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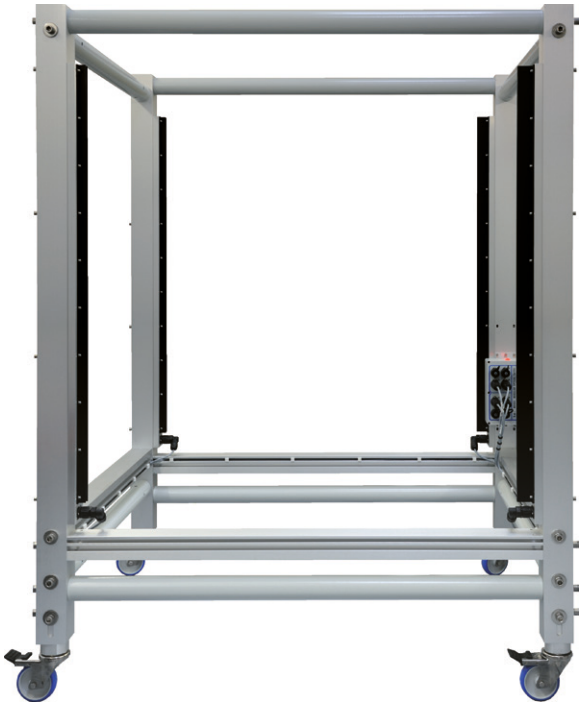
Light Screen

Type 2521A

For Velocity Measurement of Projectiles

Weatherproof optical system for highly accurate measurement of projectile velocities up to 3000 m/s. The light screen is suited to work in harsh outdoor conditions as well as indoor testing facilities.



- Analog outputs for transonic projectiles
- Highly accurate over a wide velocity range
- IP66 rating for outdoor use
- Closely integrated into KiDynamic software

Description

The Type 2521A operates with two optical light gates working in the infrared spectrum to detect the velocity of projectiles. The wavelength and the analog output allow the robust detection of subsonic, transonic, and supersonic projectiles with a single system.
Additionally, the analog output voltage is proportional to the shadow of the passing object allowing the detection of the projectile shape. Furthermore, even clouds of projectiles can be detected with the correct software processing.
For high velocity projectiles, fast signal conditioning and data acquisition is required, such as with Kistler transient recorder 2529A.

Application

The 2521A can be applied in a wide range of applications where projectiles at high velocity need to be measured. This includes:

- Testing of tooling such as nail guns
- EPVAT testing

Included Accessories

- none

Optional Accessories	Type/Art. No.
• Coaxial BNC – BNC cable	2519AZ100Asp

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Technical Data

Principle of measurement		2 high-speed optical gates
Caliber range	mm	4 ... 40
frameless	mm	<125
Velocity range	m/s	50 ... 3 000 [1]
Velocity inaccuracy 200 ... 1 500 m/s, 1 000 mm measuring base, projectile base trigger	%	<0,2
Reaction time typical	µs	1
Safe passage area (WxH)	mm	1 050x1 200
frameless		depends on design
Effective sensor area (WxH)	mm	1 000x1 000
frameless		depends on design
Measuring base	mm	1 000
frameless		depends on design
Dimensions WxHxD (approx.)	mm	1 350x1 850x1 100
Trigger modes	edge	rising/falling (=projectile nose/base)
Shock wave filter selectable software filter	µs	0 ... 1 000
Threshold level, selectable	%	–75 ... 75 of meas. range
Output signals START and STOP pulse according to projectile shadow	V	0 ... 10
Gain range, selectable		1, 2, 5, 10
Power supply	VDC W	10 ... 24 20
Operating temperature range	°C	–30 ... 45
Degree of protection		IP66
Air humidity (condensing or non-condensing)	%	100
Altitude (maximum)	m	3 000

[1] extended range on request

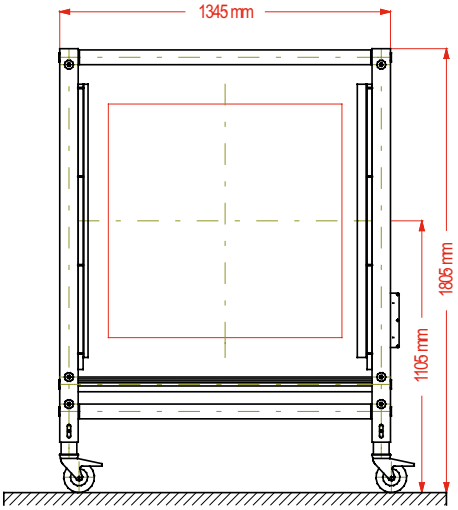

Fig. 1: Dimensions front

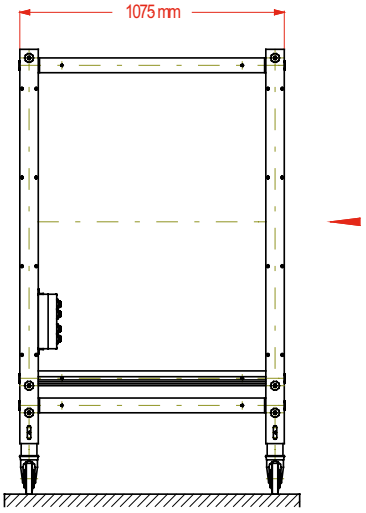

Fig. 2: Dimensions side

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