Comark

C9550 & C9500 Series Pressure Meters











COMARK

Comark™
Kane-May™



COMARK

C9550



Introduction

THE COMARK C9550 - latest model in the C9500 pressure range and sharing the same robust case , dust and waterproof to IP67 standards.

Measuring from external pressure transducers the C9550 is ideal for many applications *including*:-

- maintenance of plastic injection machines, hydraulic presses and other machinery, mobile plant, such as diggers, tractors and earthmovers
- production engineering
- production and processing of food, pharmaceuticals, chemicals and petrochemicals
- heating and refrigeration
- gas production and distribution



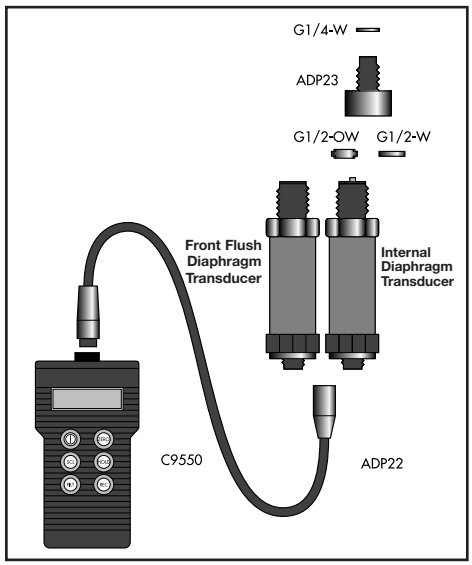
C9550 Pressure Meter Benefits

- Designed for use with external pressure transducers, C9550 offers safe, accurate pressure measurement from 0 to 4000 bar
- Choice of gauge or absolute pressure measurement
- "Hot Swap" function enables the instrument to communicate with and automatically recognise and adjust to, the transducer range and available scales
- No range adjustments are needed and one instrument covers every transducer in the whole 0 to 4,000 bar range
- Battery powered C9550 also powers all Comark transducers, no separate transducer power needed
- The multiscale C9550 displays pressure measurements in a choice of 12 scales (subject to transducer range) to suit every need, with the selected scale held in memory
- Readings from the transducers are displayed on the large, clear LCD display and the required scale can be selected at the touch of a button
- No pressure reaches the C9550 itself, so there can be no possibility of damage to the instrument. Transducers and pressure installations are also protected, as any over range pressures are displayed as an effective warning



Typical applications for the C9550 are wide and varied, ranging from industrial presses to outdoor process plant.

- Extremely versatile data capability:-
  - maximum and minimum pressures are stored in memory for display at any time
  - maximum and minimum readings can be reset to the current reading as needed
  - hold function freezes the display; useful when later records of readings are needed
  - held readings can be displayed in any available scale
  - previous maximum and minimum readings can be displayed in hold mode
- Display decimal point automatically adjusts when scales are changed to give optimum resolution
- Accuracy enhanced by two key features:-
  - adjustable zero value compensates for ambient temperature fluctuations or tares non-zero pressure readings
  - averaged reading function, selectable to filter out transient readings
- Selectable auto switch off saves battery life, with scale and switch off settings retained in memory





C9550 Transducers

Comark pressure transducers for the C9550 are sourced from the highly respected German manufacturer IMT Industrie-Messtechnik, originally part of VDO.

Transducers are available to measure gauge or absolute pressure, with a choice of measurement range, accuracy and diaphragm type.

All feature stainless steel construction for high resistance to corrosive fluids and acceptability for food industry use. The non-process side is proof against ingress to IP65.

Each transducer features an intelligent sensor, which communicates with the C9550, enabling it to recognise the transducer range and available scales.

The following gauge pressure transducers with internal diaphragm sensors are available from stock:-

PG 205-1	**0 to 2.5 bar**
PG 6-1	**0 to 6 Bar**
PG 10-1	**0 to 10 Bar**
PG 100-1	**0 to 100 Bar**
PG 400-1	**0 to 400 Bar**

Full details of all Comark transducers are given in a separate datasheet , order code C089.

C9550 Accessories

ADP22 Interface Lead. 1.5m lead to connect C9550 to any Comark transducer.

ADP23 Adaptor. Used to connect the G½A (½" BSP) male thread of the transducer to a G¼A (¼" BSP) thread fitting.

G1/2-W. Washer type gasket for pressure tight connections between a transducer and its location or an ADP23 adaptor.

G1/4-W. Washer type gasket for pressure tight connections between ADP23 adaptor and the transducer location.

G1/2-OW. Washer type gasket with a built-in "O" ring. For pressure tight seals where a transducer is moved from one location to another to measure different applications.

LC95. Carrying case for C9550 to take 1 x instrument, 1 x transducer, ADP22 Interface Lead, ADP23 adaptor and operator manuals.

C9500



C9500 INTERNAL SENSOR PRESSURE METERS

The Comark C9500 internal sensor models complement the C9550 and feature microprocessor control for flexibility, performance and ease of use.

Internal sensor pressure meters are ideal for heating, ventilation, air conditioning, and petrochemical industries, plus general service and maintenance applications.

In addition they can be used to check the calibration of pressure installations and a special test kit is available for this.

Standard (non-IS) models can be supplied as special versions with silicone protection to allow liquid pressure measurement without sensor corrosion.

All C9500 internal sensor instruments are supplied with ⅛" BSP pneumatic connectors and Intrinsically Safe versions are supplied with a robust carrying case.

C9500 Internal Sensor Pressure Meter Benefits

- Tough, practical, stylish cases, dust and waterproof to IP67, BS EN 60529 and IEC 529 and able to handle the toughest assignments
- Twin inputs to measure differential or positive/negative (vacuum) gauge pressures
- Intrinsically Safe versions to BASEEFA EEx ia IIC T4 available
- All generally used pressure scales available, with selected scale held in memory
- Carefully selected measurement range on each model to optimise the available resolution in each scale
- Hold function with held readings, including maximum and minimum, displayed in any scale
- Adjustable zero value to compensate for ambient temperature variations, with value held in memory
- Averaged reading function filters out transient readings to give a more stable displayed reading
- Maximum pressure for each instrument can be displayed with over-range indication for additional safety
- Selectable auto switch off
- TK2 test kit for pressure calibration available

C9550 TECHNICAL SPECIFICATION

Calibrated Accuracy at +23 °C	±0.06% of reading ± 1 digit
Temperature Coefficient of Reading	<0.01% of reading per °C change from +23°C
Response Time	4 readings per second
Operating Range	-20 to +50°C
Environmental Rating	IP67
Power Source	9V PP3 6F22 - MN1604 UCAR9V
Battery Life	140 hours (using MN1604)
Disconnected Transducer Indication	- 0 0 -
Over Pressure Indication	- 0 2 -
Over 9999 Reading Indication	Lowest 4 digits blink
Connections	8 way Lumberg socket KFV81 Mating plug, Lumberg SV81
Dimensions Height Width Depth	 173mm 70/83mm 32mm
Weight	255 gms including battery
EMC	Tested to EN61326-1 Light Industrial Criteria A performance Tested to EN61326-1 Heavy Industrial Criteria B performance

C9500 INTERNAL SENSOR MODELS TECHNICAL SPECIFICATIONS

SCALE	Standard Intrinsically Safe For Liquids†	C9551 C9501/IS C9551/SIL	C9553 C9503/IS C9553/SIL	C9555 C9505/IS C9555/SIL	C9557 C9507/IS C9557/SIL
PSI	Range Resolution	0 to ± 2 0.001	0 to ± 5 0.001	0 to ± 30 0.01	0 to ± 100 0.1
mbar	Range Resolution	0 to ± 140 0.1	0 to ± 350 0.1	0 to ± 2000 1	0 to ± 6900 1
inH$_2$O	Range Resolution	0 to ± 55 0.01	0 to ± 140 0.1	0 to ± 830 0.1	0 to ± 2750 1
inHg	Range Resolution	0 to ± 4 0.001	0 to ± 9.999 0.001	0 to ± 61 0.01	0 to ± 200 0.1
mmHg	Range Resolution	0 to ± 99.99 0.01	0 to ± 260 0.1	0 to ± 1500 1	0 to ± 5200 1
Torr	Range Resolution	0 to ± 99.99 0.01	0 to ± 260 0.1	0 to ± 1500 1	0 to ± 5200 1
Pa	Range Resolution	0 to ± 9999 1	– –	– –	– –
KPa	Range Resolution	– –	0 to ± 35 0.01	0 to ± 200 0.1	0 to ± 690 0.1
mmH$_2$O	Range Resolution	0 to ± 1400 1	0 to ± 3500 1	– –	– –
cmH$_2$O	Range Resolution	– –	– –	0 to ± 2100 1	0 to ± 7000 1
Kgcm^{-2}	Range Resolution	– –	– –	0 to ±2.1 0.001	0 to ±7.0 0.001
Maximum Over/ Under Pressure		6 PSI/ 400mbar	15 PSI/ 1000mbar	90 PSI/ 6200mbar	200PSI/ 13700mbar
Accuracy at +23°C		± 0.2% of full scale			
Repeatability at +23°C		± 0.1% of full scale			
Mean Temperature Coefficient of Reading		Better than 0.1% per °C			
Operating Range Temperature Humidity		 0 to +50°C 10 to 90% RH non condensing			
Environmental Rating		IP67, BS EN 60529, IEC 529			
Protection Levels (IS Models only)		EEx ia IIC T4 BASEEFA Certificate Ex 95C2454*			
Connections		⅛" BSP female			
Battery		9V PP3 6F22 — MN1604 UCAR9V			
Battery Life		90 hours (MN1604)			

† Any standard model can be ordered with silicone protection for use with liquids. Add /SIL to order code.
* Certification applicable at atmospheric pressure.

C9500 SERIES PRESSURE METERS AND ACCESSORIES

ORDER CODE	DESCRIPTION
C9550	Pressure meter for external transducers, with operator manual and transducer range datasheet
CRS/1	Protective rubber boot for all C9500 pressure meters
ADP22	1.5m interface lead for C9550
ADP23	Adaptor for C9550 transducers, G½A (½"BSP) to G¼A (¼"BSP) threads
G1/2-W	G½A (½"BSP) washer type gasket for C9550 transducers
G1/4-W	G¼A (¼"BSP) washer type gasket for ADP23 adaptor
G1/2-OW	G½A (½"BSP) washer type gasket with a built-in "O" ring, for repeated connection of C9550 transducers to different points
LC95	Carrying case for C9550 to take 1 x instrument, 1 x transducer, ADP22 interface lead, ADP23 adaptor and operator manuals
KMP15	Binder connector - for in-line measurements with internal sensor models
TCP1	Tyre connector for use with internal sensor models
TK2	Pressure test kit with tubing, hand pump, scale conversion chart and carrying case

WARRANTY

All Comark instruments have a minimum one year warranty unless otherwise stated. The warranty period for temperature probes is for six months and all other probes and electrodes are unwarranted because the conditions of use are beyond our control.

The Comark warranty covers manufacturing defects and component failure and applies worldwide. The warranty does not affect your statutory rights.

In line with our policy of continuous development we reserve the right to alter any product specifications without notice.

Comark Limited has an accredited UKAS calibration laboratory for temperature measurement. UKAS certificates can be provided for any Comark, Kane-May or other temperature measurement instrument.

CERTIFICATE No. FM12129
ISO 9001

0451

Distributed by:

COMARK

Comark Limited Gunnels Wood Road, Stevenage, Hertfordshire SG1 2TA England
Tel: 01438 (+44 1438) 367367 Fax: 01438 (+44 1438) 367400
Email enquiries UK and Ireland: salesuk@comarkltd.com
Email enquiries International: salesint@comarkltd.com

Comark Instruments Inc. 9710 SW Sunshine Court, Beaverton, OR 97005, USA.
Tel: (503) 643 5204 Fax: (503) 644 5859 Email: sales@comarkUSA.com

Website: www.comarkltd.com

a VIDA GROUP company

C090/2/EN © Comark Limited J32007