

## COCKPIT VISION

Cockpit Vision is the pinnacle of instrument technology. It represents latest advances in instrument illumination and installation techniques.

Using fibre-optic technology to illuminate the pointer and VDO's Trioptic through dial lighting we achieve superb night time illumination.

The installation technique used, where possible, disregards U-brackets and studs and features instead a 360° locking ring thereby eliminating panel warping and gauge rotation. We call it the VDO Spin-lock.

## SPEEDOMETERS, automotive



Illumination through dial and pointer. 12V globe included.

Field adjustable to suit 500 to 400,000 imp/km by pulse setting, or auto-calibration function through LCD readout via reset button. Total distance 999,999.9 not resettable. Speed display analogue; Odometer and trip distance LC-display trip distance 99,999.9 resettable.

Signal source Hall-effect, inductive or blocking oscillator sender units.

For 24V application use globe #240.053 (2 required).

For matching sender units refer to page 83.

### Speedometer - Electronic

Part No.	Range	Size	Voltage
437 015 028	0 - 200km/h	80mm	12/24V
437 015 021	0 - 300km/h	80mm	12/24V
437 015 025	0 - 200km/h	85mm	12/24V
437 015 022	0 - 300km/h	100mm	12/24V
437 015 029	0 - 200km/h	100mm	12/24V

**Note:** 8 pin plug kit part no. 340.824 recommended. Not included in kit.

## PITOT TUBE SPEEDO, marine

The Pitot Tube Speedo is designed to determine the speed of a boat over water. It consists of a Pitot tube foot and hose to transfer air pressure to the speedo head system where the air pressure is converted to speed.



### Speedometer - Pitot Tube

Part No.	Range	Size	Voltage
260.111	50mph	85mm	12V

### Accessories

Part No.	Description
170.702	pitot tube assembly black

## TACHOMETERS

Suitable for most petrol and diesel engines. Field programmable to suit 4, 6 or 8 cyl./4 stroke ignition and alternator pick-up (terminal "W"). Single phase, not suitable for star point or magneto system. For standard, points ignition system, add a 1N4004 diode in series with the signal wire (cathode towards tacho). Illumination 12V included.

### Tachometer - Electronic

Part No.	Range	Size	Voltage
333 015 037	0 - 4000rpm	52mm	12V
333 015 031	0 - 8000rpm	52mm	12V
333 015 038	0 - 4000rpm	80mm	12V
333 015 032	0 - 7000rpm	80mm	12V
333 015 046	0 - 10000rpm	80mm	12V
333 015 033	0 - 7000rpm	85mm	12V
333 015 047	0 - 4000rpm	100mm	12V
333 015 034	0 - 8000rpm	100mm	12V

**Note:** 8 pin plug kit part no. 340.824 recommended. Not included in kit.

For external shift-light, use rev-switch p/n 660.990



## TACHOMETER COLUMN MOUNT

### Tachometer - Column Mount - Kit

Part No.	Range	Size	Voltage
333 015 033POD	0 - 7000rpm	85mm	12V

**Note:** Kit includes tacho, gauge, pod plug and terminals.



## TACHOURMETER

Suitable for most petrol and diesel engines. Adjustable through LCD and reset button. Field programmable to 1, 2, 3, 4, 5, 6, 8 or 12 cyl./4-stroke, 1, 2, 3 or 4 cyl./2-stroke ignition and alternator pick-up ("W" terminal). Also suitable for signal from generator or inductive sender unit but not suitable for magneto ignition system. Incorporated hourmeter shows true engine hours. Operating hours 99,999.9. Pulse range 0.5-200 pulses per rev. Illumination 12V included.

For 24V application use globe #240.053 (2 required).

For matching sender units refer to page 83.

### Tachourmeter - Electronic

Part No.	Range	Size	Voltage
333 015 035	0 - 7000rpm	85mm	12/24V

**Note:** 8 pin plug kit part no. 340.824 recommended. Not included in kit.



## FUEL GAUGES

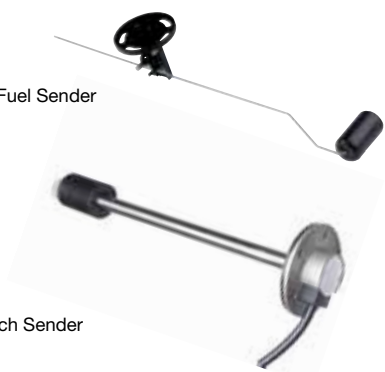
Suitable for use with most petrol, diesel fuel, and LPG systems.  
Illumination 12V included.



Adjustable Float Arm Sender 220.003



Arm Type Fuel Sender



Reed Switch Sender



Sender-Tubular Tank



Flange Mounting Kit N05801432



Fuel Gauge - Float Arm Sender			52mm
Part No.	Description	Specifications	Voltage
301 010 011	Fuel gauge (float arm)	10 - 180 ohms	12V
301.105	Fuel gauge for USA application	240 - 33 ohms	12V
301 010 010	Fuel gauge LPG Suits 5 - 90 ohms LPG tank unit senders.	5 - 90 ohms	12V

**Note:** 3 pin plug kit part no. 240.030 recommended. Not included in kit.

Sender - Adjustable Float Arm		
Part No.	Specifications	Length
220.003	10 - 180 ohms	150 - 600mm
220.004	5 - 90 ohms	150 - 600mm
220.005	240 - 33 ohms	150 - 600mm

**Note:** Mounting kit part no. N05801432 not included in kit.

### Arm Type Fuel Sender

See complete listing of arm type fuel senders on page 81.

**Note:** Mounting kit part no. N05801432 not included in kit.

### Reed Switch Sender Fuel & Water

Just for 10 - 180 ohms gauges.

See complete listing of arm/reed switch senders on page 81.

**Note:** Mounting kit part no. N05801432 not included in kit.

### Fuel Gauge - Tubular

Part No.	Description	Ohms		Voltage
		Empty	Full	
301 010 009	Fuel gauge-tubular	110/50	2 ohms	12V

**Note:** 3 pin plug kit part no. 240.030 recommended. Not included in kit.

### Tubular Type Sender

See complete listing of tubular type senders on page 82.

**Note:** Mounting kit part no. N05801432 not included in kit.

### Accessories

Part No.	Description	PCD
N05801432	Flange mounting kit	54mm

**Note:** For more Accessories, refer to pages 88 - 91.

### Fuel Gauge - OE Senders

Part No.	Description	Specifications	Voltage
301 010 015	Suits OE senders	73 -10 ohms	12V

**Matching** Sender - Replaces gauge for Holden HQ (73-76) on, HJ, HX, HZ, Torana LH, LX, Ford XR to XC, Escort and Cortina.

## PRESSURE GAUGE, electrical

Suitable for most vehicles.

Illumination 12V included.

Adaptors are listed on page 80.

Electric Pressure Gauge - 500Kpa			52mm
Part No.	Description	Specifications	Voltage
350 010 016	Oil pressure symbol on dial	500Kpa 10-184 ohms	12V

**Note:** 3 pin plug kit part no. 240.030 recommended. Not included in kit.

Sender			10-180 ohms
Part No.	Range	Thread	Terminal
360.001	500Kpa	1/8"-27NPTF	Spade
360.004	500Kpa	1/4"-18NPTF	Button
360.016	500Kpa	1/8"-28BSBT	Button
360.018	500Kpa	1/8"-27NPTF	M4 thread
360081030049K	5 Bar / 7 psi SW	1/8"-27NPTF	M4 thread

Refer to your engine manufacturers manual for correct oil pressure ratings.

**Note:** 500 Kpa = 5 Bar = 72.5 psi      700 Kpa = 7 Bar = 101.5 psi  
1000 Kpa = 10 Bar = 145 psi      2800 Kpa = 28 Bar = 406 psi



Sender 360.001

## PRESSURE GAUGE, electrical

Suitable for most vehicles.

Illumination 12V included.

Adaptors are listed on page 80.

Electric Pressure Gauge - 500Kpa			52mm
Part No.	Description	Specifications	Voltage
350 010 017	Oil symbol on dial	1000Kpa 10-199 OHMS	12V

**Note:** 3 pin plug kit part no. 240.030 recommended. Not included in kit.

Senders			10-199 ohms
Part No.	Range	Thread	Terminal
360.002	1000Kpa	1/8"-27NPTF	Spade
360.019	1000Kpa	1/8"-27NPTF	M4 thread
360081030052C	10 Bar / 7 psi SW	1/8"-27NPTF	M4 thread

Refer to your engine manufacturers manual for correct oil pressure ratings.

**Note:** 500 Kpa = 5 Bar = 72.5 psi      700 Kpa = 7 Bar = 101.5 psi  
1000 Kpa = 10 Bar = 145 psi      2800 Kpa = 28 Bar = 406 psi



Sender 360.002

## PRESSURE GAUGE, electrical

Suitable for most vehicles.  
 Supplied with nut and cone to suit 3/16" PVC tubing.  
 Illumination 12V included.



Sender 360.086



Oil line kit 230.012



Nut and cone 230.008



Engine fitting 230.024



Nut and cone 230.025

Pressure Gauge - 100psi			52mm
Part No.	Description	Specification	Voltage
350010021	Oil on dial 10-184 ohms	100psi	12V
350 010 001	Trans on dial 10-184 ohms	400psi	12V

**Note:** 3 pin plug kit part no. 240.030 recommended. Not included in kit.

Sender		10-180 ohms	
Part No.	Range	Thread	Terminal
360.086	100psi	1/8"-27NPTF	M4 Thread
360081038003C	25 Bar*	1/8"-27NPTF	M4 Thread
360081038008C	400psi	1/8"-27NPTF	M4 Thread

Refer to your engine manufacturers manual for correct oil pressure ratings.

**Note:** 500 Kpa = 5 Bar = 72.5 psi    700 Kpa = 7 Bar = 101.5 psi  
 1000 Kpa = 10 Bar = 145 psi    2800 Kpa = 28 Bar = 406 psi  
 \* (0 - 25 Bar Sender is insulated return and can be used for 400 Psi gauge application)

## PRESSURE GAUGES, mechanical

Suitable for most vehicles.  
 Supplied with nut and cone to suit 3/16" PVC tubing.  
 Illumination 12V included.

Pressure Gauge - Air, Oil & Water		52mm
Part No.	Range	Size
150 077 010	0 - 15psi	52mm
150 077 011	0 - 30psi	52mm
150 077 027	0 - 100psi	52mm
150 077 026	0 - 150psi	52mm
150 077 020	0 - 700Kpa	52mm

Accessories	
Part No.	Description
230.012	1.8m fitting kit - 3/16" PVC tubing & engine fitting
230.013	5m fitting kit - 3/16" PVC tubing & engine fitting
230.008	Nut and cone for 3/16" PVC Tubing, M12x1.5 thread
230.024	Engine fitting 1/8"-27NPTF male, 3/16" tubing
230.025	Nut and cone 1/8"-27NPTF nut
230.015	Air/Fuel pressure restrictor

## BOOST GAUGES, mechanical

Suitable for diesel vehicles.

Supplied with nut and cone to suit 3/16" PVC tubing.

Illumination 12V included.

Boost Gauge		52mm
Part No.	Range	Size
150 077 010	0-15 psi	52mm
150 077 011	0-30 psi	52mm

**Note:** Use airline kit 230.012 or 230.013  
Accessories on page 10.  
Includes Air Restrictor: 10027



## TURBO CHARGER GAUGE, mechanical

Suitable for petrol vehicles.

Supplied with nut and cone to suit 3/16" PVC tubing.

Illumination 12V included.

Turbo Charger Gauge		52mm
Part No.	Range	Size
150 077 004	-30" Hg/+25psi	52mm

Hg = Negative 30 inches of vacuum of mercury.

**Note:** Use airline kit 230.012 or 230.013  
Accessories on page 10.  
Includes Air Restrictor: 10027



## VACUUM GAUGE, mechanical

Suitable for most vehicles.

Supplied with nut and cone to suit 3/16" PVC tubing.

Illumination 12V included.

Vacuum Gauge		52mm
Part No.	Range	Size
150 077 005	-30-0" Hg	52mm

Hg = Negative 30 inches of vacuum of mercury.

**Note:** Use airline kit 230.012 or 230.013  
Accessories on page 10.  
Includes Air Restrictor: 10027



## PRESSURE GAUGE ACCESSORIES



Oil line kit 230.012



Nut and cone 230.008



Engine fitting 230.024



Nut and cone 230.025



### Accessories

Part No.	Description
230.012	1.8m fitting kit - 3/16" PVC tubing & engine fitting
230.013	5m fitting kit - 3/16" PVC tubing & engine fitting
230.025	Nut and cone 1/8"-27NPTF nut
230.008	Nut and cone for 3/16" PVC tubing, M12x1.5 thread
230.024	Engine fitting 1/8"-27NPTF male, 3/16" tubing
10027	Air restrictor to fit 3/16" PVC Tubing

## CYLINDER HEAD TEMPERATURE GAUGE

Suitable for most engines including air cooled, industrial, agricultural.

Thermocouple connection fits under 13mm spark plug, or a bolt of the same or smaller diameter.

Illumination 12V included.

### Temperature Gauge - Electric 52mm

Part No.	Range	Dial Colour	Kit Specifications
310.901	100 - 600°F	Black	Gauge, sender, loom

### Accessories

Part No.	Description
323.010	Thermocouple spare part sender

## TEMPERATURE GAUGES, electrical

Suitable for most vehicles.

Illumination 12V included.

For more matching sender units refer to page 78.

Adaptors are listed on page 80.

Temperature Gauge - Water				52mm
Part No.	Description	Specifications	Voltage	
310 010 014	Water temp. symbol on dial	40 - 120°C 287-23 ohms	12V	

**Note:** 3 pin plug kit part no. 240.030 recommended. Not included in kit.

Temperature Sender				
Part No.	Range	Thread	Terminal	Body Type
320.002	40 - 120°C	1/8"-27NPTF	button	a
320.093	40 - 120°C	1/8"-27NPTF	M4 thread	b
323.801/005/001	40 - 120°C	1/8"-27NPTF	button	a
320.022	40 - 120°C	1/2"-14NPTF	spade	c
323801001006K	40 - 120°C	M14x1.5mm	spade	c
320.004	40 - 120°C	M16x1.5mm	button	a

**Note:** 40 - 120°C = 100 - 250°F

For calibration specs, see page 92.

Temperature Gauge - Oil				52mm
Part No.	Description	Specifications	Voltage	
310 010 015	Engine oil temp. symbol on dial	50 - 150°C 323-18 ohms	12V	

**Note:** 3 pin plug kit part no. 240.030 recommended. Not included in kit.

Temperature Sender				
Part No.	Range	Thread	Terminal	Body Type
320.021	50 - 150°C	1/8"-27NPTF	button	a
320.028	50 - 150°C	1/8"-27NPTF	button	d
320.070	50 - 150°C	1/8"-27NPTF	M4 thread	f
320.092	50 - 150°C	1/8"-27NPTF	M4 thread	d
320.016	50 - 150°C	1/2"-20Whit.S	spade 90°	c
320.023	50 - 150°C	3/8"-BSPF	spade	c
320.010	50 - 150°C	M12x1.5mm	button	a

**Note:** 50 - 150°C = 120 - 300°F

For calibration specs, see page 92.



a.



b.



c.



d.



e.



f.





## TEMPERATURE GAUGES, mechanical



Thermowell 180.059

Suitable for most vehicles.

Process connection is 1/8"-27NPTF threaded removable thermowell.

Temperature is transmitted via capillary tube.

Coil up excess capillary tubing - do not cut to shorten!

Illumination 12V included.

Adaptors are listed on page 80.

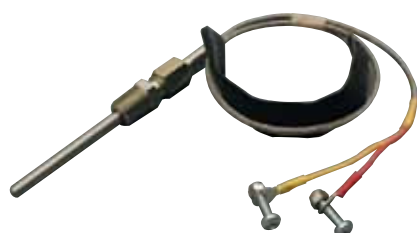
Temperature Gauge - Water		52mm
Part No.	Range	Capillary Length
180 077 022	40 - 120°C	1600mm
180 077 023	40 - 120°C	2600mm
180 077 021	40 - 120°C	4000mm

Temperature Gauge - Oil		52mm
Part No.	Range	Capillary Length
180 077 020	50 - 150°C	1600mm
180 077 019	50 - 150°C	4000mm

Accessories		
Part No.	Description	Note
180.059	Thermowell 1/8"-27NPTF	Suits adaptors # 320.xxx

**Note:** Refer page 80 for adaptors.

## EXHAUST TEMPERATURE / PYROMETER, electrical



Thermocouple 320.714

Suitable for most exhaust systems.

Thermocouple connection is by 1/4"-18 compressing fitting.

Temperature is transmitted via capillary tube.

Illumination 12V included.

Pyrometer - Electrical Kit		52mm
Part No.	Range	Voltage
310.159	0 - 900°C (37.6mV@900°C)	12V

**Note:** Cutting or adding length of loom will not affect calibration.

Spare Parts for 310.159 exhaust temperature/pyrometer kit	
Part No.	Description
310 015 009	Instrument
320.714	Thermocouple 1/4" NPTF non bonded junction "K" type to be fitted 100mm after the turbo
240.035	Loom, 5m
320.059	Weld boss 1/4" - 1/8" NPTF

## VOLTMETER

Suitable for most engines/vehicles where battery and charging systems need to be monitored.

Illumination 12V included.

Voltmeter			52mm
Part No.	Range	Voltage	
332 010 004	8 - 16V	12V	

**Note:** 2 pin plug kit part no. 240.031 recommended. Not included in kit.



## AMMETERS, with internal shunt

Suitable for most engines which require battery and charging system monitoring.

Voltage dependent - suitable for 12V or 24V.

Ammeters with internal shunt are easily identified by the heavy duty threaded terminals on the back of the instrument.

Illumination 12V included.

Ammeter with Internal Shunt - metal body				52mm
Part No.	Description	Specifications	Voltage	
190077006	30-0-30 amp gauge	use 6mm wire	12V	
190077007	60-0-60 amp gauge	use 6mm wire	12V	



## AMMETERS, with external shunt

Suitable for monitoring heavy duty electrical charging system.

Voltage dependent - suitable for 12V or 24V.

Illumination 12V included. For 24V application use dropping resistor N05801180 and globe 240.051.

Ammeter with External Shunt				52mm
Part No.	Description	Specifications	Voltage	
190.504	150-0-150 ammeter kit		12V	

**Note:** For installation use 10mm wire.

Spare Parts for 190.504 ammeter kit			
Part No.	Description	Specifications	
190 075 004	150-0-150 gauge, 52mm		
190.080	Shunt - 150 amps	50mV @ 150 amps	
190.888	5m loom		



## CLOCK, analogue



Suitable for most vehicles.

Features a 12V quartz movement for high accuracy.

Illumination 12V included.

Clock	52mm
Part No.	Voltage
370 012 001	12V

**Note:** 2 pin plug kit part no. 240.031 recommended. Not included in kit.

## INSTRUMENT KIT

Cockpit vision instrument kits are the perfect solution for the automotive enthusiast. The kit comprises of gauges and matching senders.

Cockpit Vision Kit	
Part No.	Description
740.106	Gauge kit

**Note:** Wiring and terminals not included.



Kit Contents - Gauges	
Part No.	Description
333 015 033	Tachometer (85mm)
310 010 014	Water Temperature (52mm)
301 010 011	Fuel (52mm)
350 010 017	Oil Pressure (52mm)
332 010 004	Volt Meter (52mm)



Kit Contents - Senders	
Part No.	Description
360.002	Oil Pressure
320.002	Water Temperature
220.003	Fuel

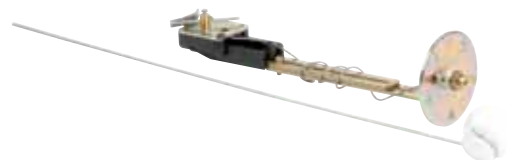
**Note:** Speedo & other gauges not part of the kit and can be purchased separately.



Sender 360.002



Sender 320.002



Adjustable Float Arm Sender 220.003