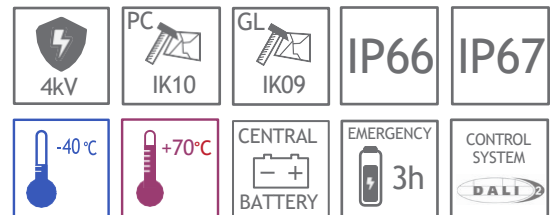


ES INS400LED





VERSION WITH PICTOGRAM
POWERED FROM
A CENTRAL BATTERY



CERTIFICATES:

CNBOP 5062/2023

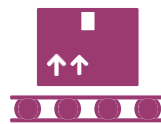
EXEMPLARY APPLICATIONS



INDUSTRY
BUILDINGS



WAREHOUSES



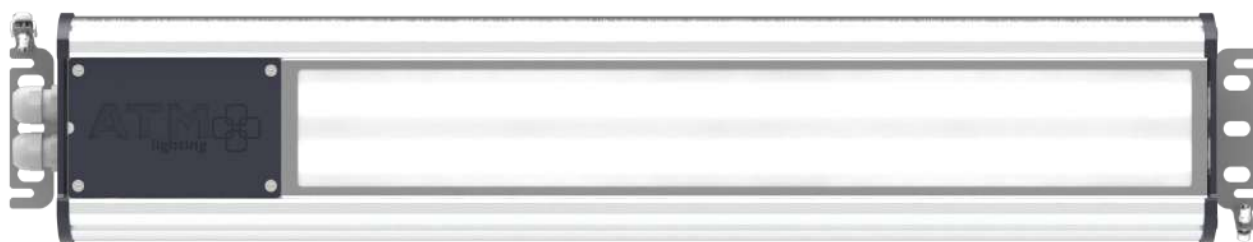
PRODUCTION
LINES










PASSAGEWAYS

Waterproof and dustproof industrial luminaires with LED modules. The housing is made of anodized aluminum, diffuser can be made of tempered glass, polycarbonate or PMMA. The endcaps and the revision flap are made of powder coated anodized aluminum.



Optional emergency version with a 3h supply module **A3S** or a version for operation with central battery **ZB**, version equipped with power supply with the DALI protocol is available as **DA**, version with constant lumen output as **CLO**, version controlled by Bluetooth **B**, and version equipped with motion and ambient light intensity sensor **SNS**.









MECHANICAL PARAMETERS

	housing	anodized aluminum (ALU)
	diffuser	tempered glass (GL), polycarbonate (PC), polymethyl methacrylate (PM)
	ingress protection	IP66 / IP67
	shock resistance	GL: IK09, PC: IK10
	protection class	I
	mounting	different mountings check: mountings
	accessories	mounting accessories



WORK PARAMETERS

	Ambient temperature	-40° C to +70° C check: types of comparison
	lifetime	>70.000h L ₈₀ B ₁₀ >100.000h L ₇₀ B ₁₀

ELECTRICAL PARAMETERS

	connection terminals	2,5 mm ² 4,0 mm ² - optional
	input voltage	35E: 220-240V 50-60Hz, 220-240V 0Hz, 34E: 220-240V 0Hz
	light source	certified LED modules
	power factor	>0,95
	cable inlets	Ø20 (wire Ø6-13mm) Ø25 - optional (wire Ø9-17mm)
	overvoltage protection	35E: 4kV (L-N), 4kV (L-PE), 34E: 1kV (L-N), 2kV (L-PE)

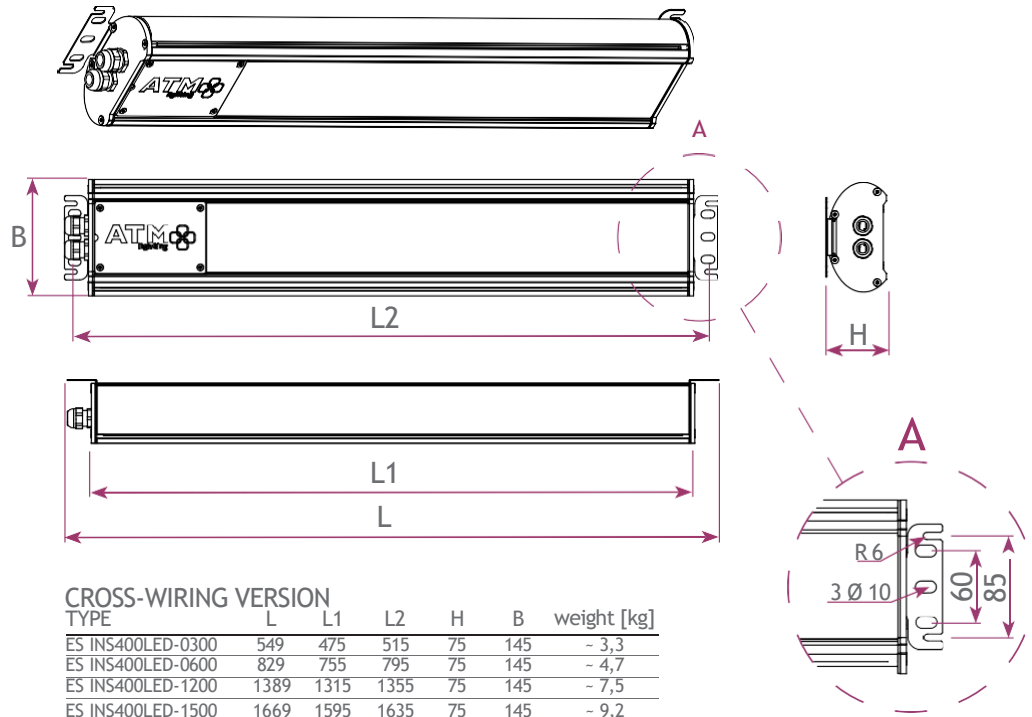
PHOTOMETRICAL PARAMETERS

	CRI	>80
	colour temperature	4000K 4500K - for C4 and C5 5000K - optional 6500K - optional



As a standard, the housing is equipped with a 20-gland system (two glands on one side of the housing). This housing can be used both as a terminal and a cross-type. The glands are equipped with sealing plugs, which should be left in place if the glands are not used.

DIMENSIONS



EMERGENCY A3 CROSS-WIRING VERSION

TYPE	L	L1	L2	H	B	weight [kg]
ES INS400LED-0300-...-A3S	599	525	565	75	145	- 3,8
ES INS400LED-0600-...-A3S	879	805	845	75	145	- 5,2
ES INS400LED-1200-...-A3S	1439	1365	1405	75	145	- 8,0
ES INS400LED-1500-...-A3S	1719	1645	1685	75	145	- 9,7

TYPES COMPARISON

Standard versions

TYPE OF THE FIXTURE	LUMINOUS FLUX [lm]	POWER CONSUMPTION [W]	EFFICIENCY [lm/W]	AMB. TEMP. [°C]
ES INS400LED-0300-A1-1	616	5,8	106	-25°C to +60°C
ES INS400LED-0300-A1-2	898	7,4	121	-25°C to +60°C
ES INS400LED-0300-A1-3	1091	8,9	123	-25°C to +60°C
ES INS400LED-0300-A1-4	1286	10,0	129	-25°C to +60°C
ES INS400LED-0600-B2-1	2289	16,2	141	-40°C to +70°C
ES INS400LED-0600-B2-2	3359	22,7	148	-40°C to +65°C
ES INS400LED-0600-B2-3	4104	27,8	148	-40°C to +60°C
ES INS400LED-0600-B2-4	4837	31,6	153	-40°C to +55°C
ES INS400LED-1200-B4-1	4624	29,5	157	-40°C to +70°C
ES INS400LED-1200-B4-2	6778	42,5	159	-40°C to +65°C
ES INS400LED-1200-B4-3	8273	52,7	147	-40°C to +60°C
ES INS400LED-1200-B4-4	9751	61,7	158	-40°C to +55°C
ES INS400LED-1500-B4A2-1	5793	36,1	160	-40°C to +70°C
ES INS400LED-1500-B4A2-2	8604	53,7	160	-40°C to +65°C
ES INS400LED-1500-B4A2-3	10353	65,0	159	-40°C to +60°C
ES INS400LED-1500-B4A2-4	12202	77,5	157	-40°C to +55°C

Narrow beam optics (NB)

TYPE OF THE FIXTURE	LUMINOUS FLUX [lm]	POWER CONSUMPTION [W]	EFFICIENCY [lm/W]	AMB. TEMP. [°C]
ES INS400LED-0300-A1-1	617	5,8	106	-25°C to +60°C
ES INS400LED-0300-A1-2	900	7,4	122	-25°C to +60°C
ES INS400LED-0300-A1-3	1093	8,9	123	-25°C to +60°C
ES INS400LED-0300-A1-4	1288	10,0	129	-25°C to +60°C
ES INS400LED-0600-B2-1	2339	16,2	144	-40°C to +70°C
ES INS400LED-0600-B2-2	3431	22,7	151	-40°C to +65°C
ES INS400LED-0600-B2-3	4193	27,8	151	-40°C to +60°C
ES INS400LED-0600-B2-4	4942	31,6	156	-40°C to +55°C
ES INS400LED-1200-B4-1	4692	29,5	159	-40°C to +70°C
ES INS400LED-1200-B4-2	6877	42,5	162	-40°C to +65°C
ES INS400LED-1200-B4-3	8394	52,7	159	-40°C to +60°C
ES INS400LED-1200-B4-4	9893	61,7	160	-40°C to +55°C
ES INS400LED-1500-B4A2-1	5594	36,1	155	-40°C to +70°C
ES INS400LED-1500-B4A2-2	8308	53,7	155	-40°C to +65°C
ES INS400LED-1500-B4A2-3	9997	65,0	154	-40°C to +60°C
ES INS400LED-1500-B4A2-4	11782	77,5	152	-40°C to +55°C

TYPES COMPARISON

Asymmetrical optics (ASY)

TYPE OF THE FIXTURE	LUMINOUS FLUX [lm]	POWER CONSUMPTION [W]	EFFICIENCY [lm/W]	AMB. TEMP. [°C]
ES INS400LED-0300-A1-1	592	5,8	102	-25°C to +60°C
ES INS400LED-0300-A1-2	864	7,4	117	-25°C to +60°C
ES INS400LED-0300-A1-3	1049	8,9	118	-25°C to +60°C
ES INS400LED-0300-A1-4	1236	10,0	124	-25°C to +60°C
ES INS400LED-0600-B2-1	2242	16,2	138	-40°C to +70°C
ES INS400LED-0600-B2-2	3289	22,7	145	-40°C to +65°C
ES INS400LED-0600-B2-3	4019	27,8	145	-40°C to +60°C
ES INS400LED-0600-B2-4	4737	31,6	150	-40°C to +55°C
ES INS400LED-1200-B4-1	4578	29,5	155	-40°C to +70°C
ES INS400LED-1200-B4-2	6710	42,5	158	-40°C to +65°C
ES INS400LED-1200-B4-3	8190	52,7	155	-40°C to +60°C
ES INS400LED-1200-B4-4	9653	61,7	156	-40°C to +55°C
ES INS400LED-1500-B4A2-1	5696	36,1	158	-40°C to +70°C
ES INS400LED-1500-B4A2-2	8459	53,7	158	-40°C to +65°C
ES INS400LED-1500-B4A2-3	10179	65,0	157	-40°C to +60°C
ES INS400LED-1500-B4A2-4	11997	77,5	155	-40°C to +55°C

Encapsulated LED modules (C4 i C5)

TYPE OF THE FIXTURE	LUMINOUS FLUX [lm]	POWER CONSUMPTION [W]	EFFICIENCY [lm/W]	AMB. TEMP. [°C]
ES INS400LED-0300-A1-1	512	5,8	88	-25°C to +60°C
ES INS400LED-0300-A1-2	747	7,4	100	-25°C to +60°C
ES INS400LED-0300-A1-3	907	8,9	102	-25°C to +60°C
ES INS400LED-0300-A1-4	1069	10,0	107	-25°C to +60°C
ES INS400LED-0600-B2-1	1938	16,2	120	-40°C to +70°C
ES INS400LED-0600-B2-2	2844	22,7	125	-40°C to +65°C
ES INS400LED-0600-B2-3	3475	27,8	125	-40°C to +60°C
ES INS400LED-0600-B2-4	4096	31,6	130	-40°C to +55°C
ES INS400LED-1200-B4-1	3958	29,5	134	-40°C to +70°C
ES INS400LED-1200-B4-2	5801	42,5	137	-40°C to +65°C
ES INS400LED-1200-B4-3	7081	52,7	134	-40°C to +60°C
ES INS400LED-1200-B4-4	8346	61,7	135	-40°C to +55°C
ES INS400LED-1500-B4A2-1	4925	36,1	136	-40°C to +70°C
ES INS400LED-1500-B4A2-2	7314	53,7	136	-40°C to +65°C
ES INS400LED-1500-B4A2-3	8801	65,0	135	-40°C to +60°C
ES INS400LED-1500-B4A2-4	10373	77,5	134	-40°C to +55°C



Luminous flux tolerance +/- 10%

Power tolerance +/- 10%

The parameters given in the following data sheet has been determined for the temperature $T_a=25^{\circ}\text{C}$.

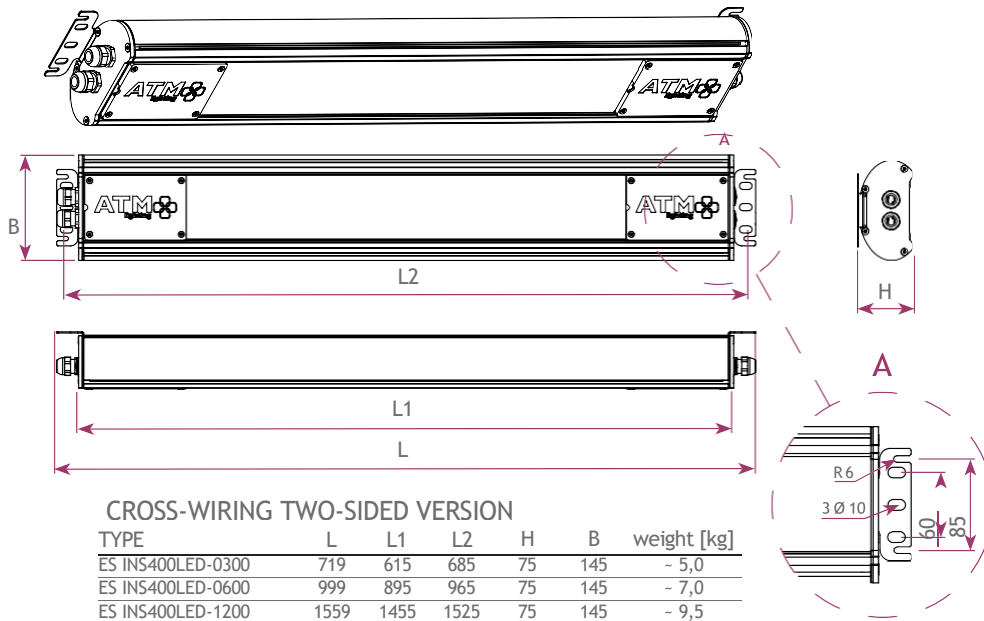
Luminous flux, light intensity distribution and efficiency have been tested based on the standards EN ISO 17025:2018-02, norm series EN13032 and LM-79.

MAXIMAL NUMBER OF LUMINAIRES IN ONE LINE

MAXIMUM NUMBER OF LINE CONNECTED LUMINAIRES DEPENDING ON THE CIRCUIT BREAKERS USED

LIGHT FITTING	B16	C16
ES INS400LED	32	53

TWO-SIDED VERSION



CROSS-WIRING TWO-SIDED VERSION

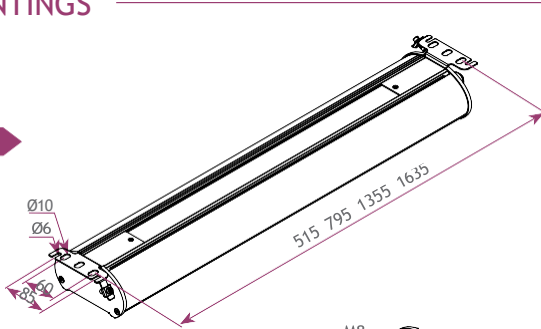
TYPE	L	L1	L2	H	B	weight [kg]
ES INS400LED-0300	719	615	685	75	145	- 5,0
ES INS400LED-0600	999	895	965	75	145	- 7,0
ES INS400LED-1200	1559	1455	1525	75	145	- 9,5
ES INS400LED-1500	1839	1735	1805	75	145	- 11,0

EMERGENCY A3 TWO-SIDED VERSION

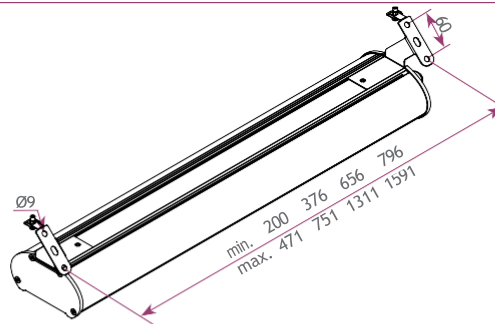
TYPE	L	L1	L2	H	B	weight [kg]
ES INS400LED-0300...-A3S	789	685	755	75	145	- 6,0
ES INS400LED-0600...-A3S	1069	965	1035	75	145	- 7,0
ES INS400LED-1200...-A3S	1629	1525	1595	75	145	- 10,0
ES INS400LED-1500...-A3S	1909	1805	1875	75	145	- 12,0

MOUNTINGS

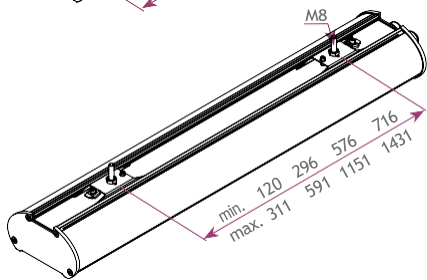
standard
AMOA



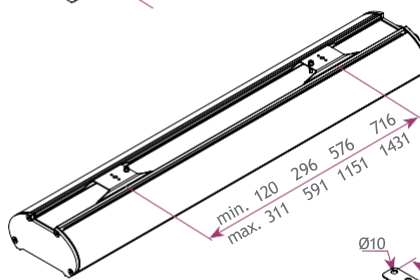
AMOB



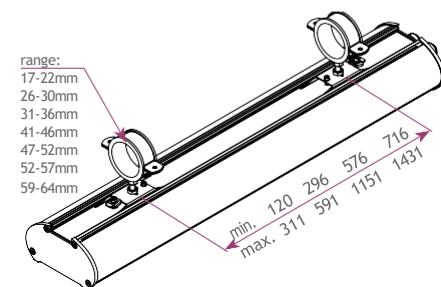
AMOC



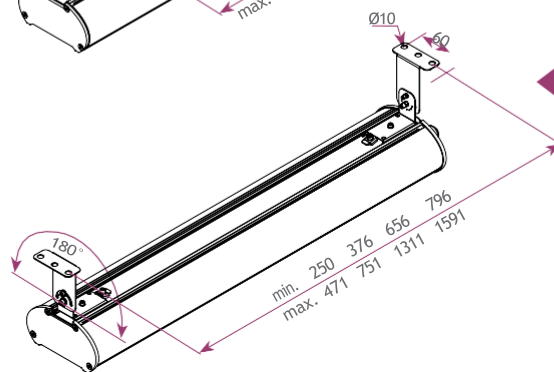
AMOD



AMOE



AMOF



All dimensions are given for single-sided non-emergency luminaires for sizes: 0300, 0600, 1200, 1500. Mounting dimensions for other variants can be found in the instruction manual.

VERSION WITH A PICTOGRAM



Pictogram dimensions: 320x85mm [LxB]

Version with a pictogram is available only for type A1
- with one LED module.

In the case of the version with an emergency power supply module (A3S), an indicator LED is visible.

The luminaire is equipped with a set of self-adhesive pictograms:



It is possible to make a pictogram to special order.

EMERGENCY VERSIONS

 3h	Emergency power module: 34E	Version with 3h emergency module. Operation in an environment with a temperature range -20°C* to +45°C. The battery can only be charged at temperatures above -10°C.	A3S
 ZB	Central battery version: 35E	Version with a driver for central battery without switching module. Operating range - see type summary table on page 5. Power supply 176-280V, 0Hz.	ZB
 ZBT	Central battery version: 35E	Central battery version with TM Technologie TM-AM module. Operating temperature from -15°C to +45°C.	ZBT
 ZBC	Central battery version: 35E	Central battery version with CEAG V-CG-S 4-400W module. Operating temperature from -20°C to +45°C.	ZBC
 ZBD	Central battery version: 35E	Central battery version with CEAG V-CG-SE 4-400W module. Operating temperature from -20°C to +45°C.	ZBD
 ZBR	Central battery version: 35E	Central battery version with RP Technik MU05 module. Operating temperature from -20°C to +45°C.	ZBR
 ZBS	Central battery version: 35E	Central battery version with ES System MSU 35 module. Operating temperature ranges from -5°C to +45°C.	ZBS
 ZBH	Central battery version: 35E	Central battery version with Hybrid MAPS-01 module. Operating temperatures range from -35°C to +45°C.	ZBH
 ZBM	Central battery version: 35E	Central battery version with Michałowscy LMP-1 module. Operating temperature from -20°C to +45°C.	ZBM

MEAN EMERGENCY LUMINOUS FLUX

TYPE	⚡ 34E	⚡ 35E
	VERSION A3S [lm]	VERSION ZB [lm]
ES INS400LED-0300-A1-1	749	616*
ES INS400LED-0300-A1-2	716	864*
ES INS400LED-0300-A1-3	705	1091*
ES INS400LED-0300-A1-4	696	1286*
ES INS400LED-0600-B2-1	894	1145
ES INS400LED-0600-B2-2	863	1680
ES INS400LED-0600-B2-3	853	2052
ES INS400LED-0600-B2-4	842	2418
ES INS400LED-1200-B4-1	904	2312
ES INS400LED-1200-B4-2	869	3390
ES INS400LED-1200-B4-3	860	4137
ES INS400LED-1200-B4-4	850	4875
ES INS400LED-1500-B4A2-1	904	2897
ES INS400LED-1500-B4A2-2	883	4301
ES INS400LED-1500-B4A2-3	862	5177
ES INS400LED-1500-B4A2-4	851	6101



All values given for standard optics.

* - For LED modules type A1, the emergency luminous flux equals the nominal value.

OPTIONAL VERSIONS



DALI-2:

Integrated power supply unit with DALI-2 interface.

DA

Optionally, the luminaire can be equipped with an integrated power supply with a DALI-2 interface, which allows monitoring the operation of the luminaires and controlling the lighting using data directly from motion sensors or from the building management system (BIM). A properly configured lighting control system can significantly reduce electricity costs and improve the ergonomics of users' work. For temperatures below -30°C, DALI functionality may be limited. Power supply on the terminal > 12V.



Bluetooth:

Bluetooth 4.0 module.

BT

CLO

Constant Lumen Output:

Constant luminous flux of the luminaire throughout the entire service life.

CLO

An additional function that allows for maintaining a constant luminous flux (Constant Lumen Output) throughout the life of the luminaire. Thanks to the constant luminous flux, the luminaire not only provides stable lighting, but also saves energy and extends the life of the LEDs.



Sensor:

Motion and light level sensor adjustable manually on the module.

SNS



Sensor:

Motion and light level sensor adjustable wireless through a mobile app.

WSNS

Possibility of operation at temperatures above -20°C.

Not available for double-sided pass-through version.

Sensor window is made of polycarbonate (regardless of the diffuser material).

Protect the SNS and WSNS luminaires against contact with harmful substances such as oil, acetone, chlorine, ethyl, ether, solvents.



PHOTOMETRY

