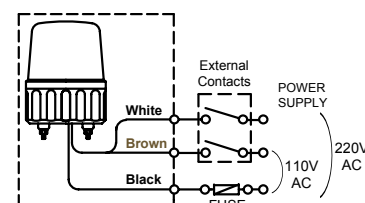
DC 12V & DC 24V

AVG-01-□ AVGB-01-□
AVG-02-□ AVGB-02-□



AC 110V & AC 220V

AVG-10-□ AVGB-10-□
AVG-20-□ AVGB-20-□



SIGNAL LIGHTS



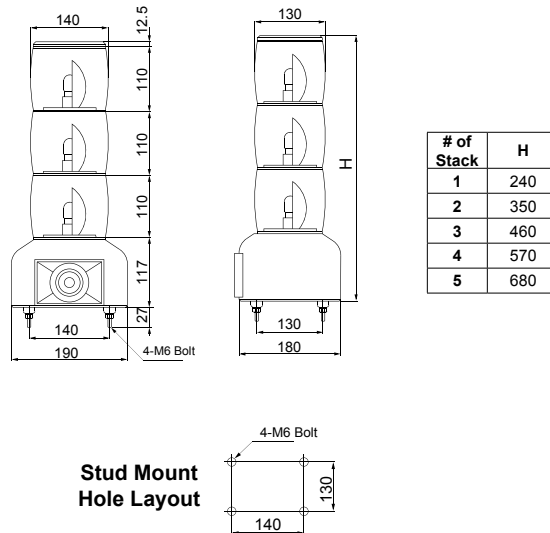
- Incandescent type
- Outstanding visibility by magnified lens
- Red, Yellow, Green, Blue or Clear lens available
- Large rotating reflector
- Selectable audio sounds: melody, two tone and siren (100dB)
- Stud mounted

Specifications

Model		MSGGS
Bulb Type		Incandescent
Power Supply		12VDC, 24VDC, 110VAC, 220VAC
Current Draw & Wattage	12VDC	2.08A, 25W
	24VDC	1.04A, 25W
	110VAC	2.08A, 25W
	220VAC	2.08A, 25W
Rotation Rate		150 times/minute

Dimensions

unit: mm



Order Information

MSGGS - 012 - 5 - RYGB C

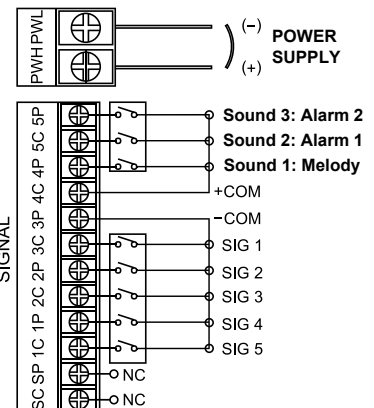
Lens Colors (top to bottom)	
R	Red
Y	Yellow
G	Green
B	Blue
C	Clear

Number of Stacks	
1	1 Light
2	2 Lights
3	3 Lights
4	4 Lights
5	5 Lights

Power Supply	
012	DC 12V
024	DC 24V
110	AC 110V
220	AC 220V

Wiring Diagram

Terminal Connections



Optional Orders

Replacement Parts

Bulb	MAB-T15-D-012-25	12V DC, 25 Watt
	MAB-T15-D-024-25	24V DC, 25 Watt
	MAB-T15-D-130-25	110V AC, 25 Watt
	MAB-T15-D-240-25	220V AC, 25 Watt
Lens	LENS-MSGGS-(□)	Lens

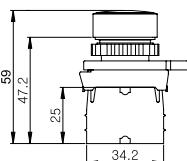
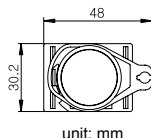
(□): indicates color of Lens; R, Y, G, B or C

*CAUTION: Do not operate more than one light at a time. It can cause over heat on transformers.

MC2 Ø22mm Push Buttons & Control Switches

Momentary Push Buttons

- Momentary Push
- Single Normally Open contact
- Flush Mount Accessory and Water Proof Protector available



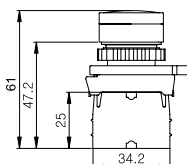
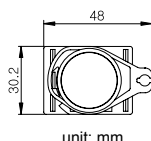
unit: mm

MC2 - **P** **R** - **A**

CONTACT BLOCK	
A	NO Contact
B	NC Contact
COLOR	
R	RED
Y	YELLOW
G	GREEN
B	BLUE
K	BLACK
STYLE	
P	Momentary Push Button

Illuminated Push Buttons

- Momentary Push
- Single Normally Open contact included
- AC/DC LED configuration in various colors
- Flush Mount Accessory and Water Proof Protector available



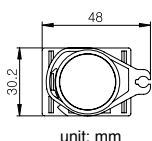
unit: mm

MC2 - **LPS** **R** - **A** **D**

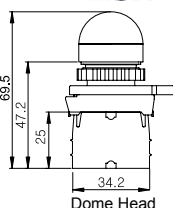
LED	
D	12~30V DC/AC LED
L	110~220V AC LED
CONTACT BLOCK	
A	NO Contact
B	NC Contact
COLOR	
R	RED
Y	YELLOW
G	GREEN
B	BLUE
C	CLEAR
STYLE	
LPS	Illuminated Push Button

Pilot Lamps

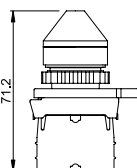
- LED illumination with clear visibility
- AC/DC LED configuration in various colors



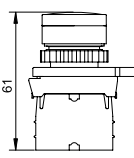
unit: mm



Dome Head



Horn Head



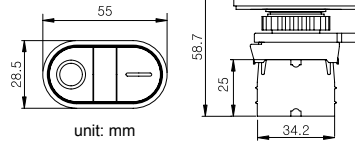
Flush Head

MC2 - **PI** **D** **R** - **D**

LED	
D	12~30V DC/AC LED
L	110~220V AC LED
COLOR	
R	RED
Y	YELLOW
G	GREEN
B	BLUE
C	CLEAR
HEAD STYLE	
D	Dome Head
H	Horn Head
F	Flush Head
STYLE	
PI	Pilot Lamp

Double Push Buttons

- Momentary Push
- Normally Open and Normally Closed contact blocks
- LED illumination

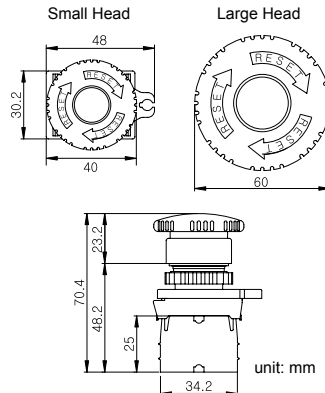


MC2 - **2P** **RG** - **AB** **D**

LED	
D	12~30V DC/AC LED
L	110~220V AC LED
CONTACT BLOCKS	
AB	1 NO Contact 1 NC Contact
COLOR	
RG	Red & Green
STYLE	
2P	Double Push Button

Emergency Stops

- Ø40 or Ø60mm Mushroom heads
- Push Lock & Twist-to-release
- Illuminated or non-illuminated styles
- UL, cUL, CE approved contact blocks

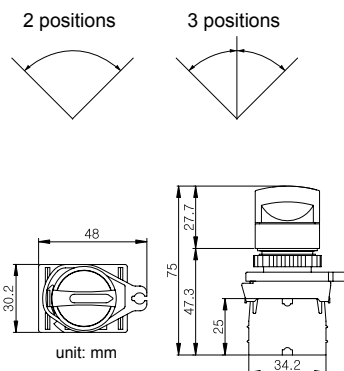


MC2 - **E** **S** **R** - **B** **D**

LED	
	Non-Illumination
D	12~30V DC/AC LED
L	110~220V AC LED
CONTACT BLOCK	
B	NC Contact
COLOR	
R	RED
HEAD	
S	Small Head (Ø40mm)
L	Large Head (Ø60mm)
STYLE	
E	Emergency Stop
LE	Illuminated Emergency Stop

Selector Switches

- Available in 2 or 3 position selection
- Fixed Position or Auto Spring Return Styles



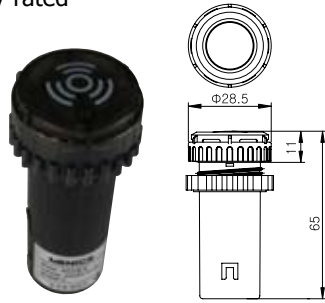
MC2 - **S** **S** **W2** **S** - **A**

CONTACT BLOCK	
A	2 Positions Single NO contact
AA	3 Positions Double NO contacts
Function	
S	Fixed Position
M	Auto Spring Return
Number of Positions	
W2	2 Positions 90°
W3	3 Positions 45°
Selector Head	
S	Knob
L	Lever
STYLE	
S	Selector Switch

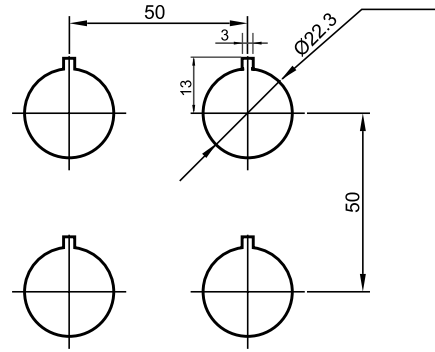
Buzzers

- Selectable Continuous and Intermittent Sound
- LED Illumination
- AC/DC 12~30V rated

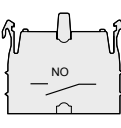
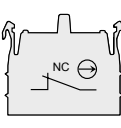
MC2-B-D



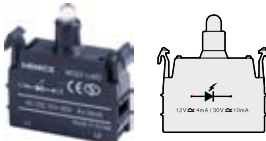
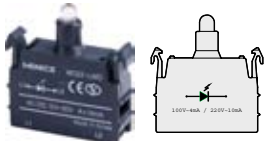
Ø22 Push Button Mounting Hole Layout & Panel Cutout



Contact Blocks

Model	NO Contact	MC22-UA	NC Contact	MC22-UB
Appearance				
Contact Capacity	110 VAC 10A / 220 VAC 5A			
Approval				

LEDs

Model	DC/AC LED	MC22-UA	AC LED	MC22-UB
Appearance				
Operating Voltage	DC/AC 12~30V		AC 110~220V	
Current Consumption	4~10mA		4~10mA	
LED Life	50,000 hours			
Approval				

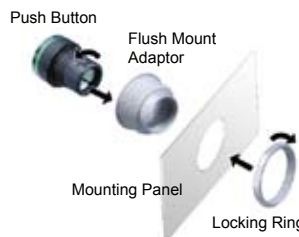
Specifications

Control Switches		Push Buttons	Illuminated Push Buttons	Pilot Lamps	Selector Switches	Emergency Stops	Double Push Buttons	Buzzer	
Model		MC2-P	MC2-LP	MC2-PI	MC2-S	MC2-E	MC2-2P	MC2-B-D	
Life	Mechanical	50,000 times (20 times/min)						Rated Voltage	AC/DC 12~30V
	Electrical	100,000 times (20 times/min)						Current	60mA
								Sound Level	85dB @ 0.1m 75dB @ 1m
Protection Degree		IP52					IP50	IP40	
Initial Contact Resistance		20MΩ maximum							
Insulation Resistance		Min.100MΩ						Min.50MΩ	
Operation Frequency		Max. 30 times/min						2~3 times/sec	
Impact	Endurance	Min. 500m/s ²							
	No movement	Min. 100m/s ²							
Vibration		10~55Hz with 3mm pick to pick							

Operating Temperature: -15~40°C Operating Humidity: 45~85%RH Storage Temperature: -40~70°C

Accessories

Flush Mount Adaptor



MC22-FP	MC22-FL
for Push Buttons MC2-P□-□	for Illuminated Push Buttons MC2-LP□-□□

Water Proof Cap



MW-25P	MW-25L
for Push Buttons MC2-P□-□	for Illuminated Push Buttons MC2-LP□-□□

E-Stop Accessories

Nameplates		Shroud		
MP-25-S	MP-25-L	MPC-KA-LD22	MPC-KA-LD25	MPC-KA-LD30
		Ø22mm	Ø25mm	Ø30mm

Locking Ring Wrench



MC-P100

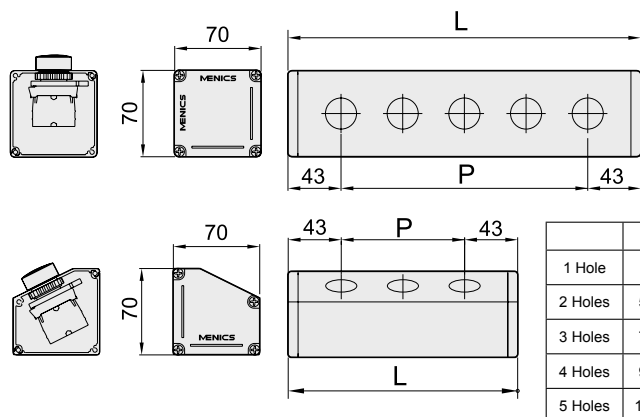
Switch Boxes

Aluminum Boxes



MB70 - S - 01

NUMBER OF HOLES	
01	1 Hole
02	2 Holes
03	3 Holes
04	4 Holes
05	5 Holes
X	X Holes (optional)
BOX STYLE	
S	Square Side
T	Triangular Side



	L	P
1 Hole	3.4 in (86mm)	—
2 Holes	5.4 in (136mm)	2 in (50mm)
3 Holes	7.3 in (186mm)	3.9 in (100mm)
4 Holes	9.3 in (236mm)	5.9 in (150mm)
5 Holes	11.3 in (286mm)	7.9 in (200mm)

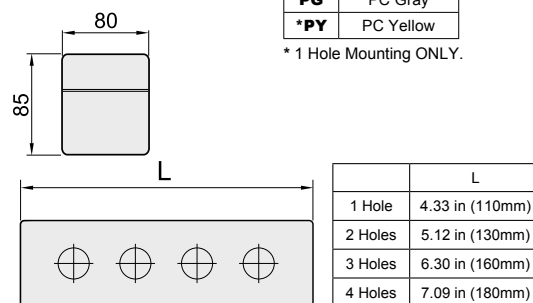
Plastic Boxes

IP 67 / NEMA 4x



BC - AG S - 01

NUMBER OF HOLES	
01	1 Hole
02	2 Holes
03	3 Holes
04	4 Holes
BOX STYLE	
S	Screw Lock
BOX MATERIAL	
AG	ABS Gray
PG	PC Gray
*PY	PC Yellow



	L
1 Hole	4.33 in (110mm)
2 Holes	5.12 in (130mm)
3 Holes	6.30 in (160mm)
4 Holes	7.09 in (180mm)

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