

# APEM

## **IH Series**    HALL EFFECT SWITCHES

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### **Benefits**

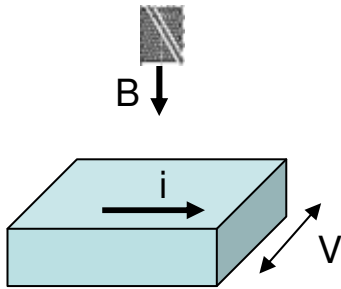
- switch and linear versions
- High number of cycles
- low behind-panel depth
- IP67 sealing



### **Contents**

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### HALL EFFECT



$i$  : current in conductor

→ needs supply

$B$  : field generated by magnet

$V$  : voltage « result »

**Hall effect = contactless => long life**

### APPLICATIONS

#### IH Switch:

This rugged switch is designed to be subjected to a repetitive jogging in harsh environments. The IHS is recommended for applications where the switch is often activated. For example, in applications where positioning the load is critical: material handling, loaders, lifts trucks, buckets and shovels ...

#### IH Linear:

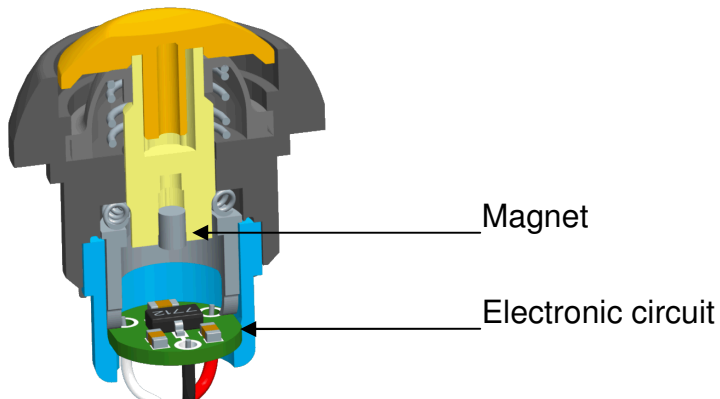
This rugged switch is intended for applications where a simple On /Off control is not sufficient and where a linear output is preferable. Typical use of IHL: applications where operators need to control motion and speed. This switch is ideal for control valves or variable speed drives and can be used in various applications including industrial controls, heavy duty equipment and handling.

#### A few applications



### Product description

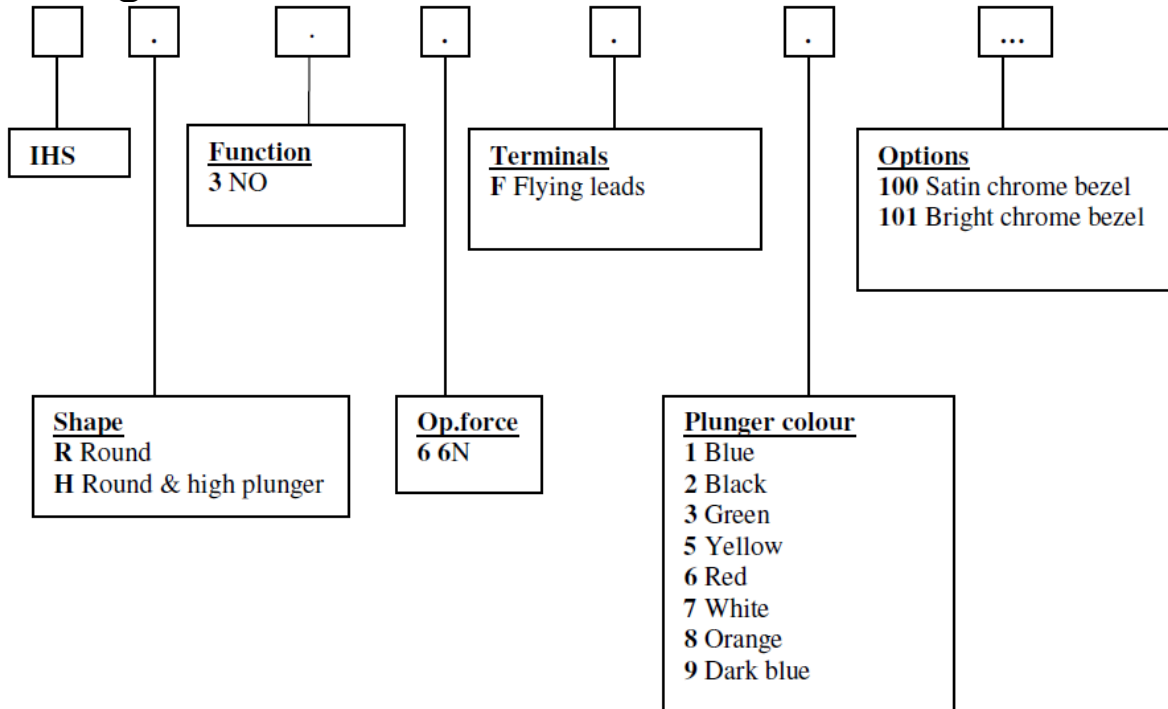
Apem has created a momentary switch, the IHS, using the hall effect to have a long life contactless switching of 5 million operations. This switch is sealed to IP67. The dome shaped actuator is available in eight colours.



#### Features:

- 5 million cycles
- Hall Effect sensor technology for long life
- Eight actuator colors
- IP67 sealing
- Operating force:  $6\text{ N} \pm 2\text{ N}$
- Low behind-panel depth
- Compact:  $\text{Ø}12\text{mm}$  (.472) case

## Order guide



Standard bezel: zamak, black

### MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

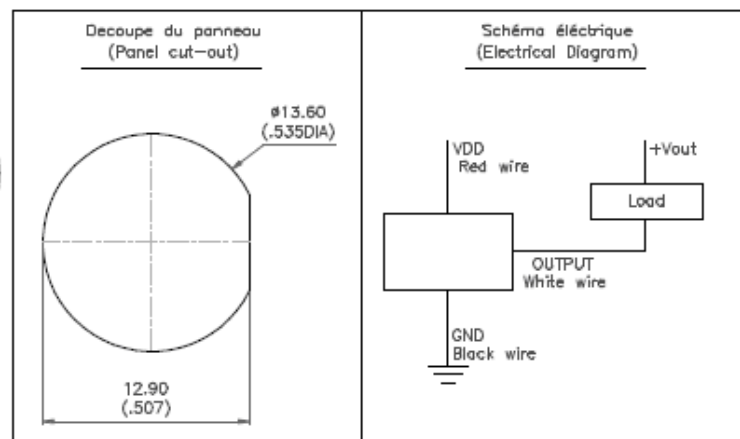
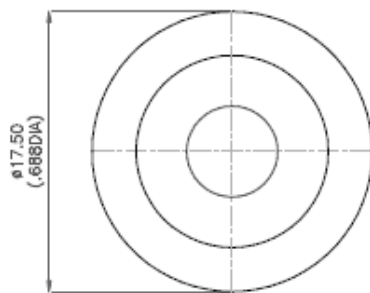
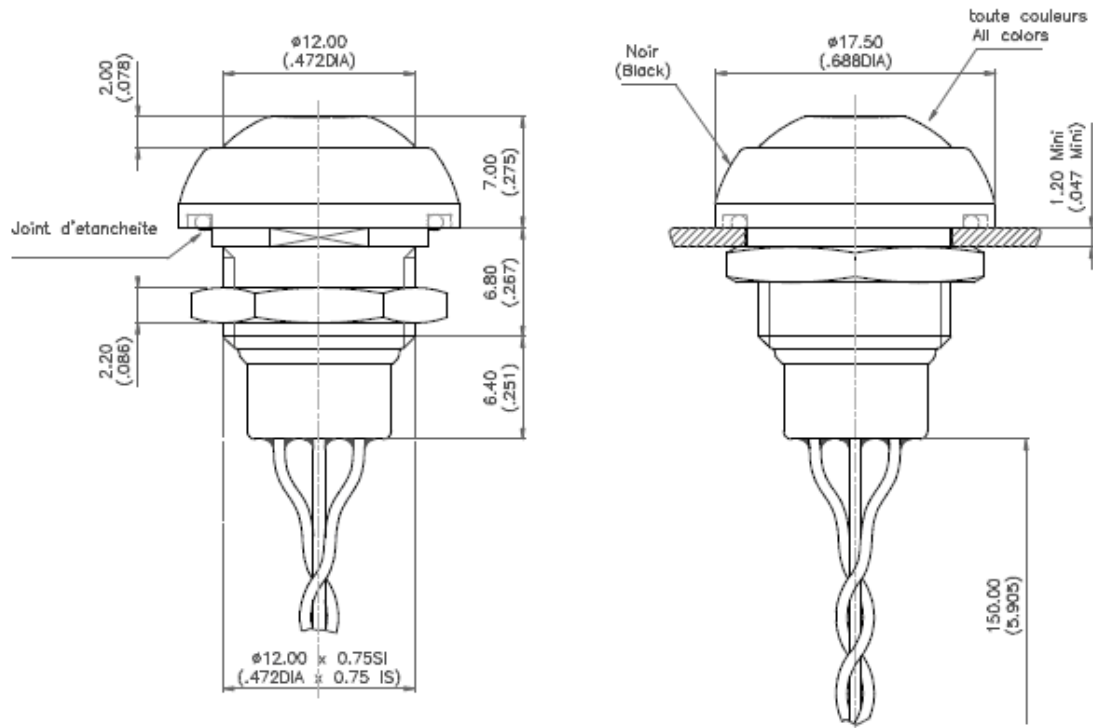
- Sealing : IP67 according to IEC 529
- Temperature range: -40°C to +85°C
- Total travel: 1,70mm ( .070 )

### ELECTRICAL AND GENERAL SPECIFICATIONS

- Electrical function: Normally open ( NO ) momentary
- Supply voltage: 3.5Vcc to 14.5Vcc
- Supply current: Vcc=12V: 2.5mA Typ. to 5mA max (current consumption in off position)
- Max.output current: 50mA
- Max.output voltage: 14.5Vcc
- Mechanical life: 5.000.000 cycles

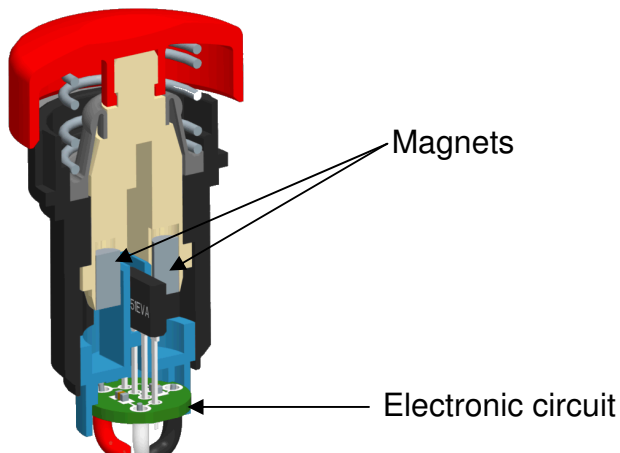
### MATERIALS

- Case: PBT, UL94-V0
- Plunger: polyamide 6/6
- Bushing: black painted Zamak
- Multi-wire lead: AWG26 (150mm)



## Product description

APEM has created a revolutionary switch, the IHL, using the Hall Effect technology to provide an output proportional to the actuator travel. The IHL uses the hall effect to have a long life contactless switching of 5 million operations. It is sealed to IP67.

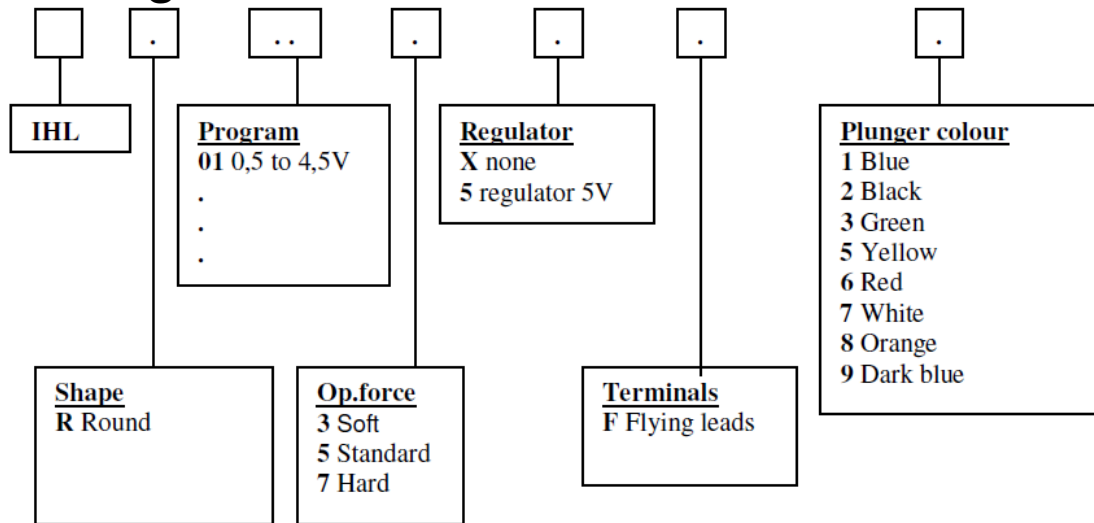


### Features:

- 0.5 to 4.5 volt outputs
- 5 million cycles
- Hall Effect for reliable contactless switching
- IP67 sealing
- Operating force: Modular
- Low behind-panel depth
- Compact: Ø12mm (.472) case

**Specific request :**  
Programmable output

## Order guide



Bezel : plastic, black, round

### Regulator on request

#### MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

- Sealing : IP67 according to IEC 529
- Temperature range: -40°C to +85°C
- Total travel: 4 mm ( .160 )
- EMC testing: 10V per meter extend to radiated fields in freq range of 80 Mhz to 1000Mhz. 1Khz 80% sine wave modulation, IEC/EN61000-4-3

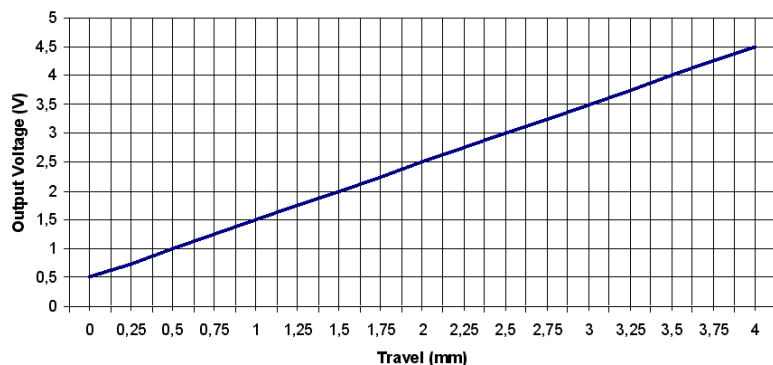
#### ELECTRICAL AND GENERAL SPECIFICATIONS

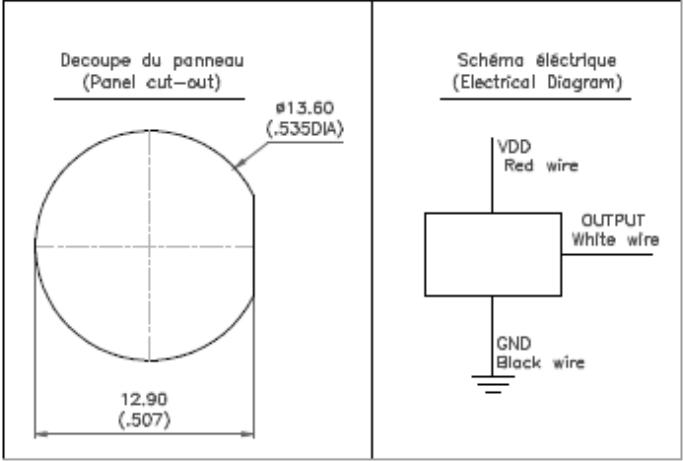
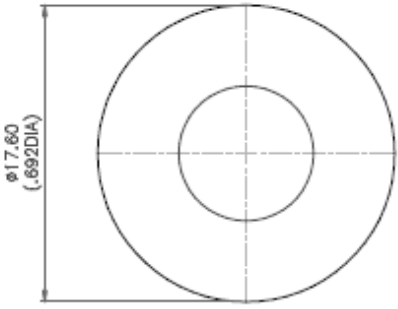
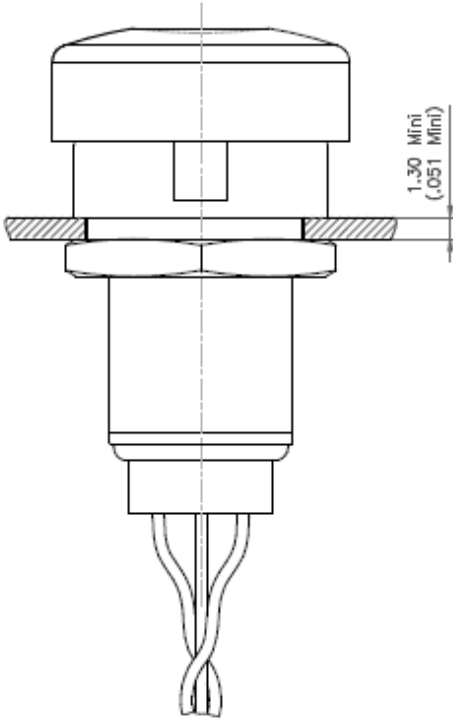
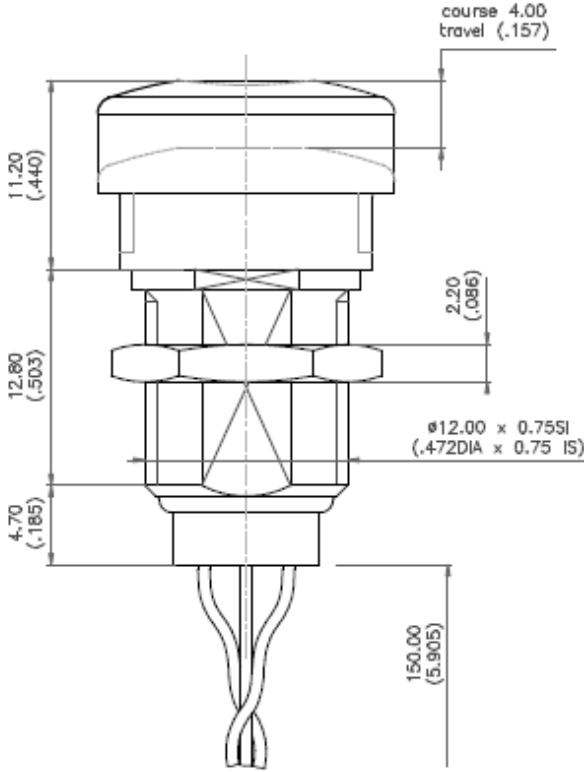
- Electrical function: proportional linear output
- Supply voltage: 4.5 Vcc to 5.5 Vcc and 6.5 Vcc to 30 Vcc with regulator
- Supply current: 9mA max.
- Max.output current: 1.25mA max
- Max.output voltage: see graph
- Mechanical life: 10.000.000 cycles

#### MATERIALS

- Case: PBT, UL94-V0
- Plunger: ABS
- Bushing: Polyamide 6/6
- Multi-wire lead: AWG26 (150mm)

Linear Output Graph (Vcc=5V@20°C)







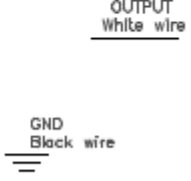
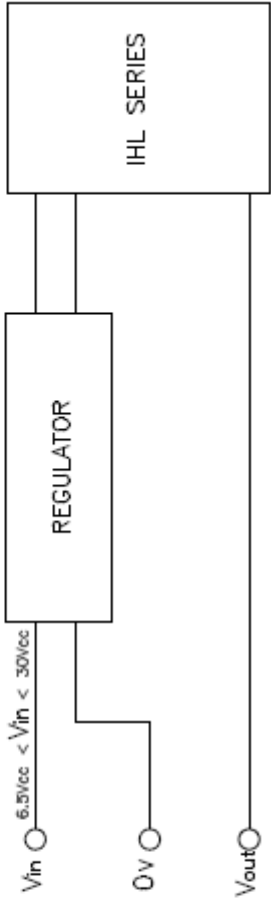
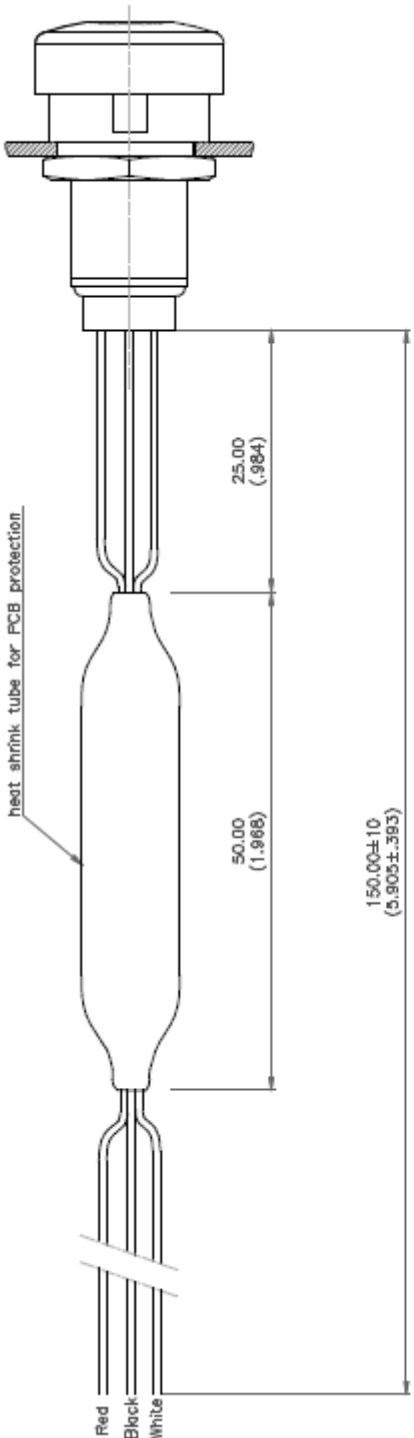


Schéma électrique  
(Electrical Diagram)