

# Cockpit International



## TACHOURMETERS, electronic with LCD Hourmeter

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. 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 75 and 76.

### Tachourmeter

Part Number	Range	Installation Ø	Voltage
333 035 010	3000rpm	80mm	12/24V
333 035 011	4000rpm	80mm	12/24V
333 035 025	3000rpm	85mm	12/24V
333 035 013	4000rpm	85mm	12/24V
333 055 002	3000rpm	100mm	12/24V

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



## TACHOMETER, electronic

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. Illumination 12V and 24V included.

### Tachometer

Part Number	Range	Installation Ø	Voltage
333 035 017	6000rpm	52mm	12V
333 035 001	3000rpm	80mm	12V
333 035 002	4000rpm	80mm	12V
333 035 003	7000rpm	80mm	12V
333 045 001	3000rpm	80mm	24V
333 045 002	4000rpm	80mm	24V
333 035 004	3000rpm	85mm	12V
333 055 001	3000rpm	100mm	12V
333 055 011	4000rpm	100mm	12V
333 065 001	3000rpm	100mm	24V

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

## SPEEDOMETER

Floodlit illumination. 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!).

Note – 140mm Speedometer Impulse Ratio programmable (1000-60000 pulses / Km (via software).

For matching sender units refer to page 75 & 76.



### Speedometer

Part Number	Range	Installation Ø	Voltage
437 035 016	0-120km/h	85mm	12/24V
437 055 001	0- 60km/h	100mm	12/24V
437 055 011	0-120km/h	100mm	12/24V
437 015 038	0-125km/h	140mm	12V
437 025 002	0-125km/h	140mm	24V

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

## FUEL GAUGES, electric

Suitable for use with most petrol, diesel fuel, and LPG systems.

Illumination 12V and 24V included.

For matching sender units refer to page 60.



### Fuel Gauge - 3-184 ohms

Part Number	Range	Installation Ø	Voltage
301 030 001	0-1/1	52mm	12V
301 040 001	0-1/1	52mm	24V

Without ISO symbol.

### Fuel Gauge - 10-184 ohms

Part Number	Range	Installation Ø	Voltage
301 030 005	0-1/1ohms	52mm	12V
301 040 005	0-1/1ohms	52mm	24V

### Sender - Adjustable Float Arm

Part No.	Specifications	Length
220.003	10 - 180 Ω	150-535mm

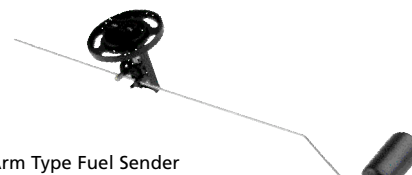
### Sender - Adjustable Float Arm

Part No.	Specifications	Length
220.004	5- 90 ohms	150-535mm

### Arm Type Fuel Senders



Sender-Adjustable Float Arm 220.003



Arm Type Fuel Sender

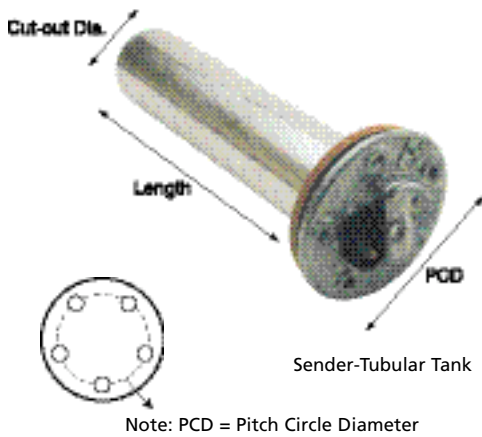
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## FUEL GAUGE, electric continued

Fuel Gauge - Tubular			52mm
Part Number	Range	Installation Ø	Voltage
301 030 002	0-1/1	52mm	12V
301 040 002	0-1/1	52mm	24V

With ISO symbol for fuel level  
For tubular tank units, adjustable resistance.



### Tubular Type Senders

See complete listing of tubular type senders on page 62.



Neoprene Rubber Gasket 36373/9A



Welding Flange 22502641141



Flange Mounting Kit N05801432

### Accessories

Part No.	Previous Part No.	Description	PCD
36373/9A		gasket-neoprene rubber	54mm
2251016		gasket	80mm
22502641141	(2250264)	welding flange	54mm
115910011401	(220.011)	welding flange	80mm
N05801432		mounting kit	54mm
2250234		gasket-cork (dim. as per 36373/9A)	54mm

## PRESSURE GAUGE, electric

Suitable for most vehicles and machines. Illumination 12 or 24V included.

Note: Not recommended for petrol!

Adaptors are listed on page 66.

Pressure Gauge - Engine Oil Pressure			52mm
Part Number	Range	Installation Ø	Voltage
350 030 016	0- 500kPa	52mm	12V
350 040 016	0- 500kPa	52mm	24V

With ISO symbol.

**Note:** 500kPa = 5Bar = 72.5 PSI

Senders			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

**Note:** 500kPa = 5Bar = 72.5 PSI

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

For thread adaptors see page 66. For additional pressure senders see page 65.

Pressure Gauge - Engine Oil Pressure			52mm
Part Number	Range	Installation Ø	Voltage
350 030 017	0-1000kPa	52mm	12V
350 040 017	0-1000kPa	52mm	24V

With ISO symbol. 1000kPa = 10 Bar = 145 PSI

For thread adaptors see page 66. For additional pressure senders see page 65.

Senders-1000kPa			10-199 ohms
Part No.	Range	Thread	Terminal
360.002	1000kpa	1/8"-27NPTF	Spade
360.019	1000kpa	1/8"-27NPTF	M4 thread

Pressure Gauge			52mm
Part Number	Range	Installation Ø	Voltage
350 040 011	0-10bar	52mm	24V

With ISO symbol. 1000kPa = 10 Bar = 145 PSI

Pressure Gauge - Transmission Oil Pressure			52mm
Part Number	Range	Installation Ø	Voltage
350 030 005	0-25bar	52mm	12V
350 040 005	0-25bar	52mm	24V

With ISO symbol. 2500kPa = 25bar = 406PSI

Senders			Insulated Return 2 terminal
Part No.	Previous Part No.	Description	Specifications
360081038003C	(360.722)	0-25 bar 360 PSI single station	1/8"-27 NPTF



Sender 360.001



Sender 360.002



Sender 360 081 038 003C

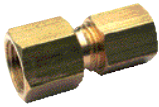
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Oil line kit 230.012



Nut and cone 230.008



Nut and cone 230.025



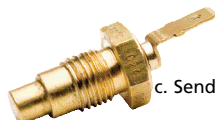
Engine fitting 230.024



a. Sender 320.002



b. Sender 320.071



c. Sender 320.022

## PRESSURE GAUGE, mechanical

Suitable for most vehicles and machines. Can be used on most non-aggressive gases and liquids. Supplied with nut and cone for 3/16" PVC tubing. Illumination 12V included.

For 24V application use globe part no. 240.053

Pressure Gauge		52mm
Part Number	Range	Installation Ø
150 035 019	0-700kPa	52mm
150 035 020	0-1000kPa	52mm
150 035 022	0-2500kPa	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

## DUAL PRESSURE GAUGE, mechanical

Suitable for most vehicles and machines.

Two independent measuring systems indicated separate pressures on one scale.

Mainly used for brake systems.

Supplied with nuts and cones for 3/16" PVC tubing.

Illumination 12V and 24V light globes included. Part No. 240.053

Dual Pressure Gauge		
Part Number	Range	Installation Ø
150.316	0-1000kPa	60mm
151.910	0-150 PSI	52mm

## TEMPERATURE GAUGE, electric

Suitable for most vehicles and machines.

Illumination 12 or 24V included.

For matching sender units refer to pages 60.

Temperature Gauge - Water			52mm
Part Number	Range	Installation Ø	Voltage
310 030 002	40-120°C	52mm	12V
310 040 002	40-120°C	52mm	24V

With ISO symbol. 40-120°C = 100-250°F

Sender					
Part No.	Previous Part No.	Range	Thread	Terminal	Body Type
320.002		40-120°C	1/8"-27NPTF	button	a
320.071		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 (320.035)		40-120°C	M14x1.5mm	spade	c
320.004		40-120°C	M16x1.5mm	button	a

**Note:** 40-120°C = 100-250°F

**Temperature Gauge - Engine Oil**

Part Number	Range	Installation Ø	Voltage
310 030 003	50-150°C	52mm	12V
310 040 003	50-150°C	52mm	24V

With ISO symbol.

50-150°C = 120-300°F

**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	b
320.070	50-150°C	1/8"-27NPTF	M4 thread	e
320.072	50-150°C	1/8"-27NPTF	M4 thread	e
320.016	50-150°C	1/2"-20Whit.S	spade 90°	c
320.023	50-150°C	3/8"-16UNF	spade	c
320.010	50-150°C	M12x1.5mm	button	a
320.007	50-150°C	M14x1.5mm	spade 90°	c
323.801/004/029	50-150°C	M16x1.5mm	spade 90°	c

**Note:** 50-150°C = 120-300°F



a. Sender 320.021

b. Sender 320.028

c. Sender 320.023

e. Sender 320.070

f. Sender 320.072

**Temperature Gauge - Transmission Oil**

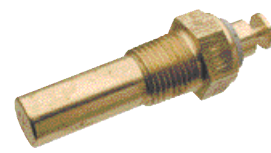
Part Number	Range	Installation Ø	Voltage
310 030 004	60-200°C	52mm	12V
310 040 004	60-200°C	52mm	24V

With ISO symbol.

60-200°C = 140-392°F

**Sender**

Part No.	Range	Thread	Terminal	Body Type
320.006	60-200°C	1/8"-27NPTF	button	a
320.020	60-200°C	1/8"-27NPTF	button	b



Sender 320.006



b. Sender 320.020

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## TEMPERATURE GAUGE, mechanical

Suitable for most vehicles and machines.

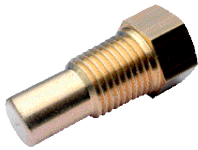
Process connection is 1/8"-27NPTF threaded removable thermowell.

Temperature is transmitted via capillary tube.

Coil up excess capillary tubing – **do not cut to shorten!**

Illumination 12V included. For 24V application use globe #240.053.

Temperature Gauge (Water Temp)			52mm
Part Number	Range	Installation Ø	Capillary Length
180 035 002	40-120°C	52mm	1600mm
180 035 004	40-120°C	52mm	2600mm
180 035 005	40-120°C	52mm	4000mm
180 035 006	40-120°C	52mm	6000mm
180 035 008	50-150°C	52mm	2600mm
180 035 009	50-150°C	52mm	4000mm



Thermowell 180.059

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

**Note:** Refer page 66 for adaptors.



## EXHAUST TEMPERATURE / PYROMETER electric

Suitable for most exhaust systems.

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

Illumination 12V included.

For 24V application use drop-resistor part no. N05801180 and globe #240.051.

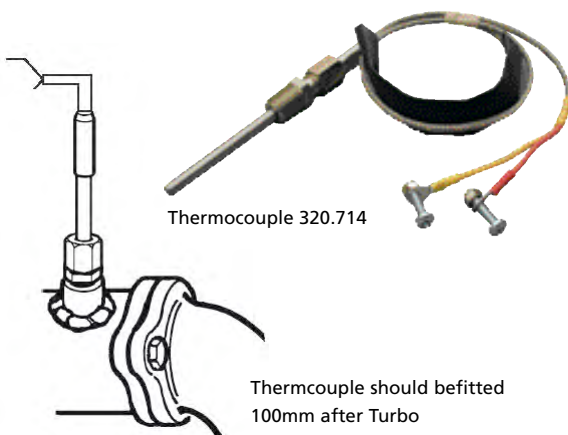
Pyrometer-Electronic Kit		52mm
Part No.	Range	Voltage
397 015 003	0-900°C (37.6mV@900°C)	12V

Complete kit - consisting of instrument, thermocouple,

5m loom & weld boss.

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

Components		
230.059	Weld boss 1/4"-18 NPTF	
240.035	Loom, 5 meter	
240.037	Loom, 10 metre (optional)	
240.039	Loom 1 metre units (cut to length)	
310 035 001	Instrument 0-900°C (37.6mv)	52mm
320.714	Thermocouple 1/4" NPTF Non bonded junction "K" type	



Thermocouple 320.714

Thermocouple should be fitted 100mm after Turbo

## AMMETER, with internal shunt

Suitable for most engines. Monitors Charge and battery condition.

Voltage independent – suitable for 12 or 24V.

Ammeters with internal shunt are easily identified by the heavy duty threaded terminals. Heavy duty wire must be used for wiring.

Illumination 12V included. For 24V application use globe #240.053.



Ammeter		52mm
Part Number	Range	Installation Ø
190 037 002	60-0-60AMP	52mm
190 037 003	100-0-100AMP	52mm

**Note:** For installation use 6mm wire. Max length 15mts.

## AMMETER, with external shunt

Suitable for most engines. Monitors Charge and battery condition.

Illumination 12V included.

For 24V application use drop resistor #240.701 and globe #240.051.



Ammeter		52mm	
Part Number	Range	Installation Ø	Voltage
190.505	150-0-150AMP	52mm	12V

Complete kit consisting of instrument, shunt and loom.

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

Kit Components			
190 075 004	150-0-150 gauge, 52mm		
190.080 (190.079)	shunt - 150 amps	50mV @ 150amps	
190.888	5m loom		

## VOLTMETER

Suitable for all engines and machines.

Monitors Charge and battery condition.

Dial colour coded.

Illumination 12 or 24V included.



Voltmeter		52mm	
Part Number	Range	Installation Ø	Voltage
332 030 001	8-16V	52mm	12V
332 040 001	18-32V	52mm	24V

With ISO symbol.



# Cockpit International



## HOURMETER, electronic

Suitable for all vehicles and machines.

Available with 360° minute hand sweep or as counters only.

Illumination 12V included were applicable. 24V globe #240.055 optional.

<i>Hourmeter</i>			
<i>Part Number</i>	<i>Range</i>	<i>Installation Ø</i>	<i>Voltage</i>
<b>With 360° minute hand sweep - Black bezel</b>			
331 032 004	0-99999.9hrs	52mm	12/24V
331.302	0-99999.9hrs	60mm illuminated	12/24V



<i>Hourmeter - Non illuminated</i>			<i>52mm</i>
<i>Part Number</i>	<i>Range</i>	<i>Installation Ø</i>	<i>Voltage</i>
<b>Counter type - with operation Indicator - Black bezel</b>			
331 032 001	0-99999.9hrs	52mm	12/24V
331810012004	0-99999.9hrs	52mm illuminated	12/24V



Sender 230.043



Sender 230.050

<i>Accessories</i>		
240.031	wiring kit	
230.043	pressure switch - 1 terminal	1/8"-27 NPTF
	70 kPa - 5 watts - N/O	6-24V
230.050	pressure switch - 2 terminal	1/8"-27 NPTF
	48 kPa - 5 watts - N/O	6-24V



## HOURMETER, electronic – rectangular type

Suitable for all vehicles and machines. Overall Dimension 53 X 32mm.

Note - Connections not polarity specific.

<i>Hourmeter</i>			
<i>Part Number</i>	<i>Range</i>	<i>Installation Ø</i>	<i>Voltage</i>
331.534	0-99999.9hrs	37mm x 25mm	12/24V
331.423	0-99999.9hrs	46mm x 46mm	240V AC