



#### **REFMATE-2-BASIC**

#### **Item Number** 4688297

The REFMATE is the Digital Manifold for the professional refrigeration engineer. It communicates wirelessly with temperature clamps, pressure gauges, and the scale, and documents all measured values in the device during long-term measurements. All data can be interpreted and displayed via the app REFMESH. The latest refrigerant and firmware updates can be easily installed via PC.

- Patented analog display (US patent 9'448'140)
- Large 4.3" TFT display
- Indication of superheating and subcooling
- Intuitive control via robust push buttons
- High precision with accuracy class 0.5
- Flexible power supply (AA batteries or USB)
- Wireless communication with REFMESH App and other devices
- All mechanical components are available as spare parts
- Lockable for long-term measurements

#### **Technical Data**

Material	Aluminium   Brass   ABS   TPE
Color	yellow (RAL 1023)   green (RAL 6026)
Standards	CE / FCC / IC / RCM / RoHS / REACH
RoHS Conformity	Yes
Accuracy Class	0.5 (+/-0.5%)
Gas Connection	1/4" SAE
Pressure Scale	bar   psi   kPa   MPa   kg/cm2
Number of Ways	2-way
Operating Temperature Range	-4 -122 °F
Storage Temperature Range	-4 -140 °F



Pressure Range	-14 - 870 psi
Ingression Protection	IP42
Resolution	0.001 bar, 0.5 psi, 1 kPa, 0.0001 MPa, 0.01 kg/cm2
Battery	4 x AA   Alternative Power Supply USB Mirco-B
Operating Hours	50 h at low operation
Signal Range	300 ft
Functions	Superheat / Subcool, Digital / analogue display, Slave pointer, Pressure zeroing, Data logging, Tube error compensation, Refrigerant favorites Refrigerant update, Firmware update, Set pressure reference, Field calibration, Unit and language settings, Display brightness, Wireless connections, Commissioning date, Printscreens
Scope of Supply	2 wired temperature sensors   Calibration Certificate   Batteries   Instruction manual   Case
Packaging	Sturdy plastic case
Sensor type	K-type   Piezo Sensor
Temperature measuring range	-40 - 257 °F
Temperature Units	°C   °F
Temperature Accuracy	+/-1 K
Temperature Resolution	0.1 °C / 0.1 °F

### Accessories

4681466	K-TYPE-CLAMP TC	Clamp thermocouple for REFMATE and DIGIMON
4687785	WIRELESS-CLAMP WTC	Temperature clamp for REFMATE and TAP

Springfield MA 01104



4688587 CCL-60-A-38010 Set of 3 charging hoses with access control valve, 60"/150 cm blue and red with access control valve A-38010, 1/4" SAE, yellow 1/4" SAE with CA ball valve  4688596 CCL-60-A-38410 Set of 3 charging hoses with access control valve, 60"/150 cm blue and red with access control valve A-38410, 5/16" SAE, yellow 1/4" SAE with CA ball valve  9881276 CCL-60 Set of 3 charging hoses, 1/4"SAE, 60"/150 cm blue, red & yellow, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  4687668 CCL-60-N Set of 3 charging hoses, 1/4"SAE, 60"/150 cm blue, red & yellow, with neoprene gaskets, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  4493622 CA-CCL-60 Set of 3 charging hoses with ball valve 1/4" SAE, 60"/150 cm, blue, red & yellow, 1x straight 1/4" SAE, 1x straight with ball valve 1/4" SAE and core depressor  4668533 CCL-60-CA Set of 3 charging hoses with ball valve, 1/4" SAE, 60"/150 cm blue, red & yellow, ball valve integrated in charging hose, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  9884095 CCL-60-1/2"- Set of 3 charging hoses, R410A/R32, 60"/150 cm blue & red: 1x straight 1/4" SAE, 1x bended 1/2"-20UNF (5/16" SAE) with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE  4682519 CA-CCL-60-1/2"- Set of 3 charging hoses, R410A/R32, 60"/150 cm blue, red & yellow with ball valve  4688477 VCL-60- 3/8"SAEX1/4"SAE  4687412 HCL6-60-Y-N- 1/4X1/4 Special suction and charging hose, yellow, 60"/150cm Inner diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without core depressor, with neoprene gaskets			
blue and red with access control valve A-38410, 5/16" SAE, yellow 1/4" SAE with CA ball valve  9881276  CCL-60  Set of 3 charging hoses, 1/4"SAE, 60"/150 cm blue, red & yellow, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  4687668  CCL-60-N  Set of 3 charging hoses, 1/4"SAE, 60"/150 cm blue, red & yellow, with neoprene gaskets, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  4493622  CA-CCL-60  Set of 3 charging hoses with ball valve 1/4" SAE, 60"/150 cm, blue, red & yellow, 1x straight 1/4" SAE, 1x straight with ball valve 1/4" SAE and core depressor  4668533  CCL-60-CA  Set of 3 charging hoses with ball valve, 1/4" SAE, 60"/150 cm blue, red & yellow, ball valve integrated in charging hose, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  9884095  CCL-60-1/2"- 20UNF  Set of 3 charging hoses, R410A/R32, 60"/150 cm blue & red: 1x straight 1/4" SAE, 1x bended 1/2"-20UNF (5/16" SAE) with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE  4682519  CA-CCL-60-1/2"- 20UNF  Set of 3 charging hoses, R410A/R32, 60"/150 cm blue, red & yellow with ball valve  4688477  VCL-60- 3/8"SAEx1/4"SAE  Vacuum hose 3/8" SAE x 1/4" SAE, 60"/150cm  Figure 1.5 AE, without  Special suction and charging hose, yellow, 60"/150cm Inner diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without	4688587	CCL-60-A-38010	blue and red with access control valve A-38010, 1/4" SAE,
yellow, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  4687668  CCL-60-N  Set of 3 charging hoses, 1/4"SAE, 60"/150 cm blue, red & yellow, with neoprene gaskets, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  4493622  CA-CCL-60  Set of 3 charging hoses with ball valve 1/4" SAE, 60"/150 cm, blue, red & yellow, 1x straight 1/4" SAE, 1x straight with ball valve 1/4" SAE and core depressor  4668533  CCL-60-CA  Set of 3 charging hoses with ball valve, 1/4" SAE, 60"/150 cm blue, red & yellow, ball valve integrated in charging hose, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  9884095  CCL-60-1/2"- 20UNF  Set of 3 charging hoses, R410A/R32, 60"/150 cm blue & red: 1x straight 1/4" SAE, 1x bended 1/2"-20UNF (5/16" SAE) with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE  4682519  CA-CCL-60-1/2"- 20UNF  Set of 3 charging hoses, R410A/R32, 60"/150 cm blue, red & yellow with ball valve  Vacuum hose 3/8" SAE x 1/4" SAE, 60"/150cm  3/8"SAEx1/4"SAE  4687412  HCL6-60-Y-N- 1/4x1/4  Special suction and charging hose, yellow, 60"/150cm Inner diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without	4688596	CCL-60-A-38410	blue and red with access control valve A-38410, 5/16" SAE,
yellow, with neoprene gaskets, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  4493622 CA-CCL-60 Set of 3 charging hoses with ball valve 1/4" SAE, 60"/150 cm, blue, red & yellow, 1x straight 1/4" SAE, 1x straight with ball valve 1/4" SAE and core depressor  4668533 CCL-60-CA Set of 3 charging hoses with ball valve, 1/4" SAE, 60"/150 cm blue, red & yellow, ball valve integrated in charging hose, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  9884095 CCL-60-1/2"- Set of 3 charging hoses, R410A/R32, 60"/150 cm blue & red: 1x straight 1/4" SAE, 1x bended 1/2"-20UNF (5/16" SAE) with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE  4682519 CA-CCL-60-1/2"- Set of 3 charging hoses, R410A/R32, 60"/150 cm blue, red & yellow with ball valve  4688477 VCL-60- 3/8"SAEx1/4"SAE  4687412 HCL6-60-Y-N- 1/4x1/4 Special suction and charging hose, yellow, 60"/150cm Inner diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without	9881276	CCL-60	yellow, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core
blue, red & yellow, 1x straight 1/4" SAE, 1x straight with ball valve 1/4" SAE and core depressor  CCL-60-CA  Set of 3 charging hoses with ball valve, 1/4" SAE, 60"/150 cm blue, red & yellow, ball valve integrated in charging hose, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  CCL-60-1/2"- Set of 3 charging hoses, R410A/R32, 60"/150 cm blue & red: 1x straight 1/4" SAE, 1x bended 1/2"-20UNF (5/16" SAE) with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE with c  CA-CCL-60-1/2"- Set of 3 charging hoses, R410A/R32, 60"/150 cm blue, red & yellow with ball valve  CA-CCL-60-1/2"- Set of 3 charging hoses, R410A/R32, 60"/150 cm blue, red & yellow with ball valve  VCL-60- 3/8"SAEx1/4"SAE  Vacuum hose 3/8" SAE x 1/4" SAE, 60"/150cm  HCL6-60-Y-N- 1/4x1/4  Special suction and charging hose, yellow, 60"/150cm Inner diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without	4687668	CCL-60-N	yellow, with neoprene gaskets, 1x straight 1/4" SAE, 1x bended
blue, red & yellow, ball valve integrated in charging hose, 1x straight 1/4" SAE, 1x bended 1/4" SAE with core depressor  CCL-60-1/2"- Set of 3 charging hoses, R410A/R32, 60"/150 cm blue & red: 1x straight 1/4" SAE, 1x bended 1/2"-20UNF (5/16" SAE) with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE with c  CA-CCL-60-1/2"- Set of 3 charging hoses, R410A/R32, 60"/150 cm blue, red & yellow with ball valve  VCL-60- 3/8"SAEx1/4"SAE  HCL6-60-Y-N- 1/4x1/4  Special suction and charging hose, yellow, 60"/150cm Inner diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without	4493622	CA-CCL-60	blue, red & yellow, 1x straight 1/4" SAE, 1x straight with ball
20UNF straight 1/4" SAE, 1x bended 1/2"-20UNF (5/16" SAE) with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE with c  4682519 CA-CCL-60-1/2"- Set of 3 charging hoses, R410A/R32, 60"/150 cm blue, red & yellow with ball valve  4688477 VCL-60- Vacuum hose 3/8" SAE x 1/4" SAE, 60"/150cm  3/8"SAEx1/4"SAE  4687412 HCL6-60-Y-N- Special suction and charging hose, yellow, 60"/150cm Inner diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without	4668533	CCL-60-CA	blue, red & yellow, ball valve integrated in charging hose, 1x
yellow with ball valve  VCL-60- 3/8"SAEx1/4"SAE  Vacuum hose 3/8" SAE x 1/4" SAE, 60"/150cm  HCL6-60-Y-N- 1/4x1/4  Special suction and charging hose, yellow, 60"/150cm Inner diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without	9884095	•	straight 1/4" SAE, 1x bended 1/2"-20UNF (5/16" SAE) with core depressor, yellow: 1x straight 1/4" SAE, 1x bended 1/4" SAE
3/8"SAEx1/4"SAE  HCL6-60-Y-N- Special suction and charging hose, yellow, 60"/150cm Inner diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without	4682519	-	
1/4x1/4 diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without	4688477		Vacuum hose 3/8" SAE x 1/4" SAE, 60"/150cm
	4687412		diameter: 9.5mm (3/8"), connections: 2 x 1/4" SAE, without

### **Spare Parts**

4687079	M2-7-SET-B+R	Replacement knobs
4687104	M2-10-95-R/2	Complete valve set, 2 pieces
4491018	M4-6-11	Sight glass assembly with 2 gaskets
4687951	A-31452-Y/3	Threaded Y-style, 3 pieces
4687785	WIRELESS-CLAMP	Temperature clamp for REFMATE and TAP



	WTC	
4681394	K-TYPE-SENSOR	External temperature sensor for REFMATE and DIGIMON
4681466	K-TYPE-CLAMP TC	Clamp thermocouple for REFMATE and DIGIMON
4687093	M4-6-04-R/4	Valve seat assemblies, 4 pieces
4662624	M4-6-04-R/10	Valve seat assemblies, 10 pieces
4493169	M4-6-11-T	Sight glass removal tool
4688082	REFMATE-CASE	Protection case for digital manifold REFMATE
4687995	REFMATE-HOOK	Replacement hook