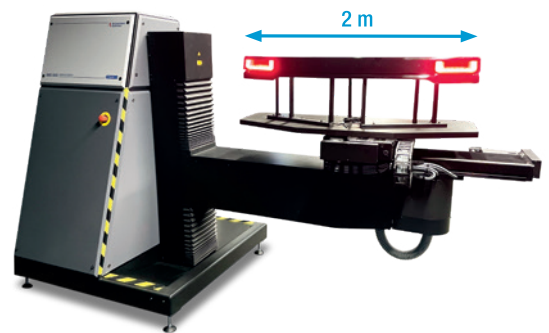


AMS 6000 / AMS 7000

Goniophotometers for wide rear & front lighting modules and headlamps

Key features at a glance

- ▲ Custom-designed Type A goniophotometer
- ▲ Fast, robust, and precise positioning, also for headlamps
- ▲ Automated set-up mode and sequential measuring procedures
- ▲ Conforms to GTB and SAE J1330 standards



Introducing a new dimension in goniophotometry for automotive lamps: our custom-designed Type A goniophotometer is engineered to handle extremely large lamps, including edge-to-edge designs, with testing capabilities at extreme left and right positions. The system offers fast, robust, and precise positioning, suitable for headlamps as well. The device features an automated set-up mode and sequential measuring procedures, providing graphical outputs of light distributions and data export options in IES, KRS, and CSV formats. It meets GTB and SAE J1330 photometry precision requirements for type testing of vehicle lights.

\ \ TECHNICAL SPECIFICATIONS

Model	AMS 6000 Goniophotometer	AMS 7000 Goniophotometer
CIE / IES goniometer type	Type A in accordance with IES LM-75-01 and CIE 121-1996	Type A in accordance with IES LM-75-01 and CIE 121-1996
Height	1768 mm	1768 mm
Length	2650 mm (for middle position of the sample table)	3400 mm (for middle position of the sample table)
Width	1250 mm (without laser scanner) 1530 mm (with laser scanners)	1250 mm (without laser scanner) 1530 mm (with laser scanners)
Clear width	1000 mm (distance of rotation center H-axis to swivel arm V-axis)	1450 mm (distance of rotation center H-axis to swivel arm V-axis)
Maximum sample expansion	Approx. 1950 mm with central mounting of the DUT	Approx. 2850 mm with central mounting of the DUT (max. sample size for functions to be tested at the extreme edge of each side approx. 1600 mm)
Nominal sample weight	50 kg	50 kg
Maximum sample weight	80 kg	80 kg
Weight (without control cabinet)	Approx. 1300 kg	Approx. 1400 kg
Optical axis height	1500 mm	1500 mm
Height adjustability	±25 mm via adjustable feet	±25 mm via adjustable feet
Action and safety area	4300 mm x 4800 mm	4750 mm x 4800 mm
Minimum room height	2950 mm	2950 mm
H-rotation / resolution	±200° with limit switches with 0.01° resolution	±200° with limit switches with 0.01° resolution
H-axis speed	3°/s to 50°/s (16 speeds)	3°/s to 50°/s (16 speeds)
V-rotation / resolution	±100° with limit switches with 0.01° resolution	±100° with limit switches with 0.01° resolution
V-axis speed	0.6°/s to 10°/s (16 speeds)	0.6°/s to 10°/s (16 speeds)
H-axis reproducibility	≤ 0.05° (below standard weight) (type < 0.02°)	≤ 0.05° (below standard weight) (type < 0.02°)
V-axis reproducibility	≤ 0.05° (below standard weight) (type < 0.02°)	≤ 0.05° (below standard weight) (type < 0.02°)

\\ TECHNICAL SPECIFICATIONS

Model	AMS 6000 Goniophotometer	AMS 7000 Goniophotometer
X-axis / resolution	±400 mm, 0.1 mm resolution	±700 mm, 0.1 mm resolution
X-axis speed	125 mm/s	125 mm/s
Y-axis / resolution	±200 mm with 0.1 mm resolution	±200 mm with 0.1 mm resolution
Y-axis speed	166 mm/s	166 mm/s
Z-axis / resolution	-50 to -650 mm with 0.1 mm resolution	-50 to -650 mm with 0.1 mm resolution
Z-axis speed	18 mm/s	18 mm/s
H-/V-/X-/Y-/Z-axes drive	Synchronous servo motors	
H, V, X, Y, Z	Digital position controller, motorized movability of all goniometer axes. PC control of all axes via LightCon PC program, AMS controller and GC 100 remote control.	
Machine safety	Emergency stop button on both sides of goniometer, on sample stage and AMS controller; separate safety controller for enabling the machine. Optional safety devices with 2 laser scanners, light fence, w pressure-sensitive mats.	
Electrical connection	Lamp multiplexer configured for low voltage with 10 channels / 10 sensor lines for max. 50 V, max. 20 A	
Additional connections on the sample table	Sub-D output, freely assignable with CAN or LIN bus for integration of ADB, AFS, matrix beam functions, CAN bus for optional temperature measurement, LED module, optional PWM signal generator (or customized according to customer specification)	
AMS controller		
Functions	Control of the goniometer drives, display of angle positions, display of photometric measurement value in lx, cd, cd/m ² for the use of DSP 200 photometers (up to 8)	
Interfaces	RS232-C for the connection of a PC, CAN bus for integration with DSP 200 photometer, SNT 10 power supply	
Power supply	230 V, 50 Hz (optional 115 VAC), power consumption 120 W	
Dimension (HxWxD); weight	133 x 482 x 370 plus 130 mm for rear connections; approx. 7 kg	
Safety controller		
Functions	Main switch for goniometer power supply, start button for releasing drives, emergency stop button, switching of operating modes	
Connections	CAN bus for goniometer and AMS controller. Goniometer power supply, 15-pin Sub-D for emergency stop, 25-pin Sub-D for safety, 2 power sockets	
Power supply	230 V, 50 Hz (optional 115 VAC), max. power consumption 3 kW	
Dimension (HxWxD); weight	133 x 482 x 370 plus 130 mm for rear connections; approx. 7 kg	
Control cabinet		
Functions	19" control cabinet, 33 HE for AMS controller, safety controller, SNT 10 power supplies, CM 10 colorimeter; RMS 1200 retro remote display and other devices; integrated 9x3-pin shockproof plug strip	
Dimension (HxWxD); weight	Approx. 1700 x 550 x 600 mm; from approx. 60 kg to 98 kg (fully-equipped)	
Standard conformity		
Product safety	RL 2006/42/EC, DIN ISO 12100, RL 2006/95/EC, DIN EN 61010-1	
EMC	RL 2004/108/EC, DIN EN 61326-1	
Photometry	EN 13032-1, DIN 5032-7, CE 3874 (2005) GTB Photometry Accuracy Guidelines, SAE J1330	

\\ ORDERING INFORMATION

Order number	Description
AMS6000-100	Five-axis goniometer, CIE Type A, with angle measurement system and control cabinet, 33 height units with laser adjustment and lamp multiplexer with 4+4+2 channels, including GC100 remote control unit with touchscreen on the sample stage
AMS7000-100	Five-axis goniometer, CIE Type A, with angle measurement system and control cabinet, 33 height units with laser adjustment and lamp multiplexer with 4+4+2 channels, including GC100 remote control unit with touchscreen on the sample stage
AMS5000-300	Optional 115 VAC power supply for AMS 5000/6000/7000
AMS5000-400	Safety pressure-sensitive mats for AMS 5000/6000/7000
AMS5000-402	Safety light barrier around the danger area for AMS 5000/6000/7000
AMS5000-404	2 safety laser scanners for AMS 5000/6000/7000
AMS-210	Relay option: 2 switching contacts for control of laboratory light and warning lights, etc., switching capacity 230 VAC / 6 A respectively
AMS-220	Audible warning signal during movement of the goniometer
AMS-310	Device for the support of license plate dummies and license plate illumination
AMS-311	License plate dummies for measurement in accordance with ECE-R4 (3 pcs., Type A, B, C)
AMS-312	License plate dummies for measurement in accordance with SAE-J587 (2 pcs., type 01, 02)
AMS-313	License plate dummies for measurement for Chinese GB standard (5 pcs.)
AMS-314	License plate dummy for measurement in accordance with Brazilian standard (1 pc.)
AMS-320	USH 30 universal headlights and lamp holders
AMS-330	Clamp set (adjustable) for slotted table 8 (2 pcs.)
AMS-341	Integrated PWM generator to set a PWM frequency and duty cycle (up to 3 channels can be operated simultaneously and 10 channels can be connected)
AMS-450	Vehicle test lamp for type testing of vehicle lamps in accordance with ECE regulations, report on luminous flux, and coil tolerance included
AMS-470	Rolling trolley for spectral radiometer
AMS-500	Motorized positioning unit for the automated positioning of 3 different photometer heads; optical axis 1400 mm, incl. position set
AMS-501	Motorized positioning unit for the automated positioning of 3 different photometer heads; optical axis 1500 mm, incl. position set
SW-600	AMS 3000/5000 LightCon software for Windows

An extensive additional accessory range is available for the AMS goniophotometer.



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