

# Veethree

'Global Technology. Indian Prices'



## INDICATION INSTRUMENTS LIMITED

## COMPANY PROFILE

### OUR MARKETS

- ✦ TRUCK/BUS
- ✦ TRACTOR
- ✦ MARINE
- ✦ OFF-ROAD
- ✦ THREE-WHEELER
- ✦ INDUSTRIAL

### ABOUT US

- ✦ Founded in 1976 with a mission of pursuing excellence
- ✦ 200,000 sq. ft. plant area
- ✦ 6 million units made a year
- ✦ Over 1000 employees
- ✦ Footprints in USA, UK & ANZ
- ✦ AN IATF 16949 & 9001 certified company



**INDIA**



**UK**



**US: Florida**



**US: Chicago**

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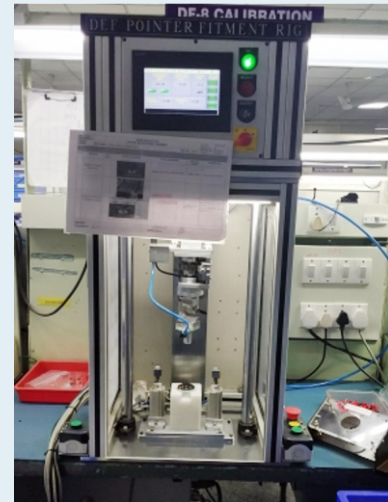
HIL Testing

## ENGINEERING & DEVELOPMENT

- ✦ Black box design capabilities
- ✦ Support for alpha/ beta samples
- ✦ Creo/ altium for designing
- ✦ HIL testing for instrument cluster
- ✦ More than 50 engineers
- ✦ Fully equipped in-house reliability lab or testing since 1995
- ✦ Expertise in CAN J1939/ NMEA

## MANUFACTURING

- ✦ Environmental controlled assembly
- ✦ Robotic pointer fitment
- ✦ Vision-based EOL
- ✦ Extensive use of poka yoke



Robotic Pointer Fitment



Vision Inspection Machine

## QUALITY

- ✦ Documented processes & procedures
- ✦ First time right
- ✦ Strong contents over tier 2 suppliers
- ✦ 8D support
- ✦ PPAP documents on request (chargeable)



## VEECONNECT

The VeeConnect is a 12 position DC power management system that allows for streamlined control. With a robust solid state design based on an aerospace pedigree, this technology allows for efficient builder configuration and reduced system and installation costs. The module is programmable via the T5, a slim-line profile housing and high-resolution 5-inch projected capacitive touch customizable color screen delivering modern tablet like aesthetics.

It meets the need for tough, flexible instrumentation while offering high performance and design specifications.



### Module Features:

- ✦ IP 67 all around protection
- ✦ Robust solid design
- ✦ All 12 channels capable of 20 amps each
- ✦ All channels receive analog or digital input
- ✦ 4 channels capable of motor reversing
- ✦ 12 channels support PWM for lighting
- ✦ System monitoring & reporting for current draw, voltage, runtime & fault condition

### Display Features:

- ✦ IP 67 all around protection
- ✦ Robust solid state design
- ✦ 2 x CANbus & 1 x RS485 connection
- ✦ 1 x analog, 1 x digital input
- ✦ 1 x relay output
- ✦ 1 x ethernet & 1 x video connection
- ✦ J1939/ NMEA 2000/ Tier 4 compatible



## DISPLAYS



**C3**  
3.5" COLOR  
DISPLAY



**M2**  
2.3" MONO-  
CHROME  
DISPLAY



**C3I**  
3.5" LOW  
PROFILE  
COLOR  
DISPLAY



**T5**  
5" TOUCH  
DISPLAY



**C7**  
7" COLOR  
DISPLAY



**T7**  
7" TOUCH  
DISPLAY



**R3s**  
3" ROUND  
GAUGE  
WITH  
RECT  
COLOR  
DISPLAY



**R2s**  
2" ROUND  
GAUGE  
WITH  
SQUARE  
COLOR  
DISPLAY



**R3**  
3" ROUND  
TOUCH  
DISPLAY

## 12.3" TFT



- ✦ Digital cluster of 12.3" coloured TFT with resolution 1920x720 and luminance up to 800 cd/m<sup>2</sup> for readable in direct sunlight too
- ✦ Cortex A7 micro processor having speed of 600 MHz is used, which can deliver the > 30 fps
- ✦ Linux based software platform
- ✦ QT based 3DUI design
- ✦ Bluetooth integration for turn by turn navigation guidance
- ✦ Software updates through USB
- ✦ IP65 & EMI/EMC compliant
- ✦ Booting time < 10sec.
- ✦ Analog camera support is available for reverse parking



## CLUSTERS

### L4B



- ✦ 4 nos. high quality stepper motor based gauges
- ✦ Monochrome TN-negative type fixed segmented LCD screen of 5"
- ✦ 50 nos. tell tales options
- ✦ Multiple inputs including CAN 2.0B (J1939) support available
- ✦ IP65 and EMI/EMC compliant
- ✦ Multi-tone buzzer for warning indicator

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- ✦ Multi-tone buzzer for warning indicator

### H4B



- ✦ 4 nos. high quality stepper motor driven gauges
- ✦ 5" TFT of resolution 800x480 with 800 nits intensity for sunlight readability
- ✦ 50 nos. tell tales options
- ✦ Multiple inputs including CAN 2.0B (J1939) support available
- ✦ IP65 and EMI/EMC compliant
- ✦ 4 buttons for screen navigation
- ✦ Analog camera support available for reverse parking

### L4C



- ✦ 4 nos. high quality stepper motor driven gauges
- ✦ Monochrome TN-negative type fixed segment LCD
- ✦ 30 nos. tell tales options
- ✦ IP65 and EMI/EMC compliant
- ✦ Multiple inputs including CAN 2.0B (J1939) support available
- ✦ Buzzer for warning available

### H6





## CLUSTERS

### Tractors



T3



T3.I

### Trucks (HCV)



H5

### Trucks (LCV)



SI

### Tractors



TI



TIB

### Three-wheelers



WI

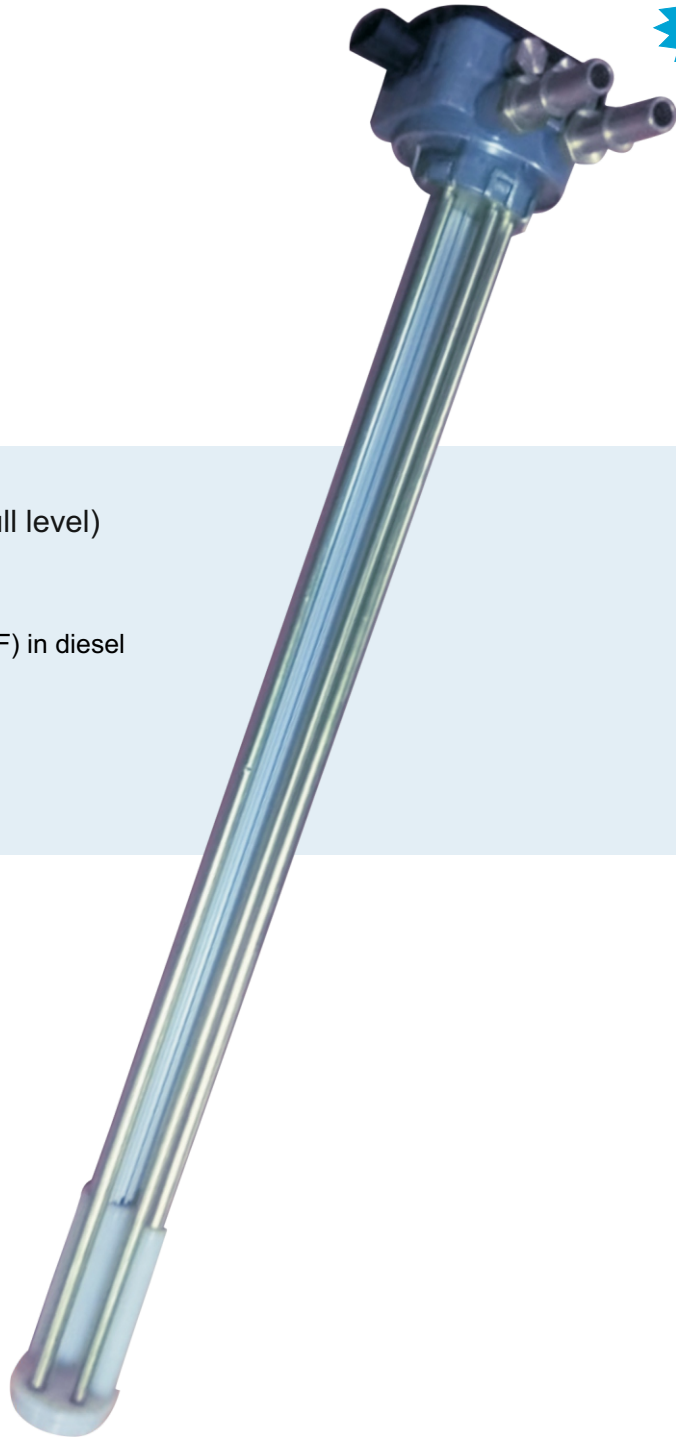


W3

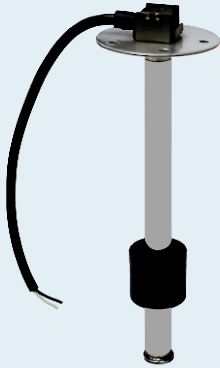
## CSC (Capacitive Self Calibrating) Fuel Level Sender Integrated Suction/ Return Tube Design

NEW

- ✦ Self Calibrating
- ✦ Linear output:  
0.5 VDC (empty level) to 5 VDC (full level)
- ✦ Accuracy:  
 $\pm 2.0\%$  of sensor length @  $+20^{\circ}\text{C}$  ( $+68^{\circ}\text{F}$ ) in diesel
- ✦ Resolution: 10 mV
- ✦ Operating voltage: 8 - 32 VDC
- ✦ Low current consumption
- ✦ Temperature compensated
- ✦ Short circuit protection
- ✦ Reverse polarity
- ✦ IP 66



## FUEL SENDERS



### (Reed Switch)

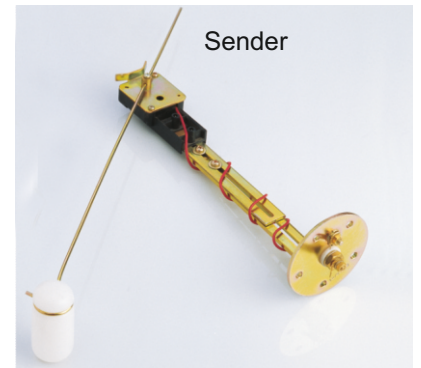
- ✦ Compatible with petrol (gasoline) & diesel fuels
- ✦ Stainless steel design eliminates corrosion issues
- ✦ Available in SAE 5 hole mounting pattern
- ✦ Factory preset lengths available
- ✦ Highly reliable longer life compared to Float Arm Senders (specially in severe sloshing conditions)
- ✦ Suitable for both 12V and 24V gauges

- ✦ Suitable for petrol (gasoline) and diesel fuels
- ✦ Available in standard resistance to match Stewart Warner, VDO, Ford, GM and other custom resistance curves
- ✦ Adjustable design (for 7 to 24" fuel tank depth)
- ✦ Available in Wire Wound & Thick Film Resistance Design
- ✦ Standard 5 hole SAE mounting flange

### (Adjustable)



Kit



Sender

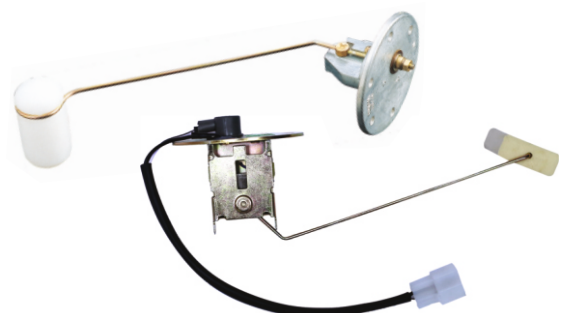
### (Integrated Suction)



- ✦ Suitable for petrol (gasoline) and diesel fuels
- ✦ 1000 hour salt spray life (optional)
- ✦ Available in Wire Wound & Thick Film Resistance Design
- ✦ Available in standard resistance to match Stewart Warner, VDO, Ford, GM and other custom resistance curves
- ✦ Available in different custom design

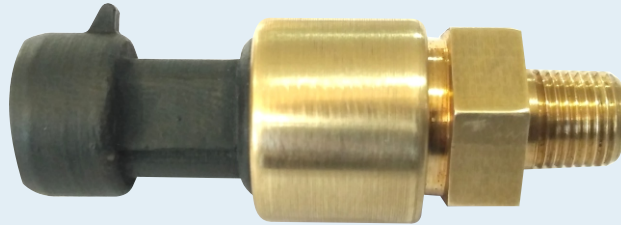
- ✦ Suitable for petrol (gasoline) and diesel fuels
- ✦ Available in different custom design
- ✦ Pre-calibrated
- ✦ Available in standard resistance to match Stewart Warner, VDO, Ford, GM and other custom resistance curves
- ✦ Heavy duty Die Cast Design
- ✦ Available in Wire Wound & Thick Film Resistance Design

### (Die-cast/ Sheet Metal)



## PRESSURE SENDERS/ SWITCHES

### Electronic Pressure Sender



- ✦ Pressure range: 1 bar to 21 bar (15 psi to 300 psi)
- ✦ Fully calibrated and temperature compensated
- ✦ Total error band: 1.0% FSS from 20°C to 85°C
- ✦ IP67 compliant
- ✦ Over voltage and reverse polarity protection

### Pressure Senders



- ✦ High accuracy and reliability
- ✦ Pre-calibrated
- ✦ Heavy duty design with metal diaphragm
- ✦ Rugged design
- ✦ Excellent repeatability
- ✦ Senders are available in standard resistance to match Stewart Warner, VDO and AC resistance gauges



## SENDERS/ SWITCHES

### Temperature Senders



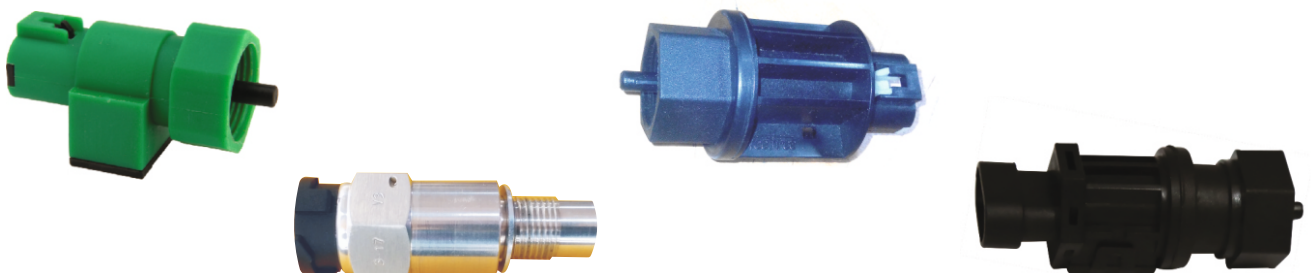
### Temperature Switches



### GPS Speed Sender

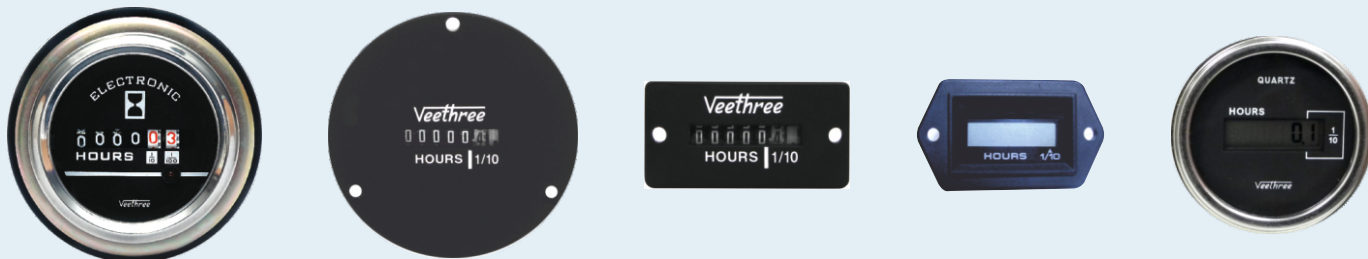


### Speed Senders

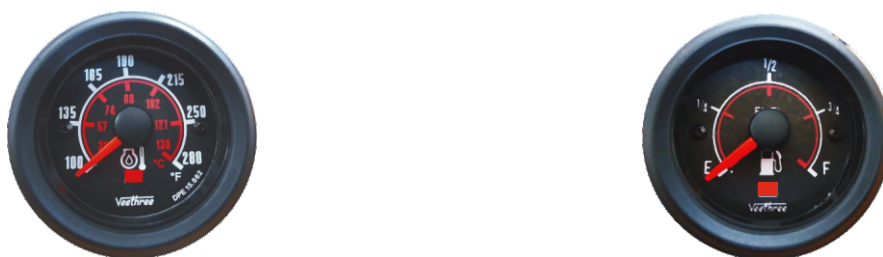


## GAUGES

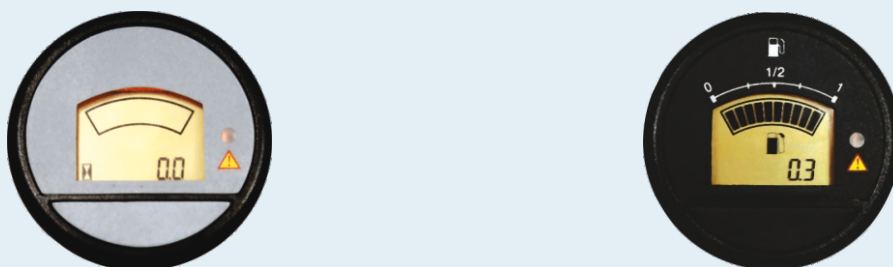
### Analog/ LCD Hour Meters



### Engine Shut Off Gauges



### Digital Fuel/ Hour Gauges



### Digital Depth Gauges



## GAUGES

### Electronic Tachometers



### GPS Speedometers



### Stepper Clock



### Honda Matrix



### J 1939 Gauges





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