

**SPECIFICATIONS**  
**PARTICLE SENSOR**  
**KS-28B**



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# Outline

The KS-28B is a particle sensor designed to measure the number concentration of particles in liquids. By connecting it to the liquid-borne particle counter KE-28B, a particle number concentration measurement system can be configured which is capable of measuring particles with a diameter of 0.2  $\mu\text{m}$  and above, and 0.5  $\mu\text{m}$  and above. The sample fluid flow rate is 10 mL per minute.

The KS-28B features small and lightweight body. It can be set up also in the narrow place that conventional products cannot be set up.

Besides the above described standard configuration, a particle size change option and KL-11A connection option are also available.

Using the particle size change option, a measurement system for particles with a diameter of 0.2  $\mu\text{m}$  / 0.3  $\mu\text{m}$  and above, or for particles with a diameter of 0.3  $\mu\text{m}$  / 0.5  $\mu\text{m}$  and above can be configured, in conjunction with the liquid-borne particle counter KE-28B.

The KL-11A connection option allows configuration of a measurement system for six freely selectable particle size categories in the range from 0.2  $\mu\text{m}$  to 2  $\mu\text{m}$ , in conjunction with the particle counter KL-11A.

Since the KS-28B does not include a provision for adjusting the sample fluid, a flow controller, external pump, or similar must be used.

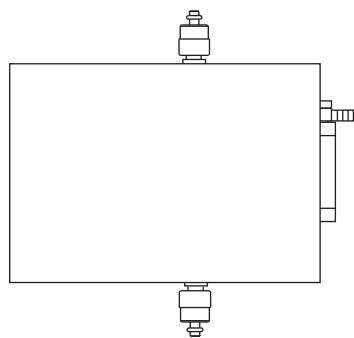
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# Specifications

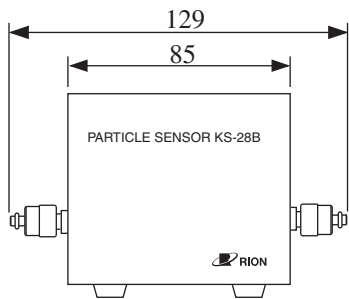
Suitable particle counter	
Standard / Particle size change option	Liquid-borne particle counter KE-28B
KL-11A connection option	Particle counter KL-11A
Optical system	Lateral light-scattering method
Light source	Laser diode (rated output 40 mW; wave length 780 nm)
Laser product class	Class 1, IEC 60825-1 (2014)
	Internal particle detection mechanism uses class 3B laser
Light detector	PIN type photodiode
Materials of parts exposed to sample fluid	Synthetic quartz, PTFE, PFA

Allowable sample fluid types	Fluids which do not corrode the fluid contact materials
Calibration	Polystyrene latex (PSL) spheres with refractive index 1.6 in pure water
Measurable particle size range	0.2 $\mu\text{m}$ to 2 $\mu\text{m}$ (with PSL particles of refractive index 1.6 in pure water)
Measurement size range	
Standard	Two channels ( $\geq 0.2 \mu\text{m}$ , $\geq 0.5 \mu\text{m}$ )
Particle size change option	
	Two channels ( $\geq 0.2 \mu\text{m}$ , $\geq 0.3 \mu\text{m}$ )
	Two channels ( $\geq 0.3 \mu\text{m}$ , $\geq 0.5 \mu\text{m}$ )
KL-11A connection option	
	Six channel (freely selectable categories in the range from 0.2 $\mu\text{m}$ to 2 $\mu\text{m}$ )
Sampling flow rate	10 mL / min
Maximum particle number concentration	1200 particles / mL (coincidence loss 5% for 0.2 $\mu\text{m}$ particles)
Sample fluid temperature range	+15°C to +35°C (no moisture condensation on flow cell)
Allowable sample fluid pressure	300 kPa or less (gauge pressure)
Warm-up time	10 minutes
Sample fluid ports	
INLET:	Sample fluid inlet, 2 mm $\times$ 4 mm dia. flared tube joint
OUTLET:	Sample fluid outlet, 2 mm $\times$ 4 mm dia. flared tube joint
PURGE:	Purge gas inlet, internal 4-mm diameter tube
Input / output connectors	
CONTROL:	
Standard / Particle size change option	
	For liquid-borne particle counter KE-28B connection
KL-11A connection option	
	For particle counter KL-11A connection
SIG 1, SIG 2 (KL-11A connection option only):	
	Particle signal output

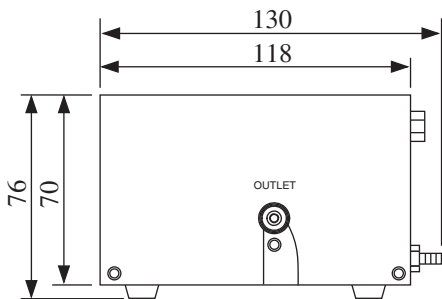
Power supply		
Standard / Particle size change option	Supplied via liquid-borne particle counter KE-28B	
KL-11A connection option	Supplied via particle counter KL-11A	
Ambient conditions for operation	+15°C to +35°C, less than 80% RH	
Ambient conditions for storage	-10°C to +50°C, less than 85% RH (no condensation and no freezing in internal piping)	
Dimensions	76 (H) mm × 129 (W) mm × 130 (D) mm (maximum) 70 (H) mm × 85 (W) mm × 118 (D) mm (excluding protruding parts)	
Weight	Approx. 600 g	
Supplied accessories (Standard / Particle size change option)		
	Tube A vacuum pack	1
	Connecting cable B	1
	Instruction manual	1
	Liquid-Borne Particle Counter Usage Precautions	1
	Inspection certificate	1
Supplied accessories (KL-11A connection option)		
	Tube A vacuum pack	1
	Connection cord B	1
	Analog signal cable 1	1
	Analog signal cable 2	1
	Calibration chart	1
	Instruction manual	1
	Liquid-Borne Particle Counter Usage Precautions	1
	Inspection certificate	1



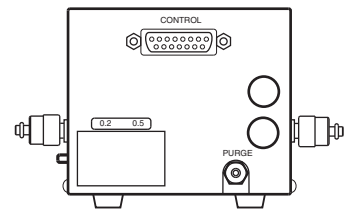
Top view



Front view



Side view



Rear view

Unit: mm

Dimensional Drawings

Specifications subject to change without notice