

ATEX ENCLOSURES : SERIES S, SF, SSC WITH TERMINALS

TECHNICAL CHARACTERISTICS :

Body and lid : Aluminium alloy with low copper content.
Screw cap with safety screw

Seal : Acid and hydrocarbon resistant silicone, located between the body and the lid

Inputs : Thread GAS UNI ISO 7/1

Certification label : Adhesive label on the lid for 6 and 9 boxes; on the body for size 4

Bolts and screws : Stainless steel

Earth screw : Stainless steel. Inside and outside the complete body



CHART 1

Ex d IIC rated terminal strips			
Ambient temperature	Temperature of terminal operation	Temperature class	Maximum surface temperature
-20°C +40°C -40°C +40°C	≥80°C	T6	T85°C
-20°C +65°C -40°C +65°C	≥100°C	T5	T100°C
-20°C +150°C -40°C +150°C	≥180°C	T3	T200°C



APPLICATION SECTORS :



Oil refineries



Chemical and petrochemical plants



Onshore plants



Offshore plants



Oil loading/offloading wharfs



Fuel depots



Low temperatures



100% Cortem product

CHART 2

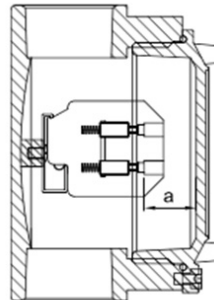
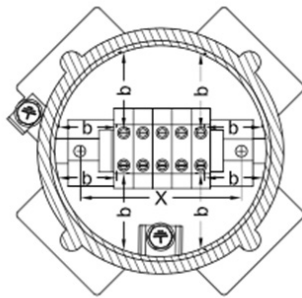
Ex e II or Ex i IIC rated terminal strips (ATEX-certified terminals)

Ambient temperature	Temperature of terminal operation	Temperature class	Maximum surface temperature
-20°C +40°C -40°C +40°C	≥80°C	T6	T85°C
-20°C +65°C -40°C +65°C	≥100°C	T5	T100°C
-20°C +80°C -40°C +80°C	≥130°C	T4	T135°C

Ex d IIC rated enclosures		ZONE TRANSVERSALE ET NOMBRE MAXIMUM DE TERMINAUX								
Enclosure type	Size	1.5	2.5	4	6	10	16	25	35	70
S.1 - SB	14-24	-	-	3	-	-	-	-	-	-
S.1 - SB	16-26-36	8	8	6	-	-	-	-	-	-
S.1	29-39-59-69	16	16	16	9	7	6	4	4	3
SB	49-59-69	16	16	12	10	8	7	5	5	4
Maximum current (A)	at 40°C	10	12.5	20	24	30	48	75	105	175
	at 65°C at 150°C	8	10.5	16	20	24	40	65	88	150
Maximum current density (A/mm ²) for terminals and cables		6.6	5	5	4	3	3	3	3	2.5
Maximum current (A) referring to 35% of the max. number of terminals as given in the table	at 40°C	13	19.5	24	30	50	64	100	140	210
	at 65°C at 150°C	10	12.5	20	24	30	48	75	105	175
Maximum current density (A/mm ²) for terminals and cables referring to 35% of the max. number of terminals as given in the table		8.5	7	6	5	5	4	4	4	3
Min.-max. rated voltage (V)		420 - 750								

MINIMUM DISTANCES FOR APPROVED HOUSINGS Ex d IIC WITH TERMINALS :

Enclosure type	Size	Minimum surface distance		S.1	SB
		a min.	b+b min.	x	x
S.1 - SB	14-24	6	20	40	40
S.1 - SB	16-26-36			58.5	50
S.1	29-39-59-69			100	85
SB	49-59-69				

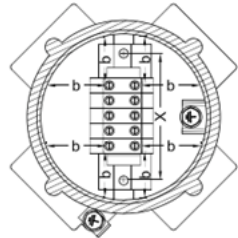
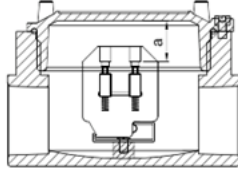


Ex e IIC rated enclosures		CROSS-SECTIONAL AREA AND MAXIMUM NUMBER OF TERMINALS															
Enclosure type	Size	1.5			2.5			4			6			10			
		Tab 1	Tab 2	Tab 3	Tab 1	Tab 2	Tab 3	Tab 1	Tab 2	Tab 3	Tab 1	Tab 2	Tab 3	Tab 1	Tab 2	Tab 3	
S.1 - SB	14-24	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
S.1 - SB	16-26-36	8	8	8	8	8	8	6	6	6	-	-	-	-	-	-	-
S.1	29-39-59-69	16	16	16	16	16	16	16	14	14	9	9	9	7	7	7	7
SB	49-59-69	16	16	16	16	16	16	16	14	14	10	10	9	8	7	7	7
Maximum current (A)	at 40°C	8			10.5			17			20			24			
	at 65°C	5.5			7.5			12			14			17			
	at 150°C	5.5			7.5			12			14			17			
Maximum current density (A/mm ²) for terminals and cables		6.6			5			5			4			3			
Min.-max. rated voltage (V)		275 - 630															

Ex e IIC rated enclosures		CROSS-SECTIONAL AREA AND MAXIMUM NUMBER OF TERMINALS					
Enclosure type	Size	16			25		
		Tab 1	Tab 2	Tab 3	Tab 1	Tab 2	Tab 3
S.1 - SB	14-24	-	-	-	-	-	-
S.1 - SB	16-26-36	-	-	-	-	-	-
S.1	29-39-59-69	6	6	6	4	4	4
SB	49-59-69	7	6	6	5	4	4
Maximum current (A)	at 40°C	40			65		
	at 65°C	29			47		
	at 150°C	29			47		
Maximum current density (A/mm ²) for terminals and cables		3			3		
Min.-max. rated voltage (V)		275 - 630					



MINIMUM DISTANCES FOR APPROVED HOUSINGS Ex d IIC WITH TERMINALS :



NOTES:
 Tab 1 for operating voltage $U \leq 400$
 Tab 2 for operating voltage $U \leq 500$
 Tab 3 for operating voltage $U \leq 630$

Minimum distances for Ex e IIC rated enclosures with terminals

Tab 1	Enclosure type	Size	Minimum surface distance		S.1	SB
			a min.	b+b min.		
Tab 1	S.1 - SB	14-24	6	20	x	x
	S.1 - SB	16-26-36			40	40
	S.1	29-39-59-69			58.5	50
	SB	49-59-69			100	85

Tab 2	Enclosure type	Size	Minimum surface distance		S.1	SB
			a min.	b+b min.		
Tab 2	S.1 - SB	14-24	8	25	x	x
	S.1 - SB	16-26-36			40	40
	S.1	29-39-59-69			58.5	50
	SB	49-59-69			100	85

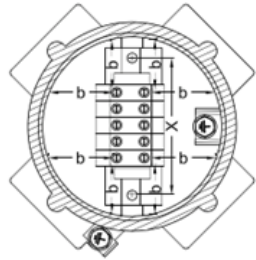
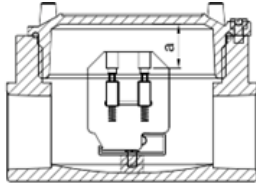
Tab 3	Enclosure type	Size	Minimum surface distance		S.1	SB
			a min.	b+b min.		
Tab 3	S.1 - SB	14-24	10	32	x	x
	S.1 - SB	16-26-36			40	40
	S.1	29-39-59-69			58.5	50
	SB	49-59-69			100	85

Ex e IIC rated enclosures		CROSS-SECTIONAL AREA AND MAXIMUM NUMBER OF TERMINALS															
Enclosure type	Size	1.5			2.5			4			6			10			
		Tab 1	Tab 2	Tab 3	Tab 1	Tab 2	Tab 3	Tab 1	Tab 2	Tab 3	Tab 1	Tab 2	Tab 3	Tab 1	Tab 2	Tab 3	
S.1 - SB	14-24	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
S.1 - SB	16-26-36	8	8	8	8	8	8	6	6	6	-	-	-	-	-	-	-
S.1	29-39-59-69	16	16	16	16	16	16	16	14	14	9	9	9	7	7	7	7
SB	49-59-69	16	16	16	16	16	16	16	14	14	10	10	9	8	7	7	7
Maximum current (A)	at 40°C	8			10.5			17			20			24			
	at 65°C	5.5			7.5			12			14			17			
	at 150°C	5.5			7.5			12			14			17			
Maximum current density (A/mm ²) for terminals and cables		6.6			5			5			4			3			
Min.-max. rated voltage (V)		275 - 630															

Ex e IIC rated enclosures		CROSS-SECTIONAL AREA AND MAXIMUM NUMBER OF TERMINALS					
Enclosure type	Size	16			25		
		Tab 1	Tab 2	Tab 3	Tab 1	Tab 2	Tab 3
S.1 - SB	14-24	-	-	-	-	-	-
S.1 - SB	16-26-36	-	-	-	-	-	-
S.1	29-39-59-69	6	6	6	4	4	4
SB	49-59-69	7	6	6	5	4	4
Maximum current (A)	at 40°C	40			65		
	at 65°C	29			47		
	at 150°C	29			47		
Maximum current density (A/mm ²) for terminals and cables		3			3		
Min.-max. rated voltage (V)		275 - 630					



MINIMUM DISTANCES FOR APPROVED HOUSINGS Ex d IIC WITH TERMINALS :



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Minimum distances for Ex e IIC rated enclosures with terminals

Tab 1	Enclosure type	Size	Minimum surface distance		S.1	SB
			a min.	b+b min.		
	S.1 - SB	14-24	6	20	x	x
	S.1 - SB	16-26-36			40	40
	S.1	29-39-59-69			58.5	50
	SB	49-59-69			100	85

Tab 2	Enclosure type	Size	Minimum surface distance		S.1	SB
			a min.	b+b min.		
	S.1 - SB	14-24	8	25	x	x
	S.1 - SB	16-26-36			40	40
	S.1	29-39-59-69			58.5	50
	SB	49-59-69			100	85

Tab 3	Enclosure type	Size	Minimum surface distance		S.1	SB
			a min.	b+b min.		
	S.1 - SB	14-24	10	32	x	x
	S.1 - SB	16-26-36			40	40
	S.1	29-39-59-69			58.5	50
	SB	49-59-69			100	85

CERTIFICATION DATA FOR BOXES WITH TERMINALS :

Classification:

Group II

Category 2GD

Installation: EN 60079.14

zone 1 - zone 2 (Gas)

zone 21 - zone 22 (Dust)

Marking:

CE 0722 Ex II 2 GD - Ex d IIC T... Gb - Ex tb IIIC T... Db - IP66/67

CE 0722 Ex II 2 GD - Ex e IIC T... Gb - Ex tb IIIC T... Db - IP66/67

CE 0722 Ex II 2 GD - Ex i IIC T... Gb - Ex tb IIIC T... Db - IP66/67

Certification:

ATEX CESI 02 ATEX 091

IEC Ex CES 14.0018X

All IEC Ex certification data can be downloaded from www.cortemgroup.com

TR CU AVAILABLE

All TR CU certification data can be downloaded from www.cortemgroup.com

INMETRO DNV 14.0108

All INMETRO certification data can be downloaded from www.cortemgroup.com

Standards:

CENELEC EN 60079-0: 2012, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-11: 2012, EN60079-31: 2009, EN 60529: 1991 and EUROPEAN DIRECTIVE 2014/34/UE

Ambient Temp.:

-40°C (-20°C) +40°C

The boxes can be installed in other ambient temperature ranges. In this case, the terminal strips used must be made from the materials indicated in chart 1 and 2.

Degree of protection:

IP66/67