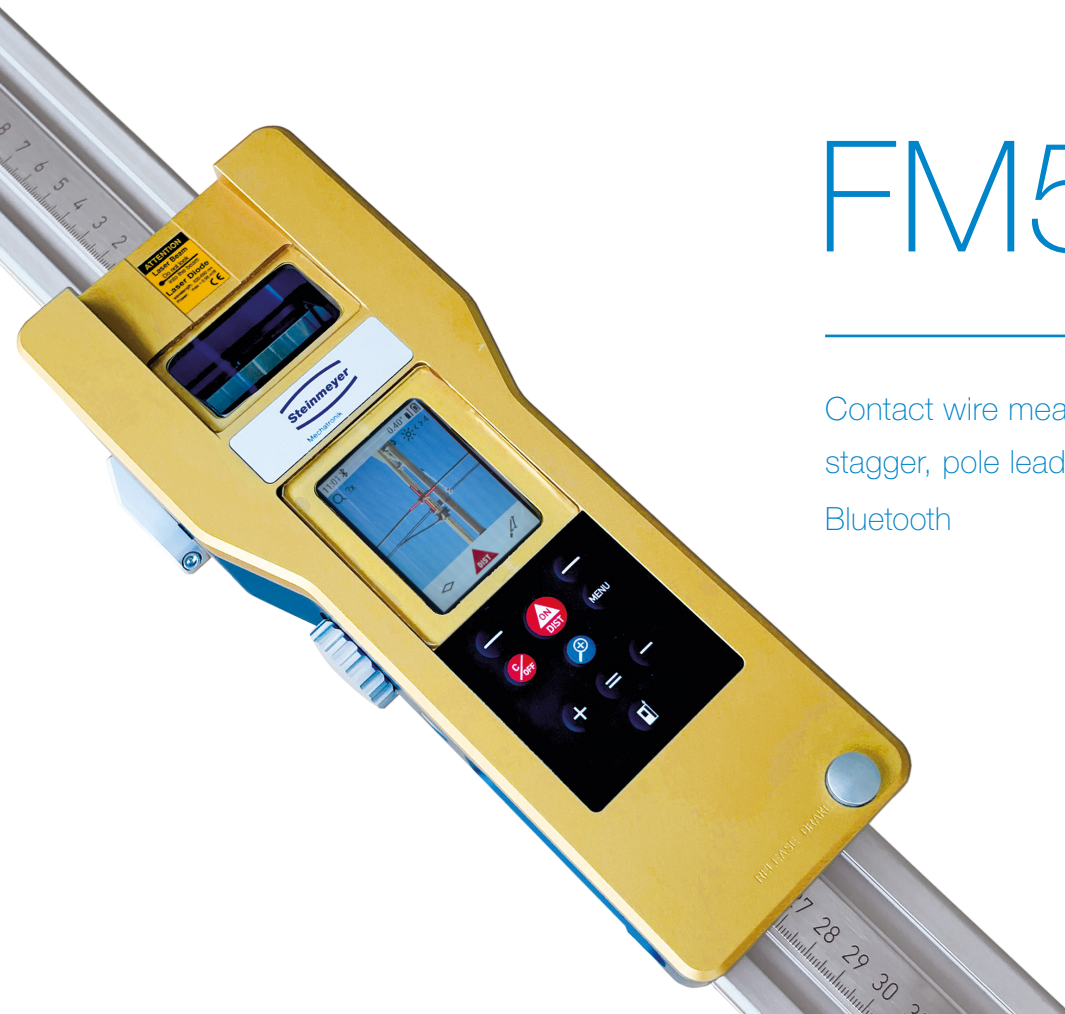




Mechatronik

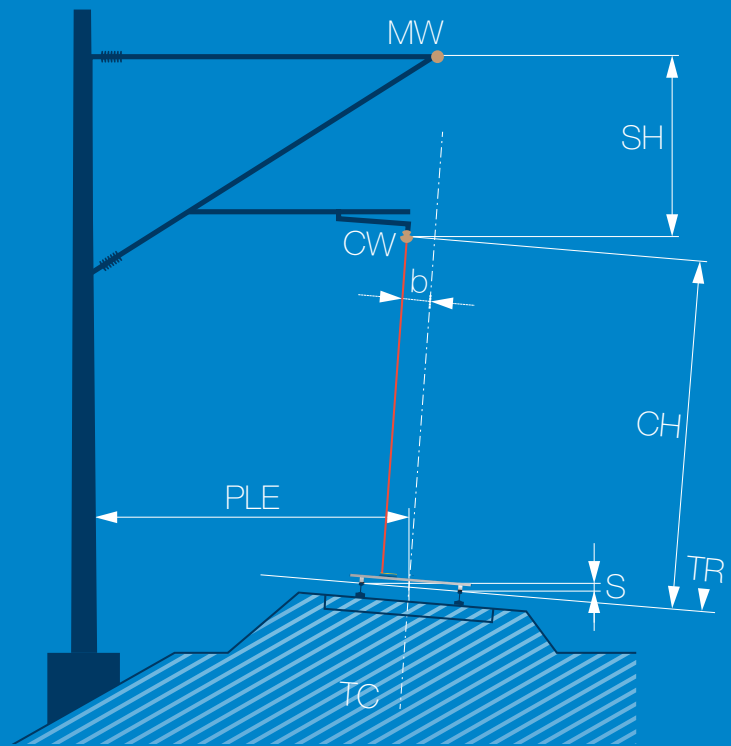


FM5-25

Contact wire measuring device for height,
stagger, pole leading edge and superelevation
Bluetooth

Measurements

CW	Contact wire
CH	Contact wire height
b	Contact wire stagger
MW	Messenger wire
SH	System height
PLE	Pole leading edge – track center
S	Superelevation
TC	Track centerline
TR	Top of the rail



Use in overhead lines for railway electrification

As a German manufacturer of precision equipment, we have been simplifying contact wire measurements in railroad technology for more than 50 years. Our contact wire measuring devices are suitable for the installation as well as for the maintenance of contact wires in heavy rail or light rail overhead contact lines.

Measurements are taken of the static rest position of the contact wire on electric railways, the contact wire height in relation to the top of the rail and the contact wire lateral position in relation to the track centerline. This makes the FM5-25 particularly suitable for route measurements for the planning, construction and inspection of catenary systems.

The construction site-compatible design allows the following measurements to be taken quickly and easily:

- Contact wire height and contact wire stagger (zig-zag)
- Suspension wire height and suspension wire stagger
- Distance between pole leading edge and track center
- Bridge and tunnel heights, heights of crossing power lines
- With accessories: superelevation (tilt/angle)

Versatile

Install and maintain overhead contact lines (OCL)

Measure contact wire position
Check compliance with tolerances

Global use on all tracks/gauge widths
in local and long-distance transport

Optional accessories

LED lighting device for measurements in the dark

Laser glasses for better visibility of the laser point

Carrying bag for separable measuring bars

Power charger and charging adapter for more comfort

Measuring bars for worldwide track gauges from 750 to 1676 mm

Additional mechanical measuring system for superelevation

Laser beam reflector for digital detection of contact wire lateral position (stagger / zig zag)

FMcapture software for measurement recording, data transfer and storage



Use and Features

FM5-25

The FM5-25 is used in combination with a gauge-specific measuring rail. This is placed across the track with the insulating stop against a track rail.

Position the catenary measuring device, which is guided in the profile grooves of the measuring rail, on the target point on the contact wire with the aid of the camera image and the laser beam, allowing measurements to be carried out quickly, easily and in any weather conditions.



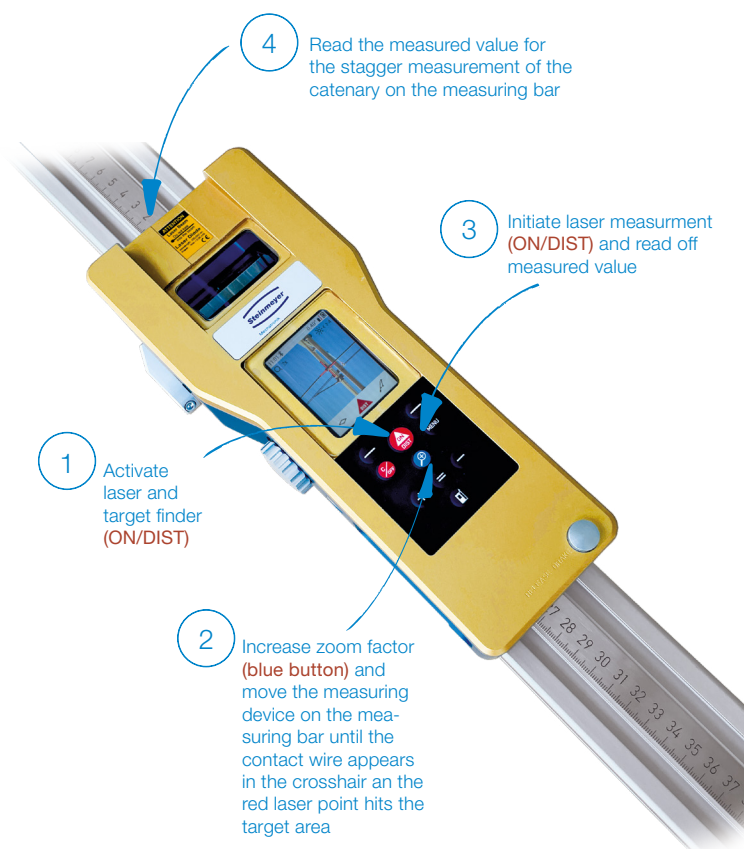
High-precision laser measurement with up to 1 mm measuring accuracy



Easy targeting of the contact wire by the camera display (4x zoom)



Bluetooth and the FMcapture application software (installed on a Windows tablet PC/notebook) enable fast data acquisition, transfer, and storage



Data sheet FM5-25

Specifications		Basic	Standard	Capture
Contact wire measuring device FM5-25				
Measuring range				
Contact wire height (laser)	up to 200 m (666 ft)	x	x	x
Contact wire stagger	± 700 mm (27.5 in)	x	x	x
Tilt measurement range	± 360°	x	x	x
Measuring accuracy				
Contact wire height (laser/system)	± 1 mm (1/16 in) / ± 5 mm (1/5 in)	x	x	x
Contact wire stagger (scale/system)	1 mm (1/16 in) / ± 5 mm (1/5 in)	x	x	x
Horizontal distance measurement pole leading edge – track center (laser/system)	± 1 mm (1/16 in) / ± 5 mm (1/5 in)	x	x	x
Tilt measurement for track superelevation	± 0.2°	x	x	x
Laser/display				
Laser class (according to IEC60825-1)	2	x	x	x
Laser power/wavelength	< 1 mW / 635 nm	x	x	x
Direction laser beam	vertical / horizontal	x	x	x
Illuminated color display	2.4 in	x	x	x
Operating modes	single / continuous measurement	x	x	x
Operating time (number of measurements)	up to 5000 / up to 10 h	x	x	x
Temperature range operation/storage	-10 ... +50 / -25 ... +70°C	x	x	x
Automatic power switch off (laser)	90 s	x	x	x
Automatic power switch off (display)	3 / 5 / 10 min	x	x	x
Display unit (optional units)	0.000m (0.00ft/0.00in/0'00"1/32)	x	x	x
Power supply				
Rechargeable Li-ionen batteries	3.7 V / 2000 mAh	x	x	x
USB charger incl. 4 diverse plug adapters	100 - 240 V (AC)	x	x	x
Dimensions				
Dimensions/weight	268 x 95 x 60 mm / 2 kg	x	x	x
Protection class (DIN EN 60529)	IP65	x	x	x
Measuring bar				
		not separable	separable	separable
Adjusted to track gauge (further track gauges possible)	1435 mm (4' 8.5")	x	x	x
Measuring range	± 700 mm (27.5 in)	x	x	x
Scale value	1 mm (1/16 in)	x	x	x
Dimensions/weight	184 x 20 x 16 cm	4.7 kg	5.1 kg	5.1 kg
Accessories				
Aluminum transport case	54 x 16 x 25 cm / 3.3 kg	x	x	x
Laser beam reflector		-	-	x
USB car charger adapter	12/24 V (DC)	-	x	x
Laser glasses		-	x	x
LED lighting device		-	x	x
Carrying bag for separable measuring bar	105 x 28 x 18 cm	-	x	x
Data interface/data storage				
Bluetooth 5.0	range up to 10m (32ft)	x	x	x
Software FMcapture (MS Windows 11)	CSV, TXT, XLSX	-	-	x
Shipping package				
Dimensions		197x37x37 cm	110x37x37 cm	110x37x37 cm
Weight		15kg	18 kg	18 kg

Further accessories and measuring bars for diverse track gauges can be found online at: www.steinmeyer-railway.com