

DESCRIPTION

- Device show the operation status of machine.
- Compact size 40 mm, there are AC and DC.
- Can show status maximum 5 step 5 colors Red, Yellow, Green Blue, White.
- Buzzer Alarm at 90 dB Max(at 1M).
- Push/Pull Connection can use both NPN/PNP, Open Collector.
- RS-485 MODBUS RTU Protocol Communication (Model TL40-20M and TL40-2BM).
- Anti-stain material Protection IP54.
- Clear vision 360 ° degree.
- Easy to separate part.

OPERATION

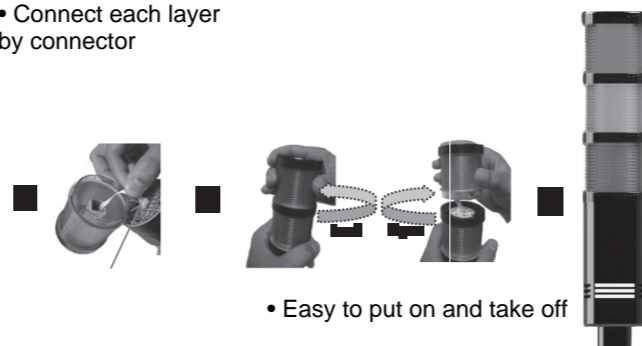
When we install and wiring circuit follow wiring diagram and when Switch command ON by color position TL40 lamp of that position will on as required function to alarm the staff know about the machine status such as

- Green means Machine is operating.
- Yellow means Notice staff to check machine.
- Red means Machine stop operation or other.

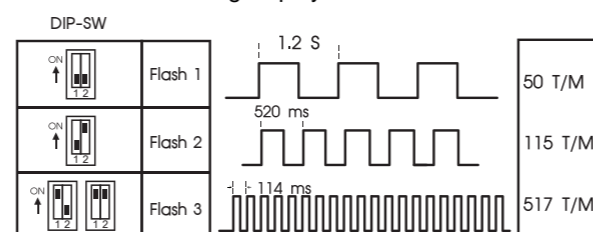
And Buzzer alarm in case the staff stay far from machine at 90 dB Max (at 1M) or send alarm data via computer by RS-485.

Signal Tower Light assemble

- Connect each layer by connector



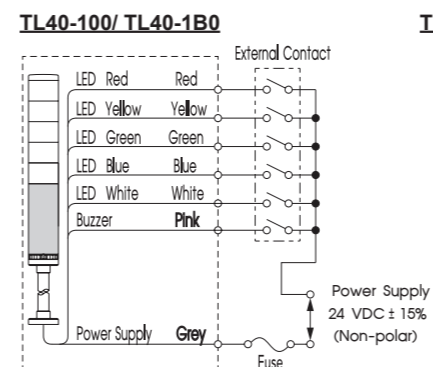
Flash Pattern setting display



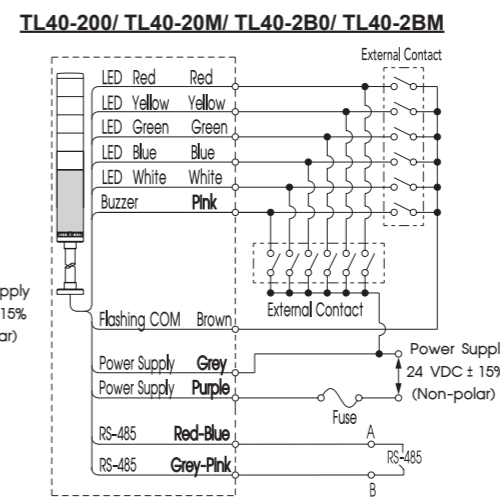
WIRING DIAGRAM

Wiring Example [Contact switch]

[Continuous Lighting]

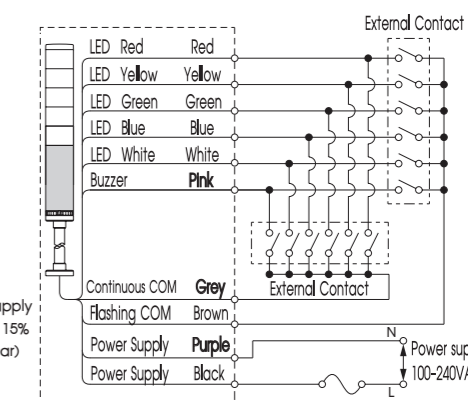


[Continuous Lighting, Flashing]



CAUTION Do not apply voltage to the Flashing COM (Brown) wire.

TL40-300/ TL40-3B0

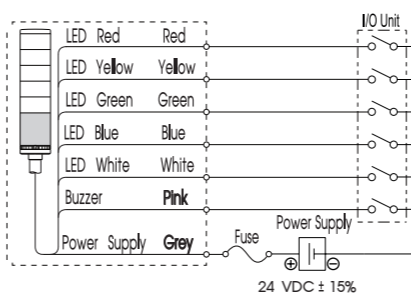


CAUTION Only apply voltage to the Power Supply Wire.

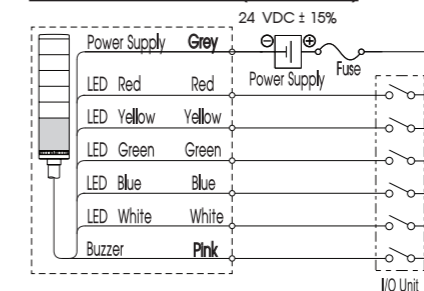
Wiring Example [NPN/PNP Transistor drive]

[Continuous Lighting]

TL40-100/ TL40-1B0 (NPN Drive)

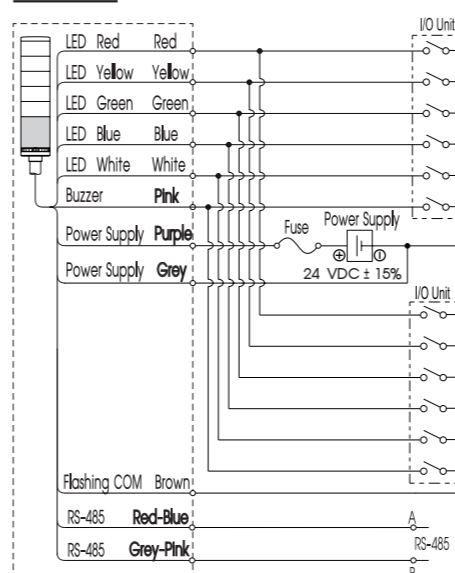


TL40-100/ TL40-1B0 (PNP Drive)



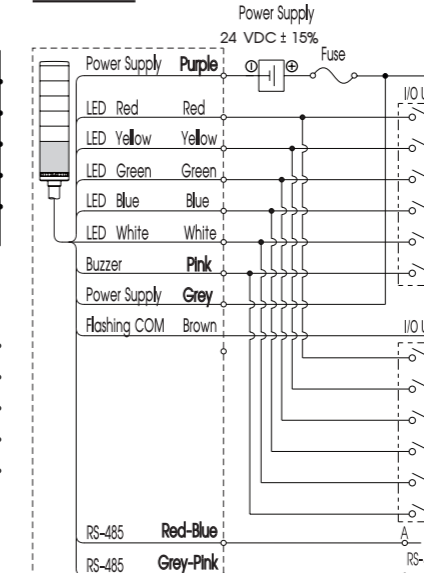
[Continuous Lighting, Flashing]

TL40-200/ TL40-20M/ TL40-2B0/ TL40-2BM NPN Drive



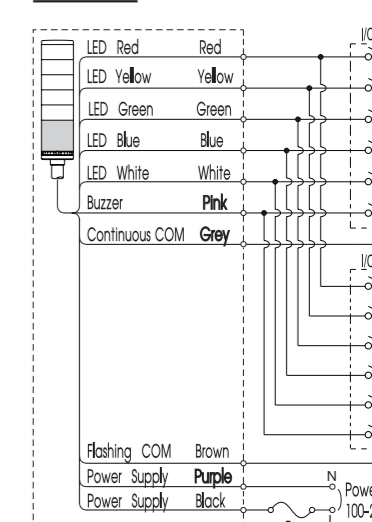
CAUTION Do not apply voltage to the Flashing COM (Brown) wire.

TL40-200/ TL40-20M/ TL40-2B0/ TL40-2BM PNP Drive



CAUTION Do not apply voltage to the Flashing COM (Brown) wire.

TL40-300/ TL40-3B0 NPN Drive



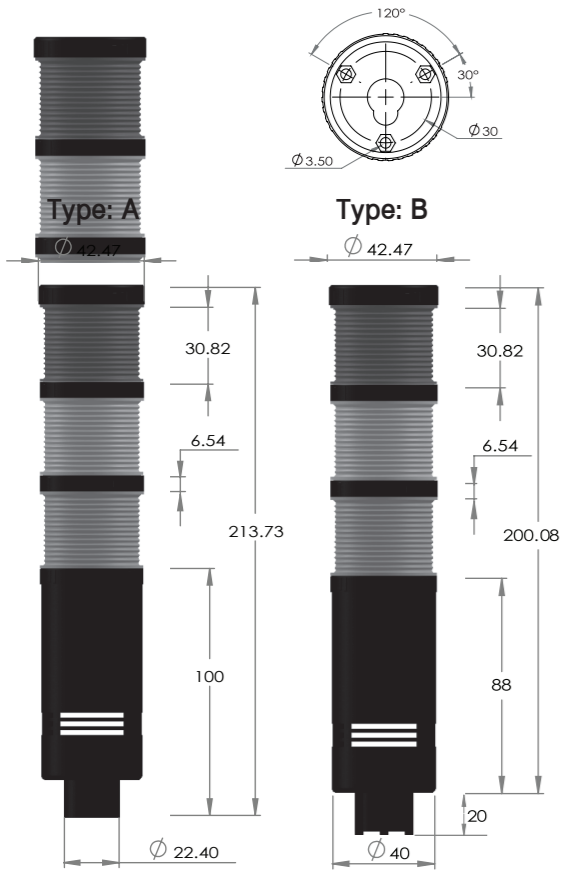
CAUTION Only apply voltage to the Power Supply Wire.

TECHNICAL SPECIFICATION

Power Supply	100-240 VAC 50/60 Hz	
	24 VDC ± 15%	
Power Consumption	0.8 VA/Light	
Color of LED Unit	Red, Yellow, Green, Blue, White	
Status Pattern (Setting)	Continue	
	Flashing and Buzzer	50 Time/Minute
		115 Time/Minute
Buzzer	90 dB Max (at 1M.)	
Lamp Life	100,000 Hr.	
Communication	Protocol	MODBUS RTU
	Baud Rate	4800, 9600, 19200, 38400
	Parity	None
	Stop Bit	1
	Data Bit	8
Ambient Operation	Temperature	-10 °C to 60 °C
	Humidity	85% RH Non-Condensing
Ambient Storage	Temperature	-20 °C to 80 °C
	Humidity	85% RH Non-Condensing
Protection Degree	IP 54	
Installation	Bracket & Pole	
Material	Tower	ABS-V0
	Bracket	ABS-V0
	Pole	Aluminium
Size	40 mm.	
Weight	185 g.	

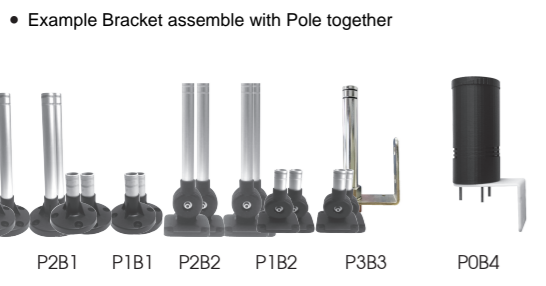
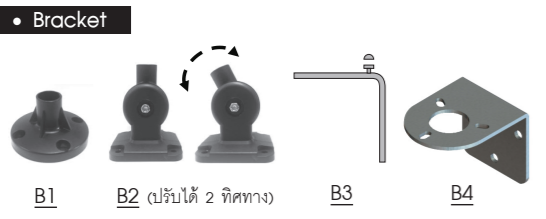
TL40 - SERIES SIGNAL TOWER LIGHT

DIMENSION

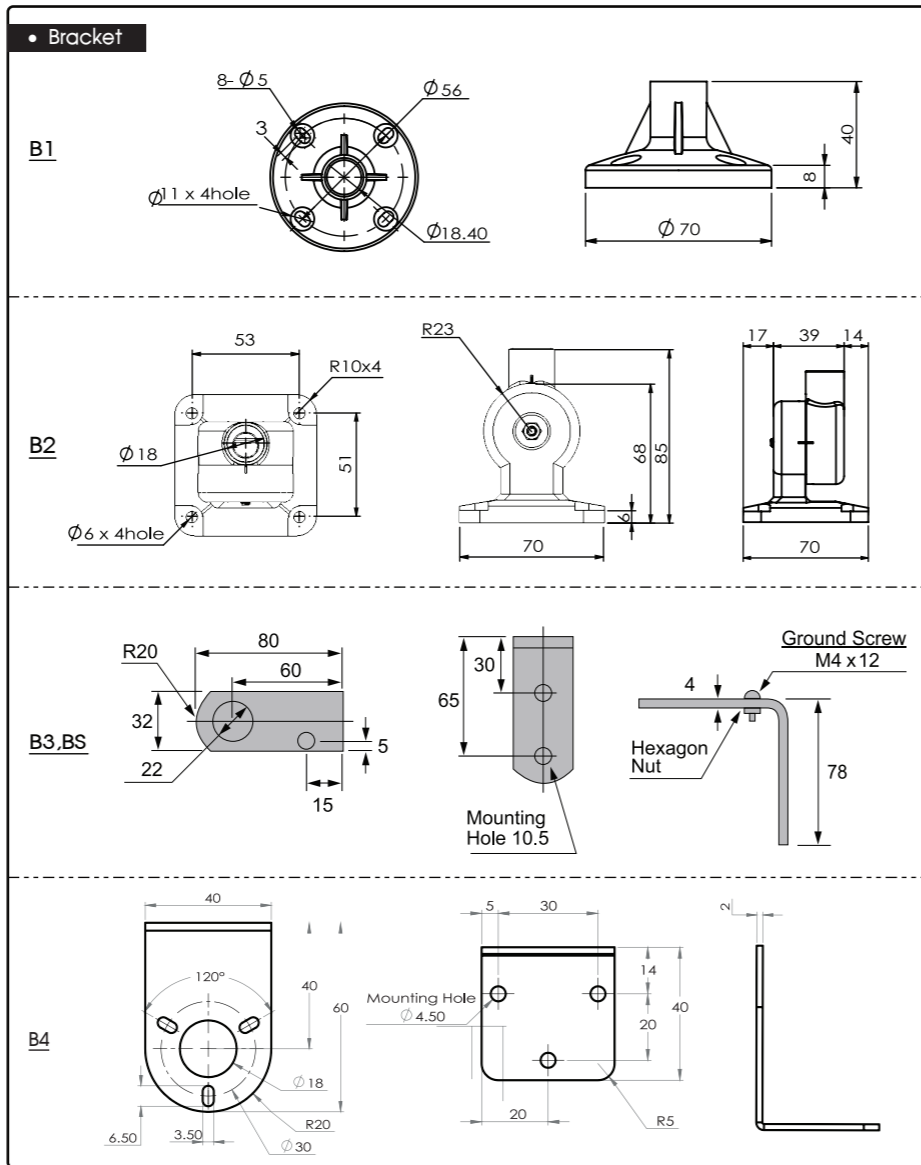


Unit : mm.

Accessories



Accessories Dimension



RS-485 Communication

How to use MODBUS RTU

1. Address setting and Baud rate as required and turn on device.
2. Every time that user re-turn on device. User must enable MODBUS everytime. (Write '0001 H' on Register 0x006).
3. Write the value that need to command ON/OFF or Flash (Follow Register table)
4. If user needs to change and Baud rate must reset device and do follow Item 2 every time.

Table 1: MODBUS RTU Register

Reg. Address	Decimal	Hex	Contents	Format	Word	Access
0	0x000	0x000	LED White Colour	Unsigned int	1	R/W
1	0x001	0x001	LED Blue Colour	Unsigned int	1	R/W
2	0x002	0x002	LED Green Colour	Unsigned int	1	R/W
3	0x003	0x003	LED Yellow Colour	Unsigned int	1	R/W
4	0x004	0x004	LED Red Colour	Unsigned int	1	R/W
5	0x005	0x005	Buzzer	Unsigned int	1	R/W
6	0x006	0x006	Enable MODBUS RTU	Unsigned int	1	R/W
7	0x007	0x007	Parity	Unsigned int	1	Read Only
8	0x008	0x008	Baud Rate	Unsigned int	1	Read Only
9	0x009	0x009	Address	Unsigned int	1	Read Only

How to write value for Register 0x000 to 0x005

For setting Lamp on Buzzer to operate.

0000 H =	OFF
0001 H =	ON Continuous
0002 H =	Flash speed 1
0102 H =	Flash speed 2
0202 H =	Flash speed 3

สำหรับ Register 0x006 (Enable MODBUS RTU)

0000 H =	Disable Control by MODBUS RTU
0001 H =	Enable Control by MODBUS RTU

Flash Configuration.

Flash 1: ON 1 2 | Flash 2: ON 1 2 | Flash 3: ON 1 2

Address Configuration.

Address = 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

Baud Rate Configuration.

4800, 19200, 9600, 38400

Picture Shows Dip Switch

ORDERING CODE

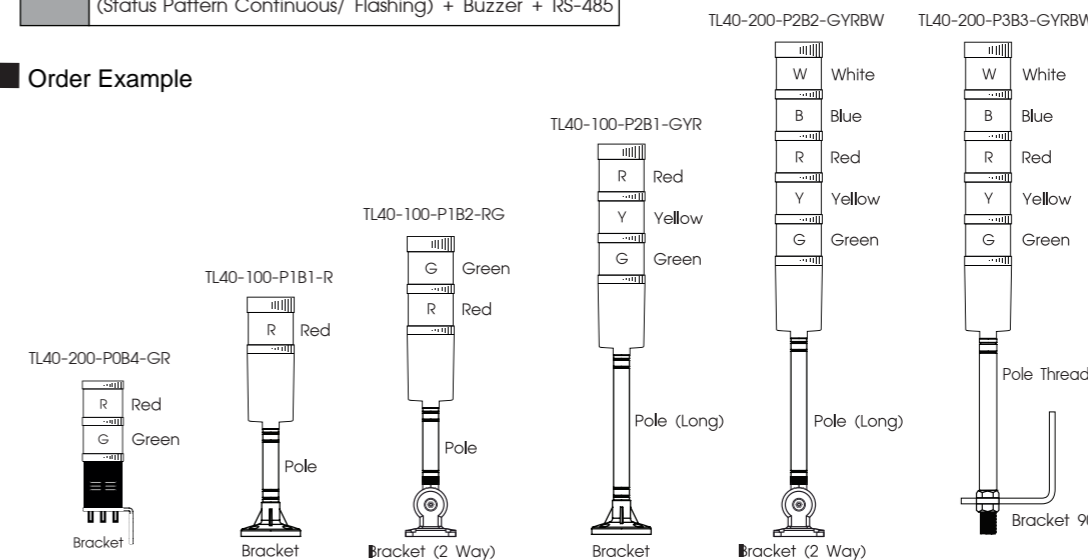
TL40 - [Power Supply & Option] - [Accessories] - [Color]

Code	Power Supply & Option
100	24 VDC ±15% (Status Pattern Continuous)
200	24 VDC ±15% (Status Pattern Continuous/ Flashing)
300	100-240 VAC (Status Pattern Continuous/ Flashing)
1B0	24 VDC ±15% (Status Pattern Continuous) + Buzzer
2B0	24 VDC ±15% (Status Pattern Continuous/ Flashing) + Buzzer
3B0	100-240 VAC (Status Pattern Continuous/ Flashing) + Buzzer
20M	24 VDC ±15% (Status Pattern Continuous/ Flashing) + RS-485
2BM	24 VDC ±15% (Status Pattern Continuous/ Flashing) + Buzzer + RS-485

Accessories (Installation)	ขนาดและมิติ	Color
P1B1 Pole + Bracket	Type: A	G Green
P1B2 Pole + Bracket (2 Way)		Y Yellow
P2B1 Pole (Long) + Bracket		R Red
P2B2 Pole (Long) + Bracket (2 Way)		B Blue
P3B3 Pole(Thread) + Bracket 90°(SUS 316)		W White
P0B4 None Pole, Bracket 90°		Type: B

*** Maximum 5 layers, 5 colors

Order Example



บริษัท โพรมัส จำกัด
 119 ซ.สีมวงอนุสรณ์ ถ.สุทธิสารวินิจฉัย แขวงดินแดง เขตดินแดง กรุงเทพฯ 10400
 โทร 0-2693-7005, 0-2277-8027 แฟกซ์ 0-2277-3565
 E-mail : sales@primusthai.com