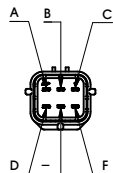
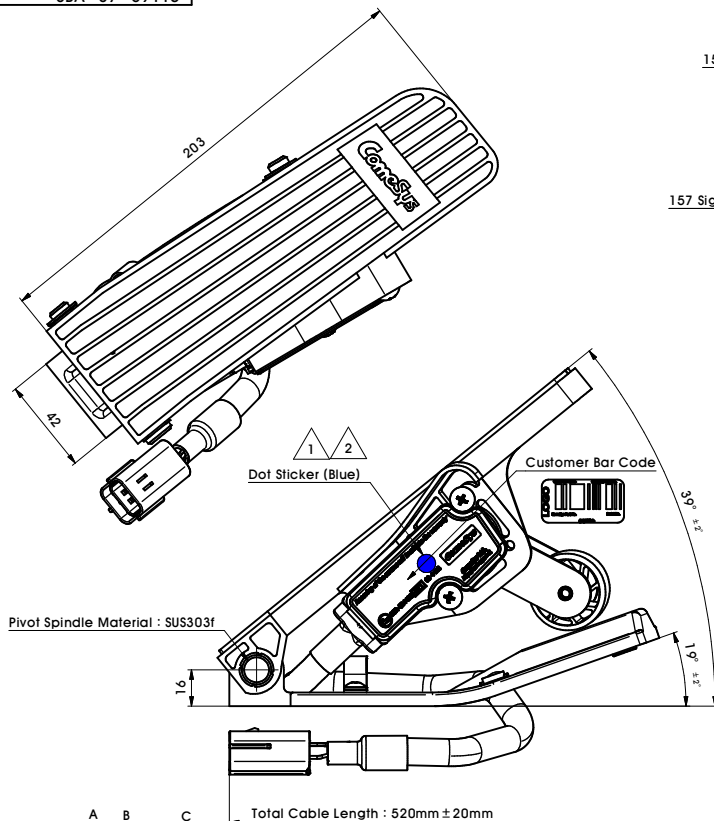


Part No. FZ3-114-381
3BA-37-69115

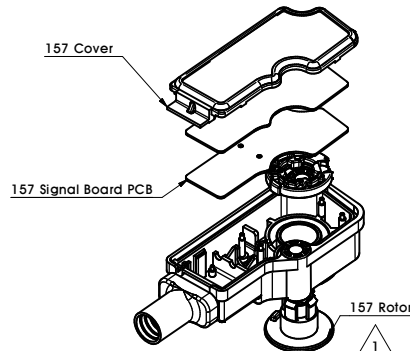


AMP P/No: 6wire 174264-2(CAP)

Pin Location	Description	Color
A	Vcc 5Vdc	Red
B	Pedal Signal Output	Green
C	Ground	Black
D	Switch, NO	Yellow
-	-	-
F	Switch, NO	Pink

*Fig4. Springs

Spring	ComeSys DWG No.	Wire Dia.	Material
Outer	CL-204	Ø2.0	SUS04 - WPB
Inner	CL-210	Ø1.7	SUS04 - WPB
Pivot	-	-	-

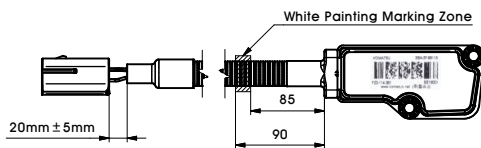
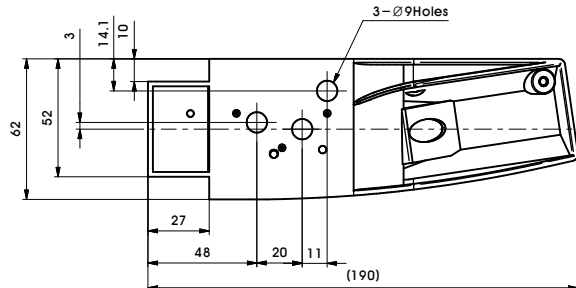


Sensor Part View

* Bar Code



S/N : 製造順番
製造日
製造月 - 1月 : A
2月 : B
12月 : L
製造年 - 19年 : V
20年 : W
21年 : X



* Sensor Assy

Fig. 1 Circuit Diagram

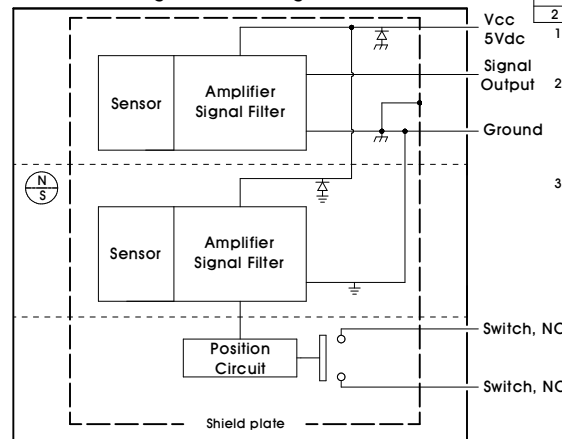


Fig. 2 Signal Output

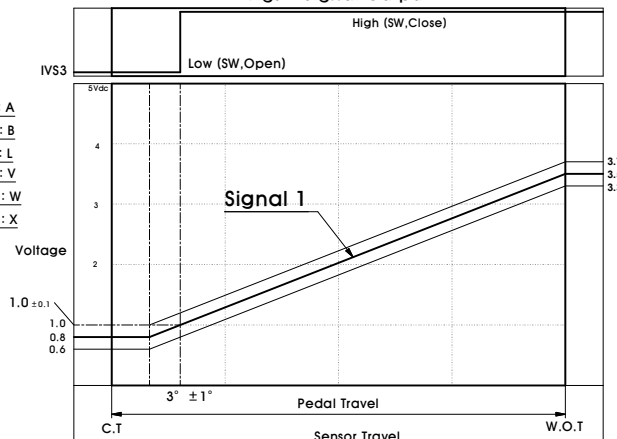
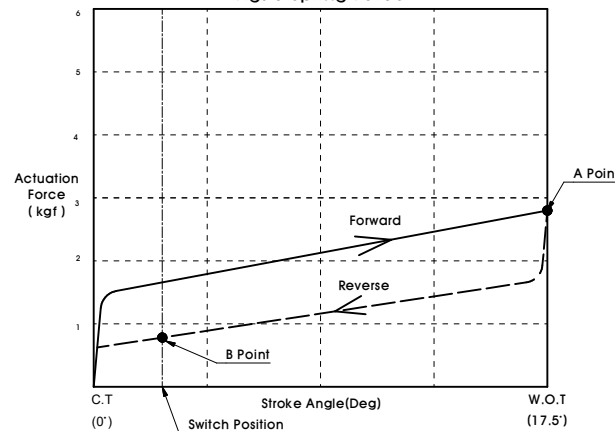


Fig. 3 Spring Force



REVISION HISTORY					
REV	DESCRIPTION	DATE	DR	RE	AP
1	Change to Rotor (CL-4149 -> CL-4921) & Dot Sticker Color (Green -> Yellow)	20.May.19	M.J.Kim	J.I.Kim	J.H.Lee
2	Dot Sticker Color(Yellow -> Blue)	05.Jul.19	M.J.Kim	J.I.Kim	J.H.Lee

1. General Layout
1) Non - Contacting Sensing Technology has been applied.
2) Pedal throttle control sensor is satisfied with SAE J1843.
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.
(A point) : max 2.7kgf & Point : min 0.8kgf) : 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 ~ +80° C
Storage Temperature : -50° C ~ +105° C
2.0 Electrical Characteristics
2-1 Signal Circuit : The sensor provides a voltage that is proportional to the pedal angle.
2.1.1 Input Voltage(Vcc) : 5Vdc ± 2%
2.1.2 Ratiometric Operational Input Range : 4.5 ~ 8V
2.1.3 Operation Current(per circuit) : 25mA(Normal), 30mA(Max)
2.1.4 Reverse Polarity : Withstand 10min(max)
2.1.5 Electrical Travel : See Fig. 2
2.1.6 Independent Linearity : ± 2% F.S. (Control Area See Fig.2)
2.1.7 Signal Load : 10kohms, C=4.7nF Tested.
2.1.8 Limit Circuit operation position : High Voltage : 6.7V Low Voltage : 2.8V
2-2 Type of switch(IVS) : MOSFET switch (Semiconductor Relay Switch)
2.2.1 Switch Operation Current (Isw) : Max 120mA
2.2.2 Switch Resistance(Ron) : Max 30Ω at Switch On
2.2.3 Switch Polarity : No polarity
2.2.4 Switch Voltage : Max 350V
2.2.5 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+GF30%+Anti Static
Pedal Bottom Plate : Aluminum (ADC12)
Cable : AEXf or AVXf (0.50mm)
Spring : See Fig4.
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 4million 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 Environment Test

Item	Test Method	Decision Standard
Vibration Test	Subject to broadband random vibration between 20 and 2000Hz for 20hours in all 3 axis. Acceleration levels of 1G rms in the axial direction, 5G rms in the horizontal direction, and 8G rms in the vertical direction.	Normal Operation
Shock Test	After Exposed 11ms of 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	Signal Circuit : After Exposed 5min at 12V. After Exposed 5min at -5V.	Normal Operation
Temp. Test	After Exposed -40° C ~ 90° C (10 cycles)	Normal Operation
Humidity Test	After Exposed at -40° C ~ 85° C (96%)	Normal Operation
Salt Fog Test	After Exposed 96 Hours at Salt Fog (ISO 22371)	Normal Operation
Chemical Test	Exposed to 3 second dips 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)	100 V/m
EMI Test	Tested in accordance with CISPR 25	80MHz ~ 2GHz
Burst	Tested in accordance with ISO7637-2	Pulse 3A, 3B

9.0 In case of the following condition, Signal output must set below 0.5V.
- Sensor Assy fall out
- Sensor failure

10.0 Accessories (Assemble)
M4 X 0.7 L=8mm Bolt
Tightening Torque 20 ~ 22 Kgf · cm
Clamp Material : Nylon

4. Free from burr at the shaft.
5. A movable part should move smoothly.
6. A movable part can take sufficient clearance.
7. Do not pass the bush device at the notch of shaft.
8. Carried of following check after the test of durability and environment.
8-1. Normal operation
8-2. Non unusual modification and wear
8-3. Keep the pedal force.
9. The operation of the pedal must operate smoothly over the full range of a movable areas with no catch and return etc.

Control & Measurement Systems Limited		Electric Accelerator Pedal Assy (MTF3)	
Application Model		Komatsu Arion model	
Material		Paint & Surface Treatment	
Weight		6.40 g	
Customer Part No.		Compart Part No.	
3BA-37-69115		FZ3-114-381	