

TRAFFIC CLASSIFIER

LLP-24

LLP-24 is an intelligent measurement module designed for comprehensive road traffic monitoring and supporting the operation of traffic management systems.

LLP-24 ensures compliance with architecture of the National Traffic Management System in terms of modules 114.A, 114.B and 104.B.

LLP-24 enables real-time reporting of traffic parameters, their aggregation and analysis for the purposes of event detection.

LLP-24 runs under the control of Linux operating system, allowing for unification of data exchange with traffic management centre, using any compatible communication protocols.

LLP-24 ensures continuous traffic measurement in all environmental conditions.

The built-in OLED display allows LLP-24 for quick evaluation of device's operation.



TECHNICAL DATA

Communication interface	10Base-T/100Base-TX Ethernet
Communication protocols	Modbus-TCP, Moher, MQTT, JSON, other implementations possible
Inputs/Outputs	2x analog/digital inputs, 2z digital open dren outputs
Processor	Cortex-A5 (450MHz, 128MB RAM)
Data safety	ARM TrustZone® cryptography
Operational system	Linux Buildroot (Debian based)
Management	HTTP, SSH, SFTP, SNMP
Local service	configuration buttons, OLED display embedded
Power supply	12 - 29 VDC
Energy consumption	max 2,5 W
Working temperature	-40 ... +80 st. C.
Ingress protection	IP30
Dimensions (width x height x depth)	108 x 90 x 60 mm
Weight	260 g
Assembly	35 mm DIN rail



FEATURES

Number of traffic lanes	1
Measuring sensors	2x induction loop or 2x piezo sensor + 1x induction loop
Classification schemes	2+1 (E2), 8+1 (A1/A2)
Aggregation intervals	<ul style="list-style-type: none"> ✓ fixed: 5, 6, 10, 15, 20, 30 or 60 min. ✓ follow-up: 1, 2, 3, 4, 5, 6 or 10 min.
Individual data	<ul style="list-style-type: none"> ✓ date and time of car passage, ✓ traffic direction, ✓ speed, ✓ substitute of electrical length, ✓ occupancy, ✓ time gap, ✓ traffic category, ✓ vehicle class.
Statistical data for traffic lane and traffic direction	<ul style="list-style-type: none"> ✓ traffic volume broken down by vehicle categories, ✓ traffic volume broken down by traffic categories, ✓ average and maximum speed broken down by light and heavy vehicles, ✓ traffic volume in speed ranges broken down by traffic categories, ✓ number of vehicles exceeding the speed limits broken down by vehicle category, ✓ traffic density, ✓ occupancy.
Events detection	<ul style="list-style-type: none"> ✓ vehicle travelling in opposite direction, ✓ vehicle stopped in traffic lane, ✓ vehicle driving too fast, ✓ vehicle driving too slow.

The modular architecture of the traffic measurement stations based on LLP-24 modules allows for flexible site configuration, adjusting the number of modules used to the quantity of traffic lanes.

The functionality of LLP-24 allows for collection and processing of data from all traffic lanes in the same direction, thanks to which the LLP-24 is capable of aggregating data from the entire cross-section of carriageway. This allows for flexible nomination of the selected LLP-24 to perform the function of Master unit, responsible for communication with central system and in the event of a failure of such device - taking over this function by another LLP-24 module.

LLP-24 has been optimized for energy consumption. Low power consumption of the device does not limit its functionality, while allowing the use of alternative energy sources.

LLP-24 ensures effective communication with central system using various communication protocols, including direct communication with data bus of the National Traffic Management System.

Telway Sp. z o.o. is the manufacturer and exclusive distributor of the LLP-24 modules.

