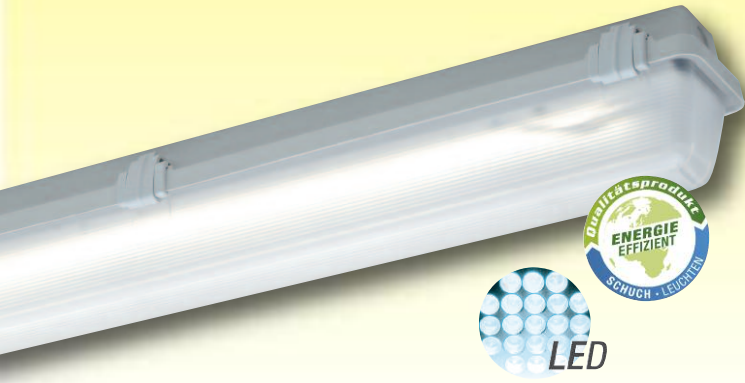


NEW

Dustproof/Waterproof LED Light Fitting with Diffuser with variably adjustable luminous flux Series 161/12L VARIO

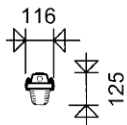
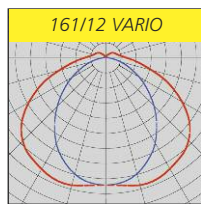
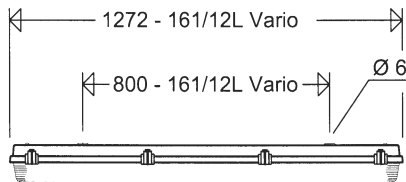


Application:

Areas, where one standardised LED-light fitting shall be used for different illumination tasks. In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, cold stores, low temperature stores, cooling and freezing chambers and walkable low temperature cabins in hotels, climate chambers, hard to reach areas with high downtime and maintenance costs when replacing the lamps or in case of frequent switching the light on. Aggressive atmospheres: Please consult us.

Design:

Housing: Glass fibre reinforced polyester resin, silicone gasket.
Diffuser: Injected, acrylic glass, frosted for glare limitation.
Closure: Three-part captive plastic clips (KK), incl. 2 safety clips (KKS) to ensure protection against contact.
Reflector: Aluminium, painted can be suspended and carries the electrical components.
Connection: 3-pole terminal
Cable entries: 2 plugs M20.
Mounting: Closed knock-outs for direct ceiling mounting (to be opened at site). Sealing and pressure disks inside each fitting.



Technical data:

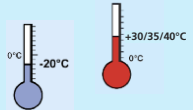
LED: Line modules 4,000K, $R_a > 80$, $L_{70B_{10}} > 50,000h$ at max. ambient temperature
ECG: 230V AC/DC, overload and short-circuit protection
Ambient temperature: -20°C up to +30/35/40°C (see type tables)

Options:

– PC-diffuser frosted (FPC) – for outdoor installation (AUS)

SCHUCH quality - Your advantage:

- universally usable due to variable setting of the luminous flux, depending on the requirement (replaces fluorescent lamps from 1x36W up to 2x58W)
- economical storage due to standardisation (only 1 version instead of 4 single types)
- quick and easy adjustment on-site
- highest efficiency with luminous efficacy up to 130lm/W
- up to 60/50% energy cost saving in comparison to illumination with 58W-fluorescent-lamps
- homogeneous illumination by using frosted diffusers, no particular light points visible, comfortable perception of light, brilliant glare limitation
- high colour reproduction $R_a > 80$, according to the workplace guide lines suitable for nearly all plant locations
- with "D"-sign, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- for temperatures from -20°C up to +30/35/40°C (depending on setting)
- lower maintenance and downtime costs due to long maintenance intervals
- ECG and LED-modules replacable by end-user
- future proof by using standardized LED-modules



161/12L VARIO



The luminous flux is variably adjustable to almost every value between 2.300lm and 6.200lm. Power consumption

tion and admissible ambient temperature will change depending on the setting of the luminous flux.

Type	Article no.	Power/ consumption W	Luminous flux lm ¹⁾	Luminous efficacy lm/W	Substitute for	Amb.- temp. °C	Weight ca. kg ³⁾
161/12 L VARIO	16117 0399	19	2.390	126	1 x 36	40	2,7
		29	3.590 ²⁾	124	1 x 58	40	
		36	4.380	122	2 x 36	35	
		55	6.170	112	2 x 58/1 x 80	30	

1) Examples for possible settings
 2) Factory setting

3) Weights without packing material



Notes:

Limitations for LED-light fittings: See chapter „Use of LED lighting in corrosive atmospheres“ in the Technical Appendix.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under www.schuch.de.

161/12L VARIO LM



for application in food industry areas

Application:

Food industry or food processing factories especially in risky areas of the food production or processing, suppliers to the food industry who are falling in the IFS standards or who are subject to comparably strict requirements (e.g. production of food packaging).

Design:

Same as type 161/12... VARIO but:
Diffuser: Shatterproof, high chemical resistance, cover for glare limitation fixed to reflector.
Closure clips: Stainless steel (KE), incl. 2 safety clips (KKS) to ensure protection against contact.
 The luminous flux is variably adjustable to almost every value between 2.530lm and 5.280lm.

Power consumption and admissible ambient temperature will change depending on the setting of the luminous flux.

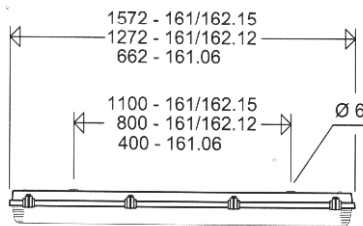
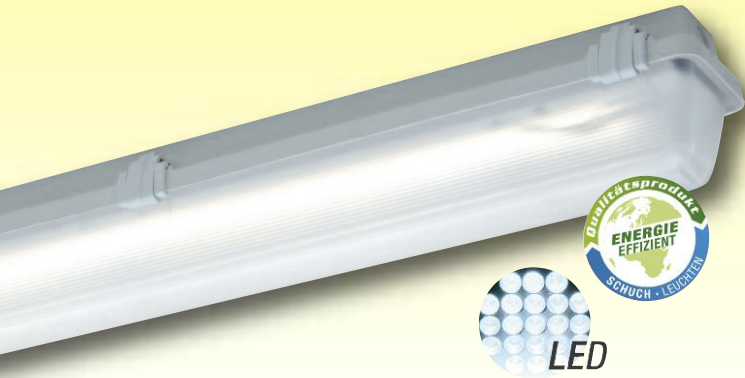
Type	Article no.	Power/ consumption W	Luminous flux lm ¹⁾	Luminous efficacy lm/W	Substitute for	Weight ca. kg ³⁾
161/12 L VARIO LM	16119 0399	19	2.530	133	1 x 36	40
		29	3.700 ²⁾	128	1 x 58	40
		36	4.480	124	2 x 36	35
		44	5.280	120	1 x 80	30

1) Examples for possible settings
 2) Factory setting

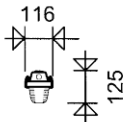
3) Weights without packing material

NEW

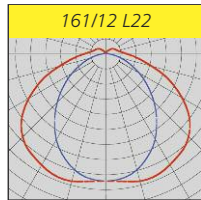
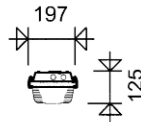
Dustproof/Waterproof LED Light Fitting with Diffuser Series 161/162... LED



Series 161...



Series 162...



Application:

In humid, wet and dusty indoor areas of industrial and agricultural premises, for workshops and car parks, cold stores low temperature stores, cooling and freezing chambers and walkable low temperature cabins in hotels, climate chambers, hard to reach areas with high downtime and maintenance costs when replacing the lamps or in case of frequent switching the light on. Aggressive atmospheres: Please consult us.

Design:

Housing: Glass fibre reinforced polyester resin, silicone gasket.

Diffuser: Injected, acrylic glass, frosted for glare limitation or types 161/06... clear

with inner prisms and frosted LED-cover for glare limitation.

Closure: Three-part captive plastic clips (KK), incl. 2 safety clips (KKS) to ensure protection against contact.

Reflector: Aluminium, painted can be suspended or removed and carries the electrical components.

Connection: 3-pole terminal or 5-pole (DIMD).

Cable entries: 2 plugs M20.

Mounting: Closed knock-outs for direct ceiling mounting (to be opened at site). Sealing and pressure disks inside each fitting.

Technical data:

LED: Line modules 4,000K, $R_a > 80$, $L_{70B_{10}} > 50,000h$ at max. ambient temperature

ECG: 230V AC/DC, overload and short-circuit protection

Ambient temperature: -20°C up to +35°C

with high luminous flux

-20°C up to +30°C

versions H50

-20°C bis +50°C

Options:

– dimmfunction via DALI-interface (DIMD)

– according to „International-Food-Standard“ (IFS)

– for application in food industrie (LM)
– for connection to central power supply unit (ZB)
– PC-diffuser frosted (FPC)

SCHUCH quality - Your advantage:

- highest efficiency with luminous efficacy up to 130lm/W
- up to 60/50% energy cost saving in comparison to illumination with 58W-fluorescent-lamps (energy consumption optimized versions)
- further saving of energy costs in dimmed operation in dependency of the dimming-adjustment
- homogeneous illumination by using frosted diffusers (types 161/06... frosted LED-covers), no particular light points visible, comfortable perception of light, brilliant glare limitation
- high colour reproduction $R_a > 80$, according to the workplace guide lines suitable for nearly all plant locations
- with "D"-sign, suitable for rooms with increased fire risk due to deposits of combustible dust and fibrous materials
- version with higher luminous flux for areas where higher illumination is needed
- version for high ambient temperatures up to +50°C
- lower maintenance and downtime costs due to long maintenance intervals
- ECG and LED-modules replacable by end-user
- future proof by using standardized LED-modules

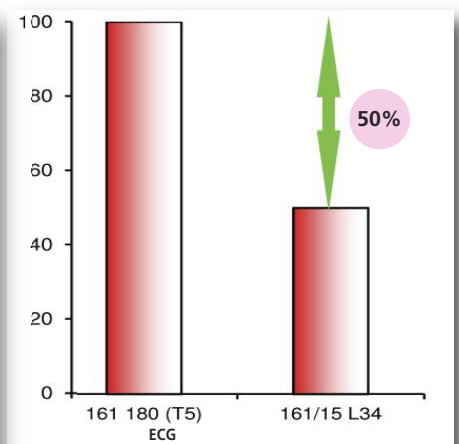
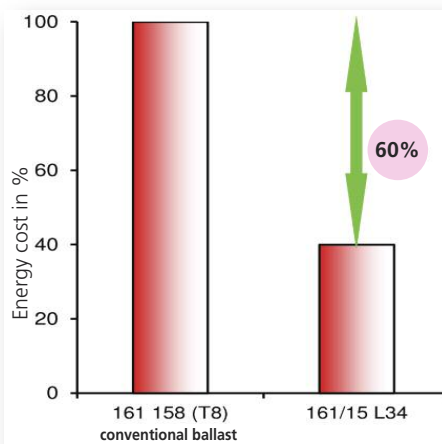


Notes:

Limitations for LED-light fittings: See chapter „Use of LED lighting in corrosive atmospheres“ in the Technical Appendix.

All technical data is relevant at the time of print. Actual technical data can be found in the internet under www.schuch.de.

Energy cost saving



161/162... LED



with line module

Notes:

Versions optimized for consumption are optimized to the lowest system power with same luminous flux in comparison to conventional versions with fluorescent lamps (1:1 replacement). Due to this these fittings have the highest light efficiency (lm/W) and are the most efficient alternative.

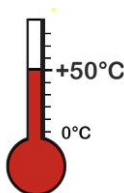
Versions with high luminous flux have the highest luminous flux magnitude and therefore are suitable especially for new installations.

Type	Article no.	Power/ consumption W	Luminous flux lm	Luminous efficacy lm/W	Substitute for	Weight ca. kg ³⁾
optimized for energy consumption (1 : 1 substitute fo fluorescent types)						
161/06 L12	16117 0307	11	1.220	111	1 x 18W	1,8
161/06 L12 DIMD	16117 0317	13 ¹⁾	1.220	94	1 x 18W	1,9
161/12 L22	16117 0301	18	2.320	129	1 x 36W	2,7
161/12 L22 DIMD	16117 0311	20 ¹⁾	2.320	116	1 x 36W	2,8
161/15 L34	16117 0303	27	3.520	130	1 x 58W	3,0
161/15 L34 DIMD	16117 0313	29 ¹⁾	3.520	121	1 x 58W	3,1
161/06 L20	16117 0308	17	2.030	119	2 x 18W	1,8
161/06 L20 DIMD	16117 0318	19 ¹⁾	2.030	107	2 x 18W	1,9
161/12 L42 ²⁾	16117 0302	36	4.310	120	2 x 36W	2,7
161/12 L42 DIMD ²⁾	16117 0312	38 ¹⁾	4.310	113	2 x 36W	2,8
161/15 L60 ²⁾	16117 0304	50	6.070	121	2 x 58W	3,0
161/15 L60 DIMD ²⁾	16117 0314	52 ¹⁾	6.070	117	2 x 58W	3,1
with high luminous flux						
161/12 L60	16117 0305	54	6.230	115	1 x 80W	2,7
161/15 L75	16117 0306	68	7.880	116	1 x 80 bzw. 2 x 58W	3,0
162/12 L120	16215 0302	109	12.160	112	2 x 80 bzw. 3 x 58W	4,3
162/15 L150	16215 0303	136	15.370	113	4 x 58W	4,8

1) Power consumption in dimming mode depends of the dimming adjustment

2) LED version in 1-lamp housing substitutes conventional 2-lamp version

3) Weights without packing material.



161/162... LED H50



with line module - for high ambient temperatures up to +50°C

Type	Article no.	Power/ consumption W	Luminous flux lm	Luminous efficacy lm/W	Substitute for	Weight ca. kg ²⁾
161/12 L22 H50	16117 0321	18	2.320	129	1 x 36W	2,7
161/12 L22 H50 DIMD	16117 0331	20 ¹⁾	2.320	116	1 x 36W	2,8
161/15 L34 H50	16117 0322	27	3.520	130	1 x 58W	3,0
161/15 L34 H50 DIMD	16117 0332	29 ¹⁾	3.520	121	1 x 58W	3,1
162/12 L42 H50	16215 0321	35	4.370	125	2 x 36W	4,3
162/12 L42 H50 DIMD	16215 0331	38 ¹⁾	4.370	115	2 x 36W	4,4
162/15 L60 H50	16215 0322	49	6.190	126	2 x 58W	4,8
162/15 L60 H50 DIMD	16215 0332	52 ¹⁾	6.190	119	2 x 58W	4,9

1) Power consumption in dimming mode depends of the dimming adjustment

2) Weights without packing material.

161/162... LED AUS



with line module - for outdoor installation

Application:

In protected and unprotected outdoor areas and industrial plants, mounted to walls, ceilings, catwalks and steel structures, pipe brackets, grating, under canopies, bus stops, train stations, subways, construction sites, etc.

Design:

As type 161/162..., but:

Diffuser: UV proof

Breather: M25

Entries:

1 gland M20 at one small side, breathing gland M25 at the other small side.

Mounting:

Ceiling and horizontal wall mount or mounting to outreaches, poles, steel structures, catwalks, etc. by means of pipe clamps.

For vertical mounting please consult us.

Type	Article no.	Power/ consumption W	Luminous flux lm	Luminous efficacy lm/W	Substitute for	Weight ca. kg ³⁾
optimized for energy consumption (1 : 1 substitute fo fluorescent types)						
161/12 L22 AUS	16117 0351	18	2.320	129	1 x 36W	2,7
161/15 L34 AUS	16117 0353	27	3.520	130	1 x 58W	3,0
161/12 L42 AUS ²⁾	16117 0352	36	4.310	120	2 x 36W	2,7
161/15 L60 AUS ²⁾	16117 0354	50	6.070	121	2 x 58W	3,0
with high luminous flux						
161/12 L60 AUS	16117 0355	54	6.230	115	1 x 80W	2,7
161/15 L75 AUS	16117 0356	68	7.880	116	1 x 80 bzw. 2 x 58W	3,0
162/12 L120 AUS	16215 0352	109	12.160	112	2 x 80 bzw. 3 x 58W	4,3
162/15 L150 AUS	16215 0353	136	15.370	113	4 x 58W	4,8

1) Power consumption in dimming mode depends of the dimming adjustment

2) LED version in 1-lamp housing substitutes conventional 2-lamp version

3) Weights without packing material.

Note:

The light fitting is not to be used in areas with high mechanical stress (wind) or seldom usage (i.e. maintenance and inspection only).

We recommend a weather roof within very critical environmental conditions.

In the hinged version please use fittings with stainless steel hinges in the 2 outer positions only. When mounting the light fittings on bracket poles or tubular beams/pipes always use original SCHUCH pipe clamps with support (see accessories).

Mounting as with series 161/162... AUS.

Dustproof/Waterproof
Light Fittings

NEW

161/162... LED LM

for application in food industry areas



fulfills the IFS



Application:

Food industry or food processing factories especially in risky areas of the food production or processing, suppliers to the food industry who are falling in the IFS standards or who are subject to comparably strict

requirements (e.g. production of food packaging).

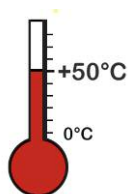
Design:

Same as type 161/162... LED but: **Diffuser:** Shatterproof, high chemical resistance, elements for glare limitation mounted to the reflector.

Closure clips: Stainless steel (KE), incl. 2 safety clips (KKS) to ensure protection against contact.

Type	Article no.	Power/ consumption W	Luminous flux lm	Luminous efficacy lm/W	Substitute for W	Amb. Temp (max.) °C	Weight ca. kg ¹⁾
optimized for energy consumption (1 : 1 substitute fo fluorescent types)							
161 06L12 LM	16119 0005	11	1.220	111	1 x 18	35	1,8
161 12L22 LM	16119 0001	21	2.670	127	1 x 36	35	2,7
161 15L34 LM	16119 0002	26	3.300	127	1 x 58	35	3,0
161 06L20 LM	16119 0006	17	2.030	119	2 x 18	35	1,8
161 12L42 LM	16119 0003	40	4.480	112	2 x 36	35	2,7
161 15L60 LM	16119 0004	51	5.870	115	2 x 58	30	3,0
with high luminous flux							
162 12L85 LM	16219 0001	79	8.760	111	2 x 54 / 1 x 80	30	4,3
162 15L100 LM	16219 0002	88	9.880	112	2 x 80	30	4,8

1) Weights without packing material.



NEW

161/162... LED LM H50

... for high ambient temperatures up to +50°C



Type	Article no.	Power/ consumption W	Luminous flux lm	Luminous efficacy lm/W	Substitute for W	Amb. Temp (max.) °C	Weight ca. kg ²⁾
161 12L22 LM H50	16119 0051	21	2.670	127	1 x 36	50	2,7
161 15L34 LM H50	16119 0052	26	3.300	127	1 x 58	50	3,0
162 12L42 LM H50	16219 0051	34	4.360	128	2 x 36	50	4,3
162 15L60 LM H45	16219 0052	46	5.910	128	2 x 58	45	4,8

1) Weights without packing material.

161/162... LED F



with highpower LED, for ambient temperatures down to -40°C



Application:

Same as versions with line modules, but particularly suitable for cold stores, low temperature stores, cooling chambers and walkable low temperature cabins down to -40°C in hotels etc. as well as for climate chambers.

Design:

Like version 161/162... with line module, but:

Reflector:

version ST 30 narrow-beam 30°,
version ST 60 narrow-beam 60°

Technical data:

ECG: 230V AC/DC, overload and short-circuit protection

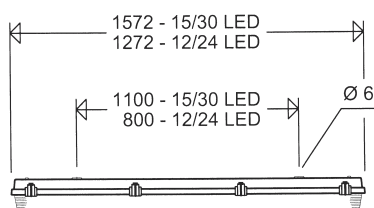
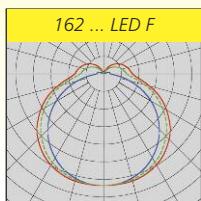
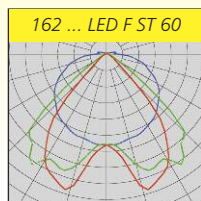
LED: Highpower-LED, 4,000K, $R_a > 80$, life period $L_{80B_{10}} > 50.000h$ at max. ambient temperature

Ambient temperature:

161... -40°C up to +35°C
162... -40°C up to +30°C

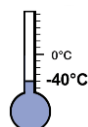
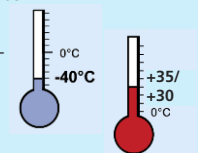
Options:

- dimmable, 1 - 10V interface
- for connection to group or central battery systems (ZB)
- PC-diffuser, frosted



SCHUCH quality - Your advantage:

- particularly suitable for energy efficient illumination of low temperature areas
 - applicable in a wide temperature range (please contact us)
 - instant light of the maximum luminous flux (raised luminous flux at low temperatures) ideal for light control via door contact, light beam or motion sensor or for safety lighting
 - insensitive to frequent switching
 - less energy consumption by reduced connection power and switching if required only
 - less energy consumption by less cooling power due to less heat input via the illumination
 - minor investments for smaller cooling systems
 - longer LED life through reduced ageing process when operating in the low temperature range
- efficiency improvement up to 15% due to high efficient aluminium mirror reflector for the light direction, ideal for high locations
- lower maintenance and downtime costs due to long intervals



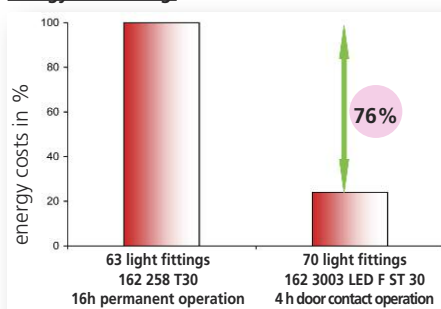
Type	Article no.	Power/ consumption W	Luminous flux lm	Luminous efficacy lm/W	Substitute for	Weight ca. kg ²⁾
161 1203 LED F	16117 0005	31	2.130	69	1 x 36W	2,6
161 1503 LED F	16117 0006	40	2.650	66	1 x 58W	4,0
162 2403 LED F	16215 0001	61	4.230	69	2 x 36W	4,8
162 3003 LED F	16215 0002	80	5.280	66	2 x 58W	6,0
with narrow-beam reflector 30°						
162 2403 LED F ST30	16215 0007	61	4.230	69	2 x 36W	5,0
with narrow-beam reflector 60°						
162 2403 LED F ST60	16215 0008	61	4.230	69	2 x 36W	5,0

1) Weights without packing material.

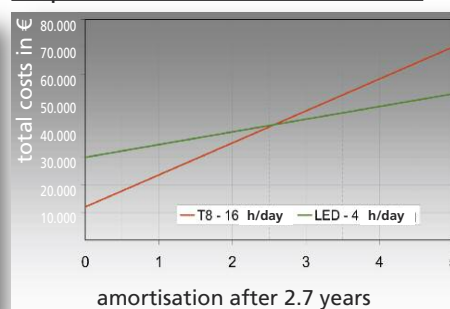
Economic comparison

Cold store 50m x 30m x 8m, 150lux cooling factor 0.7

energy cost saving.



Comparison of total costs/time of amortisation



Accessories / Spare Parts

Type	Article no.	Type	Article no.
Spare glass covers frosted		Spare glass covers PC, frosted	
161 036 F	16111 9031	161 036 FPC	16111 9033
161 058 F	16111 9032	161 058 FPC	16111 9034
162 036 F	16211 9031	162 036 FPC	16211 9033
162 058 F	16211 9032	162 058 FPC	16211 9034