



The Ex d IIC stations and controllers are suitable for the control and signalling of devices installed both "onboard" the machine and remotely (e.g. on a field control column). They are easily installed using wall mount lugs and have threaded entries for connection by means of a cable gland or metal pipe.

Used specifically in offshore and onshore environments, the chemical, petrochemical and pharmaceutical industries, and all locations which require an explosion proof system.

The switches, circuit breakers and selectors which make up the CSC series are 16 A rotary type with a front control handle. Supplied with 1" Male to 3/4" Female reducer. They are recommended for controlling devices both on board machine and on wall mounted columns. The various available cable arrangements make devices in the CSC series versatile for any type of use.

U labels its products with a non-removable adhesive label featuring a hologram and an alphanumerical univocal code, as a safety measure against the illegal sale of fakes so that all the products are guaranteed as original. Non-compliance with the International standards entails serious risks for the environment, especially for those working daily on the plants.

## Sectors of application:



Petroleum refineries



Chemical and petrochemical plants



Onshore plants



Offshore plants



Petroleum loading/unloading pontoons



Low temperatures



Mining operations

## CERTIFICATION DATA

### Classification:

Group II

Category 2GD/M2

### Installation: EN 60079.14

zone 1 - zone 2 (Gas)

zone 21 - zone 22 (Dust)

### Marking:

CE 0722 Ex I M2 Ex db I Mb (stainless steel and cast iron ONLY)

CE 0722 Ex II 2 GD; Ex db IIC T...°C Gb; Ex tb IIIC T...°C Db

### Certificate:

ATEX CESI 01 ATEX 092 X

IEC Ex CES 17.0001X

TR CU AVAILABLE

For all IEC Ex and TR CU certification data,

### Standards:

CENELEC EN 60079-0: 2012, EN 60079-0/A11: 2013, EN 60079-1: 2014 EN60079-31 2014 and European Directive 2014/34/EU

IEC 60079-0: 2011, IEC 60079-1: 2014, IEC 60079-31: 2013

RoHS Directive 2002/95/EC.

### Temperature class:

T6 (Ta +40°C)

T5 (Ta +55°C)

### Ambient Temp.:

-20°C +55°C

Standard

-50°C +55°C

Only for group II. The Group II monitoring and signalling units, equipped with polycarbonate signalling lenses, are limited to -40°C

### Degree of protection:

IP66

## CSC Series... Switches, selectors and circuit breaker



### EXPLODED VIEW



### DESCRIPTION

The switches, circuit breakers and selectors which make up the CSC series are 16 A rotary type with a front control handle. Supplied with 1" Male to 3/4" Female reducer

### MECHANICAL FEATURES

<b>Body and lid:</b>	Low copper content aluminium alloy, complete with wall fastening lugs.
<b>Gaskets:</b>	Acid, hydrocarbon and high temperature resistant silicon positioned between the body and the cover
<b>Control lever:</b>	Coated aluminium alloy
<b>Certification label:</b>	Adhesive affixed to external surface
<b>Badge:</b>	Anodised aluminium, white lettering on black background
<b>Internal bushing and pin:</b>	Stainless steel
<b>Control lever:</b>	Aluminium alloy
<b>Screws:</b>	Stainless steel
<b>Earth screw:</b>	Internal M5 on body and lid connected by a 2.5 mm <sup>2</sup> wire
<b>Coating:</b>	Polyester RAL 7035 (Light grey)
<b>Threaded entries:</b>	One upper and one lower Ø 1" complete with Male 1"- Female 3/4" adapter

#### Resistenza alla corrosione:

The STANDARD of the aluminium alloy used by manufacturer has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

### ELECTRICAL FEATURES

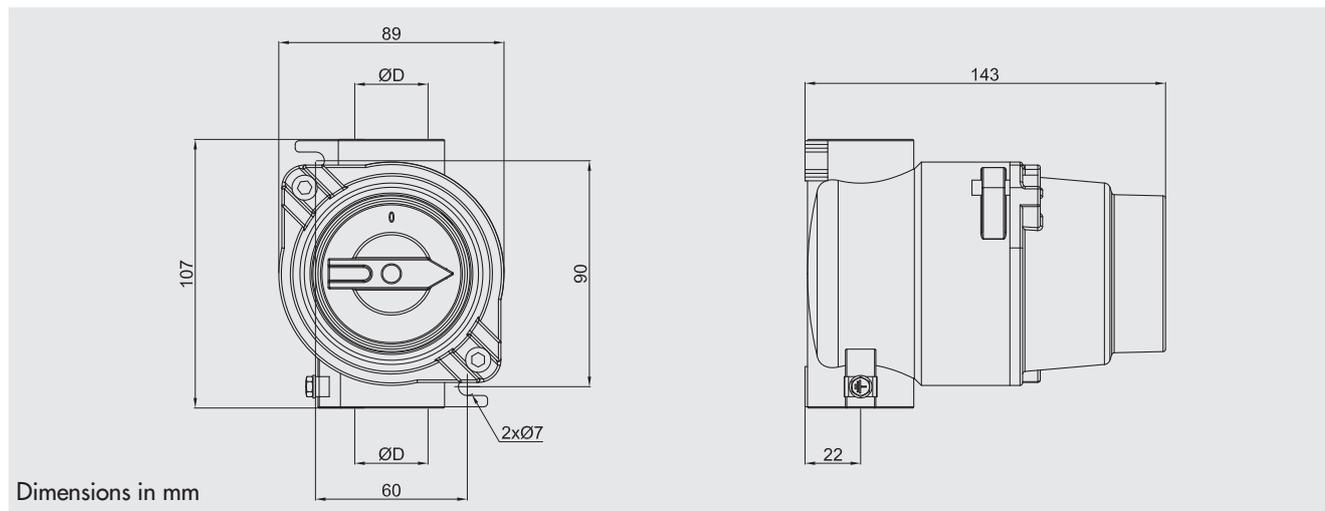
**Switches:** 16A, 690 V

### ACCESSORIES UPON REQUEST / SPECIAL REQUESTS

RAL 2004 (Pure orange) internal anti-condensation coating  
 External polyester coatings in various colours (specify RAL colour)  
 Stainless steel version (sample code CSC-216IN)  
 Cast iron version (sample code CSC-216GJ)  
 Cablegland / fittings



## DIMENSIONAL DRAWING



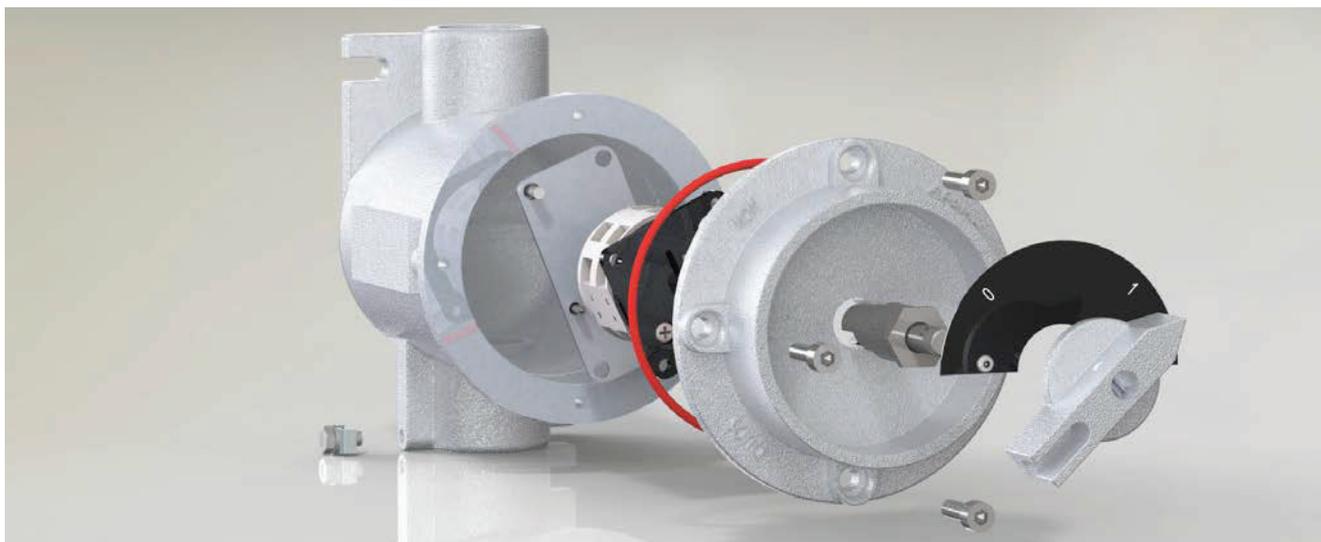
## SELECTION TABLE

Illustration	Entry ØD (*)	Description	Badge	Arrangement	Capacity	Poles	Weight Kg	Code																									
	1" ISO 7/1	Switch with 2 fixed positions '0-1'		<table border="1"> <thead> <tr> <th>POS.</th> <th colspan="2">CONTACT</th> </tr> <tr> <th></th> <th>1-2</th> <th>3-4</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>O</td> <td>O</td> </tr> <tr> <td>1</td> <td>X</td> <td>X</td> </tr> </tbody> </table>	POS.	CONTACT			1-2	3-4	0	O	O	1	X	X	16 A	2	0.95	<b>CSC-216</b>													
	POS.				CONTACT																												
	1-2	3-4																															
0	O	O																															
1	X	X																															
1" NPT	<b>CSC-216N</b>																																
	1" ISO 7/1	Switch with 2 fixed positions '0-1'		<table border="1"> <thead> <tr> <th>POS.</th> <th colspan="3">CONTACT</th> </tr> <tr> <th></th> <th>1-2</th> <th>3-4</th> <th>5-6</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>O</td> <td>O</td> <td>O</td> </tr> <tr> <td>1</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>	POS.	CONTACT				1-2	3-4	5-6	0	O	O	O	1	X	X	X	16 A	3	0.86	<b>CSC-316</b>									
	POS.				CONTACT																												
	1-2	3-4	5-6																														
0	O	O	O																														
1	X	X	X																														
1" NPT	<b>CSC-316N</b>																																
	1" ISO 7/1	Switch with 2 fixed positions '0-1'		<table border="1"> <thead> <tr> <th>POS.</th> <th colspan="4">CONTACT</th> </tr> <tr> <th></th> <th>1-2</th> <th>3-4</th> <th>5-6</th> <th>7-8</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> </tr> <tr> <td>1</td> <td>X</td> <td>X</td> <td>X</td> <td>X</td> </tr> </tbody> </table>	POS.	CONTACT					1-2	3-4	5-6	7-8	0	O	O	O	O	1	X	X	X	X	16 A	4	0.85	<b>CSC-416</b>					
	POS.				CONTACT																												
	1-2	3-4	5-6	7-8																													
0	O	O	O	O																													
1	X	X	X	X																													
1" NPT	<b>CSC-416N</b>																																
	1" ISO 7/1	Switch with 3 fixed positions '1-0-2'		<table border="1"> <thead> <tr> <th>POS.</th> <th colspan="4">CONTACT</th> </tr> <tr> <th></th> <th>1-2</th> <th>3-4</th> <th>5-6</th> <th>7-8</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>X</td> <td>O</td> <td>X</td> <td>O</td> </tr> <tr> <td>0</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> </tr> <tr> <td>2</td> <td>O</td> <td>X</td> <td>O</td> <td>X</td> </tr> </tbody> </table>	POS.	CONTACT					1-2	3-4	5-6	7-8	1	X	O	X	O	0	O	O	O	O	2	O	X	O	X	16 A	2	0.89	<b>CSCC-216</b>
	POS.				CONTACT																												
	1-2	3-4	5-6	7-8																													
1	X	O	X	O																													
0	O	O	O	O																													
2	O	X	O	X																													
1" NPT	<b>CSCC-216N</b>																																
	1" ISO 7/1	Switch with 3 fixed positions '1-2'		<table border="1"> <thead> <tr> <th>POS.</th> <th colspan="2">CONTACT</th> </tr> <tr> <th></th> <th>1-2</th> <th>3-4</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>X</td> <td>O</td> </tr> <tr> <td>2</td> <td>O</td> <td>X</td> </tr> </tbody> </table>	POS.	CONTACT			1-2	3-4	1	X	O	2	O	X	16 A	2	0.89	<b>CSCD-216</b>													
	POS.				CONTACT																												
	1-2	3-4																															
1	X	O																															
2	O	X																															
1" NPT	<b>CSCD-216N</b>																																
	1" ISO 7/1	Inverter with 3 fixed positions '1-0-2'		<table border="1"> <thead> <tr> <th>POSITION</th> <th colspan="4">CONTACT</th> </tr> <tr> <th></th> <th>1-2</th> <th>3-4</th> <th>5-6</th> <th>7-8</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>O</td> <td>X</td> <td>X</td> <td>O</td> </tr> <tr> <td>0</td> <td>O</td> <td>O</td> <td>O</td> <td>O</td> </tr> <tr> <td>2</td> <td>X</td> <td>O</td> <td>O</td> <td>X</td> </tr> </tbody> </table>	POSITION	CONTACT					1-2	3-4	5-6	7-8	1	O	X	X	O	0	O	O	O	O	2	X	O	O	X	16 A	2	0.89	<b>CSCI-216</b>
	POSITION				CONTACT																												
	1-2	3-4	5-6	7-8																													
1	O	X	X	O																													
0	O	O	O	O																													
2	X	O	O	X																													
1" NPT	<b>CSCI-216N</b>																																

\* Supplied with 1" Male to 3/4" Female reducer



### EXPLODED VIEW



The switches, circuit breakers and selectors which make up the EFSCO series are 25, 32, 40 and 63 A rotary type with a front control handle.

### MECHANICAL FEATURES

<b>Body and lid:</b>	Low copper content aluminium alloy, complete with wall fastening lugs.
<b>Gaskets:</b>	Acid, hydrocarbon and high temperature resistant silicon positioned between the body and the cover
<b>Control lever:</b>	Coated aluminium alloy
<b>Certification label:</b>	Adhesive affixed to external surface
<b>Badge:</b>	Anodised aluminium, white lettering on black background
<b>Internal bushing and pin:</b>	Stainless steel
<b>Screws:</b>	Stainless steel
<b>Earth screw:</b>	Internal M5 on body and lid connected by a 2.5 mm <sup>2</sup> wire
<b>Coating:</b>	Polyester RAL 7035 (Light grey)
<b>Resistenza alla corrosione:</b>	The STANDARD of the aluminium alloy used by manufacturer has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

### ELECTRICAL FEATURES

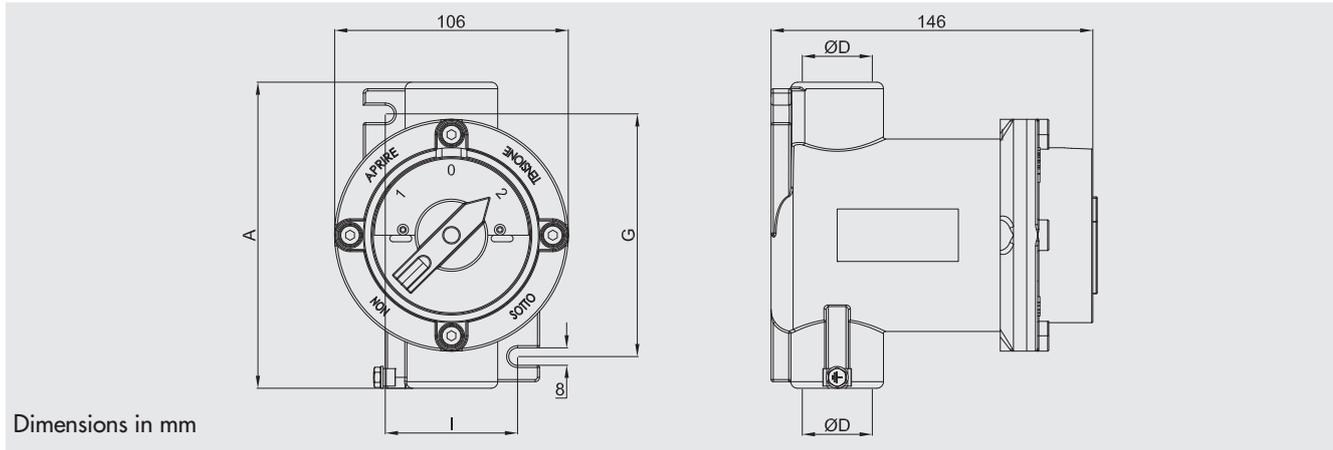
**Switches:** 25 A to 63 A, 690 V

### ACCESSORIES UPON REQUEST / SPECIAL REQUESTS

RAL 2004 (Pure orange) internal anti-condensation coating  
 External polyester coatings in various colours (specify RAL colour)  
 Stainless steel version (sample code EFSCO-266IN)  
 Cablegland / fittings



## DIMENSIONAL DRAWING



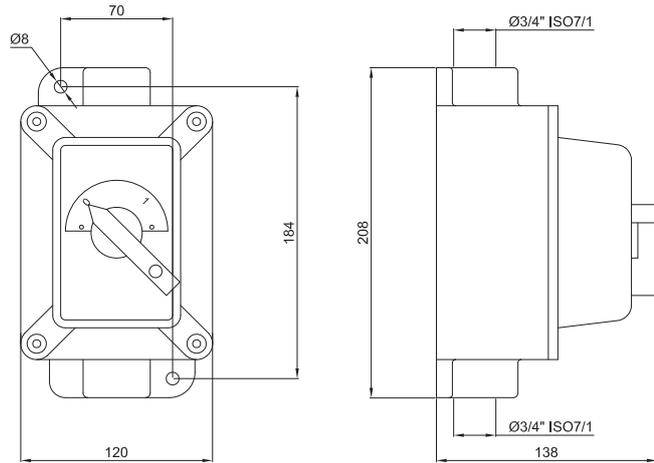
Dimensions in mm

## CODE SELECTION TABLE

Illustration	Entry D ISO7/1	A	G	I	Description	Arrangement	Capacity	Poles	Weight Kg	Code																			
	1"	140	110	60	Switch with 2 fixed positions '0-1'	<table border="1"> <tr><th>POS.</th><th colspan="3">CONTACT</th></tr> <tr><td>0</td><td>O</td><td>O</td></tr> <tr><td>1</td><td>X</td><td>X</td></tr> </table>	POS.	CONTACT			0	O	O	1	X	X	25 A	2	1.14	<b>EFSCO-22</b>									
	POS.	CONTACT																											
	0	O	O																										
	1	X	X																										
	1"	140	110	60			32 A	2	1.20	<b>EFSCO-32</b>																			
	1"	140	110	60			40 A	2	1.35	<b>EFSCO-42</b>																			
	1 1/2"	160	120	80	63 A	2	1.35	<b>EFSCO-62</b>																					
	1"	140	110	60	Switch with 2 fixed positions '0-1'	<table border="1"> <tr><th>POS.</th><th colspan="3">CONTACT</th></tr> <tr><td>0</td><td>O</td><td>O</td><td>O</td></tr> <tr><td>1</td><td>X</td><td>X</td><td>X</td></tr> </table>	POS.	CONTACT			0	O	O	O	1	X	X	X	25 A	3	1.14	<b>EFSCO-23</b>							
	POS.	CONTACT																											
	0	O	O	O																									
	1	X	X	X																									
	1"	140	110	60	32 A	3	1.20	<b>EFSCO-33</b>																					
1"	140	110	60	40 A	3	1.35	<b>EFSCO-43</b>																						
1 1/2"	160	120	80	63 A	3	1.40	<b>EFSCO-63</b>																						
1"	140	110	60	Switch with 2 fixed positions '0-1'	<table border="1"> <tr><th>POS.</th><th colspan="4">CONTACT</th></tr> <tr><td>0</td><td>O</td><td>O</td><td>O</td><td>O</td></tr> <tr><td>1</td><td>X</td><td>X</td><td>X</td><td>X</td></tr> </table>	POS.	CONTACT				0	O	O	O	O	1	X	X	X	X	25 A	4	1.18	<b>EFSCO-24</b>					
POS.	CONTACT																												
0	O	O	O			O																							
1	X	X	X			X																							
1"	140	110	60	32 A	4	1.20	<b>EFSCO-34</b>																						
1"	140	110	60	40 A	4	1.35	<b>EFSCO-44</b>																						
1 1/2"	160	120	80	63 A	4	1.40	<b>EFSCO-64</b>																						
	1"	140	110	60	Circuit breaker with 2 fixed positions '1-2'	<table border="1"> <tr><th>POS.</th><th colspan="2">CONTACT</th></tr> <tr><td>1</td><td>X</td><td>O</td></tr> <tr><td>2</td><td>O</td><td>X</td></tr> </table>	POS.	CONTACT		1	X	O	2	O	X	25 A	1	1.20	<b>EFSCO-26</b>										
	POS.	CONTACT																											
	1	X	O																										
	2	O	X																										
	1"	140	110	60			32 A	1	1.18	<b>EFSCO-36</b>																			
	1"	140	110	60			40 A	1	1.20	<b>EFSCO-46</b>																			
1"	140	110	60	63 A	1	1.40	<b>EFSCO-66</b>																						
1"	140	110	60	Circuit breaker with 2 fixed positions '1-2'	<table border="1"> <tr><th>POS.</th><th colspan="4">CONTACT</th></tr> <tr><td>0</td><td>X</td><td>O</td><td>X</td><td>O</td></tr> <tr><td>1</td><td>O</td><td>X</td><td>O</td><td>X</td></tr> </table>	POS.	CONTACT				0	X	O	X	O	1	O	X	O	X	25 A	2	1.18	<b>EFSCO-266</b>					
POS.	CONTACT																												
0	X	O	X	O																									
1	O	X	O	X																									
1"	140	110	60	32 A	2	1.18	<b>EFSCO-366</b>																						
1 1/2"	160	120	80	40 A	2	1.20	<b>EFSCO-466</b>																						
	1"	140	110	60	Switch with 3 fixed positions '1-0-2'	<table border="1"> <tr><th>POS.</th><th colspan="2">CONTACT</th></tr> <tr><td>1</td><td>X</td><td>O</td></tr> <tr><td>0</td><td>O</td><td>O</td></tr> <tr><td>2</td><td>O</td><td>X</td></tr> </table>	POS.	CONTACT		1	X	O	0	O	O	2	O	X	25 A	1	1.14	<b>EFSCO-242</b>							
	POS.	CONTACT																											
	1	X	O																										
	0	O	O																										
	2	O	X																										
	1"	140	110	60			32 A	1	1.18	<b>EFSCO-342</b>																			
	1"	140	110	60			40 A	1	1.18	<b>EFSCO-442</b>																			
	1"	140	110	60			63 A	1	1.40	<b>EFSCO-642</b>																			
1"	140	110	60	Switch with 3 fixed positions '1-0-2'	<table border="1"> <tr><th>POS.</th><th colspan="4">CONTACT</th></tr> <tr><td>1</td><td>X</td><td>O</td><td>X</td><td>O</td></tr> <tr><td>0</td><td>O</td><td>O</td><td>O</td><td>O</td></tr> <tr><td>2</td><td>O</td><td>X</td><td>O</td><td>X</td></tr> </table>	POS.	CONTACT				1	X	O	X	O	0	O	O	O	O	2	O	X	O	X	25 A	2	1.14	<b>EFSCO-244</b>
POS.	CONTACT																												
1	X	O	X			O																							
0	O	O	O	O																									
2	O	X	O	X																									
1"	140	110	60	32 A	2	1.18	<b>EFSCO-344</b>																						
1 1/2"	160	120	80	40 A	2	1.18	<b>EFSCO-444</b>																						



## DIMENSIONAL DRAWING



## DESCRIPTION

EFD3 series three pole, magnetothermic breakers are used for control (start - stop) and protection of three-phase motors. Circuit breaker with adjustable magnetothermic protection and external control handle.

## MECHANICAL FEATURES

- Body and lid:** Rectangular casing constructed from low copper content aluminium alloy, complete with wall fastening lugs.
- Gaskets:** Acid, hydrocarbon and high temperature resistant silicon positioned between the body and the cover
- Control levers:** Coated aluminium alloy
- ON - OFF plate:** Stainless steel
- Certification label:** Adhesive affixed to external surface
- Screws:** Stainless steel
- Earth screw:** Internal M5 on body and lid connected to each other with a 2.5 mm<sup>2</sup> wire
- Coating:** Polyester RAL 7035 (Light grey)
- Threaded entries:** One upper and one lower Ø 3/4"

### Resistenza alla corrosione :

The STANDARD of the aluminium alloy used by manufacturer has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

## CODE SELECTION TABLE

Illustration	Rated current (A)	Temperature range (A)	Weight Kg	Codes
	0.25	0.16 0.25	2.25	EFD3-02
	0.40	0.25 0.40	2.25	EFD3-04
	0.60	0.40 0.60	2.52	EFD3-06
	1.00	0.60 1.00	2.52	EFD3-10
	1.60	1.00 1.60	2.52	EFD3-16
	2.50	1.60 2.50	2.52	EFD3-25
	4.00	2.50 4.00	2.52	EFD3-40
	6.00	4.00 6.00	2.52	EFD3-63
	10.00	6.00 10.00	2.52	EFD3-100
	16.00	10.00 16.00	2.52	EFD3-160
	20.00	16.00 20.00	2.52	EFD3-200
	25.00	20.00 25.00	2.52	EFD3-250