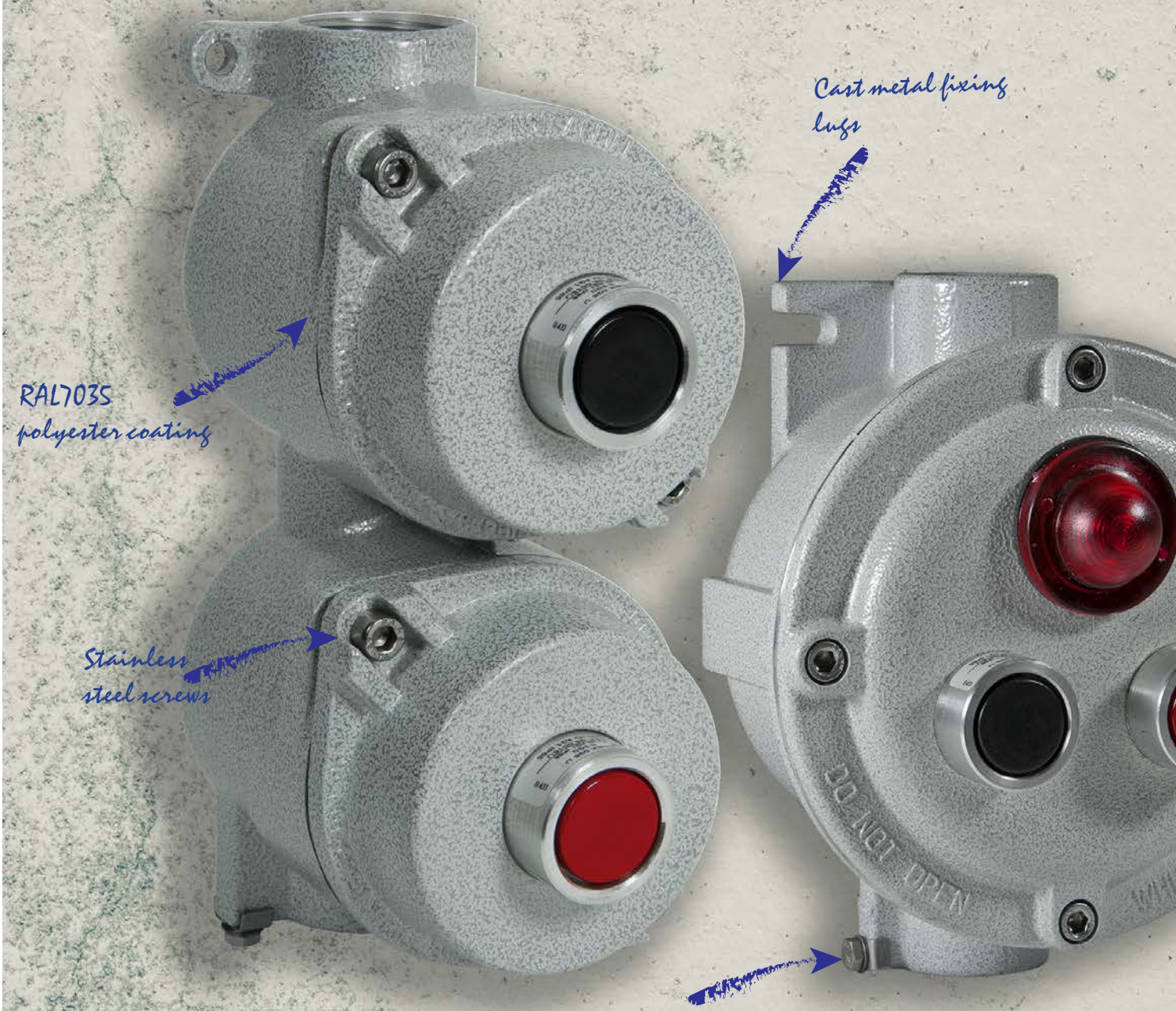
CSC, EFSCO, EFDC, EMHA

Command and control stations 'Ex d'

- Group IIC
- Zone 1, 2, 21, 22
- Aluminium alloy, stainless steel or cast iron enclosures
- Category 2GD or M2



CORTEM GROUP®

CSC Series... Control and signalling station

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.

Cortem Group 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

100% produced by Cortem

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	For all IEC Ex and TR CU certification data, download the certificate from www.cortemgroup.com		
	TR CU AVAILABLE			
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			

A QR reader is required to access the information contained in the QRCode. Centre the QR code in the frame of your Smartphone camera. Your Smartphone will open the corresponding address.

ATEX Certificate

IECEx Certificate

Use and maintenance instructions

CSC Series... Control and signalling station

CROSS-SECTION VIEW

MECHANICAL FEATURES OF ENCLOSURES

Body and lid:	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
Instrument casing:	Borosilicate glass
Certification label:	Adhesive affixed to external surface
Screws:	Stainless steel
Earth screw:	Internal M5 on body and lid connected by a 2.5 mm^2 wire
Coating:	Polyester RAL 7035 (Light grey)
Threaded entries:	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 Cortem has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

MECHANICAL FEATURES OF CONTROL AND SIGNALLING DEVICES

Pushbutton:	Coloured nylon
Illuminated pushbutton:	Clear coloured polycarbonate
Control levers:	Coated aluminium alloy
Badge:	Anodised aluminium, white lettering on black background
Internal bushing and pin:	Stainless steel
Gaskets:	Acid and hydrocarbon resistant NBR
Coating:	Polyester RAL 7035 (Light grey), where applicable
Station assembly:	Screwed onto cover
Contacts assembly:	Snap action on an appropriate flange to ensure the quick connection of entire contacts block to the station
External body lens:	Impact and UV resistant polycarbonate lens, coloured or transparent

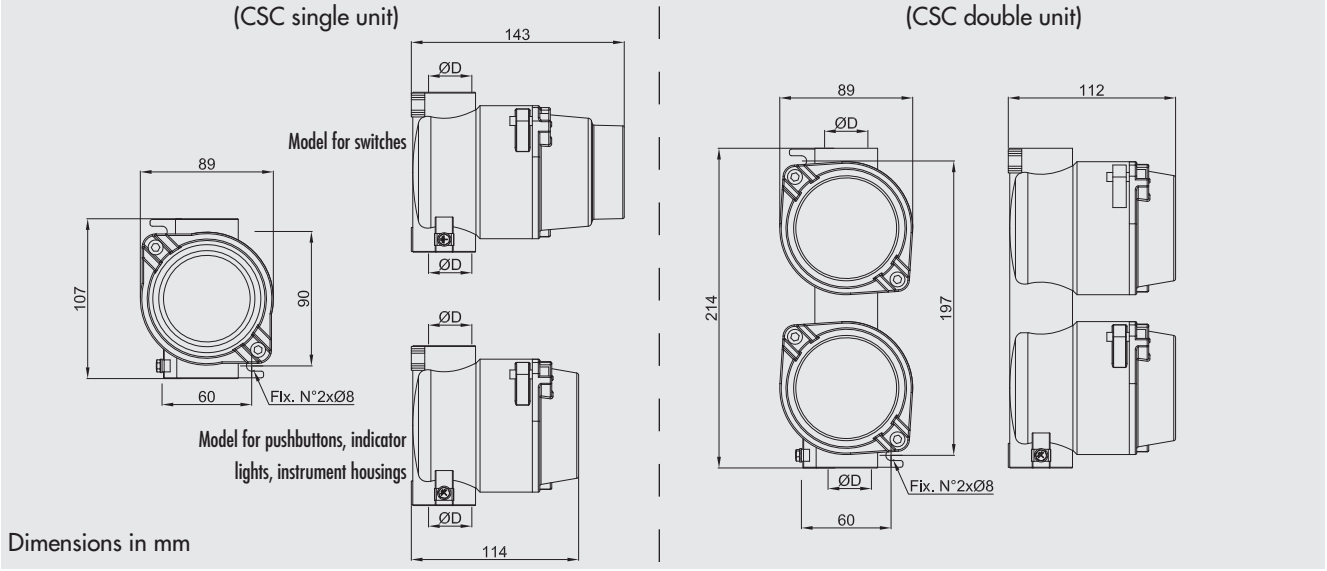
ELECTRICAL FEATURES

Contacts for pushbuttons:	Max. 10A 600 V
Switches:	16A, 690 V
Indicator lights:	24/250V, 3W
Analogue instruments:	600V

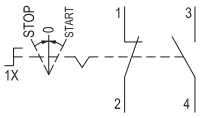
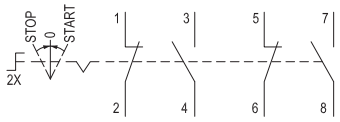
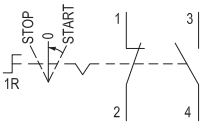
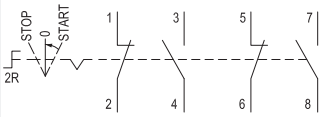
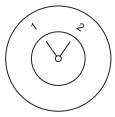
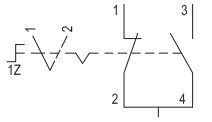
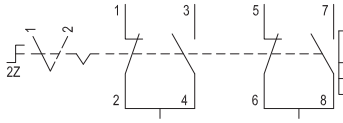
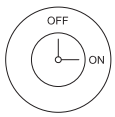
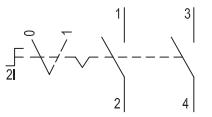
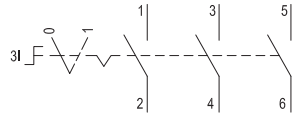
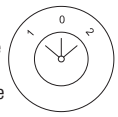
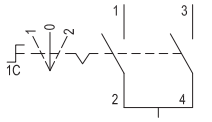
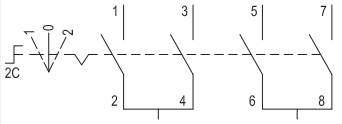
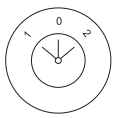
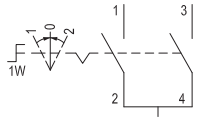
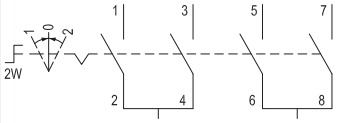
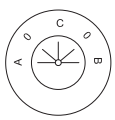
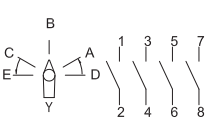
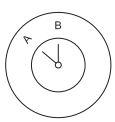
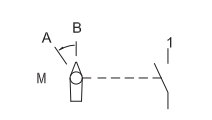
ACCESSORIES UPON REQUEST / SPECIAL REQUESTS

RAL 2004 (Pure orange) internal anti-condensation coating
External polyester coatings in various colours (specify RAL colour)
Stainless steel or cast iron version available with minimum production batches. Contact your sales representative for more details. (sample code stainless steel CSC-D**IN,** cast iron sample code CSC-D**GJ**)
Cablegland / fittings
System protecting against accidental operation for mushroom-head push-buttons serie CSC-R (code **M-990**)

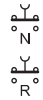
DIMENSIONAL DRAWING



SELECTOR ARRANGEMENT

Description	Badge	Single pole arrangement	Contacts	Single pole arrangement	Contacts	Codes
Motors "start-stop" control, with spring return to 0 from both STOP and START.			POS. | CONTACT 1-2 3-4 STOP O O 0 X O START X X		POS. | CONTACT 1-2 3-4 5-6 7-8 STOP O O O O 0 X O X O START X X X X	X
Motors "start-stop" control with spring return from START to 0, and in fixed STOP position can be padlocked.			POS. | CONTACT 1-2 3-4 STOP O O 0 X O START X X		POS. | CONTACT 1-2 3-4 5-6 7-8 STOP O O O O 0 X O X O START X X X X	R
Switch with two fixed-positions, suitable for "automatic-manual" service			POS. | CONTACT 1-2 3-4 0 X O 1 O X		POS. | CONTACT 1-2 3-4 5-6 7-8 0 X O X O 1 O X O X	Z
Switch			POS. | CONTACT 1-2 3-4 0 O O 1 X X		POS. | CONTACT 1-2 3-4 5-6 0 O O O 1 X X X	I
Three fixed position switch can be padlocked in the centre position. Versions: single pole - double pole - triple pole			POS. | CONTACT 1-2 3-4 1 X O 0 O O 2 O X		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	C
Three position switch can be padlocked in centre position with spring return to 0 from positions 1 and 2.			POS. | CONTACT 1-2 3-4 1 X O 0 O O 2 O X		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	W
5 position reversing start switch. Lever with fixed C position and spring return to 0 from A and B			POS. | CONTACT 1-2 5-6 8-7 3-4 A X X 0 0 0 0 X 0 0 C 0 0 0 0 0 0 0 X 0 B 0 0 X X			Y
"Start" motors control with lever spring return to position B			POS. | CONTACT 1 A X 0 B 0 0			M

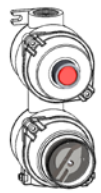
CODE SELECTION TABLE

Illustration	Entry ØD	Description	Diagram	Weight Kg	Codes
	1" ISO 7/1	Single body: double pushbutton		0.85	**CSC-D**
	1" NPT				**CSC-DN**
	1" ISO 7/1	Single body: illuminated pushbutton		0.90	**CSC-G**
	1" NPT				**CSC-GN**
	1" ISO 7/1	Double body: double illuminated pushbutton		1.60	**CSC-GG**
	1" NPT				**CSC-GGN**
	1" ISO 7/1	Single body: single signal lamp		0.80	**CSC-L**
	1" NPT				**CSC-LN**
	1" ISO 7/1	Double body: double signal lamp		1.57	**CSC-LL**
	1" NPT				**CSC-LLN**
	1" ISO 7/1	Single body: single pushbutton (1NA+1NC)		0.74	**CSC-P**
	1" NPT				**CSC-PN**
	1" ISO 7/1	Single body: single pushbutton 2NA 2NC		0.88	**CSC-2P**
	1" NPT				**CSC-2PN**
	1" ISO 7/1	Double body: pushbutton + indicator light		1.63	**CSC-PL**
	1" NPT				**CSC-PLN**
	1" ISO 7/1	Double body: two pushbuttons		1.69	**CSC-PP**
	1" NPT				**CSC-PPN**
	1" ISO 7/1	Single body: single maintained pushbutton (maintained) (1NA+1NC)		0.90	**CSC-B**
	1" NPT				**CSC-BN**
	1" ISO 7/1	Single body: single maintained pushbutton (maintained) (2NA+2NC)		0.92	**CSC-2B**
	1" NPT				**CSC-2BN**

CODE SELECTION TABLE

Illustration	Entry ØD	Description	Diagram	Weight Kg	Codes
	1" ISO 7/1	Single body: mushroom head pushbutton (1NA + 1NC)		0.92	CSC-F
	1" NPT				CSC-FN
	1" ISO 7/1	Single body: mushroom head pushbutton (2NA + 2NC)		0.94	CSC-2F
	1" NPT				CSC-2FN
	1" ISO 7/1	Single body: 'twist to release' mushroom head pushbutton		0.92	CSC-R
	1" NPT				CSC-RN
	1" ISO 7/1	Single body: 'twist to release' mushroom head pushbutton (2NA+2NC)		0.94	CSC-2R
	1" NPT				CSC-2RN
		Selectors			
	1" ISO 7/1	Single body: single pole selector		0.87	CSC-1C
	1" NPT				CSC-1CN
	1" ISO 7/1	Single body: double pole selector		0.89	CSC-2C
	1" NPT				CSC-2CN
	1" ISO 7/1	Single body: triple pole selector		0.91	CSC-3C
	1" NPT				CSC-3CN
	1" ISO 7/1	Single body: single pole switch		0.87	CSC-1I
	1" NPT				CSC-1IN
	1" ISO 7/1	Single body: double pole switch		0.89	CSC-2I
	1" NPT				CSC-2IN
	1" ISO 7/1	Single body: triple pole switch		0.91	CSC-3I
	1" NPT				CSC-3IN
	1" ISO 7/1	Single body: run/stop selector		0.89	CSC-1R
	1" NPT				CSC-1RN
	1" ISO 7/1	Single body: single pole selector		0.89	CSC-1W
	1" NPT				CSC-1WN
	1" ISO 7/1	Single body: double pole selector		0.91	CSC-2W
	1" NPT				CSC-2WN
	1" ISO 7/1	Single body: run/stop selector		0.89	CSC-1X
	1" NPT				CSC-1XN
	1" ISO 7/1	Single body: reversing start switch		0.89	CSC-1Y
	1" NPT				CSC-1YN
	1" ISO 7/1	Single body: single pole circuit breaker		0.89	CSC-1Z
	1" NPT				CSC-1ZN
	1" ISO 7/1	Single body: double pole circuit breaker		0.89	CSC-2Z
	1" NPT				CSC-2ZN
	1" ISO 7/1	Single body: triple pole circuit breaker		0.89	CSC-3Z
	1" NPT				CSC-3ZN

CODE SELECTION TABLE

Illustration	Entry ØD	Description	Weight Kg	Codes
		Combinations		
	1" ISO 7/1	Double body: single pole changeover switch + indicator light	1.65	**CSC-1CL**
	1" NPT			**CSC-1CLN**
	1" ISO 7/1	Double body: double pole changeover switch + indicator light	1.67	**CSC-2CL**
	1" NPT			**CSC-2CLN**
	1" ISO 7/1	Double body: triple pole changeover switch + indicator light	1.69	**CSC-3CL**
	1" NPT			**CSC-3CLN**
	1" ISO 7/1	Double body: pushbutton + single pole selector	1.70	**CSC-P1C**
	1" NPT			**CSC-P1CN**
	1" ISO 7/1	Double body: pushbutton + double pole selector	1.72	**CSC-P2C**
	1" NPT			**CSC-P2CN**
	1" ISO 7/1	Double body: pushbutton + triple pole selector	1.74	**CSC-P3C**
	1" NPT			**CSC-P3CN**
	1" ISO 7/1	Double body: single pole circuit breaker + indicator light	1.65	**CSC-1ZL**
	1" NPT			**CSC-1ZLN**
	1" ISO 7/1	Double body: double pole circuit breaker + indicator light	1.67	**CSC-2ZL**
	1" NPT			**CSC-2ZLN**
	1" ISO 7/1	Double body: triple pole circuit breaker + indicator light	1.65	**CSC-3ZL**
	1" NPT			**CSC-3ZLN**
	1" ISO 7/1	Double body: pushbutton + single pole circuit breaker	1.70	**CSC-P1Z**
	1" NPT			**CSC-P1ZN**
	1" ISO 7/1	Double body: pushbutton + double pole circuit breaker	1.72	**CSC-P2Z**
	1" NPT			**CSC-P2ZN**
	1" ISO 7/1	Double body: pushbutton + triple pole circuit breaker	1.74	**CSC-P3Z**
	1" NPT			**CSC-P3ZN**
	1" ISO 7/1	Double body: run/stop selector + single pole switch	1.74	**CSC-1R1C**
	1" NPT			**CSC-1R1CN**
	1" ISO 7/1	Double body: run/stop selector + single pole switch	1.76	**CSC-1R2C**
	1" NPT			**CSC-1R2CN**
	1" ISO 7/1	Double body: run/stop selector + single pole switch	1.78	**CSC-1R3C**
	1" NPT			**CSC-1R3CN**
	1" ISO 7/1	Double body: run/stop selector + single pole circuit breaker	1.73	**CSC-1R1Z**
	1" NPT			**CSC-1R1ZN**
	1" ISO 7/1	Double body: run/stop selector + double pole circuit breaker	1.76	**CSC-1R2Z**
	1" NPT			**CSC-1R2ZN**
	1" ISO 7/1	Double body: run/stop selector + triple pole circuit breaker	1.78	**CSC-1R3Z**
	1" NPT			**CSC-1R3ZN**

CODE SELECTION TABLE

Illustration	Entry ØD	Description	Weight Kg	Codes
	1" ISO 7/1	Double body: run/stop selector + single pole switch	1.73	CSC-1X1C
	1" NPT			CSC-1X1CN
	1" ISO 7/1	Double body: run/stop selector + double pole changeover switch	1.75	CSC-1X2C
	1" NPT			CSC-1X2CN
	1" ISO 7/1	Double body: run/stop selector + triple pole changeover switch	1.73	CSC-1X3C
	1" NPT			CSC-1X3CN
	1" ISO 7/1	Double body: run/stop selector + single pole circuit breaker	1.73	CSC-1X1Z
	1" NPT			CSC-1X1ZN
	1" ISO 7/1	Double body: run/stop selector + double pole circuit breaker	1.75	CSC-1X2Z
	1" NPT			CSC-1X2ZN
	1" ISO 7/1	Double body: run/stop selector + triple pole circuit breaker	1.77	CSC-1X3Z
	1" NPT			CSC-1X3ZN
	1" ISO 7/1	Double body: run/stop selector + indicator light	1.67	CSC-1RL
	1" NPT			CSC-1RLN
	1" ISO 7/1	Double body: run/stop selector + indicator light	1.66	CSC-1XL
	1" NPT			CSC-1XLN
	1" ISO 7/1	Single body: instrument casing	0.75	CSC-H
	1" NPT			CSC-HN
	1" ISO 7/1	Double body: instrument casing	1.50	CSC-HH
	1" NPT			CSC-HHN
	1" ISO 7/1	Double body: run/stop selector + instrument casing	1.67	CSC-1RH
	1" NPT			CSC-1RHN
	1" ISO 7/1			CSC-1XH
	1" NPT			CSC-1XHN
	1" ISO 7/1	Single body: Key operated handle with quick coupling for cam switch. Stainless steel bushing.	0.95	CSC-1ZK
	1" NPT			CSC-1ZKN
	1" ISO 7/1			CSC-2ZK
	1" NPT			CSC-2ZKN
	1" ISO 7/1	Single body: break glass emergency pushbutton with hammer	1.10	CSCPEA2
	1" NPT			CSCPEA2N

Note:
For non-standard arrangements, contact the Sales Office.

EFDC Series... Control and signalling station

CROSS-SECTION VIEW

DESCRIPTION

EFDC series control and monitoring units are suitable for the control and signalling of devices, both on board the machine or remotely, and are used in the chemical, petrochemical and pharmaceutical industries, and any location which requires an explosion proof system. A feature of this station is the ability to mount up to four operators on the cover.

MECHANICAL FEATURES OF ENCLOSURES

Body and lid:	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
Certification label:	Adhesive affixed to external surface
Screws:	Stainless steel
Earth screw:	Internal M5 on body and lid connected by a 2.5 mm^2 wire
Coating:	Polyester RAL 7035 (Light grey)
Threaded entries:	One upper and one lower Ø 1"
Resistenza alla corrosione:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

MECHANICAL FEATURES OF CONTROL AND SIGNALLING DEVICES

Pushbutton:	Coloured nylon
Illuminated pushbutton:	Clear coloured polycarbonate
Control lever:	Aluminium alloy
Badge:	Anodised aluminium, white lettering on black background
Outer body:	Aluminium alloy
Internal bushing and pin:	Stainless steel
Gaskets:	Acid and hydrocarbon resistant NBR
Station assembly:	Screwed onto cover
Contacts assembly:	Snap action on an appropriate flange to ensure the quick connection of entire contacts block to the station
External body lens:	Impact and UV resistant polycarbonate lens, coloured or transparent

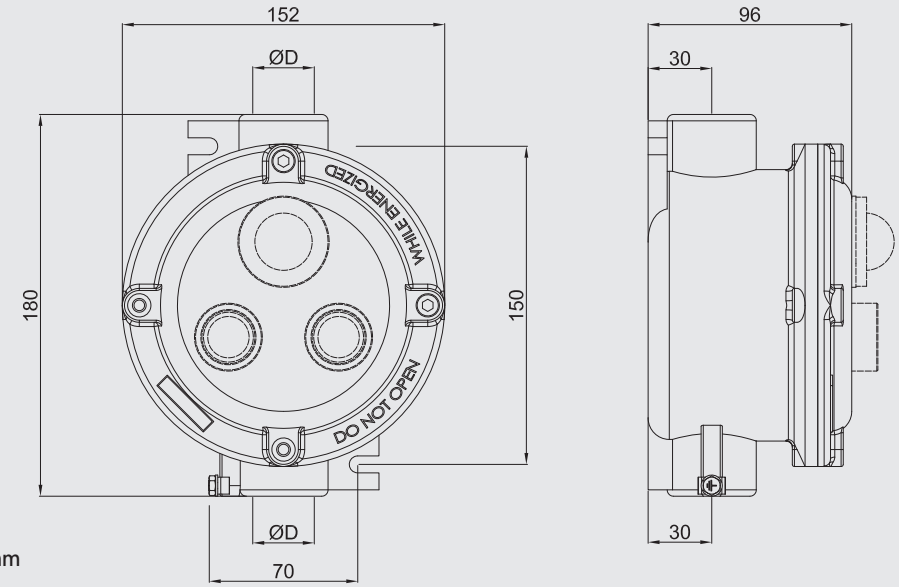
ELECTRICAL FEATURES

Contacts for pushbuttons:	Max. 10A 600 V
Switches:	16A, 690 V
Indicator lights:	24/250V, 3W

ACCESSORIES UPON REQUEST / SPECIAL REQUESTS

RAL 2004 (Pure orange) internal anti-condensation coating
External polyester coatings in various colours (specify RAL colour)
Cablegland / fittings
System protecting against accidental operation for mushroom-head push-buttons serie EFDC-21EMR and EFDC-21EMC (code **M-990**)

DIMENSIONAL DRAWING



Dimensions in mm

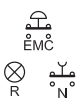
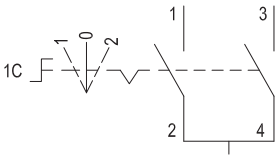
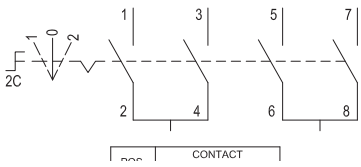
CODE SELECTION TABLE

Illustration	Entry ØD	Description	Diagram	Weight Kg	Codes
	1" ISO 7/1	Single body: button		1.4	**EFDC-21**
	1" NPT				**EFDC-21N**
	1" ISO 7/1	Single body: indicator light		1.4	**EFDC-25**
	1" NPT				**EFDC-25N**
	1" ISO 7/1	Single body: two buttons		1.5	**EFDC-22**
	1" NPT				**EFDC-22N**
	1" ISO 7/1	Single body: two indicator lights		1.5	**EFDC-24**
	1" NPT				**EFDC-24N**
	1" ISO 7/1	Single body: pushbutton with indicator light		1.5	**EFDC-23**
	1" NPT				**EFDC-23N**
	1" ISO 7/1	Single body: three buttons		1.6	**EFDC-27**
	1" NPT				**EFDC-27N**
	1" ISO 7/1	Single body: three indicator lights		1.6	**EFDC-20**
	1" NPT				**EFDC-20N**
	1" ISO 7/1	Single body: two pushbuttons and an indicator light		1.6	**EFDC-28**
	1" NPT				**EFDC-28N**
	1" ISO 7/1	Single body: pushbutton with two indicator lights		1.6	**EFDC-29**
	1" NPT				**EFDC-29N**

CODE SELECTION TABLE

Illustration	Entry ØD	Description	Diagram	Weight Kg	Codes
	1" ISO 7/1	Single body: four pushbuttons		1.8	**EFDC-30**
	1" NPT				**EFDC-30N**
	1" ISO 7/1	Single body: four indicator lights		1.8	**EFDC-31**
	1" NPT				**EFDC-31N**
	1" ISO 7/1	Single body: three pushbuttons with an indicator light		1.8	**EFDC-32**
	1" NPT				**EFDC-32N**
	1" ISO 7/1	Single body: two pushbuttons with two indicator lights		1.8	**EFDC-33**
	1" NPT				**EFDC-33N**
	1" ISO 7/1	Single body: pushbutton with three indicator lights		1.8	**EFDC-34**
	1" NPT				**EFDC-34N**
	1" ISO 7/1	Single body: emergency pushbutton station with protective glass and hammer		1.4	**EFDC-21EMV**
	1" NPT				**EFDC-21EMVN**
	1" ISO 7/1	Single body: emergency pushbutton station		1.4	**EFDC-21EM**
	1" NPT				**EFDC-21EMN**
	1" ISO 7/1	Emergency pushbutton station with 'twist to release' mushroom head pushbutton		1.4	**EFDC-21EMR**
	1" NPT				**EDFC-21EMRN**
	1" ISO 7/1	Emergency pushbutton station with key release mushroom head pushbutton (when the button is pressed, turn the key to release)		1.4	**EFDC-21EMC**
	1" NPT				**EFDC-21EMCN**

CODE SELECTION TABLE

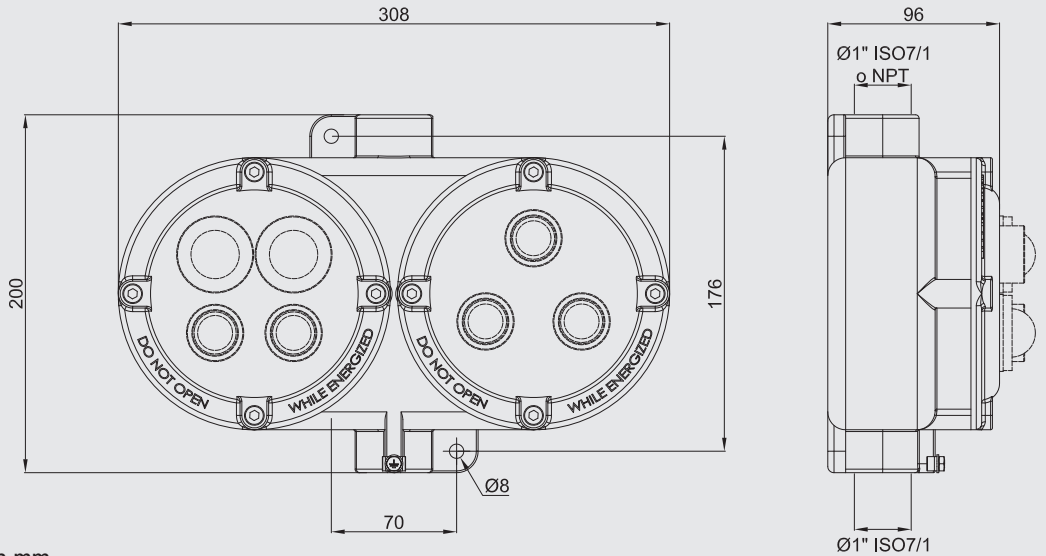
Illustration	Entry ØD	Description	Diagram	Weight Kg	Codes
	1" ISO 7/1 1" NPT	Emergency pushbutton station with 'twist to release' mushroom head pushbutton and pushbutton		1.5	**EFDC-21EMRV1** **EFDC-21EMRV1N**
	1" ISO 7/1 1" NPT	Emergency pushbutton station with 'twist to release' mushroom head pushbutton, pushbutton and indicator light		1.5	**EFDC-21EMRV2** **EFDC-21EMRV2N**
	1" ISO 7/1 1" NPT	Single body: emergency pushbutton station with mushroom head pushbutton and key reset		1.4	**EFDC-21EMCV1** **EFDC-21EMCV1N**
	1" ISO 7/1 1" NPT	Single body: emergency pushbutton station with mushroom head pushbutton and key reset, pushbutton and indicator light		1.4	**EFDC-21EMCV2** **EFDC-21EMCV2N**
	1" ISO 7/1 1" NPT	Single body: Single pole selector		2.0	**EFDC-1C** **EFDC-1CN**
	1" ISO 7/1 1" NPT	Single body: Double pole selector		2.1	**EFDC-2C** **EFDC-2CN**

Note:
For non-standard arrangements, contact the Sales Office.

DESCRIPTION

EFDC series control and signalling stations -.../... are double bodied enclosures and can contain up to eight devices. They are used for the remote control of devices such as distribution panels for lights, pumps, starter motors, etc.

DIMENSIONAL DRAWING



Dimensions in mm

CODE SELECTION TABLE

Use the code in the selection table of EFDC single body stations to compose the code for double body stations.

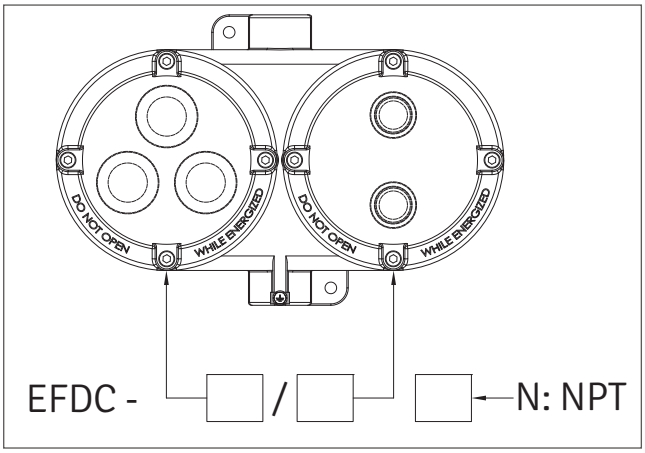
Example:

EFDC-20/22

Double body station with three indicator lights in the left-hand enclosure and two pushbuttons in the one to the right. Two 1" ISO7/1 fittings.

EFDC-23/21N

Double body station with pushbutton and indicator light in the left-hand enclosure and a pushbutton in the one to the right. Two 1" NPT fittings.



EFDC33/2C connected to an instrument casing **CSC-H** with ammeter.

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

Body and lid:	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 lever:	Coated aluminium alloy
Certification label:	Adhesive affixed to external surface
Badge:	Anodised aluminium, white lettering on black background
Internal bushing and pin:	Stainless steel
Control lever:	Aluminium alloy
Screws:	Stainless steel
Earth screw:	Internal M5 on body and lid connected by a 2.5 mm^2 wire
Coating:	Polyester RAL 7035 (Light grey)
Threaded entries:	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 Cortem has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

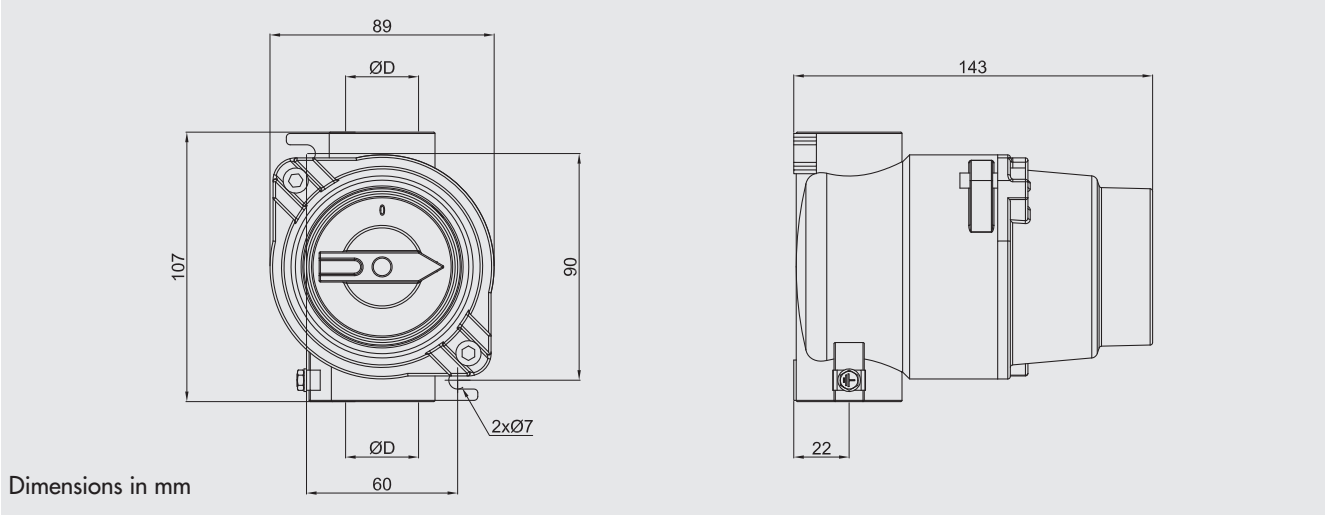
ELECTRICAL FEATURES

Switches:	16A, 690 V

ACCESSORIES UPON REQUEST / SPECIAL REQUESTS

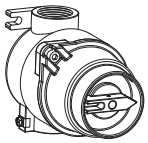
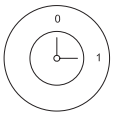
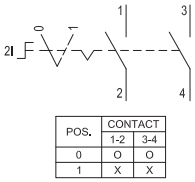
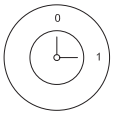
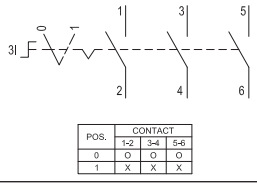
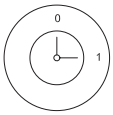
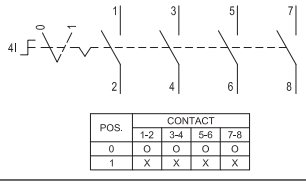
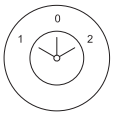
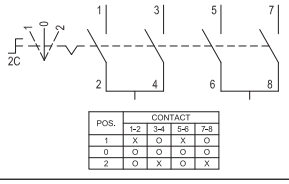
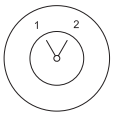
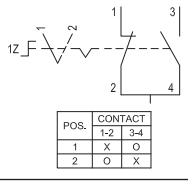
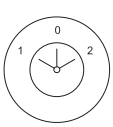
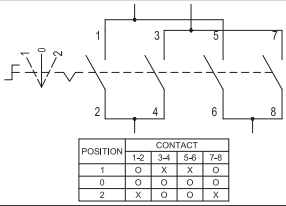
RAL 2004 (Pure orange) internal anti-condensation coating
External polyester coatings in various colours (specify RAL colour)
Stainless steel or cast iron version available with minimum production batches. Contact your sales representative for more details. (sample code stainless steel CSC-216**IN,** cast iron sample code CSC-216**GJ**)
Cablegland / fittings

DIMENSIONAL DRAWING

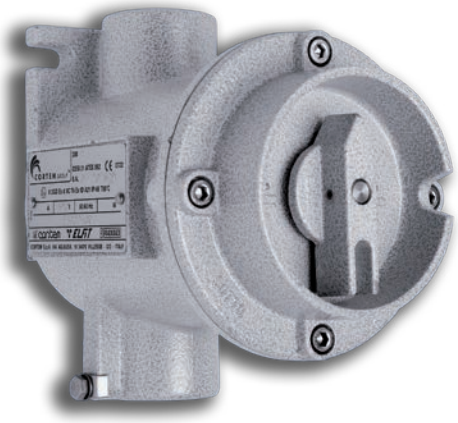


Dimensions in mm

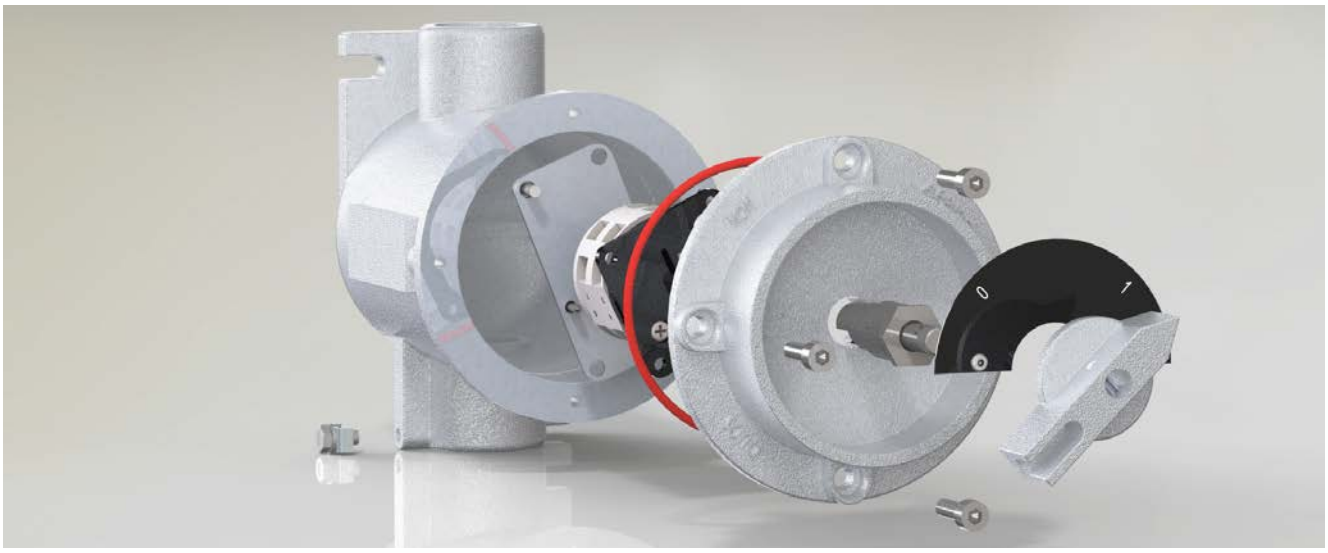
SELECTION TABLE

Illustration	Entry ØD (*)	Description	Badge	Arrangement	Capacity	Poles	Weight Kg	Code
	1" ISO 7/1	Switch with 2 fixed positions '0-1'			16 A	2	0.95	**CSC-216**
	1" NPT							**CSC-216N**
	1" ISO 7/1	Switch with 2 fixed positions '0-1'			16 A	3	0.86	**CSC-316**
	1" NPT							**CSC-316N**
	1" ISO 7/1	Switch with 2 fixed positions '0-1'			16 A	4	0.85	**CSC-416**
	1" NPT							**CSC-416N**
	1" ISO 7/1	Switch with 3 fixed positions '1-0-2'			16 A	2	0.89	**CSCC-216**
	1" NPT							**CSCC-216N**
	1" ISO 7/1	Switch with 3 fixed positions '1-2'			16 A	2	0.89	**CSCD-216**
	1" NPT							**CSCD-216N**
	1" ISO 7/1	Inverter with 3 fixed positions '1-0-2'			16 A	2	0.89	**CSCI-216**
	1" NPT							**CSCI-216N**

* 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

Body and lid:	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 lever:	Coated aluminium alloy
Certification label:	Adhesive affixed to external surface
Badge:	Anodised aluminium, white lettering on black background
Internal bushing and pin:	Stainless steel
Screws:	Stainless steel
Earth screw:	Internal M5 on body and lid connected by a 2.5 mm^2 wire
Coating:	Polyester RAL 7035 (Light grey)
Resistenza alla corrosione:	The STANDARD of the aluminium alloy used by Cortem has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

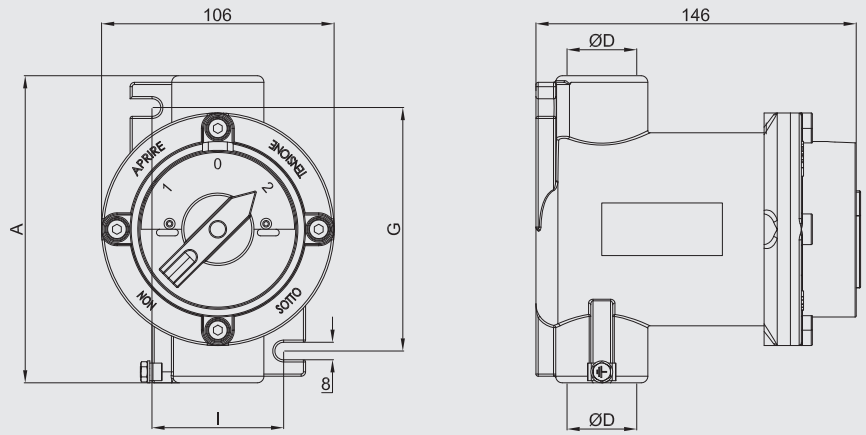
ELECTRICAL FEATURES

Switches:	25 A to 63 A, 690 V

ACCESSORIES UPON REQUEST / SPECIAL REQUESTS

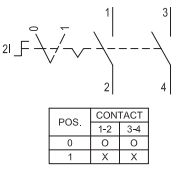
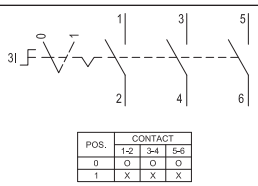
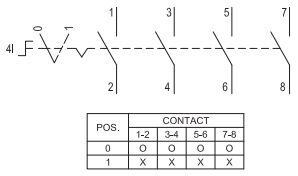
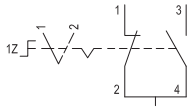
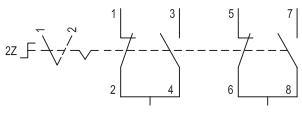
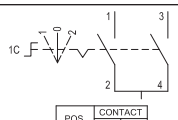
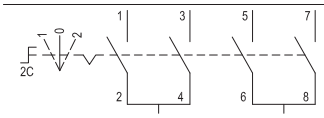
RAL 2004 (Pure orange) internal anti-condensation coating
External polyester coatings in various colours (specify RAL colour)
Stainless steel version available with minimum production batches. Contact your sales representative for more details. (sample code stainless steel EFSCO-266**IN**)
Cablegland / 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'		25 A	2	1.14	**EFSCO-22**
	1"	140	110	60			32 A	2	1.20	**EFSCO-32**
	1"	140	110	60			40 A	2	1.35	**EFSCO-42**
	1 1/2"	160	120	80			63 A	2	1.35	**EFSCO-62**
	1"	140	110	60	Switch with 2 fixed positions '0-1'		25 A	3	1.14	**EFSCO-23**
	1"	140	110	60			32 A	3	1.20	**EFSCO-33**
	1"	140	110	60			40 A	3	1.35	**EFSCO-43**
	1 1/2"	160	120	80			63 A	3	1.40	**EFSCO-63**
	1"	140	110	60	Switch with 2 fixed positions '0-1'		25 A	4	1.18	**EFSCO-24**
	1"	140	110	60			32 A	4	1.20	**EFSCO-34**
	1"	140	110	60			40 A	4	1.35	**EFSCO-44**
	1 1/2"	160	120	80			63 A	4	1.40	**EFSCO-64**
	1"	140	110	60	Circuit breaker with 2 fixed positions '1-2'		25 A	1	1.20	**EFSCO-26**
	1"	140	110	60			32 A	1	1.18	**EFSCO-36**
	1"	140	110	60			40 A	1	1.20	**EFSCO-46**
	1"	140	110	60			63 A	1	1.40	**EFSCO-66**
	1"	140	110	60			25 A	2	1.18	**EFSCO-266**
	1"	140	110	60			32 A	2	1.18	**EFSCO-366**
	1 1/2"	160	120	80			40 A	2	1.20	**EFSCO-466**
	1"	140	110	60	Switch with 3 fixed positions '1-0-2'		25 A	1	1.14	**EFSCO-242**
	1"	140	110	60			32 A	1	1.18	**EFSCO-342**
	1"	140	110	60			40 A	1	1.18	**EFSCO-442**
	1"	140	110	60			63 A	1	1.40	**EFSCO-642**
	1"	140	110	60			25 A	2	1.14	**EFSCO-244**
	1"	140	110	60			32 A	2	1.18	**EFSCO-344**
	1 1/2"	160	120	80			40 A	2	1.18	**EFSCO-444**

CROSS-SECTION VIEW

DESCRIPTION

EMHA-9 instrument housings are normally used to contain medium-sized analogue instruments such as ammeters and voltmeters.
CSC-H instrument housings are normally used to contain small-sized analogue instruments such as ammeters and voltmeters.

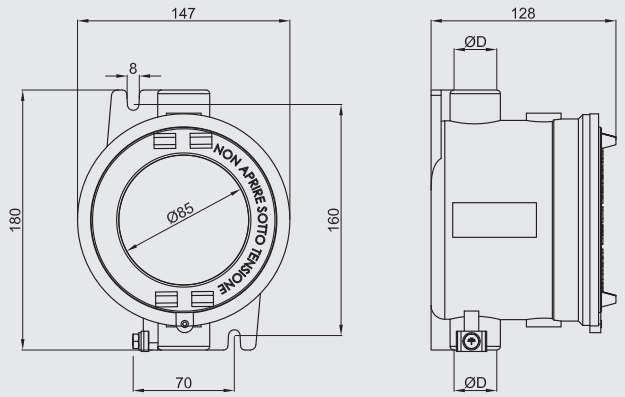
MECHANICAL FEATURES

Body and lid:	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
Glass	tempered and temperature resistant
Internal frame:	Aluminium
Certification label:	Adhesive affixed to external surface
Screws:	Stainless steel
Earth screw:	Internal M5 on body and lid connected by a 2.5 mm^2 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 Cortem has passed the tests required by standards EN60068-2-30 (hot-humid cycles) and EN60068-2-11 (salt fog test)

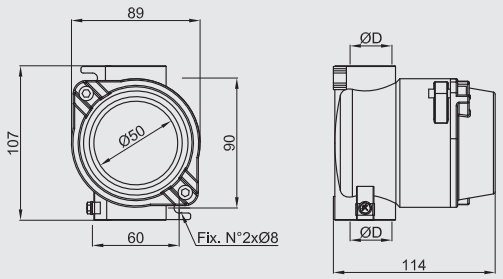
ACCESSORIES UPON REQUEST / SPECIAL REQUESTS

Measuring instruments (Voltmeter - Ammeter)
RAL 2004 (Pure orange) internal anti-condensation coating
External polyester coatings in various colours (specify RAL colour)
Stainless steel or cast iron version available with minimum production batches. Contact your sales representative for more details. (sample code stainless steel EMHA-9**IN,** cast iron sample code EMHA-9**GJ**)
Cablegland / fittings

DIMENSIONAL DRAWING



Dimensions in mm



CODE SELECTION TABLE

Illustration	Entry ØD	Description	Weight Kg	Codes
	3/4" ISO7/1	Instrument casing Ø85 mm	1.88	**EMHA-9**
	3/4" NPT			**EMHA-9N**
	1" ISO 7/1	Single body: instrument casing	0.75	**CSC-H**
	1" NPT			**CSC-HN**