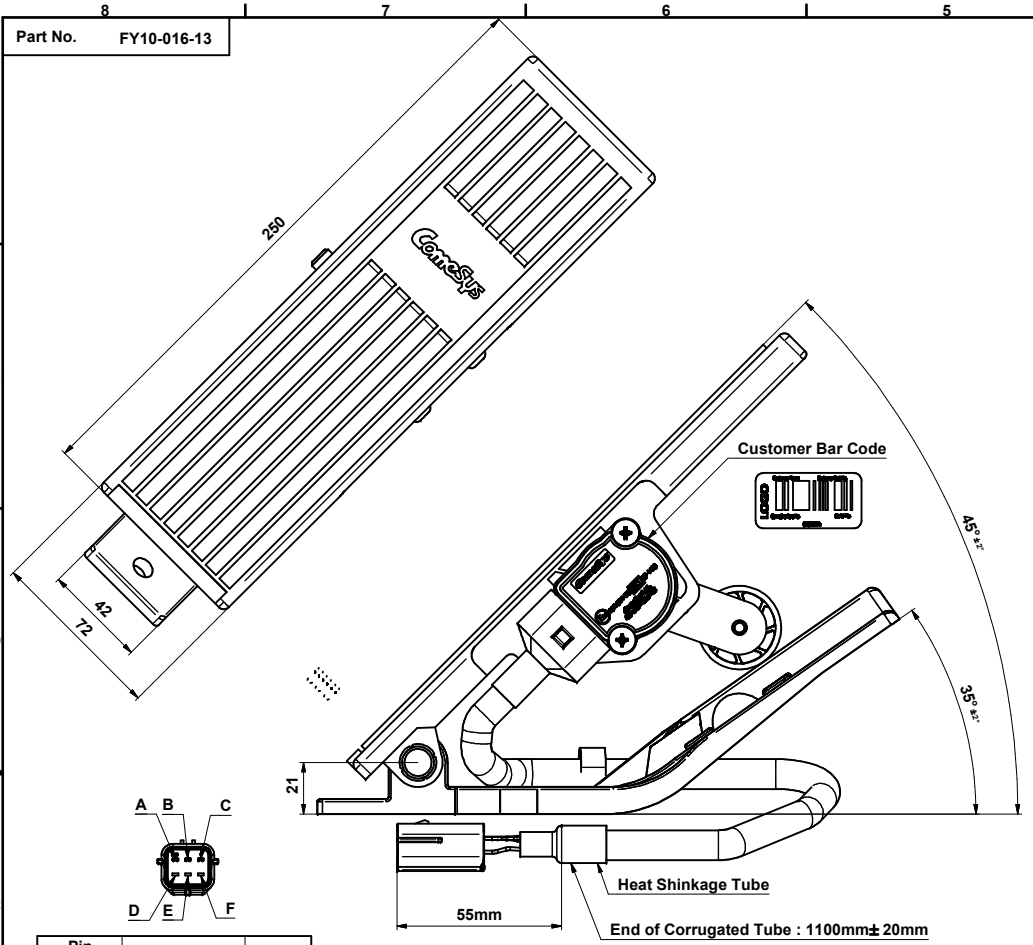
Part No. FY10-016-13



Pin Location	Description	Color
A	Power Input1, Vcc1	Red
B	Pedal Signal Output1, Vs1	Green
C	Ground1 (Signal1)	Black
D	Power Input2, Vcc2	White
E	Pedal Signal Output2, Vs2	Orange
F	Ground2 (Signal2)	Violet

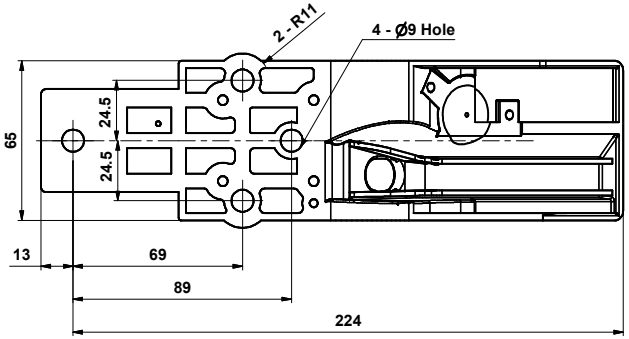


Fig. 1 Circuit Diagram

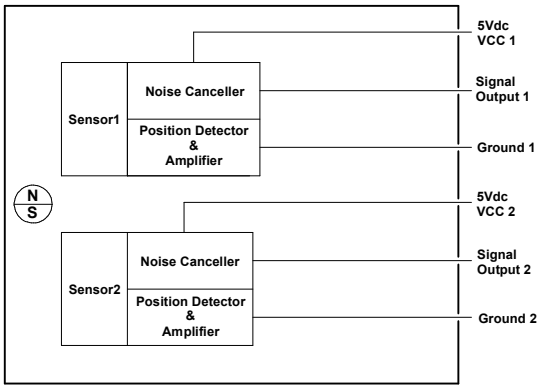


Fig 2. Signal Output

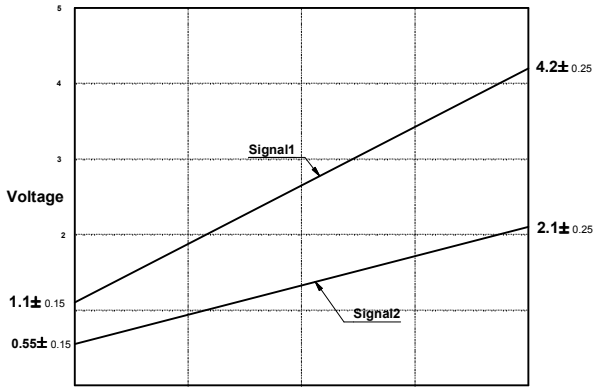
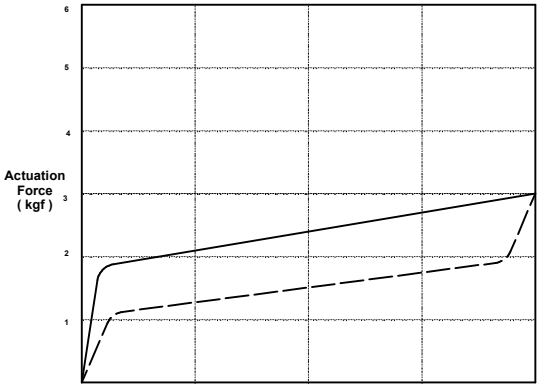


Fig. 3 Spring Force



REVISION HISTORY					
REV	DESCRIPTION	DATE	DR	RE	AP

1. General Layout
   Non - Contact Sensing Technology.
   This drawing is satisfied with FMVSS124.
   International Patent Pending.
2. 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)
   See : Fig 3.
   - End-Break force : 160kgf± 5kgf will not damage any pedal parts.
3. Electrical Conditions
   1.0 Environmental Conditions:
   Operating Temperature : -40˚C ~ +85˚C
   Storage Temperature : -40˚C ~ +105˚C
   2.0 Electrical Characteristics
   2-1 Type of sensing element
   2.1.1 Input Voltage(Vcc) : 5Vdc ± 2%
   Ratiometric Operational Input Range : 4.5 ~ 8V
   2.1.2 Operation Current(Iop) : 16mA(Normal), 20mA(Max)
   2.1.3 Reverse Porarity : Withstand 10min
   2.1.4 Electrical Travel : See Fig 2.
   2.1.5 Independent Linearity :± 2%
   2.1.6 Signal Load : 10kohms,C=4.7nF Tested.
   3.0 Mechanical Specifications
   3-1 Mechanical Travel : 17.5± 2˚
   4.0 Electrical Connection
   AMP J Series Connector : for 6 wire 174264-2 (CAP)
   5.0 Material
   Pedal Foot Plate : PA66+GF33%+Anti Static
   Pedal Bottom Plate : Aluminum (ADC12)
   Cable : AEXf or AVXf (0.50㎟)
   6.0 Marking
   Sensor serial number and pedal production number shall be indicated and recorded before despatch at factory.
   7.0 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.
   8.0 Enviornment 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 11ms at Acceleration 20g(ZERO to PEAK)	Normal Operation
Impact Test	Subject to a drop test onto a smooth concrete floor from a height of one meter a total of 6 time	Normal Operation
High voltage Test	APS Signal : After Exposed 3min. at 12Volts IVS Signal : After Exposed 3min. at 38Volts	Normal Operation
Temp. Test	After Exposed -40˚C ~ 85˚C (100 cycles)	Normal Operation
Humidity Test	After Exposed at -32˚C ~ 70˚C (96%)	Normal Operation
Salt Fog Test	After Exposed 96 Hours at Salt Fog (JIS Z2371)	Normal Operation
Chemical Test	Exposed to 3 second dips in each of the test fluids, followed by a 3 minutes air dry	Normal Operation

ComeSys Control & Measurement Systems Limited

General Tolerance For Machining (KS B 0412)

0.5~3mm	±0.2	120~315mm	±1.2
3~6mm	±0.3	315~1000mm	±2
6~30mm	±0.5	1000~2000mm	±3
30~120mm	±0.8	2000~4000mm	±4

Proviety & Confidence
The information contained in this Drawing is the sole property of ComeSys Ltd. Any reproduction in part / as a whole without the written permission of ComeSys Ltd. is prohibited.
http://comesys.net

DR	D.H.S	10.Sept.09	Do Not Scale
RE	M.J.Y	10.Sept.09	Third Angle Projection
AP	H.M.Lee	10.Sept.09	Sheet 1 of 1

Name: Electric Accelerator Pedal ASM - MTF10
Application Model: Hyundai Wheel Loader - Cummins ISM Engine
Material: -
Paint & Surface Treatment: -
Weight: -
Heat Treatment: -
Customer Part No.: 21LL-01570
ComeSys Part No.: FY10-016-13
Issued: 0