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Ex-Floodlights of the series FMV LED / NFMV / NSSFMV

4 (Zone 2, 21, 22)

The powerful LED floodlights FMV/nFMV...LED

The new series of energy-saving FMV floodlights in LED technology are ideal for all general lighting applications in explosive gas atmospheres Zone 2 and in explosive dust atmospheres Zone 21 and 22.

The floodlights with a light output from 3189 lm up to 15181 lm can be used to replace comparable conventional light sources with an equivalent power of 50 W up to >1000 W. The new types NFMV 25L and 50L can even replace highest luminous flux power up to >1000 W of conventional HP lamps.

High efficient power LED modules with more than 112 lumen per watt enables up to 70 % energy cost reduction compared to HID fixtures.

LED technology for harsh environments

Due to the particularly solid construction of the housing and the vibration resistance of the LED module, the FMV LED floodlight is resistant to impact, shock and vibration. As a result, it represents the ideal lighting concept for use in areas with difficult environmental conditions. Thanks to the non-sensitive LED technology, even extreme temperatures from -40 °C up to +55 °C are not a problem. The robust, powder coated light metal housing in the degree of protection IP 66 and an impact-resistant lens meet the highest corrosion protection and mechanical resistance requirements. The advantages of the integrated, advanced LED technology with a high luminous flux and, at the same time, an extremely low energy consumption are a long

service life and a high level of efficiency.

NFMV floodlights for high-pressure discharge lamps

The NFMV floodlights with high-gloss internal reflectors for high-pressure discharge lamps from 150 W up to 400 W are suited for operation in hazardous areas in Zone 2 and Zone 21 and ambient temperatures of -25 °C to +50 / 45 °C. The light metal housing with an epoxy resin powder coating and a glass that is resistant to temperature changes and impacts meets the requirements for the degree of protection IP66. The modular design allows a fast and economical installation. A durable sealing system for use in extreme ambient conditions offers additional security. The restricted breathing design allows high light outputs and, at the same time, a favourable temperature class T3.

Impact-resistant glass meets the requirements of the degree of protection IP66. The modular design allows a fast and economical installation. A durable sealing system for use in extreme ambient conditions offers additional security. The restricted breathing design allows high light outputs and, at the same time, a favourable temperature class T3.

Wide range of applications

The particularly rugged construction, the high degree of protection and the wide temperature range make these light fittings particularly suitable for offshore applications, in the oil and gas industry and in chemical plants, where explosive atmospheres are to be expected. Further applications include use in explosive gas atmospheres in Zone 2 areas such as oil refineries, ships and drilling platforms, chemical, petrochemical and LNG facilities, waste and wastewater facilities, as well as industrial applications indoors and outdoors. Applications in explosive dust atmospheres in Zone 21 and 22 include flour mills, sugar mills, food production, wood processing and other plants with combustible dusts. The NFMV / NSSFMV floodlights feature an adjustable mounting bracket and are suitable for wall and ceiling mounting in medium and large suspension heights. Accessories for pole mounting are also available.

Stainless steel NSSFMV floodlights for particularly harsh environments






The NSSFMV floodlights with high-gloss internal reflectors for high-pressure discharge lamps from 150 W to 400 W fulfil the requirements for hazardous areas in Zone 2 and Zone 22 and ambient temperatures from -25 °C to +55 / 50 °C particularly in harsh environments with a high level of mechanical load, moisture and dust. The stainless steel enclosure with a temperature-change and im-

Features

- FMV LED floodlights for high power LED modules
- NFMV and NSSFMV luminaires for high-pressure discharge lamps from 150 W to 400 W
- Wide temperature range according to type from -45 °C up to +55 °C
- High degree of protection IP66 for harsh environments




Ordering details

Type	Lamp / illuminant	Rated luminous flux of the luminaire	Weight	Cable gland/ thread	Screw plug	Order No.
FMV LED						
	FMV 3L CY/UNV1 76 M20	LED System 28 W ¹⁾	3189 lm	13.9 kg	2 x M20 metal thread	1 x M20 1 2564 443
	FMV 5L CY/UNV1 76 M20	LED System 45 W ¹⁾	5183 lm	13.9 kg	2 x M20 metal thread	1 x M20 1 2564 445
	FMV 7L CY/UNV1 76 M20	LED System 62 W ¹⁾	7095 lm	13.9 kg	2 x M20 metal thread	1 x M20 1 2564 446
	FMV 9L CY/UNV1 76 M20	LED System 79 W ¹⁾	9132 lm	14.5 kg	2 x M20 metal thread	1 x M20 1 2564 383
	FMV 11L CY/UNV1 76 M20	LED System 99 W ¹⁾	11107 lm	14.5 kg	2 x M20 metal thread	1 x M20 1 2564 382
	FMV 13L CY/UNV1 76 M20	LED System 112 W ¹⁾	13100 lm	14.5 kg	2 x M20 metal thread	1 x M20 1 2564 384
	FMV 15L CY/UNV1 76 M20	LED System 131 W ¹⁾	15.181 lm	14.5 kg	2 x M20 metal thread	1 x M20 1 2595 564
	FMV 3L CY/UNV1 76 M25	LED System 28 W ¹⁾	3189 lm	13.9 kg	2 x M25, metal thread	1 x M25 1 2564 448
	FMV 5L CY/UNV1 76 M25	LED System 45 W ¹⁾	5183 lm	13.9 kg	2 x M25, metal thread	1 x M25 1 2564 449
	FMV 7L CY/UNV1 76 M25	LED System 62 W ¹⁾	7095 lm	13.9 kg	2 x M25, metal thread	1 x M25 1 2564 450
	FMV 9L CY/UNV1 76 M25	LED System 79 W ¹⁾	9132 lm	14.5 kg	2 x M25, metal thread	1 x M25 1 2564 451
	FMV 11L CY/UNV1 76 M25	LED System 99 W ¹⁾	11107 lm	14.5 kg	2 x M25, metal thread	1 x M25 1 2564 452
	FMV 13L CY/UNV1 76 M25	LED System 112 W ¹⁾	13100 lm	14.5 kg	2 x M25, metal thread	1 x M25 1 2564 385
	FMV 15L CY/UNV1 76 M25	LED System 131 W ¹⁾	15.181 lm	14.5 kg	2 x M25 metal thread	1 x M25 1 2595 600
nFMV 25L						
	NFMV 25L CY/UNV1 76 M20	LED System 263 W ¹⁾	26.240 lm	23.6 kg	2 x M20, metal thread, 1 x M20 cable gland Ø 10 - 16 mm	1 x M20 1 2521 842
nFMV 50L						
	NFMV 50L CY/UNV1 76 M20	LED System 531 W ¹⁾	53.890 lm	48.1 kg	2 x M20, metal thread, 1 x M20 cable gland Ø 10 - 16 mm	1 x M20 1 2649 227
NFMV						
	NFMV HSE 150 W, 230 V 50 Hz	HSE 150 W	14000 lm	15.5 kg	2 x M20 metal thread	1 x M20 NOR 000 005 180 021
	NFMV HSE 150 W, 240 V 50 Hz	HSE 150 W	14000 lm	15.5 kg	2 x M20 metal thread	1 x M20 NOR 000 005 180 022
	NFMV HSE/HIE 250 W, 230 V 50 Hz	HSE/HIE 250 W	25000 lm / 19000 lm	16.9 kg	2 x M20 metal thread	1 x M20 NOR 000 005 180 024
	NFMV HSE/HIE 250 W, 240 V 50 Hz	HSE/HIE 250 W	25000 lm / 19000 lm	16.9 kg	2 x M20 metal thread	1 x M20 NOR 000 005 180 025
	NFMV HSE/HIE 400 W, 230 V 50 Hz	HSE/HIE 400 W	48000 lm / 33000 lm	15.5 kg	2 x M20 metal thread	1 x M20 NOR 000 005 180 027
	NFMV HSE/HIE 400 W, 240 V 50 Hz	HSE/HIE 400 W	48000 lm / 33000 lm	15.5 kg	2 x M20 metal thread	1 x M20 NOR 000 005 180 028
NSSFMV						
	NSSFMV SY 150, 230 V 50 Hz M25	150 W HSE	14000 lm	16.9 kg	2 x M25, metal thread	2 x M25 CCL 110 3421
	NSSFMV SY 250, 230 V 50 Hz M25	250 W HSE	25000 lm	17.5 kg	2 x M25, metal thread	2 x M25 CCL 110 3469
	NSSFMV MY 250, 230 V 50 Hz M25	250 W HIE	19000 lm	17.5 kg	2 x M25, metal thread	2 x M25 CCL 110 3470
	NSSFMV SY 400, 230 V 50 Hz M25	400 W HSE	48000 lm	18.6 kg	2 x M25, metal thread	2 x M25 CCL 110 3517
	NSSFMV MY 400, 230 V 50 Hz M25	400 W HIE	33000 lm	18.9 kg	2 x M25, metal thread	2 x M25 CCL 110 3518

¹⁾scope of delivery

Accessories

Type	Content	OU	Rated luminous flux	Order No.
	Slip fitter 2" for pole mounting	1		20 49
	HSE 150 W	high pressure sodium lamp 150 W E40	1	14000 lm NOR 000 000 511 300
	HSE 250 W	high pressure sodium lamp 250 W E40	1	25000 lm CGS 3238 600 P1009
	HSE 400 W	high pressure sodium lamp 400 W E40	1	48000 lm CGS 3238 700 P1009
	HIE 250 W	Metal-halide lamp 250 W	1	17000 lm CGS 323 7990 P1007
	HIE 400 W	Metal-halide lamp 400 W	1	33000 lm CGS 323 7990 P1008

Wire guard and external visor on request for FMV LED

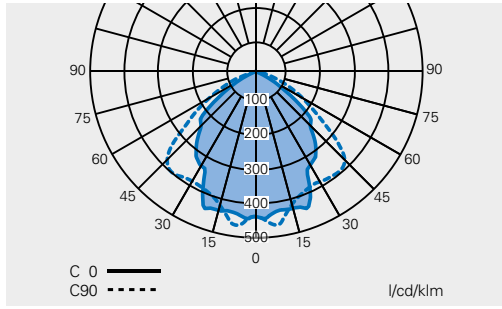
Scope of delivery without lamp and fixing accessories, if not stated otherwise. Metal cable glands see catalogue part 2: 2.3.12 ff

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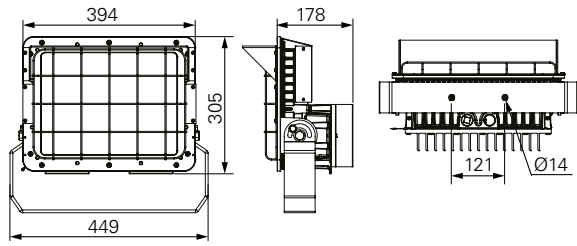
Dimension drawing / Polar curve

FMV LED / nFMV / NSSFMV

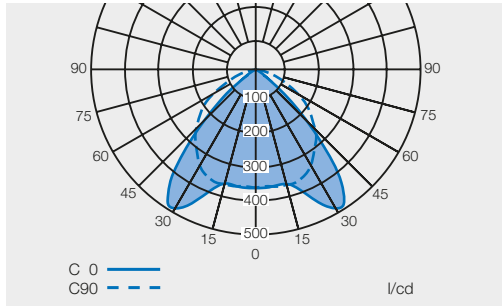
Polar curve FMV LED



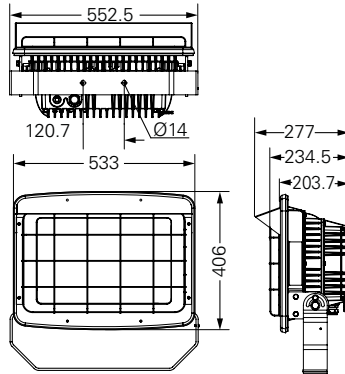
FMV LED



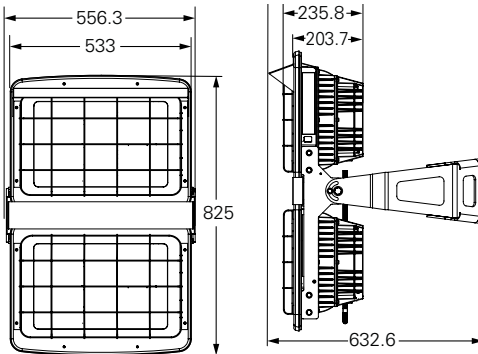
Polar curve nFMV 25L/50L wide beam



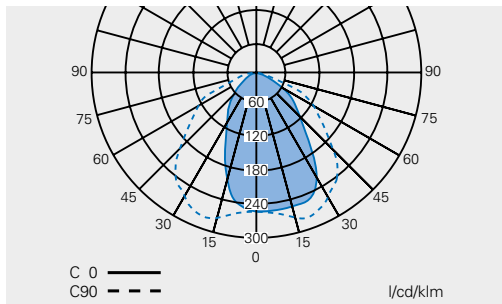
nFMV 25L LED



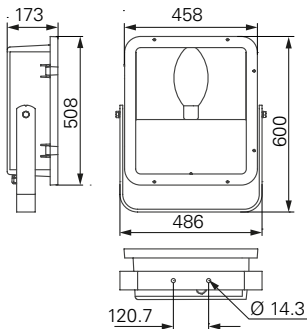
nFMV 50L LED



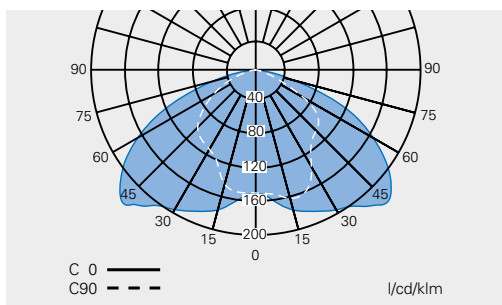
Polar curve NFMV 150 - 400 W



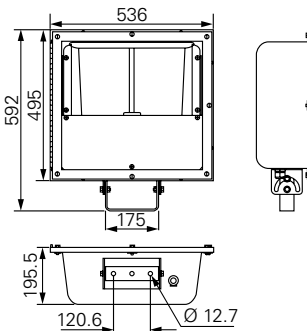
NFMV



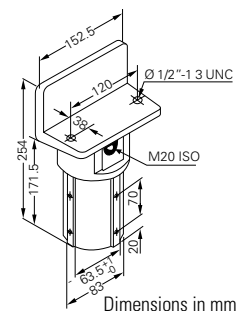
Polar curve NSSFMV



NSSFMV



Slip fitter





Technical data

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	FMV LED	nFMV LED 25/50L
Type Examination Certificate (gas)	DEMKO 15 ATEX 1383X	DEMKO 15 ATEX 1225X
EC-Type Examination Certificate (dust)	DEMKO 15 ATEX 1377X	DEMKO 15 ATEX 1226X
IECEx Certificate of Conformity	IECEx UL 15.0029	IECEx UL 15.0040X
Marking accd. to 2014/34/EU	⊕ II 3 G Ex nA IIC T5/ T4 Gc ⊕ II 2 D Ex tb IIIC T65 °C/T80 °C Db	⊕ II 3 G Ex nA IIC T4 Gc ⊕ II 2 D Ex tb IIIC T76 °C Db IP66
Marking accd. to IECEx	Ex nA IIC T5/T4 Gc Ex tb IIIC T65 °C/T80 °C Db	Ex nA IIC T4 Gc Ta -30 °C to +55 °C Ex tb IIIC T 76 °C Db Ta -30 °C to +40 °
Permissible ambient temperature	-40 °C up to +55 °C	-30 °C bis +55 °C (gas) / -30 °C up to +40 °C (dust)
Lifetime fixture	60,000 h at t _a = +55 °C / 150,000 h at t _a = +25 °C	50,000 h bei t _a = +55 °C / 100,000 h bei t _a = +25 °C
Rated voltage	100 - 277 V AC / 108 - 250 V DC	120 - 277 V AC / 127 - 250 V DC
Frequency	50 - 60 Hz	0/50 - 60 Hz
Power factor cos φ	≥ 0.9	≥ 0.9
Circuit	electronic driver	electronic driver
Protection class	I	I
Lamp / Illuminant	LED System 28 - 131 W	LED System 263 W (NFMV 25L) / LED System 531 W (NFMV 50L)
Light colour / CRI	5000 K / R _a 70, 3000 K / R _a 80 on request	5000 K / R _a 70
Dimensions (L x W x H)	394 x 178 x 305 mm	533 x 204 x 406 mm (NFMV 25L) / 533 x 204 x 825 mm (NFMV 50L)
Connecting terminals	L, N and PE; 2 x 4 mm ²	L, N and PE; 2 x 4 mm ²
Enclosure colour	grey	grey
Enclosure material	light alloy with powder coating	light alloy with powder coating
Weight	14.5 kg	23,6 kg (NFMV 25L) / 48,1 kg (NFMV 50L)
Cable glands / gland plates / enclosure drilling	metal thread 2 x M20 x 1.5, 1 x M20 plugged or metal thread 2 x M25 x 1.5, 1 x M25 plugged	metal thread 2 x M25 x 1.5, 1 x M25 plugged ¹⁾
Type of mounting	mounting bracket	mounting bracket
Degree of protection accd. to EN 60529	IP66	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass

Additional luminaire data

Type	Power	Rated luminous flux of the luminaire (± 10 %)	Temperature class II 3 G	
			TU ≤ 40 °C	TU ≤ 55 °C
FMV LED				
FMV 3L LED	28 W	3189 lm	T5	T4
FMV 5L LED	45 W	5183 lm	T5	T4
FMV 7L LED	62 W	7095 lm	T5	T4
FMV 9L LED	79 W	9132 lm	T5	T4
FMV 11L LED	99 W	11107 lm	T5	T4
FMV 13L LED	112 W	13100 lm	T5	T4
FMV 15L LED	131 W	15181 lm	T5	T4
nFMV 25L LED	263 W	26.240 lm	T4	T4
nFMV 25L LED	531 W	53.890 lm	T4	T4

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Technical data

NFMV / NSSFMV



4 Technical data

	NFMV	NSSFMV
Type Examination Certificate	DEMKO 10 ATEX 0907694	LCIE 11 ATEX 1014 X (Gas) LCIE 11 ATEX 3101 X (Staub)
EC-Type Examination Certificate	DEMKO 10 ATEX 147285	
IECEX Certificate of Conformity		IECEX CQM 12.0004X
Marking accord. to 2014/34/EU	⊕ II 3 G Ex nR II T3 ⊕ II 2 D Ex tD A21 IP66 T ²⁾	⊕ II 3 G Ex nR II T3/T2 ⊕ II 2 D Ex tb IIIC T ²⁾ Db
Marking accord. to IECEx		Ex nR IIC T3/T2 Gc Ex tb IIIC T125°C/T205°C IP66
Permissible ambient temperature	-25 °C up to +55 °C (< 400 W) -25 °C up to +50 °C (400 W)	-45 °C up to +55 °C (≤ 250 W)/ -45 °C up to +50 °C (400 W)
Rated voltage	230 V ¹⁾	230 V ¹⁾
Frequency	50 Hz ¹⁾	50 Hz ¹⁾
Power factor cos φ	≥ 0.9	≥ 0.9
Protection class	I	I
Lamp / Illuminant	HSE/HIE lamp 150 - 400 W	HSE/HIE lamp 150 - 400 W
Lamp cap	E40 accord. IEC 60238	E40 accord. IEC 60238
Rated luminous flux	¹⁾	¹⁾
Light output ratio	60 %	68 %
Dimensions (L x W x H)	600 x 458 x 173 mm	592 x 535 x 193 mm
Connecting terminals	L, N and PE; 2 x 4 mm ²	L, N, PE max. 2 x 2.5 mm ²
Enclosure colour	grey	natural
Enclosure material	light alloy with powder coating	stainless steel
Weight	15.5 kg	16.9 kg
Cable glands / gland plates / enclosure drilling	2 x M20 x 1.5 thread, 1 x M20 plugged	2 x M20 x 1.5 thread, 1 x M20 plugged
Type of mounting	mounting bracket	mounting bracket
Degree of protection accord. to EN 60529	IP66	IP66
Protective cover / protective bowl	borosilicate glass	borosilicate glass

Additional luminaire data NFMV and NSSFMV

Type	Power	Rated luminous flux ³⁾	Temperature class II 3 G			max. surface temp. II 2 D		
			T ₀ ≤ 40 °C	T ₀ ≤ 50 °C	T ₀ ≤ 55 °C	T ₀ ≤ 40 °C	T ₀ ≤ 50 °C	T ₀ ≤ 55 °C
NFMV...								
HSE	150 W	14000 lm	T5	T3	--	T100 °C	T200 °C	--
HSE	250 W	25000 lm	T5	T3	--	T100 °C	T200 °C	--
HIE	250 W	19000 lm	T3		T3	T200 °C		T200 °C
HSE / HIE	400 W	48000 lm / 33000 lm	T3	T3	--	T200 °C	T200 °C	--
NSSFMV...								
HSE	150 W	14000 lm	T4	T3	T3	T125 °C	T135 °C	T140 °C
HSE / HIE	250 W	25000 lm / 19000 lm	T3	T3	T3	T160 °C	T170 °C	T175 °C
HSE / HIE	400 W	48000 lm / 33000 lm	T3	T2	--	T195 °C	T205 °C	--

¹⁾ other frequencies on request

²⁾ see table luminaire data

³⁾ depends on used lamps