

# TWO-HAND CONTROL MODULES

## Selection Chart

TWO-HAND  
CONTROL MODULES

TWO-HAND CONTROL MODULES

Type	Model	Catalog Page	Type	Supply Voltage	Inputs	Safety Outputs	Output Rating	Auxiliary Outputs	Housing Width
DUO-TOUCH® SG	AT-FM-10K 	Page 87	IIIC	24V ac/dc	2 STB*	<b>2 NO</b>	6 amps	—	22.5 mm
	AT-GM-13A 	Page 87	IIIC	115V ac/ 24V dc	2 STB*	<b>4 NO</b>	6 amps	1 NPN, 1 PNP & 1 NC	45 mm
	AT-HM-13A 	Page 87	IIIC	230V ac/ 24V dc	2 STB*	<b>4 NO</b>	6 amps	1 NPN, 1 PNP & 1 NC	45 mm
	AT-GM-11KM 	Page 87	IIIC	115V ac/ 24V dc	2 STB* & Muting	<b>2 NO</b>	6 amps	1 NPN, 1 PNP & 1 NC	67.5 mm
	AT-HM-11KM 	Page 87	IIIC	230V ac/ 24V dc	2 STB* & Muting	<b>2 NO</b>	6 amps	1 NPN, 1 PNP & 1 NC	67.5 mm
DUO-TOUCH®	AT-AM-2A 	Page 97	IIIA/B	115V ac	2 OTB**	<b>2 NO</b>	4 amps	1 NC	45 mm
	AT-BM-2A 	Page 97	IIIA/B	230V ac	2 OTB**	<b>2 NO</b>	4 amps	1 NC	45 mm
	AT-FM-2A 	Page 97	IIIA/B	24V ac/dc	2 OTB**	<b>2 NO</b>	4 amps	1 NC	45 mm

NC = Normally Closed, NO = Normally Open

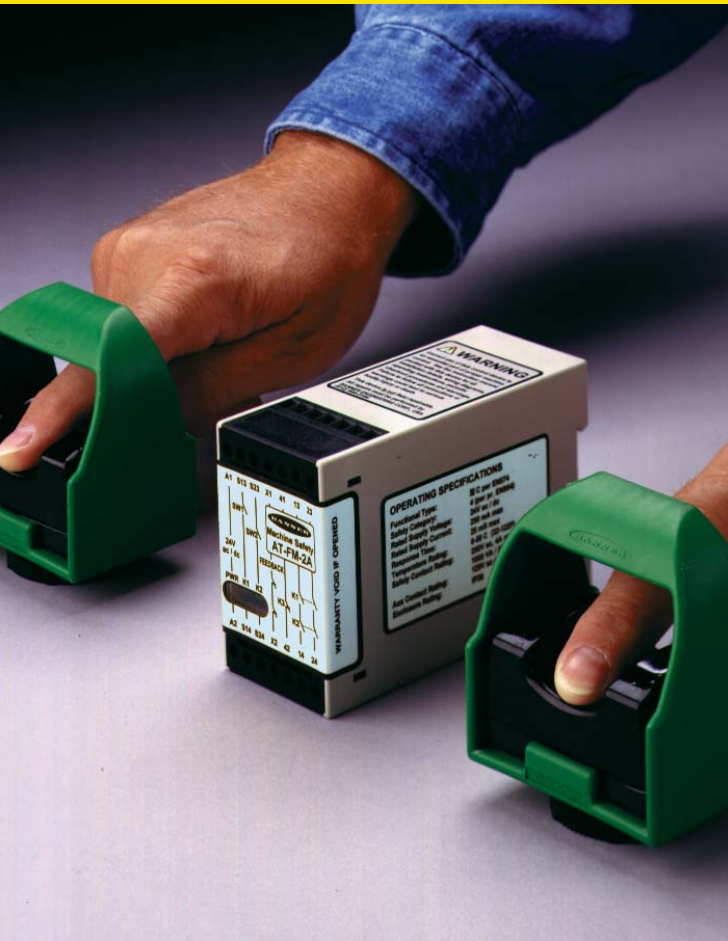
\* May also use two mechanical push buttons, each with one normally open (NO) and one normally closed (NC) contact (Form C). See data sheets for details.

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

# DUO-TOUCH®

## Two-Hand Control Modules, OTB Compatible

- Monitors a pair of mechanical push buttons or OTB optical touch buttons.
- Permits machine operation only when the operator has both hands on the controls.
- Responds in 25 milliseconds or less.
- Meets Type IIIA/B requirements for Safety Category 1 and 3.
- Monitors the status of machine control elements.



TWO-HAND CONTROL MODULES

DUO-TOUCH® SG MODULES

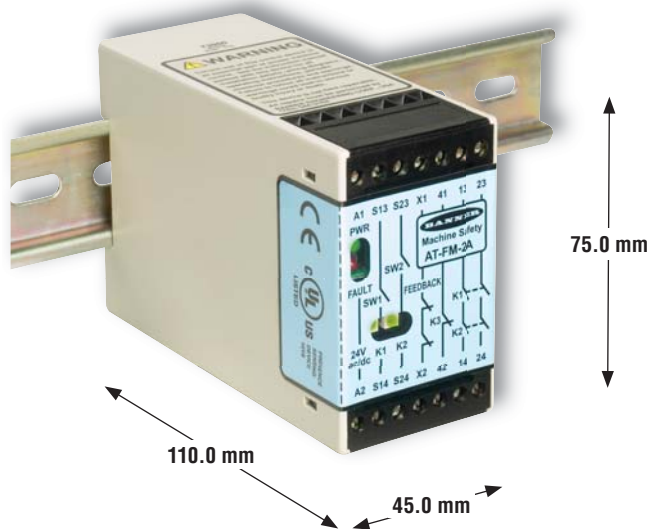
STB BUTTONS

DUO-TOUCH® MODULES

OTB BUTTONS

### DUO-TOUCH® Two-Hand Control Modules, OTB Compatible

- 24V ac/dc, 115V ac, or 230V ac
- Three green and one red LED indicators
- NEMA 1 polycarbonate housing
- Standard 35 mm DIN rail track mounting



**MORE INFO ONLINE** [Detailed Dimensions](#)

**AT-..M-2A Models**  
(AT-FM-2A Module shown)

## TWO-HAND CONTROL MODULES

### DUO-TOUCH® Modules

## DUO-TOUCH® Two-Hand Control Modules, OTB Compatible






Models	Supply Voltage	Inputs	Safety Outputs	Output Rating	Auxiliary Outputs	Terminals	Timing Diagrams	Data Sheet
AT-AM-2A	115V ac	2 OTB*	2 NO	4 amps	1 NC	Fixed	TD003 (p. 239)	47550
AT-BM-2A	230V ac							
AT-FM-2A	24V ac/dc							

NC = Normally Closed, NO = Normally Open

\* May also use two mechanical push buttons, each with one normally open (NO) contact. See data sheet for details.

NOTE: Kits are available which include one DUO-TOUCH Safety Module and two OTB Touch Buttons. OTB Touch Buttons are also available separately. See page 100.


## DUO-TOUCH® Kits – e/m Relay OTB Touch Buttons

Kit	Kit Components				
	DUO-TOUCH Safety Module	Supply Voltage	Safety Outputs	OTB Touch Buttons	
				Model	Cable*
AT-AM-K5	 AT-AM-2A	115V ac	2 NO	OTBA5	2 m
AT-AM-K5Q				OTBA5QD	5-Pin Mini QD
AT-BM-K5	 AT-BM-2A	230V ac	2 NO	OTBB5	2 m
AT-BM-K5Q				OTBB5QD	5-Pin Mini QD
AT-FM-K81	 AT-FM-2A	24V ac/dc	2 NO	OTBVR81	2 m
AT-FM-K81Q				OTBVR81QD	5-Pin Mini QD

NC = Normally Closed, NO = Normally Open

\* For 9 m cable, add suffix W/30 to the 2 m model number (example, AT-AM-K5 W/30). A model with a QD requires a mating cable. QD cables are ordered separately (see page 178).

## DUO-TOUCH® Kits – Solid-State OTB Touch Buttons

Kit	Kit Components				
	DUO-TOUCH Safety Module	Supply Voltage	Safety Outputs	OTB Touch Buttons	
				Model	Cable*
AT-FM-K6	 AT-FM-2A	24V ac/dc	2 NO	OTBVN6 & OTBVP6	2 m
AT-FM-K6Q				OTBVN6 & OTBVP6	4-Pin Mini QD

NC = Normally Closed, NO = Normally Open

\* For 9 m cable, add suffix W/30 to the 2 m model number (example, AT-FM-K6 W/30). A model with a QD requires a mating cable. QD cables are ordered separately (see page 178).

## DUO-TOUCH® Safety Modules Specifications

<b>Supply Voltage and Current</b>	<b>Model AT-AM-2A:</b> 115V ac ±15% at 100 mA <b>Model AT-BM-2A:</b> 230V ac ±15% at 50 mA <b>Model AT-FM-2A:</b> 24V ac/dc ±15% at 250 mA	
<b>Supply Protection Circuitry</b>	Protected against transient voltages and reverse polarity (dc hookup is without regard to 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> <b>Max. voltage:</b> 250V ac or 250V dc <b>Max. current:</b> 4A ac or dc (resistive load) <b>Max. power:</b> 1000 VA, 200 watts <b>Mechanical life:</b> 10,000,000 operations <b>Electrical life:</b> 100,000 cycles (typically @ 1.0 kVA switching power)  <b>NOTE: Transient suppression is recommended when switching inductive loads. Install suppressors across load. Never install suppressors across output contacts.</b>  <b>Auxiliary Monitor Output (K3):</b> One non-safety relay contact <b>Maximum switching voltage:</b> 125V ac or dc <b>Maximum switching current:</b> 500 mA (resistive load)	
<b>Output Response Time</b>	25 milliseconds maximum	
<b>Input Requirements</b>	Outputs from actuating devices must each be capable of switching 40 to 100 mA @ 12 to 18V dc.	
<b>Simultaneity Monitoring Period</b>	300 milliseconds (typical) < 500 milliseconds under single-fault conditions	
<b>Status Indicators</b>	<b>3 green LED indicators:</b> Power ON K1 energized K2 energized	<b>1 red LED indicator:</b> Fault
<b>Housing</b>	Polycarbonate. Rated NEMA 1; IEC IP20	
<b>Mounting</b>	Mounts to standard 35 mm DIN rail track. Safety Module must be installed inside an enclosure rated NEMA 3 (IEC IP54), or better.	
<b>Vibration Resistance</b>	10 to 55Hz @ 0.35 mm displacement per IEC 68-2-6	
<b>Operating Conditions</b>	<b>Temperature:</b> 0° to +50° C <b>Relative humidity:</b> 90% @ +50° C (non-condensing)	
<b>Safety Category</b>	1 and 3 per ISO 13849-1; Type IIIA/B per ISO 13851 (EN574) (Dependent on hookup and installation of the hand controls)	
<b>Certifications</b>	For a list of certifications see page 236.	
<b>Wiring Diagrams</b>	<b>AT-..M-2A models:</b> WD035 (p. 266) <b>AT-..M-2A to OTB Buttons:</b> WD037 (p. 267)	