

TNAML[®] zone 2/22



Maintenance Free Fluorescent Luminaire



Features:

- + 100% encapsulated, maintenance free design requiring only visual inspection to IEC/EN 60079-17
- + In accordance with ATEX regulations
- + 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
- + No condensation due to 100% sealed for life construction
- + Self-cleaning glass
- + 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

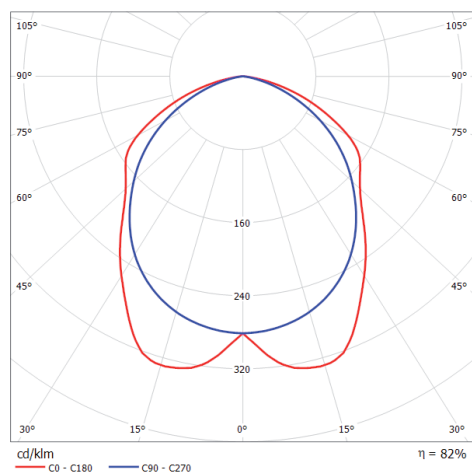
Total Cost of Ownership

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.

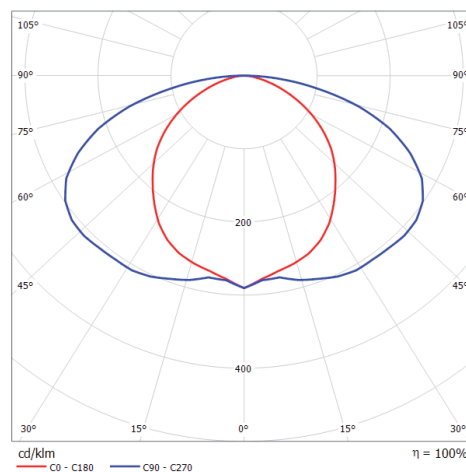
Upon request:

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 Ex e:	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:	Zone 1, Ex e mb II T6 (TNAML...) or safe area industrial version (TNAML-I...)
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 Trillingstechniek BV (detailed report available on request)

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

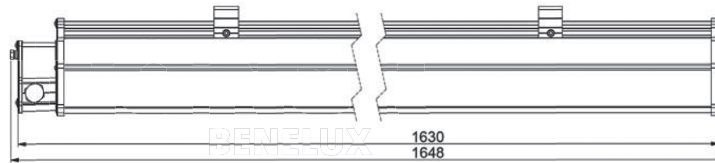
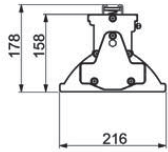
General specifications:

Certificate:	ATEX: DEKRA 12ATEX0031
ATEX classification:	Group II Category 3 G D
Applicable zones:	2 and 22
Applied standards:	EN-IEC 60079-0, EN-IEC 60079-15, EN-IEC 60079-31, EN 55015, EN 61000-3-2, EN 61000-3-3
Ex code:	Gas II 3 G Ex nA mc IIC T6 GC Dust II 3 D Ex tD A22 IP66 T80°C
Inspection:	Visual inspection in accordance with EN/IEC 60079-17
HACCP:	Stated by DEKRA 06540-QUA/EX
Ingress protection:	IP 68 by attest DEKRA 211978700

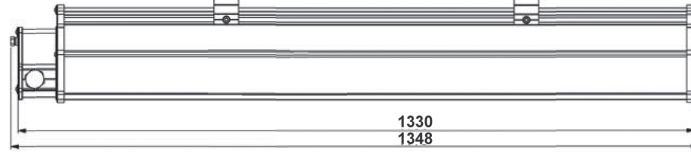
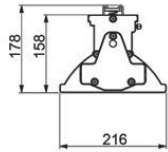
Product specifications:

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)
Ambient temperature range:	TNAML for use in gas environments: -20°C to +55°C for T5; -20°C to +40°C for T6 TNAML-E for use in gas environments: -20°C to +45°C for T5; -20°C to +40°C for T6 TNAML and TNAML-E for use in dust environments: -20°C to +55°C for T 80°C
Voltage:	220-264VAC 50/60Hz (optional 110VAC)
Electrical connection:	0,5-6mm ² by spring terminals through integrated external junction box (sealed by resin after installation and test)
Entries:	2 x M25 cable gland entries. 1 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

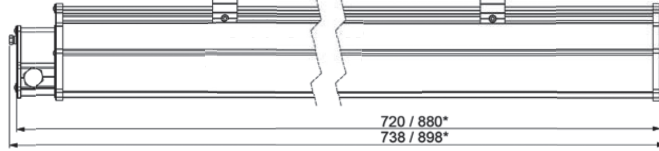
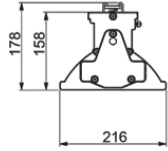
2 x 58W



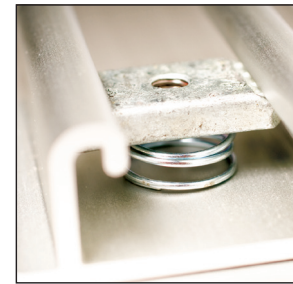
2 x 36W



2 x 18W



* Emergency light version



Type key generator:

TNAML-nA 1236A1A

1= 230V 50/60Hz 2= 110V 50/60Hz								
<table border="1"> <tr> <th>Standaard</th> <th>Optional</th> </tr> <tr> <td>218= 2x18 Watt lamps</td> <td>118= 1x18 Watt lamp</td> </tr> <tr> <td>236= 2x36 Watt lamps</td> <td>136= 1x36 Watt lamp</td> </tr> <tr> <td>258= 2x58 Watt lamps</td> <td>158= 1x58 Watt lamp</td> </tr> </table>	Standaard	Optional	218= 2x18 Watt lamps	118= 1x18 Watt lamp	236= 2x36 Watt lamps	136= 1x36 Watt lamp	258= 2x58 Watt lamps	158= 1x58 Watt lamp
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<p>A= Standard body, see dimensional drawings B= HACCP for food industry C= Wireless Black Start</p>								
<p>1= 1 terminal box 2= 2 terminal boxes incl. through wiring 2,5 sqmm</p>								
<p>A= Normal light B= Emergency light 90 minutes capacity, 2 LEDs C= Emergency light 180 minutes capacity, 2 LEDs D= Emergency light 90 minutes 4 LEDs for IMO applications E= Recessed from bottom (only for 2x18 Watt and 2x36 Watt 1 meter) F= Recessed from top</p>								

Most common types:

Article code	Wattage	Voltage	Weight	Lumen
TNAML-nA 1218A1A	2 x 18W	220-264VAC	7.1 kgs	2,600
TNAML-nA 1236A1A	2 x 36W	220-264VAC	9.7 kgs	6,000
TNAML-nA 1258A1A	2 x 58W	220-264VAC	12.4 kgs	10,400
TNAML-nA 1218A1B	2 x 18W	220-264VAC	9.4 kgs	2,600
TNAML-nA 1236A1B	2 x 36W	220-264VAC	11.3 kgs	6,000
TNAML-nA 1258A1B	2 x 58W	220-264VAC	14.2 kgs	10,400