

Fig. 1 Circuit Diagram

- 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.  
- End-Break force : 160kgf; 5kgf will not damage any pedal parts.  
(Initial Load : 0.9kgf(MIN), Full Throttle : 3.3kgf(MAX))
- Electrical Conditions  
3.1 Environmental Conditions:  
Operating Temperature : -40°C ~ +85°C  
Storage Temperature : -40°C ~ +120°C  
3.2 Electrical Characteristics  
3.2-1 Type of sensing element  
3.2.1.1 Input Voltage(Vcc) : 12Vdc (8~15Vdc)  
3.2.1.2 Operation Current(Iop) : 20mA(Normal), 25mA(Max)  
3.2.1.3 Reverse Paranty : Withstand 10min  
3.2.1.4 Electrical Travel : See Fig 2.  
3.2.1.5 Independent Linearity : ±2%  
3.2.1.6 Signal Load : 10kohms, C=4.7nF Tested.  
3.2-2 Type of Switch(IVS3) : Relay  
3.2.2.1 Switch max Load Current : 1A @ 30Vdc  
3.2.2.2 Max Switching Current : 1A  
3.2.2.3 Max Switching Voltage : 250V, 110V  
3.2.2.4 Switch Position  
Switch Position shall be discussed at PO and fixed at factory before delivery. See Fig. 2

Fig. 2 Signal Output

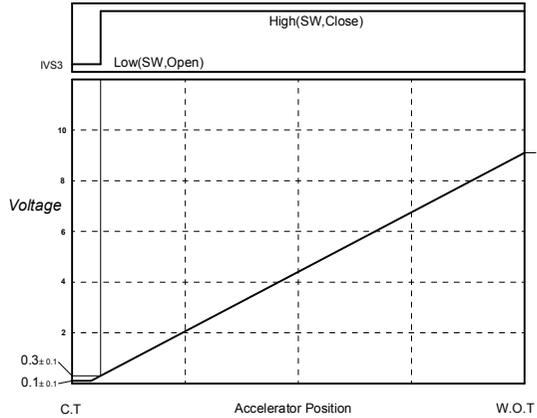
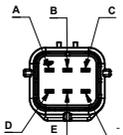
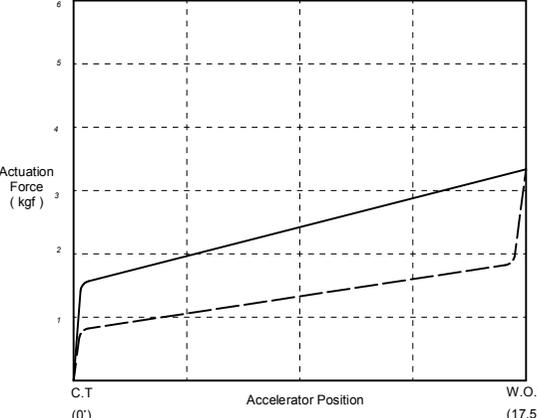
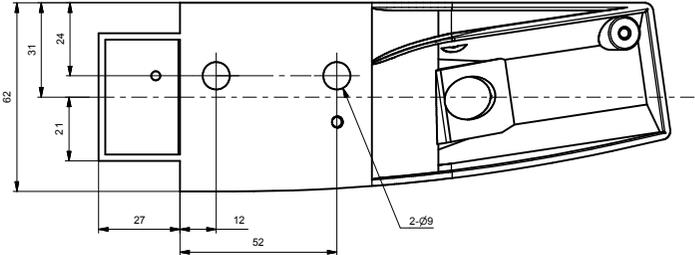


Fig. 3 Spring Force



| Pin Location | Description             | Color  |
|--------------|-------------------------|--------|
| A            | Power Input, Vcc        | Red    |
| B            | Pedal Signal Output, Vs | Green  |
| C            | Ground ( Signal )       | Black  |
| D            | Switch Common           | Yellow |
| E            | FS3(IVS3),NO            | Blue   |
| -            | -                       | -      |



- Mechanical Specifications  
4-1 Mechanical Travel : 17.5±z
- Electrical Connection  
AMP J Series Connector : For 6 wire : 174264-2 (Cap)
- Material  
Pedal Foot Plate : PA66+GF30%+Anti Static  
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 random vibration between 20 and 2000Hz for 20hours in all 3 axis.            | Normal Operation    |
| Shock Test        | After Exposed to Acceleration 20g (ZERO 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<br>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 96 Hours (JIS Z2371)  | 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              |

**ComeSys** Control & Measurement Systems Limited

Electric Accelerator Pedal Assy (MTF3)

|  |                          |                 |
|--|--------------------------|-----------------|
| Customer Traceability for Manufacturing (K3 B0412) | Policy & Compliance      | Approval Master |
| Traceability                                       | Traceability             | SME             |
| Material   | Part & Surface Treatment |                 |
| Weight   | Final Treatment          |                 |
| Customer Part No.                                  | Compliance               |                 |
| Part No.   | Sheet 1 of 1             | FZ3-152-343     |