



InSystems
automation



www.proANT.de

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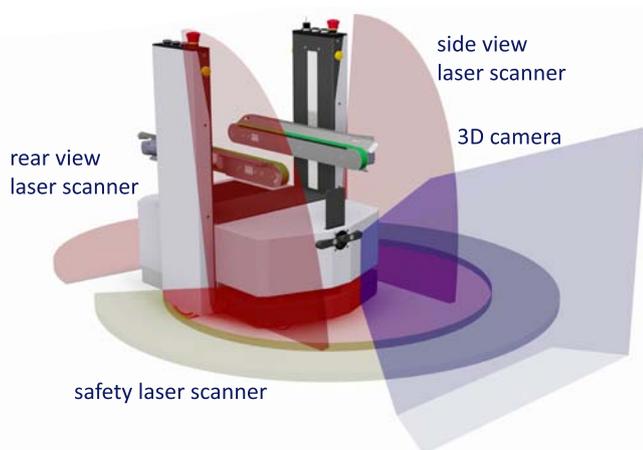
Automatic Navigating Transport Vehicle

proANT transport robot with lifting function for SLC

InSystems developed a new proANT with a lifting function for SLC (small load carrier) which can be delivered with either of three types of load handling devices. The lifting usually allows infinitely adjustable hand-over heights between 410 and 750 mm, but can be modified by customer request. Thus, transport robots can realize different hand-over heights and can drive faster due to the center of mass lying optimally with a lowered load handling.

Safety

proANTs autonomously plan the optimal transport route whilst constantly scanning their environment in the direction of travel with a security laser. If they detect a person or an obstacle, they avoid them independently. Moreover, a 3D camera can be integrated to control the space above with security laser scanner. Two more laser scanners at both sites and one at the back of the vehicle - encircling security field.



Load handling and Loadports

There are three types of load handling available for transport of KLT containers with a ground area of 600 x 400 mm.

- passive load handling with skids (left)
- active load handling with belt conveyor (center)
- active load handling with small belt conveyor (right)

The belt conveyor allows the transport of additional containers and small-sized boxes.



Transfer of load can be realized with every conveyance technique. Depending on load handling and demand very different active and passive transfer stations can be designed for example simple Pick & Drop Stations at work stations.



Technical Data

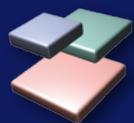
| proANT | |
|--------------------------|---------------------------------------------------------------------------|
| Dimensions (LxBxH): | 740 x 622 x 895 mm |
| Laser scanner: | S300 von SICK (personal safety) |
| Load | up to 50 kg |
| Load handling: | 3 standard designs for SLC 600x400 mm; or customized for load and product |
| Height of load transfer: | 410-750 mm with automatical lifting |
| Drive: | Electric motor, 2 wheels differential drive and 2 free spinning wheels |
| Speed: | 1.5 m/s |
| Turning circle: | 0 mm (turns on the spot) |
| Positioning accuracy: | 1°, +/- 10 mm |
| Battery: | 8 cells LiFeYPO4 with balancing board and temperature monitoring, 24 V DC |

proANT transport robots

InSystems Automation engineers and manufactures customized autonomous guided vehicles (AGV) for intralogistic transportation purposes according to loads, transport routes and handling heights are unique to each and every production site. Usually these AGVs are able to transport and manage loads of 20 to 200 kg, but up to 1000 kg are manageable.

The proANT AGVs navigate autonomously. They individually find their path, avoid obstacles and calculate alternative routes to reach their goal in the shortest time possible. To avoid jams or system halts, the proANT AGVs communicate among each other and manage their traffic via WLAN. A fleet manager controls battery conditions of AGVs and lets them return to the charging station if necessary. Due to a modern battery technology the charging process can be realized in a few minutes. Certified security functions enable the robot to identify humans and enter into a safe halt, even if someone suddenly steps into their path.

More proANT information on www.proant.de



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InSystems Automation GmbH
Rudower Chaussee 29
Showroom Industry 4.0
Rudower-Chaussee 9

12489 Berlin, Germany
Phone +49 30 6392 2510
E-Mail info@insystems.de
www.insystems.de