



			<p>3NC+1NO</p> <ul style="list-style-type: none"> <li>* ACTUATING KEY LOCKED BY SPRING AND UNLOCKED BY ENERGISING SOLENOID</li> <li>* ACCEPTABLE MAKES = SIEMENS/EUCHNER/SCHMERSAL/SCHNEIDER TELEMECHANIQ</li> <li>* ACTUATOR KEY HAVE TO BE PROVIDED</li> <li>* TECHNICAL SPECIFICATIONS DATA SHEET ALONG WITH MOUNTING DETAILS HAVE TO BE SUBMITTED FOR TECHNICAL SCRUTINY.</li> <li>* DIMENSIONS OF SWITCH AND ACTUATOR KEY ARE IN ANNEXURE-I</li> </ul>			
02	1600007406/20	HY8452437420	<p>SPRING LOCKED SAFETY DOOR SWITCH 1300N</p> <p>GENERAL TECHNICAL DATA :-</p> <ul style="list-style-type: none"> <li>* SUPPLY VOLTAGE OF MAGNETIC COIL = 24V DC</li> <li>* RELATIVE ON PERIOD OF MAGNETIC COIL = 100%</li> <li>* POWER OF MAGNETIC COIL = 3.5W</li> <li>* INSULATION VOLTAGE RATED VALUE = 250V</li> <li>* DEGREE OF POLLUTION = CLASS3</li> <li>* OPERATING CURRENT = 3A</li> <li>* MECHANICAL LIFE = 1 MILLION OPERATIONS</li> <li>* REPEAT ACCURACY = 0.05MM</li> <li>* DESIGN OF CONTACTS = SLOW ACTION CONTACTS</li> <li>* NO. OF CONTACTS FOR POSITION SURVEILLANCE OF MAGNETIC LOCKING ELEMENT(SOLENOID ) = 2NC+1NO</li> <li>* NO. OF CONTACTS FOR POSITION SURVEILLANCE OF ACTUATOR KEY = 2NC+1NO</li> <li>* DESIGN OF SWITCHING FUNCTION = POSITIVE OPENING</li> <li>* MATERIAL OF ENCLOSURE = PLASTIC</li> <li>* DESIGN OF OPERATING MECHANISM = 5 DIRECTIONS OF APPROACH</li> <li>* MIN ACTUATING FORCE = 30N</li> <li>* PROTECTION CLASS = IP65/IP67</li> <li>* DESIGN OF ELECTRICAL CONNECTION = SCREW TYPE TERMINALS</li> <li>* LOCKING FORCE = 1300N</li> <li>* ACTUATING KEY LOCKED BY SPRING AND UNLOCKED BY ENERGISING SOLENOID</li> <li>* ESCAPE RELEASE FROM FRONT</li> <li>* ACCEPTABLE MAKES : SIEMENS/EUCHNER/SCHMERSAL/SCHNEIDER TELEMECHANIQUE</li> <li>* ACTUATOR KEY HAVE TO BE PROVIDED</li> <li>* TECHNICAL SPECIFICATIONS DATA SHEET ALONG WITH MOUNTING DETAILS HAVE TO BE SUBMITTED FOR TECHNICAL SCRUTINY.</li> <li>* DIMENSIONS OF SWITCH AND ACTUATOR KEY ARE IN ANNEXURE-II</li> </ul>	EA	2.00	29.07.2015
03	1600007406/30	HY8452437439	<p>SOLENOID LOCKED SAFETY DOOR SWITCH 2000N</p> <p>GENERAL SPECIFICATIONS:-</p> <ul style="list-style-type: none"> <li>* DESIGN= RECTANGULAR</li> <li>* MATERIAL = METAL</li> <li>* HEAD TYPE = KEY OPERATED TURRET HEAD</li> <li>* CONTACTS TYPE= 2NC + 1 NO</li> <li>* CONTACTS OPERATION = SLOW BREAK,BREAK BEFORE MAKE</li> <li>* SOLENOID CONTACTS TYPE = 1NC + 1NO(SLOW BREAK SIMULTANEOUS)</li> <li>* ELECTROMAGNET INTERLOCKING = LOCKING ON ENERGISATION AND UNLOCKING ON DEENERGISATION OF SOLENOID</li> <li>* NO. OF CONTACTS FOR POSITION SURVEILLANCE OF MAGNETIC LOCKING ELEMENT (SOLENOID) = 1NC+1NO</li> <li>* NO. OF CONTACTS FOR POSITION SURVEILLANCE OF ACTUATOR KEY= 2NC + 1NO</li> <li>* SOLENOID VOLTAGE = 24V DC</li> <li>* MECHANICAL DURABILITY = 10 MILLION CYCLES</li> <li>* MINIMUM ACTUATION SPEED = 0.01m/s</li> <li>* MAXIMUM ACTUATION SPEED = 0.5 m/s</li> <li>* LOCKING FORCE = 2000N</li> <li>* BODY MATERIAL = ZAMAK</li> <li>* HEAD MATERIAL = ZAMAK</li> </ul>	EA	2.00	29.07.2015

*[Handwritten Signature]*  
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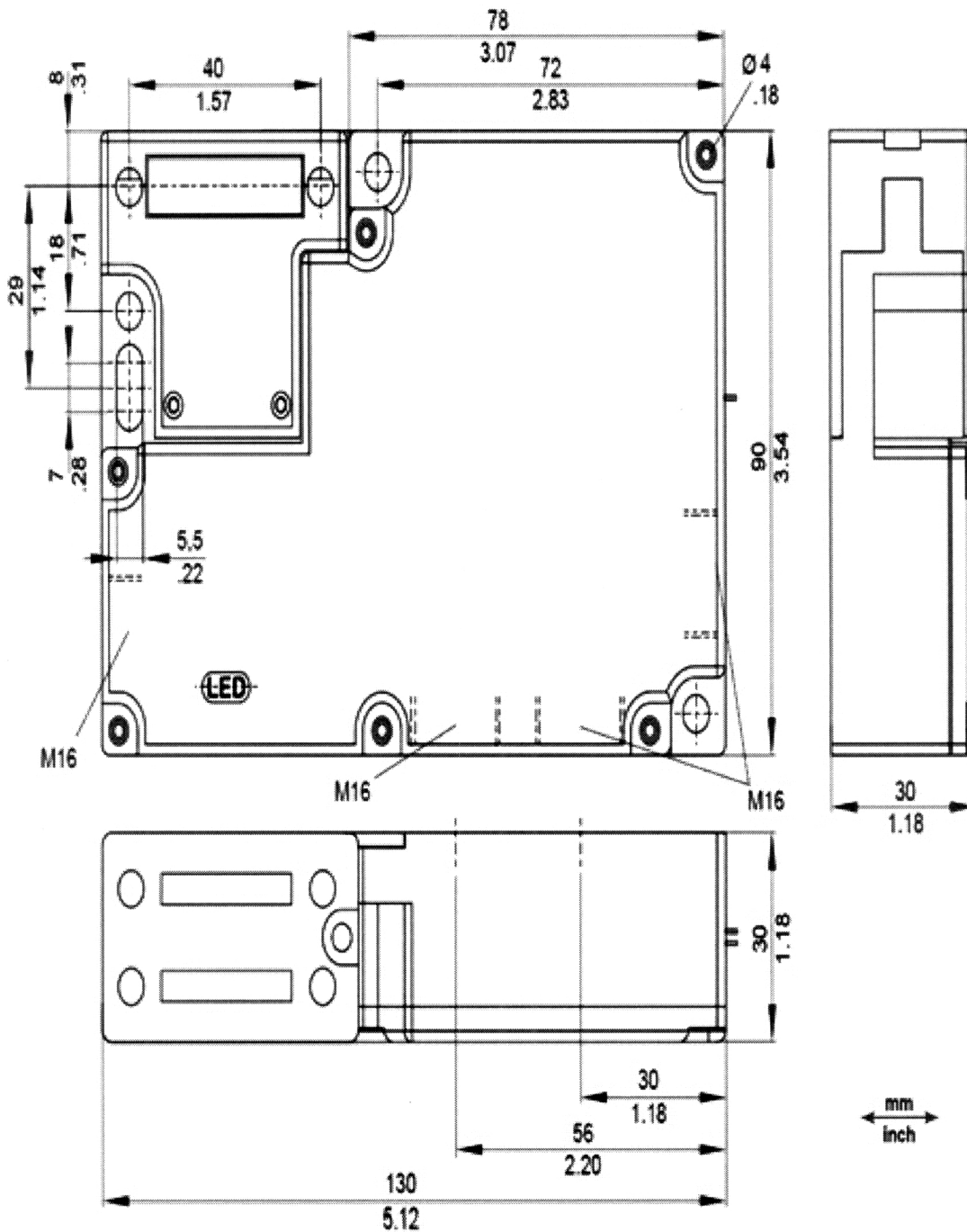
			<ul style="list-style-type: none"> <li>* DEPTH = 44MM</li> <li>* HEIGHT = 146MM</li> <li>* WIDTH = 98MM</li> <li>* STANDARDS= EN 1088/ISO 14119 EN/EC 60204-1 EN/IEC 60947-5-1 EN/ISO 12100 UL 508 CSA C22.2</li> <li>* IP DEGREE OF PROTECTION = IP67</li> <li>* ACCEPTABLE MAKES = SIEMENS/EUCHNER/SCHMERSAL/SCHNEIDER TELEMECHANIQUE</li> <li>* ACTUATOR KEY HAVE TO BE PROVIDED</li> <li>* TECHNICAL SPECIFICATIONS DATA SHEET ALONG WITH MOUNTING DETAILS HAVE TO BE SUBMITTED FOR TECHNICAL SCRUTINY.</li> <li>* DIMENSIONS OF SWITCH AND ACTUATOR KEY ARE IN ANNEXURE-III</li> </ul>			
04	1600007406/40	HY8452437447	<p>SPRING LOCKED SAFETY SWITCH 2000N 5NC 3 NO MECHANICAL SPECIFICATION:-</p> <ul style="list-style-type: none"> <li>* HOUSING MATERIAL = ANODIZED DIE CAST ALLOY</li> <li>* DEGREE OF PROTECTION = IP67</li> <li>* MECHANICAL LIFE = 1000000 CYCLES</li> <li>* CONTACT MATERIAL = SILVER ALLOY ,GOLD FLASHED</li> <li>* SWITCHING PRINCIPLE = SLOW ACTION SWITCHING CONTACT</li> <li>* INSTALLATION POSITION = ANY</li> <li>* NUMBER OF DOOR POSITION POSITIVELY DRIVEN CONTACTS = 3</li> <li>* NUMBER OF DOOR POSITION NO CONTACTS = 1</li> <li>* NUMBER OF GUARD LOCK MONITORING POSITIVE DRIVEN CONTACTS = 2</li> <li>* NUMBER OF GUARD LOCK MONITORING NO CONTACTS = 2</li> <li>* APPROACH SPEED = MAX 20 M/MIN</li> <li>* GUARD LOCK PRINCIPLE = CLOSED CIRCUIT CURRENT PRINCIPLE.GUARD LOCKING BY SPRING FORCE,RELEASE BY APPLYING TO SOLENOID.</li> <li>* LOCKING FORCE = 2000N</li> <li>* RETENTION FORCE = 10N</li> <li>* EXTRACTION FORCE = 30N</li> <li>* ACTUATING FORCE = 35N</li> </ul> <p>ELECTRICAL CONNECTION RATINGS :-</p> <ul style="list-style-type: none"> <li>* THERMAL RATED CURRENT = 4A</li> <li>* UTILIZATION CATEGORY ACC TO EN 60947-5-1 FOR DC-13 = 4A,24V DC</li> <li>* SOLENOID OPERATING VOLTAGE = 24V DC</li> <li>* RATED INSULATION VOLTAGE = 250V</li> <li>* RATED IMPULSE WITHSTAND VOLTAGE = 2.5KV</li> <li>* POWER CONSUMPTION = 10W</li> <li>* SOLENOID DUTY CYCLE = 100%</li> <li>* SWITCHING ELEMENTS</li> <li>* SK-FOR MONITORING ACTUATOR/DOOR POSITION</li> <li>* UK-FOR MONITORING GUARD LOCKING(BUILT IN SOLENOID)</li> <li>* 2131H SLOW ACTION SWITCHING CONTACT 3NC +1 NO</li> <li>* 3131H SLOW ACTION SWITCHING CONTACT 2NC +2 NO</li> <li>* MECHANICAL RELEASE ON FRONT-USED FOR RELEASING GUARD LOCKING WITH THE AID OF TOOL</li> <li>* ESCAPE RELEASE ON REAR WITHPUSH BUTTON-USED FOR MANUAL RELEASING GUARD LOCKING FROM WITH IN DANGER AREA WITHOUT TOOLS.</li> <li>* TWO LED INDICATORS RED AND GREEN</li> <li>* ACTUATING HEAD FITTED LEFT</li> <li>* ACCEPTABLE MAKES : SIEMENS/EUCHNER/SCHMERSAL/SCHNEIDER TELEMECHANIQUE</li> </ul>	EA	2.00	29.07.2015

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			<ul style="list-style-type: none"> <li>* ACTUATOR KEY HAVE TO BE PROVIDED</li> <li>* TECHNICAL SPECIFICATIONS DATA SHEET ALONG WITH MOUNTING DETAILS HAVE TO BE SUBMITTED FOR TECHNICAL SCRUTINY.</li> <li>* DIMENSIONS OF SWITCH AND SWITCHING FUNCTIONS ARE IN ANNEXURE-IV.</li> </ul>			
05	1600007406/50	HY8452437455	<p>SOLENOID LOCKED SAFETY SWITCH 2000N 2NC 2NO MECHANICAL SPECIFICATION :-</p> <ul style="list-style-type: none"> <li>* HOUSING = CAST ALUMINIUM, ENAMEL FINISH</li> <li>* ACTUATOR KEY = STEEL CHROMATED</li> <li>* DEGREE OF PROTECTION = IP67</li> <li>* UNLOCKED HOLDING FORCE = 5N</li> <li>* TRAVEL FOR POSITIVE BREAK = 38MM</li> <li>* FORCE TO REACH POSITIVE BREAK = 5N</li> <li>* CLOSING FORCE = 10N</li> <li>* MECHANICAL LIFE = 1 MILLION OPERATIONS</li> <li>* CONFORMITY TO STANDARDS = IEC 947-5-1 EN60947-5-1 DIN VDE 0660-200 BG-GS-ET-15 UL CSA</li> <li>*SOLENOID LOCKING FORCE=2000N</li> <li>*MINIMUM CLOSING RADIUS=250MM</li> </ul> <p>ELECTRICAL SPECIFICATIONS :-</p> <ul style="list-style-type: none"> <li>* CONTACTS= FINE SILVER</li> <li>* CONTACT CONFIGURATION = DOUBLE POLE, DOUBLE BREAK WITH ELECTRICALLY SEPERATED CONTACT BRIDGES.</li> <li>* CONTACT GAP = GUARD MONITORING-2X3 mm, SOLENOID MONITORING -2X2 MM(MINIMUM)</li> <li>* CONTACT RATING = 8A(250V AC)</li> <li>* SWITCHING ACTION = SLOW ACTION, POSITIVE BREAK NC CONTACTS</li> <li>* SHORT CIRCUIT PROTECTION = FUSE 6A(TIME DELAY)</li> <li>* RATED INSULATION VOLTAGE = 250V AC</li> <li>* RATED IMPULSE INSULATION VOLTAGE = 4KV</li> <li>* TERMINAL TYPE = SCREW TERMINALS WITH SELF LIFTING CLAMPS FOR UP TO 13AWG FLEXIBLE STARNDDED WIRE (2.5 MM2).</li> <li>* SOLENOID SUPPLY VOLATGE = 24V DC</li> <li>* SOLENOID POWER CONSUMPTION = 12W(MAX)</li> <li>* SOLENOID DUTY CYCLE = 100%</li> <li>* NO OF CONTACTS = 2NC+2 NO</li> <li>* NO. OF CONTACTS FOR POSITION SURVEILLANCE OF MAGNETIC LOCKING ELEMENT(SOLENOID )= 1NC+1NO</li> <li>* NO. OF CONTACTS FOR POSITION SURVEILLANCE OF ACTUATOR KEY = 1NC+1NO</li> <li>* PARALLEL ACTUATING KEY LOCKED BY ENERGISING SOLENOID AND UNLOCKED BY SPRING</li> <li>* ACCEPTABLE MAKES = SIEMENS/EUCHNER/SCHMERSAL/SCHNEIDER TELEMECHANIQUE</li> <li>* ACTUATOR KEY HAVE TO BE PROVIDED</li> <li>* TECHNICAL SPECIFICATIONS DATA SHEET ALONG WITH MOUNTING DETAILS HAVE TO BE SUBMITTED FOR TECHNICAL SCRUTINY.</li> <li>* DIMENSIONS OF SWITCH AND ACTUATOR KEY ARE IN ANNEXURE-V.</li> </ul>	EA	2.00	29.07.2015
<p>Remarks: 1) THIS ENQUIRY IS IN TWO PART BID SYSTEM. 2) TERMS &amp; CODITIONS AS PER ANNEXURE - I</p>			<p>TEST CERTIFICATE REQ: NO GUARANTEE RAQ: <del>NO</del> <i>yes</i> SAMPLE REQ: NO.</p>	<p>For and on-behalf of Bharat Heavy Electricals Limited  SREENU K PUR OFFICER/CMM/PUR <i>[Signature]</i> 22/06</p>		

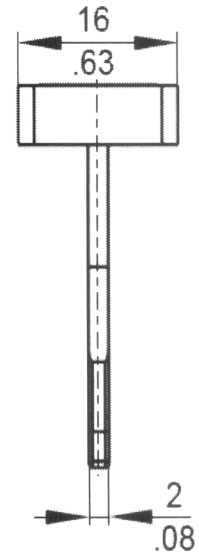
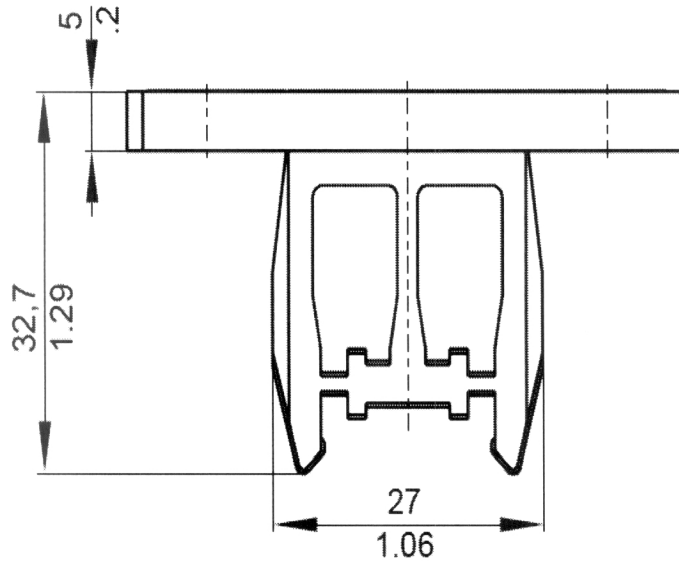
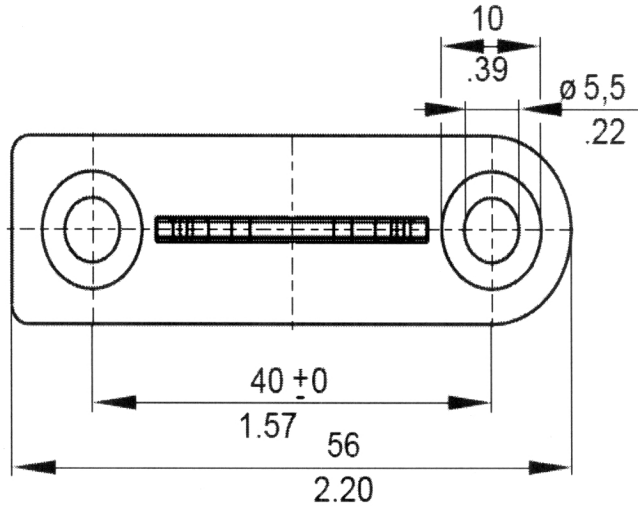
**ANNEXURE-I**

**HY8452437412**



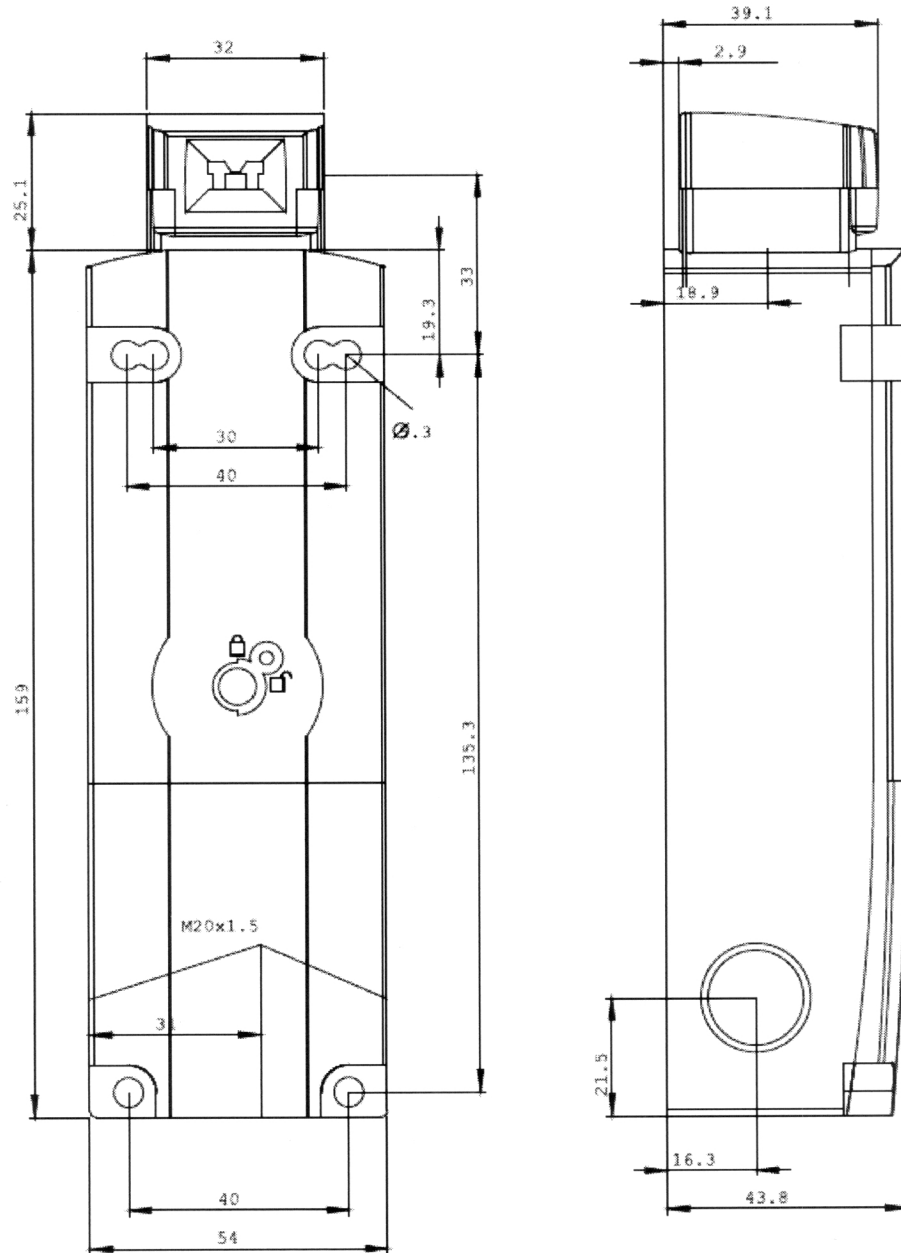
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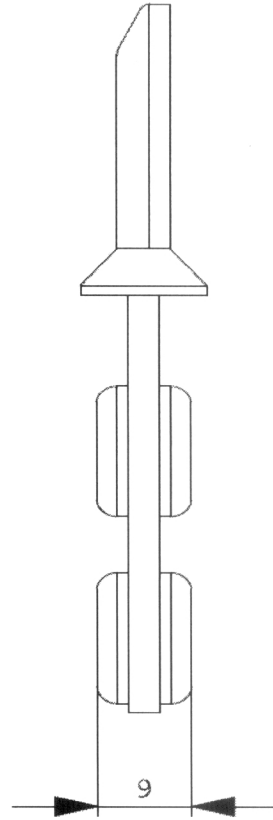
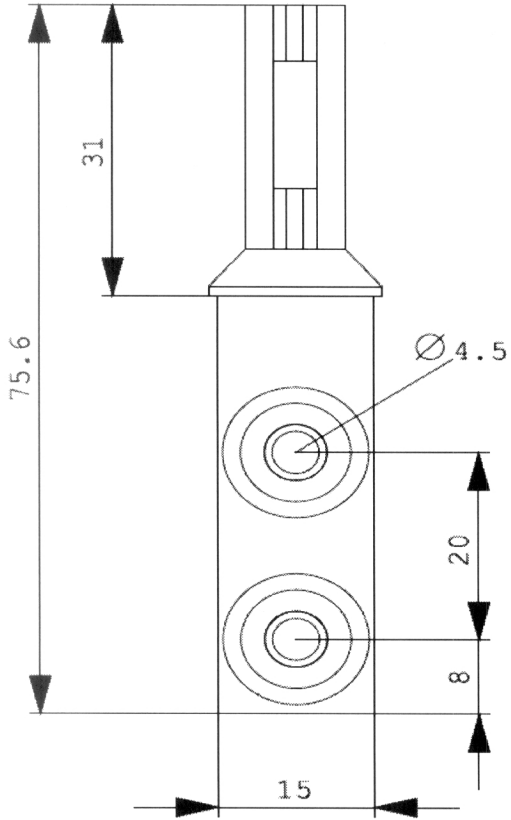
**ANNEXURE-II**

**HY8452437420**



**ANNEXURE-II**

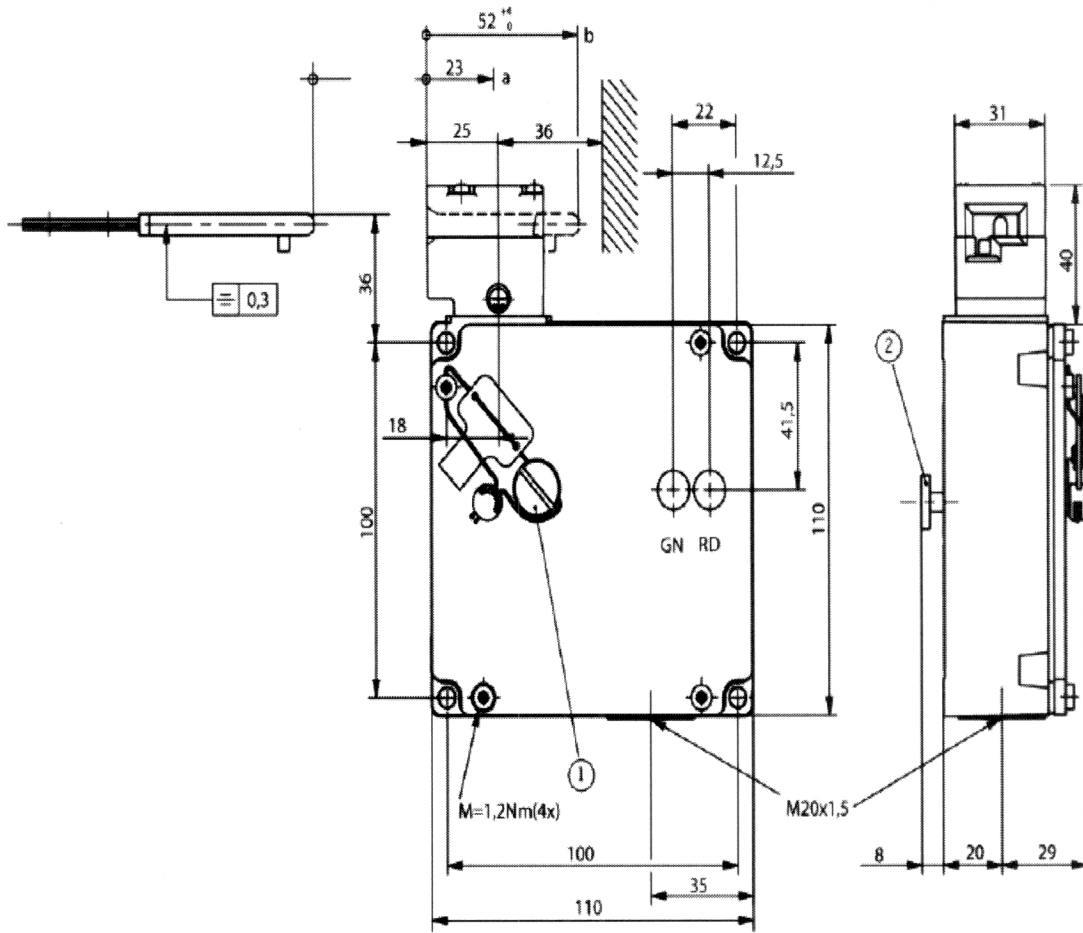
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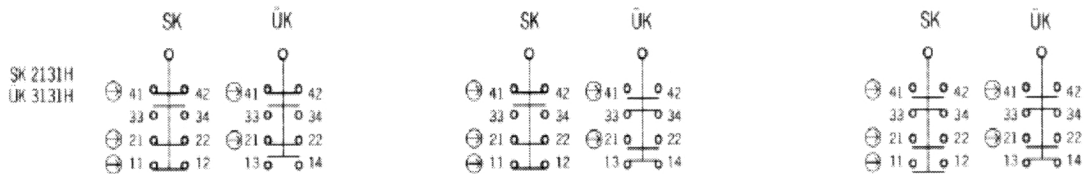
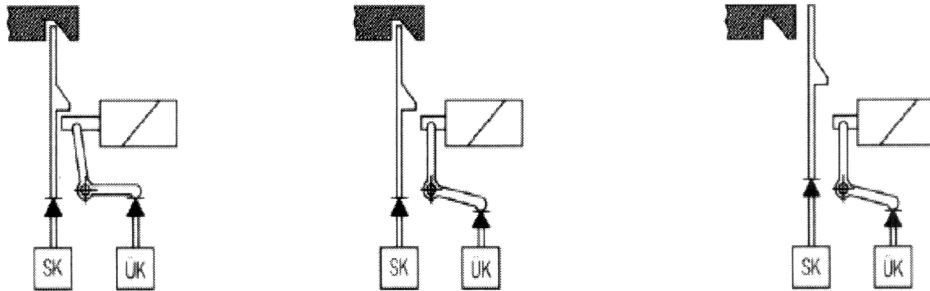


# ANNEXURE-IV

**HY8452437447**



## Switching functions





ANNEXURE-V

HY8452437455

