Guard Locking Switches

Atlas 5





Description

The Atlas 5 is a positive mode, tongue operated guard locking interlock switch that locks a machine guard closed until power is isolated and ensures that it remains isolated while the guard is open. The guard may only be opened when a signal is applied to the internal solenoid which releases the lock mechanism. A heavy-duty switch, the Atlas 5 locking mechanism withstands forces up to 5500N (1236lbs.) and the die-cast alloy housing is ideal for use in harsh environments. A unique feature of the Atlas 5 is its patented selfaligning head that tolerates actuator or guard misalignment, making it particularly useful for heavy machine guards.

The Atlas 5 is designed for machines that do not stop immediately or where premature interruption of the machine could cause damage to tooling and components or cause an additional hazard. With 2 safety (N.C.) contacts and 2 auxiliary (N.O.) contact, Atlas 5 is ideal for PLC controlled machines.

Features

- Mechanical lock
- High locking force—5500N (1236lbs.)
- · Heavy duty die-cast alloy housing ideal for harsh environments
- Patented self-aligning head tolerates actuator misalignment

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Category 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 CSA Safety Contacts Atlas 5 Atlas 5 Atlas 5 trapped key (left hand) Atlas 5 trapped key (left hand) Utilization Cat. AC (Ue) (le) DC Solv 250V 100V AV 250V 100V AV 1A 2A 5A DC Solv 500V 500VA Maximum Switched Current/ Volt/Load Thermal Current (ltth) Min Current SV. 5mA DC Safety Contact Gap Rtd. Insulation Voltage (Ui) 500V Rtd. Impulse withstand Volt Auxiliary Contacts AC (Uimp) 2500V Actuator Travel for Positive Opening Break Contact Min Force 12N (2.7 lbs) Max Actuation Speed 160mm per sec (6.3 in. per sec) Max Actuation Frequency 2 Cycle per sec Case Material Actuator Material Protection IP65 Conduit Entry 3 x M20 or 3 x 1/2in NPT or quick disconnect Operating Temperature -10°C to +60°C (14°F to +140°F) Fixing 4 x M5 Mechanical Life 1,000,000 operations Weight 1200g (2.65lbs)				
Approvals Approvals CE marked for all applicable directives, cULus and CSA Safety Contacts Atlas 5 Atlas 5 trapped key (left hand) Atlas 5 trapped key (left hand) Utilization Cat. AC (Ue) (le) DC AC JON	Standards	EN954-1, ISO13849-1, IEC/EN60204- 1, NFPA79, EN1088, ISO14119, IEC/ EN60947-5-1, ANSI B11.19, AS4024.1		
Atlas 5 Atlas 5 Atlas 5 trapped key (left hand) Atlas 6 trapped key (left hand) Atlas 6 trapped key (left hand) Atlas 6 trapped key (left hand) Atlas 7 trapped key (left hand) Atlas 6 trapped action Atlas 7 trapped key (left hand) Atlas 6 trapped action Atlas 7 trapped key (left hand) Atlas 6 trapped action Atlas	Category	Dual channel interlocks suitable for		
Atlas 5 trapped key (left hand) N.C. direct opening action 1 N.O. 4C 15 500V 250V 100V 1A 2A 5A 250V 0.5A, 24V 2A Maximum Switched Current/ 500V 500VA Min Current 5V. 5mA DC Safety Contact Gap > 2mm contact block Rtd. Insulation Voltage (Ui) 500V Rtd. Impulse withstand Volt (Uimp) 2500V Auxiliary Contacts 1 N.O. Actuator Travel for Positive Opening Break Contact Min Force 12N (2.7 lbs) Max Actuation Speed 160mm per sec (6.3 in. per sec) Max Actuation Frequency 2 Cycle per sec Case Material Die cast alloy Actuator Material Stainless Steel Protection IP65 Conduit Entry 3 x M20 or 3 x 1/2in NPT or quick disconnect Operating Temperature -10°C to +60°C (14°F to +140°F) Fixing 4 x M5 Mechanical Life 1,000,000 operations Electrical Life 1,000,000 operations Weight 1200g (2.65lbs)	Approvals			
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AC (Ue) (le) 1A 2A 5A 250V 0.5A, 24V 2A Maximum Switched Current/ 500V 500VA Thermal Current (Ith) 10A Min Current 5V. 5mA DC Safety Contact Gap > 2mm contact block Rtd. Insulation Voltage (Ui) 500V Rtd. Impulse withstand Volt (Uimp) 2500V Auxiliary Contacts 1 N.O. Actuator Travel for Positive Opening Break Contact Min Force 12N (2.7 lbs) Max Actuation Speed 160mm per sec (6.3 in. per sec) Max Actuation Frequency 2 Cycle per sec Case Material Die cast alloy Actuator Material Stainless Steel Protection IP65 Conduit Entry 3 x M20 or 3 x 1/2in NPT or quick disconnect Operating Temperature -10°C to +60°C (14°F to +140°F) Fixing 4 x M5 Mechanical Life 1,000,000 operations Weight 1200g (2.65lbs)		1 N.O. direct opening action 2 N.C. direct opening action		
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Safety Contact Gap > 2mm contact block Rtd. Insulation Voltage (Ui) 500V Rtd. Impulse withstand Volt (Uimp) 2500V Auxiliary Contacts 1 N.O. Actuator Travel for Positive Opening Break Contact Min Force 12N (2.7 lbs) Max Actuation Speed 160mm per sec (6.3 in. per sec) Max Actuation Frequency 2 Cycle per sec Case Material Die cast alloy Actuator Material Stainless Steel Protection IP65 Conduit Entry 3 x M20 or 3 x 1/2in NPT or quick disconnect Operating Temperature -10°C to +60°C (14°F to +140°F) Fixing 4 x M5 Mechanical Life 1,000,000 operations Electrical Life 1,000,000 operations Weight 1200g (2.65lbs)	Thermal Current (Ith)	10A		
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Auxiliary Contacts Actuator Travel for Positive Opening Break Contact Min Force Max Actuation Speed Max Actuation Frequency Case Material Protection Conduit Entry Die cast alloy A M20 or 3 x 1/2in NPT or quick disconnect Operating Temperature Fixing 4 x M5 Mechanical Life 1,000,000 operations Weight N.O. 8mm (.31in.) 8mm (.31in.) 12N (2.7 lbs) 160mm per sec (6.3 in. per sec) 2 Cycle per sec 2 Cycle per sec 2 Cycle per sec 3 x M20 or 3 x 1/2in NPT or quick disconnect 1P65 Conduit Entry 3 x M20 or 3 x 1/2in NPT or quick disconnect 10°C to +60°C (14°F to +140°F) Fixing 4 x M5 Mechanical Life 1,000,000 operations Veight 1200g (2.65lbs)	Rtd. Insulation Voltage	(Ui) 500V		
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Case Material Actuator Material Protection IP65 Conduit Entry 3 x M20 or 3 x 1/2in NPT or quick disconnect Operating Temperature -10°C to +60°C (14°F to +140°F) Fixing 4 x M5 Mechanical Life 1,000,000 operations Electrical Life 1,000,000 operations Weight 1200g (2.65lbs)	Max Actuation Speed	160mm per sec (6.3 in. per sec)		
Actuator Material Protection IP65 Conduit Entry 3 x M20 or 3 x 1/2in NPT or quick disconnect Operating Temperature -10°C to +60°C (14°F to +140°F) Fixing 4 x M5 Mechanical Life 1,000,000 operations Electrical Life 1,000,000 operations Weight 1200g (2.65lbs)	Max Actuation Frequency	2 Cycle per sec		
Protection IP65 Conduit Entry 3 x M20 or 3 x 1/2in NPT or quick disconnect Operating Temperature -10°C to +60°C (14°F to +140°F) Fixing 4 x M5 Mechanical Life 1,000,000 operations Electrical Life 1,000,000 operations Weight 1200g (2.65lbs)	Case Material	Die cast alloy		
Conduit Entry 3 x M20 or 3 x 1/2in NPT or quick disconnect Operating Temperature -10°C to +60°C (14°F to +140°F) Fixing 4 x M5 Mechanical Life 1,000,000 operations Electrical Life 1,000,000 operations Weight 1200g (2.65lbs)	Actuator Material	Stainless Steel		
disconnect Operating Temperature -10°C to +60°C (14°F to +140°F) Fixing 4 x M5 Mechanical Life 1,000,000 operations Electrical Life 1,000,000 operations Weight 1200g (2.65lbs)	Protection	IP65		
Fixing 4 x M5 Mechanical Life 1,000,000 operations Electrical Life 1,000,000 operations Weight 1200g (2.65lbs)	Conduit Entry			
Mechanical Life 1,000,000 operations Electrical Life 1,000,000 operations Weight 1200g (2.65lbs)	Operating Temperature	-10°C to +60°C (14°F to +140°F)		
Electrical Life 1,000,000 operations Weight 1200g (2.65lbs)	Fixing	4 x M5		
Weight 1200g (2.65lbs)	Mechanical Life	1,000,000 operations		
	Electrical Life	1,000,000 operations		
	Weight	1200g (2.65lbs)		
Colour Red	Colour	Red		
Max Holding Force 5500N (1236lbs)	Max Holding Force	5500N (1236lbs)		
Min Operating Radius 300mm end entry, 800mm entry fro	Min Operating Radius	300mm end entry, 800mm entry front		
Power Supply 24V AC/DC or 110V AC or 230V AC (solenoid)	Power Supply			
Solenoid Power 13W typical 100% ED	Solenoid Power	13W typical 100% ED		
Solenoid Rating 100% duty	Solenoid Rating	100% duty		



Product Selection

			Contacts		Solenoid	Catalogue Number		
Туре		Actuator			M20 Conduit	1/2in NPT	Quick Disconnect	
					24V AC/DC	440G-L07264	440G-L07258	440G-L07298
Atlas 5 LH Key Lock		- Standard	2 N.C.	1 N.O.	110V AC/DC	440G-L07263	440G-L07257	440G-L07299
					230V AC/DC	440G-L07262	440G-L07256	440G-L07300
					24V AC/DC	440G-L07255	440G-L07249	440G-L07301
					110V AC/DC	440G-L07254	440G-L07248	440G-L07302
	LOCK				230V AC/DC	440G-L07253	440G-L07247	440G-L07303
1		M23 mating cable 2m (6.5ft). See page 15-13 for details and additional lengths.						889M-F12AH-2

Accessories

Descr	iption	For Dimensions refer to page	Catalogue Number
	Standard Actuator	14-3	440G-A07136
	Replacement End Cap	14-3	440G-A07180
	Fully Flex Actuator	14-3	440G-A07269

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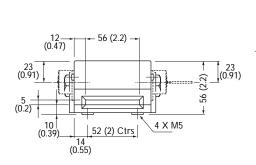
Interlock Switches

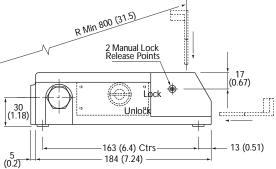
Guard Locking Switches

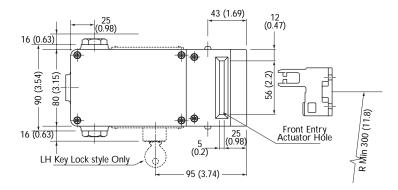
Atlas 5

Approximate Dimensions—mm (inches)

Dimensions are not intended to be used for installation purposes.

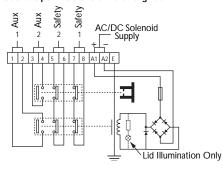


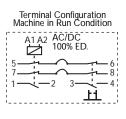




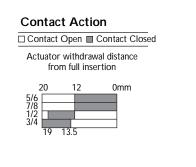
Typical Wiring Diagrams

Guard Open—Solenoid De-energized





Connector Pinout		Terminal	Contact	
	1	A1	Solenoid	
	3	A2	Power	
_	4	5	N.C.	
	6	6	N.C.	
\bigcirc \bigcirc \bigcirc	7	7	N.C.	
	8	8	N.C.	
	9	1	NO	
5 4	10	2	N.O.	
	5	3	NO	
	2	4	N.O.	
	12	Ground		





Application Details



CU 1 Timer Unit

Used with Atlas for machines with constant overruns. Gives a timed delay to the lock/release signal. Failsafe and adjustable to a range of times from 0.1 seconds up to 40 minutes. For more details, see the Safety monitoring relay section in this catalogue.



CU 2 Stop Motion Detector Unit

Used with Atlas for machines with constant or variable over run. Gives a timed delay to the lock/release signal. Fail safe and adjustable to a range of times from 0.1 seconds up to 40 minutes. For more details, see the Monitoring Safety Relay section in this catalogue.



Minotaur MSR6R/T Monitoring Safety Relay Unit

Ensures a maximum level of safety by monitoring all wiring in the safety circuit including switches and contactors.

Any fault and the power to the machine is switched off.

Other Minotaur units are available, see the Safety monitoring relay section in this catalogue.

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