

Interlock Switches

Tongue Switches

Trojan 5 & 6



Description

The Trojan family is a universal tongue (or key) actuated safety interlock switch designed to fit at the leading edge of sliding, hinged or lift-off guards. The dual key entry slots and rotatable head, movable only by releasing the cover screws, allow four actuator entry options. The Trojan contains all of the safety related functions—i.e., forced guided contacts, tamper resistant mechanism—allowing the machine to be safeguarded in compliance with the machine directive.

Operation of the switch is achieved through the insertion of a specially profiled stainless steel key that is permanently mounted to the leading edge of the guard door. The Trojan actuator includes a self-ejecting mechanism that prevents operation of the switch if the actuator is not mounted to the guard door (e.g., if the operator uses a spare key).

The Trojan 6 is available with either 4 N.C. safety contacts, 3 N.C. safety contacts and 1 N.O. auxiliary contact or 2 N.C. safety contacts and 2 N.O. auxiliary contacts. The unit is sealed to IP67 and has three M20 conduit entries.

Features

- Strong and versatile, can be used in most applications
- Self-ejecting tamper resistant actuator, only operates when mounted to the guard
- Four possible actuator entry points, easy to install
- GD2 style available for demanding applications
- Conforms to EN1088, EN292, EN60947-5-1, EN60204-1

Specifications

Standards	EN954-1, ISO13849-1, IEC/EN60204-1, NFPA79, EN1088, ISO14119, IEC/EN60947-5-1, ANSI B11.19, AS4024.1
Category	Cat. 1 Device per EN954-1 Dual channel interlocks suitable for Cat. 3 or 4 systems
Approvals	CE marked for all applicable directives, cULus and BG
Safety Contacts	4 N.C. or 3 N.C. or 2 N.C. direct opening action
Designation/Utilization Cat. AC (Ue) (Ie) DC	500V 250V 100V 1A 2A 5A 250V 0.5A 24V 2A
Max Switched Current/ Voltage/Load	500V/500VA
Thermal Current (Ith)	10A
Min Current	5V 5mA DC
Safety Contact Gap	>2 x 2mm (0.078in)
Rtd. Insulation Voltage	(Ui) 500V
Rtd. Impulse withstand Voltage	(Uimp) 2500V
Auxiliary Contacts	1 N.O. or 2 N.O.
Pollution Degree ①	3
Actuator Travel for Positive Opening	6mm (0.23in)
Min Operating Radius	175mm (6.89in) (60mm) (2.36in) with flexible actuator)
Break Contact Min Force	20N (4.5lb)
Max Actuation Speed	160mm (6.29in) per sec
Max Actuation Frequency	2 Cycle per sec
Case Material	UL approved glass filled polyester
Actuator Material	Stainless Steel
Protection	IP67
Conduit Entry	3 x M20 or quick disconnect style
Operating Temperature	-20°C to +80°C (-4°F to +176°F)
Fixing	2 x M5
Mounting	Any position
Mechanical Life	1,000,000 operations
Electrical Life	1,000,000 operations
Weight	160g (0.35lbs)
Colour	Red

① Conductive pollution occurs, or dry, non conductive pollution occur which becomes conductive due to condensation.

Product Selection



Model Type	Contacts		BBM/ MBB	Actuator	M20 Conduit		Quick Disconnect	
	Safety	Aux.			M20 Conduit	1/2in NPT Adaptor		End
Trojan 5 Standard	2 N.C.	1 N.O.	BBM	Standard	440K-T11090	440K-T11202	440K-T11205	
				Guide/Semi-Flex	440K-T11110	440K-T11203	440K-T11206	
				Guide/Fully-Flex	440K-T11467	440K-T11204	440K-T11207	
				—	440K-T11089	—	440K-T11129	
			BBM Gold Contacts	Standard	440K-T11085	—	—	
				MBB	Standard	440K-T11118	440K-T11208	440K-T11224
					Guide/Semi-Flex	440K-T11123	440K-T11209	440K-T11363
					Guide/Fully-Flex	440K-T11468	440K-T11210	440K-T11364
Trojan 5 GD2 Front Entry	2 N.C.	1 N.O.	BBM		—	440K-T11146	440K-T11469	440K-T11365
				GD2 Standard	440K-T11336	440K-T11211	440K-T11366	
				Guide/Semi-Flex	440K-T11337	440K-T11212	440K-T11367	
				Guide/Fully-Flex	440K-T11338	440K-T11213	440K-T11368	
			MBB	—	440K-T11147	—	440K-T11226	
				Standard	440K-T11339	440K-T11470	440K-T11369	
				Guide/Semi-Flex	440K-T11340	440K-T11471	440K-T11370	
				Guide/Fully-Flex	440K-T11341	440K-T11472	440K-T11371	
	2 N.C.	1 N.O.	BBM	—	440K-T11167	—	440K-T11372	
				Recommended mating cable for Trojan 5, 2m (6.5ft). See page 15-11 for details and additional lengths.				

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Product Selection (continued)



Model Type	Contacts		BBM/ MBB	Actuator	M20 Conduit		Quick Disconnect		
	Safety	Aux.			M20 Conduit	1/2in NPT Adaptor	End Entry		
Trojan 6 Standard	3 N.C.	1 N.O.	BBM	Standard	440K-T11171	440K-T11435	440K-T11403		
				Semi-Flex	440K-T11436	440K-T11405	440K-T11404		
				Fully-Flex	440K-T11437	440K-T11406	440K-T11407		
				—	440K-T11449	440K-T11408	440K-T11409		
	2 N.C.	2 N.O.	MBB	—	440K-T11450	440K-T11465	440K-T11451		
			BBM	Standard	440K-T11174	440K-T11438	440K-T11410		
				Semi-Flex	440K-T11439	440K-T11412	440K-T11411		
				Fully-Flex	440K-T11440	440K-T11413	440K-T11414		
				—	440K-T11452	440K-T11416	440K-T11415		
			MBB	—	440K-T11453	440K-T11454	440K-T11455		
			4 N.C.	—	—	—	440K-T11441	440K-T11172	440K-T11417
			Trojan 6 GD2 Front Entry	3 N.C.	1 N.O.	BBM	Standard	440K-T11418	440K-T11466
	Guide/Semi-Flex	440K-T11442					440K-T11420	440K-T11421	
Guide/Fully-Flex	440K-T11443	440K-T11423					440K-T11422		
—	440K-T11188	440K-T11444					440K-T11424		
2 N.C.	2 N.O.	MBB		—	440K-T11456	440K-T11457	440K-T11458		
		BBM		Standard	440K-T11445	440K-T11425	440K-T11426		
				Guide/Semi-Flex	440K-T11446	440K-T11428	440K-T11427		
				Guide/Fully-Flex	440K-T11447	440K-T11429	440K-T11430		
				—	440K-T11459	440K-T11433	440K-T11434		
		MBB		—	440K-T11460	440K-T11461	440K-T11462		
		4 N.C.		—	—	—	440K-T11448	440K-T11432	440K-T11431
				Recommended mating cable for Trojan 6, 2m (6.5ft). See page 15-10 for details and additional lengths.					

Accessories

Description	For Dimensions refer to page	Catalogue Number
 Standard Actuator (Standard Model Only)	14-5	440K-A11095
 GD2 Standard Actuator (GD2 Model Only)	14-4	440G-A27011
 Flat Actuator	14-5	440K-A11112
 Alignment Guide with Semi-flexible Actuator (Discard the Alignment Guide for GD2)	14-5	440K-A11144
 Alignment Guide with Fully-flexible Actuator (Discard the Alignment Guide for GD2)	14-6	440K-A27010
 Sliding Bolt Actuator (GD2 Model Only)	14-4	440G-A27163
 Catch and Retainer Kit (Standard Model Only)	14-4	440K-A11094

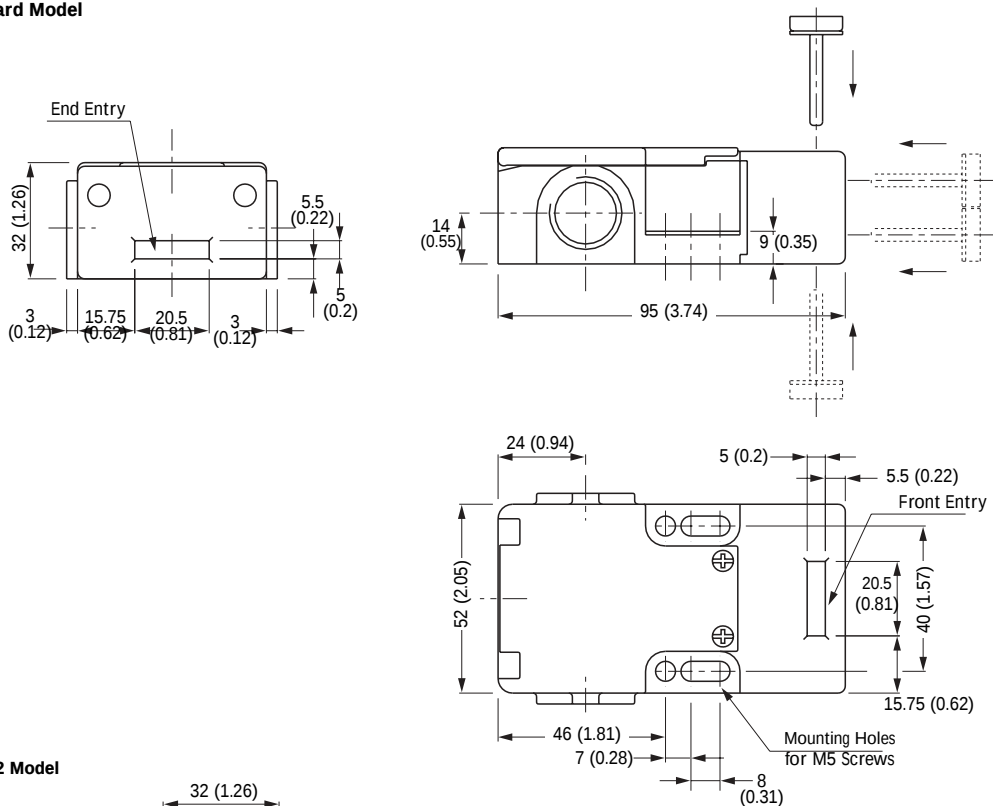
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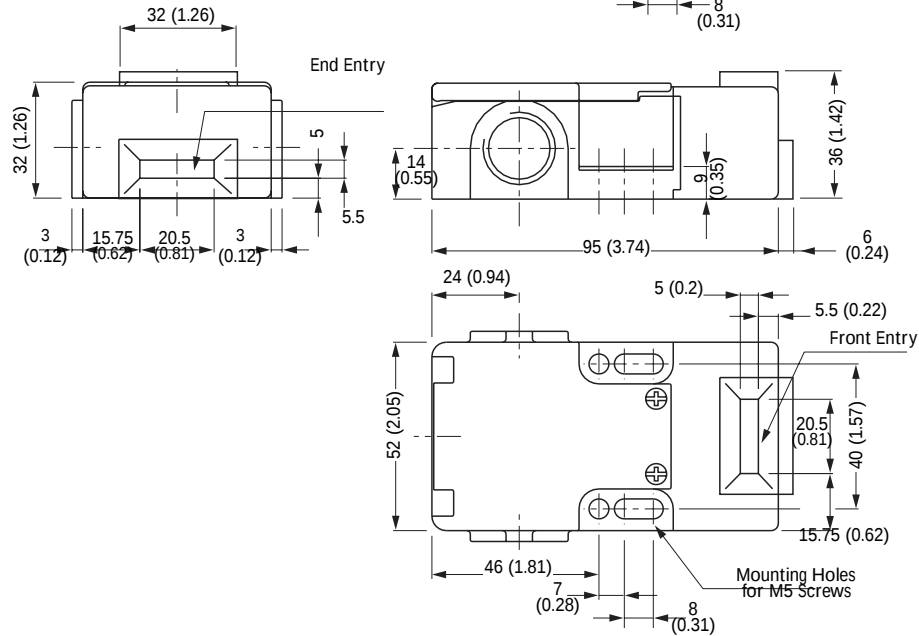
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Approximate Dimensions—mm (in)

Standard Model



GD2 Model



Typical Wiring Diagrams

Trojan 5

Connector Pinout		2 N.C. + 1 N.O.	
		Terminal	Contact
Auxiliary Circuit (N.O.) Safety Circuit 2 (N.C.) Safety Circuit 1 (N.C.)	1	11	N.C.
	5	12	
	2	21	N.C.
	6	22	
	3	33	N.O.
	4	34	

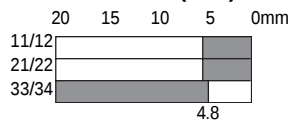
Contact Action

□ Contact Open ■ Contact Closed

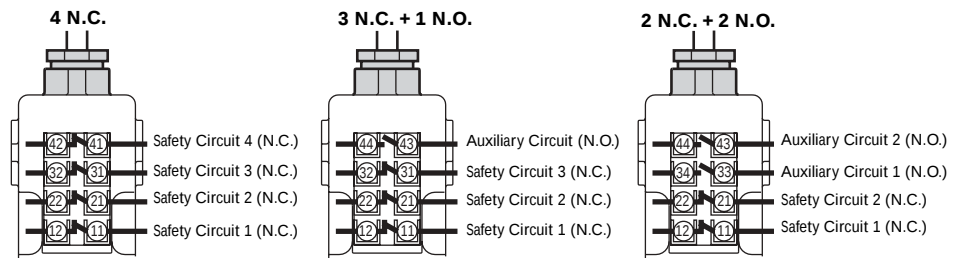
2 N.C. + 1 N.O. (BBM)



2 N.C. + 1 N.O. (MBB)



Trojan 6

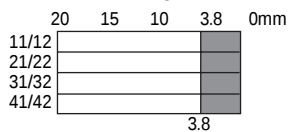


Connector Pinout		4 N.C.		3 N.C. + 1 N.O.		2 N.C. + 2 N.O.	
		Terminal	Contact	Terminal	Contact	Terminal	Contact
	1	11	N.C.	11	N.C.	11	N.C.
	7	12		12		12	
	6	21	N.C.	21	N.C.	21	N.C.
	5	22		22		22	
	4	31	N.C.	31	N.C.	33	N.O.
	3	32		32		34	
	8	41	N.C.	43	N.O.	43	N.O.
	2	42		44		44	

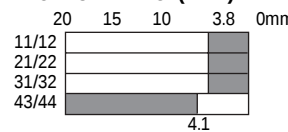
Contact Action

□ Contact Open ■ Contact Closed

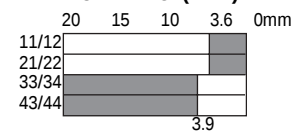
4 N.C.



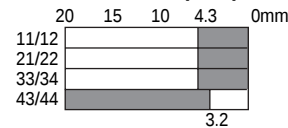
3 N.C. + 1 N.O. (BBM)



2 N.C. + 2 N.O. (BBM)



3 N.C. + 1 N.O. (MBB)



2 N.C. + 2 N.O. (MBB)

