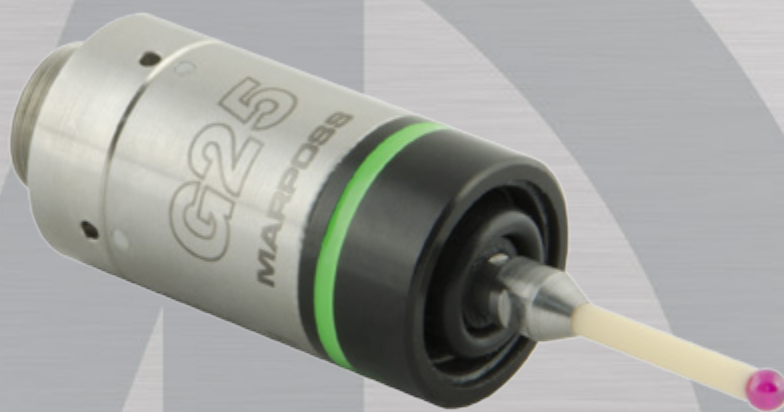


G25

***PROBE FOR CONTACT SCANNING
ON GRINDING MACHINES FOR GEARS
AND MACHINING CENTRES***



MARPOSS

System description

For over 60 years Marposs has been the global standard for precision gauging on grinding machines.

The combination of technical know-how in on machine gauging and touch technology has produced the G25 probe, able to do both part surface scanning and touch for part positioning and measurement.

The G25's strong points include compact size, measurement stability at high speeds, allowing for highly reduced cycle times when compared to old point-by-point scanning methods.

The product was developed in order to gauge parts on machines while still fixtured in case rework is required.

The application is composed by a G25 probe and a P32 interface. This system can perform the dual function of:

- part surface form scanning using an analog voltage output to the machine control
- touch probe function to be used for part positioning and dimensional measurement

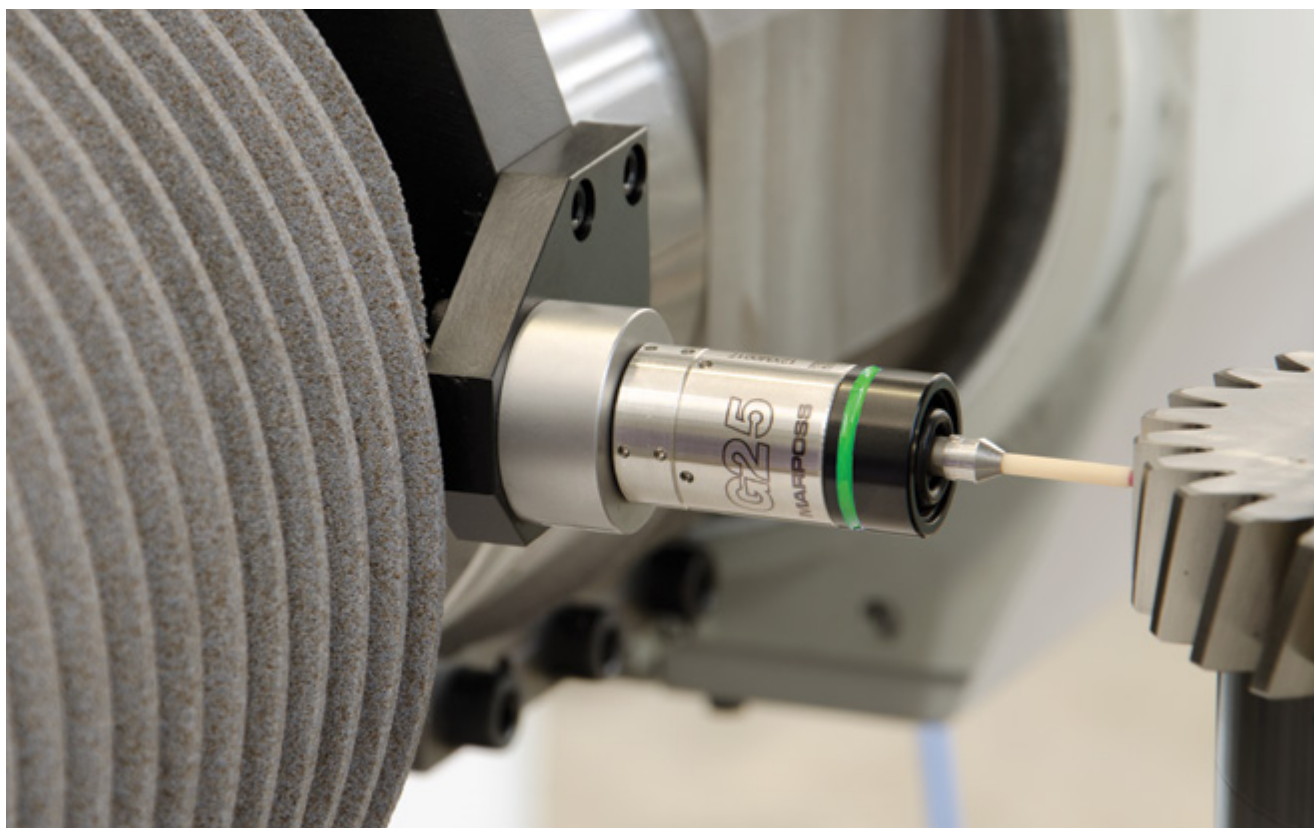
A digital version is also available. This is composed of a G25 probe directly connected to a PC via USB2. Using this layout removes the requirement for the analog to digital conversion in the machine control, because signal is already digitized.

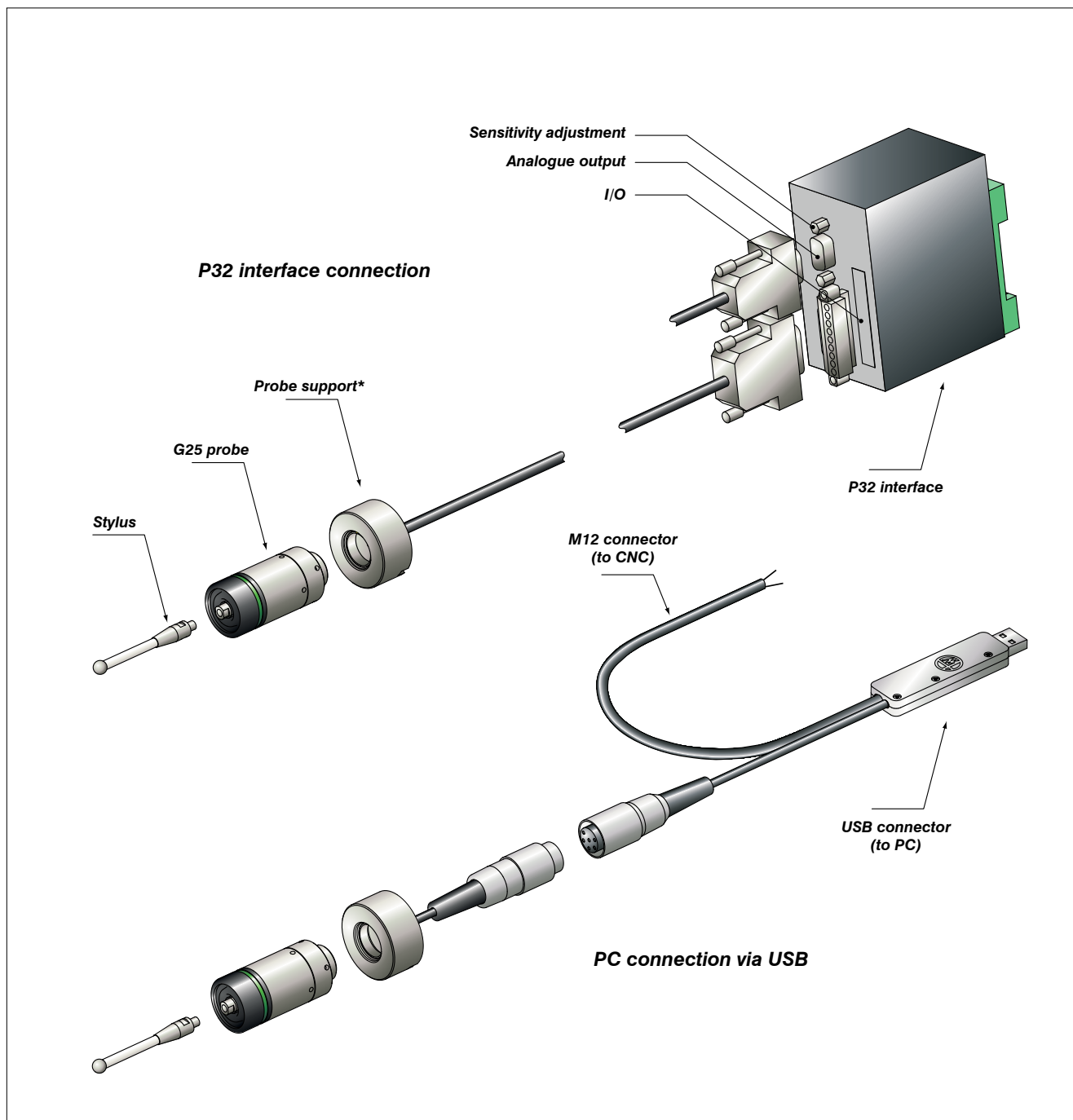
Main features

- compact size
- high level of accuracy
- high touch speed
- high scanning speed
- scanning and touch function in all directions
(with restrictions along Z axis)

Advantages

- scanning and touch function with a single probe
- part check and positioning inside the machine
- gear class certification
- cycle time reduction





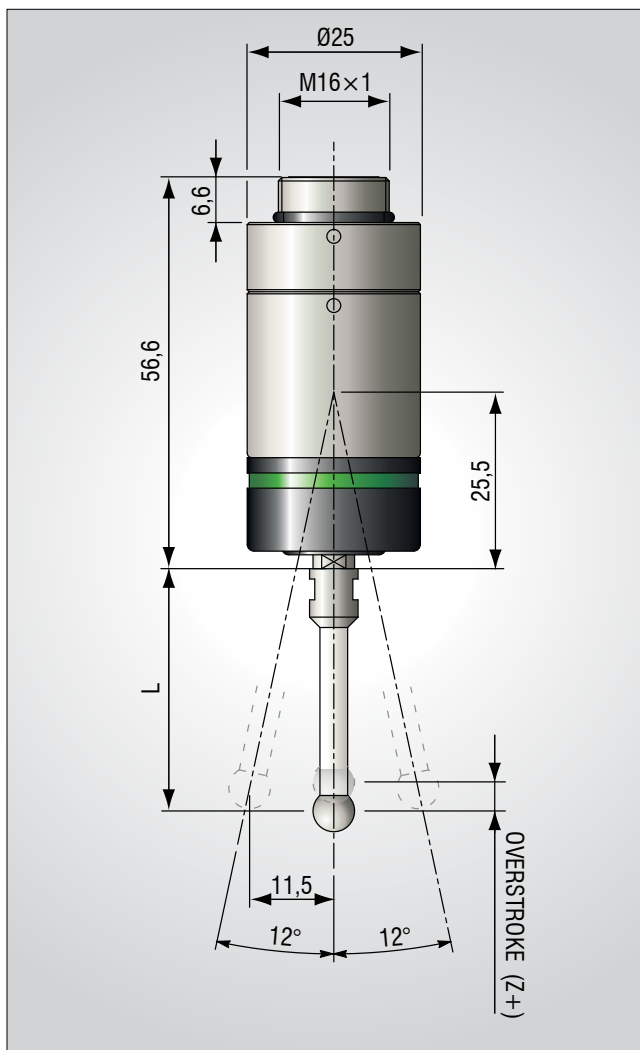
(*) = in addition to the standard supports, integration is possible on gauging arms purpose-designed and made for any type of application

G25 probe can be used with different types of styli in order to fit the application specifications. In addition to the vast range of styli available on Marposs catalogue, custom styli can be designed and produced where required.



G25 probe

Touch and scanning in a single product: this is the G25, the ideal solution for many gauging and positioning applications on machine tools. It can supply a part touch skip signal. Inside its measuring range it supplies a signal proportional to the movement of the stylus on the part, allowing it to be scanned.

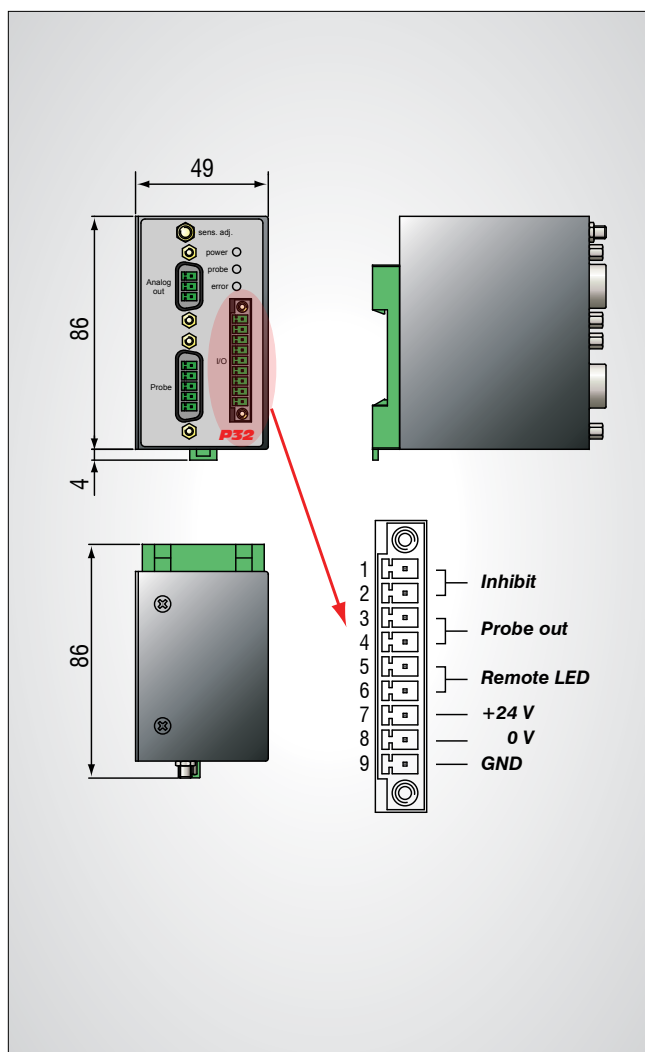


PROBE AXES	$\pm X, \pm Y, \pm Z^*$	
UNIDIRECTIONAL REPEATABILITY (2σ)**	0,4 μm	
TRIGGERING FORCE	0,9 N <i>XY plane</i>	5,5 N <i>Z direction</i>
OVERSTROKE	12° <i>XY plane</i>	3,9 mm <i>Z direction</i>
PROTECTION DEGREE <i>(IEC 60529 Standard)</i>	IP67	

(*): Scan in Z-direction with offset stylus only
 (**): Features refer to a stylus with L = 35 mm

P32 interface

The P32 interface provides an analog output and a touch signal. The sensitivity of the analog output can be adjusted using a trimmer on the front panel. There are 3 LED indicator lamps, green, yellow and red, indicating connected and powered, touch and alarm respectively. It is possible to have a remotely mounted touch signal LED connected through the P32 I/O.



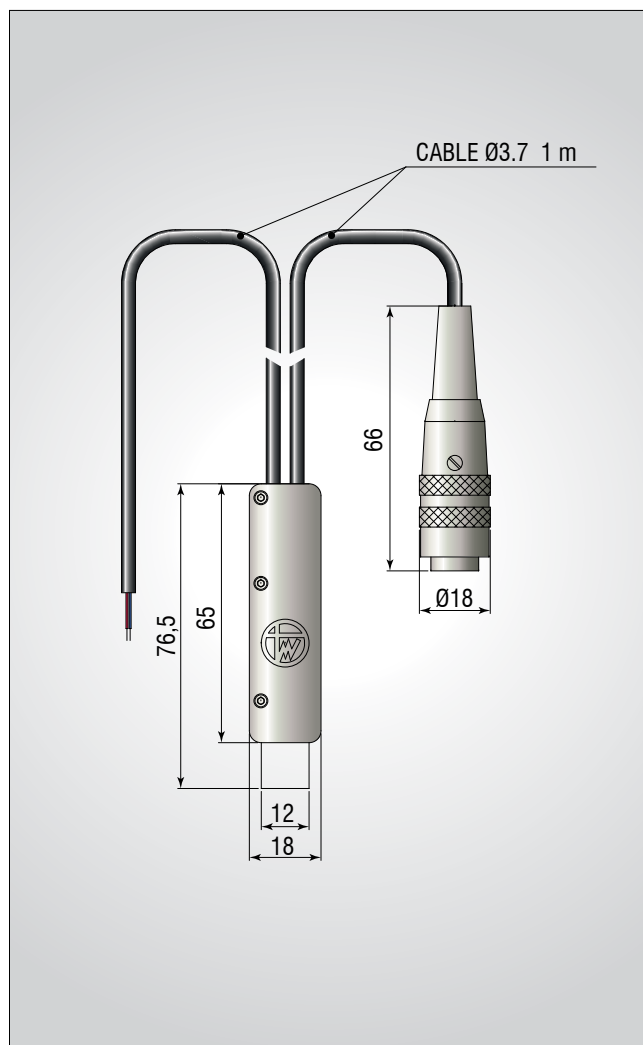
POWER SUPPLY	24 Vdc unregulated
CURRENT DRAW	100 mA max
OUTPUT SIGNALS	Solid state relay (SSR) max. ± 50 V max. ± 40 mA
EXTERNAL LED	Nominal current 10 mA
PROTECTION DEGREE (IEC 60529)	IP20

Digital interface

The G25 Digital Interface application features a USB interface capable of supplying an external device with a skip signal after a pre-set threshold value has been reached, as well as acquiring and processing the measurement signal.

The digital interface consists of:

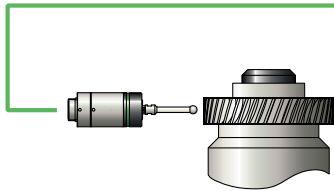
- A) A connector for the G25 measurement probe
- B) USB connector for connection to a terminal
- C) Switch for generating the Skip signal via a pre-set threshold value.



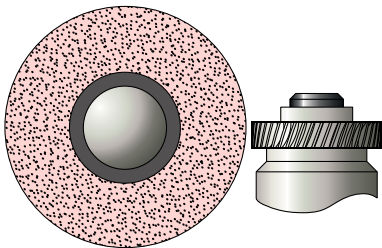
POWER SUPPLY	4,40 ÷ 5,25 Vdc provides by USB Bus
ABSORPTION	<100 mA when active <1 mA in stand-by
DIGITAL INTERFACE USB	USB 2.0 full (12Mbit/sec) Low power function Communication device class (CDC) Protocol Connessione seriale con Baudrate 9600 – Data 8 bit – Parity none – Stop 1 bit – Flow control none
SAMPLING AND A/D CONVERSION	A.C. sampling at average value synchronized with power supply. Fast sampling: 1,07 ms (delay time of digital measure) Possibility to have meaning value in a programmable period (20 to 160 ms)
SOLID STATE RELAY FOR SKIP SIGNAL	120 mA max (protected against extra current). Max 30 V on the switch
DIAGNOSTIC	Transducer connection (and on primary winding and on secondary) Short circuit on primary winding Overcurrent on solid state relay
PROTECTION RATING	IP 40
OPERATING TEMPERATURE	5 - 60 °C

Gear grinding application

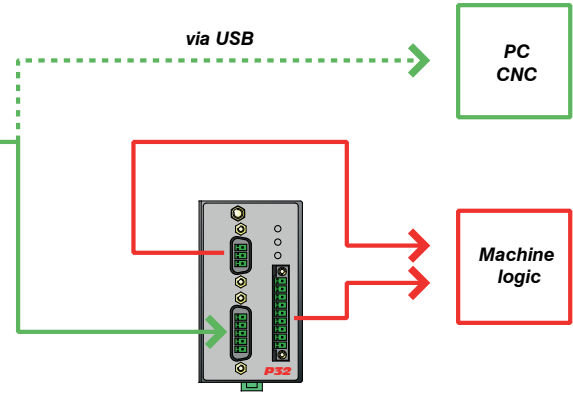
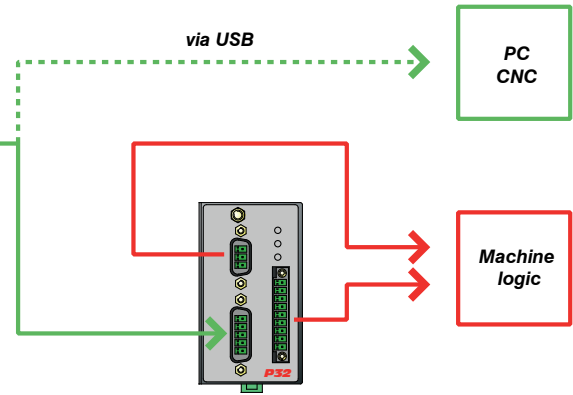
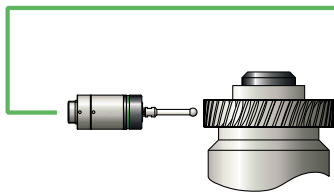
1. Calibration and positioning (touch)



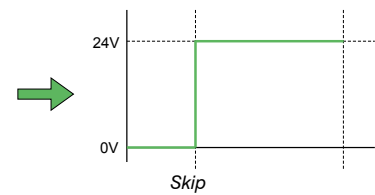
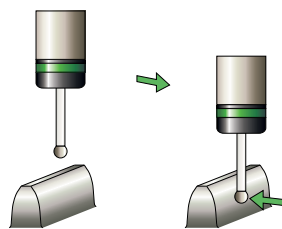
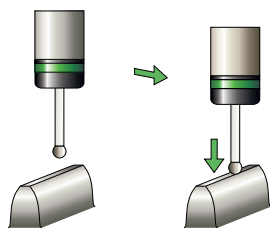
2. Grinding



3. Part check (touch and scanning)

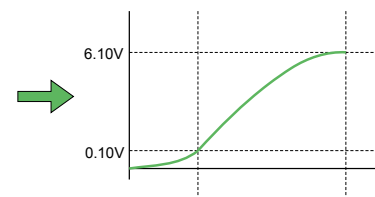
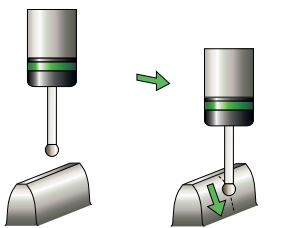
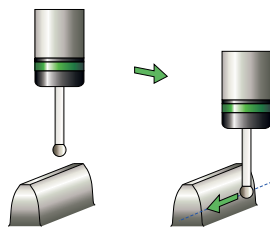


Touch

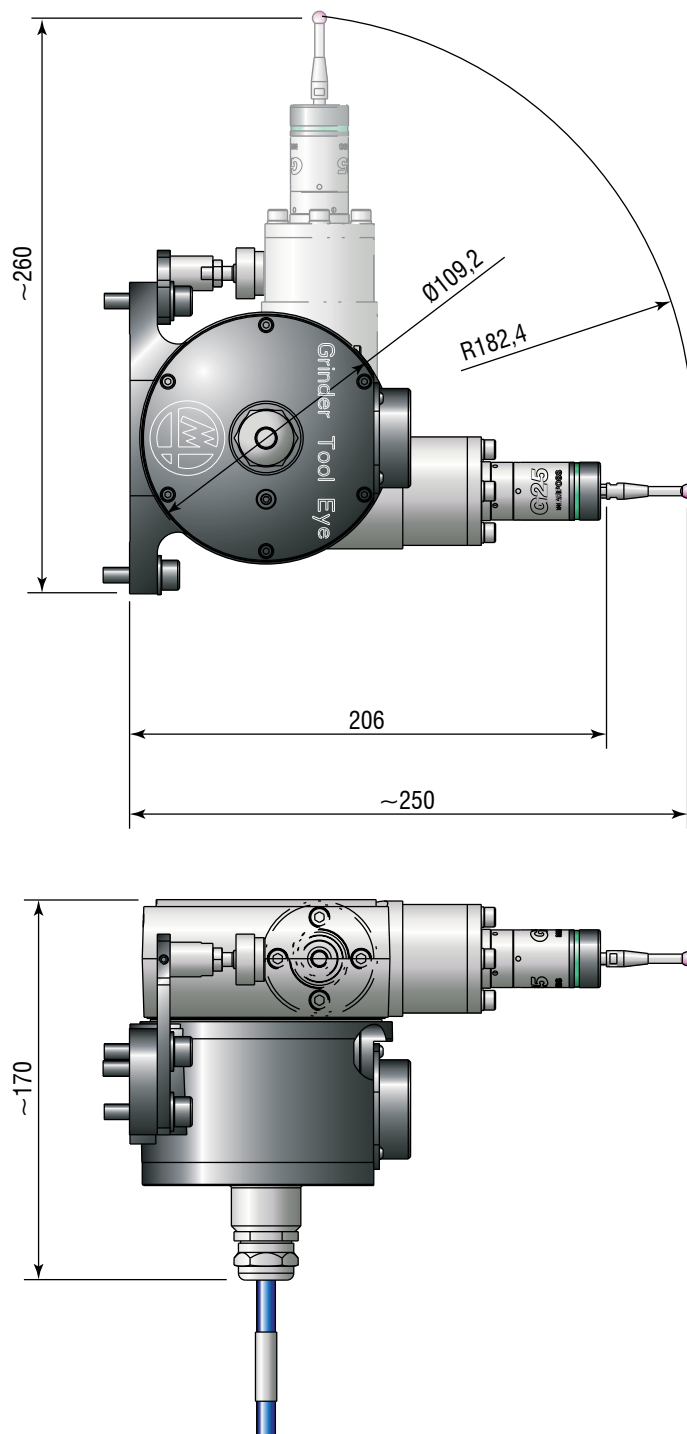


Touch and scan signals with P32 interface

Scanning



Application example



www.marposs.com

For a full list of address locations, please consult the Marposs official website

D6104100G0 - Edition 01/2016 - Specifications are subject to modifications
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