

Digitales Hand-Manometer HM22

D Das kompakte Hand-Manometer HM22 hat ein grosses, leicht ablesbares Display und ist sehr einfach zu bedienen. Die Messbereiche können per Knopfdruck umgeschaltet werden. Das ermöglicht eine bessere Ablesegenauigkeit für den niedrigeren Messbereich. Angewendet wird das Hand-Manometer für die Überwachung und Kontrolle von Apparaturen in der Prozess- und Verfahrenstechnik, wo die Qualitätsanforderungen immer anspruchsvoller werden. Dieses Präzisionsmessinstrument erlaubt Messungen im Bereich Über- und Unterdruck, Differenzdruck oder Absolutdruck.



THOMMEN
HM22

Digital handheld pressure gauge HM22

E The compact, handheld pressure gauge HM22 has a large, easy-to-read display and is very simple to operate. Measuring ranges can be selected by pressing a button. This permits improved reading precision for the lower measuring range. The pressure gauge is used for monitoring and checking apparatus in process engineering, where quality requirements are becoming increasingly rigorous. Measurements can be made with this instrument in over- and underpressure, differential or absolute pressure.

Manomètre numérique portatif HM22

F Le manomètre portatif compact possède un grand afficheur bien lisible et très simple à utiliser. Les gammes de mesure peuvent être commutées par pression du doigt. Ceci permet d'obtenir une meilleure précision de lecture au niveau plage de mesure plus basse de mesure. Le manomètre portatif est utilisé pour surveiller et contrôler les appareillages dans le génie chimique, où les exigences de qualité deviennent de plus en plus sévères. Cet instrument de précision permet d'effectuer des mesures au niveau de la pression positive, négative, différentielle ou de la pression absolue.

Manometro digitale portatile HM22

I Il manometro portatile HM22 di forma compatta ha un grande display di agevole lettura e può essere manovrato con grande facilità. I campi di misura possono essere commutati premendo un tasto. Ciò consente una maggiore precisione di lettura nel basso campo di misura. Il manometro portatile viene usato per la sorveglianza e il controllo di strumenti e impianti nei processi in cui i requisiti di qualità diventano sempre più severi. Questo strumento di misura di precisione consente misure nel campo della pressione, depressione, pressione differenziale o pressione assoluta.

Messbereiche Measuring ranges Gammes de mesure Campi di misura	Auflösung Resolution Résolution Risoluzione	Max. Belastbarkeit Max. loading capacity Capacité de charge max. Caricabilità massima	Genauigkeit v.E. ± 1 digit Error limit F.S. ± 1 digit Limite d'erreur p.E. ± 1 digit Limite di errore f.s. ± 1 digit
0... 20 / 200 mbar	0,01 / 0,1	1500 mbar	0,5% / 0,2%
0... 100 / 1000 mbar	0,1 / 1	2000 mbar	0,5% / 0,2%
0... 200 / 2000 mbar	0,1 / 1	3000 mbar	0,5% / 0,2%
0... 1 / 10 bar	0,001 / 0,01	27 bar	0,5% / 0,2%
0... 110 / 1100 mbar abs	0,1 / 1	2000 mbar	0,5% / 0,2%
0... 200 / 2000 mbar abs	0,1 / 1	3000 mbar	0,5% / 0,2%

Technische Daten

Messmedien:	Instrumentenluft, inerte Gase
Masseinheit:	mbar (kPa auf Anfrage)
Betriebstemperatur:	0...+60 °C
Temperatureinfluss:	± 0,05 %/°C
Messrate:	3 Messungen / Sekunde
Speisung:	9 V Batterie oder Akku IEC 6LR61
Stromaufnahme:	1,7 mA
Batterielebensdauer:	ca. 250 Std.
Pneum. Anschluss:	Schlauch ø 4/6 mm, NPT 1/8" Innengewinde
Gehäuseschutzart:	IP 54
Gehäusedimension:	152 x 83 x 34/29 mm
Gewicht inkl. Batterie:	250 g

Technical data

Measuring media:	instrument air, inert gases
Unit of measurement:	mbar (kPa on enquiry)
Operating temperature:	0...+60 °C
Temperature effects:	± 0,05 %/°C
Measuring rate:	3 readings / second
Supply:	9 V battery or accumulator IEC 6LR61
Current consumption:	1,7 mA
Battery life:	appr. 250 h
Pneumatic connection:	tube ø 4/6 mm, NPT 1/8" female
Case, type of protection:	IP 54
Case dimension:	152 x 83 x 34/29 mm
Weight incl. battery:	250 g

Caractéristiques techniques

Fluides de mesure:	air d'instrument, gaz inertes
Unité de mesure:	mbar (kPa sur demande)
Temp. d'utilisation:	0...+60 °C
Influence de la temp.:	± 0,05 %/°C
Fréquence des mes.:	3 mesures / seconde
Alimentation:	batterie 9 V ou accumulateur IEC 6LR61
Absorption de courant:	1,7 mA
Longévité batterie:	env. 250 heures
Raccordement pneum.:	tuyau ø 4/6 mm, NPT 1/8" féminin
Protection du boîtier:	IP 54
Dimensions du boîtier:	152 x 83 x 34/29 mm
Poids inclus batterie:	250 g

Caratteristiche tecniche

Fluidi di misura:	aria strumenti, gas inerti
Unità di misura:	mbar (kPa a richiesta)
Temp. di esercizio:	0...+60 °C
Influenza della temp.:	± 0,05 %/°C
Cadenza di misura:	3 misure / secondo
Alimentazione:	batteria 9 V o accumulatore IEC 6LR61
Corrente assorbita:	1,7 mA
Durata della batteria:	ca. 250 ore
Raccordo pneumatico:	tubo flessib. ø 4/6 mm, NPT 1/8" femminile
Protezione custodia:	IP 54
Dimensioni custodia:	152 x 83 x 34/29 mm
Peso con batteria:	250 g

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Digitales Hand-Manometer HM28

D Dieses Hand-Manometer überzeugt durch seine Vielseitigkeit. Es stehen Funktionen für die Leckrate, Min/Max-Werte und zur Speicherung der Messwerte auf der Anzeige zur Verfügung. Diese Messwerte können mit der Datalogging-Funktion in einen integrierten Datenspeicher abgelegt und von dort über die RS232 Schnittstelle direkt über einen angeschlossenen Drucker (ohne PC) protokolliert werden. Ebenso wird eine PC-Software unter Windows angeboten. Das HM28 erlaubt Messungen im Bereich Über- und Unterdruck, Differenzdruck oder Absolutdruck.



THOMMEN
HM28

Digital handheld pressure gauge HM28

Manomètre numérique portatif HM28

Manometro digitale portatile HM28

E A convincing feature of this handheld pressure gauge is its versatility. Functions are available for leak rate, min./max. values and for storing the measured values in the display. The measured values can be stored in the integrated data memory with the datalogging function and from there, logged directly on a connected printer (without PC) via the RS232 interface. Of course a PC-software level Windows is also available. The HM28 permits measurements in over- and underpressure, differential or absolute pressure.

F Ce manomètre numérique portatif s'impose par son universalité. Il y a à disposition des fonctions pour le débit de fuite, les valeurs mini/maxi, et pour la mémorisation des valeurs de mesure indiquées sur le visuel. Ces valeurs de mesure peuvent être enregistrées dans une mémoire de données intégrée, et, de là, directement imprimée sur liste par une imprimante raccordée, en passant par l'interface RS232 (sans utiliser un PC). De même, un logiciel sous Windows est disponible. Le HM28 permet des mesures dans les domaines de pression positive, négative, différentielle ou pression absolue.

I Questo manometro digitale portatile convince per la sua versatilità. Sul display sono disponibili funzioni per l'indicazione del tasso di dispersione, dei valori massimi e minimi, e per la memorizzazione dei valori misurati. Questi valori di misura possono essere memorizzati, mediante le funzioni di datalogging, in una memoria integrata di dati e da qui, attraverso l'interfaccia RS232, stampati direttamente collegando una stampante (senza bisogno di PC). Viene offerto anche un PC-software sotto Windows. L'HM28 permette di misurare pressione, depressione, pressione differenziale oppure pressione assoluta.

Messbereiche Measuring ranges Gamme de mesure Campi di misura	Auflösung Resolution Résolution Risoluzione	Max. Belastbarkeit Max. loading capacity Capacité de charge max. Caricabilità massima	Genauigkeit v.E. ± 1 digit Error limit F.S. ± 1 digit Limite d'erreur p.E. ± 1 digit Limite di errore f.s. ± 1 digit
0... 25 mbar	0,001	125 mbar	0,2% / 0,1%
0... 70 mbar	0,01	350 mbar	0,2% / 0,1% / 0,05%
0... 200 mbar	0,01	1500 mbar	0,2% / 0,1%
0... 300 mbar	0,01	1500 mbar	0,2% / 0,1% / 0,05%
0... 500 mbar	0,1	4000 mbar	0,2% / 0,1%
0... 1000 mbar	0,1	4000 mbar	0,2% / 0,1% / 0,05%
0... 2000 mbar	0,1	7000 mbar	0,2% / 0,1% / 0,05%
0... 7 bar	0,001	17 bar	0,2% / 0,1% / 0,05%
0... 10 bar	0,001	27 bar	0,2% / 0,1%
0... 17 bar	0,001	27 bar	0,2% / 0,1% / 0,05%
0... 30 bar	0,01	70 bar	0,2% / 0,1%
0... 70 bar	0,01	140 bar	0,2% / 0,1%
0... 90 bar	0,01	140 bar	0,2% / 0,1%
0... 1100 mbar abs	0,1	4000 mbar	0,2% / 0,1%
0... 2000 mbar abs	0,1	7000 mbar	0,2% / 0,1% / 0,05%
0... 7 bar abs	0,001	17 bar	0,2% / 0,1%

Technische Daten

Messmedien:	Instrumentenluft, inerte Gase. Ausführungen medienkomp. Alle Medien, die mit rostfreiem Stahl 18/8 (DIN 1.4305) verträglich sind.
Masseinheiten:	mbar, bar, kPa, hPa, MPa, mmH ₂ O, mH ₂ O, mmHg, psi, inH ₂ O, inHg
Temperaturkalibration:	10...35 °C
Betriebstemperatur:	-5...+50 °C
Feuchtigkeit:	30 bis 95 % r.F.
Temperaturkalibration:	10...35 °C
Messrate (RS232): Klasse 0,2%	20 Messungen / Sekunde
Klassen 0,1% / 0,05%	10 Messungen / Sekunde
Stromaufnahme:	< 9 mA
Speisung:	9 V Batterie oder Steckernetzgerät
Speicherintervall:	manuell, 1...60 Sek./Min., wählbar
Pneum. Anschluss:	Schlauch ø 4/6 mm, NPT 1/8" Innengewinde > 7 bar
Gehäuseschutzart:	IP 54
Gehäusedimension:	152 x 83 x 34/29 mm
Gewicht inkl. Batterie:	270 g

Technical data

Measuring media:	instrument air, inert gases Versions Media comp. All media which are compatible with stainless steel 18/8 (DIN 1.4305).
Units of measurement:	mbar, bar, kPa, hPa, MPa, mmH ₂ O, mH ₂ O, mmHg, psi, inH ₂ O, inHg
Temperature calibration:	10...35 °C
Operating temperature:	-5...+50 °C
Humidity:	30 to 95 % r.H.
Measuring rate (RS232): Classe 0,2%	20 readings / second
Classes 0,1% / 0,05%	10 readings / second
Current consumption:	< 9 mA
Supply:	9 V battery or power supply unit
Memory interval:	manual, 1...60 sec./min., selectable
Pneumatic connection:	tube ø 4/6 mm, NPT 1/8" female > 7 bar
Case, type of protection:	IP 54
Case dimension:	152 x 83 x 34/29 mm
Weight incl. battery:	270 g

Caractéristiques techniques

Fluides de mesure:	air d'instrument, gaz inertes Exécutions fluides compatibles Tous les fluides compatibles avec l'acier inoxydable 18/8 (DIN 1.4305)
Unités de mesure:	mbar, bar, kPa, hPa, MPa, mmH ₂ O, mH ₂ O, mmHg, psi, inH ₂ O, inHg
Etalonnage de la temp.:	10...35 °C
Temp. d'utilisation:	-5...+50 °C
Humidité:	30 à 95 % hum. rel.
Fréq. d. mes. (RS232): Classe 0,2%	20 mesures / seconde
Classes 0,1% / 0,05%	10 mesures / seconde
Absorption de courant:	< 9 mA
Alimentation:	batt. 9 V, unité d'aliment. a. fiche
Intervalle de mémoris.:	manuel, 1...60 sec./min., à sélectionner
Raccordement pneum.:	tuyau ø 4/6 mm, NPT 1/8" féminin > 7 bar
Protection du boîtier:	IP 54
Dimensions du boîtier:	152 x 83 x 34/29 mm
Poids inclus batterie:	270 g

Caratteristiche tecniche

Fluidi di misura:	aria strumenti, gas inerti Per le versioni compatibili con i fluidi Ogni tipo di fluido compatibile con acciaio inox 18/8 (DIN 1.4305)
Unità di misura:	mbar, bar, kPa, hPa, MPa, mmH ₂ O, mH ₂ O, mmHg, psi, inH ₂ O, inHg
Calibrazione in temp.:	10...35 °C
Temp. di esercizio:	-5...+50 °C (comp. di temp.)
Umidità:	30 a 95 % u.r
Cadenza di mis. (RS232): Classe 0,2%	20 misure / secondo
Classi 0,1% / 0,05%	10 misure / secondo
Corrente assorbita:	< 9 mA
Alimentazione:	batterie 9 V, mediante alim. da rete
Interv. di memorizzaz.:	manuale, da 1...60 sec./min., a schelta
Raccordo pneumatico:	tubo flessib. ø 4/6 mm, NPT 1/8" femminile > 7 bar
Protezione custodia:	IP 54
Dimensioni custodia:	152 x 83 x 34/29 mm
Peso con batteria:	270 g

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Digitaler Druck-Kalibrator HM38

D Mit dem Druck-Kalibrator HM38 stehen dem Anwender zwei individuelle Druckmessbereiche zur Verfügung für Über- und Unterdruck, Differenzdruck oder Absolutdruck. Es kann gleichzeitig Strom bzw. Spannung gemessen und gegeben werden. Das beleuchtete Display und die Funktion Zoom ermöglichen ein einfaches Ablesen der Messwerte. Eine Datalogging-Funktion mit Schnittstelle RS232 und entsprechende PC-Software unter Windows ist selbstverständlich.

Weitere Funktionen: Messen/Geben, Leckrate, Record, Rampe, Deviation, Simulation und Trigger.



THOMMEN
HM38

Digital pressure calibrator HM38

Calibreur de pression numérique HM38

Calibratore digitale di pressione HM38

E The pressure calibrator HM38 provides the user with two individual pressure measuring ranges for over- and underpressure, differential or absolute pressure. It is possible simultaneously to measure and generate current and voltage. The illuminated display and the zoom function permit simple reading of the measured values. And of course with a datalogging function with interface RS232 and PC-software level Windows. Further functions: measure/generate, leak rate, record, rampe, deviation, simulation and trigger.

F Avec le calibreur de pression HM38, l'utilisateur dispose de deux gammes de mesure manométrique dans les domaines de pression positive, négative, différentielle ou pression absolue. Il est possible de mesurer et de produire simultanément un courant resp. une tension. L'afficheur éclairé, ainsi que la fonction zoom, simplifient la lecture des valeurs mesurées. Il va de soi qu'il y a également une fonction pour l'enregistrement des données avec interface RS232 et avec un logiciel sous Windows. D'autres fonctions: mesurer/produire, débit de fuite, record, rampe, déviation, simulation et trigger.

I Con il calibratore di pressione HM38 sono disponibili per l'utente due distinti campi di misura per pressione, depressione, pressione differenziale oppure pressione assoluta. Si possono misurare e trasmettere allo stesso tempo correnti e tensioni. Il display illuminato e la funzione di zoom permettono una facile lettura dei valori misurati. Lo strumento è donato anche di una funzione di datalogging con interfaccia RS232 e un PC-software sotto Windows. Altre funzioni: misurare/trasmettere, frequenza di dispersione, record, rampe, deviazione, simulazione e trigger.

Messbereiche
Measuring ranges
Gammes de mesure
Campi di misura

Auflösung
Resolution
Résolution
Risoluzione

Max. Belastbarkeit
Max. loading capacity
Capacité de charge max.
Caricabilità massima

Genauigkeit v.E. ± 1 digit
Error limit F.S. ± 1 digit
Limite d'erreur p.E. ± 1 digit
Limite di errore f.s. ± 1 digit

0... 25 mbar	0,001	125 mbar	0,1%
0... 70 mbar	0,01	350 mbar	0,1% / 0,05%
0... 200 mbar	0,01	1500 mbar	0,1%
0... 300 mbar	0,01	1500 mbar	0,1% / 0,05%
0... 500 mbar	0,01	4000 mbar	0,1%
0... 1000 mbar	0,1	4000 mbar	0,1% / 0,05%
0... 2000 mbar	0,1	7000 mbar	0,1% / 0,05%
0... 7 bar	0,001	17 bar	0,1% / 0,05%
0... 10 bar	0,001	27 bar	0,1%
0... 17 bar	0,001	27 bar	0,1% / 0,05%
0... 30 bar	0,001	70 bar	0,1%
0... 70 bar	0,01	140 bar	0,1%
0... 1100 mbar abs	0,1	4000 mbar	0,1%
0... 2000 mbar abs	0,1	7000 mbar	0,1% / 0,05%
0... 7 bar abs	0,001	17 bar	0,1%

Technische Daten

Messmedien:	Instrumentenluft, inerte Gase. Ausführungen 30/70 bar: Alle Medien, die mit rostfreiem Stahl 18/8 (DIN 1.4305) verträglich sind.
Masseinheiten:	mbar, bar, kPa, hPa, MPa, mmH ₂ O, mH ₂ O, mmHg, psi, inH ₂ O, inHg
Gleichstrom Messen	Auflösung Genauigkeit
0...24 mADC Geben	1 µA ±0,025 % v.E. ± 1 digit
0...24 mADC Gleichspannung Messen	1 µA ±0,05 % v.E. ± 1 digit
0...30 VDC Geben	1 mV ±0,025 % v.E. ± 1 digit
0...1 VDC	0,1 mV ±0,05 % v.E. ± 1 digit
Betriebstemperatur:	-5 ... +50 °C (temperaturkomp.)
Temperaturkalibration:	10...35 °C
Temperatureinfluss:	≤ 70 mbar ± 0,02 %/°C ≥ 200 mbar ± 0,005 %/°C
Messrate (RS232):	25 Messungen / Sekunde
Stromaufnahme:	< 30 mA ohne Geben
Speisung:	9 V Batterie oder Steckernetzgerät
Speicherintervall:	manuell, 1...99 sec/min/h wählbar
Messbuchsen:	4 mm, vergoldet
Pneum. Anschluss:	Schlauch ø 4/6 mm, NPT 1/8" Innengewinde > 7 bar
Gehäuseschutzart:	IP 54
Gehäusedimension:	152 x 83 x 34/29 mm
Gewicht inkl. Batterie:	300 g

Caractéristiques techniques

Fluides de mesure:	air d'instrument, gaz inertes Exécutions 30/70 bar: Tous les fluides compatibles avec l'acier inoxydable 18/8 (DIN 1.4305)
Unités de mesure:	mbar, bar, kPa, hPa, MPa, mmH ₂ O, mH ₂ O, mmHg, psi, inH ₂ O, inHg
Courant continu Mesure	Résolution Précision
0...24 mADC Produire	1 µA ±0,025 % p.E. ± 1 digit
0...24 mADC Tension continue Mesure	1 µA ±0,05 % p.E. ± 1 digit
0...30 VDC Produire	1 mV ±0,025 % p.E. ± 1 digit
0...1 VDC	0,1 mV ±0,05 % p.E. ± 1 digit
Temp. d'utilisation:	-5...+50 °C (comp. de temp.)
Etalonnage de la temp.:	10...35 °C
Influence de la temp.:	≤ 70 mbar ± 0,02 %/°C ≥ 200 mbar ± 0,005 %/°C
Fréq. d. mes. (RS232):	25 mesures / seconde
Absorption de courant:	< 30 mA sans produire
Alimentation:	batt. 9 V, unité d'aliment. a. fiche
Intervalle de mémoris.:	manuel, 1...99 sec/min/h à sélect.
Douilles de mesure:	4 mm, doré
Raccordement pneum.:	tuyau ø 4/6 mm, NPT 1/8" féminin > 7 bar
Protection du boîtier:	IP 54
Dimensions du boîtier:	152 x 83 x 34/29 mm
Poids inclus batterie:	300 g

Technical data

Measuring media:	instrument air, inert gases Versions 30/70 bar: All media which are compatible with stainless steel 18/8 (DIN 1.4305).
Units of measurement:	mbar, bar, kPa, hPa, MPa, mmH ₂ O, mH ₂ O, mmHg, psi, inH ₂ O, inHg
Direct current Measure	Resolution Accuracy
0...24 mADC Generate	1 µA ±0,025 % F.S. ± 1 digit
0...24 mADC DC voltage Measure	1 µA ±0,05 % F.S. ± 1 digit
0...30 VDC Generate	1 mV ±0,025 % F.S. ± 1 digit
0...1 VDC	0,1 mV ±0,05 % F.S. ± 1 digit
Operating temperature:	-5...+50 °C (temp. compensation)
Temperature calibration:	10...35 °C
Temperature effects:	≤ 70 mbar ± 0,02 %/°C ≥ 200 mbar ± 0,005 %/°C
Measuring rate (RS232):	25 readings / second
Current consumption:	< 30 mA without generate
Supply:	9 V battery or power supply unit
Memory interval:	manual, 1...99 sec/min/h selectable
Measurement sockets:	4 mm, gold-plated
Pneumatic connection:	tube ø 4/6 mm, NPT 1/8" female > 7 bar
Case, type of protection:	IP 54
Case dimension:	152 x 83 x 34/29 mm
Weight incl. battery:	300 g

Caratteristiche tecniche

Fluidi di misura:	aria strumenti, gas inerti Per le versioni 30/70 bar: Ogni tipo di fluido compatibile con acciaio inox 18/8 (DIN 1.4305)
Unità di misura:	mbar, bar, kPa, hPa, MPa, mmH ₂ O, mH ₂ O, mmHg, psi, inH ₂ O, inHg
Corrente continua Misurare	Risoluzione Precisione
0...24 mADC Trasmettere	1 µA ±0,025 % f.s. ± 1 digit
0...24 mADC Tensione continua Misurare	1 µA ±0,05 % f.s. ± 1 digit
0...30 VDC Trasmettere	1 mV ±0,025 % f.s. ± 1 digit
0...1 VDC	0,1 mV ±0,05 % f.s. ± 1 digit
Temp. di esercizio:	-5...+50 °C (comp. di temp.)
Calibrazione in temp.:	10...35 °C
Influenza della temp.:	≤ 70 mbar ± 0,02 %/°C ≥ 200 mbar ± 0,005 %/°C
Cadenza di mis. (RS232):	25 misure / secondo
Corrente assorbita:	< 30 mA senza trasmettere
Alimentazione:	batterie 9 V, mediante alim. da rete
Interv. di memorizzaz.:	man., da 1...99 sec/min/ore a schelta
Prese di misura:	4 mm, dorate
Raccordo pneumatico:	tubo flessib. ø 4/6 mm, NPT 1/8" femminile > 7 bar
Protezione custodia:	IP 54
Dimensioni custodia:	152 x 83 x 34/29 mm
Peso con batteria:	300 g

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Meteo Station HM30

**for pressure,
humidity, temperature
and altitude**

Application

- **Meteorology**
- **Heating/ventilation/air conditioning**
- **Measurement technique**
- **Geology, geodesy**
- **Aviation**
- **Mountaineering**

Your benefit

- **Compact, multi-function measuring instrument for climatic data, for on site use at any time**
- **Several meteo parameters can be observed, measured and evaluated**
- **Simultaneous display of barometric pressure, humidity, temperature 1 and temperature 2**
- **Datalogging with real time clock**
- **Data transfer to PC**
- **PC remote control facility**
- **Data printout possible without PC**
- **Windows supported software**
- **Measured values provide basis for accurate decision-making**

Performance features

- **Barometric pressure/barometer/QNH**
- **Humidity/air temperature with combined sensor**
- **Second temperature with insertion sensor**
- **Dewpoint determination**
- **Altitude measurement**
- **Difference measurement**
- **Trend indication**
- **Peak value storage, max/min**
- **Hold and Zoom function**
- **RS232 interface**
- **Connection for plug-in mains supply unit**
- **Battery voltage indication**
- **Splash-proof ABS case (IP54)**
- **12 months guarantee**



Technical data

Measuring media	
- combined sensor 1	air
- temp. sensor 2	water and soft plastic media, compatible with stainless steel V4A
Units of measurement	
- barometric pressure	mbar, hPa, mmHg, inHg, inH ₂ O, psia
- humidity	% rF, % rH
- temperature	°C, °F
- altitude	m, ft
- trend	.../h, .../min
Temp. calibration:	-20 °C...+60 °C
Operating temperature:	-20 °C...+60 °C
Humidity:	0 to 95 % rH, non condensing
Meas. rate with PC:	25 readings / second
Current consumption:	without sensors < 12 mA temp. sensor 1 mA combined sensor 4 mA
Supply:	9 V battery (IEC 6LR61), accu. or power supply unit
Battery life:	continuous operation, up to 48 h
Autom. cut-out time	continuous operation, 1, 10, 30, 60 min.
Memory interval:	manual, 1 sec to 24 h (15 possibilities)
Memory size:	max 908 measurements
Case, type of prot.:	IP 54
Case dimension:	152 x 83 x 34/29 mm
Weight incl. battery:	275 g (less sensors)
Weight of sensors:	185 g

Software

THOMMEN Climate SW HM30

The THOMMEN Climate SW HM30 offers the facility to display measured values of the THOMMEN Meteo Station HM30 on the PC. The program is ideal for all who wish to observe, record and evaluate climatic data in real time.

Barometric pressure, altitude, humidity and temperature can be displayed simultaneously in digital and in graphic form. The measured values can be stored on the PC and are buffered to prevent loss in the case of a power supply failure. In addition, the measuring interval is selectable for long-term measurements. The evaluation of the data permits the print-out of graphics and lists or transfer to other Windows applications. The Meteo Station HM30 can be individually configured from the PC. Stored values from the HM30 datalogging can be input into the PC and stored, evaluation taking place as with the real time measurement. The user of the Climate SW HM30 therefore has a very simple way of observing, recording and evaluating climatic measured values. In this he is supported by further functions such as programmable alarm values, mean value, difference and min./max. values.

The software is multilingual, runs on Windows 3.1 and Windows 95. A Pentium PC with 8 MB RAM is recommended. A 30 day program version is available.

Parameter	Measuring ranges	Resolution	Error limit F.S. ± 1 digit	
barometric pressure	225... 1125 hPa abs	0,1 hPa	± 1 hPa	
humidity	0... 100% rH	0,1% rH	± 1,5% rH	
temperature	combined sensor 1 temp. sensor 2	-40... +60 °C -50... +200 °C	0,1 °C 0,1 °C	± 0,3 ° ± 0,3 °C
altitude	-500.. 10 000 m	1 m	± 10 m ± 2 m (Δ < 500 m)	

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I-HM30-E/0700 Art. Nr. 70 794 056



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Digital Manometer



Das Manometer HM 35 / HM 35 EX überzeugt durch seine vielseitigen Einsatzmöglichkeiten. Es erlaubt Messungen im Bereich Relativdruck, Differenzdruck oder Absolutdruck. Die EX-Ausführung erfüllt alle Anforderungen für das Arbeiten im EX-Bereich EEx ia IIC T4. Es stehen Funktionen wie Druck-Änderungsrate, MIN/MAX und Mittelwert zur Verfügung. Ferner kann das HM 35 / HM 35 EX individuell für verschiedenste Anwendungen konfiguriert werden. Eine grosse, gut ablesbare Grafik-Anzeige mit Beleuchtung, die Handlichkeit, eine Echtzeit-Uhr mit Datum, der Datenspeicher für 10'000 Messwerte... um nur wenige Highlights zu nennen, erleichtern die Anwendung. Via Infrarotschnittstelle (IR) können alle Daten direkt auf einen PC übertragen werden. Dazu wird eine Kommunikations-Software für Windows angeboten. 22 umschaltbare Masseinheiten runden das Bild dieses präzisen Manometers ab.

The most impressive feature of the HM 35 / HM 35 EX manometer is the versatile range of applications. It allows measurements in the area of relative, differential or absolute pressure. The EX-version meets all requirements for applications in hazardous areas (EEx ia IIC T4). Functions such as pressure change rate, MIN/MAX and average value are available, in addition the HM 35 / HM 35 EX can also be individually configured for different applications. A large, well readable graphics display, its handy size, a real time clock including date, the background illumination, the data memory for 10'000 measurements... only to mention a few highlights – facilitate its use. Via the infrared interface (IR), all data can be transferred directly to any PC. A communication software for Windows is also available. 22 selectable measurement units complete off the specification of this precise manometer.

Messbereiche Measuring ranges	Auflösung Resolution	Max. Belastbarkeit Max. load capacity	Genauigkeit v.E. ± 1 digit Error limit F.S. ± 1 digit	v. Mw. ± 1 digit of rdg. ± 1 digit
0... 25 mbar	0,001	125 mbar	0,2% / 0,1%	
0... 70 mbar	0,001	350 mbar	0,2% / 0,1%/0,05%	0.1%
0... 200 mbar	0,01	500 mbar	0,2% / 0,1%	
0... 300 mbar	0,01	1500 mbar	0,2% / 0,1%/0,05%	0.1%
0... 500 mbar	0,01	4000 mbar	0,2% / 0,1%	
0... 1000 mbar	0,01	4000 mbar	0,2% / 0,1%/0,05%	0.1%
0... 2000 mbar	0,1	7000 mbar	0,2% / 0,1%/0,05%	0.1%
0... 7500 mbar	0,1	17 bar	0,2% / 0,1%/0,05%	0,1%
0... 10 bar	0,0001	27 bar	0,2% / 0,1%	
0... 17 bar	0,0001	27 bar	0,2% / 0,1%/0,05%	0.1%
0... 35 bar	0,001	70 bar	0,2% / 0,1%	
0... 70 bar	0,001	140 bar	0,2% / 0,1%	0.1%
0... 90 bar	0,001	140 bar	0,2% / 0,1%	0.1%
0... 1100 mbar abs	0,01	4000 mbar	0,2% / 0,1%	
0... 2000 mbar abs	0,1	7000 mbar	0,2% / 0,1%/0,05%	
0... 7500 mbar abs	0,1	17 bar	0,2% / 0,1%	

Technische Daten

Messmedien:	für inerte Gase und Instrumentenluft
Medienkompatibel rel./abs.:	alle Medien, welche mit rostfreiem Stahl 18/8 (DIN 1.4305) verträglich sind. Messbereiche von 1 bar – 90 bar
Masseinheiten: (je nach Messbereich)	mbar, bar, Pa, hPa, kPa, MPa, kg/cm ² , kg/m ² , mmHg, cmHg, mHg, inHg, mmH ₂ O, cmH ₂ O, mH ₂ O, inH ₂ O, ftH ₂ O, psi, lb/in ² , lb/ft ² , torr, atm
Temperaturkalibration:	0°C... 50°C
Betriebstemperatur:	0°C... 50°C
Feuchtigkeit:	max. 95 % rF
Kommunikation:	serielles Infrarot (IR)-Protokoll und SCPI-Befehle
Anzeigerate:	2 M/s
Stromversorgung:	3 x 1,5 V Batterie IEC LR6, Batterie – Lebensdauer ca. 90 h bzw. ca 60 h (EX-Ausführung) oder Steckernetzgerät 6 VDC Achtung: bei EX-Version kein Steckernetzgeräte-Anschluss vorhanden
Speicherintervall:	manuell, 10, 25 M/s, 1s... 24h wählbar
Pneum. Anschluss:	Schlauch Ø 4/6mm NPT 1/8" Innengewinde (ab 10 bar)
Gehäuseschutzart:	IP 54
Gehäusedimensionen:	200 x 94/58 x 40/28 mm
Gewicht inkl. Batterien:	300 g

Technical data

Measuring media:	inert gases and instrument air
Media compatible rel./abs.:	all media which are compatible with stainless steel 18/8 (DIN 1.4305). Range from 1 bar to 90 bar
Units of measurement: (depending on range)	mbar, bar, Pa, hPa, kPa, MPa, kg/cm ² , kg/m ² , mmHg, cmHg, mHg, inHg, mmH ₂ O, cmH ₂ O, mH ₂ O, inH ₂ O, ftH ₂ O, psi, lb/in ² , lb/ft ² , torr, atm
Temperature calibration:	0°C... 50°C
Operating temperature:	0°C... 50°C
Humidity:	max. 95 % rH
Communication:	serial Infrared (IR) Protocol and SCPI-commands
Display rate:	2 M/s
Power supply:	3 x 1.5 V battery IEC LR6, battery life time appr. 90 h or appr. 60 h (EX-Version) or power supply unit 6 VDC Attention: EX-version no power supply connection available
Memory interval:	manual, 10, 25 M/s, 1s... 24h selectable
Pneumatic connection:	hose Ø 4/6 mm NPT 1/8" (from 10 bar),
Case, type of protection:	IP 54
Case dimension:	200 x 94/58 x 40/28 mm
Weight incl. batteries:	300 g



Please contact us for more information or for our complete documentation.

REVUE THOMMEN
Manufacturer of mechanical and electrical aircraft instruments, used in military, commercial and business aviation.

REVUE THOMMEN is a certified company:

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Mobile Pressure Generator MG20



HM22
The compact handheld pressure gauge

HM28
The versatile handheld pressure gauge

HM38
The pressure calibrator

The mobile pressure generator MG20 from THOMMEN combines our wide experience with the latest technology available today.

Based on our well-proven, highly reliable mobile pressure generator series OM, LM and EC, the new MG20 represents the state-of-the-art in pressure simulation.

The pressure generator MG20 acts as the base unit. Our pressure measurement instruments HM22, HM28 or HM38 plug easily into the MG20, as required for the different measurement functions and ranges, and offer the well-known advantages and benefits.

The specifications

Pressure simulation with bellows unit, hand pump

Gauge pressure	0 to 17 bar
Vacuum	0 to -700 mbar
Measuring media	Instrument air or inert gases
Pneumatic connect.	Plug-in connector / nipple «Rectus» type 20 approx. 158 x 108 x
Case dimensions	259 mm
Weight without measuring instrument	2,1 kg
Operating temp.	-20° C to +50° C
Storage temp. range	-40° C to +80° C



Mobile Pressure Generator MG20

The applications

- Measurement and control engineering
- Process engineering
- Pharmaceutical and chemical industries
- Paper and foodstuffs industries
- Gas, water works and waste disposal plants
- Heating/ventilation/air conditioning

Your benefit

- Easily exchangeable measurement instruments (HM)
- Portable simulation and measurement unit
- For calibration tasks in workshops or on-site
- Very simple operation via the keypad
- Over- and underpressure can be created and regulated with the pneumatic unit
- Robust, compact and yet lightweight construction
- Maintenance-free

Performance features

- Simulation of over- and underpressure
- Overpressure to 17 bar with hand pump
- Underpressure to -700 mbar
- Fine adjustment with Variobalg
- Independent of a pneumatic and electrical supply
- Pneumatic Plug-in connector/nipple («Rectus» type 20)
- SCS-certificate included (HM)

HM22

The compact, handheld pressure gauge HM22 has a large, easy-to-read display and is very simple to operate. Measuring ranges can be selected by pressing a button. This permits improved reading precision for the small measuring range. The pressure gauge is used for monitoring and checking apparatus in process engineering, where quality requirements are becoming increasingly rigorous. Measurements can be made with this instrument in over- and underpressure, differential or absolute pressure.

HM28

A convincing feature of this handheld pressure gauge is its versatility. Functions are available for leak rate, min./max. values and for storing the measured values in the display. The measured values can be stored in the integrated data memory with the datalogging function and from there, logged directly on a connected printer, without PC via the RS232 interface. A Ex-version for working in the designated fire and explosion hazard zone EEx ib IIC T5 is also available.

HM38

The pressure calibrator HM38 provides the user with two individual pressure measuring ranges for over- and underpressure, differential or absolute pressure. It is possible simultaneously to measure and generate current and voltage. The illuminated display and the zoom function permit simple reading of the measured values. And of course with a datalogging function with interface RS232 and PC-software level Windows.

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Digital Manometer



HM 25



Das Manometer HM 25 überzeugt durch seine vielseitigen Einsatzmöglichkeiten. Es ist konzipiert für Messungen im Bereich Differenzdruck und Relativdruck. Die Hauptanwendungen des HM 25 finden Sie in der pharmazeutischen und chemischen Industrie, in der Heizungs-, Lüftungs- und Klimatechnik, Energieerzeugung, Anlagenbau usw. Sie erhalten das Instrument in einem handlichen Koffer inkl. pneumatischen Kupplungen.

Das Display erlaubt ein optimales Ablesen der Messwerte. Zudem verfügt das HM 25 über acht umschaltbare Masseinheiten. Die serielle Schnittstelle erlaubt eine einfache Datenübertragung zu Ihrem PC. Weitere Vorteile: Speicherung der MAX/MIN Werte, Holdfunktion und Nullen per Tastendruck. Für den Anwender steht eine kostenlose Software zur Verfügung.

The most impressive feature of the HM 25 manometer is the versatile range of applications. It has been designed for measurements in the areas of differential and relative pressure. The main applications of the HM 25 are in the pharmaceutical and chemical industries, in heating engineering, ventilation and air conditioning technology, in energy generation, system constructions etc. You will get the instrument in a handy carrying case, including pneumatic connections.

The display permits an optimal reading of the measurements. In addition, the HM 25 offers eight selectable measurement units. The serial interface allows a simple data transmission to your PC. Other advantages: storage of the MAX/MIN values, hold function and zeroing by key-stroke. A free software is available to the user.

Messbereiche Measuring ranges	Auflösung Resolution	Max. Belastbarkeit Max. load capacity	Genauigkeit v.E. ± 1 digit Error limit F.S. ± 1 digit
0... 2000 mbar	1	4 mbar	2%
0... 7000 mbar	5	10 mbar	2%

Technische Daten

Funktionen:	Differenz- und Relativdruck, Zero, Hold, MAX/MIN
Messmedien:	für inerte Gase und Instrumentenluft
Masseinheiten:	mbar, kg/cm ² , mmHg, inHg, mH ₂ O, inH ₂ O, psi, atm
Betriebstemperatur:	0°C... 50°C
Feuchtigkeit:	max. 80 % rF
Kommunikation:	RS 232 interface
Messrate:	ca. 1.25 M/s
Stromversorgung:	9 V Batterie, IEC 6LR61, Batterie – Lebensdauer ca. 70h
Pneum. Anschluss:	Kupplung
Gehäusedimensionen:	18 x 72 x 32 mm
Gewicht inkl. Batterie:	260 g



Please contact us for more information or for our complete documentation.

REVUE THOMMEN
Manufacturer of mechanical and electrical aircraft instruments, used in military, commercial and business aviation.

Technical data

Functions:	differential and relative pressure, zero, hold, MAX/MIN
Measuring media:	inert gases and instrument air
Units of measurement:	mbar, kg/cm ² , mmHg, inHg, mH ₂ O, inH ₂ O, psi, atm
Operating temperature:	0°C... 50°C
Humidity:	max. 80 % rH
Communication:	RS 232 interface
Measuring rate:	approx. 1.25 M/s
Power supply:	9 V battery IEC 6LR61, battery life time appr. 70h
Pneumatic connection:	coupling
Case dimension:	18 x 72 x 32 mm
Weight incl. battery:	260 g

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