## Series 400

## Multi-Switch Interlocking Assembly Sub Panel Mounting Interlocking or Independent Stations



- Uses Series 2100 or 2600 Switches
- SPST - 6PDT switch circuitry
- Easy lamp replacement from front
- T 1-3/4 midget flange-based lamp or LED with replaceable lens covers in standard EMC colors

P/N 421-6/Type 4/
GH2150,WL163W


- 2 to 24 stations standard; Larger assemblies available
- No barriers between stations


P/N 401-3/Type 1/GH3050,WL163W

Electro-Mech's Series 400 Multi-Station Switch Assemblies provide numerous configurations to meet a wide range of applications. Many standard mounting frames are available, and custom designs can be readily provided with custom "SW" drawing specifications.

Several types of mechanical/lockout actions between switch stations can be provided. The mechanical linkage between switch stations is made with electrofilmed steel parts, and is actuated by stainless steel pins. All Series 2100 and Series 2600 switches from SPST to 6PDT can be used in the multistation assemblies.

More than one style of intelock/lockout relationship can be utilized in the same assembly. For example, in a five station assembly, three switches can be interlocked and locked out, and the other two switches operated independently. In addition, switches can be wired so the light comes on when the switch is action (standard lamp circuit is independent of switch circuit).

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## Multi-Switch Interlocking Assembly Sub Panel Mounting Interlocking or Independent Stations

GENERAL SPECIFICATIONS: (Series 2100 or 2600) Ratings: 30 volts DC or 125 volts AC; 2.0A resistive, 0.5 A inductive

Operating Pressure:
Plunger Travel:
$2 \mathrm{lbs} . \pm 1 \mathrm{lb} .(908 \mathrm{~g} \pm 454 \mathrm{~g})$
0.187 nominal ( 4.7 mm ) Switches accomodate standard EMC lenses and options. Lenses accomodate one T 1-3/4 mfb lamp or LED.


P/N 421-6/Type 4/GH2150,WL163W


3/4" Centers/401=Single Row/421=Double Row

| \# Stns | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Dim. A | 1.00 | 1.75 | 2.50 | 3.25 | 4.00 | 4.75 | 5.50 | 6.25 |
| Dim. B |  | 0.75 | 1.50 | 2.25 | 3.00 | 3.75 | 4.50 | 5.25 |
| Dim. C | (applies to units wider than 8 stations) |  |  |  |  |  |  |  |
| Dim. D | 2 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |



## ASSEMBLY TYPES AND FUNCTIONS - Series 400 and 500 Assemblies

TYPE 1: INDEPENDENT. Mounting frame only. No interaction between switches.
TYPE 2: MOMENTARY AND LOCKOUT. Each switch has momentary action, no two switches can be actuated at the same time (uses GH2100 momentary switch).

TYPE 3: INDEPENDENTLY MAINTAINED AND LOCKED OUT. Each switch locks down when depressed and can only be released by depressing it again; no two switches can be operated at the same time (uses GH2300/GH2800 switches).

TYPE 4: INTERLOCK AND LOCKOUT. Each switch locks down when
depressed, and is released by pushing any other switch in the same assembly; no two switches can be operated at the same time (uses GH2100/GH2600) switches. (Note: interlock mechanism is external to switch action and thus uses momentary switches).

TYPE 5: MAINTAINED WITH MASTER RELEASE. Each switch locks down when depressed, and is released only by pushing a master release button mounted in the same assembly. One or more switches can be actuated at the same time and all actuated switches are released when the master release button is depressed.

TYPE 7: MAINTAINED WITH REMOTE MASTER RELEASE AND MASTER RELEASE LOCKOUT. Same as Type 6 except that when the master release button is actuated and releases the depressed switches, it prevents further actuation of any of the switches. The master release must then be re-actuated to release the lockout.

TYPE 8: INTERLOCK AND LOCKOUT WITH MASTER RELEASE. Each switch locks down when depressed and is released by any other switch in the assembly or by a master release button in the same assembly.

TYPE 9: INTERLOCK AND LOCKOUT WITH REMOTE MASTER RELEASE. Same as Type 8 except the master release can be located in any remote location. Release button is wired to a solenoid in the assembly which releases the depressed switch.

TYPE 10: INTERLOCK AND LOCKOUT WITH REMOTE MASTER RELEASE AND MASTER RELEASE LOCKOUT. Same as Type 9 except that when the master release button is actuated and releases the locked switch, it prevents further actuation of the switches. The master release must then be re-actuate to release the lockout.

TYPE 6: MAINTAINED WITH REMOTE MASTER RELEASE. Same as Type 5 except release button can be located in any remote location. Release button is wired to a solenoid in the assembly which releases the depressed station(s).

## Series 500

Multi-Switch Interlocking Assembly
Front Panel Mounting
Chrome Plated Barriers Between Stations


P/N 503-4/Type 4/GH2652,WL165W-FG,D327 engr SERIES,500,TYPE,4


P/N 502-2/Type 4/Vert/GH2654,WL163G,R-FG, D327 engr ON, OFF (white fill)

Electro-Mech Series 500 offers a line of front panel mounting assemblies which utilize Series 2100 or Series 2600 pushbutton switches. These assemblies feature long lasting chrome barriers that border each individual lens and adds a clean and durable appearance to the front panel. Assemblies are available in four styles with each being able to utilize all ten types of tracking action and switching sequences, as listed with the Series 400 specifications. The chart below shows the dimensional configurations for three of the four different styles (single row or double row, 0.87 " or 1.00 " centers) and can be custom modified to meet specific requirements.

Mounting: Series 500 assemblies push in from the front of the panel and attach with a mating " $U$ " shaped mounting bracket behind the panel. Mounting bracket is attached to the switch assembly with screws as provided behind the panel.

[63.5]

Series 502 (uses L163 lens)
Single Row - 7/8" Centers

| \# Stns | A | $\mathbf{B}$ | $\mathbf{C}$ | $\mathbf{D}$ | $\mathbf{E}$ | $\mathbf{F}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | 0.976 | 0.488 | 1.35 | 1.00 | 0.986 | 0.877 |
| $\mathbf{2}$ | 1.851 | 0.488 | 1.35 | 1.00 | 1.861 | 0.877 |
| $\mathbf{3}$ | 2.726 | 0.488 | 1.35 | 1.00 | 2.736 | 0.877 |
| $\mathbf{4}$ | 3.601 | 0.488 | 1.35 | 1.00 | 3.611 | 0.877 |
| $\mathbf{5}$ | 4.476 | 0.488 | 1.35 | 1.00 | 4.486 | 0.877 |
| $\mathbf{6}$ | 5.351 | 0.488 | 1.35 | 1.00 | 5.361 | 0.877 |
| $\mathbf{7}$ | 6.226 | 0.488 | 1.35 | 1.00 | 6.236 | 0.877 |
| $\mathbf{8}$ | 7.101 | 0.488 | 1.35 | 1.00 | 7.111 | 0.877 |
| $\mathbf{9}$ | 7.976 | 0.488 | 1.35 | 1.00 | 7.986 | 0.877 |
| $\mathbf{1 0}$ | 8.851 | 0.488 | 1.35 | 1.00 | 8.861 | 0.877 |
| $\mathbf{1 1}$ | 9.726 | 0.488 | 1.35 | 1.00 | 9.736 | 0.877 |
| $\mathbf{1 2}$ | 10.601 | 0.488 | 1.35 | 1.00 | 10.611 | 0.877 |

Series 503 (uses L165 lens)
Single Row-1" Centers

| \# Stns | A | B | C | D | E | F |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{1}$ | 1.100 | 0.55 | 1.35 | 1.00 | 1.11 | 0.877 |
| $\mathbf{2}$ | 2.100 | 0.55 | 1.35 | 1.00 | 2.11 | 0.877 |
| $\mathbf{3}$ | 3.100 | 0.55 | 1.35 | 1.00 | 3.11 | 0.877 |
| $\mathbf{4}$ | 4.100 | 0.55 | 1.35 | 1.00 | 4.11 | 0.877 |
| $\mathbf{5}$ | 5.100 | 0.55 | 1.35 | 1.00 | 5.11 | 0.877 |
| $\mathbf{6}$ | 6.100 | 0.55 | 1.35 | 1.00 | 6.11 | 0.877 |
| $\mathbf{7}$ | 7.100 | 0.55 | 1.35 | 1.00 | 7.11 | 0.877 |
| $\mathbf{8}$ | 8.100 | 0.55 | 1.35 | 1.00 | 8.11 | 0.877 |
| $\mathbf{9}$ | 9.100 | 0.55 | 1.35 | 1.00 | 9.11 | 0.877 |
| $\mathbf{1 0}$ | 10.100 | 0.55 | 1.35 | 1.00 | 10.11 | 0.877 |
| $\mathbf{1 1}$ | 11.100 | 0.55 | 1.35 | 1.00 | 11.11 | 0.877 |
| $\mathbf{1 2}$ | 12.100 | 0.55 | 1.35 | 1.00 | 12.11 | 0.877 |

Series 522 (uses L163 lens) Double Row - 7/8" Centers - 1" bet. Rows

| \# Stns | A | B | C | D | E | F |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\mathbf{2}$ | 0.976 | 0.488 | 1.35 | 2.00 | 0.986 | 1.88 |
| $\mathbf{4}$ | 1.851 | 0.488 | 1.35 | 2.00 | 1.861 | 1.88 |
| $\mathbf{6}$ | 2.726 | 0.488 | 1.35 | 2.00 | 2.736 | 1.88 |
| $\mathbf{8}$ | 3.601 | 0.488 | 1.35 | 2.00 | 3.611 | 1.88 |
| $\mathbf{1 0}$ | 4.476 | 0.488 | 1.35 | 2.00 | 4.486 | 1.88 |
| $\mathbf{1 2}$ | 5.351 | 0.488 | 1.35 | 2.00 | 5.361 | 1.88 |
| $\mathbf{1 4}$ | 6.226 | 0.488 | 1.35 | 2.00 | 6.236 | 1.88 |
| $\mathbf{1 6}$ | 7.101 | 0.488 | 1.35 | 2.00 | 7.111 | 1.88 |
| $\mathbf{1 8}$ | 7.976 | 0.488 | 1.35 | 2.00 | 7.986 | 1.88 |
| $\mathbf{2 0}$ | 8.851 | 0.488 | 1.35 | 2.00 | 8.861 | 1.88 |
| $\mathbf{2 2}$ | 9.726 | 0.488 | 1.35 | 2.00 | 9.736 | 1.88 |
| $\mathbf{2 4}$ | 10.601 | 0.488 | 1.35 | 2.00 | 10.611 | 1.88 |

# Ordering Information for Multi-Switch Assemblies 

Series 400 and Series 500

|  | Series 400 |  |  |
| :---: | :---: | :---: | :---: |
|  | Sub Panel Mounting |  |  |
| Series \# | \# of Rows | Centers Dim. | Hardware |
| 400 | Single Row | 5/8" centers | Extruded channel |
| 401 | Single Row | 3/4" centers | Extruded channel |
| 402 | Single Row | 7/8" centers | Extruded channel |
| 403 | Single Row | 1 " centers | Extruded channel |
| 411 | Single Row | 3/4" centers | Flat plate with standoffs |
| 412 | Single Row | 7/8" centers | Flat plate with standoffs |
| 413 | Single Row | 1 " centers | Flat plate with standoffs |
| 421 | Double Row | 3/4" centers | 3/4" between switches and |
| 422 | Double Row | 7/8" centers | 7/8" between switches and |
| 423 | Double Row | 1 " centers | $1 "$ between switches and ro |
|  | Series 500 |  |  |
|  | Front Panel Mounting |  |  |
| 502 | Single Row | 7/8" centers | uses 3/4" square lenses |
| 503 | Single Row | 1 " centers | uses 3/4" $\times 7 / 8$ " lenses |
| 522 | Double Row | 7/8" centers b <br> 1" centers bet | witches in the row, ; uses $3 / 4$ " square lenses |
| 523 | Double Row | 1 " centers bet uses $3 / 4$ " x $7 /$ | ches and rows; |

Notes:

1. Chrome barriers are supplied unless otherwise specified. Other colors are black, grey, \& white. 2. Special requirements such as different switches, lenses, and lens legends at different stations require a drawing number (SW4xxxx) to be assigned at no charge.

## Part Number Description for Multi-Station Switch Assemblies



Lens legends: Specify legends by appending "engr " plus the actual characters on the lens. Separate each station by a comma. Separate lines on a single lens with a slash (e.g. engr STOP, READY, STATION/4). Specify photo positive (PP) or photo negative (PN) legend films after the lens color (e.g. L153W/PP).

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