# 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<br>IEC 60079-0: 2011, IEC 60079-1: 2014, IEC 60079-31: 2013<br>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... 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 |

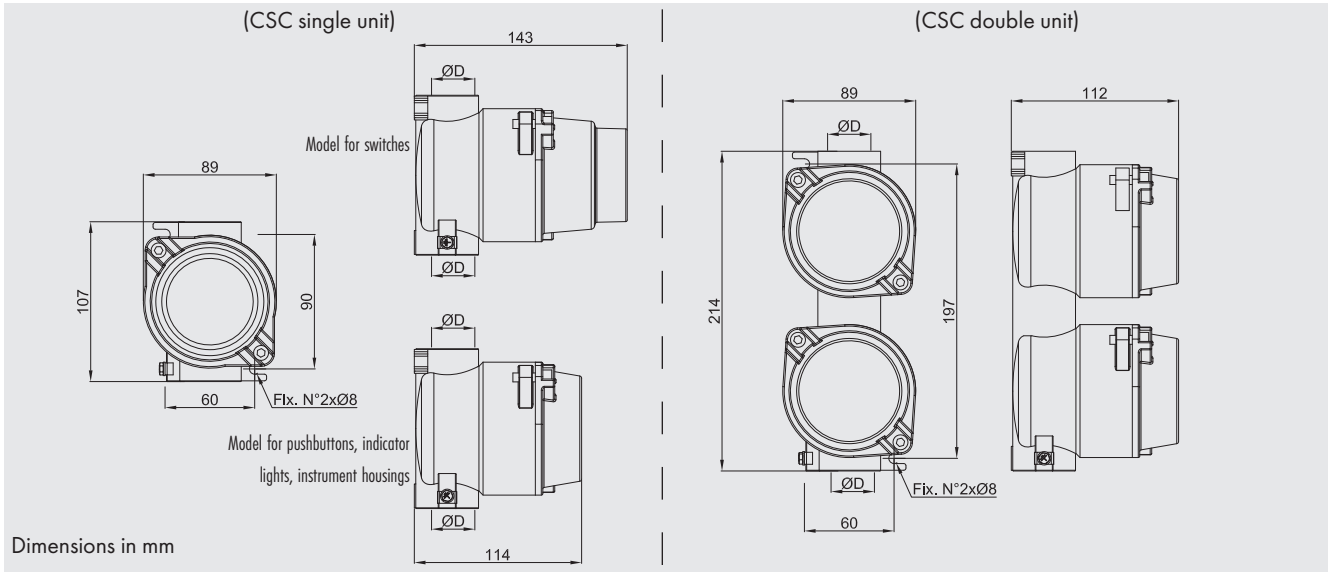
## ELECTRICAL FEATURES

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

## ACCESSORIES UPON REQUEST / SPECIAL REQUESTS

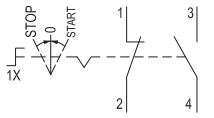
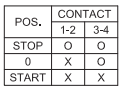
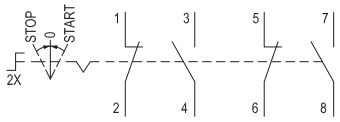
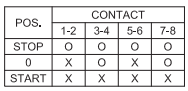
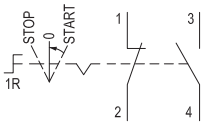
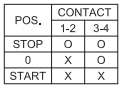
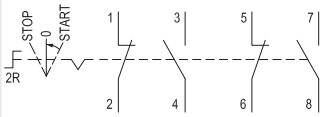
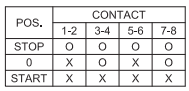
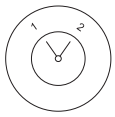
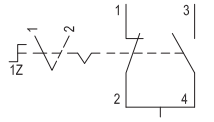
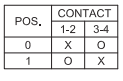
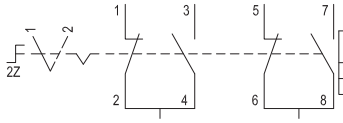
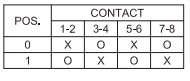
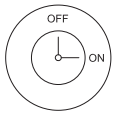
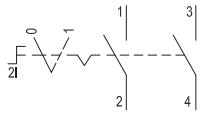
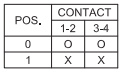
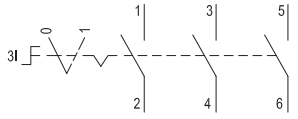
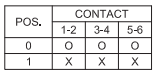
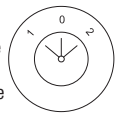
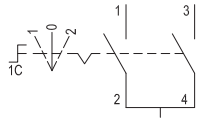
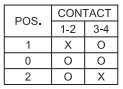
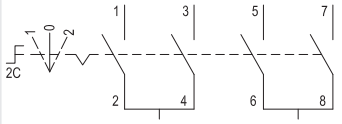
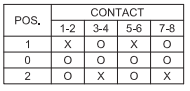
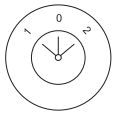
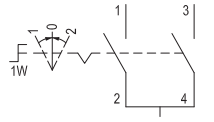
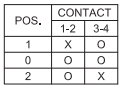
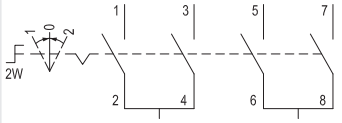
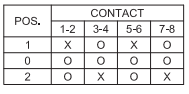
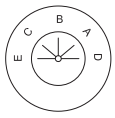
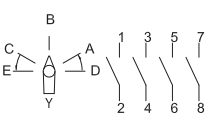
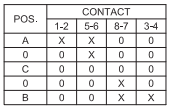
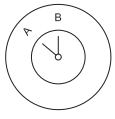
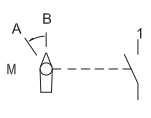
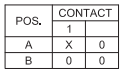
RAL 2004 (Pure orange) internal anti-condensation coating
External polyester coatings in various colours (specify RAL colour)
Stainless steel or cast iron version available with minimum production batches. Contact your sales representative for more details. (sample code stainless steel CSC-D**IN,** cast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

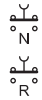
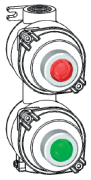
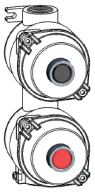



Dimensions in mm

## 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. |  |  |  |  |  | X |
| Motors "start-stop" control with spring return from START to 0, and in fixed STOP position can be padlocked. |  |  |  |  |  | R |
| Switch with two fixed-positions, suitable for "automatic-manual" service |  |  |  |  |  | Z |
| Switch |  |  |  |  |  | I |
| Three fixed position switch can be padlocked in the centre position. Versions: single pole - double pole - triple pole |  |  |  |  |  | C |
| Three position switch can be padlocked in centre position with spring return to 0 from positions 1 and 2. |  |  |  |  |  | W |
| 5 position reversing start switch. Lever with fixed C position and spring return to 0 from A and B |  |  |  | | | Y |
| "Start" motors control with lever spring return to position B |  |  |  | | | M |

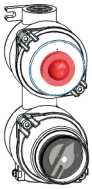
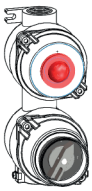
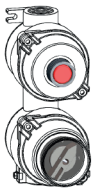
## CODE SELECTION TABLE

| 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 2NO+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** |

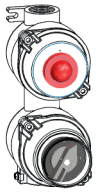
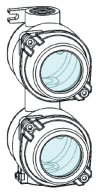
## CODE SELECTION TABLE

| Illustration | Entry ØD | Description | Diagram | Weight Kg | Codes |
|---|---|---|---|---|---|
|  | 1" ISO 7/1 | Single body: mushroom head pushbutton (1NO+ 1NC) | EM | 0.92 | CSC-F |
| | 1" NPT | | | | CSC-FN |
| | 1" ISO 7/1 | Single body: mushroom head pushbutton (2NO+ 2NC) | | 0.94 | CSC-2F |
| | 1" NPT | | | | CSC-2FN |
|  | 1" ISO 7/1 | Single body: 'twist to release' mushroom head pushbutton (1NO+ 1NC) | EMR | 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 | Combinations Description | Weight Kg | Codes |
|---|---|---|---|---|
|  | 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 + double pole switch | 1.76 | CSC-1R2C |
| | 1" NPT | | | CSC-1R2CN |
| | 1" ISO 7/1 | Double body: run/stop selector + triple 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.