



Product Description

MASTER MHN-SA

Compact quartz metal halide lamps with double-pinch

Benefits

- Allows compact and very efficient luminaire systems with high precision optics for good beam control and minimal spill light
- Very good color rendering creates a pleasant ambience with high visual comfort for players and spectators
- Continuous spectral distribution offers a superior solution for (semi-) professional stadiums with regular TV coverage

Features

- Very compact source (Short Arc) with high luminous efficacy and superior color rendering
- Double-pinch concept results in long lifetime
- Natural white color appearance, high color rendering and good color stability
- Daylight color temperature eases transition from daylight to artificial lighting

Application

- Professional sports lighting and floodlighting

Warnings and Safety

- Use only in totally enclosed luminaire, even during testing (IEC61167, IEC 62035, IEC60598)
- The luminaire must be able to contain hot lamp parts if the lamp ruptures
- A lamp breaking is extremely unlikely to have any impact on your health. If a lamp breaks, ventilate the room for 30 minutes and remove the parts, preferably with gloves. Put them in a sealed plastic bag and take it to your local waste facilities for recycling. Do not use a vacuum cleaner.

MASTER MHN-SA

Controls and Dimming

| | |
|----------|----|
| Dimmable | No |
|----------|----|

General Information

| | |
|--------------------|-----|
| Operating Position | P15 |
|--------------------|-----|

Light Technical

| | |
|-------------------------------------|----------|
| Chromaticity Coordinate X (Nom) | 330 |
| Colour Code | 956 |
| Colour Designation | Daylight |
| Correlated Colour Temperature (Nom) | 5600 K |

Mechanical and Housing

| | |
|-------------|-------|
| Bulb Finish | Clear |
| Bulb Shape | TD40 |

Approval and Application

| Order Code | Full Product Name | Energy Consumption kWh/1000 h | Mercury (Hg) Content (Nom) |
|------------|--|-------------------------------|----------------------------|
| 20075400 | MASTER MHN-SA 1800W/956 (P)SFC 230V | 1980 kWh | 92 mg |
| 20076100 | MASTER MHN-SA 1800W/956 (P)SFC 400V | 2035 kWh | 250 mg |
| 20079200 | MASTER MHN-SA 2000W/956 400V XW UNP/1 | 2244 kWh | 225 mg |
| 20106500 | MASTER MHN-SA 1800W/956 230V XW UNP/1 | 1980 kWh | 92 mg |
| 24183600 | MASTER MHN-SA 2000W/956 400V XW HO UNP/1 | 2305 kWh | 215 mg |

Operating and Electrical (1/2)

| Order Code | Full Product Name | Lamp | | | |
|------------|---------------------------------------|--------------------|---------------|---------------|---------------|
| | | Current (EM) (Nom) | Voltage (Max) | Voltage (Min) | Voltage (Nom) |
| 20075400 | MASTER MHN-SA 1800W/956 (P)SFC 230V | 17.3 A | 130 V | 110 V | 120 V |
| 20076100 | MASTER MHN-SA 1800W/956 (P)SFC 400V | 10.5 A | 220 V | 185 V | 205 V |
| 20079200 | MASTER MHN-SA 2000W/956 400V XW UNP/1 | 11.3 A | 220 V | 185 V | 205 V |

| Order Code | Full Product Name | Lamp | | | |
|------------|--|--------------------|---------------|---------------|---------------|
| | | Current (EM) (Nom) | Voltage (Max) | Voltage (Min) | Voltage (Nom) |
| 20106500 | MASTER MHN-SA 1800W/956 230V XW UNP/1 | 17.3 A | 130 V | 110 V | 120 V |
| 24183600 | MASTER MHN-SA 2000W/956 400V XW HO UNP/1 | 11.8 A | 220 V | 185 V | 205 V |

Operating and Electrical (2/2)

| Order Code | Full Product Name | Power (Rated) (Nom) |
|------------|---------------------------------------|---------------------|
| 20075400 | MASTER MHN-SA 1800W/956 (P)SFC 230V | 1800.0 W |
| 20076100 | MASTER MHN-SA 1800W/956 (P)SFC 400V | 1850.0 W |
| 20079200 | MASTER MHN-SA 2000W/956 400V XW UNP/1 | 2040.0 W |

| Order Code | Full Product Name | Power (Rated) (Nom) |
|------------|--|---------------------|
| 20106500 | MASTER MHN-SA 1800W/956 230V XW UNP/1 | 1800.0 W |
| 24183600 | MASTER MHN-SA 2000W/956 400V XW HO UNP/1 | 2095.0 W |

General Information (1/2)

| Order Code | Full Product Name | Cap-Base | Life To 10% | Life To 20% | Life To 50% |
|------------|---------------------------------------|----------|----------------|----------------|----------------|
| | | | Failures (Nom) | Failures (Nom) | Failures (Nom) |
| 20075400 | MASTER MHN-SA 1800W/956 (P)SFC 230V | (P)SFC | 2000 h | 3200 h | 6100 h |
| 20076100 | MASTER MHN-SA 1800W/956 (P)SFC 400V | (P)SFC | 2400 h | 3600 h | 6100 h |
| 20079200 | MASTER MHN-SA 2000W/956 400V XW UNP/1 | X830R | 1400 h | 2100 h | 3700 h |

| Order Code | Full Product Name | Cap-Base | Life To 10% | Life To 20% | Life To 50% |
|------------|--|----------|----------------|----------------|----------------|
| | | | Failures (Nom) | Failures (Nom) | Failures (Nom) |
| 20106500 | MASTER MHN-SA 1800W/956 230V XW UNP/1 | X830R | 2300 h | 3000 h | 5000 h |
| 24183600 | MASTER MHN-SA 2000W/956 400V XW HO UNP/1 | X830R | 2300 h | 3000 h | 5000 h |

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General Information (2/2)

| Order Code | Full Product Name | Life To 5% Failures (Nom) |
|------------|---------------------------------------|---------------------------|
| 20075400 | MASTER MHN-SA 1800W/956 (P)SFC 230V | 1300 h |
| 20076100 | MASTER MHN-SA 1800W/956 (P)SFC 400V | 1700 h |
| 20079200 | MASTER MHN-SA 2000W/956 400V XW UNP/1 | 1000 h |

| Order Code | Full Product Name | Life To 5% Failures (Nom) |
|------------|--|---------------------------|
| 20106500 | MASTER MHN-SA 1800W/956 230V XW UNP/1 | 1800 h |
| 24183600 | MASTER MHN-SA 2000W/956 400V XW HO UNP/1 | 1700 h |

Luminaire Design Requirements

| Order Code | Full Product Name | Bulb Temperature (Max) |
|------------|---------------------------------------|------------------------|
| 20075400 | MASTER MHN-SA 1800W/956 (P)SFC 230V | 980 °C |
| 20076100 | MASTER MHN-SA 1800W/956 (P)SFC 400V | 980 °C |
| 20079200 | MASTER MHN-SA 2000W/956 400V XW UNP/1 | 980 °C |

| Order Code | Full Product Name | Bulb Temperature (Max) |
|------------|--|------------------------|
| 20106500 | MASTER MHN-SA 1800W/956 230V XW UNP/1 | 980 °C |
| 24183600 | MASTER MHN-SA 2000W/956 400V XW HO UNP/1 | 1015 °C |

Light Technical (1/2)

| Order Code | Full Product Name | Chromaticity Coordinate Y (Nom) | Colour | | Lumen Maintenance 1000 h (Nom) | Lumen Maintenance 2000 h (Nom) |
|------------|-------------------------------------|---------------------------------|-----------------------|--------------------------------|--------------------------------|--------------------------------|
| | | | Rendering Index (Nom) | Lumen Maintenance 1000 h (Nom) | | |
| 20075400 | MASTER MHN-SA 1800W/956 (P)SFC 230V | 339 | 86 | 95 % | 91 % | |
| 20076100 | MASTER MHN-SA 1800W/956 (P)SFC 400V | 339 | 86 | 90 % | 81 % | |
| 20079200 | MASTER MHN-SA 2000W/956 | 362 | 85 | 88 % | 79 % | |

| Order Code | Full Product Name | Chromaticity Coordinate Y (Nom) | Colour | | Lumen Maintenance 1000 h (Nom) | Lumen Maintenance 2000 h (Nom) |
|------------|--|---------------------------------|-----------------------|--------------------------------|--------------------------------|--------------------------------|
| | | | Rendering Index (Nom) | Lumen Maintenance 1000 h (Nom) | | |
| | 400V XW UNP/1 | | | | | |
| 20106500 | MASTER MHN-SA 1800W/956 230V XW UNP/1 | 339 | 86 | 92 % | 80 % | |
| 24183600 | MASTER MHN-SA 2000W/956 400V XW HO UNP/1 | 366 | 81 | 96.5 % | 92.5 % | |

Light Technical (2/2)

| Order Code | Full Product Name | Lumen Maintenance 5000 h (Nom) | Luminous Efficacy (rated) (Nom) | Luminous Flux (Rated) (Nom) |
|------------|---------------------------------------|--------------------------------|---------------------------------|-----------------------------|
| 20075400 | MASTER MHN-SA 1800W/956 (P)SFC 230V | 76 % | 86 lm/W | 155000 lm |
| 20076100 | MASTER MHN-SA 1800W/956 (P)SFC 400V | 71 % | 86 lm/W | 160000 lm |
| 20079200 | MASTER MHN-SA 2000W/956 400V XW UNP/1 | 70 % | 98 lm/W | 200000 lm |

| Order Code | Full Product Name | Lumen Maintenance 5000 h (Nom) | Luminous Efficacy (rated) (Nom) | Luminous Flux (Rated) (Nom) |
|------------|--|--------------------------------|---------------------------------|-----------------------------|
| 20106500 | MASTER MHN-SA 1800W/956 230V XW UNP/1 | 60 % | 86 lm/W | 155000 lm |
| 24183600 | MASTER MHN-SA 2000W/956 400V XW HO UNP/1 | 78 % | 108 lm/W | 226000 lm |

