1

VLL LED Zone 1 GRP linear fixtures

Featuring indutrial-leading energy efficiency, VLL is designed to replace fluorescent light in Zone 1 and 2 hazardous area applications with easy installation and maintenance. This product performs its excellence in both reliability and safety while helping reduce energy and cost.

Benefits:

EFFICIENCY

· Industry leading lumen efficacy up to 130~lm/w reduces energy consumption and delivers cost savings.
· Three lumen packages available from 3100 to 7400lm providing a versatile solution for different illumination applications.

SAFETY AND RELIABILITY

· Rugged design for extremely harsh environments, IP66 even under vibration.
· Optional self-contained battery for emergency lighting applications delivers 25% of standard lumen output for 1.5-hours or 3-hours.

EASY INSTALLATION AND MAINTENANCE

· Retrofit- friendly with optional sliding rail mounting system, allowing brackets to be easily adjusted to existing mounting holes.
· Self-monitoring status battery indicator makes easy for maintenance check.
· Inhibit switch comes as standard for our emergency fitting which is suitable for offshore unmanned platform application.
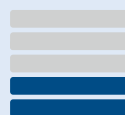
LATEST POLE MOUNTING

· Improved reliability with build-in cable gland and no-exposed cables
· No sideways rotation with strong resistance to heavy winds
· Externally accessible Ex e chamber for easy termination

LED vs. fluorescent savings at a glance

Why are so many facilities making the switch from fluorescent to LED? The numbers say it all.

VLL-5L vs. x 36W Fluorescent

40% REDUCTION IN ENERGY COSTS

66% LOWER TOTAL COST OF OWNERSHIP

100% LAMP MAINTENANCE REDUCTION

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Features & specifications

The Zone 1 VLL product Series LED Luminaires with high-quality international brand LED chips, have extremely long lifespan. Multiple versions of the LED are available, providing ideal solutions for indoor or outdoor areas to retrofit existing fluorescent fixtures.

Model	Nominal* lumens	Wattage	Efficacy	Equivalent fluorescent
VLL-3L	3100	25W	>130~Lm/W	2x18W
VLL-5L	6400	50W	>130~Lm/W	2X36W
VLL-7L	7400	60W	>130~Lm/W	2X54W

*Lumen values apply to 5700K light color, 70 CRI fixtures. Lumen output may vary slightly for different models.
*Tolerance+/-10%

Application

- Locations where require continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent on-and-off of lights
- Where flammable vapors, gases, ignitable dusts, fibers or flyings are present; indoors or outdoors
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Marine, wet locations and hose-down environments
- Manufacturing plants; heavy industrial, chemical, petrochemical or pharmaceutical facilities; platforms; loading docks; tunnels
- Optionally with DALI for controlling and monitoring the luminaire

Standard materials

- Enclosure-Glass Fiber Reinforced Plastic (GRP)
- Diffuser-Polycarbonate (PC)
- Gaskets-Silicone
- Fasteners-All external fasteners stainless steel

LED system:

- Cold white 5700K
- Optional 3000K, 4000K, 5000K, 6500K
- All series feature field replaced LED modules
- Fog diffuser with harmful glare protection as standard
- Rated life of 5 years up to 50/55°C provides long term, lowmaintencnce operation.

Certifications and compliances

- Marking accd.to IECEx
  Ex db eb mb IIC T5 Gb or Ex eb mb IIC T5 Gb
  / Ex db eb ib mb IIC T5 Gb (EM)*
  Ex tb IIIC T80°C Db
- Marking accd.to ATEX
  II2 G Ex eb mb IIC T5 Gb
  II2 G Ex db eb mb IIC T5 Gb
  II2 G Ex db eb ib mb IIC T5 Gb(EM)
  II2 D Ex tb IIIC T80°C Db

Technical data

IECEx-certification of conformity	IECEx NEP 21.0020X, SEV 22 ATEX 0584X, IECEx SEV 22.0001X
Ex Marking	Ex db eb mb IIC T5 Gb or Ex eb mb IIC T5 Gb / Ex db eb ib mb IIC T5Gb (EM)* Ex tb IIIC T80°C Db
Ambient temp	Normal: -40°C to 55°C for 3L, 5L, -40°C to 50°C for 7L Emergency: -25°C to 50°C for 3L,5L, -25°C to 45°C for 7L
Rated input volt	100-240VAC 50/60Hz, DC 108-250V
Power factor	>0.9
Color Temperature	5700K as standard, 3000K/4000K/5000K/6500K
CRI	Cool white>70 as standard, CRI>80 is optional
System watt*	VLL 3L series: <30W VLL 5L series: <56W VLL 7L series: <65W
Lumen output	VLL 3L series:3100Lm VLL 5L series:6400Lm VLL 7L series:7400Lm
Material	GRP and PC
Weight	VLL 3L series Normal and EM: 4.3Kg / 5.8Kg VLL 5L /7L series Normal and EM: 7.5Kg / 9.8Kg
Terminals	Max 6mm²
Entry Size	M20 as standard, M25 is available.
Out line dimension	VLL 3L series: 732x178x125 VLL 5L /7L series:1333x178x125
Backup duration & Lumen percentage	Standard version EM1=1.5h,25% output. EM2=3h, 25% output is available.
IP(IEC60598)	IP66

*Isolation switch is available as optional
*Tolerance+/-5%

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Ordering Information

Product Type	Colour Temp[1]	Terminals	Throughwiring[2] Single-ended	Twin-ended	Entry Threaded	Ex e Threaded Plug[3]	Part No.[4]
VLL 3L							
VLL-3L-57-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004126
VLL-3L-57-2/6-220-N		2x6	-	●	4xM20	2	CCL2004130
VLL 3L Emergency							
VLL-3L-57-EM1-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004134
VLL-3L-57-EM1-2/6-220-N		2x6	-	●	4xM20	2	CCL2004138
VLL 5L							
VLL-5L-57-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004174
VLL-5L-57-2/6-220-N		2x6	-	●	4xM20	2	CCL2004178
VLL 5L Emergency							
VLL-5L-57-EM1-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004182
VLL-5L-57-EM1-2/6-220-N		2x6	-	●	4xM20	2	CCL2004186
VLL 7L							
VLL-7L-57-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004222
VLL-7L-57-2/6-220-N		2x6	-	●	4xM20	2	CCL2004226
VLL 7L Emergency							
VLL-7L-57-EM1-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004230
VLL-7L-57-EM1-2/6-220-N		2x6	-	●	4xM20	2	CCL2004234

Product Type	Colour Temp[1]	Terminals	Throughwiring[2] Single-ended	Twin-ended	Entry Threaded	Ex e Threaded Plug[3]	Part No.[4]
VLL 3L Pole Mounting							
VLL-3L-57-1/6-120-N-P	5700K	1x6	●	-	2xM20	1	CCL2004252
VLL-3L-57-EM1-1/6-120-N-P		1x6	●	-	2xM20	1	CCL2004254
VLL 5L Pole Mounting							
VLL-5L-57-1/6-120-N-P	5700K	1x6	●	-	2xM20	1	CCL2004264
VLL-5L-57-EM1-1/6-120-N-P			●	-	2xM20	1	CCL2004266
VLL 7L Pole Mounting							
VLL-7L-57-1/6-120-N-P	5700K	1x6	●	-	2xM20	1	CCL2004276
VLL-7L-57-EM1-1/6-120-N-P			●	-	2xM20	1	CCL2004278

[1] Tolerance +/- 10%
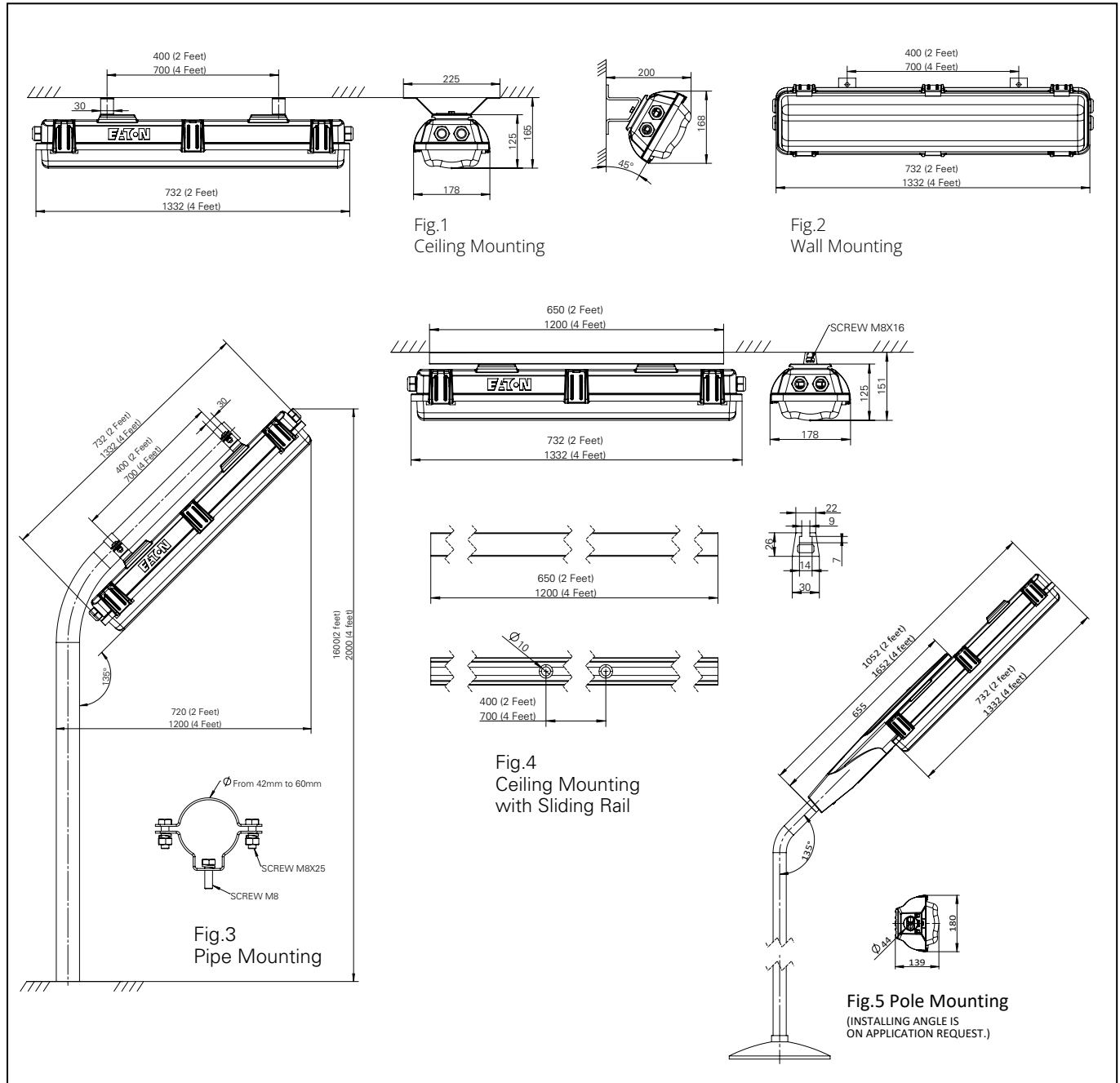[2] Through wiring 6 x 2.5 mm^2
[3] Standard version without cable gland. if need, please order separately
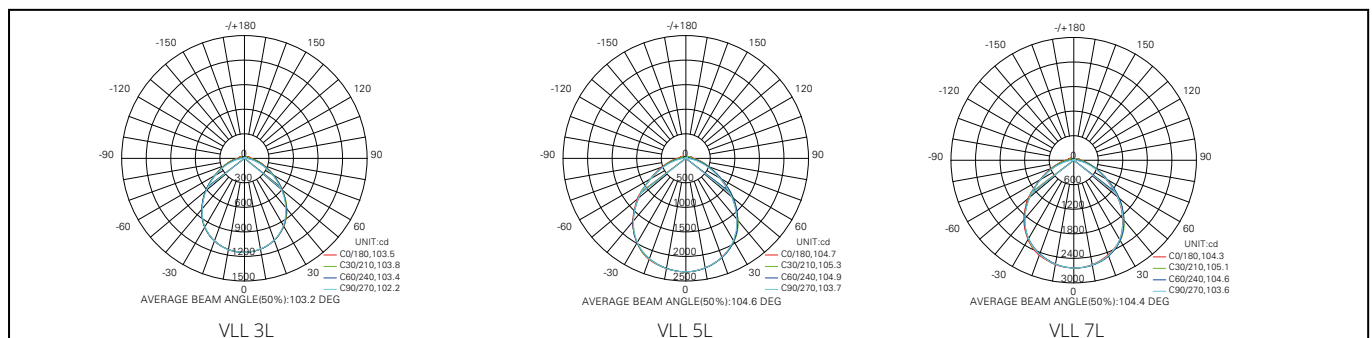[4] Contact your local sales representative for special requirements.
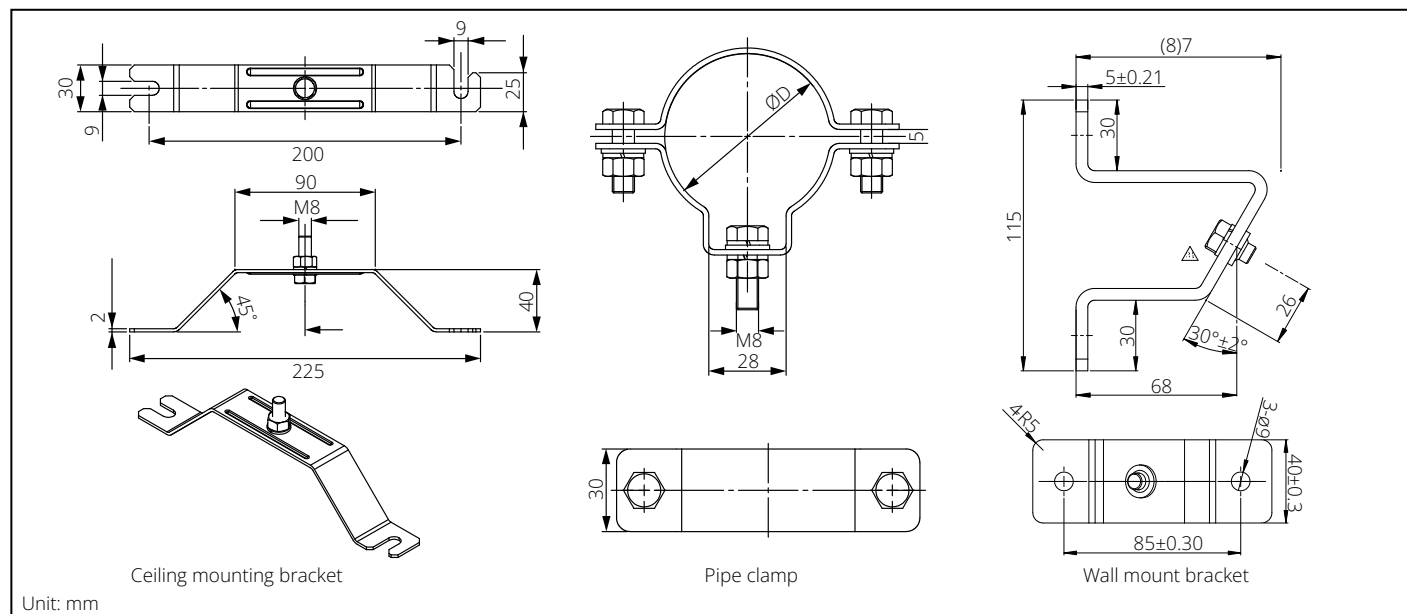
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Dimensions (mm)

400 (2 Feet)
700 (4 Feet)
30
732 (2 Feet)
1332 (4 Feet)

225
165
125
178

Fig.1
Ceiling Mounting

200
168
45°

Fig.2
Wall Mounting

400 (2 Feet)
700 (4 Feet)
732 (2 Feet)
1332 (4 Feet)

650 (2 Feet)
1200 (4 Feet)
SCREW M8X16
732 (2 Feet)
1332 (4 Feet)
125
151
178

732 (2 Feet)
1332 (4 Feet)
400 (2 Feet)
700 (4 Feet)
30
1600(2 feet)
2000 (4 feet)
135°
720 (2 Feet)
1200 (4 Feet)

22
9
26
14
7
30

650 (2 Feet)
1200 (4 Feet)

Ø10

400 (2 Feet)
700 (4 Feet)

Fig.4
Ceiling Mounting
with Sliding Rail

1052 (2 feet)
1652 (4 feet)
655
732 (2 feet)
1332 (4 feet)
135°

Ø From 42mm to 60mm
SCREW M8X25
SCREW M8

Fig.3
Pipe Mounting

Ø44
139
180

Fig.5 Pole Mounting
(INSTALLING ANGLE IS
ON APPLICATION REQUEST.)

Polar curve

-/+180
-150   150
-120   120
-90   90
-60   60
300
600
900
1200
1500
-30   30
0
UNIT:cd
— C0/180,103.5
— C30/210,103.8
— C60/240,103.4
— C90/270,102.2
AVERAGE BEAM ANGLE(50%):103.2 DEG

VLL 3L

-/+180
-150   150
-120   120
-90   90
-60   60
500
1000
1500
2000
2500
-30   30
0
UNIT:cd
— C0/180,104.7
— C30/210,105.3
— C60/240,104.9
— C90/270,103.7
AVERAGE BEAM ANGLE(50%):104.6 DEG

VLL 5L

-/+180
-150   150
-120   120
-90   90
-60   60
600
1200
1800
2400
3000
-30   30
0
UNIT:cd
— C0/180,104.3
— C30/210,105.1
— C60/240,104.6
— C90/270,103.6
AVERAGE BEAM ANGLE(50%):104.4 DEG

VLL 7L

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Mounting accessories (To be ordered separately)

Ceiling mounting bracket

Pipe clamp

Wall mount bracket

Unit: mm

Pipe mounting

Part No	Description	Quantity per luminaire
CHR5218	Pipe clamp assy D42 316S/S	2
CHR5221	Pipe clamp assy D51 316S/S	2

Wall mounting

Part No	Description	Quantity per luminaire
CHR5248	Wall suspension 316S/S	2

Ceiling mounting

Part No	Description	Quantity per luminaire
CHR5245	Ceiling mounting BKT 316S/S	2
CHLMT2372-01	Mounting sliding rail for 2 feet	1
CHLMT2372-02	Mounting sliding rail for 4 feet	1

Metallic Cable Glands (Order Separately)

ADE-1F2

Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable seaing range - Max
ADE1M201NPN	M20	Non-armoured, Marine shipboard, Type P, Tray cable (armoured)	4.5	8.5
ADE1M202NPN	M20		7.0	12.0
ADE1M203NPN	M20		10.0	16.0

ADE-4F

Catalog #	Metric Thread Size	Cable Types	Cable sealing range inner sheath		Cable sealing range outer sheath		Armor	
			Min.	Max.	Min.	Max.	Min.	Max.
ADE4M201NPN	M20	SWA, SWB, STA, Braided marine shipboard, Type P; Leadsheathed cable (with addition of earthing washer)	4.5	8.0	7.0	12.0	0.2	0.9
ADE4M202NPN	M20		7.0	12.0	10.0	16.0	0.2	1.3
ADE4M203NPN	M20		10.0	15.5	13.5	21.0	0.2	1.3

ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, please contact our sales representative.