



K30

Fingerprint Time
Attendance Terminal



TEMP GAUGE

FUEL GAUGE

SPEEDOMETER

REV COUNTER

VOLTMETER

Time Access & Automotive Systems

ACCESS CONTROL
TIME & ATTENDANCE &
AUTOMOTIVE AUTO ELECTRICAL

Tel: 011 326 4146 – Cell: 082 375 3280

www.timeandautomotive.co.za

www.t-a-s.co.za



Product Range:

Biometrics / Time & Attendance / Access Control

- Facial Recognition Systems
- Handscan time & attendance, Access Control or both
- Fingerprint time & attendance, Access Control or both
- Proximity card & computerized time & attendance, Access Control or both
- Time recorders and clocking machines with Battery Backup and red print to Highlight Late comers with siren attachment.
- Timers, sirens, clock cards, card racks, ribbons and accessories.
- Guard patrol & computerized clocks
- Battery powered systems for all sites without power handscan, fingerprint, proximity, tag computerized systems and battery powered clocking machine
- Computer sales, repairs & upgrades
- CCTV cameras & accessories (Facial Recognition)
- Cable & Wireless cameras
- Gate Motors all makes
- Intercom systems
- Beams inside and outside
- Electric fences
- Sales and services for all the products above

**KINDLY CONTACT THE ABOVE FOR
PROFESSIONAL SERVICE**



Automotive Products & Instruments

VDO Parts & Accessories

- VDO car radiator fans & air-con fans
- VDO fuel pumps & water pumps & thermostats
- Low water probes & fuel level probes
- Windscreen washer kits & wiper blades

Winches

- Warn range of winches

Engine Monitoring Systems

- Engine monitoring systems with shut down facilities
- Speed, rev & idle limiters & turbo timers....
- Tachographs monitoring for driver's performance

Engine Parts & Accessories

- Warning triangle
- Caps & cooling systems, switches, carburetor kits, ignitions, clutch kits, glow plugs, electronic cat, ignition leads set, timing belts and air-brake components
- Lurton range of measuring instruments
- Thermometers, light meters, humidity meters, pressure meters & all other types of meter ranges
- VDO radio & accessories & steering & suspension components



Automotive Products & Instruments

Cables

- Speedo cables, accelerator cables, chock cables, rev counter cables, push & pull cables, clutch cables & all other types of cables

VDO Gauges & Instruments

- Speedo's, rev counters, pressure gauges, volt meter, temperature gauges, hour meters, amp meters pyrometers

Speedo & Cluster Instruments Repairs

- Colour coding done on speedo's, rev counters and gauges, counters, handheld tachometers & hub-odometers

Marine

- VDO temperature, pressure senders, switches, speed sensors & all types of marine gauges & accessories.
- Automotive marine & industrial gauges, all ranges available

Colour Coding

- All colour coding on speedo's and gauges

Speedometers

- Build in GPS Speedometer & GPS senders 1008dia mm or 140dia mm 12/24 volt



Auto Electrical Products

Lights & Globes

- Beacons, buzzers, globes, fuses, lamps, light bars, lights, light sockets, power pack, torches, relays, switches, pilot lights, sealed beams, plugs & sockets, strobe lights & backup alarms

Accessories

- Cables, clamps, connectors housing, solder, springs, tape, lubricant spray, sleeving, ring kits & anti-freeze, horns, hooters, circuit breakers, flasher unit terminals, testers & chevrons, cooler box, inverters, junction boxes, reflectors, tow truck tail board

Ignition Systems

- New caps, rotors, ignition coils, electronic modules/pick-ups, distributors caps & ID
- Contacts sets, condensers, condenser wire lengths, radio suppressors, resistors & vacuum control

Alternators. Solenoid Starters

- Alternators, armatures, bearings, oil seals, brush holders, bushes, diodes & rectifiers, drivers, end brackets, fan, field coils, hardware, alternator starters, pulleys, reduction & repairs kit listing, slip rings, solenoids, solenoid repairs parts, starters, starter to drive I.D, stator & voltage regulators

**KINDLY CONTACT THE ABOVE FOR
PROFESSIONAL SERVICE**

VDO *TAS* VDO

Time Access & Automotive Systems

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AMMETER – With Internal Shunt

Suitable for most engines. **Monitors Charge and battery condition.** Voltage independent – suitable for 12 & 24V
 Ammeters with internal shunt are easily identified by the heavy duty threaded terminals. Heavy duty wire must be used for wiring. Illumination globe holder included.
 For 24V application use globe 999-065-002
 For 12V application use globe 999-065-001

Part no.	Range	Ø
190-037-001C	30-0-30AMP	52mm
190-037-002C	60-0-60AMP	52mm
190-037-003C	100-0-100AMP	52mm

CLOCK - Quartz

The VDO Quartz Clock offers accurate timing to within ± 1 second per day. The crystallographic properties of quartz ensure that the electric current is precisely regulated for accurate timing.



ELECTRIC CLOCKS

Part no.	Voltage	Ø
370-214-031-001G	12	52mm
370-214-031-003G	24	52mm

FUEL GAUGES - Lever

Suitable for use with petrol and diesel fuel.
 Illumination 12V and 24V included.



FUEL GAUGES 10-180 ohms

Part no.	Range	Ø	Voltage
301-030-001C	0-1/1	52mm	12
301-040-001C	0-1/1	52mm	24

For tank units with 10-180 ohms resistance.
 Without ISO symbol.

SENDER – Adjustable Float Arm



Part no.	Specifications	Length
220-003	0-1/1 Empty 100ohm	150mm-600mm Full 180 ohm

SENDER – Plastic Adjustable Includes Warning Contact

Part no.	Specifications	Length
A2C5951062	3-180ohm	145-400mm

FUEL GAUGES - Tubular

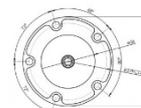
Part no.	Range	Ø	Voltage
301-030-002C	0-1/1	52mm	12
301-040-002C	0-1/1	52mm	24

With ISO symbol for fuel level
 For tubular tank units, adjustable resistance range
Full 3 ohm Empty 9 ohm



TUBULAR TYPE SENDERS (PCD* Pitch Circle Diameter)

Part no	PCD*	Cut-Out Dia.	Voltage	Length
224-082-008-008R	54mm	42mm	12/24	189,5mm
224-011-000-027G	54mm	42mm	12/24	270,0mm
224-011-000-370X	54mm	42mm	12/24	370,0mm
224-817-008-004R	54mm	42mm	With warning contact	380,0mm
224-011-000-039X	54mm	42mm	12/24	390,0mm
224-082-005-117R	54mm	42mm	12/24	498,0mm
224-082-005-012R	54mm	42mm	12/24	555,0mm
224-082-005-129R	54mm	42mm	12/24	665,0mm
224-817-008-011C	54mm	42mm	With warning contact	914,0mm



TUBULAR TYPE SENDER (Heavy Duty)

Part no.	PCD*	Cut-Out Dia.	Voltage	Length
X10-224-009-039	80mm	57mm	12/24	596,0mm
X10-224-009-029	80mm	57mm	12/24	741,0mm
X10-224-009-040	80mm	57mm	12/24	1086,0mm
X10-224-009-072	80mm	57mm	12/24	1387,0mm



Note: PCD = Pitch Circle Diam.

TUBULAR TYPE SENDERS (Insulated Versions)

Part no.	PCD*	Cut-Out Dia.	Voltage	Length
X10-224-021-001	80mm	57mm	12/24	536,0mm
X10-224-021-006	80mm	57mm	12/24	846,0mm
X10-224-021-005	80mm	57mm	12/24	1045,0mm

Please Note: All 54mm PCD have an Aluminium body
 Please Note: All 80mm PCD have Steel Body



ACCESSORIES

Part no.	Description	PCD*
2-250-234	Gasket, cork	54mm
2-251-006	Gasket, cork	80mm
2-251-016	Gasket, rubber	80mm
1403141	Flange only	
1403145	Flange & Gasket	54mm



HOURMETER - Electronic

Suitable for all vehicles and machines
Available with 360° - minute hand sweep or as counters only

With 360° Sweep Hand, Black Bezel



Part no.	Range	Ø	Voltage
331-810-012-002G	0-99999.9hrs	52mm	12/24



No Minute Hand, Black Bezel



Part no.	Range	Ø	Voltage
331-810-012-001X	0-99999.9hrs	52mm	12/24

DELPO Vibration Hourmeter



Part no.	Description	Thread
230-112-001-002C	Pressure Switch	18" -27NPTF

PRESSURE GAUGE - Electric

Suitable for all vehicles and machines.

Illumination 12V or 24V included. **Note: Not recommended for petrol or water.**

PRESSURE GAUGES, Engine Oil Pressure 500kPa

Part no.	Range	Ø	Voltage
350-030-016C	0-500kPa	52mm	12
350-040-016C	0-500kPa	52mm	24

With ISO symbol.
500kPa = 72.5 PSI

SENDER Only 500kPa

Part no.	Range	Thread	Voltage
360-081-029-004C	500kPa	1/8" 27NPTF	12/24

SENDER/SWITCH Combination

Part no.	Range	Thread	Switch Point
360-081-030-049C	500kPa	1/8" -27NPTF	500kPa

Refer to your engine manufacturer's manual for correct oil pressure.
Note: 500kPa = 72.5 PSI. Additional senders are listed on page 13.

PRESSURE GAUGES, Engine Oil Pressure 100kPa

Part no.	Range	Ø	Voltage
350-030-017C	0-1000kPa	52mm	12
350-040-017C	0-1000kPa	52mm	24

With ISO symbol.
1000kPa = 145 PSI

SENDER Only 1000kPa

Part no.	Range	Thread	Voltage
360-081-029-012C	1000kPa	1/8" -27NPTF	12/24

SENDER/SWITCH

Part no.	Range	Thread	Voltage
360-081-030-052C	1000kPa	1/8" -27NPTF	50kPa

Refer to your engine manufacturer's manual for correct oil pressure. Note: 1000kPa = 145PSI. Additional senders are listed on page 13.

PRESSURE GAUGES, Transmission Oil Pressure

Part no.	Range	Ø	Voltage
350-030-005C	0-25 bar	52mm	12
350-040-005G	0-25 bar	52mm	24

With ISO symbol
25 Bar = 2500kPa = 360PSI

SENDER Only 2500kPa

Part no.	Range	Thread	Voltage
360-081-038-003C	0-25 bar	1/8" -27NPTF	12/24





PRESSURE GAUGES - Mechanical

Suitable for most vehicles and machines. Can be used on most non-aggressive gases and liquids. Supplied with nut and cone for 3/6" PVC tubing. Globe Holder not included.

For 24V application use globe part no. 999-065-002
For 12V application use globe part no. 999-065-001

Part no.	Range	Ø
150-035-019G	0-700kPa	52mm
150-035-020G	0-1000kPa	52mm
150-035-022G	0-2500kPa	52mm



TURBO BOOST GAUGE - Mechanical

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

Part no.	Range	Ø
150-015-001K	0 to +3 bar	52mm

ACCESSORIES

Part no.	Description	Length
150-005	Pressure pipe kit	2 Meters
150-006	Pressure pipe kit	5 Meters
150-007	Pressure pipe kit	6 Meters



ADAPTORS - Brass

Suitable for pressure & temperature senders & switches with 1/8"-27NPTF thread. Mechanical temperature gauges with 1/8"-27NPTF, oil pressure kits for mechanical pressure gauges.

Part no.	Internal Thread	External Thread
105-029	1/8" -27NPTF	M14 X 1.5
105-035	1/8" -27NPTF	M18 X 1.5
105-039	1/8" -27NPTF	M18 X 1.5
105-040	1/8" -27NPTF	1/4" -18NPTF
105-041	1/8" -27NPTF	5/8" -18UNF
105-042	1/8" -27NPTF	3/8" -18NPTF
105-043	1/8" -27NPTF	1/2" -14NPTF



Part no.	Internal Thread	External Thread
105-031	M14 x 1.5	M16 x 1.5
105-032	M14 x 1.5	M18 x 1.5
105-033	M14 x 1.5	5/8" -18UNF
105-034	M14 x 1.5	3/5" -18NPTF
105-036	M14 x 1.5	1/2" -14NPTF

TURBO CHARGE GAUGE - Mechanical

Suitable for all vehicles.
Illumination 12V included.

Part no.	Range	Ø
150-035-001G	-1-0 to + 1,5 bar	52mm



VACUUM GAUGE - Mechanical

Suitable for most vehicles.
Supplied with nuts and cones for 3/16" tubing.
Illumination 12V included.

Part no.	Range	Ø
150-077-005	-30-0" Hg	52mm



VOLTMETER

Suitable for all engines and machines.
Monitors charge and battery condition.
Illumination 12V or 24V included

Part no.	Range	Voltage	Ø
332-030-001C	8-16V	12	52mm
332-040-001C	18-32V	24	52mm



OIL PRESSURE SENDERS

WITHOUT WARNING CONTACT – COMMON GROUND

Part no.	Range	Thread	Type
360-081-029-004C	500kPa	1/8" x27NPTF	(A)
360-081-029-012C	1000kPa	1/8" x27NPTF	(A)

Refer to your engine manufacturer's manual for correct oil pressure ratings.

Note: 500kPa = 72.5 PSI, 1000kPa = 145 PSI

- Rated Voltage: 6V to 24V
 - Operating Temperature: -25°C to + 100°C
 - Up to + 120°C for 1-hour max. at threaded connector)
- Resistance range: 10 W to 184 W

OIL PRESSURE SENDERS – With Switch

WITH WARNING CONTACT – COMMON GROUND

Part no.	Range	Switch Point	Thread	Type
360-081-030-049C	500kPa	40kPa	1/8" x27NPTF	(B)
360-081-030-052C	1000kPa	50kPa	1/8" x27NPTF	(B)
360-081-030-025C	500kPa	40kPa	M 18x1.5	(C)
360-081-030-032C	1000kPa	50kPa	M 14x1.5	(B)

Note: 500kPa = 72.5 PSI, 1000kPa = 145 PSI

- Rated Voltage: 6V to 24V
- Operating Temperature: -25°C to +100°C
- (up to +120°C for 1-hour max. at threaded connector)
- Resistance range: 10 W to 184 W
- Switching capacity of warning contact: 5W max. non-inductive

OIL PRESSURE SENDERS – Single Station

WITHOUT WARNING CONTACT – INSULATED RETURN

Part no.	Range	Thread	Type
360-081-032-001C	500kPa	1/8" x27NPTF	(B)
360-081-032-014C	1000kPa	1/8" x27NPTF	(B)
360-081-032-025C	200kPa	1/8" x27NPTF	(C)
360-081-038-002C	2500kPa	3/8" x27NPTF	(F)
360-081-038-003C	2500kPa	1/8" x27NPTF	(E)

Note: 200kPa = 29 PSI, 500 kPa = 72.5 PSI, 1000kPa = 145 PSI
2500kPa = 362.5 PSI

- Rated Voltage: 6V to 24V
- Operating Temperature: -25°C to +100°C
- (up to +120°C for 1-hour max. at threaded connector)
- Resistance range: 10 W to 184 W
- Overpressure safety: 30 bar or 50 bar max. (short period only for 2 seconds)

OIL PRESSURE SENDERS – With Switch

WITH WARNING CONTACT – INSULATED RETURN

Part no.	Range	Switch Point	Thread	Type
360-081-039-002C	500kPa	80kPa	1/8" x27NPTF	(G)
360-081-039-003C	1000kPa	80kPa	1/8" x27NPTF	(G)

Note: 500kPa = 72.5 PSI, 1000kPa = 145 PSI

- Operating Temperature: -25°C to +100°C
- (up to +120°C for 1-hour max. at threaded connection)
- Resistance range: 10 W to 184 W
- Overpressure safety: 30 bar or 50 bar max. (short period only for 2 seconds)

OIL PRESSURE SENDERS – Dual Station

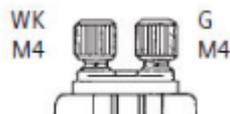
WITHOUT WRNING CONTACT – INSULATED RETURN

Part no.	Range	Thread	Type
362-081-001-001K	500kPa	1/8" x27NPTF	(F)
362-081-001-002K	1000kPa	1/8" x27NPTF	(F)
362-081-002-001K	2500kPa	1/8" x27NPTF	(F)

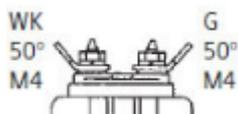
Note: 500kPa = 72.5 PSI, 1000kPa = 145 PSI, 2500kPa = 362.5 PSI
Rated Voltage: 6V to 24V



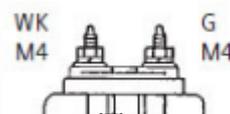
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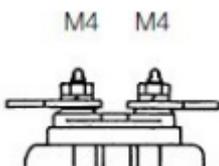
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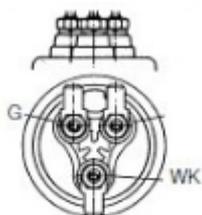
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(F)



(G)



HEAVY DUTY PRESSURE SWITCH

NON-INSULATED

Part no.	Switch Point	Thread	Contacts	Type
230-112-003-013C	700kPa	1/8" x 27NPTF	Close as pressure falls	(A)
220-112-003-012C	600kPa	1/8" x 27NPTF	Close as pressure falls	(A)
230-112-001-002C	70kPa	1/8" x 27NPTF	Close as pressure falls	(A)
230-112-001-001C	100kPa	M10 x 1	Close as pressure falls	(A)

Note: 70kPa = 10.15 PSI, 100kPa = 14.50 PSI, 600 kPa = 87 PSI

- Rated Voltage: 6V to 24V
- Operating Temperature: -25°C to 120°C (up to 140°C for 1-hour max. at threaded connector)

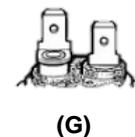
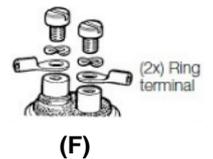
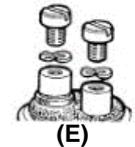


INSULATED

Part no.	Switch Point	Thread	Contacts	Type
230-112-005-006C	50kPa	M10x1	Close as pressure falls	(E)
230-112-007-005C	30kPa	M14x1.5	Open as pressure rises	(G)
230-112-005-011C	50kPa	M10x1	Closes as pressure rises	(F)
230-112-002-001C	50kPa	1/8" x 27NPTF	Closes as pressure rises	(E)

Note: 30kPa = 4.35 PSI, 50kPa = 7.25 PSI, 150kPa = 21.75 PSI

- Rated Voltage: 6V to 24V
- Operating Temperature: -25°C to 120°C (up to 140°C for 1-hour max/ at threaded connector)



ADJUSTABLE PRESSURE SWITCH

INSULATED

Part no.	Terminal	Adjustable Range	Contracts
105-018	Screw	10-100kPa	Close as pressure rises
105-020	Blade	10-100kPa	Close as pressure rises
105-021	Blade	100-1000kPa	Close as pressure rises
105-022	Blade	1000-2000kPa	Close as pressure rises
105-023	Blade	2000-5000kPa	Close as pressure rises
105-024	Blade	10-100kPa	Close as pressure falls
105-025	Blade	100-1000kPa	Close as pressure falls
105-026	Blade	1000-2000kPa	Close as pressure falls
105-027	Blade	2000-5000kPa	Close as pressure falls

Over Pressure Rating up to 30000kPa

Max Voltage 42V-D

Threads: all M10x1 T





SPEEDOMETERS

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 999-065-002 (2 required).
 Note: 140mm speedometer impulse Radio programmable (1000-60000 pulses/Km (via software)).

Part no.	Range	Ø	Voltage
437-035-001C	0-60km/h	80mm	12/24
437-035-012C	0-80km/h	80mm	12/24
437-035-002G	0-120km/h	80mm	12/24
437-035-003C	0-200km/h	80mm	12/24
437-055-001G	0-60km/h	100mm	12/24
437-055-002G	0-120km/h	100mm	12/24
437-025-002C	0-125km/h	140mm	24

Note: 8-way socket connector part no: **Z863103**
 8 x terminal part no: **Z863016**



GPS SPEED SENSOR

Part no.	Description
412-001	GPS Speed Sensor



TEMPERATURE GAUGES - 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 globe holder not included.
 For 24V application use globe **999-065-002**
 For 12V application use globe **999-065-001**
 Globe Holder part no. **999-067-001**

TEMPERATURE GAUGE (WATER GAUGE)

Part no.	Range	Ø	Capillary length
180-035-002G	40-120°C	52mm	1600mm
180-035-004G	40-120°C	52mm	2600mm
180-035-005G	40-120°C	52mm	4000mm
180-035-006G	40-120°C	52mm	6000mm
180-035-008G (oil)	50-150°C	52mm	2600mm



ACCESSORIES

Part no.	Description	Thread
1-801-078	Block Adaptor	1/8x27NPTF

SENSORS – hall effect

PULSE SENSORS FOR ELECTRONIC TACHOGRAPHS/SPEEDOMETERS 3 BLADE

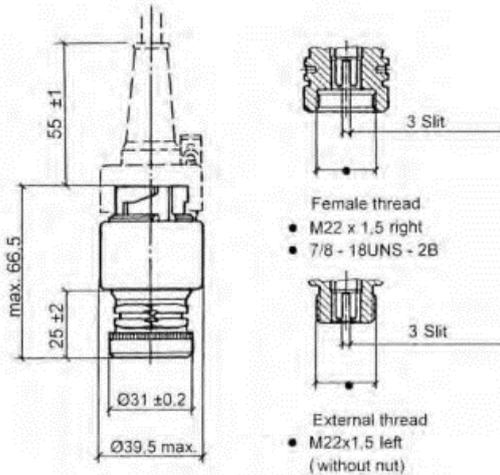
For instruments which require an electrical pulse (**single** pulse) for inquiry of the speed and/or the distance.

Output: single pulse • Pulses/Revolution: 8 (s- and V-pulse)
Pulse Ratio: 30-70%...70-30% • Operating Voltage: 6.5V...16V

Part no.	Pulses	Thread
2155-01000000	8	M22x1.5 right (female)
2155-02000000	8	M22x1.5 left (external) no nut
A731012	8	7/8" -18UNF Male/Female in line
A-Spec-731		Sender cable connector bayonet plug kit, 3-way spade



3 x Blade connector 6,3 x 0,8



- Blue – Speed Signal
- Green – Negative
- Red – Positive
- 12/24V
- Square wave signal
- Cable Length 4M+

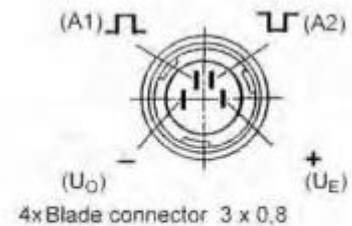
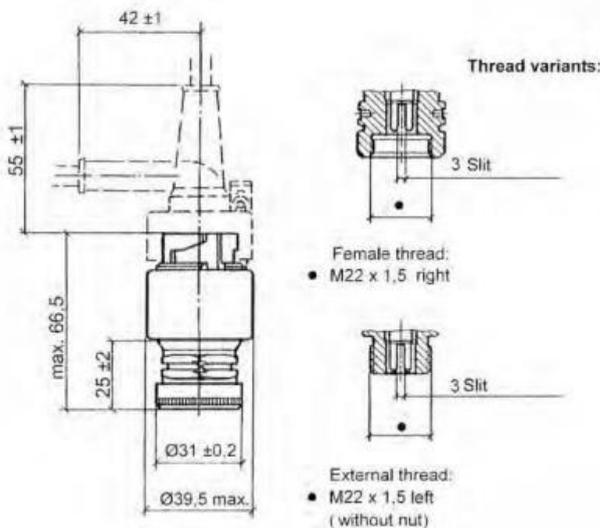


PULSE SENSORS FOR ELECTRONIC TACHOGRAPHS 4 BLADE

For instruments which require an electrical pulse (**dual** pulse inverse) for inquiry of the speed and/or the distance.

Output: dual pulse inverse • Pulses/Revolution: 8 (s- and V-pulse)
Pulse Ratio: 30-70%...70-30% • Operating Voltage: 6.5V...16V

Part no.	Pulses	Thread
2159-01000000	8	M22x1.5 right (female)
2159-02000000	8	M22x1.5 left (external) no nut
A-Spec-737		Sender cable connector bayonet plug kit, 4-way spade





SENSORS – hall effect

PULSE SENSORS FOR ELECTRONIC TACHOGRAPHS/SPEEDOMETERS

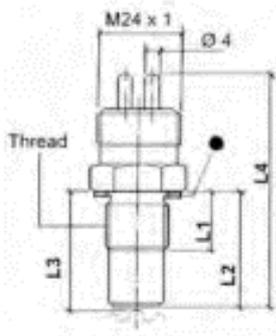
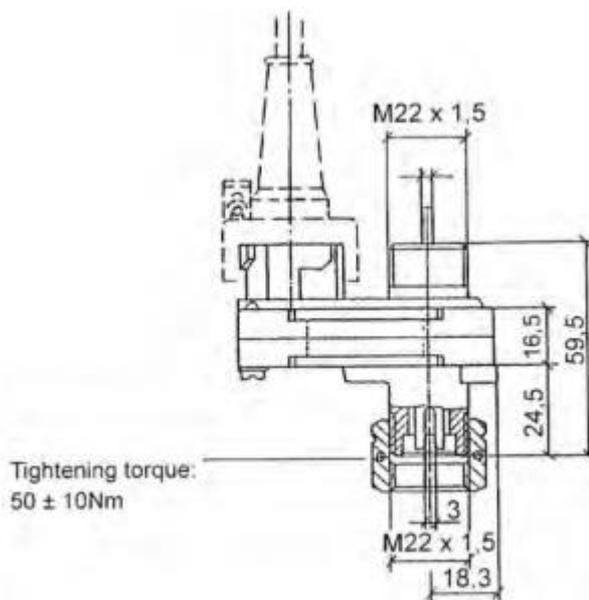
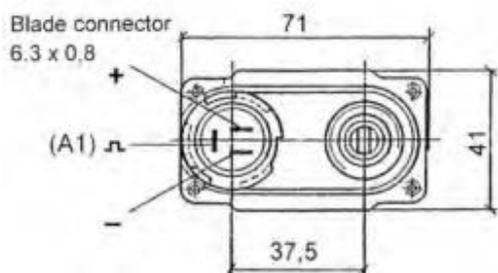
For instruments which require an electrical pulse (**single pulse**) for Inquiry of the speed and/or the distance.

For applications requiring an additional mechanical takeoff.

Output: single pulse • Pulses/Revolutions: 8 (s- and V-pulse)

Pulse Ratio: 30-70%...70-30% • Operating Voltage: 6.5V...16V

Part no.	Pulses	Thread (Input & Output)
2157-03000000	8	M22x1.5



SENDERS – inductive push on

Electrical connection: 2-pole, insulated return

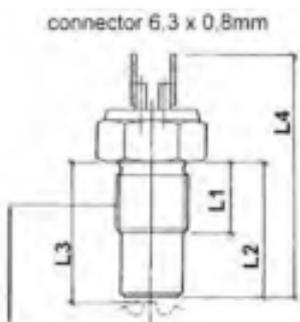
Rated voltage: independent

Interior Resistance: Ri 1050Ω ± 100Ω

Test Voltage: 500V

Insulating Resistance: 500kΩ min.

Part no.	Signal	Thread	L1	L2	L3	L4
340-801-005-002C	Sine	M18x1.5	24.9	26.5	27.65	63
340-804-005-007C	Sine	M18x1.5	15	35	36	71



SENDER – inductive blade

Electrical connection: 2-pole, insulated return

Rated voltage: independent

Interior Resistance: Ri 1050Ω ± 100Ω

Test Voltage: 500V

Insulating Resistance: 500kΩ min.

Part no.	Signal	Thread	L1	L2	L3	L4
340-804-006-007C	Sine	M18.1.5	24.9	26.5	27.65	63

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 12cyl./4 stroke, 1,2,3 or 4 cyl./2-stroke ignition and alternator pick-up ("W" terminal). Also suitable for signal form 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 **999-065-002** (2 required).

For matching speed sensors/senders see page 16-17

TACHOURMETER

Part no.	Range	Ø	Voltage
333-035-010G	3000rpm	80mm	12/24V
333-035-011G	4000rpm	80mm	12/24V
333-035-014C	6000rpm	80mm	12/24V
333-055-002G	3000rpm	100mm	12/24V

Note: 8 pin plug required which is not included in kit, PN. **Z2863103**

Terminal PN. **Z2863016** x 8



TACHOMETERS - 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"). For 24V application use globe 999-065-002 (2 required)

TACHOMETER

Part no.	Range	Ø	Voltage
333-035-017G	6000rpm	52mm	12V
333-035-018G	8000rpm	52mm	12V
333-035-001G	3000rpm	80mm	12V
333-035-002C	4000rpm	80mm	12V
333-035-003C	7000rpm	80mm	12V
333-035-022C	10000rpm	80mm	12V
333-055-001G	3000rpm	100mm	12V
333-045-001G	3000rpm	80mm	24V
333-045-002C	4000rpm	80mm	24V

Note: 8 pin plug required which is not included in kit, PN. **Z2863103**

Terminal PN. **Z2863016** x 8



GENERATOR SENDER

Part no.	Signal Output	Thread
340-807-001-001C	With distance pulse output	M22x1.5
340-808-001-002G	Output 1.0 Volt AC current per 100rpm	M22x1.5





TEMPERATURE GAUGES - electric

Suitable for most vehicles and machines.

Illumination 12 or 24V included.

For other sender units please refer to page 21

TEMPERATURE GAUGES - WATER

Part no.	Range	Ø	Voltage
310-030-002C	40-120°C	52mm	12
310-040-002C	40-120°C	52mm	24

With ISO symbol

40-120°C=100-250°F



SENDER ONLY

Part no.	Range	Thread	Terminal
323-801-005-001D	40-120°C	1/8-27NPTF	Button

DENDER/SWITCH COMBINATION

Part no.	Range	Thread	Switch Point
323-803-001-011D	40-120°C	5/8" 18UNF	95°C
323-803-001-016D	40-120°C	M14x1.5	94°C
323-803-001-001D	40-120°C	M14x1.5	100°C

40-120°C=100-250°F

For other sender units please refer to page 21



TEMPERATURE GAUGES – ENGINE OIL

Part no.	Range	Ø	Voltage
310-030-003C	50-150°C	52mm	12
310-040-003C	50-150°C	52mm	24

With ISO symbol

50-150°C=120-300°F



SENDER ONLY

Part no.	Range	Thread	Terminal
323-801-009-001D	50-150°C	1/8-27NPTF	Button

SENDER/SWITCH COMBINATION

Part no.	Range	Thread	Switch Point
323-803-002-002D	50-150°C	M14x1.5	120°C
323-803-002-007D	50-150°C	M14x1.5	120°C
323-803-014-002D	50-150°C	M14x1.5	130°C



TEMPERATURE GAUGE – TRANSMISSION OIL (CYLINDER HEAD – AIR COOLED ENGINE)

Part no.	Range	Ø	Voltage
310-030-004C	60-200°C	52mm	12
310-040-004C	60-200°C	52mm	24

With ISO symbol

60-200°C=140-392°F



SENDER ONLY

Part no.	Range	Thread	Terminal
323-801-003-001D	60-200°C	M10x1.5	Button
323-801-028-001C	60-200°C	M14x1.5	Screw

SENDERS – to suit VDO instruments 40°-120°C

The senders listed hereunder are for use with all instruments listed in The publication.

Selection is simple: just match the range of the instrument with The range of the sender unit.

WATER TEMPERATURE SENDERS

To suit all VDO temperature gauges with range 40°C-120°C

Related Voltage: 6V to 24V

Temperature response time: 3 minutes minimum after switching

On operating current.

Part no.	Range	Thread	Type
323-801-005-001D	40-120°C	1/8x27NPTF	(A)
323-801-001-016D	40-120°C	1/2-14NPTF	(B)
323-801-001-026N	40-120°C	M14x1.5	(B)

40-120°C-120°C=100-250°F

WATER TEMPERATURE SENDERS WITH SWITCH

Contact rating 3 watt

Related Voltage: 6V to 24V

Temperature response time: 3 minutes minimum after switching on operating current.

Switching capacity: 1.2W to 3W non-inductive

Break Point: 5°C max. below make point

Contacting Mode: slow-acting

Type of contact: Switch closes at switch point

Part no.	Range	Switch Point	Thread	Type
323-803-001-004D	40-120°C	90°C, NO	M14x1.5	(D)
323-803-001-008D	40-120°C	110°C, NO	M14x1.5	(D)
323-803-001-016D	40-120°C	94°C, NO	M14x1.5	(D)
323-803-004-002D	40-120°C	105°C, NO	M14x1.5	(E)
323-803-001-011D	40-120°C	95°C, NO	5/8-18UNF	(D)
323-803-001-001D	40-120°C	100°C	M14x1.5	(D)

40-120°C=100-250°F

Note: NO = Normally open – contact closes at switch point

TEMPERATURE SENDER UNIT

Insulated return – single station

Related Voltage: 6V to 24V

Temperature response time: 3 minutes minimum after switching

On operating current.

Part no.	Range	Thread	Type
323-80-001-001K	40-120°C	M14x1.5	(C)
323-805-001-002	40-120°C	5/8-18UNF	(C)

TEMPERATURE SENDER UNIT

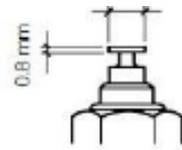
Insulated return – dual station

Related Voltage: 6V to 24V

Temperature response time: 3 minutes minimum after switching

on operating current.

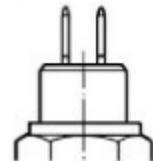
Part no.	Range	Thread	Type
325-805-003-001	40-120°C	1/4-18NPTF	(C)



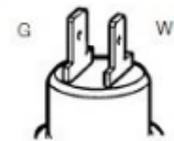
(A)



(B)



(C)



(D)



(E)

SENDERS – to suit VDO instruments 50°C-150°C

The senders listed hereunder are for use with all instruments listed in this publication.

Selection is simple: just match the range of the instrument with the range of the sender unit.

OIL TEMPERATURE SENDER ONLY

To suit all VDO temperature gauges with range 50°C-150°C

Related Voltage: 6V to 24V

Temperature response time: 3 minutes minimum after switching on operating current.

Part no.	Range	Thread	Type
323-801-009-001D	50-150°C	1/8-27NPTF	(A)
323-801-010-003D	50-150°C	M12x1.5	(A)
323-801-004-002N	50-150°C	M14x1.5	(F)

50-150°C=120-300°F

SENDER/SWITCH COMBINATION

Related Voltage: 6V to 24V

Temperature response time: 3 minutes minimum after switching on operating current.

Switching capacity: 1.2W to 3W non-inductive

Break Point: 5°C max. below make point

Contacting Mode: slow-acting

Type of contact: Switch closes at switch point

Part no.	Range	Switch Point	Thread	Type
323-803-014-002D	50-150°C	130°C, NO	M14x1.5	(D)
323-803-002-007D	50-150°C	130°C, NO	M14x1.5	(D)

50-150°C=120-300°F

Note: NO = Normally open – contact closes at switch point

TEMPERATURE SENDER UNIT

Insulated return

Related Voltage: 6V to 24V

Temperature response time: 3 minutes minimum after switching on operating current.

Part no.	Range	Thread	Type
323-805-003-001N	50-150°C	M14x1.5	(C)

50-150°C=120-300°F

WATER LEVEL PROBE

MOUNTING THE RUBBER GROMMET IN THE EXPANSION TANK. Find a suitable location (slightly below the low-level mark on a flat surface)

The probe should never be installed in an area of cooling water turbulence. Drill a hole of 24mm diameter using a hole saw (a cone drill is not suitable) Remove/clean holes of burrs & sharp edges.

Use an adhesive to stop the grommet from turning inside the hole. Use grease or a mild lubricating oil between the flat surface of the grommet & the hexagon of the probe for easier turning.

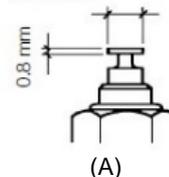
Tighten the probe by hand in the grommet until it is properly secured (if necessary, turn it another ½ turn using a spanner)

Part no. Description

415-207	Water Level Probe (Capacitive)
415-209	Interface for above
415-Spec-215	Kit Includes Probe & Interface



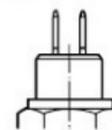
Single-Pole, common ground
Ø 6.3 mm



(A)

Insulated return

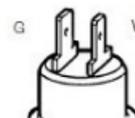
(2x) 6.3 x 0.8 mm



(C)

G = Blade connector / 6.3 x 0.8 mm

W = Blade connector / 4.8 x 0.8 mm



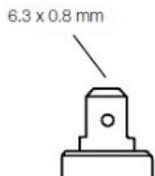
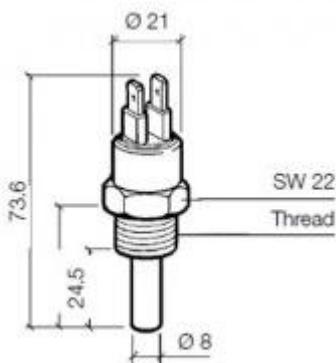
(D)



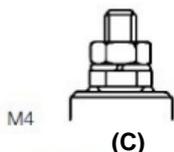
6.3 x 0.8 mm

(F)

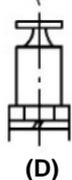




Hexagonal nut



Ø 6.3 x 0.8 mm



TEMPERATURE SWITCHES – insulated return

Rated Voltage: 6V to 12V

Switching Capacity: 100/120W

Make Point: Contact close as temperature rises.

Break Point: Contact open as temperature falls.

2-fold blade x 0.8DIN 46244

Part no.	On	Off	OP.Max	Thread
X10-232-001-001+	64°C	60°C	110°C	M14x1.5
X10-232-001-002*	82°C	74°C	110°C	M14x1.5
X10-232-001-007*	96°C	92°C	110°C	M14x1.5
X10-2.2-001-010*	105°C	100°C	110°C	M18x1.5

+ = Switching capacity 120W

* = Switching capacity 100W

TEMPERATURE SWITCHES – Common Ground

Rated Voltage: 6V to 12V.

Switching Capacity: 1.2W to 3W non-inductive

Type of contact: **Contact closes at switch point.**

Contacting mode: slow-acting

Break Point: 5°C max. below make point.

Part no.	Switch Point	OP. Max	Thread	Type
232-011-005-003D	90°C	120°C	M10x1.5	(C)
232-011-005-004D	170°C	220°C	M10x1.5	(C)
232-011-005-011D	125°C	155°C	M10x1.5	(C)
232-011-005-017D	150°C	200°C	M10x1.5	(C)
232-011-005-019D	96°C	120°C	1/8-27NPTF	(C)
232-011-005-020D	105°C	120°C	1/8-27NPTF	(C)
232-011-005-030D	185°C	230°C	M10x1.5	(D)
232-011-017-010D	110°C	160°C	M14x1.5	(A)
232-011-017-017D	85°C	120°C	M14x1.15	(A)
232-011-017-032D	120°C	130°C	M14x1.5	(A)
232-011-017-034D	100°C	160°C	M14x1.5	(A)
232-011-017-038D	55°C	120°C	M14x1.5	(A)
232-011-017-040D	70°C	120°C	M14x1.5	(A)
232-011-017-135D	102°C	150°C	M14x1.5	(B)
232-011-019-003D	195°C	250°C	M10x1.5	(C)

Rated Voltage: 6V to 12V.

Switching Capacity: 3W non-inductive

Type of contact: **Contact open at switch point.**

Contacting mode: slow-acting

Break Point: 5°C max. below make point.

Part no.	Switch Point	OP.Max	Thread	Type
232-011-020-026D	103°C	120°C	M14x1.5	(B)

GPS SPEEDOMETERS & GPS SENDERS & NORMAL ELECTRONIC SPEEDOMETERS

SPEEDOMETER WITH REV & GPS OR SPEEDOMETER WITH NO REV

- Built in GPS for speed (No sensor required)
- Built in RPM from sensor or W terminal
- 12/24 Volt compatible / load dump protection / reverse
- Polarity protection Programmable total mileage re-settable trip meter
- Programmable over speed alarm built in 100mm or 140mm diameter

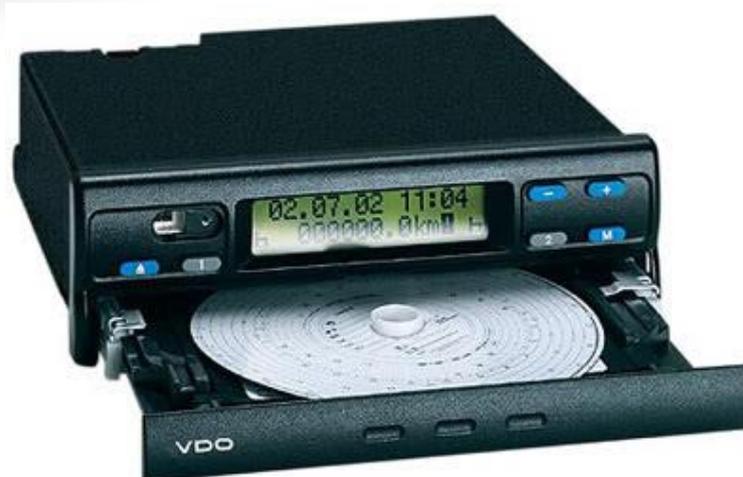


Little Black Box EMS IV

The little black box EMS IV can prevent damages and breakdowns by providing audible and visual warnings before damages occurs.

- Over temperature
- Low oil pressure
- Loss of coolant
- Broken fan belt
- Charge system failure
- Over speed warning/control
- Automatic engine shutdown

Radio Style Tachograph



MURPHY®

Mechanical Gauges (Pressure) 20P / 25P Series

Ranges are available from 0-15 psi (103 kPa) [1.0 bar] through 0-100 psi (690 kPa) [7.0 bar].



The gage mechanism is enclosed in a steel case coated to resist corrosion. A polycarbonate, break-resistant lens and a polished, stainless steel bezel help protect this rugged, built-to-last instrument. Accuracy and protection from moderate overpressure is assured by a unique, unitized diaphragm chamber. A built-in pulsation dampener helps eliminate pointer flutter and is removable for cleaning. For models 20P and 25P, the gage pointer acts as a pressure indicator and as one switch pole which completes a circuit when it touches the adjustable limit contact. Contacts are grounded through the case and have self-cleaning motion to ensure electrical continuity.

Model 20PE has internal snap-acting SPDT switches.

Gage-only models, without the switches are also available.

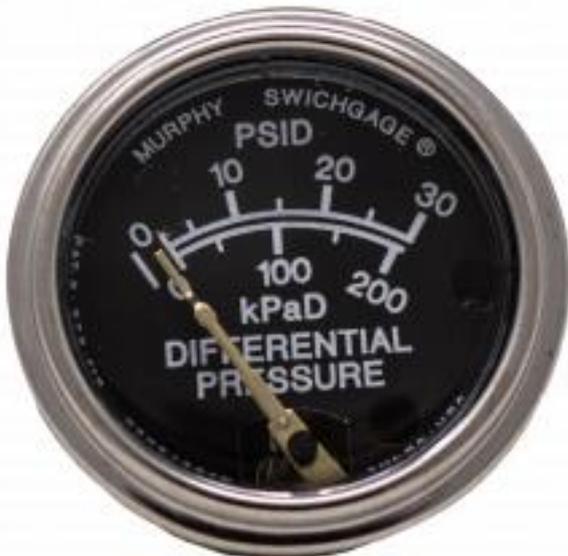
Mechanical Gauges (Pressure) 25DP and A25DP

The 25DP series mechanism is enclosed in a steel case coated to resist corrosion. The A25DP series has a polycarbonate case sealed from the environment. Both feature a polycarbonate, break-resistant lens to help protect the instruments.

The gage pointer acts as a pressure indicator and as one switch pole which completes a circuit when it touches the adjustable limit contact. Contacts have self-cleaning motion to ensure electrical continuity.

Additional features:

- Constant visual indication of the condition of your filter is shown on the dial.
- Two instruments in one with an accurate indicating gage and adjustable p.s.i.d. limit switch reduces inventory and installation time.
- Adjustable contact lets you set the monitoring range of the gage. The contact is tamper proof and can be set only with a 1/16 Allen-head wrench.
- All gages are made of durable materials allowing them to withstand rugged applications.
- Early filter changes cost you money and increase the risk of contaminants entering the system. A filter restriction Swichgage instrument will let you know when to change the filter and maintain peak efficiency.



MURPHY®

160-320F Murphy Temperature Gauge w/Switch



New MURPHY Switchgauge model 10-35-0949 fluid temperature gauge with high limit switch. Can be used with coolant, oil, diesel fuel or hydraulic fluid. 1/16" Hex wrench adjustment knob on front to adjust switch set point

SPECIFICATIONS

- **Range** 160-320°F, 60-160°C
- **Capillary Tube** 3 Ft. with 1/4" dia. x 1-3/4" bulb
- **Packing Nut** 10 mm x 1.5
- **Switch Contacts** SPST-N.O, 2 amps pilot duty
- **Gauge Face** 2" dia.
- **Mount** 2 studs 1-5/8" c/c
- **Mounting** 2-1/16" dia. opening x 3" minimum depth
- **Size** 2-1/4" x 2-1/4"
- **Shpg.** 1 lb.

Murphy Temperature Switchgauge 20T / 25T



The 20 Series (2 inch/51 mm dial) and the 25 Series (2-1/2 inch/64 mm dial) Switchgauge models are diaphragm-actuated, temperature-indicating gages with built-in electrical switches for tripping alarms and/or shut-down devices.

Ranges are available from 32°-120°F (0°-45°C) through 300°-440°F (160°-220°C).

The gage mechanism is enclosed in a steel case coated to resist corrosion. A polycarbonate, break-resistant lens and a polished, stainless steel bezel help protect this rugged, built-to-last instrument.

These vapor-actuated gages feature a sealed capillary tube and a sensing bulb. When subjected to heat, the liquid in the sensing bulb changes to vapor creating pressure against the diaphragm mechanism. The diaphragm translates this vapor pressure into a mechanical gage reading.

For series 20T and 25T, the gage pointer acts as a temperature indicator and as one switch pole which completes a circuit when it touches the adjustable limit contact. Contact(s) are grounded through the Switchgauge case. They have a self-cleaning motion to enhance electrical continuity.

MURPHY®

TM SERIES HOURMETERS



The TM Series hourmeters record the operating time of vehicles or powered equipment. They are electromechanical and have a quartz base time counter that insures accuracy (better than $\pm 0.02\%$ over the entire range). They can record up to 99,999.9 hours (9,999.9 for TM612/624) and include an automatic recycle to zero hours feature.

The TM Series models have a shockproof and tamperproof, totally sealed case made of an engineered plastic. These small, light weight time meters are rugged and durable. They are the answer to applications requiring a low DC power, reliable hourmeter. The TM612/624 model includes a 3-hole mounting shock ring for extreme-shock protection

Features:

- 2 in. (51 mm) Diameter Dial
- Tamperproof and Environmentally Sealed
- Mechanical Counter—No Battery Needed to Maintain Elapsed Time
- Reversed Polarity Protected
- Quartz-Crystal Time Base for Accurate Long-Term Timekeeping
- Powered by 12 to 24 VDC

SPECIFICATIONS

- **Power Input:** 12 to 24 VDC
- **Power Consumption:** Less than 0.03 W @ 12 VDC; 0.4 W @ 24 VDC.
- **Accuracy:** $\pm 0.02\%$ over entire range.
- **Temperature Range:** -40°F to 185°F (-40°C to $+85^{\circ}\text{C}$).
- **Dial (Face Plate):** White numerals (over black background).
- **Time Scale:** 6-digits 99,999.9 hours with automatic recycle to zero
- **Vibration Resistance:** Withstands 10 to 75 Hz @ 1 to 8 G's.
- **Case Material:** Plastic.
- **Bezel:** Stainless Steel.
- **Terminations:** 1/4 in. (6 mm) male blade terminals.
- **Shipping Weight:** 5 ozs. (140 g).
- **Shipping Dimensions:** 3-1/8 x 3 x 3 in. (79 x 76 x 76 mm) approximately.

WARNING: This product may expose you to chemicals which are known to the State of California to cause cancer, birth



MURPHY

MURPHY BOAT TACHOMETER GAUGE 1/4 INCH SILVER BLACK



Boat part number 1081878 is a new OEM tachometer gauge with digital hour meter from Murphy Boats, part number unavailable. Manufactured by Faria, part number TD9172A. May be used on other boats. Please check with your local boat brand dealer for boat / brand / model / year cross-referencing compatibility.

This clear halogen illuminated 3,000 RPM tachometer features a flat lens, silver colored bezel, black face, white needle, and white graphics. Features the Murphy logo on the face. Measures approximately 3 7/8" Dia. across the face (including bezel) x 3 3/4" D overall. Requires an approximate 3 1/4" Dia. cutout. Has (4) threaded bolts and (1) single spade male connection. Mounting bracket included.

Electric Gauges, Swichgages & Senders

The Murphy EG21 gauge and EGS21 Swichgage® range takes the electric gauge to new heights, with leading-edge technology and proven reliability. With our proven EG Air Core Movement design, the EG(S)21 series offers superior operation, reading accuracy, back-lighting and installation. The EG(S)21 gives you the assurance of highest reliability and service.

These rugged, environmentally sealed gauges exceed the rigid SAE J1810 standard for reliable operation in rough offroad and power environments. Corrosion resistant materials are used throughout, making the gauges highly suited for marine and other environmentally sensitive applications. Soft, non-glare dial and pointer illumination is provided by "cold light" LED: when powered, the white scale lettering and clear pointer become soft red. Standard EMEA-region models feature a non-glare, SAE low profile black bezel.

EGS21 Swichgage® models have all the features of the EG21 gauge, plus an adjustable set-point PowerHall® switch output for operating alarms or equipment shutdown. The trip point is adjustable over 90% of the scale and has a set point indicator visible on the gauge face. EG(S)21 gauges and Swichgages are driven by equipment-mounted ES series resistive senders for pressure, temperature and fuel level measurement, available in 1-wire (ground return) and 2-wire (insulated return) variants.





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Cresta 2118

Automotive Commercial & Auto Electrical Products



Industrial Gauges

DELPO



MB – 10 Facial Reader

MB10-VL is a touchless multi-biometric identification terminal featuring TAS innovative Visible Light Facial Recognition technology. With the latest algorithm and Visible Light facial recognition technologies, the device can recognize a target in the distance from 30cm to 50cm. It will automatically operate when it detects a human face in the detection distance to deliver better recognition quality in terms of speed and accuracy than the previous near-infrared facial recognition terminals. With the applied Deep Learning algorithm, the pose angle tolerance and anti-spoofing ability against the dynamic environment and various spoofing attacks have been greatly enhanced. Together with the world's cutting-edge 3D Neuron Fingerprint Algorithm and comprehensive support in mainstream card modules, MB10-VL must be the best fit in various working environments satisfying different customer's needs.



Multi-Bio 600 Facial Reader

The Multi-Bio 600 is a Time & Attendance terminal with basic access control functions for the SME market. This device features our advanced fingerprint and facial recognition algorithms which ensures high verification speeds. The MB600 does have Wi build in as well as normal TCP/IP connection and USB download available for flexible communication solutions that can be used in different installation environments.



KF 460 Facial Reader

KF 460 is an innovative terminal for management employee attendance and basic access control functions. User verification is performed using face recognition (standard) or ID cards (optional). The verification process takes less than 1 second. The user-friendly UI provides customers with a quick and easy experience. Data transfer can be done through your TCP/IP or to transfer data manually interface.





P 160 Palm Reader

P 160 is a multi-biometric identification time & attendance an access control terminal, which can connect with third party electronic lock, door sensor and exit button etc. With the latest palm/finger identification algorithm and streamline technology, it can hold 600 palm templates and up to 20,000 fingerprint templates without dividing into group.



F 18 Fingerprint Reader

F 18 is an innovative biometric fingerprint reader for access Control application. With high performance firmware functions and compact designs, it has become one of the most popular devices. It is applied with the latest firmware with user friendly and flexible user privilege settings for multi-level management. The new hardware platform users ZMM 210 core-board with 1.2Ghz CPU. With optimization of both hardware platform and firmware, the new F 18 can verify fingerprints with even higher efficiency. The device offers flexibility of both standalone installation and with any 3rd party access control panels with support standard Wiegand signal. TCP/IP and RS485 are also available which enable F 18 to be applied in different networks.



MA 300 RFID & Fingerprint Reader

MA 300 is one of the innovative biometric fingerprint readers for access control applications. Offering unparalleled performances by adopting and excellent matching speed. It is metallic casing and IP 65 rated which enables it to be 300 offers the flexibility to be installed standalone or with any third-party panels that support 26-bit Wiegand. User can be enrolled by the administrator card when the device works standalone mode. TCP/IP and RS485 are available, so that the device can be connected easily and conveniently with metal casing.

K 30 Fingerprint Reader

The K 30 is a 2.8-inch TFT screen Time Attendance Terminal. TCP/IP and USB host make data management extremely easy. Most importantly, the build-in backup battery can eliminate the trouble of power failure. With elegant appearance and reliable quality, you can get the best from it.



S 922 Portable Fingerprint Reader

S 922 Portable fingerprint time and attendance terminal is specifically designed for off-site time management, such as construction sites, logistic industries, large farms, mining industry, etc. and can store 50,000 fingerprint and 50,000 card templates. Top handle with rubber coating enables users to carry easily.



SC105 RFID Access Card Reader

SC105 is a RFID Access Control Terminal which possesses a 2.0-inch color display with graphical UI, enabling simple and easy control. It has a built-in auxiliary input function which enhances the flexibility to be connected with wired detector or emergency switch. With multi-verification methods by combinations of PIN, password and card, high level of security and flexibility are guaranteed. Moreover, the product supports USB flash drive for offline data management, as well as is equipped with multiple alarm outputs such as Tamper Proof Switch and Duress Alarm. Its convenience and adaptability allow it to be well deployed in residential housing, offices and any other public facilities.





SF 100 FINGERPRINT READER

The SF100 is an IP based fingerprint terminal works both in network and standalone modes. In network mode, it can connect with TAS software for access control and time attendance management. Wiegand output makes SF100 flexible to connect with TAS or any 3rd party controllers as a slave reader. Additionally, Wiegand input allows two units of SF100 to configure with each other and utilize Master & Slave solution, which requires user verification at both entrance and exit. Meanwhile, anti-passback function can be used to maximize the security. Auxiliary input interface allows SF100 to connect with an external source, for instance, a smoke detector or emergency switch. Once the linkage function is enabled through the machine menu, the device would generate an alarm signal and open the door in case of emergency.



X 7 FINGERPRINT READER

X7, an innovative biometric fingerprint reader for access control applications. Offering unparalleled performance using an advanced algorithm for reliability, precision and excellent matching speed. It operates as a standalone scanner with interfaces for third party electric locks, alarms, door sensors, exit buttons and doorbells. Keypad operation is easy and convenient, such as, enrolling user, deleting user and accessing control parameter settings etc.



F 12 SLAVE READER

The F12 is a fingerprint reader with RS485 communication interface and it works with biometric access and fingerprint standalone access controllers, F18 and more. It allows the capturing and transferring of fingerprint samples to the access control panel. With an IP65 rating, the F12 offers extra durability in all weather conditions including outdoor environments.



UNIVERSAL TIME & ATTENDANCE SOFTWARE

Our new Software called Universal Time & Attendance. The Time & Attendance that will cater for your needs. Universal Time & Attendance has a multi-user platform that allows users to manage information and reports simultaneously (stand-alone, Lan and wan).

Normal time, overtime, Saturday overtime, Sunday overtime, Late arrivals, Early departures, long lunch or smoke breaks are all standard features and all are available on reports.

Fixed shifts, rotating shifts and Auto shift detection ensure precise time calculations to provide flawless timesheets and reports. Reports can be exported into any electronic format and can be automatically emailed to supervisors or managers providing seamless efficiency.

Our software can give the following reports: clock times report in minutes or decimals, total report in makeup, absenteeism report, late arrivals, missing clocking report, audit reports, list of employees and job costing. Our software can export to VIP or Pastel payroll.

ABSENTEEISM REPORT			27/10/2021
From 01/10/2021 to 09/10/2021			
Number 2402	Name TEST,		
Date	Code	Description	
Wed 06-10-2021	5	A.W.O.L	
Thu 07-10-2021	5	A.W.O.L	
Employee total	2		
Number AB022	Name ADAM, JAMES		
Date	Code	Description	
Fri 01-10-2021	5	A.W.O.L	
Mon 04-10-2021	5	A.W.O.L	
Tue 05-10-2021	5	A.W.O.L	
Wed 06-10-2021	5	A.W.O.L	
Thu 07-10-2021	5	A.W.O.L	
Fri 08-10-2021	5	A.W.O.L	
Employee total	6		
Report total	8		

Clocking Report (Decimal)											27/10/2021
From 01/09/2021 to 14/09/2021											
Number: AB022	Name: ADAM, JAMES										
Work Pattern :	01 (WORK PATTERN)										
Date:	In	Out	NT	1.5	2.0	PPH	Leave	SUN	Lost	Total Sh	Notes
Wed 01-09-2021	___	17:09	-1.00	0.00	0.00	0.00	0.00		9.00	-1.00	0 Missing Clocking
Thu 02-09-2021	07:51	17:07	8.15	0.00	0.00	0.00	0.00		0.85	8.15	M
Fri 03-09-2021	07:11	17:03	8.82	0.00	0.00	0.00	0.00		0.18	8.82	M
Sat 04-09-2021	NOT COMPULSARY		0.00	0.00	0.00	0.00	0.00		0.00	0.00	0
Sun 05-09-2021	NOT COMPULSARY		0.00	0.00	0.00	0.00	0.00		0.00	0.00	0
Mon 06-09-2021	ABSENT		0.00	0.00	0.00	0.00	0.00		12.00	0.00	0 A.W.O.L
Tue 07-09-2021	08:25	17:06	7.58	0.00	0.00	0.00	0.00		1.42	7.58	M
Wed 08-09-2021	07:19	17:08	8.68	0.00	0.00	0.00	0.00		0.32	8.68	M
Thu 09-09-2021	07:25	17:16	8.85	0.00	0.00	0.00	0.00		0.15	8.85	M
Fri 10-09-2021	07:34	17:11	8.62	0.00	0.00	0.00	0.00		0.38	8.62	M
Sat 11-09-2021	NOT COMPULSARY		0.00	0.00	0.00	0.00	0.00		0.00	0.00	0
Sun 12-09-2021	NOT COMPULSARY		0.00	0.00	0.00	0.00	0.00		0.00	0.00	0
Mon 13-09-2021	07:14	17:09	8.77	0.00	0.00	0.00	0.00		0.23	8.77	M
Tue 14-09-2021	07:10	17:04	8.83	0.00	0.00	0.00	0.00		0.17	8.83	M
Totals:			67.30	0.00	0.00	0.00	0.00	0.00	24.70	67.30	8
Report Totals			67.30	0.00	0.00	0.00	0.00	0.00	24.70	67.30	8

Total Hours Summary Report (Decimal)									27/10/2021
From 01/09/2021 to 14/09/2021									
Emp no	Name	NT	1.5	2.0	PPH	Leave	Lost	TOTAL	Shifts
AB022	ADAM, JAMES	67.30	0.00	0.00	0.00	0.00	24.70	67.30	8
Report Totals		67.30	0.00	0.00	0.00	0.00	24.70	67.30	8

Time Access & Automotive Systems



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JOB COSTING REPORT

Clocking Report (Hours & Minutes) From 26/10/2020 to 09/11/2020

24/11/2020

Number: AMJ01 Name: AMIDU, JONI
 Work Pattern : 03 (Shifts)

Date:	In	Out	NT	1.5	2.0	PPH	Leave	SUN	Total Sh	Notes	
Mon 26-10-2020	ABSENT		00:00	00:00	00:00	00:00	00:00		00:00	0 A.W.O.L	N
Tue 27-10-2020	ABSENT		00:00	00:00	00:00	00:00	00:00		00:00	0 A.W.O.L	N
Wed 28-10-2020	07:02	18:05	10:58	00:00	00:00	00:00	00:00		10:58	1 Late arrival	M
Thu 29-10-2020	07:02	18:05	10:58	00:00	00:00	00:00	00:00		10:58	1 Late arrival	M
Fri 30-10-2020	07:07	18:03	10:53	00:00	00:00	00:00	00:00		10:53	1 Late arrival	M
Sat 31-10-2020	06:53	18:04	11:00	00:00	00:00	00:00	00:00		11:00	1	M
Sun 01-11-2020	NOT COMPULSARY		00:00	00:00	00:00	00:00	00:00		00:00	1	N
Mon 02-11-2020	ABSENT		00:00	00:00	00:00	00:00	00:00		00:00	0 A.W.O.L	M
Tue 03-11-2020	ABSENT		00:00	00:00	00:00	00:00	00:00		00:00	0 A.W.O.L	M
Wed 04-11-2020	07:00	18:00	11:00	00:00	00:00	00:00	00:00		11:00	1	M
Thu 05-11-2020	07:02	18:03	10:58	00:00	00:00	00:00	00:00		10:58	1 Late arrival	M
Fri 06-11-2020	07:09	18:00	10:51	00:00	00:00	00:00	00:00		10:51	1 Late arrival	M
Sat 07-11-2020	NOT COMPULSARY		00:00	00:00	00:00	00:00	00:00		00:00	1	M
Sun 08-11-2020	07:16	18:07	00:00	09:00	01:44	00:00	00:00	10:44	10:44	1 Late arrival	M
Mon 09-11-2020	06:49	18:01	11:00	00:00	00:00	00:00	00:00		11:00	1	M
Totals:			87:38	9:00	1:44	0:00	0:00	10:44	98:22	11	

Number: BEL01 Name: BELINDA, MUKULA
 Work Pattern : 03 (Shifts)

Date:	In	Out	NT	1.5	2.0	PPH	Leave	SUN	Total Sh	Notes	
Mon 26-10-2020	18:05	07:00	12:55	00:00	00:00	00:00	00:00		12:55	1 Late arrival	N
Tue 27-10-2020	18:01	07:03	12:59	00:00	00:00	00:00	00:00		12:59	1 Late arrival	N
Wed 28-10-2020	ABSENT		00:00	00:00	00:00	00:00	00:00		00:00	0 A.W.O.L	N
Thu 29-10-2020	07:00	17:56	10:56	00:00	00:00	00:00	00:00		10:56	1 Early departure	M
Fri 30-10-2020	07:08	18:00	10:52	00:00	00:00	00:00	00:00		10:52	1 Late arrival	M

Costing Report (Hours & Minutes) From 24/05/2021 to 28/05/2021

09/06/2021

Cost centre : JOB COSTING
 Number: JCD6 Name: JOB, MANUFACTURING
 Work Pattern : 2 (JOB COSTING)

Date:	In	Out	NT	1.5	2.0	PPH	Leave	SUN	Lost	Total Sh	Notes	
Mon 24-05-2021	07:36	12:36	04:36	00:00	00:00	00:00	00:00	00:00	00:00	04:36	1	M
Tue 25-05-2021	10:25	14:15	04:30	02:40	00:00	00:00	00:00	00:00	00:00	07:10	1	M
Wed 26-05-2021	08:30	12:00	03:30	00:00	00:00	00:00	00:00	00:00	00:00	03:30	1	M
Thu 27-05-2021	08:30	11:46	03:16	00:00	00:00	00:00	00:00	00:00	00:00	03:16	1	M
Fri 28-05-2021	08:10	09:10	02:10	00:00	00:00	00:00	00:00	00:00	00:00	02:10	1	M
Totals:			18:02	2:40	0:00	0:00	0:00	0:00	00:00	20:42	5	

COSTING :	NT	R
	1.5	R 5,410.00
	2.0	R 1,200.00
	PPH	R 0.00
	Leave	R 0.00
TOTAL		R 6,610.00
LOST		R 0.00

JOB COSTING SOFTWARE

AMANO BX 1500

Features:

- Full electronic time recorder with large, clear analogue indication
- Ergonomically shaped slot for timecards with anti-dust lid
- Silent time adjustment
- Quartz clock with an accuracy of ± 3 sec/week
- Soundless matrix printer
- Automatic time card feeding capability
- Maintenance of program data during power failure
- Calendar with automatic date adjustment
- Automatic adjustment for daylight saving time
- Programmable day switch
- 6 lighted keys for IN/OUT preselection
- Can print up to 6 columns
- Printing selection: AM/PM or 0-23 hour, regular minute, 1/100, 1/10 or 1/20 hour
- AMANO timecard size 86mm
- Detection for both sides of the card
- Preprogrammed basic functions
- Including black ribbon
- Wall mounting or installation on table



AMANO BX 1600

Features:

- Full electronic time recorder with large, easy to read digital clock face
- Ergonomically shaped slot for timecards with anti-dust lid
- Silent time adjustment
- Quartz clock with an accuracy of ± 3 sec/week
- Soundless matrix printer
- Automatic time card feeding capability
- Maintenance of program data during power failure
- Calendar with automatic date adjustment
- Automatic adjustment for daylight saving time
- Programmable day switch
- programmable IN/OUT printing position
- Can print up to 6 columns
- Hour in small print for first printing after time change (to indicate unauthorized time changes)
- Printing irregular mark in predefined zone
- Printing selection: AM/PM or 0-23 hour, regular minute, 1/100, 1/10 or 1/20 hour
- AMANO timecard size 86mm
- Detection for both sides of the card
- Preprogrammed basic functions
- Including black ribbon





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AMANO BX 6000



Features:

Full power reserve ensures operation during power failure
 Initial print after time change
 Counts the number of prints for attendance
 1-colour printing
 2-colour printing (optional)
 Time signal (optional)
 Time signal (optional)
 Melody (optional)
 Automatic shift of print position (optional)
 Memory Holding Function:
 3 years of total power failure time (all functions other than internal clock stop) with lithium battery.
 Battery Backup:
 The fully charged lithium battery (full power reserve) maintains the following:
 The clock, 2-colour selection, time signal, melody, and printing position for up to 72 hours.
 The printing frequency depends on the working conditions:
 200 printings with 2-colour selection and melody for up to 72 hours.
 When the time recorder is operated with full power reserve, the IN/OUT indicator lamp goes on and off.



MINDMAN TT-850



Features:

Power source: AC110/220V 50/60HZ
 Operation conditions: Temperature: 0°C-40°C
 Humidity: 40%-90%
 Power Consumption: 4W (32W) at Peak Operation)
 Dimensions: 190(W) x 210 (H) x 130 (D) mm
 Weight: 3kg
 Typical users: Warehouse, Restaurant, Small office and Retail store
 Benefits: Quarts Accuracy
 Simple to use, easy to audit payroll recorder
 No need to reset, always on time
 Automatic card feeder
 Large display, small compact body convenient for table top and wall mounting
 Six column, fully automatic, across/up/down printing
 Perpetual calendar and daylight-saving adjustment
 High quality dot matrix printer for clean, clear printing
 Auto-shift IN/OUT printing position
 Select day of week of print in English, Spanish, Italian, German, French, Numbered day
 Pay period can be set weekly, bi-weekly, or monthly
 Accepts up to 17 variations of time cards
 Selectable hours in 1-12 or 0-23 and choice of minutes or hundredths

DATE	TIME	IN	OUT	TOTAL	REMARKS
01/01/01	08:00	08:00	17:00	09:00	
02/01/01	08:00	08:00	17:00	09:00	
03/01/01	08:00	08:00	17:00	09:00	
04/01/01	08:00	08:00	17:00	09:00	
05/01/01	08:00	08:00	17:00	09:00	
06/01/01	08:00	08:00	17:00	09:00	
07/01/01	08:00	08:00	17:00	09:00	
08/01/01	08:00	08:00	17:00	09:00	
09/01/01	08:00	08:00	17:00	09:00	
10/01/01	08:00	08:00	17:00	09:00	
11/01/01	08:00	08:00	17:00	09:00	
12/01/01	08:00	08:00	17:00	09:00	
13/01/01	08:00	08:00	17:00	09:00	
14/01/01	08:00	08:00	17:00	09:00	
15/01/01	08:00	08:00	17:00	09:00	
16/01/01	08:00	08:00	17:00	09:00	
17/01/01	08:00	08:00	17:00	09:00	
18/01/01	08:00	08:00	17:00	09:00	
19/01/01	08:00	08:00	17:00	09:00	
20/01/01	08:00	08:00	17:00	09:00	
21/01/01	08:00	08:00	17:00	09:00	
22/01/01	08:00	08:00	17:00	09:00	
23/01/01	08:00	08:00	17:00	09:00	
24/01/01	08:00	08:00	17:00	09:00	
25/01/01	08:00	08:00	17:00	09:00	
26/01/01	08:00	08:00	17:00	09:00	
27/01/01	08:00	08:00	17:00	09:00	
28/01/01	08:00	08:00	17:00	09:00	
29/01/01	08:00	08:00	17:00	09:00	
30/01/01	08:00	08:00	17:00	09:00	
31/01/01	08:00	08:00	17:00	09:00	



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AMANO PIX 200

Features:

Economical time recorder/stamp designed for modern society illuminated print window password prevents tampering with settings ink capacity gauge. Easy to replace ribbon cartridge wall or desk mount pre-programmable print size, dot matrix printing, quartz oscillation clock with an accuracy of ± 3 sec/week automatic daylight-saving time adjustment, clock and programming data kept for 3 years without AC power 31 selectable pre-set print styles: prints year, month, day, date hour (AM/PM) or 0-23, minutes (regular, 10th, 1/100A, 1/100B (5/10)) seconds, 8-digit number and comments in various order 13 selectable in various order, 13 selectable comments in 6 languages. Programmable customized comment imprint (up to 3 lines). Print up to 8 consecutive numbers with automatic reset function at a specified programmed time power supply: 230 VAC 50Hz temperature: -10°C to +45°C (14F-113F) Humidity: 10% to 90% (not condensation) Dimensions: W x H x D: 159 x 163 x 171mm Weight 2.2kg (4.85lbs) (not including optional battery)



MINDMAN SP 600

Features:

All functions are quickly and easily customized to meet Your exact business requirements built-in battery backup For time, date and memory auto reset after power failure, Never needing to be reset. Automatic month end and leap year adjustment left or right-hand margin printing. Large illuminated print window for accurate alignment of document. Printing option include manual, automatic, semi-automatic and combination automatic hour adjustment for summer and winter time change, 1 to 8-digit numbering: Up to nine repeats. Selectable printing: 29 present formats such as "19 Jan 2014 11:00" customizable printing: Up to three separate lines 12 or 24-hour print format. Regular minute or 1/10, 1/100 or 1/500 of an hour 13 pre-set comments such as filed, set, paid prints in English, German, Spanish, French, Italian or Portuguese, password for program protection "*" mark for irregular printing, programmable by each day of the week wall or tabletop mounting power supply: 220-240 VAC 50/60Hz Dimensions: W x H x D: 156 x 287 x 274mm Weight: 2.5kg (battery included)





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D 5 Gate Motor Description

Input voltage 90 – 240V AC $\pm 10\%$
50Hz Motor voltage 12V DC
Motor power supply battery-driven-2A
charger push force rated 17kgf
Gate speed at push force <5kg 22m/min Gate speed at rated push
force 18m/min Duty cycle mains present 50% Duty cycle mains
present 150
Duty cycle mains present 500kg
Duty cycle mains present centurion code-hopping
Multichannel, 433MHz, capacity-500 transmitter button



Variety Boom Gates and Barriers

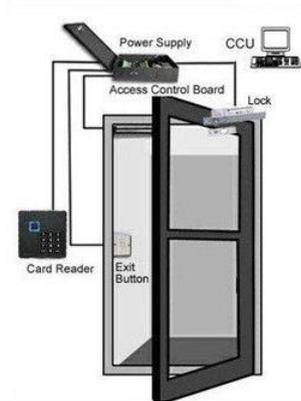
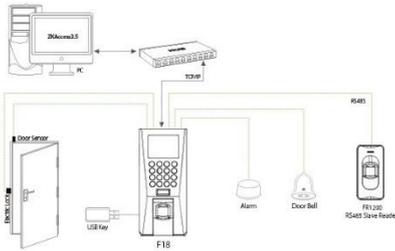
The most versatile manual barriers on the market, Time Access Offers a wide range of options to compliment any prestige Installation.

Applications:

Ideal for road closures
Supervised access control
Commercial and industrial check
Points any manual access control



ACCESS CONTROL



An access control point, which can be a door, turnstile, parking gate, elevator, or other physical barrier, where granting access can be electronically controlled. Typically, the access point is a door. An electronic access control can contain several elements.

At its most basic, there is a stand-alone electric lock. The lock is unlocked by an operator with a switch. To automate this, operator intervention is replaced by a reader. The reader could be a keypad where a code is entered, it could be a card reader, or it could be a biometric reader. Readers do not usually make an access decision. But send a card number to an access control panel that verifies the number against an access list.

To monitor the door, position a magnetic door switch can be used. In concept, the door switch is not unlike those on refrigerators or car doors. Generally only entry is controlled, and exit is uncontrolled. In cases where exit is not controlled, free exit, a device called a request-to-exit (REX) is used. Request-to-exit devices can be a push button or a motion detector.

When the button is pushed, or the motion detector detects motion at the door, the door alarm is temporarily ignored while the door is opened. Exiting a door without having to electrically unlock the door is called mechanical free egress. This is an important safety feature. In cases where the lock must be electrically unlocked on exit, the request-to-exit device also unlocks the door.



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GUARD MONITORING



System Overview

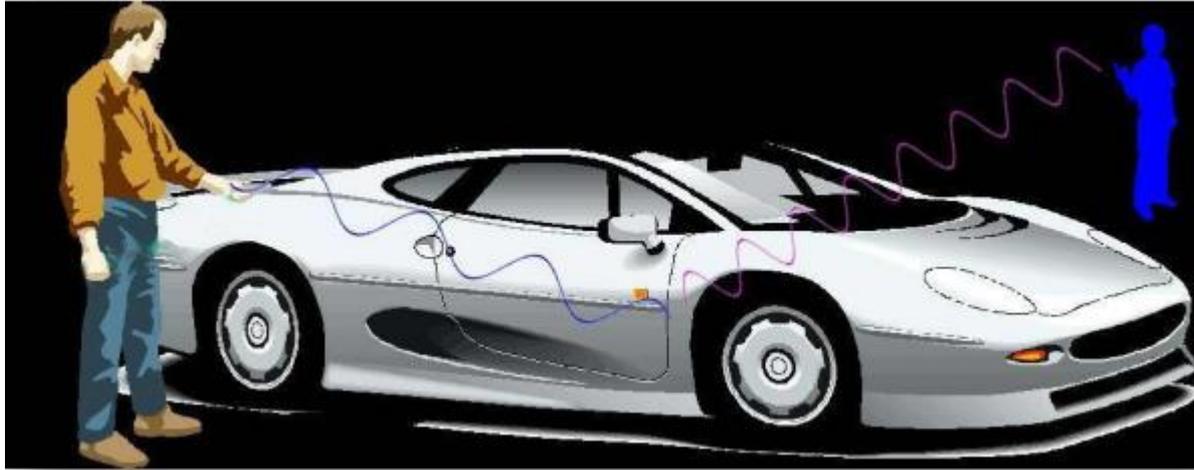
Guard's patrol and clock points along their patrol route using the Magtouch. Clocking data is then downloaded onto a computer through the clocking station connected to the computer by a USB cable. Reports can then be printed and emailed.

Kit Includes:

- Upload station
- Upload cable
- Installation CD
- Magtouch baton
- Baton pouch
- 10 x ID point
- 10 x ID holders



How the CardGuard works:



There has been a sharp increase in motor theft and theft of valuables from vehicles due to Remote jamming. This recent trend of jamming the remote locking of cars is very common. When a person leaves their car, criminals activate their jammers which prevent the Persons remote signal from reaching their car and locking the doors. As the individual Walks away, thinking their car is locked, the thieves have easy access to the vehicle to Steal laptops, backpacks, wallets, sunglasses and luggage.



The *CarGuard* was designed to detect the jamming signal Of thieves and to raise an alarm. It is ideal for large Shopping Centre's and office parking areas as it is fully Portable and can be used by security personnel as they Patrol the car parks. It has a 100m detection range. The Device also has an LCD graphics display and it has both a Vibration and beeper alert to warn security personnel of Any potential remote jamming.

Please note that our devices do not prevent the jamming signal – they just detect it and Set off an alarm to warn you!

Benefits:

- security personnel are immediately alerted to potential car jamming.
- *CarGuard* is fully portable and has a 100m range.
- The unit has a real time clock and has the ability to Record and display a 200-event history.



How the MallGuard works:



There has been a sharp increase in motor theft and theft of valuables from vehicles due to remote Jamming. This recent trend of jamming the remote locking of cars is very common. When a person Leaves their car, criminals activate their jammers which prevent the person's remote signal from Reaching their car and locking the doors. As the individual walks away, thinking their car is locked, the thieves have easy access to the vehicle to steal laptops, backpacks, wallets, sunglasses and luggage.



The MallGuard is perfect for petrol filling stations and small shopping Centre car parks. It is able to detect the thieves' jamming signal and set off an alarm. It is a fixed unit that can be attached to either a wall or pole. The *MallGuard* has a loud siren and a red flashing strobe light to alert security personnel of potential car jamming and subsequent theft. Detection range will depend on the jamming device being used but on average the units detect up to 200m.

Please note that our devices do not prevent the jamming signal – they just detect it and set off an alarm to warn you!



Shopping Centre's that have installed These units have reported a decreased Rate in theft via remote jamming.



K30

Fingerprint Time
Attendance Terminal



TEMP GAUGE

FUEL GAUGE

SPEEDOMETER

REV COUNTER

VOLTMETER

TAS

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