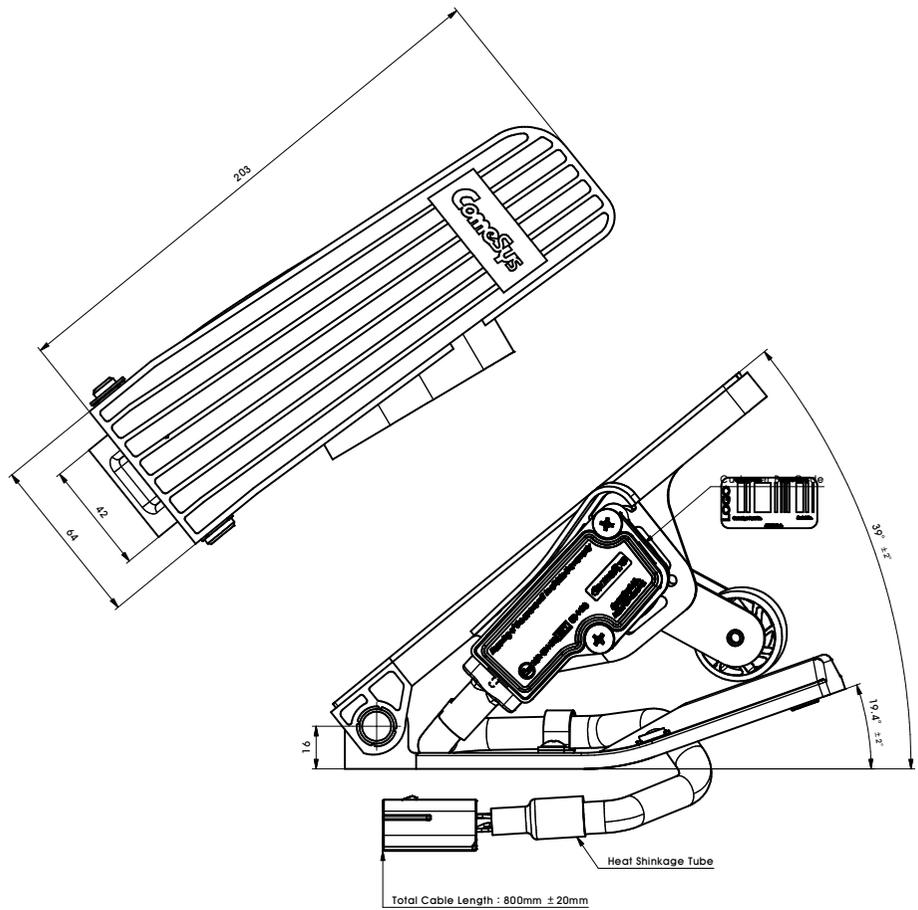


REVISION HISTORY					
REV	DESCRIPTION	DATE	DR	RE	AP
0	Issued	28.Nov.17	S.W.Kang	J.J.Kim	H.M.Lee



Pin Location	Description	Color
A	Power Input, Vcc	Red
B	Pedal Signal Output, Vs	Green
C	Ground (Signal)	Black
D	Switch	Yellow
E	IVS3 (NO)	Blue
-	-	-

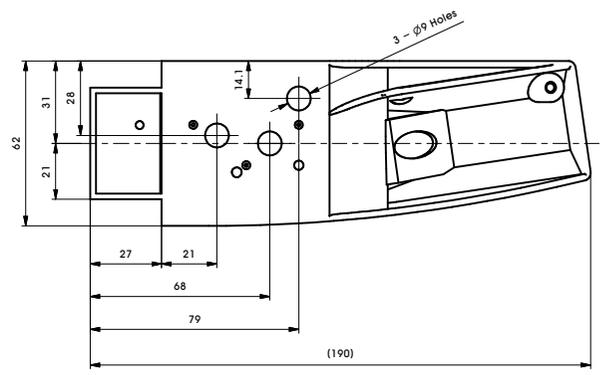


Fig. 1 Circuit Diagram

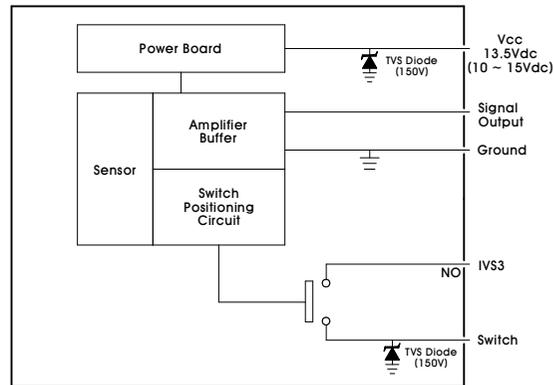


Fig. 2 Signal Output

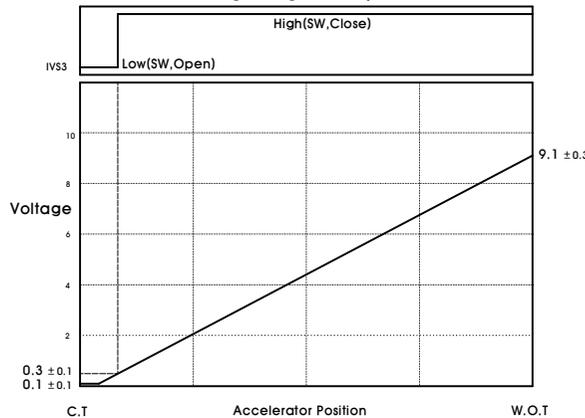
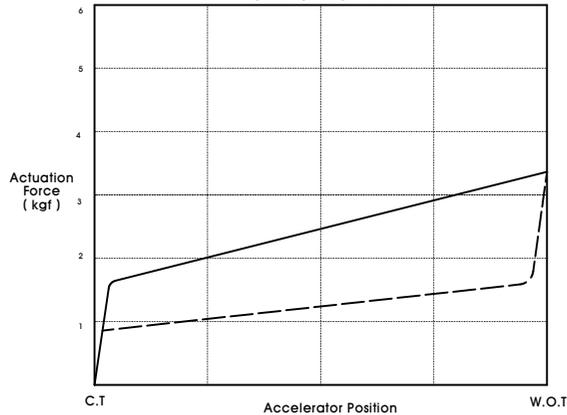


Fig. 3 Spring Force



- General Layout
  - Non - Contact Sensing Technology.
  - This drawing is satisfied with FMVSS124.
  - International Patent Pending.
- Mechanical Conditions
  - A static pedal force is applied at a point of 150mm from the pedal pivot axis and perpendicular to the pedal surface.
  - Initial Load : 0.9kgf(MIN), Full Throttle : 3.3kgf(MAX)
  - End - Break force : 160kgf(5kgf will not damage any pedal parts.
  - One return spring, inner or outer spring, incorporated to return pedal to idle on release of actuation force.
- Electrical Conditions
  - Environmental Conditions:
    - Operating Temperature : -40° C ~ +85° C
    - Storage Temperature : -40° C ~ +120° C
  - Electrical Characteristics
    - Type of sensing element
      - Input Voltage(Vcc) : 10Vdc ~ 15Vdc
      - Operation Current(Iop) : 20mA(Normal), 25mA(Max)
      - Reverse Pararity : Withstand 10min
      - Electrical Travel : See Fig 2.
      - Independent Linearity : ±2%
      - Signal Load : 10kohms, C=4.7nF Tested.
    - Type of Switch(IVS) : MOSFET switch (Semiconductor Relay Switch)
      - Switch Continuous Load Current(Io) : Max 100mA (400mW)
      - Switch Operation Current (Ii) : 2mA
      - Switch Resistance(Ron) : 5Ω at switch On
      - Current leak max 1µA at Switch Open (Ileak)
      - Switch Pararity : No parity
      - Switch Voltage : 5V, 12V, 24V, 48V, 80Vdc
      - Switch Position
        - Switch Position shall be discussed at PO and fixed at factory before delivery. See Fig.2
- Mechanical Specifications
  - Mechanical Travel : 17.5° ±2°
- Electrical Connection
  - AMP 6wire 174264-2 (Cap)
- Material
  - Pedal Foot Plate : PA66+GF30%
  - Pedal Bottom Plate : Aluminum ( ADC12 )
  - Cable : AEXf or AVXf ( 0.50mm<sup>2</sup> )
- Marking
  - Sensor serial number and pedal production number shall be indicated and recorded before despatch at factory.
- Durability
  - Subject to over 10million cycles between idle and full throttle position at a rate of approx. 100 cycles per minute.
  - Any wear observed, e.g., on the mechanical stops checked to be in compliance with the initial condition values.
- Environment Test

Item	Test Method	Decision Standard
Vibration Test	Subject to broadband 9G vibration between 10 and 200Hz for 8hours(4, 2, 2hour) in all 3 axis	Normal Operation
Shock Test	After Exposed to acceleration 20g (ZERR to PEAK) for 11ms	Normal Operation
Impact Test	Subject to a drop test onto a smooth concrete floor from a height of one meter a total of 6 times	Normal Operation
High voltage Test	APS Signal : After Exposed to 12Volts for 3min IVS Signal : After Exposed to 38Volts for 3min	Normal Operation
Temp. Test	After Exposed to -40° C ~ 85° C (100 cycles)	Normal Operation
Humidity Test	After Exposed to -32° C ~ 70° C (96%)	Normal Operation
Salt Fog Test	After Exposed to Salt Fog for 86 hours (JIS 22371)	Normal Operation
Chemical Test	Exposed to 3 second dipping in each of the test fluids, followed by a 3 minutes air-dry	Normal Operation
ESD Test	Tested in accordance with IEC 61000-4-2 Spec	25KV (Air Discharge)
EMS Test	As per ISO 11452-2 (2004E)	100V/m
SurgeTest	Industrial Equipment Standards : 61000-4-5 TEST Voltage(2KV), Current impulse(8/20us) - Standard Voltage(1kV)	Normal Operation
Burst Test	Industrial Equipment Standards : 61000-4-5 TEST Voltage(2KV) - Standard Voltage(1kV)	Normal Operation

Control & Measurement Systems Limited				Name	
Electric Accelerator Pedal Assy (MFZ3)				BYD	
Source Reference For Marking (KID 0412)	Pinout & Color	Approval Mark	Material	Paint & Surface Treatment	
Rev: 01	01	01	01	01	01
Rev: 02	02	02	02	02	02
Rev: 03	03	03	03	03	03
Rev: 04	04	04	04	04	04
Rev: 05	05	05	05	05	05
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