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Automotive | Hybrid & EV

Automotive Electric and Electronic Trainer



Automotive Electric and Electronic Trainer

A modern vehicle is characterised by its high degree of electrification. This means that most open and closed-loop control processes are carried out using electro-mechanical systems. These systems, as well as all those designed to enhance driver comfort and drivability, require a stable and fail-safe power supply to ensure the finest quality of driving, leading to utmost comfort for drivers.

Lucas-Nülle training systems for automotive technology offer trainees the outstanding opportunity to learn about the various aspects of how on-board vehicle networks are supplied with electrical power at an authentic practical level. They also get a vivid and detailed look at how the lighting systems work and how they can subsequently be enhanced.

Lighting Trainer



Lighting Trainer

Hardly any other design element is as distinctive to a vehicle as its headlights. New shapes and light sources are continually emerging. Nevertheless, they all have one thing in common. They need electricity and have to be connected to the on-board network. Learn the difference between conventional wiring and a lighting system using a CAN bus. Control of rear lights by means of pulse-width modulation is also explained in great detail.

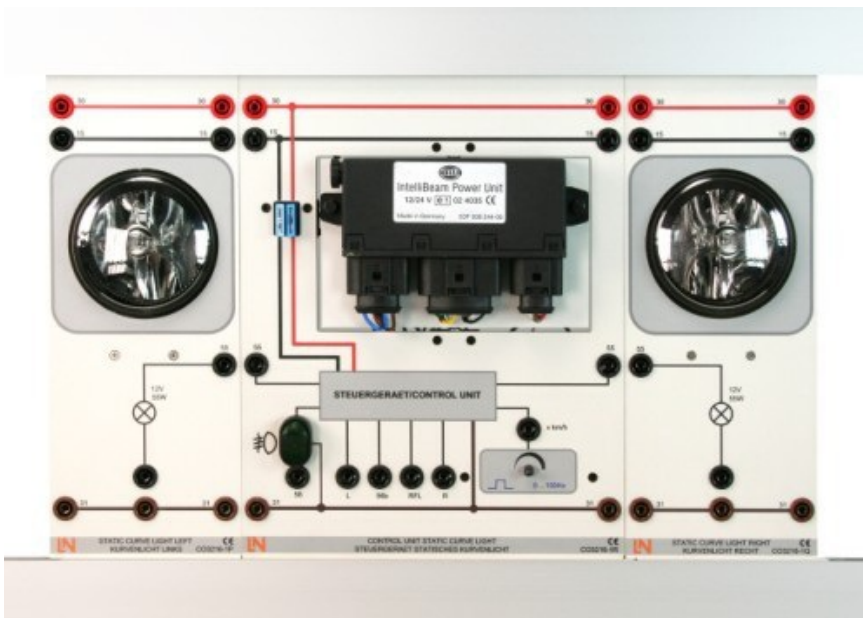
Training Panel Systems



Training Panel Systems

Please choose your product:

ALC 1.4 Static Cornering Light Trainer



ALC 1.4 Static Cornering Light Trainer

This system helps instructors to impart know-how in all topics involving auxiliary headlights and signalling systems – the latter being obligatory in every vehicle and thus enjoying special consideration in training programs. What is of interest here is that control of these components can differ depending on the vehicle. For that reason instructors can only profit from a system that allows them to become familiar with various versions of these right there in the classroom.

Supplement to basic set, consisting of:

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Pos.	Product name	Bestell-Nr.	Anz.
1	Cornering light with yaw-rate sensor, control unit + fog lamps	CO3216-1R	1

The pivot-mounted control unit ensures that, with dipped headlights activated, the turning light comes on without delay upon activation of the indicators or automatic activation by cornering at up to 40 km/h. The right-hand or left-hand auxiliary headlight is turned on as needed. A fog lamp function can be activated separately if necessary. Each headlight can be used as a turning light or as a fog lamp.

Technical data for control unit

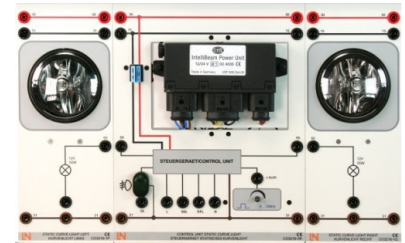
- Operating voltage: 12V
- Components:

Yaw-rate sensor for determining the cornering acceleration
Extra switch for fog lamp function
Continuous vehicle speed signal

- Input for dipped headlights
- Input for parking lights
- Inputs for right- and left-hand indicators
- Pivot-mounting for control unit
- Calibration capacity
- Inputs/outputs: 4mm sockets
- Dimensions: 297 x 228 x 60mm
- Weight: 1.2kg

Technical data for headlights

- Operating voltage: 12V
- Fog lamps: 55 W/H7
- Asymmetric bulb layout
- Partial reflection of scattered light
- Fog lamp certification as per ECE rule 19
- Cornering light certification as per ECE rule 119
- Fog lamp certification as per SAE for the USA
- Cornering light certification as per SAE for the USA
- Clear glass design
- Inputs/outputs: 4mm sockets
- Dimensions: 297 x 114 x 150mm
- Weight: 1.2kg



Media:



Pos.	Product name	Bestell-Nr.	Anz.
2	Manual ALC 1.4, Static cornering lights	SH5005-10	1

High-quality, bound, colour teachers' manual with rigid spine, including solutions. CD-ROM with additional students' manual, including exercises and worksheets.

Details:

- Theoretical background
- Colour CAD drawings for experiment set-ups and circuits
- Exercises and worksheets
- Printed on high-quality 100-g/m² colour copy paper, book cover on 210-g/m² glossy paper



Training contents:

- Illustration of a complete lighting system layout
- Configuration and start-up
- Project assignment: Functional test
- Terminal designations according to DIN (German Industrial Standard) 72552
- Project assignment: Terminal designation
- Description of the system and its functions
- Fog lamp functions
- Cornering light functions
- Yaw rate sensor
- Basic legislation, part 1
- ECE country codes
- Basic legislation, part 2
- Static cornering light installation instructions
- Instructions for fitting electrical connections
- Saving speed signals
- Project assignment 1: Retrofitting a static cornering light

- Auxiliary headlights
- Installation instructions
- Circuit diagram
- Project assignment 2
- Headlight adjustment
- Headlight adjustment: Practical exercise
- Project assignment 3
- Project assignment 4
- Project assignment 5
- Project assignment 6
- Project assignment 7
- Project assignment 8
- Project assignment 9
- Project assignment 10