

■ DEVICE FOR GAS ANALYSIS



For verification of several parameters with only one measurement

C5-3-039R-R...

MULTI-ANALYSER^{C5} with gas return system

This multi-functional measuring device allows the determination of up to five quality parameters with only one measurement:

- » Percentage of substance amount 3M™ Novec™ 5110 [%] in carbon dioxide CO₂ or nitrogen N₂
- » Moisture concentration [div.]
- » Percentage of substance amount oxygen O₂ [%]
- » Option: percentage of substance amount carbon dioxide CO₂ [%]
- » Option: concentration carbon monoxide CO [ppm]



If sensors need to be calibrated, they can be easily calibrated on site by the user. The device is immediately ready for use without loss of time based on the "Plug & Play" principle.

The MultiAnalyser^{C5} is a battery-operated, compact, user- and maintenance-friendly device which guarantees high measuring accuracy. The unit allows different kinds of measurements and treatment of the measuring gas:

- » The measuring gas can be stored in an internal storage vessel and pumped back into the gas compartment (up to 10 bar p_g)
 - » External storage of the measuring gas into a cylinder:
For measurements on cylinders, vessels or gas compartments with higher pressure (max. inlet pressure 35 bar p_g) or if the measuring gas should not be pumped back, a cylinder can be connected directly to the separate outlet (max. 10 bar p_g). It is not necessary to use a pressure reducer and to separate the device from the gas cylinder or the gas compartment.
 - » External storage of the measuring gas into a collecting bag:
An external gas collecting bag can be connected allowing continuous measurements (inlet pressure max. 35 bar p_g) without pumping the gas back. It is possible to empty the external bag by means of the MultiAnalyser^{C5} or via the connection on a service cart or compressor unit.
- No emissions of measuring gas
 - Modular interchangeability of the sensors
 - Easy and user-friendly menu navigation via high quality 7" capacitive colour touch screen
 - Storage of up to 500 measurement results with name, date and time
 - Battery and external power supply
 - USB and LAN connection
 - Adjustable user languages: DE, EN, FR, ES, IT, PT, CZ, PL, CN, JPN, RUS
 - Compact design, easy handling and transportation (installed in a trolley case)



■ DEVICE FOR GAS ANALYSIS



C5-3-039R-R...

MULTI-ANALYSER ^{C5}

Precise and correct results for subsequent measurements can be guaranteed by purging the measuring hose prior to each measurement. The gas is stored internally.

Another big advantage of the MultiAnalyser ^{C5} is its high precision. The gas moisture is measured at operating pressure. Thus, very precise results are obtained during a short measuring time even in the critical dew point range (< -40 °C). The dew point is calculated at ambient pressure. The device is very maintenance-friendly. The residual lifetime of the electrochemical sensors is displayed automatically. A very practical and useful device.

Technical data:

Dimensions: Length 406 mm, Width 538 mm, Height 269 mm
Weight: 25 kg
Inlet pressure: p_e 0.2 - 35 bar
Operating temperature: -10 °C to +50 °C
Ambient moisture: max. 90 % relative moisture, non condensing during operation
Operating voltage: 85-264 VAC, 47-63 Hz
Number of measured values to be stored internally: 500
Interface: USB/LAN
Measuring time: variably calculated by the system, max. 15 minutes
Indication of moisture concentration in dew point °C or °F, referred to atmospheric or inlet pressure, reversible to indication in ppm_v
Inlet pressure indication in bar p_a or p_e , psi, kPa, MPa

Standard equipment:

Transport case; 6 m long connecting hose with DILLO couplings DN8 (M24x1,5) and DN20 (M43x2); 2 m long connecting cable
USB stick with data file for evaluation and reading out of measured data
Operating manual



■ DEVICE FOR GAS ANALYSIS



C5-3-039R-R... MULTI-ANALYSER ^{C5}

Sensor data:					
	Mole percent * 3M™ Novec™ 5110 in carbon dioxide (CO ₂) or nitrogen (N ₂)	Moisture	Mole percent oxygen (O ₂)	Option: mole percent carbon dioxide (CO ₂)	Option: Concentration carbon monoxide (CO)
Measuring principle	Non-dispersive infrared sensor (NDIR)	Electronic dew point measurement (capacitive)	Electrochemical reaction	Non-dispersive infrared sensor (NDIR)	Electrochemical reaction
Measuring range	0 - 15 Mol-%	-60 °C to +20 °C	0 – 25 mol %	0 - 100 mol %	0,0 – 500,0 ppm
Measuring accuracy	≤ ±0,1 mol-% (at < 7%) ≤ ±0,2 mol-% (at ≥ 7%)	≤ ±2 °C (at > -40 °C) ≤ ±3 °C (at < -40 °C)	≤ ±0,2 mol %	≤ ±2 mol %	≤ ±2 % of measuring range
Adjustable limit value	0,0 - 15,0 %	-60 °C to +20 °C	0,0 - 25,0 %	0,0 - 100,0 %	0,0 – 500,0 ppm
Recommended calibration interval	2 years	2 years	2 years lifetime	2 years	2 years lifetime

*Mole % represents the amount of substance in a mixture and is equivalent to the ideal volume fraction. Its size is independent of pressure and temperature.

Available option of the MultiAnalyser ^{C5}:

Single measuring device: Percentage 3M™ Novec™ 5110 (%) in N ₂	C5-3-039R-R111
Single measuring device: Percentage 3M™ Novec™ 5110 (%) in CO ₂	C5-3-039R-R112
Two-in-one measuring device: Percentage 3M™ Novec™ 5110 (%) in N ₂ and moisture	C5-3-039R-R211
Two-in-one measuring device: Percentage 3M™ Novec™ 5110 (%) in CO ₂ and moisture	C5-3-039R-R212
Three-in-one measuring device: Percentage 3M™ Novec™ 5110 (%) in N ₂ , moisture and oxygen O ₂ (%)	C5-3-039R-R311
Three-in-one measuring device: Percentage 3M™ Novec™ 5110 (%) in CO ₂ , moisture and oxygen O ₂ (%)	C5-3-039R-R312
Five-in-one measuring device: Percentage 3M™ Novec™ 5110 (%) in N ₂ , moisture, oxygen O ₂ (%), carbon dioxide CO ₂ (%) and carbon monoxide CO (ppm)	C5-3-039R-R511
Five-in-one measuring device: Percentage 3M™ Novec™ 5110 (%) in CO ₂ , moisture, oxygen O ₂ (%), carbon dioxide CO ₂ (%) and carbon monoxide CO (ppm)	C5-3-039R-R512

Optional accessories at an extra charge:

External compressor for increase of pressure for application of the MultiAnalyser ^{C5} in medium voltage switchgear with a pressure of < 0.2 bar p _e	3-826-R003
Discharge gas collecting bag	B151R95
Adapter case for measuring device	On request
6 m long connecting hose with self-closing couplings (as extension hose)	3-531-R060
Additional operating manual on CD-ROM	6-0004-R213

Packing:

Packing for C5-3-039R-R...	3-775-R104
----------------------------	------------

*) 3M and Novec are registered trademarks of 3M.

