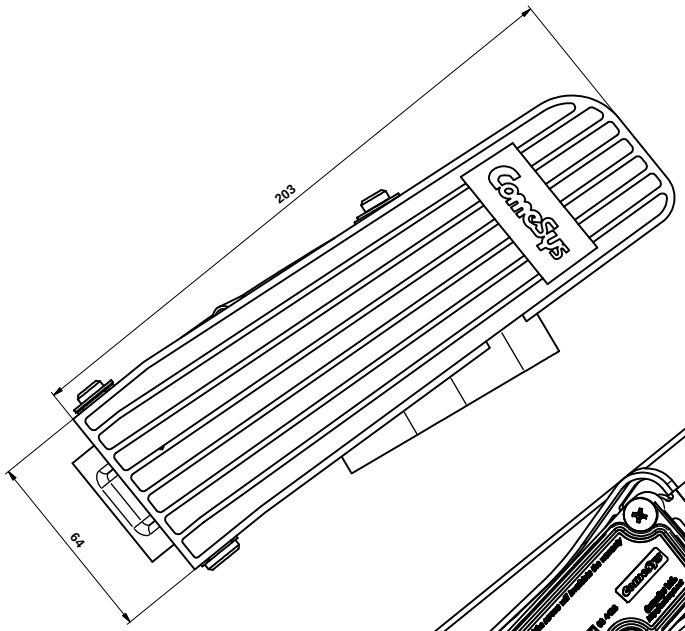
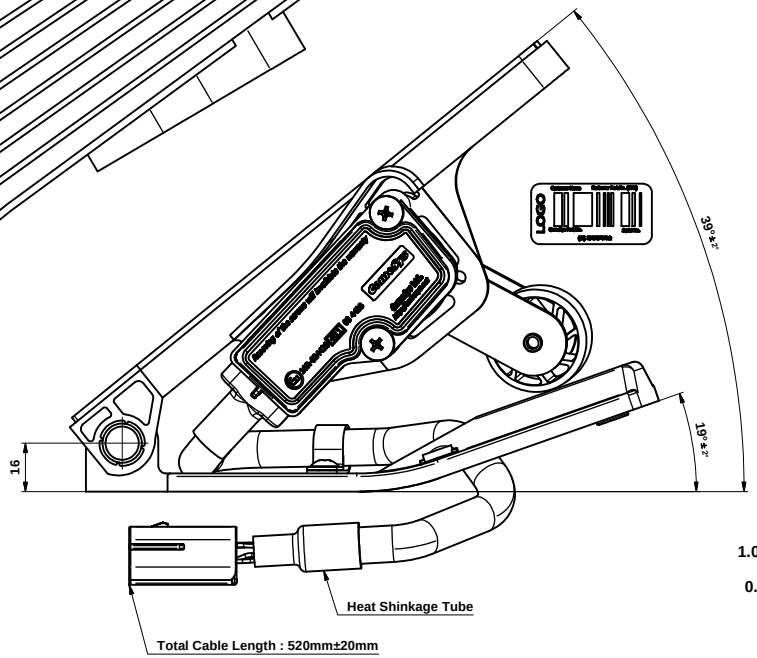
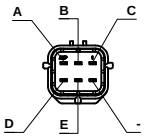
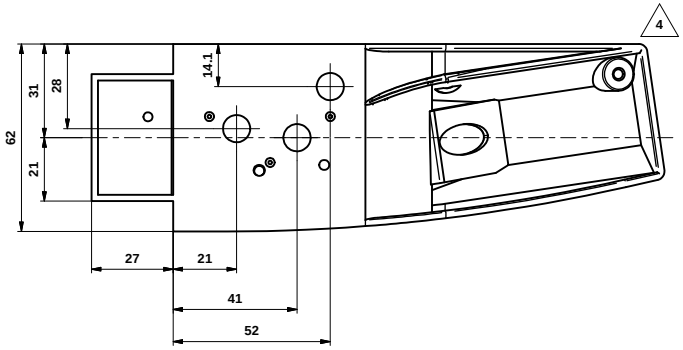
Part No. FZ3-142-70







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



MODEL	C/B, 4wheels CPD 10/15/18/25-J3
ECU	DANAHER AC
PEDAL	FZ3-142-70
SIGNAL	in 8Vdc out 0.6 - 6.4Vdc
SWITCH	TR
SWITCH POSITION	"Off" to "On" at1.04V
SWITCH VOLTAGE	48Vdc
SWITCH CURRENT	2mA@48Vdc

* The figures described in the table obtained at Heli test truck.

Fig. 1 Circuit Diagram

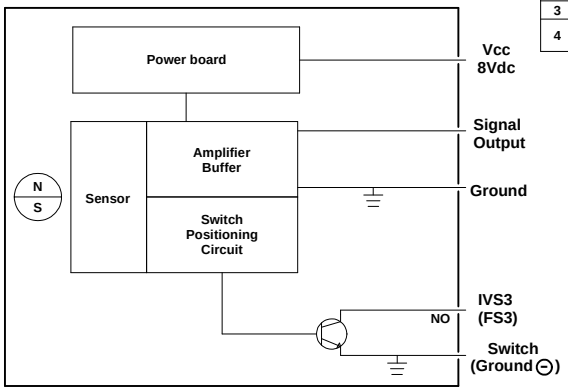


Fig. 2 Signal Output

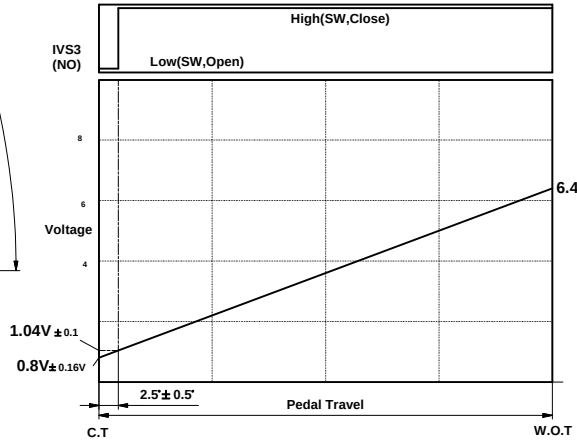
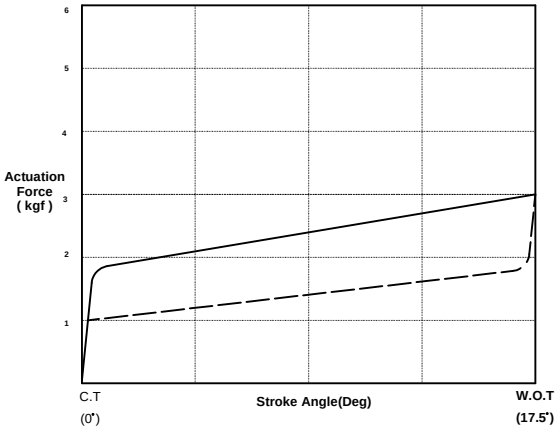


Fig. 3 Spring Force



REV	DESCRIPTION	DATE	DR	RE	AP
1	Switching mechanism changed	10.July.10	D.H.Shin	J.H.Ahn	H.M.Lee
2	Submit for OE Approval	02.Dec.10	D.H.Shin	J.I.Kim	H.M.Lee
3	Add Customer Part NO.	05.June.12	D.H.Shin	J.I.Kim	H.M.Lee
4	Change Bottom Plate 2 Hole -> 3 Hole	03.Dec.15	D.H.Shin	J.I.Kim	H.M.Lee

1. General Layout
1) Non - Contacting Sensing Technology has been applied.
2) Pedal throttle control sensor is satisfied with FMVSS124.
3) 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 : 1kgf(min) Full Throttle Load : 3kgf(max)) : See Fig3.
- 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.

3. Electrical Conditions
1.0 Environmental Conditions:
Operating Temperature : -40°C ~ +85°C
Storage Temperature : -40°C ~ +120°C
2.0 Electrical Characteristics
2-1 Type of sensing element
2.1.1 Input Voltage(Vcc) : 8Vdc fixed from controller
2.1.2 Operation Current(Iop) : 20mA(Normal), 25mA(Max)
2.1.3 Reverse Porarity : withstand max 3mins
2.1.4 Electrical Travel : See Fig 2.
2.1.5 Independent Linearity :± 2%
2.1.6 Signal Load : 10kohms,C=4.7nF Tested.
2-2 Type of Switch(IVS) : Transistor
2.2.1 Switch max Load Voltage : 50V
2.2.2 Switch max Load Current : 10mA (200mW)
2.2.3 Switch Load : >1kohms.C=4.7nF Tested
2.2.4 Switch Position
Switch Position shall be discussed at PO and fixed at factory before delivery. See Fig. 2
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㎟)
Snap-Rings : Stainless
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 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 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 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

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

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http://comesys.net

DR	J.E.Kim	27.May.08	Do Not Scale
RE	J.T.Jung	27.May.08	Third Angle Injection
AP	H.M.Lee	27.May.08	Sheet 1 of 1

Name: Electric Accelerator Pedal Ass'y
Application Model: DANAHER AC Controller
Material: ------- | Paint & Surface Treatment: -------
Weight: ------ g | Heat Treatment: ------
Customer Part No.: A63V2-40501 SGME - HEL 3 | ComeSys Part No.: FZ3-142-70 | Issued: 4