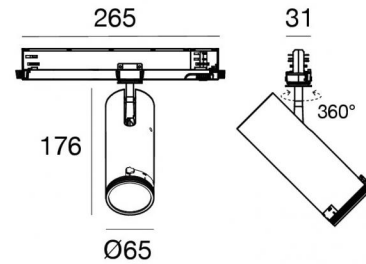




Projectors | 176-264 V AC /176-280 V DC  
1 arrayLED 23 W DC - 26 W AC | CRI 90  
**81990M85**



Technical data	
Type	Track
Installation position	Ceiling
Installation environment	Indoor
Light Source	LED
Circuit structure	arrayLED
Optics	Adjustable Focus
Light emission direction	frontal
Nominal power	23 W DC
Total Power	26 W
Source lumens	3139 lm
Nominal input voltage	220 - 240 V AC
Input voltage range	176 - 264 V AC
Frequency	50 - 60 Hz
CCT / Tone	2700 K
Colour rendering index	90 Ra
C.C. / C.V.	AC
Safety class	2
IP	IP20
Glow wire test	850°
Direct mounting on normally flammable surfaces	Yes
CE	Yes
Driver included	Driver
Dimmable article	DALI-2 - PUSH DIM
Directional	Swivelling
total angle (vertical plane)	90 °
total angle (horizontal plane)	360 °
Tilting	No
Walk-over	No
Drive-over	No
Cable included	No
Resin potting	No
Type of light emission	Single emission
Net weight	0.735 Kg
Electrostatic discharge protection	Yes
Surge protection	2 KV
Optics technology	Anti - Glare

### Finishing casing

Material	Die-cast Aluminium EN AB - 46100
Colour	Black
Processing	Powder coating

The driver contained in the device complies with IEC 61347-2-13 annex J, and can therefore be powered by centralized power systems.



Projectors | 176-264 V AC /176-280 V DC | 1 arrayLED 23 W DC - 26 W AC | CRI 90 | Angle Max  
**81990M85**

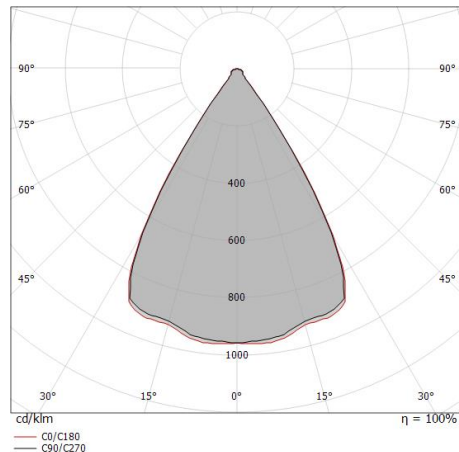
Single emission projectors for indoor application. The super warm white LED light source with a adjustable focus light distribution is composed of 1 arrayed LEDs with CCT of 2700 K and a CRI 90; the source luminous flux is 3139 lm, with a 136.5 lm/W nominal luminous efficacy.

The device body is made of die-cast aluminium en ab - 46100 and features a black finish, processed by means of powder coating. The ingress protection degree is IP20; the total weight is of 0.735 kg.

The total absorbed power is 26 W.

The device features protection class II and can be ceiling-mounted.

Compliant with the EN 60598-1 standard and its specific provisions.



Distance [m]	Cone diameter [m]	illuminance [lx]
0.5	0.63	E(0°) 5225 E(C90) 1596 E(C0) 1605
1.0	1.26	E(0°) 1306 E(C90) 399 E(C0) 401
1.5	1.89	E(0°) 581 E(C90) 177 E(C0) 178
2.0	2.52	E(0°) 327 E(C90) 100 E(C0) 100
2.5	3.15	E(0°) 209 E(C90) 64 E(C0) 64
3.0	3.78	E(0°) 145 E(C90) 44 E(C0) 45

Distance [m] Cone diameter [m] illuminance [lx]

— C0/C180 (Half-peak divergence: 64.6°)  
 — C90/C270 (Half-peak divergence: 64.4°)

### Energy efficiency class

This product contains a light source of energy efficiency class E.

### Illuminotechnical Features

Light Output Ratio (LOR)	43 %
Source lumens	3139 lm
Delivered lumens	1364 lm
Consumption	26 W
Luminaire efficacy	52 lm/W
Colour temperature	2700 K
Standard Deviation of Colour Matching	2 Step MacAdam
Colour rendering index	90 Ra
Colour Rendering Index	60 R9
Black Body Locus	On
Standard Operating Ambient Temperature	-20 / +50°C
Ordinary temperature on the glass	40°C

### LED Life / Failure Ratio

L70 B10 C0 252000h (at Tj 65 Ta 25 )

### UGR

UGR axial	24.1
UGR transversal	24.2
X=4H   Y=8H	S=0.25H
Reflection factor	70/50/20

### OPTICAL

C0/C180 optics	64°
Light distribution simmetry	Symmetrical

### COLOR VECTOR GRAPHIC





Projectors | 176-264 V AC /176-280 V DC | 1 arrayLED 23 W DC - 26 W AC | CRI 90 | Angle

Min

## 81990M85

Single emission projectors for indoor application. The super warm white LED light source with a adjustable focus light distribution is composed of 1 arrayed LEDs with CCT of 2700 K and a CRI 90; the source luminous flux is 3139 lm, with a 136.5 lm/W nominal luminous efficacy.

The device body is made of die-cast aluminium en ab - 46100 and features a black finish, processed by means of powder coating. The ingress protection degree is IP20; the total weight is of 0.735 kg.

The total absorbed power is 26 W.

The device features protection class II and can be ceiling-mounted.

Compliant with the EN 60598-1 standard and its specific provisions.

### Energy efficiency class

This product contains a light source of energy efficiency class E.

### Illuminotechnical Features

Light Output Ratio (LOR)	18 %
Source lumens	3139 lm
Delivered lumens	583 lm
Consumption	26 W
Luminaire efficacy	22 lm/W
Colour temperature	2700 K
Standard Deviation of Colour Matching	2 Step MacAdam
Colour rendering index	90 Ra
Colour Rendering Index	60 R9
Black Body Locus	On
Standard Operating Ambient Temperature	-20 / +50°C
Ordinary temperature on the glass	40°C

### LED Life / Failure Ratio

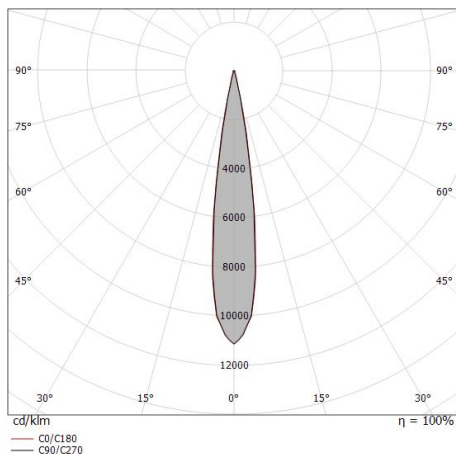
L70 B10 C0 252000h (at Tj 65 Ta 25)

### UGR

UGR axial	14.2
UGR transversal	14.6
X=4H   Y=8H	S=0.25H
Reflection factor	70/50/20

### OPTICAL

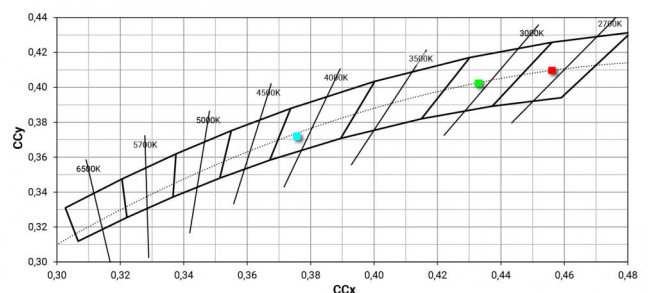
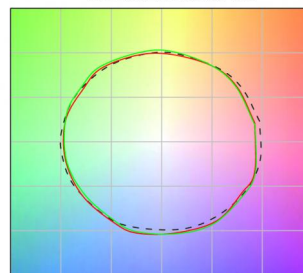
C0/C180 optics	16°
Light distribution simmetry	Symmetrical



Distance [m]	Cone diameter [m]	illuminance [lx]
0.5	0.14 0.15	E(0°) 25960 E(C90) 8.1° 12669 E(C0) 8.3° 12645
1.0	0.28 0.29	E(0°) 6490 E(C90) 8.1° 3167 E(C0) 8.3° 3161
1.5	0.43 0.44	E(0°) 2884 E(C90) 8.1° 1408 E(C0) 8.3° 1405
2.0	0.57 0.58	E(0°) 1623 E(C90) 8.1° 792 E(C0) 8.3° 790
2.5	0.71 0.73	E(0°) 1038 E(C90) 8.1° 507 E(C0) 8.3° 506
3.0	0.85 0.88	E(0°) 721 E(C90) 8.1° 352 E(C0) 8.3° 351

— C0/C180 (Half-peak divergence: 16.6°)  
— C90/C270 (Half-peak divergence: 16.2°)


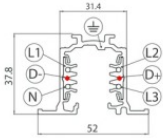
### COLOR VECTOR GRAPHIC


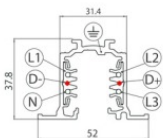



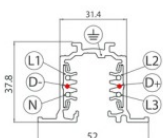



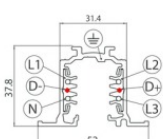
		<p>Track Length: 1000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>83336</td> </tr> </tbody> </table>	Finish	Code	White	83336
Finish	Code						
White	83336						
		<p>Track Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>83337</td> </tr> </tbody> </table>	Finish	Code	White	83337
Finish	Code						
White	83337						
		<p>Track Length: 3000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>83338</td> </tr> </tbody> </table>	Finish	Code	White	83338
Finish	Code						
White	83338						
		<p>Track Length: 1000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>83339</td> </tr> </tbody> </table>	Finish	Code	Black	83339
Finish	Code						
Black	83339						
		<p>Track Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>83340</td> </tr> </tbody> </table>	Finish	Code	Black	83340
Finish	Code						
Black	83340						
		<p>Track Length: 3000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>83341</td> </tr> </tbody> </table>	Finish	Code	Black	83341
Finish	Code						
Black	83341						
		<p>Track - Three-phase Recessed White DALI Track, 1 m (9000-1/W-R) Length: 1000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>80990</td> </tr> </tbody> </table>	Finish	Code	White	80990
Finish	Code						
White	80990						
		<p>Track - Three-phase Recessed White DALI Track, 2 m (9000-2/W-R) Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>80991</td> </tr> </tbody> </table>	Finish	Code	White	80991
Finish	Code						
White	80991						


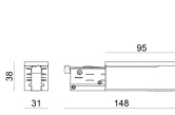



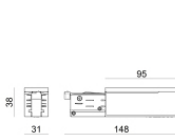
		Track - Three-phase Recessed White DALI Track, 3 m ( 9000-3/W-R)	<b>Finish</b>	<b>Code</b>
		Length: 3000mm; Type of track: Standard. Material:Aluminium, colour:White, processing:Coating.	White	80992


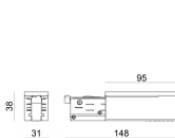
		Track - Three-phase Recessed Grey DALI Track, 1 m (9000-1/B-R)	<b>Finish</b>	<b>Code</b>
		Length: 1000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.	Black	80993


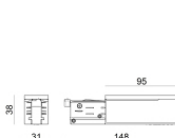
		Track - Three-phase Recessed Black DALI Track, 2 m (9000-1/B-R)	<b>Finish</b>	<b>Code</b>
		Length: 2000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.	Black	80994

		Track - Three-phase Recessed Black DALI Track, 3 m (9000-3/B-R)	<b>Finish</b>	<b>Code</b>
		Length: 3000mm; Type of track: Standard. Material:Aluminium, colour:Black, processing:Coating.	Black	80995

		Power supply - White Right power supply header (9001/W)	<b>Code</b>
		Material:PC, colour:white.	81033

		Power supply - Black Right power supply header (9001/B)	<b>Code</b>
		Material:PC, colour:black.	81034

		Power supply - White left power supply header (9002/W)	<b>Code</b>
		Material:PC, colour:white.	81036

		Power supply - Black left power supply header (9002/B)	<b>Code</b>
		Material:PC, colour:black.	81037



		<p>Junction - White power supply junction - central (9010/W) Type linear. Material:PC, colour:white.</p>	<p><b>Finish</b> White</p>	<p><b>Code</b> 81042</p>
		<p>Junction - Black power supply junction - centrale (9010/B) Type linear. Material:PC, colour:black.</p>	<p><b>Finish</b> Black</p>	<p><b>Code</b> 81043</p>
		<p>Junction - Flexible white junction (9018/W) Type flexible curve. Material:PC, colour:white.</p>	<p><b>Finish</b> White</p>	<p><b>Code</b> 81066</p>
		<p>Junction - Flexible black junction (9018/B) Type flexible curve. Material:PC, colour:black.</p>	<p><b>Finish</b> Black</p>	<p><b>Code</b> 81067</p>
		<p>Junction - Left white T junction - external (9013/W) Type linear. Material:PC, colour:white.</p>	<p><b>Finish</b> White</p>	<p><b>Code</b> 81051</p>
		<p>Junction - Black left T junction - external (9013/B) Type linear. Material:PC, colour:black.</p>	<p><b>Finish</b> Black</p>	<p><b>Code</b> 81052</p>
		<p>Junction - Right white T junction - external (9014/W) Type linear. Material:PC, colour:white.</p>	<p><b>Finish</b> White</p>	<p><b>Code</b> 81054</p>
		<p>Junction - Right black T junction - external (9014/B) Type linear. Material:PC, colour:black.</p>	<p><b>Finish</b> Black</p>	<p><b>Code</b> 81055</p>



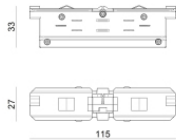
Closing cap - White end cap 9004/W  
Material:PC, colour:white.

**Code**  
80999



Closing cap - Black end cap 9004/B  
Material:PC, colour:black.

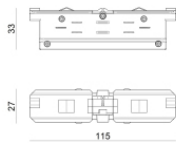
**Code**  
81000



Junction - White electrical junction - internal (9003/W)  
Type linear.  
Material:PC, colour:white.

**Finish**  
White

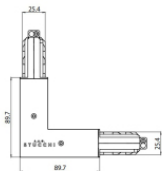
**Code**  
81039



Junction - Black electrical junction - internal (9003/B)  
Type linear.  
Material:PC, colour:black.

**Finish**  
Black

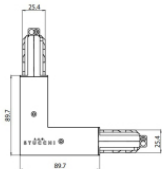
**Code**  
81040



Junction - White L junction - internal (9011/W)  
Type linear.  
Material:PC, colour:white.

**Finish**  
White

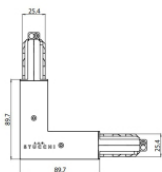
**Code**  
81045



Junction - Black L junction - internal (9011/B)  
Type linear.  
Material:PC, colour:black.

**Finish**  
Black

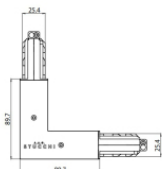
**Code**  
81046



Junction - White L junction - external (9012/W)  
Type linear.  
Material:PC, colour:white.

**Finish**  
White

**Code**  
81048



Junction - Black L junction - external (9012/B)  
Type linear.  
Material:PC, colour:black.

**Finish**  
Black

**Code**  
81049



		<p>Junction - White X junction (9017/W) Type linear. Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>81063</td> </tr> </tbody> </table>	Finish	Code	White	81063
Finish	Code						
White	81063						
		<p>Junction - Black X junction (9017/B) Type linear. Material:PC, colour:black.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>81064</td> </tr> </tbody> </table>	Finish	Code	Black	81064
Finish	Code						
Black	81064						
		<p>Junction - Left white T junction - internal (9015/W) Type linear. Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>81057</td> </tr> </tbody> </table>	Finish	Code	White	81057
Finish	Code						
White	81057						
		<p>Junction - Left black T junction - internal (9015/B) Type linear. Material:PC, colour:black.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>81058</td> </tr> </tbody> </table>	Finish	Code	Black	81058
Finish	Code						
Black	81058						
		<p>Junction - Right White T junction - internal (9016/W) Type linear. Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>White</td> <td>81060</td> </tr> </tbody> </table>	Finish	Code	White	81060
Finish	Code						
White	81060						
		<p>Junction - Right black T junction - internal (9016/B) Type linear. Material:PC, colour:black.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>81061</td> </tr> </tbody> </table>	Finish	Code	Black	81061
Finish	Code						
Black	81061						
		<p>Closing cap - Recessed white end cap 9004-R/W Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Code</th> </tr> </thead> <tbody> <tr> <td>81002</td> </tr> </tbody> </table>	Code	81002		
Code							
81002							
		<p>Closing cap - Recessed black end cap 9004-R/B Material:PC, colour:black.</p>	<table border="1"> <thead> <tr> <th>Code</th> </tr> </thead> <tbody> <tr> <td>81003</td> </tr> </tbody> </table>	Code	81003		
Code							
81003							

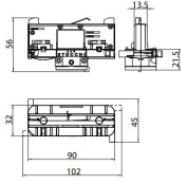




	<p>Ceiling rose - 1.5m white pendant luminaire kit + bracket (9000-KIT5-1,5-W) Material:plastic, colour:white.</p>	<p><b>Code</b> 81012</p>
	<p>Ceiling rose - 1.5m black pendant luminaire kit + bracket ((9000-KIT5-1,5-B) Material:plastic, colour:black.</p>	<p><b>Code</b> 81014</p>
	<p>Ceiling rose - 5m white pendant luminaire kit + bracket (9000-KIT5-5-W) Material:plastic, colour:white.</p>	<p><b>Code</b> 81013</p>
	<p>Ceiling rose - 5m black pendant luminaire kit + bracket (9000-KIT5-5-B) Material:plastic, colour:black.</p>	<p><b>Code</b> 81015</p>
	<p>Suspensions - White rigid suspension 1m (S-9000-P3-W) Material:plastic, colour:white.</p>	<p><b>Code</b> 81021</p>
	<p>Suspensions - Black rigid suspension 1m (S-9000-P3-B) Material:plastic, colour:black.</p>	<p><b>Code</b> 81022</p>
	<p>Bracket - Anodized fixing bracket (S-9000/131) L=35mm, H=14mm, D=24mm. Material:Aluminium, colour:translucent.</p>	<p><b>Finish</b> Anod. Al. <b>Code</b> 81086</p>
	<p>Bracket - White fixing bracket (S-9000/131-W) L=35mm, H=14mm, D=24mm. Material:Aluminium, colour:white, processing:Coating.</p>	<p><b>Finish</b> White <b>Code</b> 81087</p>



		Bracket - Black fixing bracket (S-9000/131-B) L=35mm, H=14mm, D=24mm. Material:Aluminium, colour:Black, processing:Coating.	<b>Finish</b> Black	<b>Code</b> 81088
		Cable cover - White recessed cover (S-9001-R/6-W) Material:PC, colour:white.		<b>Code</b> 81069
		Cable cover - Black recessed cover (S-9001-R/6-B) Material:PC, colour:black.		<b>Code</b> 81070
		Cable cover - White cover for recessed L junction (S-9011-R/6-W) Material:PC, colour:white.		<b>Code</b> 81075
		Cable cover Material:PC, colour:black.		<b>Code</b> 81076
		Cable cover - White cover for recessed X junction (S-9017-R/6-W) Material:PC, colour:white.		<b>Code</b> 81081
		Cable cover - Black cover for recessed X junction (S-9017-R/6-B) Material:PC, colour:black.		<b>Code</b> 81082
		White three-phase adapter (9009-4/W)		<b>Code</b> 81091



Black three-phase adapter (9009-4/B)

**Code**  
81093



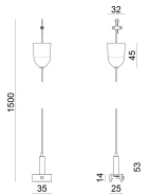
Tool - Cutter S-9000/T

**Code**  
81005



Suspensions - 1.5m white pendant luminaires kit (9000-KIT3-1,5-W)  
Material:plastic, colour:white.

**Code**  
81006



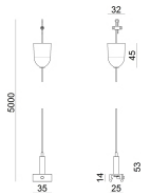
Suspensions - 1.5m black pendant luminaires kit (9000-KIT3-1,5-B)  
Material:plastic, colour:black.

**Code**  
81008



Suspensions - 5m white pendant luminaires kit (9000-KIT3-5-W)  
Material:plastic, colour:white.

**Code**  
81007



Suspensions - 5m black pendant luminaires kit (9000-KIT3-5-B)  
Material:plastic, colour:black.

**Code**  
81009



Suspensions - White rigid suspension clip (S-9000-P2-W)  
Material:plastic, colour:white.

**Code**  
81018



Suspensions - Black rigid suspension clip (S-9000-P2-B)  
Material:plastic, colour:black.

**Code**  
81019

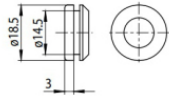


		<p>Bracket - Anodized stiffening bracket (S-9000/333) L=180mm, H=24mm, D=26mm. Material:Aluminium, colour:Anodised Aluminum, processing:Anodisation.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td></td> <td>81024</td> </tr> </tbody> </table>	Finish	Code		81024
Finish	Code						
	81024						
		<p>Bracket - White stiffening bracket (S-9000/333-W) L=180mm, H=24mm, D=20mm. Material:Aluminium, colour:white RAL 9010, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td></td> <td>81025</td> </tr> </tbody> </table>	Finish	Code		81025
Finish	Code						
	81025						
		<p>Bracket - Black stiffening bracket (S-9000/333-B) L=180mm, H=24mm, D=20mm. Material:Aluminium, colour:black RAL 9005, processing:Coating.</p>	<table border="1"> <thead> <tr> <th>Finish</th> <th>Code</th> </tr> </thead> <tbody> <tr> <td></td> <td>81026</td> </tr> </tbody> </table>	Finish	Code		81026
Finish	Code						
	81026						
		<p>Cable cover - White cover for recessed junction (S-9010-R/6-W) Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Code</th> </tr> </thead> <tbody> <tr> <td>81072</td> </tr> </tbody> </table>	Code	81072		
Code							
81072							
		<p>Cable cover - Black cover for recessed junction (S-9010-R/6-B) Material:PC, colour:black.</p>	<table border="1"> <thead> <tr> <th>Code</th> </tr> </thead> <tbody> <tr> <td>81073</td> </tr> </tbody> </table>	Code	81073		
Code							
81073							
		<p>Cable cover - White cover for recessed T junction (S-9013-R/6-W) Material:PC, colour:white.</p>	<table border="1"> <thead> <tr> <th>Code</th> </tr> </thead> <tbody> <tr> <td>81078</td> </tr> </tbody> </table>	Code	81078		
Code							
81078							
		<p>Cable cover - Black cover for recessed T junction (S-9013-R/6-B) Material:PC, colour:black.</p>	<table border="1"> <thead> <tr> <th>Code</th> </tr> </thead> <tbody> <tr> <td>81079</td> </tr> </tbody> </table>	Code	81079		
Code							
81079							
		<p>Cable cover Material:white.</p>	<table border="1"> <thead> <tr> <th>Code</th> </tr> </thead> <tbody> <tr> <td>83249</td> </tr> </tbody> </table>	Code	83249		
Code							
83249							



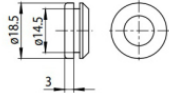
Cable cover  
Material:black, colour:black.

**Code**  
83250



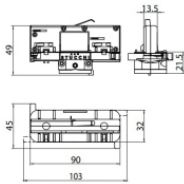
Closing cap - White gasket (S-9001/115-W)  
Material:white.

**Code**  
81084



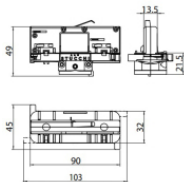
Closing cap - Black gasket (S-9001/115-B)  
Material:black, colour:black.

**Code**  
81085



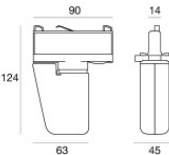
White three-phase/DALI adapter (9009/W)

**Code**  
81094



Black three-phase/DALI adapter (9009/B)

**Code**  
81095



Electronic accessory - TWIL-DALI controller for devices with DALI protocol installed on three-phase track.  
installation position: ceiling L=90mm, H=124mm, D=45mm.  
Material:ABS Plastic, colour:black.

**Code**  
C-E700008