

# Unical 9000

## Electro-pneumatic Controller for the Fully Automatic Cleaning and Calibration of pH Sensors



Maintenance of pH measuring points without process interruption for high-quality process automation.

Unical 9000 controls the retractable fitting and media like water, cleaning solutions (CIP), purge air, and buffer solutions for the fully automatic cleaning and calibration of pH measuring points. In cCare systems with Protos II, it enables configurable sensor maintenance with time control – even in conditions with high pressure, high temperatures, and heavy soiling.



### Individual Configuration

- Custom solutions for any requirement
- Flexible in terms of medium supply, program sequences, and system integration
- Always at your side with professional technical advice

### Automatic Sensor Maintenance

- Sensor maintenance without process interruption for longer sensor service life
- Several specific time controls per day of week
- Operation via modular Protos II transmitters

### Wide Range of Applications

- Use in harsh environments, including hygienic cleanrooms
- Effective selection of mounting methods
- Application also possible in hazardous areas

**Product Code**

Unical		9000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Explosion protection	For Ex zone 1		X															
	Without		N															
Enclosure	Steel, coated		C															
	Stainless steel, polished		S															
Media connection (rinse function only)	5 m (seal material FKM)		1	0														
	10 m (seal material FKM)		2	0														
	15 m (seal material FKM)		5	0														
	5 m (seal material EPDM)		A	0														
	10 m (seal material EPDM)		B	0														
	15 m (seal material EPDM)		E	0														
Media connection (calibration and rinse function)	5 m (seal material FKM)		3															
	10 m (seal material FKM)		4															
	14 m (seal material FKM)		7															
	17 m (seal material FKM)		6															
	5 m (seal material EPDM)		C															
	10 m (seal material EPDM)		D															
	14 m (seal material EPDM)		G															
	17 m (seal material EPDM)		F															
Media interface	With <sup>1)</sup>		1															
	Without <sup>2)</sup>		0															
Media adapter with ports I-III	With (seal material FKM)		1															
	With (seal material EPDM)		A															
	Without		0															
Port I	Metering pump with 4-liter container (EPDM)		2															
	Without		0															
Port II	Metering pump with 4-liter container (EPDM)		2															
	Without		0															
Port III	Metering pump with 4-liter container (EPDM)		2															
	Metering pump with 4-liter container (FKM)		B															
	Without		0															
Extra package, Aux 1 air purging	With		C															
	Without		N															
Extra package, Aux 2 external valve	With		E															
	Without		N															
Special version	Without															0	0	0
	With protective cabinet, non-Ex area															1	0	0
	With protective cabinet and heater, non-Ex area															2	0	0
	With protective cabinet, Ex area															3	0	0
	With protective cabinet and heater, Ex area															4	0	0

1) Interface for connecting retractable fittings from other manufacturers

2) For retractable fittings WA130, WA130H, WA132, WA150, WA153, WA154, WA155, or WA160

### Specifications (Excerpt)

Excerpt from the user manual. Detailed information → [www.knick-international.com](http://www.knick-international.com)

#### Ambient Conditions

Ambient temperature, operation <sup>3)</sup>	Non-Ex: 5...55 °C (41...131 °F) Ex: 5...50 °C (41...122 °F)
Ambient temperature, transport/storage	-20...70 °C (-4...158 °F)
Relative humidity	10...95 %, non-condensing

#### Compressed Air

Compressed air quality in accordance with ISO 8573-1	Quality class 5.3.3
Solid contaminants	5 (max. 40 µm, max. 10 mg/m <sup>3</sup> )
Water content for temperatures ≥ 15 °C (59 °F)	Class 4 <sup>4)</sup>
Water content for temperatures 5...15 °C (41...59 °F)	Class 3, pressure dew point -20 °C (-4 °F) or lower
Oil content	Class 3 (max. 1 mg/m <sup>3</sup> )
Permitted pressure range	4...10 bar (58...145 psi) <sup>5)</sup>
Retractable fitting operating pressure	4...7 bar (58...101.5 psi) <sup>5)</sup>
Pressure monitoring	Automatic monitoring, message
Compressed air connector	Female thread: G $\frac{1}{4}$ "
Air consumption	Max. 300 l/min when actuating the retractable fitting
Min. air temperature	5 °C (41 °F)

#### Rinse Water

Rinse water, filtered	100 µm
Permitted pressure range	2...6 bar (29...87 psi)
Temperature range	5...65 °C (41...149 °F)
Pressure monitoring	Automatic monitoring, message
Rinse water port	Female thread: G $\frac{1}{4}$ " Male thread: G $\frac{3}{4}$ "

#### Power Connection

Terminals 9...20: Auxiliary power (Ex ia IIC) <sup>6)</sup>	Fed via Protos module: 6.8 V (± 10 %)/15 mA via external auxiliary power source 15...30 V/20 mA
Connector <sup>7)</sup>	Terminals, connection cross-section max. 2.5 mm <sup>2</sup>

<sup>3)</sup> Other temperature ranges possible on request

<sup>4)</sup> For application temperatures > 15 °C (59 °F), a pressure dew point of max. 3 °C (37.5 °F) is permitted.

<sup>5)</sup> Increased minimum pressure 5 bar (72.5 psi) required for retractable fitting in case of high process pressure or difficult process media.

<sup>6)</sup> In hazardous locations, observe EU-Type Examination Certificate.

<sup>7)</sup> Pre-assembled cable to the industrial transmitter. Length 10 m

### Enclosure

Enclosure surface S	Stainless steel A2, polished
Enclosure surface C	Stainless steel A2, coated Color: gray
Mounting	Wall or pipe mounting
Enclosure dimensions (W × H × D)	Approx. 310 × 410 × 135 mm (12.2 × 16.1 × 5.31")
Protection rating	IP65/NEMA 4X
Cable gland	Cable glands, 6 pcs., M20×1.5 mm
Weight	Approx. 8.5 kg

### Standards and Directives

Explosion protection	See EU Type Examination Certificate and EU Declaration of Conformity
EMC	EN 61326
Lightning protection	EN 61000-4-5, installation class 2
Protection against electric shock	EN 61010