

# TNAML<sup>®</sup> industrial

## Maintenance Free Fluorescent Luminaire



### Features:

- + 100% encapsulated, maintenance free design
- + 10 years operational warranty \* assures favourable total cost of ownership
- + Easy and flexible installation
- + Fit & Forget
- + Seawater resistant anodized aluminium (in accordance with NORSOK 121)
- + Tempered glass, very high impact resistant, IK 10 (20 joules)
- + Fully recyclable, environmental friendly product
- + Optional emergency lighting by LED, 90/180 minutes battery, battery functionality -20°C to + 30°C
- + High light output efficiency (>80%) i.e. less luminaires required for same lighting level
- + Available with 2x18W / 2x36W / 2x58W lamps and optional with 1x18W / 1x36W / 1x58W lamp
- + Self-locking device for cable gland nuts
- + Self-cleaning glass
- + No condensation due to 100% sealed for life construction
- + Safety wire connection
- + 100% Leakage test
- + Clean room recessed mounting system
- + HACCP approved for food applications
- + Black start for unmanned platforms

\*Conditions apply

Type	Max. qty. of luminaires on a 16A/C-char. circuit. 30mA ELCB	Inrush current
2 x 18W	30	18A / 250µs
2 x 36W	30	18A / 250µs
2 x 58W	20	31A / 350µs

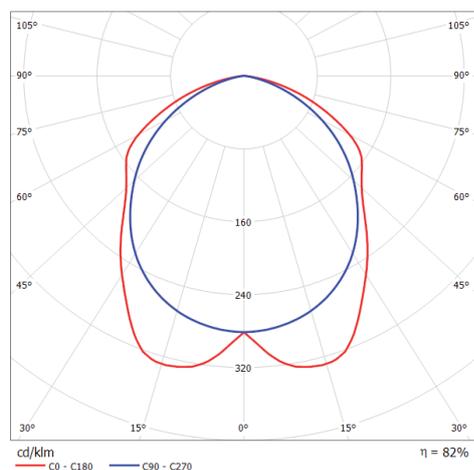
## Total Cost of Owner ship

The benefits of installing TNAML® can be shown in a Total Cost of Ownership calculation. For this purpose we have created a software tool to calculate the lifetime cost savings based on input from the client.

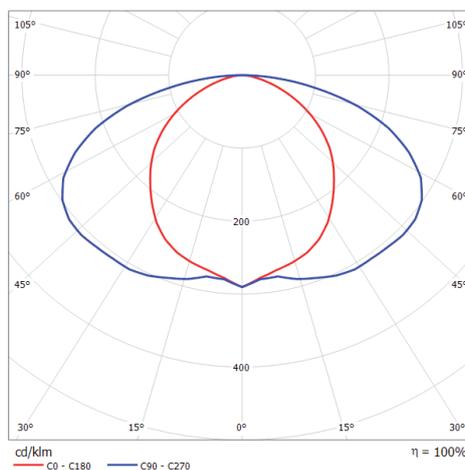
### Upon request:

Voltage:	110/120VAC, 50/60 Hz (only for 2x18W and 2x36W)
Lamps:	Colour 3000K or 6500K
Electrical connection:	By 6 meter permanent flying lead, braided
Mounting brackets:	Pole and ceiling mounting brackets
Frosted glass	Avoiding glare for low mounted luminaires
HACCP	For food industry
Safety wire:	For installation into a fixing arrangement on the light fitting
Cable Gland:	Suitable rated cable glands can be supplied with the luminaire (separate package)
Recessed ceiling installation:	Frame for recessed installation in modular ceiling systems, painted steel or stainless steel
Wiring:	Through wiring by 2 junction boxes
Other area classifications:	Ex zone 1/2, Ex zone 21/22
Mounting brackets:	Pole and ceiling mounting brackets

### Standard luminaire

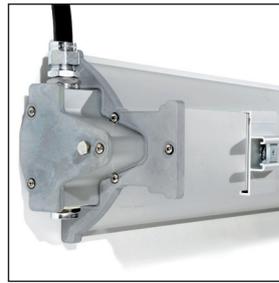


### Emergency luminaire



## Characteristics:

- + Maintenance free (visual inspection only)
- + Sealed-for-life concept
- + Fit and forget
- + 10 years operational warranty\*
- + L90B10 at 84.000 hours\*
- + Patented design



### + Vibration test by Thales (detailed report available on request)

- Standard: IEC60721-2-3 Ed 1.0 and IEC68-2-6
- Frequency range: 1 - 150 Hz
- Amplitude: 5 mm (1 to 10 Hz)
- Acceleration: 2 gn (10 to 150 Hz)
- Sweep rate: 1 octave per minute
  - sweep cycles: 10
  - directions: 3

### + Vibration test by Sebert Trillingstechnik BV (detailed report available on request)

- Standard: IEC60068-3-3 for Nuclear Generating Stations

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## General specifications:

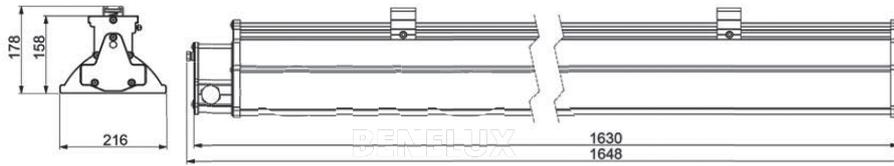
- Applied standards: EN-50102, EN-IEC 60598-1, EN-IEC 60598-2-1  
EN 55015, EN 61000-3-2, EN 61000-3-3, EN 61547
- HACCP: Stated by DEKRA 06540-QUA/EX
- Ingress protection: IP 68 by attest DEKRA 211978700

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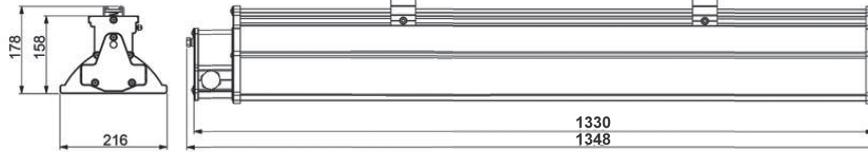
## Product specifications:

- Housing: Seawater resistant (NORSOK 121) anodized (25 micron) aluminium with tempered glass
- Lamps: Pre-mounted long life lamps, colour 4000K
- Impact rating: IK 10 (20 joules)
- Operational temperature range: -20°C to +55°C\*
- Voltage: 220-264VAC 50/60Hz (optional 110VAC)
- Electrical connection: 0,5-6mm<sup>2</sup> by spring terminals through integrated external junction box (sealed by resin after installation and test)
- Entries: 2 x M25 cable gland entries. One plugged off
- Ballast: Electronic with end of life protection, Pre-heated start
- Mounting: 2 x brackets on guidance rail for flexible, easy and quick installation
- Emergency batteries: Disconnecting possibility during installation by "B" terminal
- Battery life time: 300 cycles, automatic random test each 100 days

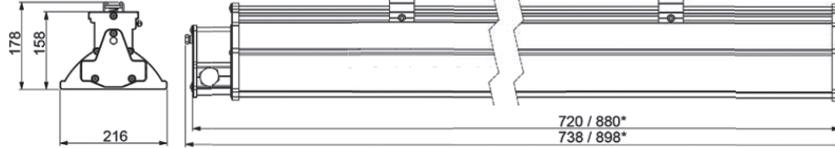
**2 x 58W**



**2 x 36W**



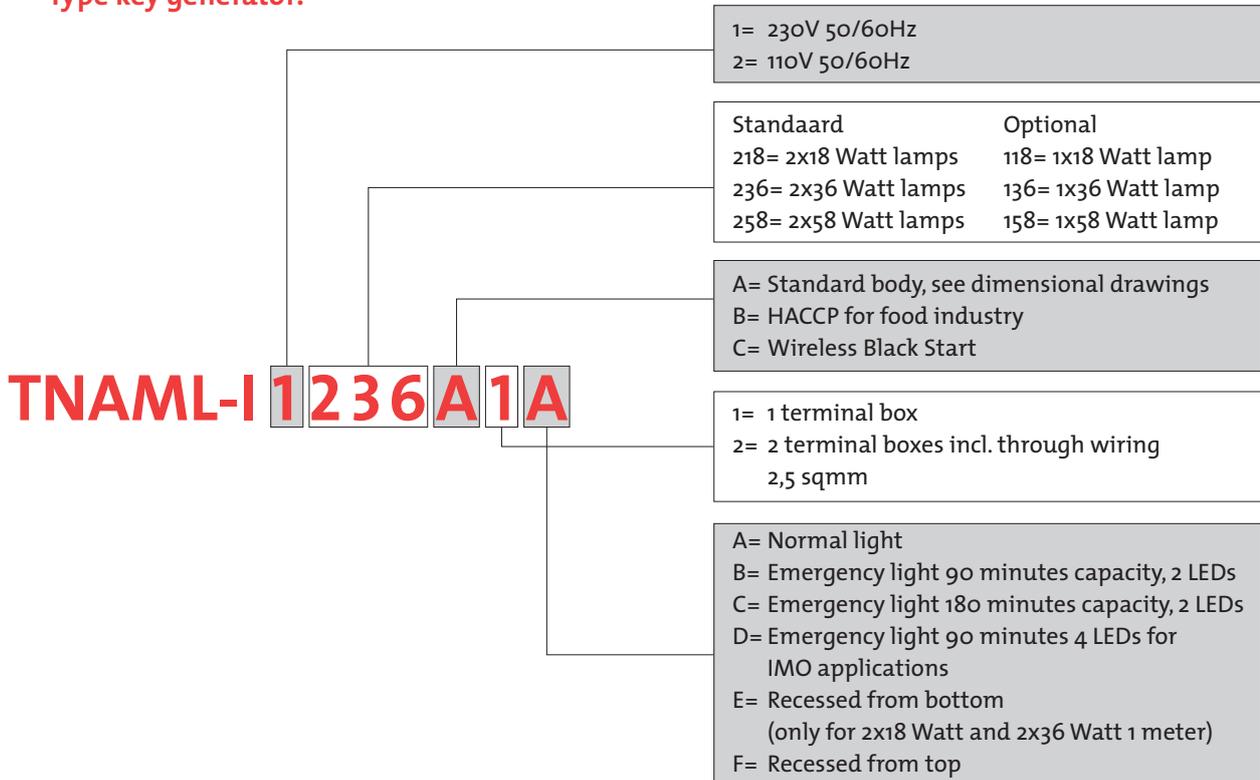
**2 x 18W**



\* Emergency light version



**Type key generator:**



**Most common types:**

Article code	Wattage	Voltage	Weight	Lumen
TNAML-I 1218A1A	2 x 18W	220-264VAC	7,1 kgs	2,600
TNAML-I 1236A1A	2 x 36W	220-264VAC	9.7 kgs	6,000
TNAML-I 1258A1A	2 x 58W	220-264VAC	12.4 kgs	10,400
TNAML-I 1218A1B	2 x 18W	220-264VAC	9.4 kgs	2,600
TNAML-I 1236A1B	2 x 36W	220-264VAC	11.3 kgs	6,000
TNAML-I 1258A1B	2 x 58W	220-264VAC	14,2 kgs	10,400