

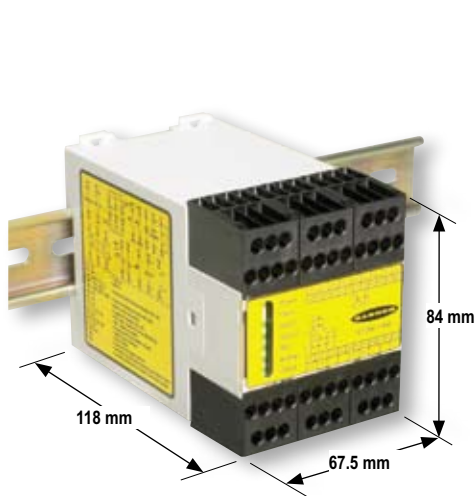
# DUO-TOUCH® SG

## Two-Hand Control Modules, STB Compatible

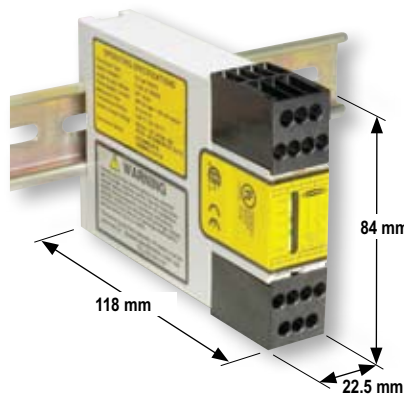
- Modules work with Banner STB self-checking touch buttons or can be retrofitted with existing mechanical palm buttons to create a complete, ergonomic two-hand control system (see page 561).
- To ensure OSHA/ANSI Control Reliability, modules have a diverse-redundant microcontroller circuit and multiple redundant, force-guided (mechanically linked) output contacts.
- Anti-tiedown logic requires that both touch buttons are activated within one-half second or less of each other.
- Designed to meet Category 4 per ISO 13849-1 (EN 954-1) and functional Type IIIC two-hand control per ISO 13851 (EN 574).
- Removable terminal blocks allow convenient wiring and exchanging of modules without rewiring.
- Optional mute inputs allow release of actuating buttons during the non-hazardous portion of the machine cycle.
- Modules easily interface with DUO-TOUCH® Run Bars with STBs for an economical, convenient means for actuation.



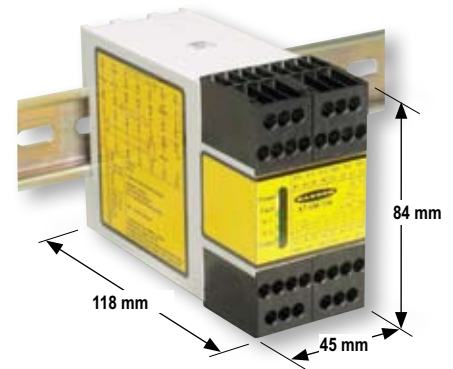
ACCESSORIES  
page  
563



AT-GM-11KM & AT-HM-11KM Models  
(AT-GM-11KM shown)



AT-FM-10K Model



AT-GM-13A & AT-HM-13A Models  
(AT-GM-13A shown)



### DUO-TOUCH® SG Run Bar



Page 564

- Provides convenient economical means for two-hand control actuation
- Simplifies installment
- Includes two STB self-checking touch buttons

### STB Self-Checking Touch Buttons



Page 561

- Delivers highest level of safety for two-hand controls
- Self-checks for internal problems
- Features ergonomic design to prevent repetitive motion stress

# DUO-TOUCH® SG Two-Hand Control Modules

Supply Voltage	Inputs	Safety Outputs	Output Rating	Auxiliary Outputs	Muting	Terminals	Model
24V ac/dc	2 STB*	2 NO	6 amps	—	—	Removable	AT-FM-10K
115V ac/24V dc	2 STB*	4 NO	6 amps	1 NPN, 1 PNP & 1 NC	—	Removable	AT-GM-13A
230V ac/24V dc							AT-HM-13A
115V ac/24V dc	2 STB* & Muting	2 NO	6 amps	1 NPN, 1 PNP & 1 NC	Yes	Removable	AT-GM-11KM
230V ac/24V dc							AT-HM-11KM

NC = Normally Closed, NO = Normally Open


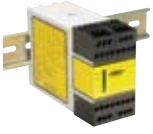



\* May also use two mechanical push buttons, each with one normally open (NO) and one normally closed (NC) contact (Form C). See data sheets for details.

NOTE: Kits are available which include one DUO-TOUCH SG Safety Module and two STB Touch Buttons. STB Touch Buttons are also available separately. See page 561.


- Photoelectrics Sensors
- Fiber Optic Sensors
- Special Purpose Sensors
- Measurement & Inspection Sensors
- Vision
- Wireless
- Lighting & Indicators
- Safety Light Screens
- Safety Laser Scanners
- Fiber Optic Safety Systems
- Safety Controllers & Modules
- Safety Two-Hand Control Modules**
- Safety Interlock Switches
- Emergency Stop & Stop Control

**ACCESSORIES**  
page 563

## DUO-TOUCH® SG Kits — Solid-State STB Touch Buttons (Meets Category IIIC)

Kit	Kit Components†					
	DUO-TOUCH® SG Safety Module	Supply Voltage	Safety Outputs	Auxiliary Outputs	STB Touch Buttons (see page 561)	
					Connection	Model
ATK-VP6	 AT-FM-10K	24V ac/dc	2 NO	—	2 m	STBVP6
ATK-VP6Q					4-Pin Mini QD	STBVP6Q
ATK-VP6Q5					4-Pin Euro QD	STBVP6Q5
ATGMK-VP6	 AT-GM-13A	115V ac/24V dc	4 NO	1 NPN, 1 PNP & 1 NC	2 m	STBVP6
ATGMK-VP6Q					4-Pin Mini QD	STBVP6Q
ATGMK-VP6Q5					4-Pin Euro QD	STBVP6Q5
ATHMK-VP6	 AT-HM-13A	230V ac/24V dc	4 NO	1 NPN, 1 PNP & 1 NC	2 m	STBVP6
ATHMK-VP6Q					4-Pin Mini QD	STBVP6Q
ATHMK-VP6Q5					4-Pin Euro QD	STBVP6Q5
ATGMKM-VP6	 AT-GM-11KM	115V ac/24V dc	2 NO	1 NPN, 1 PNP & 1 NC	2 m	STBVP6
ATGMKM-VP6Q					4-Pin Mini QD	STBVP6Q
ATGMKM-VP6Q5					4-Pin Euro QD	STBVP6Q5
ATHMKM-VP6	 AT-HM-11KM	230V ac/24V dc	2 NO	1 NPN, 1 PNP & 1 NC	2 m	STBVP6
ATHMKM-VP6Q					4-Pin Mini QD	STBVP6Q
ATHMKM-VP6Q5					4-Pin Euro QD	STBVP6Q5










NC = Normally Closed, NO = Normally Open

 **Connection options:** A model with a QD requires a mating cordset (see page 563).

For 9 m cable, add suffix W/30 to the 2 m model number (example, ATK-VP6 W/30).

† Contact factory for DUO-TOUCH SG kits with e/m relay STB Buttons.

## DUO-TOUCH® SG AT-FM-10K Modules Specifications

<b>Supply Voltage and Current</b>	24V dc $\pm 15\%$ @ 150 mA (use a SELV-rated supply according to EN IEC 60950, NEC Class 2) 24V ac $\pm 15\%$ @ 150 mA, 50-60 Hz $\pm 5\%$ (use an NEC Class 2-rated transformer) To comply with UL and CSA standards, the installation's isolated secondary power supply circuit must incorporate a method to limit the overvoltage to 0.8 kV.													
<b>Supply Protection Circuitry</b>	Protected against transient voltages and reverse polarity													
<b>Overvoltage Category</b>	<b>Output relay contact voltage of 1V to 150V ac/dc:</b> Category III <b>Output relay contact voltage of 151V to 250V ac/dc:</b> Category II (Category III, if appropriate overvoltage reduction is provided, as described in datasheet.)													
<b>Pollution Degree</b>	2													
<b>Safety Outputs</b>	<p>Each normally open output channel is a series connection of contacts from two forced-guided (mechanically linked) relays, K1-K2.</p> <p><b>Contacts:</b> AgNi, 5 <math>\mu</math>m gold-plated</p> <p><b>Low Current Rating:</b> The 5 <math>\mu</math>m gold-plated contacts allow the switching of low current/low voltage. In these low-power applications, multiple contacts can also be switched in series (e.g., "dry switching"). <b>To preserve the gold plating on the contacts, do not exceed the following max. values at any time</b></p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: center;"><b>Min. voltage:</b> 1V ac/dc</td> <td style="text-align: center;"><b>Max. voltage:</b> 60V</td> </tr> <tr> <td style="text-align: center;"><b>Min. current:</b> 5 mA ac/dc</td> <td style="text-align: center;"><b>Max. current:</b> 300 mA</td> </tr> <tr> <td style="text-align: center;"><b>Min. power:</b> 5 mW (5 mVA)</td> <td style="text-align: center;"><b>Max. power:</b> 7 W (7 VA)</td> </tr> </table> <p><b>High Current Rating:</b> If higher loads must be switched through one or more of the contacts, the minimum and maximum values of the contact(s) changes to:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center; vertical-align: middle;">  </td> <td style="padding: 5px;"> <b>Minimum</b>  <b>Voltage:</b> 15V ac/dc  <b>Current:</b> 30 mA ac/dc  <b>Power:</b> 0.45 W (0.45 VA)         </td> <td style="padding: 5px;"> <b>Maximum</b>            250V ac/dc / 24V dc, 6 A resistive            B300, R300 per UL508         </td> </tr> <tr> <td style="text-align: center; vertical-align: middle;">  </td> <td style="padding: 5px;"> <b>Minimum</b>  <b>Voltage:</b> 15V ac/dc  <b>Current:</b> 30 mA ac/dc  <b>Power:</b> 0.45 W (0.45 VA)         </td> <td style="padding: 5px;"> <b>Maximum</b>            250V ac/dc / 24V dc, 6 A resistive            IEC 60947-5-1            AC15 230V ac, 3A; DC-13: 24V dc, 2A         </td> </tr> </table> <p><b>Mechanical life:</b> 20,000,000 operations  <b>Electrical life (switching cycles of the output contacts, resistive load):</b> 150,000 cycles @ 900 VA; 1,000,000 cycles @ 250 VA; 2,000,000 cycles @ 150 VA; 5,000,000 cycles @ 100 VA  <b>NOTE: Transient suppression is recommended when switching inductive loads. Install suppressors across load. Never install suppressors across output contacts.</b></p>		<b>Min. voltage:</b> 1V ac/dc	<b>Max. voltage:</b> 60V	<b>Min. current:</b> 5 mA ac/dc	<b>Max. current:</b> 300 mA	<b>Min. power:</b> 5 mW (5 mVA)	<b>Max. power:</b> 7 W (7 VA)		<b>Minimum</b> <b>Voltage:</b> 15V ac/dc <b>Current:</b> 30 mA ac/dc <b>Power:</b> 0.45 W (0.45 VA)	<b>Maximum</b> 250V ac/dc / 24V dc, 6 A resistive B300, R300 per UL508		<b>Minimum</b> <b>Voltage:</b> 15V ac/dc <b>Current:</b> 30 mA ac/dc <b>Power:</b> 0.45 W (0.45 VA)	<b>Maximum</b> 250V ac/dc / 24V dc, 6 A resistive IEC 60947-5-1 AC15 230V ac, 3A; DC-13: 24V dc, 2A
<b>Min. voltage:</b> 1V ac/dc	<b>Max. voltage:</b> 60V													
<b>Min. current:</b> 5 mA ac/dc	<b>Max. current:</b> 300 mA													
<b>Min. power:</b> 5 mW (5 mVA)	<b>Max. power:</b> 7 W (7 VA)													
	<b>Minimum</b> <b>Voltage:</b> 15V ac/dc <b>Current:</b> 30 mA ac/dc <b>Power:</b> 0.45 W (0.45 VA)	<b>Maximum</b> 250V ac/dc / 24V dc, 6 A resistive B300, R300 per UL508												
	<b>Minimum</b> <b>Voltage:</b> 15V ac/dc <b>Current:</b> 30 mA ac/dc <b>Power:</b> 0.45 W (0.45 VA)	<b>Maximum</b> 250V ac/dc / 24V dc, 6 A resistive IEC 60947-5-1 AC15 230V ac, 3A; DC-13: 24V dc, 2A												
<b>Output Response Time</b>	35 milliseconds maximum													
<b>Input Requirements</b>	Outputs from actuating devices must each be capable of switching 25 mA @ 24V dc (nominal).													
<b>Simultaneity Monitoring Period</b>	$\leq 500$ milliseconds													
<b>Status Indicators</b>	<b>4 green LEDs:</b> Power ON Input 1 energized Input 2 energized Output	<b>1 red LED:</b> Fault												
<b>Construction</b>	Polycarbonate housing													
<b>Environmental Rating</b>	IEC IP20													
<b>Mounting</b>	Mounts to standard 35 mm DIN rail track. Safety Module must be installed inside an enclosure rated NEMA 3 (IP54), or better.													
<b>Vibration Resistance</b>	10 to 55 Hz @ 0.35 mm displacement per IEC 60068-2-6													
<b>Operating Conditions</b>	<b>Temperature:</b> 0° to +50° C <b>Relative humidity:</b> 90% @ +50° C (non-condensing)													
<b>Design Standards</b>	 : Cat. 4 PL e, per EN ISO 13849-1; SIL 3 per IEC 61508 and IEC 62061; Type IIIC per ISO 13851 (EN574) (when used with STBs or hard contacts)													
<b>Certifications</b>	  PRESS CONTROL 8N35													
<b>Wiring Diagrams</b>	WD065 (p. 818)													

## DUO-TOUCH® SG AT-..M-13A Modules Specifications

<b>Supply Voltage and Current</b>	<b>AT-GM-13A:</b> 115V ac, ±15%; 50/60 Hz & 24V dc, ±15%, 10% max. ripple <b>AT-HM-13A:</b> 230V ac, ±15%; 50/60 Hz & 24V dc, ±15%, 10% max. ripple										
<b>Power Consumption</b>	Approx. 4 W/7 VA										
<b>Supply Protection Circuitry</b>	Protected against transient voltages and reverse polarity										
<b>Safety Outputs (including Auxiliary NC output 51/52)</b>	<p><b>Outputs (K1 and K2):</b> four redundant (total of eight) forced-guided safety relay contacts</p> <p><b>Contact ratings:</b></p> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"><b>Min. voltage:</b> 15V ac/dc</td> <td style="width: 50%;"><b>Max. voltage:</b> 250V ac or 250V dc</td> </tr> <tr> <td><b>Min. current:</b> 30 mA</td> <td><b>Max. current:</b> 6A ac or dc (resistive load)</td> </tr> <tr> <td><b>Min. power:</b> 0.45 VA (0.45 W)</td> <td><b>Max. power:</b> 1500 VA (200 W)</td> </tr> <tr> <td colspan="2"><b>Mechanical life:</b> 50,000,000 operations</td> </tr> <tr> <td colspan="2"><b>Electrical life:</b> 150,000 cycles (typically @ 1.5 kVA switching power)</td> </tr> </table> <p><b>NOTE: Transient suppression is recommended when switching inductive loads. Install suppressors across load. Never install suppressors across output contacts.</b></p>	<b>Min. voltage:</b> 15V ac/dc	<b>Max. voltage:</b> 250V ac or 250V dc	<b>Min. current:</b> 30 mA	<b>Max. current:</b> 6A ac or dc (resistive load)	<b>Min. power:</b> 0.45 VA (0.45 W)	<b>Max. power:</b> 1500 VA (200 W)	<b>Mechanical life:</b> 50,000,000 operations		<b>Electrical life:</b> 150,000 cycles (typically @ 1.5 kVA switching power)	
<b>Min. voltage:</b> 15V ac/dc	<b>Max. voltage:</b> 250V ac or 250V dc										
<b>Min. current:</b> 30 mA	<b>Max. current:</b> 6A ac or dc (resistive load)										
<b>Min. power:</b> 0.45 VA (0.45 W)	<b>Max. power:</b> 1500 VA (200 W)										
<b>Mechanical life:</b> 50,000,000 operations											
<b>Electrical life:</b> 150,000 cycles (typically @ 1.5 kVA switching power)											
<b>Auxiliary Supply Voltage (for Solid-State outputs)</b>	24V dc @ 1A (between Y30 & Y33)										
<b>Auxiliary Solid-State Output Current</b>	500 mA max., short circuit protected (Y32 or Y33)										
<b>Output Response Time</b>	35 milliseconds max. ON/OFF										
<b>Input Requirements</b>	Outputs from actuating devices (1 NO and 1 NC) must each be capable of switching 20 mA @ 12V dc.										
<b>Simultaneity Monitoring Period</b>	≤ 500 milliseconds										
<b>Z1/Z2 Courtesy Voltage</b>	24V dc @ 150 mA (for STB button power)										
<b>External Device Monitoring (EDM)</b>	One pair of terminals (Y1 and Y2) are provided to monitor the state of external devices controlled by the safety outputs. Each device must be capable of switching 15 to 30V dc at 10-50 mA.										
<b>Status Indicators</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"><b>4 green LEDs:</b> Power ON Input 1 energized Input 2 energized Output</td> <td style="width: 50%; vertical-align: top;"><b>1 red LED:</b> Fault</td> </tr> </table>	<b>4 green LEDs:</b> Power ON Input 1 energized Input 2 energized Output	<b>1 red LED:</b> Fault								
<b>4 green LEDs:</b> Power ON Input 1 energized Input 2 energized Output	<b>1 red LED:</b> Fault										
<b>Environmental Rating</b>	Polycarbonate. Rated NEMA 1; IP20										
<b>Mounting</b>	Mounts to standard 35 mm DIN rail track. Safety Module must be installed inside an enclosure rated NEMA 3 (IP54), or better.										
<b>Vibration Resistance</b>	10 to 55 Hz @ 0.35 mm displacement per IEC 60068-2-6										
<b>Operating Conditions</b>	<b>Temperature:</b> 0° to +50° C <b>Relative humidity:</b> 90% @ +50° C (non-condensing)										
<b>Design Standards</b>	Designed to comply with Category 4 per ISO 13849-1 (EN 954-1); Type IIIC per ISO 13851 (EN 574)										
<b>Certifications</b>	<div style="display: flex; align-items: center;"> <div> <p><b>Important Notice:</b> <b>European Community Machinery Directive 2006/42/EC</b> The DUO-TOUCH SG AT-..M-13A Two-Hand Control Modules comply with Machine Directive 98/37/EC. After December 31, 2011, when Machine Directive 2006/42/EC will be in force, the DUO-TOUCH SG AT-..M-13A Two-Hand Control Modules can only be installed as a replacement component within the European Union (EU). For more information, please see <a href="http://www.bannerengineering.com/144763">www.bannerengineering.com/144763</a> or call 1-888-373-6767.</p> </div> </div>										
<b>Wiring Diagrams</b>	<b>AT-..M-13A models:</b> WD066 (p. 819) <b>AT-..M-13A to STB Buttons:</b> WD068 (p. 820)										

- Photoelectrics Sensors
- Fiber Optic Sensors
- Special Purpose Sensors
- Measurement & Inspection Sensors
- Vision
- Wireless
- Lighting & Indicators
- Safety Light Screens
- Safety Laser Scanners
- Fiber Optic Safety Systems
- Safety Controllers & Modules
- Safety Two-Hand Control Modules**
- Safety Interlock Switches
- Emergency Stop & Stop Control

- DUO-TOUCH SG**
- STB BUTTONS
- DUO-TOUCH RUN BARS

**DUO-TOUCH® SG AT-..M-11KM with Muting Specifications**

<b>Supply Voltage and Current</b>	<b>AT-GM-11KM:</b> 115V ac, ± 15%; 50/60Hz & 24V dc, +/- 15%, 10% max. ripple <b>AT-HM-11KM:</b> 230V ac, ± 15%; 50/60Hz & 24V dc, +/- 15%, 10% max. ripple														
<b>Power Consumption</b>	Approx. 4 W / 7 VA														
<b>Supply Protection Circuitry</b>	Protected against transient voltages and reverse polarity														
<b>Safety Outputs</b>	<b>Outputs (K1 and K2):</b> two redundant (total of four) safety relay (forced-guided) contacts <b>Contact ratings:</b> <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"><b>Min. voltage:</b> 15V ac/dc</td> <td style="width: 50%;"><b>Max. voltage:</b> 250V ac or 250V dc</td> </tr> <tr> <td><b>Min. current:</b> 30 mA</td> <td><b>Max. current:</b> 6A ac or dc (resistive load)</td> </tr> <tr> <td><b>Min. power:</b> 0.45 W (0.45 VA)</td> <td><b>Max. power:</b> 1500 VA, 200 watts</td> </tr> <tr> <td colspan="2"><b>Mechanical life:</b> 50,000,000 operations</td> </tr> <tr> <td colspan="2"><b>Electrical life:</b> 150,000 cycles (typically @ 1.5 kVA switching power)</td> </tr> </table> <p><b>NOTE: Transient suppression is recommended when switching inductive loads. Install suppressors across load. Never install suppressors across output contacts.</b></p>	<b>Min. voltage:</b> 15V ac/dc	<b>Max. voltage:</b> 250V ac or 250V dc	<b>Min. current:</b> 30 mA	<b>Max. current:</b> 6A ac or dc (resistive load)	<b>Min. power:</b> 0.45 W (0.45 VA)	<b>Max. power:</b> 1500 VA, 200 watts	<b>Mechanical life:</b> 50,000,000 operations		<b>Electrical life:</b> 150,000 cycles (typically @ 1.5 kVA switching power)					
<b>Min. voltage:</b> 15V ac/dc	<b>Max. voltage:</b> 250V ac or 250V dc														
<b>Min. current:</b> 30 mA	<b>Max. current:</b> 6A ac or dc (resistive load)														
<b>Min. power:</b> 0.45 W (0.45 VA)	<b>Max. power:</b> 1500 VA, 200 watts														
<b>Mechanical life:</b> 50,000,000 operations															
<b>Electrical life:</b> 150,000 cycles (typically @ 1.5 kVA switching power)															
<b>Auxiliary Supply Voltage (for solid-state outputs)</b>	24V dc @ 1A (applied between Y30 & Y31)														
<b>Auxiliary Solid-State Output Current</b>	500 mA max., short circuit protected, Y32 is a PNP output, Y33 is an NPN output														
<b>Output Response Time</b>	35 milliseconds max. ON/OFF														
<b>Input Requirements</b>	Outputs from actuating devices must each be capable of switching up to 20 mA @ 12V dc.														
<b>Simultaneity Monitoring Period</b>	≤ 500 milliseconds														
<b>Z1/Z2 Courtesy Voltage</b>	24V dc @ 150 mA (for STB button power, separate from Auxiliary output, unregulated)														
<b>External Device Monitoring (EDM)</b>	One pair of terminals (Y1 and Y2) are provided to monitor the state of external devices controlled by the safety outputs. Each device must be capable of switching 15 to 30V dc at 10-50 mA.														
<b>Muting Device Inputs (M1, M2)</b>	The muting devices work as a pair (M1 and M2). The simultaneity requirement is that they be "closed" within 3 seconds of each other to initiate a mute condition or allow a mute cycle, assuming all other conditions are met. Each muting device must be capable of switching 15 to 30V dc at 10-50 mA.														
<b>Mute Enable Input (ME)</b>	Mute Enable input must be closed in order to start a mute cycle. Opening this input after a mute cycle has begun has no effect. The switching device must be capable of switching 15 to 30V dc at 10-50 mA.														
<b>Safety Stop Interface (SSI)</b>	This input consists of two concurrent channels (SSI-A and SSI-B) and is always active. Any time either or both channels open, the Safety Outputs will go OFF. When using the SSI, the external device must be capable of switching 15 to 30V dc at 10-50 mA.														
<b>Status Indicators</b>	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"><b>6 green LED indicators</b></td> <td style="width: 50%;"><b>1 red LED indicator</b></td> </tr> <tr> <td>Power ON</td> <td>Fault</td> </tr> <tr> <td>Input 1 energized</td> <td></td> </tr> <tr> <td>Input 2 energized</td> <td></td> </tr> <tr> <td>SSI inputs closed</td> <td></td> </tr> <tr> <td>Muting activated</td> <td></td> </tr> <tr> <td>Output</td> <td></td> </tr> </table>	<b>6 green LED indicators</b>	<b>1 red LED indicator</b>	Power ON	Fault	Input 1 energized		Input 2 energized		SSI inputs closed		Muting activated		Output	
<b>6 green LED indicators</b>	<b>1 red LED indicator</b>														
Power ON	Fault														
Input 1 energized															
Input 2 energized															
SSI inputs closed															
Muting activated															
Output															
<b>Environmental Rating</b>	Polycarbonate. Rated NEMA 1; IP20														
<b>Mounting</b>	Mounts to standard 35 mm DIN rail track. Safety Module must be installed inside an enclosure rated NEMA 3 (IP54), or better.														
<b>Vibration Resistance</b>	10 to 55 Hz @ 0.35 mm displacement per IEC 60068-2-6														
<b>Operating Conditions</b>	<b>Temperature:</b> 0° to +50° C <b>Relative humidity:</b> 90% @ +50° C (non-condensing)														
<b>Design Standards</b>	Designed to comply with Category 4 per ISO 13849-1 (EN 954-1); Type IIIC per ISO (EN 574)														
<b>Certifications</b>	For certification information, please call 1-888-373-6767.														
<b>Wiring Diagrams</b>	<b>AT-..M-11KM:</b> WD067 (p. 820) <b>AT-..M-11KM to STB Buttons:</b> WD068 (p. 820)														



**WD064**

**DUO-TOUCH® SG Two-Hand Control Modules, STB Compatible**

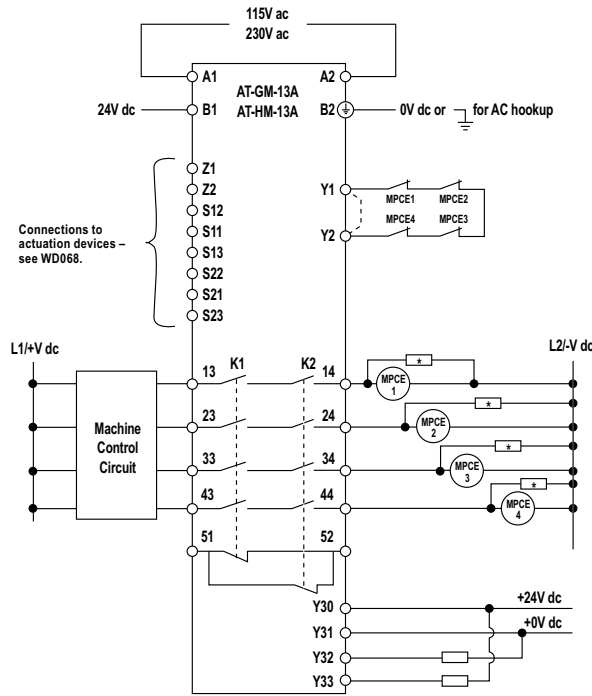
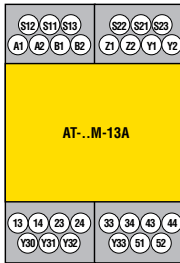


Page 552

**Models**

- AT-GM-13A
- AT-HM-13A

**AT-..M-13A  
Terminal Locations**



Connections to actuation devices – see WD068.

\* Arc Suppressors. See manual for specific warnings.

Wiring diagrams are for information only. See appropriate manuals for all specific warnings, cautions and information for use.

**WD065**

**DUO-TOUCH® SG Two-Hand Control Modules, STB Compatible**

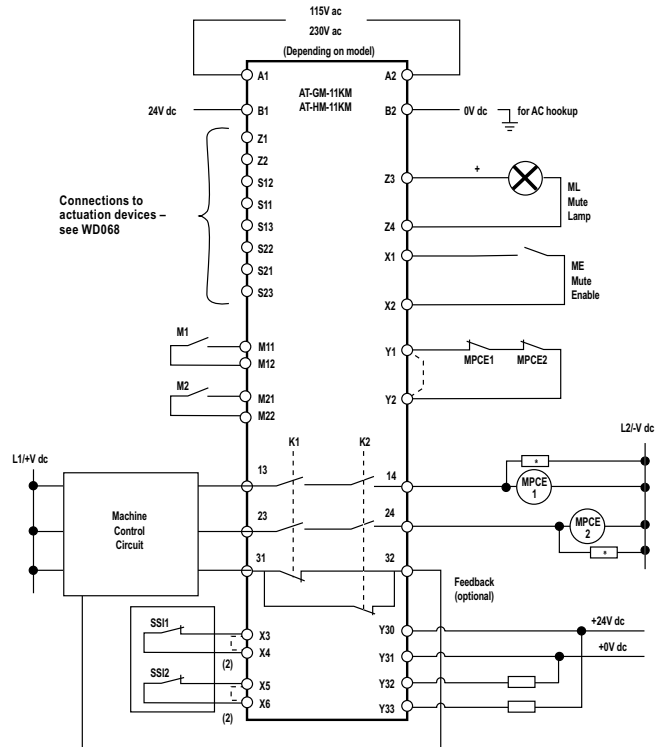
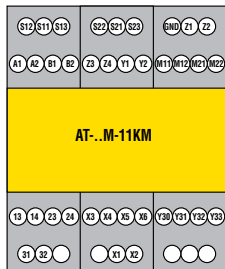


Page 552

**Models**

- AT-GM-11KM
- AT-HM-11KM

**AT-..M-10K  
Terminal Locations**



Connections to actuation devices – see WD068

(2) Jumper SSI inputs if not used

\* Arc Suppressors. See manual for specific warnings.

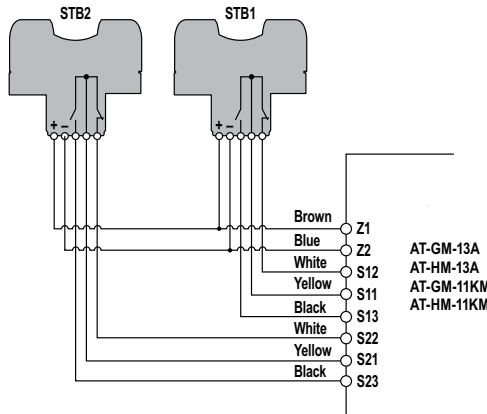
Wiring diagrams are for information only. See appropriate manuals for all specific warnings, cautions and information for use.


More on next page

WD066

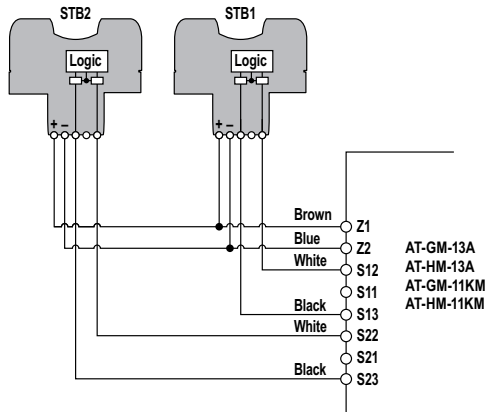
DUO-TOUCH® SG Two-Hand Control Modules, STB Touch-Button with Contact Output


2-Channel EDM with Interface Model



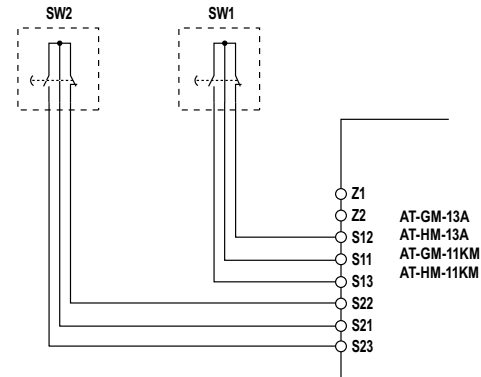
 Wiring diagrams are for information only. See appropriate manuals for all specific warnings, cautions and information for use.


AT-..M-13A and AT-..M-11K to Two STB Touch Buttons with PNP (Sourcing) Outputs



 Wiring diagrams are for information only. See appropriate manuals for all specific warnings, cautions and information for use.

AT-..M-13A and AT-..M-11KM to Two Mechanical Push Buttons with Contact Outputs



 Wiring diagrams are for information only. See appropriate manuals for all specific warnings, cautions and information for use.

More on next page 

**WD067**

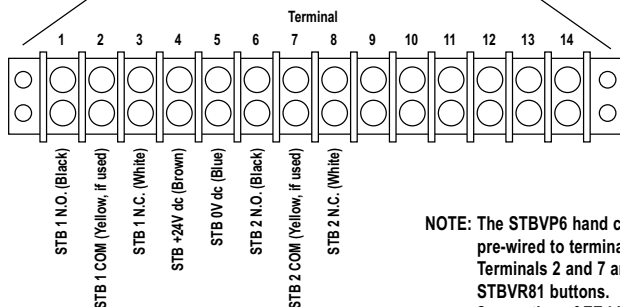
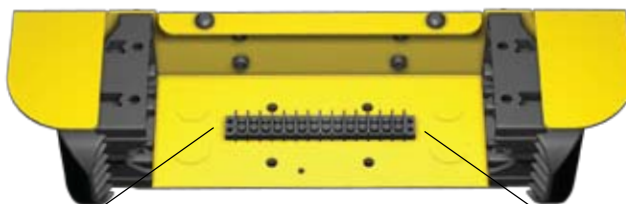
**DUO-TOUCH® Run Bar with STBs**



Page 560

**Models**

- STBVP6-RB1..



**NOTE:** The STBVP6 hand control buttons are pre-wired to terminals 1, 3, 4, 5, 6 and 8. Terminals 2 and 7 are reserved for use of STBVR81 buttons. Connection of EZ-LIGHT indicator(s) and QD connectors not shown. (See data sheet for details)

Wiring diagrams are for information only. See appropriate manuals for all specific warnings, cautions and information for use.

**WD068**

**EZ-LIGHT™ for Two-Hand Control**



Page 432

**Models**

- K50LGRYB11P
- T30GRYB11P

LED Function	Brown Wire	Gray Wire	Black Wire	White Wire	Typical Function
Red ON	+V dc	—	—	—	Stop and/or Not Ready
Blue ON	+V dc	+V dc	—	—	Stopped, but Ready/Enabled
Green ON	+V dc	+V dc	+V dc	—	Go
Yellow ON	+V dc	+V dc	+V dc	+V dc	Mute Condition
Red Flashing	Any other hookup combination				Abnormal State

**NOTES:**

- Blue wire connected to 0V dc
- Supply Voltage and Current = 10 to 30V dc, 60 mA max.