Base Load Power Hub (BLPH)

INS JB

INSTALLATION, OPERATING AND MAINTENANCE MANUAL

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1	NO COMMENTS - APPROVED - WORK MAY PROCEED
2	MINOR COMMENTS - REVISE AND RESUBMIT - WORK MAY PROCEED
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Sign	Date
V. Barratta	30-08-2024

Rev.	Date	Description	Prepared	Reviewed	Approved
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To be sure to be safe.

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4	References	X	X	X					
5	INSTALLATION, OPERATING AND MAINTENANCE MANUAL	X	X	X					

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HOLDS LIST

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CORTEM GROUP®

SCATOLE PORTA MORSETTI SERIE SA ... CTB ...
ISTRUZIONI DI SICUREZZA, USO E MANUTENZIONE

Terminal boxes series SA ... CTB ...
safety, maintenance and mounting instructions

IN ACCORDO ALLA DIRETTIVA 2014/34/EU
ED IN ACCORDO ALLO SCHEMA IECEx

according to directive 2014/34/EU
and according to IECEx scheme

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SCATOLE CON MORSETTI SERIE SA. .. CTB ...
ISTRUZIONI DI SICUREZZA, USO E MANUTENZIONE

Increased safety terminal boxes series SA. .. CTB ...
safety, maintenance and mounting instruction

CONFORMITÀ ALLE NORMATIVE STANDARD

SCATOLE MORSETTI SA. .. CTB ...
COSTRUITE IN ACCORDO ALLE NORMATIVE

EN 60079-0:2018	IEC 60079-0:2017
EN 60079-7:2015	IEC 60079-7:2015
EN 60079-11:2012	IEC 60079-11:2011
EN 60079-31:2014	IEC 60079-31:2013
IN ACCORDO ALLA DIRETTIVA 2014/34/EU	IN ACCORDO ALLO SCHEMA IECEx

ISTRUZIONI DI SICUREZZA

RIVOLTE A PERSONALE QUALIFICATO IN ACCORDO CON LE LEGGI NAZIONALI, INCLUSE LE RELATIVE NORME E, DOVE APPLICABILE, IN ACCORDO CON IEC 60079-17 RIGUARDANTE LE APPARECCHIATURE ELETTRICHE PER ATMOSFERE POTENZIALMENTE ESPLOSIVE

- LA CUSTODIA NON DEVE ESSERE INSTALLATA IN AREA PERICOLOSA ZONA 0

- DEVONO ESSERE RISPETTATI I DATI TECNICI INDICATI SULLA TARGHETTA DELLA CUSTODIA

- NON SONO AMMESSE MODIFICHE AL PRODOTTO

- LA CUSTODIA PUÒ ESSERE INSTALLATA SOLO SE COMPLETAMENTE INTEGRA

- DEVONO ESSERE UTILIZZATE ESCLUSIVAMENTE PARTI DI RICAMBIO CORTEM

- LE OPERAZIONI DI MANUTENZIONE ORDINARIE E STRAORDINARIE DEVO ESSERE EFFETTUATE SOLO DA ELETTRICISTI QUALIFICATI CON L'APPROVAZIONE DI PERSONALE "ESPERTO"

- TOGLIERE LE PRESENTI ISTRUZIONI DALL'INTERNO DELLA CUSTODIA DURANTE IL FUNZIONAMENTO

- DEVONO ESSERE STRETTAMENTE OSSERVATE LE NORME NAZIONALI DI SICUREZZA E PREVENZIONE INFORTUNI, E LE PRESCRIZIONI INDICATE CON "⚠" NEL PRESENTE FASCICOLO TECNICO

Conformity with standards

Terminal boxes SA ... CTB ...
manufactured according to standards

EN 60079-0:2018	IEC 60079-0:2017
EN 60079-7:2015	IEC60079-7:2015
EN 60079-11:2012	IEC 60079-11:2011
EN 60079-31:2014	IEC 60079-31:2013
according to Directive 2014/34/EU	according to IECEx schema

safety instruction

for skilled electricians and instructed personnel in accordance with national legislation, including the relevant standards and, where applicable, in accordance with IEC 60079-17 on electrical apparatus for explosive atmospheres

- the terminal boxes must not be operated in zone 0 hazardous areas

- the technical data indicated on nameplate of terminal boxes are to be observed

- changes of the design and modifications to the terminal box are not permitted

- the terminal box shall be operated as intended and only in undamaged and perfect condition

- only genuine CORTEM spare parts may be used for replacement

- repairs may only be carried out by qualified electrician and will subsequently have to be checked by an "expert"

- do not keep these operating instruction inside the terminal box during operation

- the national safety rules and regulations for prevention of accidents and the following safety instruction which are marked with an "⚠" in these operating instruction, will have to be observed

ESECUZIONI: Marking:

CESI 03 ATEX 333	*IECEX CES 13.0001*	
⟨Ex⟩ II 2GD Ex eb IIC T6/T5/T4 Gb Ex tb IIIC T75°C/T110°C Db IP66	Ex eb IIC T6/T5/T4 Gb Ex tb IIIC T75°C/T110°C Db IP66	CUSTODIE CONTENENTI MORSETTI A SICUREZZA AUMENTATA IN ACCORDO ALLA NORMA EN 60079-7, IEC 60079-7.
⟨Ex⟩ II 2GD Ex eb ia IIC T6/T5/T4 Gb Ex tb ia IIIC T75°C/T110°C Db IP66	Ex eb ia IIC T6/T5/T4 Gb Ex tb ia IIIC T75°C/T110°C Db IP66	CUSTODIE CONTENENTI MORSETTI A SICUREZZA AUMENTATA E A SICUREZZA INTRINSECA IN ACCORDO ALLE NORME EN 60079-7, EN 60079-11, IEC 60079-7, IEC 60079-11.
⟨Ex⟩ II 2GD Ex ia IIC T6/T5/T4 Gb Ex ia IIIC T75°C/T110°C Db IP66	Ex ia IIC T6/T5/T4 Gb Ex ia IIIC T75°C/T110°C Db IP66	CUSTODIE CONTENENTI MORSETTI A SICUREZZA INTRINSECA IN ACCORDO ALLA NORMA EN 60079-11, IEC 60079-11.
		Boxes with increased safety terminals according to EN 60079-7, IEC 60079-7.
		Boxes with increased safety and intrinsic safety terminals according to EN 60079-7, EN 60079-11, IEC 60079-7,1EC 60079-11.
		Boxes with intrinsic safety terminals accordinI to EN 60079-11, IEC 60079-11.

CORTEM GROUP è da sempre impegnata nella salvaguardia dell'ambiente ed in tal senso raccomanda di smaltire i contenitori e gli imballaggi usati secondo le prescrizioni e le normative vigenti nel Paese di destinazione, evitando di disperderli nell'ambiente dopo l'utilizzo.

CORTEM GROUP cares for the environmental protection and recommends therefore to dispose properly of the packing and wrapping of its goods, according to the prescriptions and regulations in force in the destination country. The differentiated waste disposal is strongly recommended.

INFORMAZIONE AGLI UTENTI DI APPARECCHIATURE DOMESTICHE O PROFESSIONALI



Ai sensi dell'art. 13 del Decreto Legislativo 25 luglio 2005, n. 151 "*Attuazione delle Direttive 2002/95/CE, 2002/96/CE e 2003/108/CE, relative alla riduzione dell'uso di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti*".

Il simbolo del cassonetto barrato riportato sull'apparecchiatura o sulla sua confezione indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti. L'utente dovrà, pertanto, conferire l'apparecchiatura giunta a fine vita agli idonei centri di raccolta differenziata dei rifiuti elettronici ed elettrotecnici, oppure riconsegnarla al rivenditore al momento dell'acquisto di una nuova apparecchiatura di tipo equivalente, in ragione di uno a uno.

Nel caso di utenti professionali (aziende o enti), ai sensi della normativa sopra citata, la raccolta differenziata della presente apparecchiatura giunta a fine vita è organizzata e gestita:

a) direttamente dall'utente, nel caso in cui questo decida di disfarsi dell'apparecchiatura senza sostituirla con una apparecchiatura nuova equivalente ed adibita alle stesse funzioni;
b) dal produttore, inteso come il soggetto che ha per primo introdotto e commercializzato in Italia o rivende in Italia col proprio marchio l'apparecchiatura nuova che ha sostituito la precedente, nel caso in cui, contestualmente alla decisione di disfarsi dell'apparecchiatura a fine vita, l'utente effettui un acquisto di un prodotto di tipo equivalente ed adibito alle stesse funzioni. In tale ultimo caso, l'utente potrà richiedere al produttore il ritiro della presente apparecchiatura entro e non oltre 15 giorni naturali consecutivi dalla consegna della suddetta apparecchiatura nuova.

L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dismessa al riciclaggio, al trattamento e allo smaltimento ambientalmente compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il reimpiego e/o riciclo dei materiali di cui è composta l'apparecchiatura.

Lo smaltimento abusivo del prodotto da parte dell'utente comporta l'applicazione delle sanzioni di cui alla corrente normativa di legge.

INFORMATION TO USERS OF DOMESTIC AND PROFESSIONAL EQUIPMENT



According to art. 13 of Legislative Decree dated 25 July 2005 No. 151 "*Putting into effect Directives 2002/95/CE, 2002/96/CE and 2003/108/CE, aimed to limit the use of dangerous substances in electronic and electrical equipment, and related to waste disposal*".

The symbol of the crossed dustbin shown on the equipment or on its package indicates that the product must be collected separately from other waste, at the end of its lifetime. The user shall bring the equipment at the end of its lifetime in places dedicated to collect electrical and electronic waste, or he shall return it to a dealer, buying equivalent equipment (one back, one in).

In the case of professional users (companies or organizations), the subject equipment collection at the end of its lifetime is managed as following indicated:

a) Directly by the user, if he decides to throw the equipment away and not to replace it with a new equivalent one with the same functions;
b) By the manufacturer (i.e. he who first introduced and put on the Italian market, or he who resells in Italy with his brand the new equipment that replaced the previous one), in case the user decides to throw away the old equipment and to replace it with a new equivalent one with the same functions. In this last case, the user can ask the manufacturer to pick up the subject equipment within and not later than 15 days, natural and consecutive, after the new equipment has been delivered.

Separating waste and recycling is aimed to environmentally compatible waste treatment and disposal, in order to limit negative effects on environment and health and to promote recycling the old equipment construction materials and its remake into new products.

Illegal disposal of the product by the user is subject to fines, as per the current applicable law.

CARATTERISTICHE GENERALI — GENERAL CHARACTERISTICS

Range of ambient temperature normally used						
Type of boxes (material)	Gaskets material	Ambient temperature	Temperature class	Max surface temperature	Use cable suitable for temperature	Max service temperature of terminals (*)
Aluminium alloy, Stainless steel, Polyester resin	VMQ SPS 060 (for SA.. and SA../P) SILICONCELL (for cover of CTB CTBE and gland plates SA...SS CTB) EPDM/SBR (for body SA...SS)	-40°C +40°C	T6	T75°C	no warning tag for cables	+80°C
		-40°C +55°C	T5	T75°C	90°C	+95°C

Range of ambient temperature for signal circuits (max 1A for Ex e terminals; max 100mA for Ex ia terminals)						
Type of boxes (material)	Gaskets material	Ambient temperature	Temperature class	Max surface temperature	Use cable suitable for temperature	Max service temperature of terminals (*)
Aluminium alloy, Stainless steel, Polyester resin	VMQ SPS 060 (for SA.. and SA../P) SILICONCELL (for cover of CTB CTBE and gland plates SA...SS CTB) EPDM/SBR (for body SA...SS)	-40°C +60°C	T6	T75°C	no warning tag for cables	+80°C

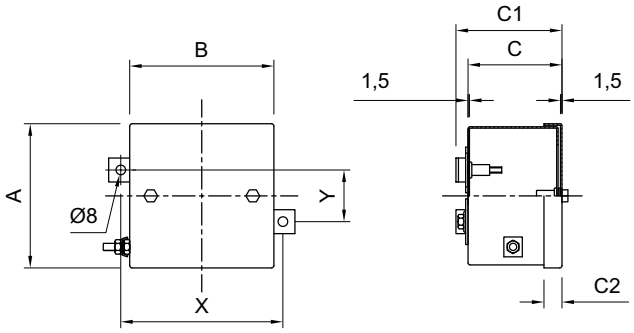
Other types of ambient temperature range admitted						
Type of boxes (material)	Gaskets material	Ambient temperature	Temperature class	Max surface temperature	Use cable suitable for temperature	Max service temperature of terminals (*)
Aluminium alloy, Stainless steel	VMQ SPS 060 (for SA..) VMQ MG1077N40 (for body of SA ... SS) SILICONCELL (for cover of CTB CTBE and gland plates SA... SS CTB)	-60°C +40°C	T6	T75°C	no warning tag for cables	+80°C
		-60°C +55°C	T5	T75°C	90°C	+95°C
		-60°C +65°C (**)	T5	T75°C	90°C	+95°C
Polyester resin	VMQ SPS 060 (for SA.. and SA../P)	-40°C +65°C (**)	T5	T75°C	110°C	+95°C

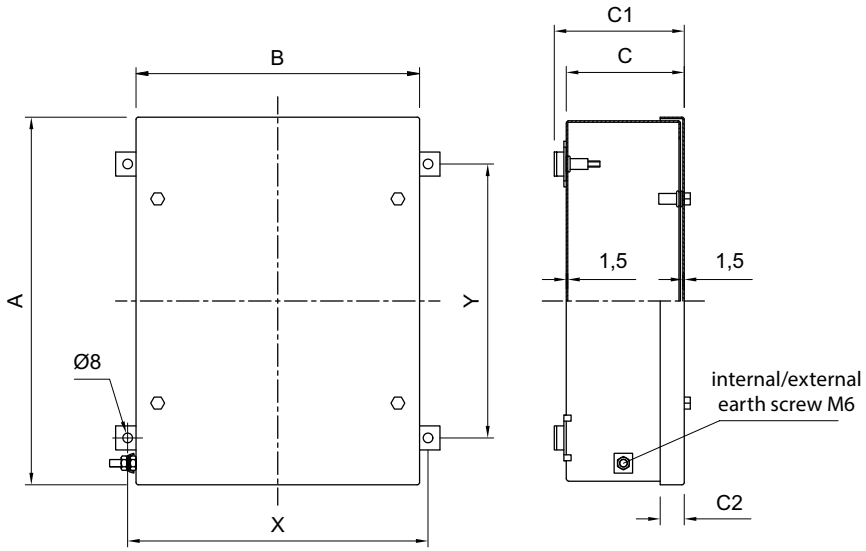
Range of ambient temperature for signal circuits (max 10A for Ex e terminals; max 100mA for Ex ia terminals)						
Type of boxes (material)	Gaskets material	Ambient temperature	Temperature class	Max surface temperature	Use cable suitable for temperature	Max service temperature of terminals (*)
Stainless steel	VMQ MG1077N40 (for body of SA ... SS) SILICONCELL (for cover of CTB CTBE and gland plates SA...SS CTB)	-60°C +85°C	T4	T110°C	110°C	+120°C

(*) - La temperature massima di servizio dei morsetti installati all'intero delle custodie deve essere pari o superiore alla temperature indicata nelle tabelle sopra indicate.

(*) - The maximum service temperature of terminals installed inside the enclosures should be equal or greater than the temperature indicated into the tables shown above.

Part number	A	B	C	C1	C2	X	Y	No. of fixing brackets	No. of cover screws
CTBE121208	120	120	80	90	15	135	43	2	2
CTBE151208	150	120	80	90		135	73		
CTBE151509	150	150	90	100		165	73		
CTBE191509	190	150	90	100		165	113		4
CTBE191910	190	190	100	110		205	113		
CTBE221513	229	152	130	140		167	152		
CTBE262610	258	258	100	110	20	273	161	4	
CTBE262616			160	170					
CTBE262620			200	210					
CTBE301410	306	146	100	110		160	228		
CTBE302310	306	236	100	110		250	228		
CTBE303010	306	306	100	110		320	228		
CTBE303016			160	170					
CTBE303020			200	210					
CTBE381612	380	160	120	130		175	303		
CTBE382610	380	260	100	110		275	303		
CTBE382616			160	170					
CTBE382620			200	210					
CTBE402513	400	250	130	140		265	323		





ATTENZIONE:
USARE CAVI ADATTI ALLA TEMPERATURA INDICATA

VOLTAGGIO NOMINALE MAX.: 1000V
CORRENTE NOMINALE MAX : 312A
SEZIONE DEL MORSETTI : DA 1,5MMQ A 300mmq

LA TEMPERATURA AMBIENTE STD. PER L'INSTALLAZIONE DELLE CASSETTA È TA -40°C +40°C CON CLASSE DI TEMPERATURA T6 OPPURE TA -40"C +55°C PER CLASSE DI TEMPERATURA T5. SU RICHIESTA LE CASSETTE POSSONO ESSERE INSTALLATE IN AMBIENTI CON ALTRI RANGE DI TEMPERATURA CHE VARIANO A SECONDA DELLA GUARNIZIONE USATA E DAL TIPO DI MORSETTI INSTALLATI ALL'INTERNO. QUANDO LE CASSETTE SONO ADATTE AD ESSERE INSTALLATE IN AMBIENTI CON TEMPERATURE NON STANDARD, LE SUDDETTE TEMPERATURE SARANNO INDICATE SUI DATI DI TARGA. AL VARIARE DEL RANGE DI TEMPERATURA AMBIENTE, VARIANO LA CLASSE DI TEMPERATURA E LA TEMPERATURA SUPERFICIALE. TUTTE QUESTE CARATTERISTICHE SONO INDICATE NELLE TABELLE SOPRA RIPORTATE.

TUTTE LE INDICAZIONI ELETTRICHE SONO RIFERITE A CASSETTE CORTEM CON MORSETTI WEIDMULLER 0 CABUR. MORSETTI DI ALTRI COSTRUTTORI POSSONO ESSERE USATI SE CERTIFICAZIONE, CARATTERISTICHE E DIMENSIONI SONO SIMILARI. PER LA CONNESSIONE DI TERRA SI DEVONO RISPETTARE LE INDICAZIONI DEL PARAGRAFO 15 DELLE NORME EN 60079-0, IEC 60079-0. GLI ELEMENTI DI CONNESSIONE PER LA MESSA A TERRA 0 PER IL COLLEGAMENTO EQUIPOTENZIALE DELLE MASSE DEVONO PERMETTERE IL COLLEGAMENTO EFFICACE DI ALMENO UN CONDUTTORE DI SEZIONE COME INDICATO DI SEGUITO:

AREA A SEZIONE TRASVERSALE DEL CONDUTTORI DI FASE DELL'INSTALLAZIONE (S mmq)A	AREA A SEZIONE TRASVERSALE DEL CONDUTTORE PROTETTIVO CORRISPONDENTE (S mmq)
S<=16	S
16<S<=35	16
S>35	0,5 S

OLTRE A RISPETTARE LE PRESENTI PRESCRIZIONI GLI ELEMENTI DI CONNESSIONE PER LA MESSA A TERRA O DEL COLLEGAMENTO EQUIPOTENZIALE DELLE MASSE POSTI ALL'ESTERNO DELLA COSTRUZIONE ELETTRICA DEVONO PERMETTERE IL COLLEGAMENTO EFFICACE DI UN CONDUTTORE DI ALMENO 4mmq. GLI ACCESSORI USATI PER ENTRATE DI CAVI O CHIUSURA IMBOCCHI INUTILIZZATI DEVONO ESSERE CERTIFICATI IN ACCORDO ALLE EN60079-0, EN 60079·7, EN 60079·31, IEC 60079-0, IEC 60079·7, IEC 60079·31 E DEVONO GARANTIRE UNA PROTEZIONE MECCANICA PARI A IP66. GLI ACCESSORI DEVONO AVERE LA STESSA TEMPERATURA AMBIENTE DI INSTALLAZIONE DELLE CASSETTE.

Warning:
Use cables able for indicated temperature

Max. nominal voltage: 1000V
Max. nominal current: 312A
Section of terminals : from 1,5mmq to 300mmq

The standard ambient temperature range is Ta -40°C +40°C with temperature class T6 or Ta -40°C +55°C with temperature class T5. On request the boxes can be installed with other range of ambient temperature that depend on type of gasket used and type of terminal mounted inside. When the boxes are suitable to be installed with ambient temperature not standard, the ambient temperature is marked on the tag. With the changing of ambient temperature, change also class of temperature and surface temperature.
For all the characteristics see the tables above.

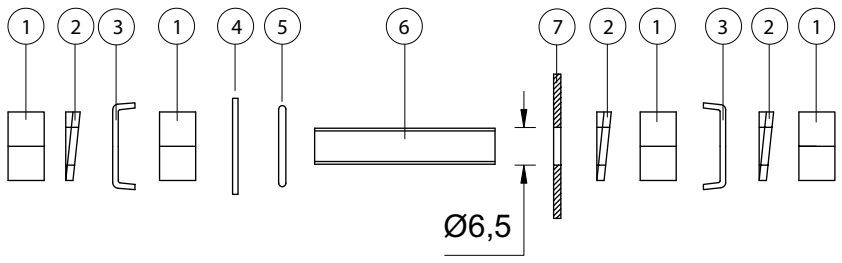
All the electrical indications are referred to Cortem boxes with Weidmuller or Cabur terminals. Terminals of others Manufacturer can be installed, if the certifications, characteristics and dimensions are similar.
For earth connections must be respected the indications of par. 15 to standards EN 60079.0, IEC 60079-0.
Earthing or equipotential bonding connection facilities shall allow for the effective connection of at least one conductor with a auss sectional area as indicated following:

Cross-sectional area of phase conductors of the installation (S mmq)	Cross-sectional area of corresponding protective conductor (S mmq)
S<=16	S
16<S<=35	16
S>35	0,5 S

In addition, earthing or bonding connection facilities on the outside of boxes shall provided for effective connection of a conductor of at least 4mmq.
The accessories used for cable entries and for closing unused apertures shall be certified according to the standards EN 60079-0, EN 60079-7, EN 60079·31, IEC 60079·0, IEC 60079·7, IEC 60079·31 and shall guarantee a degree protection IP66. The accessories for cable entry must be certified for same ambient temperature of installation of boxes.

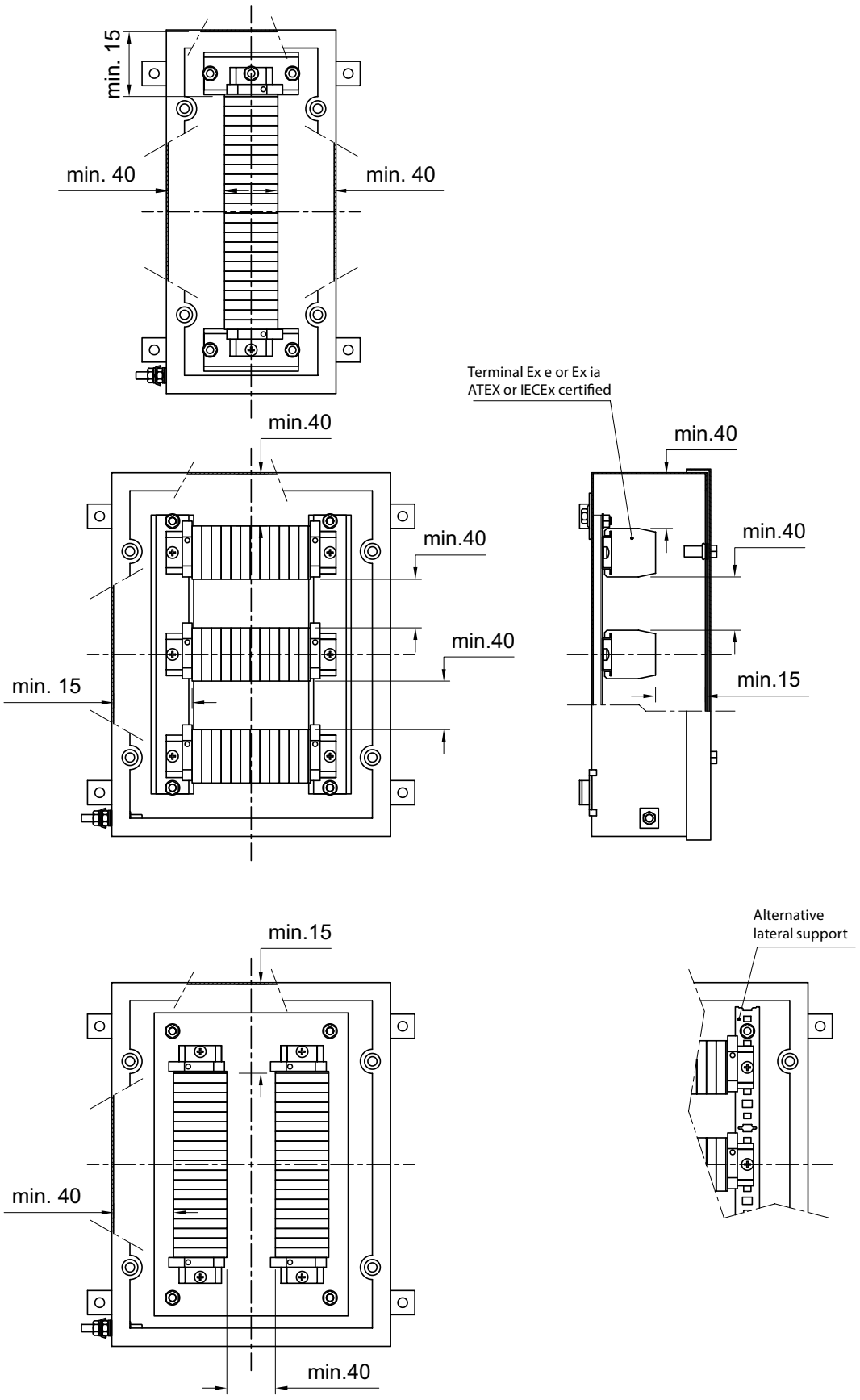
Dettaglio delle vite di terra interna/esterna M6
Detail for internal/external earth screw M6

1 - Dado M6 in acciaio inox o ottone	1 - Brass or stainless steel nut M6
2 - Rondella elastica (grower) in acciaio inox	2 - Stainless steel spring washer
3 - staffe antirotazione in acciaio inox o ottone	3 - Brass or stainless steel antirotationplate
4 - Rondella piana in acciaio inox	4 - Stainless steel plain washer
5- Rondella/guarnizione piana in Teflon	5 - Teflon plain washer/gasket
6 - Grana M6 in acciaio inox o ottone	6 - Brass or stainless steel socket setscrew M6
7 - Parete delle cassette in acciaio inox	7 - Wall of stainless steel junction box



Esempi di disposizione morsetti e distanze minime

Examples for terminals disposition ed minimum distances



Codice Part number	Area forabile - Drilling area				
	A	B	C	D	H
CTBE121208	95	75	75	95	35
CTBE151208	95	105	75	125	35
CTBE151509	125	105	105	125	45
CTBE191509	125	145	105	165	45
CTBE191910	165	145	145	165	55
CTBE221513	127	184	107	199	85
CTBE262610	233	213	213	233	50
CTBE262616	233	213	213	233	110
CTBE262620	233	213	213	233	150
CTBE301410	120	260	100	280	50
CTBE302310	210	260	190	280	50
CTBE303010	260	260	260	260	50
CTBE303016	280	260	260	280	220
CTBE303020	280	260	260	280	250
CTBE381612	115	335	135	355	70
CTBE382610	235	335	215	355	50
CTBE382616	235	335	215	355	110
CTBE382620	235	335	215	355	150
CTBE402513	225	355	205	375	80

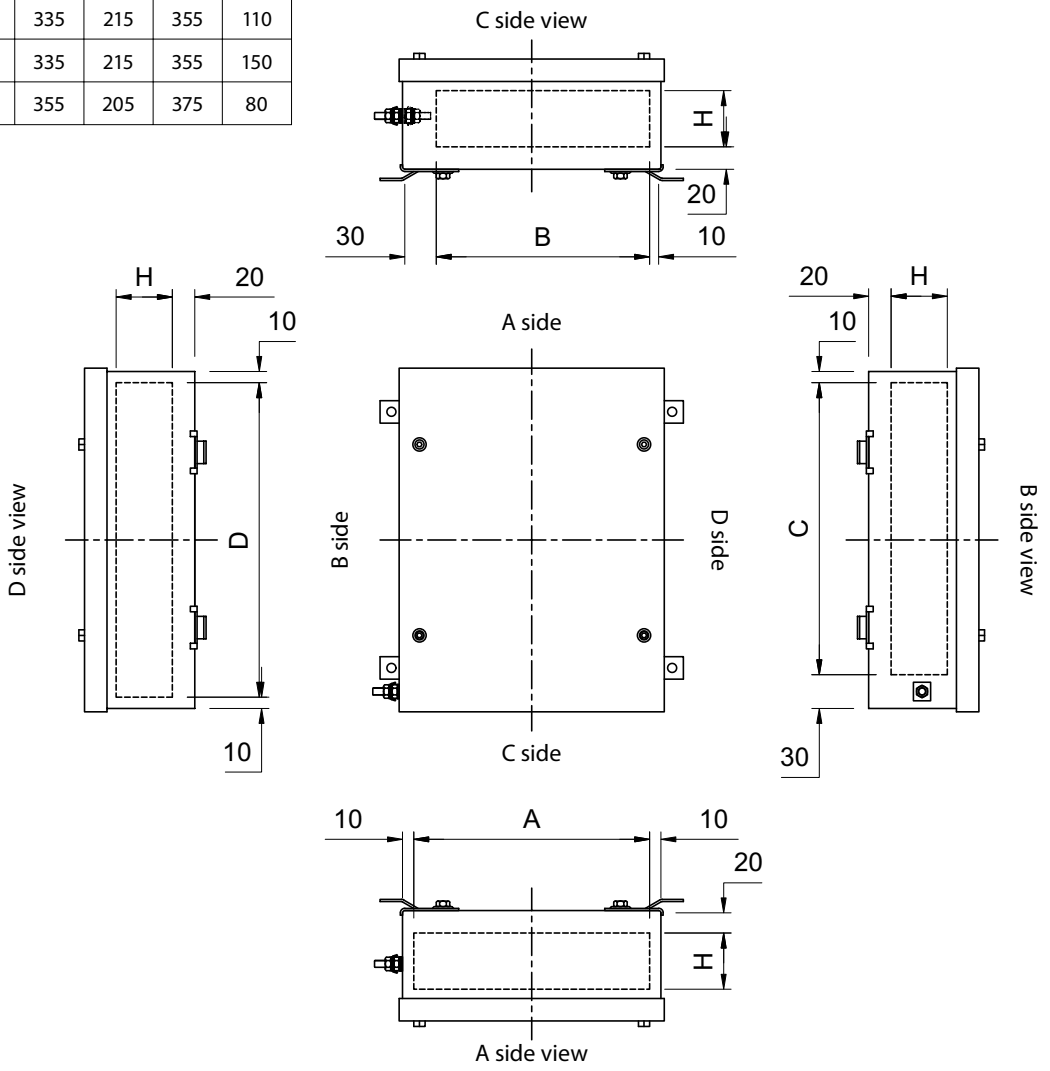
Foro passante da eseguire in base alla filettatura del pressacavo o tappo da installare
Passing through hole to be performed under the thread of cable gland or plug installed

TIPO FORO hole type	1	2	3	4	5	6	7	8	10
ISO 7/1 - ISO 228	1/2"	3/4"	1"	1" 1/2	1" 1/2	2"	2" 1/2	3"	4"
FORO PASSANTE Through hole	Ø22	Ø27,5	Ø34	Ø43	Ø48,5	Ø60,5	Ø76	Ø89	Ø114

IMPERIAL BS 31 (BET)	3/4"	1"	1" 1/4	1" 1/2	2"	2" 1/2	3"		
FORO PASSANTE Ø Through hole Ø	Ø20	Ø26,5	Ø32,5	Ø39	Ø51,5	Ø64,5	Ø77		

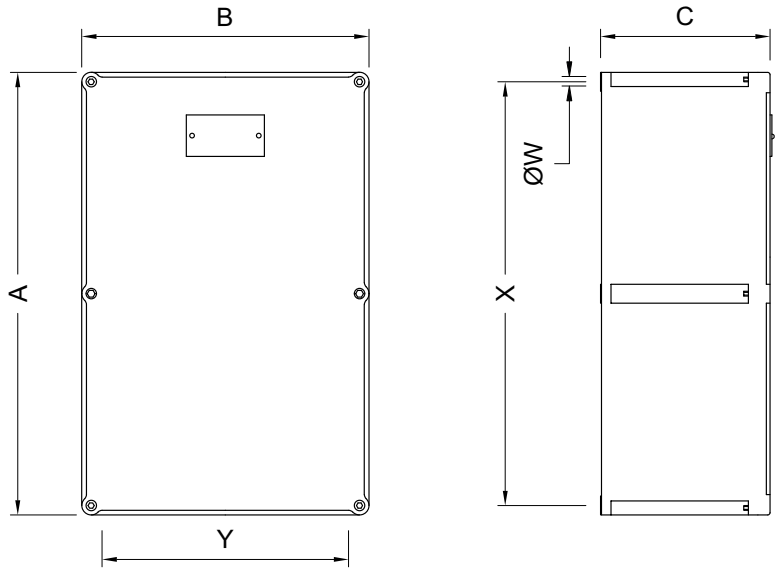
ISO 965	20X1,5	25X1,5	32X1,5	40X1,5	50X1,5	63X1,5	75X1,5	90X1,5	100X1,5
FORO PASSANTE Ø Through hole Ø	Ø20	Ø25,5	Ø32,5	Ø40,5	Ø50,5	Ø63,5	Ø75,5	Ø90,5	Ø100,5

P.G.	PG 9	PG 11	PG 13,5	PG 16	PG 21	PG 29	PG 36	PG 42	
FORO PASSANTE Ø Through hole Ø	Ø16	Ø19,5	Ø21	Ø23,5	Ø29	Ø38	Ø48	Ø55	



Tab.1 types and dimensions for aluminium boxes

JUNCTION BOX TYPE	OUTSIDE DIMENSIONS			MOUNTING DIMENSIONS		
	A	B	C	X	Y	ØW
SA-090907	90	90	85	74	74	7
SA-111108	110	110	95	94	94	
SA-141410	147	147	110	131	131	
SA-171108	170	110	95	154	94	
SA-202012	200	200	130	180	180	
SA-301410	305	147	110	285	127	
SA-302310	305	230	110	285	210	
SA-302318	305	230	190	285	210	
SA-473018	470	305	195	450	285	
SA-623018	620	305	195	600	285	
SAG-606018	600	600	210	580	580	8



COPPIA DI SERRAGGIO RACCOMANDATA
RECOMMENDED TIGHTENING TORQUES

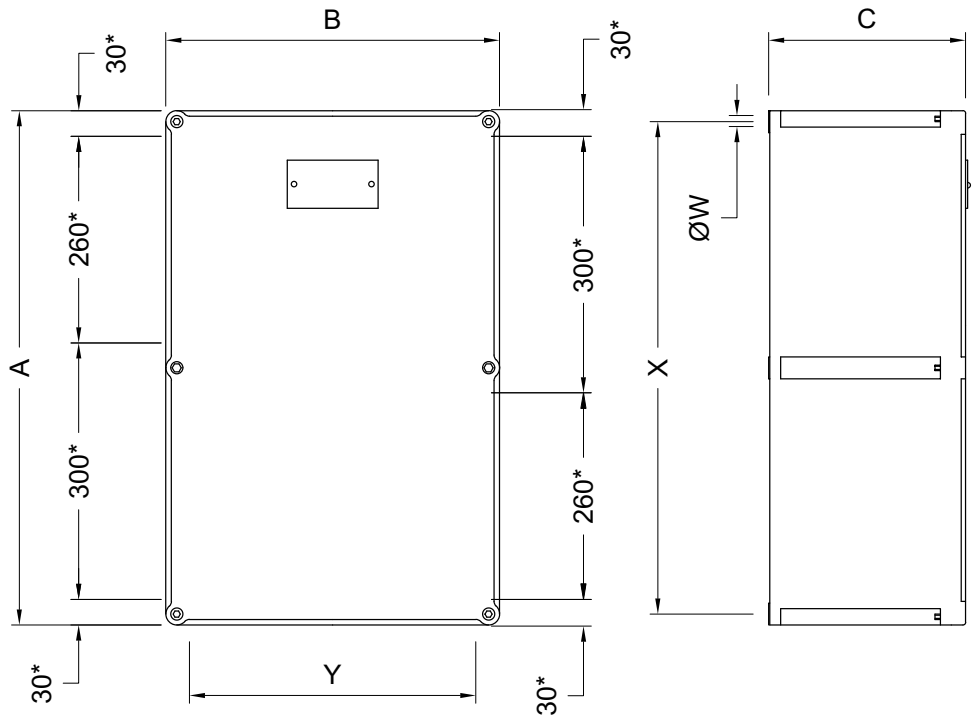
Filetto Nominale Nominal size thread	Classe di resistenza 70 Steel Grade Property Class 70	
	Precarico (N) Preload (N)	Serraggio (Nm) Tightening (Nm)
M5	3.000	3,5
M6	6.200	4,5
M8	12.200	16
M10	16.300	32
M12	24.200	56
M16	45.000	135

Tab.2 types and dimensions for poliaster boxes

JUNCTION BOX TYPE	OUTSIDE DIMENSIONS			MOUNTING DIMENSIONS		
	A	B	C	X	Y	ØW
SA-090907P	90	90	85	74	74	7
SA-111108P	110	110	95	94	94	
SA-141410P	147	147	110	131	131	
SA-171108P	170	110	95	154	94	
SA-301410P	305	147	110	285	127	
SA-302310P	305	230	110	285	210	
SA-302318P	305	230	190	285	210	
SA-473018P	470	305	195	450	285	
SA-623018P	620	305	195	-	-	

On drawing for polyester boxes the fixing dimensions indicated with asterisk are referred only to SA-623018P box. For the fixing dimensions of all the other boxes see table.

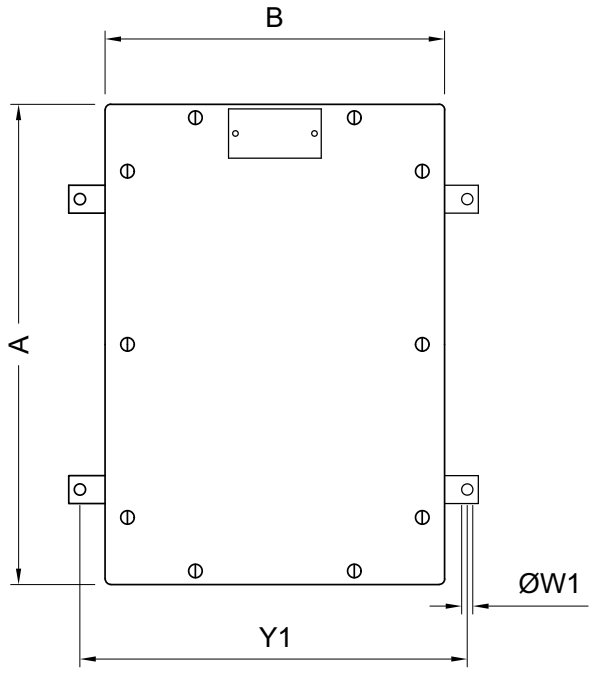
Polyester boxes

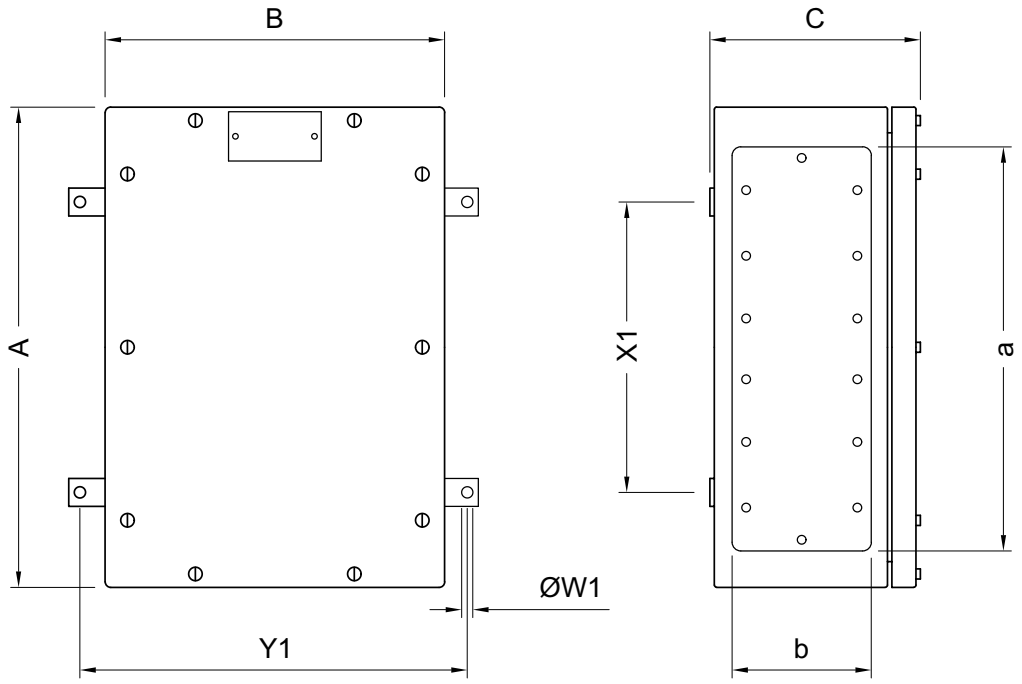


Tab.3 types and dimensions for typical stainless steal boxes SA with or without gland-plates

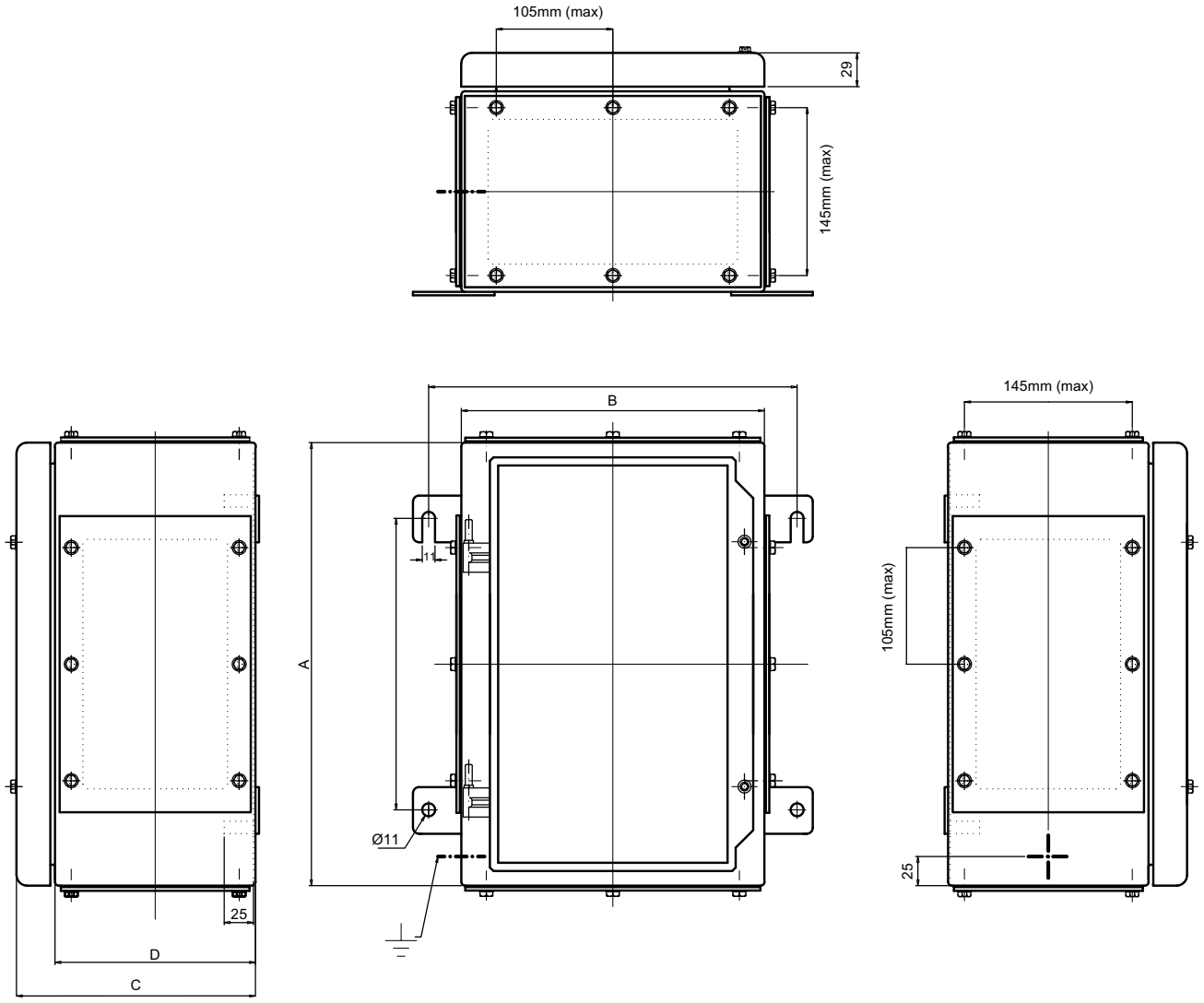
JUNCTION BOX TYPE	OUTSIDE DIMENSIONS			MOUNTING DIMENSIONS			DIMENSIONS OF GLAND PLATES short side		DIMENSIONS OF GLAND PLATES long side	
	A	B	C	X1	Y1	ØW	a	b	a	b
SA-111108SS	110	110	85	38	130					
SA-141410SS	147	147	100	75	167					
SA-171108SS	170	110	85	98	130					
SA-301410SS	305	147	100	233	167					
SA-302310SS	305	230	100	233	250	8				
SA-302318SS	305	230	180	233	250		200	140	275	140
SA-473018SS	470	305	180	398	325		275	140	440	140
SA-623018SS	620	305	180	548	325		275	140	590	140
SA-404020SS	400	400	200	328	420		370	172	370	172
SAG-606020SS	600	600	200	528	620		570	172	570	172

Stainless steel boxes

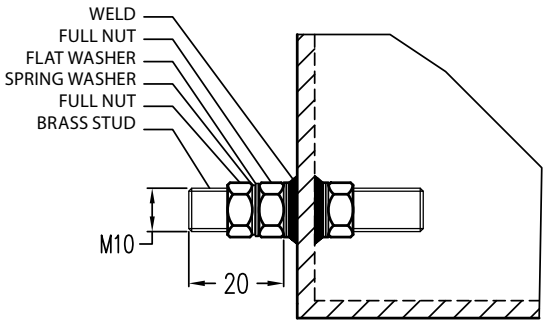




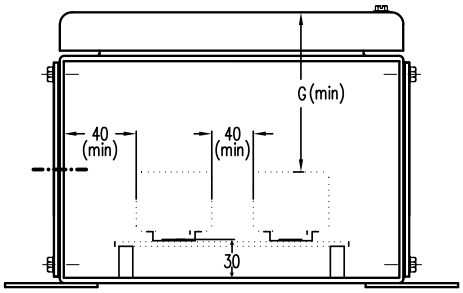
Tab.4 types and dimensions for stainless steal boxes CTB

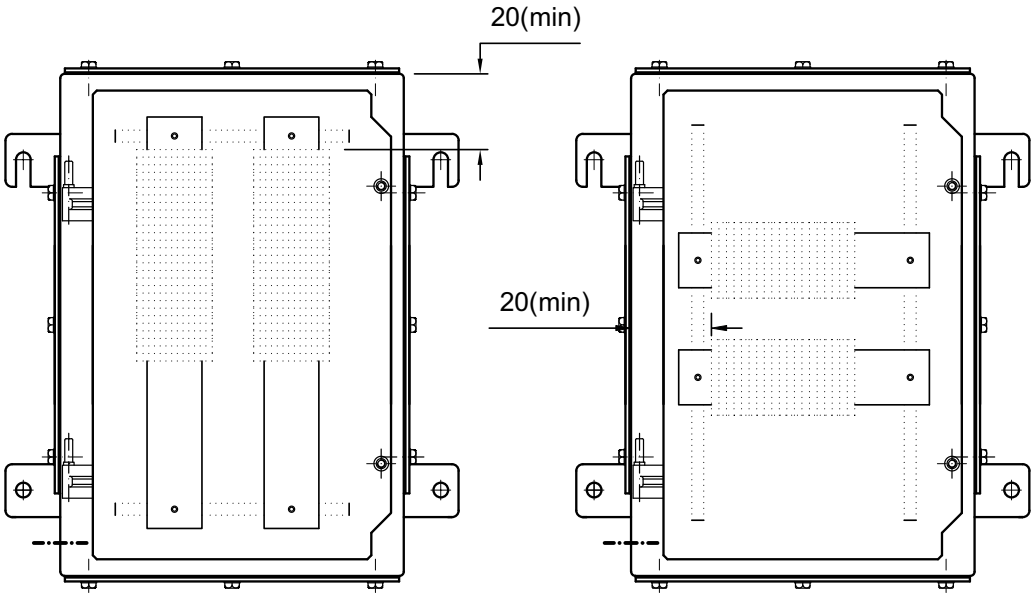


DETAIL OF EXTERNAL AND
Internal earth stud

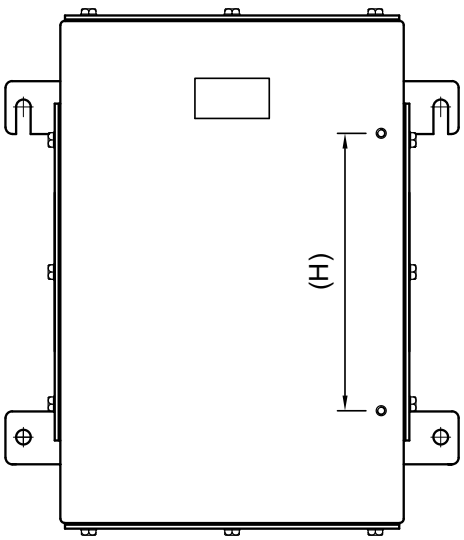


DETAILS THE SAME INTERNAL AS EXTERNAL

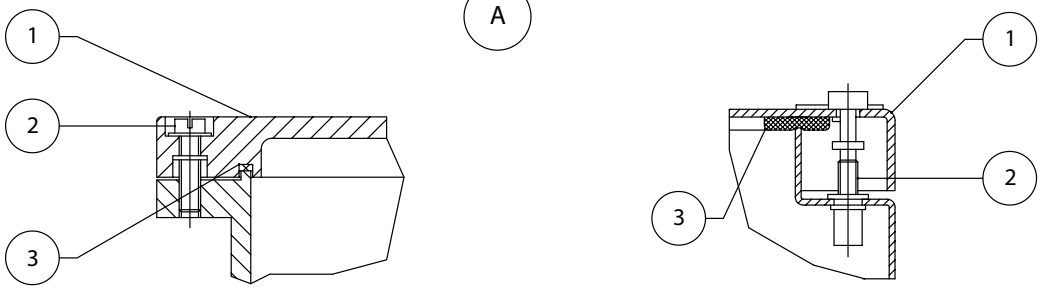




JUNCTION BOX TYPE	DIMENSION	DOOR FIXING SCREWS	
	G (min)	No. OF SCREWS	DIMENSION (H)
CSTB121208	20	4	100
CSTB151609	30	4	130
CSTB191910	40	4	170
CTB221513	50	2	120
CTB262616	45	2	148
CTB262620	90	2	148
CTB303016	45	2	170
CTB303020	90	2	170
CTB382816	45	2	170
CTB382820	90	2	170
CTB453816	45	2	260
CTB453820	90	2	260
CTB484816	45	2	270
CTB484820	90	2	270
CTB503516	45	2	270
CTB503520	90	2	270
CTB624516	45	3	255
CTB624520	90	3	255
CTB745520	90	3	255
CTB765020	90	3	266
CTBB68420	90	3	315
CTB916120	90	3	320
CTB987420	90	3	360



A



COPPIA DI SERRAGGIO RACCOMANDATA

TIPO CUSTODIA	Serraggio (Nm)
SA ... SS (inox)	4
SA ... (alluminio)	4
SA .../P (poliestere)	3+4*

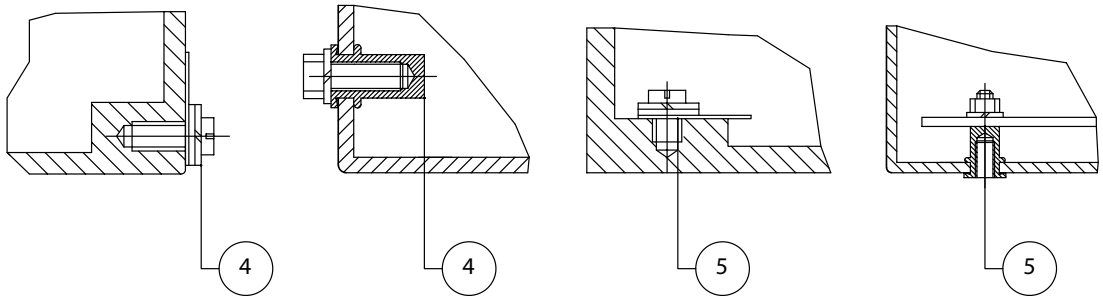
* dove viti TC usare cacciavite a croce mod. PH

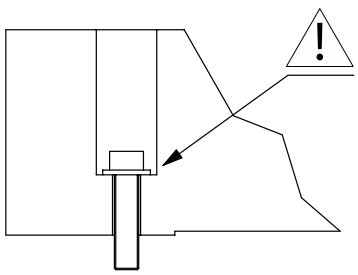
RECOMMENDED TIGHTENING TORQUES

Enclosure type	Tightening (Nm)
SA ... SS (stainless steel)	4
SA ... (aluminium)	4
SA .../P (polyester)	3+4*

* where TC screws use phillips screwdriver mod. PH

B

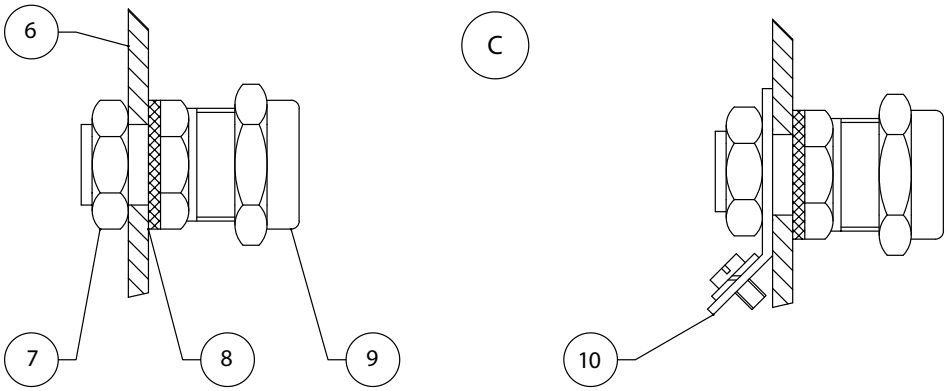


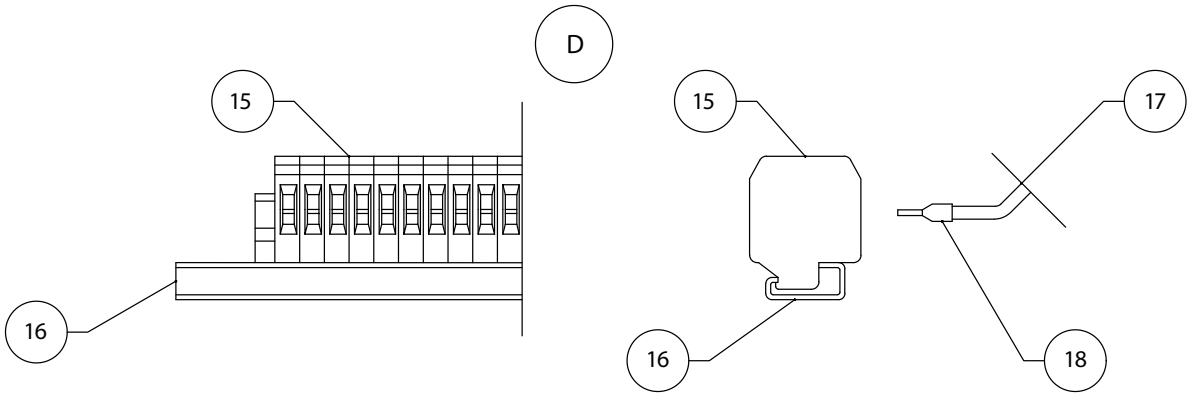


NOTA: PER IL FISSAGGIO DELLE CUSTODIE SA-6230181N POLIESTERE USARE VITI COMPLETE DI RONDELLA PIANA.

Note: to fix SA-623018 polyester boxes, use screws complete of washers.

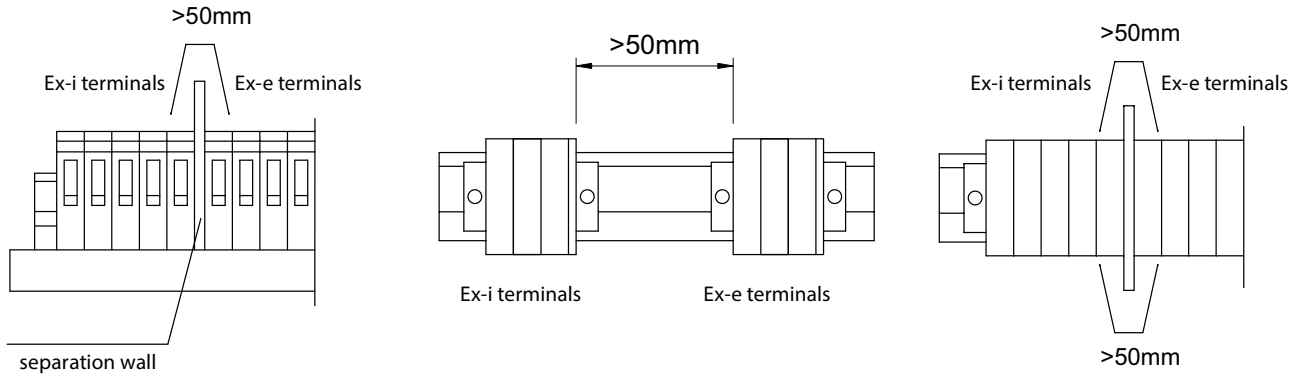
C



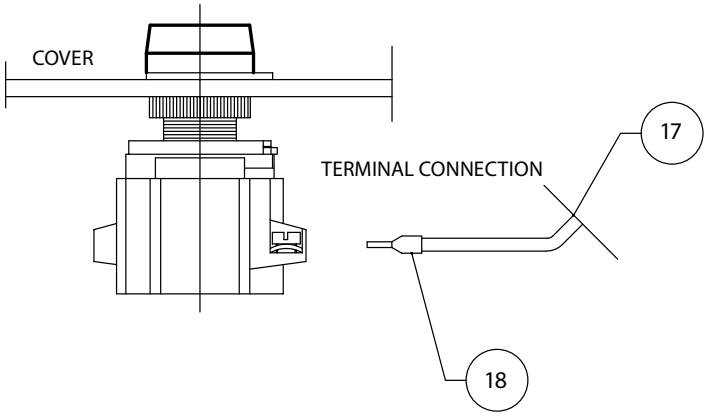


TIPICI MONTAGGI ALL'INTERNO CASSETTA DI MORSETTI Ex-e ED Ex-i

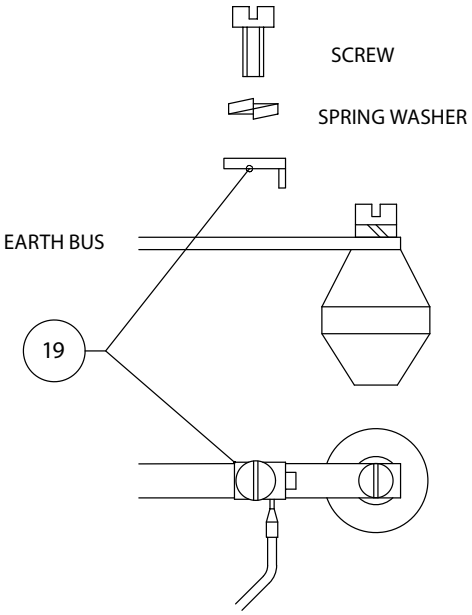
TYPICAL ARRANGEMENTS OF Ex-e AND Ex-i TERMINALS



TYPICAL EQUIPMENT CONNECTION



TYPICAL EARTH CONNECTION



PER UNA EFFICACE CONNESSIONE DEi CAVI 17 AI COMPONENTI SI CONSIGLIA L'USO DI PUNTALINI (CAPICORDA) 18
TUTTE LE VITI DI FISSAGGIO SONO DI TIPO ANTIALLENTANTE E TUTTE LE CONNESSIONI DI TERRA SONO COMPLETE DI STAFFA ANTIROTAZIONE 19.

SUI COPERCHI DELLE CASSETTA POTRANNO ESSERE MONTATI SOLTANTO OPERATORI CON CERTIFICATO ATEX, IECEx.
VERIFICARE SEMPRE I DATI DI TARGA DEGLI OPERATORI E DELLE CUSTODIE PRIMA DI COLLEGARE I CIRCUTI

To obtain an appropriate connection of cables 17 with equipment, the us of crimping lugs 18 is preferred. All the screws are antiloosening type, all earth connections are complete with antirotation support 19.

Only equipment with ATEX, IECEx certificate can be mounted on covers of the boxes. Before energizing, verify the tag data on boxes and on equipment.

LA TEMPERATURA AMBIENTE STD. PER L'INSTALLAZIONE DELLE CASSETTE È Ta -40°C +40°C CON CLASSE DI TEMPERATURA T6 OPPURE Ta -40°C +55°C PER CLASSE DI TEMPERATURA T5.
SU RICHIESTA LE CASSETTE POSSONO ESSERE INSTALLATE IN AMBIENTI CON ALTRI RANGE DI TEMPERATURA CHE VARIANO A SECONDA DEL MATERIALE DELLA CASSETTA, DELLA GUARNIZIONE USATA E DAL TIPO DI MORSETTI INSTALLATI ALL'INTERNO.
QUANDO LE CASSETTE SONO ADATTE AD ESSERE INSTALLATE IN AMBIENTI CON TEMPERATURE NON STANDARD, LE SUDDETTE TEMPERATURE SARANNO INDICATE SUI DATI DI TARGA. AL VARIARE DEL RANGE DI TEMPERATURA AMBIENTE, VARIANO LA CLASSE DI TEMPERATURA E LA TEMPERATURA SUPERFICIALE.
TUTTE QUESTE CARATTERISTICHE SONO INDICATE SUL CERTIFICATO.

If not specified on the nameplate of box, the standard ambient temperature range is Ta -40°C +40°C with temperature class T6 or Ta -40°C +55°C with temperature class T5.
On request the boxes can be installed with other range of ambient temperature that depend on material fa boxes, type of gasket used and type of terminal mounted inside.
When the boxes are suitable to be installed with ambient temperature not standard, the ambient temperature is marked on the tag. With the changing of ambient temperature, change also class of temperature and surface temperature.
For all the characteristics see the certificate.

FIGURA A
PER TOGLIERE IL COPERCHIO 1 ALLENTARE TUTTE LE VITI 2 PER IL RIMONTAGGIO ASSICURARSI CHE LA GUARNIZIONE 3 SIA NELLA PROPRIA SEDE E NON SIA DANNEGGIATA STRINGERE TUTTE LE VITI PER GARANTIRE LA PROTEZIONE IP

Detail A
To remove the cover 1 unloose all the screws 2. Before closing the box be sure that the gasket 3 is in its slot and that it is not damaged. Tighten all the screws to assure IP protection degree.

FIGURA B
TUTTE LE CASSETTE SONO DOTATE DI VITE INTERNA/ESTERNA COMPLETA DI STAFFA ANTIROTAZIONE PER LA CONNESSIONE DI TERRA. (CASSETTE IN POLIESTERE SOLO CONNESSIONE INTERNA) ASSICURARE UN BUON COLLEGAMENTO STRINGENDO LE VITI E DOTANDO I CAVI DI CAPICORDA.

Detail B
All the boxes are complete with internal-external earth screw complete with antirotation support for earth connection. (only internal screw for polyester boxes). A good connection can be assured by tightening the screws properly. All the earth cables must be provided with terminal lugs .

FIGURA C
IL MONTAGGIO DI PRESSACAVI O TAPPI 9 SULLE PARETI DELLE CUSTODIE 6, AVVIENE TRAMITE CONTRODADO 7 E GUARNIZIONE 8. PRESSACAVI METALLICI SU CUSTODIE IN POLIESTERE POSSONO E ESSERE FORNITI CON ANELLO METALLICO DI MESSA A TERRA 10. TUTTI I FORI INUTILIZZATI DEVONO ESSERE TAPPATI, TUTTI GLI ACCESSORI CHE VENGONO MONTATI DEVONO ESSERE IN ACCORDO ALLE NORME EN 60079-0 EN 60079-7 E CON MIN. LO STESSO GRADO DI PROTEZIONE DELLE CUSTODIE

Detail c
Cable glands and I or plugs 9 must be installed on the walls of the boxes complete with locknut 7 and gasket 8. If metallic cable glands are installed on polyester junction boxes, they could be supplied complete with metallic ring for earth connection 10. All the unused holes must be plugged , all the accessories mounted on boxes must be certified according to EN 60079-0, EN 60079-7 and must how a protection degree at least equal to the protection degree of boxes.

FIGURA D
ALL'INTERNO DELLE CUSTODIE I MORSETTI 15 SONO MONTATI SU PROFILI DIN 16. PER UNA EFFICACE CONNESSIONE DEI CAVI 17 AI MORSETTI SI CONSIGLIA L'USO DI PUNTALINI.

Detail D
The internal terminals 15 are mounted on the DIN rail 16. To obtain an appropriate connection of cables 17 with terminals, the use of crimping lugs is preferred.

ALL'INTERNO DELLA CASSETTA POTRANNO ESSERE MONTATI SOLTANTO MORSETTI CON CERTIFICATO "ATEX".

Only terminals with "ATEX" certificate can be mounted inside the box.

NEL CASO IN CUI NELLA STESSA CUSTODIA SI TROVINO MORSETTI IN ESECUZIONE Ex-e ED Ex-i DOVRANNO ESSERE RISPETTATE LE DISTANZE MINIME INDICATE NEI DETTAGLI DELLA PAGINA PRECEDENTE CHE SONO RIFERITE ALLE NORME VIGENTI. I MORSETTI IN ESECUZIONE Ex-i DOVRANNO ESSERE EVIDENZIATI O TRAMITE TARGHETTA O COMUNQUE CON UN DIVERSO COLORE DAGLI AL TRI (BLU) .

In case of Ex e and Ex i terminals are mounted inside the box, the minimum distances between terminals described on previous sheet must be respected (accounting to the European standard).
Ex i terminals must be identified with a label or with a different colour (blue).

SE VENGONO FORNITE CON MORSETTI CABLATI, LE CUSTODIE VENGONO SOTTOPOSTE ALLA PROVA DI TENSIONE APPLICATA IN ACCORDO ALLA CLAUSOLA 7.1 DELLA EN60079·7 ED IEC60079·7 CON I SEGUENTI VALORI: 1500V +0% +5% PER 1 MINUTO.
SE VENGONO FORNITE CON MORSETTI NON CABLATI, SARÀ CURA DELL'INSTALLATORE SOTTOPORRE LE CUSTODIE ALLA PROVA DI TENSIONE APPLICATA.

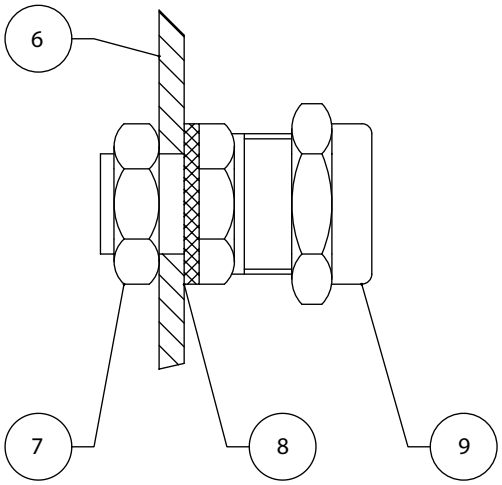
When supplied with terminals complete of wiring cables, the boxes have been submitted to the dielectric test in accordance with the clause 7.1 of EN60079·7 and IEC 60079·7 with the following values: 1500V +0% +5% for 1 minute.
When supplied with terminals without wiring cables, the dielectric test must be made by Installer.

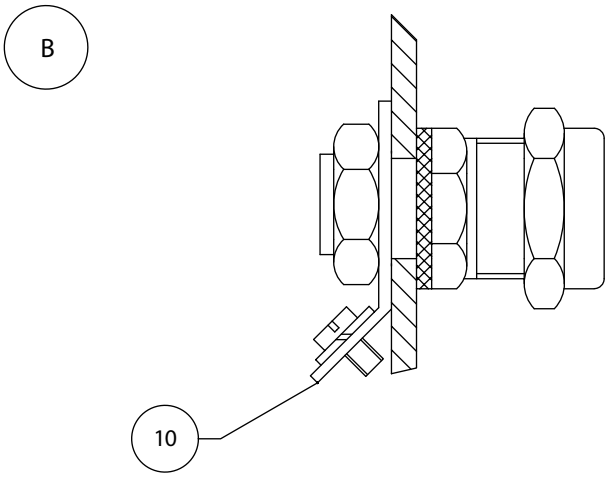
FIGURA A
ALL'INTERNO DELLE CUSTODIE I MORSETTI 15 SONO MONTATI SU PROFILI DIN 16.
PER UNA EFFICACE CONNESSIONE DEI CAVI 17 AI MORSETTI SI CONSIGLIA L'USO DI PUNTALINI.
ALL'INTERNO CASSETTA POTRANNO ESSERE MONTATI SOLTANTO MORSETTI CON CERTIFICATO "ATEX" E/O IECEx.
NEL CASO IN CUI NELLA STESSA CUSTODIA SI TROVINO MORSETTI IN ESECUZIONE Ex.., ED Ex-i DOVRANNO ESSERE RISPETTATE LE DISTANZE MINIME INDICATE NEI DETTAGLI DELLA PAGINA PRECEDENTE CHE SONO RIFERITE ALLE NORME DI RIFERIMENTO. I MORSETTI IN ESECUZIONE Ex-i DOVRANNO ESSERE EVIDENZIATI O TRAMITE TARGHETTA O COMUNQUE CON UN DIVERSO COLORE DAGLI ALTRI (BLU).

detail A
The internal terminals 15 are mounted on the DIN rail 16 to obtain an appropriate connection of cables 17 with terminals, the use of crimping lugs is preferred.
Only terminals with ATEX and/or IECEx certificate are permitted to mount inside the box.
In case of inside the box are mounted Ex e and Ex i terminals, the minimum distances between terminals described on previous sheet must be respected (according to the reference standards). Ex-i terminals must be identify with a label or with a different colour (blue).

FIGURA B
IL MONTAGGIO DI PRESSACAVI U TAPPI 9 SULLE PARETI DELLE CUSTODIE 6, AVVIENE TRAMITE CONTRODADO 7 E GUARNIZIONE 8.
I PRESSACAVI POSSONO ESSERE FORNITI CON ANELLO METALLICO DI MESSA A TERRA 10. TUTTI I FORI INUTILIZZATI DEVONO ESSERE TAPPATI, TUTTI GLI ACCESSORI CHE VENGONO MONTATI DEVONO ESSERE IN ACCORDO ALLE NORME EN 60079-0, EN 60079-7, IEC 60079-0, IEC 60079-7 E CON MIN. LO STESSO GRADO DI PROTEZIONE DELLE CUSTODIE.

detail B
Cable glands and I or plugs 9 must be installed on the walls of the boxes 6 complete with locknut 7 and gasket 8.
The cable glands could be supplied complete with metallic ring for earth connection 10. All the unused holes must be plugged , all the accessories mounted on boxes must be certified according to EN 60079-0, EN 60079-7, IEC 60079-0, IEC 60079-7 and with a protection degree min. equal to the protection degree of boxes.

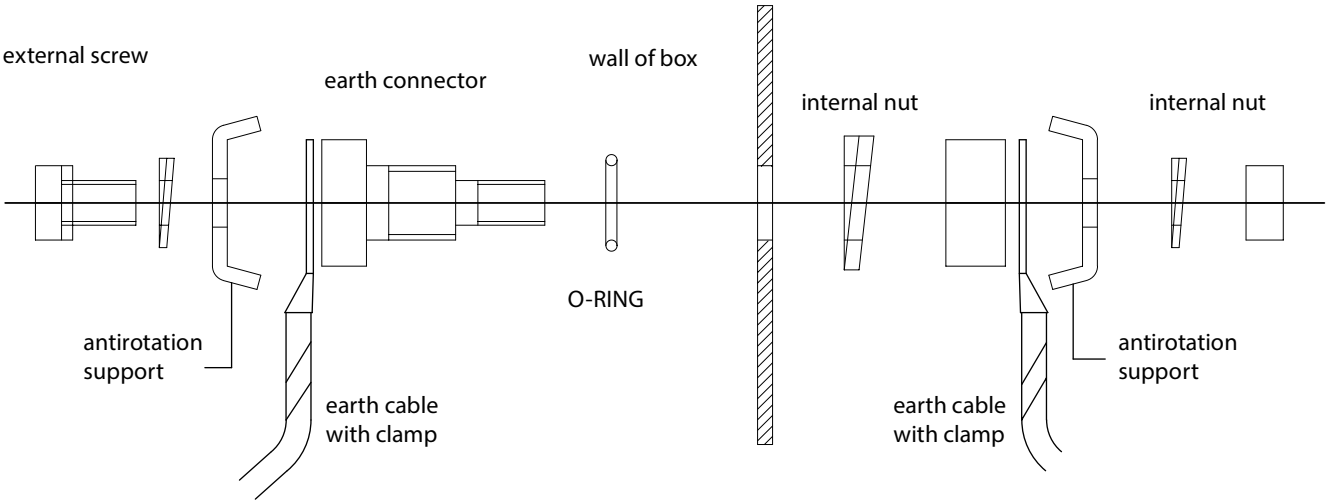




SE VENGONO FORNITE CON MORSETTI CABLATI, LE CUSTODIE VENGONO SOTTOPOSTE ALLA PROVA DI TENSIONE APPLICATA IN ACCORDO ALLA CLAUSOLA 7.2 DELLA EN60079-7 ED IEC60079-7 CON I SEGUENTI VALORI: 1500V +0% +5% PER 1 MINUTO.
SE VENGONO FORNITE CON MORSETTI NON CABLATI, SARÀ CURA DELL'INSTALLATORE SOTTOPORRE LE CUSTODIE ALLA PROVA DI TENSIONE APPLICATA.

When supplied with terminals complete of wiring cables, the boxes have been submitted to the dielectric test in accordance with the clause 7.2 of EN60079·7 and IEC 60079·7 with the following values: 1500V +0% +5% for 1 minute.
When supplied with terminals without wiring cables, the dielectric test must be made by Installer.

Typical connection for external/internal earth screw (antiloosening type with spring washers)



ATTENZIONE:
USARE CAVI ADATTI ALLA TEMPERATURA INDICATASULLA TARGHETTA

VOLTAGGIO NOMINALE MAX.: 1000V

CORRENTE NOMINALE : DA 8A A 312A

SEZIONE DEl MORSETTI : DA 1,5mmq A 300mmq

TUTTE LE INDICAZIONI ELETTRICHE SONO RIFERITE A CASSETTE CORTEM CON MORSETTI WEIDMULLER. MORSETTI DI ALTRI COSTRUTTORI POSSONO ESSERE USATI SE LA CERTIFICAZIONE, CARATTERISTICHE E DIMENSIONI SONO SIMILARI.
PER LA CONNESSIONE DI TERRA SI DEVONO RISPETTARE LE INDICAZIONI DEL PARAGRAFO 15 DELLE NORME EN 60079-0, IEC 60079-0. GLI ELEMENTI DI CONNESSIONE PER LA MESSA A TERRA O PER IL COLLEGAMENTO EQUIPOTENZIALE DELLE MASSE DEVONO PERMETTERE IL COLLEGAMENTO EFFICACE DI ALMENO UN CONDUTTORE DI SEZIONE COME INDICATO DI SEGUITO:

AREA A SEZIONE TRASVERSALE DEI CONDUTTORI DI FASE DELL'INSTALLAZIONE (S mmq)
S<=16
16<S<=35
S>35

AREA A SEZIONE TRASVERSALE DEL CONDUTTORE PROTETTIVO CORRISPONDENTE (S mmq)
S
16
0,5 S

OLTRE A RISPETTARE LE PRESENTI PRESCRIZIONI GLI ELEMENTI DI CONNESSIONE PER LA MESSA A TERRA O DEL COLLEGAMENTO EQUIPOTENZIALE DELLE MASSE POSTI ALL'ESTERNO DELLA COSTRUZIONE ELETTRICA DEVONO PERMETTERE IL COLLEGAMENTO EFFICACE DI UN CONDUTTORE DI ALMENO 4mmq.
GLI ACCESSORI USATI PER ENTRATE DI CAVI O CHIUSURA IMBOCCHI INUTILIZZATI DEVONO ESSERE CERTIFICATI IN ACCORDO ALLE EN 60079-0; EN 60079-7; EN 60079-31 E IEC 60079-0; IEC 60079-7; IEC 60079-31 E DEVONO GARANTIRE UNA PROTEZIONE MECCANICA PARI A IP66. GLI ACCESSORI DEVONO AVERE LA STESSA TEMPERATURA AMBIENTE DI INSTALLAZIONE DELLE CASSETTE.

Warning:
Use cables suitable for temperature indicated on the label

Max. nominal voltage: 1000V

Nominal current : from 8A to 312A

Section of terminals : from 1,5mmq to 300mmq

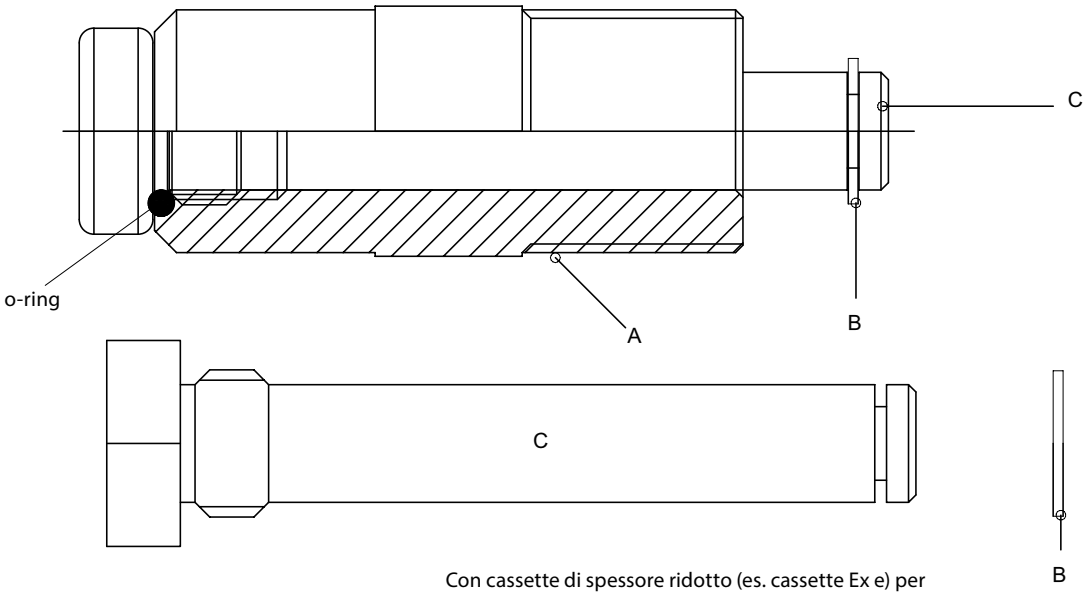
All the electrical indications are referred to Cortem boxes with Weidmuller terminals. terminals of others Manufacturer can be installed, if the certifications, characteristics and dimensions are similar.
For earth connections must be respected the indications of par. 15 to standards EN 60079-0, IEC 60079-0.
Earthing or equipotential bonding connection facilities shall allow for the effective connection of at least one conductor with a cross sectional area as indicated following:

Cross-sectional area of phase conductors of the installation(S mmq)
S<=16
16<S<=35
S>35

Cross-sectional area of corresponding protective conductor (S mmq)
S
16
0,5 S

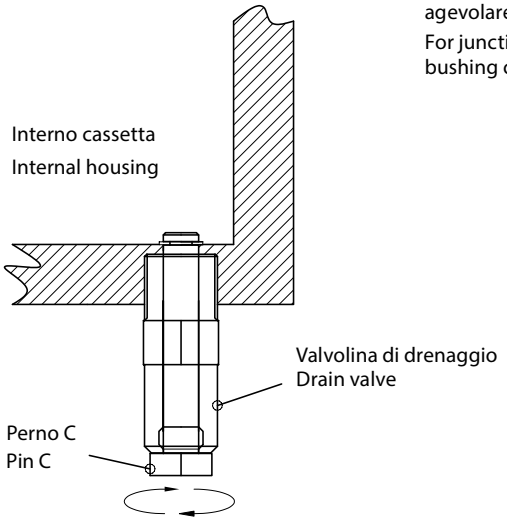
In addition, earthing or bonding connection facilities on the outside of boxes shall provided for effective connection of a conductor of at least 4mmq.
The accessories used for cable entries and for closing unused apertures shall be certified according to the standards EN 60079-0; EN 60079-7; EN 60079-31 and IEC 60079-0; IEC 60079-7; IEC 60079-31 and shall guarantee a degree protection IP66. The accessories for cable entry must be certified for same ambient temperature of installation of boxes.

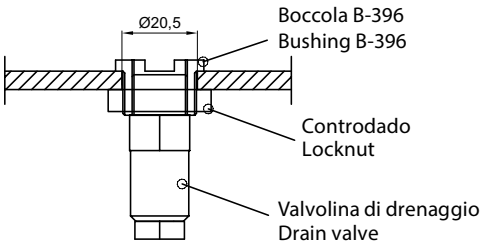
VALVOLA TIPO:
Valve type: ECD-2.. 11 2GD Ex d IIC/Ex e 11 Ex tD A21 IP66



Con cassette di spessore ridotto (es. cassette Ex e) per agevolare il drenaggio viene aggiunta una boccola.

For junction boxes with reduced thickness (ex. Ex e boxes) an bushing can be added for an easy drain.





Per procedere con il drenaggio, svitare il perno C.
Terminata l'operazione di drenaggio avvitare il perno facendo attenzione che la guarigione o-ring sia nella propria sede.

To proceed with drain operation, unscrew the pin C.
When drain operation is finished, screw the pin C, be careful to keep the a-ring gasket on its seat.

Durante il normale uso, il perno C deve essere completamente avvitato e la guarnizione o-ring deve essere nella propria sede, al fine di mantenere il grado di protezione IP.

During the normal use, the pin C must be completely screwed and the o-ring gasket must be on its seat, to maintain the degree of protection.

Per la pulizia della valvolina, si deve smontare la stessa dalla cassetta procedendo successivamente allo smontaggio di tutti i componenti come da schema:
1 - Smontare la valvolina A dalla cassetta
2 - Togliere la rondella elastica B
3 - Svitare e sfilare dalla valvolina A il perno C
4 - Effettuare la pulizia del componente ECD
5 - Rimontare la valvolina ECD procedendo in senso inverso a quanta indicate nei punti precedenti

For the cleaning of the valve you must strip down it from the junction box proceeding subsequently the dismantling of the components as in the scheme
1 - Strip down the valve A from the junction box
2 - Remove the internal reataing ring B
3 - Unscrew and take out from the valve A the pin C
4 - Make the cleaning of the component ECD
5 - Reassemble the valve ECD proceeding in the opposite direction as indicated in the above mentioned points.

CORTEM s.p.a.
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R.E.A. C.C.I.A.A. GORIZIA U. 32755 - M. GO 000139
Registro Imprese Gorizia 00052120318
Cod.Fisc. e Partita Iva **IT00052120318**
Eco-contributo RAEE assolto ove dovuto n° Registro A.E.E. IT08020000001818

COMPANY WITH QUALITY SYSTEM CERTIFIED BY DNV = ISO 9001 =
COMPANY WITH ENVIRONMENTAL SYSTEM CERTIFIED BY DNV = ISO 14001 =

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Member of CORTEM GROUP
To be sure to be safe.

DICHIARAZIONE DI CONFORMITA' *DECLARATION OF CONFORMITY*

N° 0137

Il costruttore:
***We*:**

CORTEM S.p.A.
Via Aquileia, 10
34070 VILLESSE (GO) - ITALY

Dichiara con la presente la conformità allo schema IECEx, del Prodotto
Hereby declares the conformity to IECEx scheme, of the Product

Custodie portamorsetti serie: *Terminal boxes series:*	**SA… SAG… SA…/P SA…SS** **CTB… CSTB… CTBE…**
Modo di protezione: *Protection mode:*	**Ex eb IIC T6/T5/T4 Gb** **Ex tb IIIC T75°C/T110°C Db** **IP66** **Ex eb ia IIC T6/T5/T4 Gb** **Ex tb ia IIIC T75°C/T110°C Db** **IP66** **Ex ia IIC T6/T5/T4 Gb** **Ex ia IIIC T75°C/T110°C Db** **IP66**
Temperatura ambiente: *Ambient temperature:*	**-40°C÷+40°C, -40°C÷+55°C, -40°C÷+60°C, -40°C÷+65°C** **-60°C÷+40°C, -60°C÷+55°C, -60°C÷+65°C, -60°C÷+85°C**
Certificato: *Certificate:*	**IECEx CES 13.0001**

In accordo con le seguenti norme IEC:
In accordance with the following IEC Standards:

IEC 60079-0:2017
IEC 60079-7:2015
IEC 60079-11:2011
IEC 60079-31:2013
IEC 60529:2001

Villesse, 21.10.2019

Firma
Signature . . . . . .
Riccardo Gratton
Vice-president

INSTALLATION INSTRUCTIONS
& CONDITIONS FOR SAFE USE

Ex II 2 GD
Ex eb IIC Gb

Modular TERMINAL Blocks: W- Series

DEMKO 14 ATEX1338 U
IECEx ULD 14.0005U
Notified Body No. of Ex - QA: 0344
Label print on package unit: 0344
UL21UKEX2114U
Approved Body No. of UK Ex - QA: xxxx
(see product marking)
Standards:
EN IEC 60079-0:2018 and EN IEC 60079-7:2015 A1:2018
IEC 60079-0: 7th Edition and IEC 60079-7: 5.1th Edition

Modular Terminal Blocks: WDU/WPE

Version:	Type	Order No
	WDU 2.5*	1020000000

in conjunction with:	Type	Order No
	WPE 2.5*	1010000000

Accessories:	Type	Order No
End Plate	WAP 2.5-10*	1050000000
Partition Plate	WTW 2.5-10*	1050100000
End bracket	WEW 35/2*	1061200000
Terminal rail	TS 35/… acc.to DIN EN 60715	
Screen bus bar	LS 2.8	1056400000

Cross-connection	Pluggable*	Screwable*	Order No
	ZQV 2.5N/2	WQV 2.5/2	1053660000
	ZQV 2.5N/3	WQV 2.5/3	1053760000
	ZQV 2.5N/4	WQV 2.5/4	1053860000
	ZQV 2.5N/5	WQV 2.5/5	1053960000
	ZQV 2.5N/6	WQV 2.5/6	1054060000
	ZQV 2.5N/7	WQV 2.5/7	1054160000
	ZQV 2.5N/8	WQV 2.5/8	1054260000
	ZQV 2.5N/9	WQV 2.5/9	1054360000
	ZQV 2.5N/10	WQV 2.5/10	1054460000

Insulation material:

- Type	Wemid
- Tracking resistance (A) to IEC 60112	CTI ≥ 600
- Flammability class to UL 94	V0

- Operating temperature range	-60°C…+110°C (insulating material limit)
- Ambient temperature range	-60°C…+40°C (for T6 applications)
- Ambient temperature range	-60°C…+55°C (for T5 applications)
- Ambient temperature range	-60°C…+70°C (for T4 applications)

* in all colours and optional with hexagon and six lobe drive

Technical data according to IEC/EN 60079-7 (increased safety "eb"):

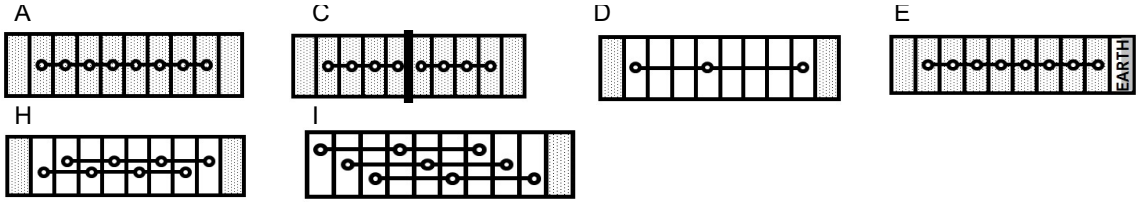
	WDU 2.5	WPE 2.5
- Rated voltage	690 V	
- Rated voltage with LS 2.8	275 V	
- Rated current	24 A / ΔT 40 K	
- Temperature rise with rated current	37,7 K / 24 A	
- Rated current with WQV	24 A / ΔT 40 K	
- Rated current with ZQV	24 A / ΔT 40 K	
- Contact resistance with rated conductor, 2.5mm²	0,37 mΩ	0,83 mΩ
- Rated conductor cross section	2.5mm²	2.5mm²
- Conductor cross section solid	0,14 - 4.0 mm²	0,14 - 4.0 mm²
- Conductor cross section stranded	0,14 - 4,0 mm²	0,14 - 4,0 mm²
- Conductor cross section flexible	0,14 - 4,0 mm²	0,14 - 4,0 mm²
- cross section, American Wire Gauge	26 - 12 AWG	26 - 12 AWG
- 2 conductors with same cross-section	0,5 - 1,5 mm²	---
- Tightening torque range, terminal screw	0,4 - 0,8 Nm	0,4 - 0,6 Nm
- Tightening torque range, fixing screw		0,4 - 0,8 Nm
- Tightening torque range for WQV…	0,4 - 0,8 Nm	
- Stripping length	10 mm	10 mm

IECEx / ATEX / UKCA Terminal and Cross-Connector Arrangements:

Max voltage data according to IEC/EN 60079-7 in conjunction with protective conductor terminal blocks of the WPE-Series, (increased safety "eb"):

Application Case

A	Continuous
C	Adjacent – separated by a partition plate
D	Intermediate - bridging one or more unconnected terminals
E	Next to a protective conductor terminal (earth) without a partition plate
H	Cross-connection with twin parallel
I	Cross-connection with triple parallel



Application case	WDU 2.5 with ZQV 2.5/N	WDU 2.5 with WQV 2.5
	max Voltage/V	max Voltage/V
A	440	550
C	440	550
D	352	275
E	352	352
H	275	275
I	69	-

Information for further cross-connector arrangements will be provided on request.

Max voltage data with optional screen bus bar LS 2,8:
- WDU 2.5 with ZQV 2.5/N 69 V
- WDU 2.5 with WQV 2.5 275 V

Note:
If smaller cross sections than the rated cross section are used, the belonging lower current has to be laid down in the IECEx/EC-Type Examination Certificate of the complete apparatus.

Mounting instructions:
The WDU/WPE series is suitable for application in enclosures in atmospheres with flammable gases or combustible dust. For use in flammable gases these enclosures must satisfy the requirements according to IEC/EN60079-0 and IEC/EN60079-7. For use in combustible dust these enclosures must satisfy the requirements according to IEC/EN60079-0 and IEC/EN60079-31.

Regarding the use of accessories the instructions of the manufacturer must be followed.

Schedule of Limitations:
The WDU/WPE terminals are suitable for use in enclosures in atmospheres with flammable gases or combustible dust. For flammable gases these enclosures must satisfy the requirements according to IEC/EN60079-0 and IEC/EN60079-7. For combustible dust the enclosure must satisfy the requirements according to IEC/EN60079-0 and IEC/EN60079-31.
The terminal blocks shall be placed inside a suitable IECEx/ATEX/UKCA certified IP54 enclosure for gas atmosphere. For dust atmosphere the terminal blocks shall be mounted inside a suitable IECEx/ATEX/UKCA certified certified ‘t’ enclosure (IEC/EN60079-31).

Under normal operating conditions the temperature rise of the terminal blocks is maximum 40 K, measured at the maximum permitted rated current. Due to the above mentioned, the terminal blocks may be used in apparatus of temperature classes T6..T1 as long as the terminal block ambient temperature range is not exceeded. No part of terminal block must exceed 110 °C under any condition.

T6 (- 60°C ... +40 °C)
T5 (- 60°C … +55 °C)
T4 (- 60°C ... +70 °C)

When using the type WDU/WPE especially with other terminal blocks series or sizes or accessories the requirements for clearance and creepage distances according to IEC/EN60079-7 must be observed.
Regarding the use of covers, cross-connectors and end brackets the instructions of the manufacturer must be followed.

For cross connection accessories, current rating, resistance across the terminal and torque values please refer to the table under “technical data” above.

The terminal can be used with either one or two wires into either side of the terminal. When two wires are used they must be of the same type, and of equal sizes. No other wire sizes or types than the ones specified in instructions must be used. The terminal blocks must either be mounted next to another block of the same type and size or with an end plate.
When assembling with other approved terminal blocks series, sizes and accessories the required creepage distances and clearances must be considered.
If smaller conductor cross sections than the rated conductor cross sections are used, then the corresponding lower current shall be stated in the Certificate of the complete apparatus.
Unused terminals shall be tightened.



- Cross connections with blank ends shall not be used.
- Manually cut cross connections shall not be used.

Essential Health and Safety Requirements:
Concerning ESRs this Schedule verifies compliance with the Annex II of ATEX / Schedule 1 of UKCA directive and Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016 only. By placing the product on the market, the manufacturer declares compliance with other relevant Directives, and all other safety related requirements including those of Annex II / Schedule 1 of these Directives.

CORTEM GROUP®

VALVOLINA DI SFIATO E DRENAGGIO SERIE ECDE-...
ISTRUZIONI DI SICUREZZA, USO E MANUTENZIONE

Drain and Breather Valve ECDE-...
safety, maintenance and mounting instructions

IN ACCORDO ALLA DIRETTIVA 2014/34/UE
ED IN ACCORDO ALLO SCHEMA IECEx

according to directive 2014/34/UE
and according to IECEx scheme

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ELFIT | cortem | FONDISONZO

ISTRUZIONI PER IL MONTAGGIO VALVOLINA DI SFIATO E DRENAGGIO SERIE ECDE-...
COSTRUITE IN ACCORDO ALLE NORMATIVE:

EN 60079-0:2012
EN 60079-7:2015
EN 60079-31:2014
EN 60529
IN ACCORDO ALLA DIRETTIVA ATEX 2014/34/UE DEL26-02-2014

IEC 60079-0:2011
IEC 60079-7:2015
IEC 60079-31:2013
IEC 60529
IN ACCORDO ALLO SCHEMA IECEX

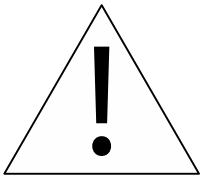
Mounting instructions of drain and breather valve ECDE-...
Manufactured according to the following Standards:

EN 60079-0:2012
EN 60079-7:2015
EN 60079-31:2014
EN 60529
according to ATEX directive 2014/34/UE del26-02-2014

IEC 60079-0:2011
IEC 60079-7:2015
IEC 60079-31:2013
IEC 60529
according to IECEx scheme

ECDE-B Ex CE 0722 II GD
CML 16 ATEX 1351U
Ex eb IIC Gb Ex tb IIIC Db IP66
IECEx CML 16.0124U

ECDE-D Ex CE 0722 II GD
CML 16 ATEX 1351U
Ex eb IIC Gb Ex tb IIIC Db IP66
IECEx CML 16.0124U



ISTRUZIONI DI SICUREZZA

RIVOLTE A PERSONALE QUALIFICATO IN ACCORDO CON LE LEGGI NAZIONALI, INCLUSE LE RELATIVE NORME E, DOVE APPLICABILE IN ACCORDO CON IEC 60079-17 RIGUARDANTE LE APPARECCHIATURE ELETTRICHE PER ATMOSFERE POTENZIALMENTE ESPLOSIVE.

- NON SONO AMMESSE MODIFICHE AL PRODOTTO

-LA VALVOLINA PUÒ ESSERE INSTALLATA SOLO SE COMPLETAMENTE INTEGRA

- DEVONO ESSERE UTILIZZATE SOLO PARTI DI RICAMBIO ELFIT/CORTEM

- DEVONO ESSERE SEGUITE SCRUPOLOSAMENTE LE SEGUENTI ISTRUZIONI PER OTTENERE UNA PERFETTA INSTALLAZIONE

- DEVONO ESSERE STRETTAMENTE OSSERVATE LE NOME NAZIONALI DI SICUREZZA E PREVENZIONE INFORTUNI, E LE PRESCRIZIONI INDICATE CON NEL PRESENTE FASCICOLO TECNICO.

SAFETY INSTRUCTIONS

To the attention of qualified personnel in accordance with national legislation and its attendant regulations and, if applicable, in accordance with IEC60079-17 concerning electrical equipment for high-explosive areas.

- Product modifications are not allowed

-The valve can be fit up only if thoroughly intact

-Only ELFIT/CORTEM spare parts must be used

- In order to get a proper installation, the following instruction must be thou roughly followed.

- National safety rules and accident prevention standards as well as all the requirements which are represented by in this technical dossier must be strictly observed.

ISTRUZIONI PER IL MONTAGGIO

1) IL MONTAGGIO DEI VARI COMPONENTI DELLE VALVOLINE SERIE ECDE, VIENE EFFETTUATO IN FABBRICA

2) LA VALVOLINA FUNGE DA SFIATO NELLA VERSIONE ECDE-B (SCHEMA A), O DA DRENAGGIO NELLA VERSIONE ECDE-D (SCHEMA B)

3) PER ASSICURARE UNA TENUTA LP TRA VALVOLINA E LA CASSETTA, SI DEVE PROCEDERE COME EVIDENZIATO NELLO SCHEMA C

4) PER LA PULIZIA DELLA VALVOLINA, SI DEVE SMONTARE LA STESSA DALLA CASSETTA, ASSICURANDOSI DI AVERE PREVENTIVAMENTE EFFETTUATO LA MESSA FUORI TENSIONE DELLA CASSETTA, PROCEDENDO SUCCESSIVAMENTE ALLO SMONTAGGIO DI TUTTI I COMPONENTI COME DA SCHEMA
DOPO LA PULIZIA SI DEVE RIMONTARE LA VALVOLINA PROCEDENDO IN SENSO INVERSE DA COME INDICATE IN SCHEMA F PER ECD-1.. O SCHEMA G PER ECD-2.. E SUCCESSIVAMENTE RIDARE TENSIONE ALLA CASSETTA.

MOUNTING INSTRUCTIONS

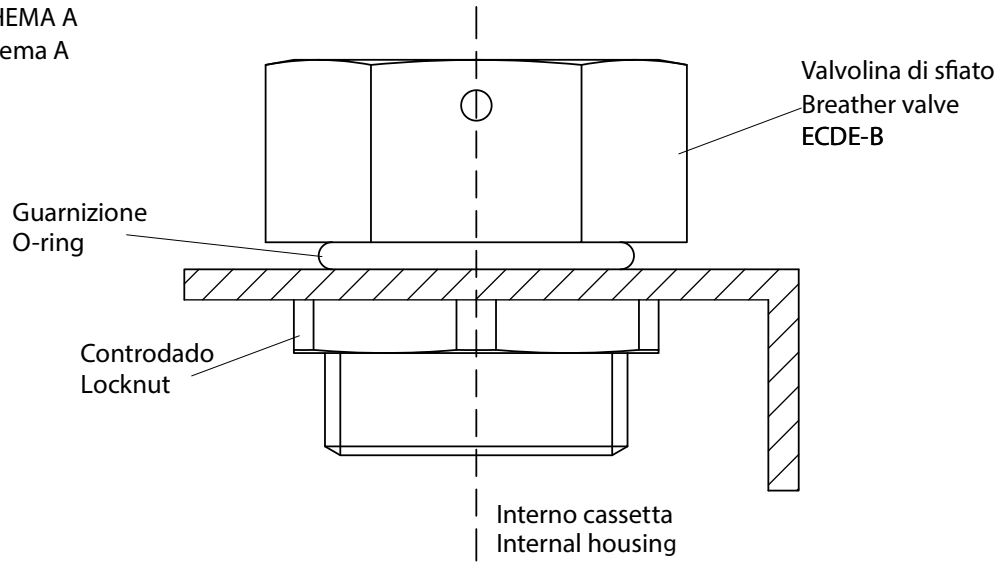
1) The assembly of the components of the models ECDE valve is made in the factory

2) The valve is used as breather in the ECDE-B version (scheme A), or drain in the ECDE-D version (scheme B)

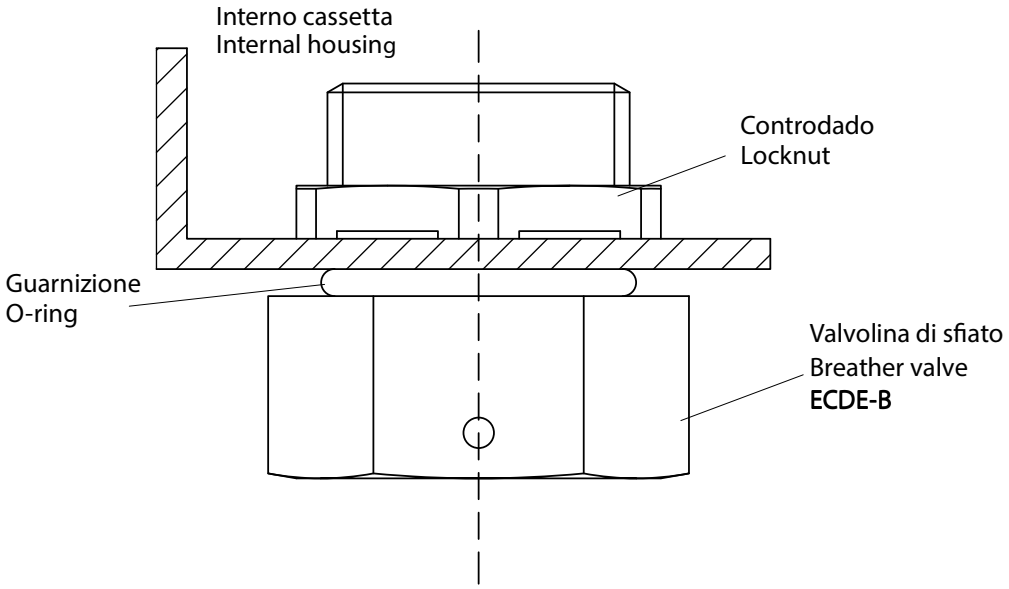
3) To ensure a IP protection between valve and enclosure, it shall be as shown in Scheme C.

4) For the cleaning of the valve you must strip down it from the junction box , making sure you have previously removed power to the junction box, proceeding subsequently the dismantling of the components as in the scheme D
After the cleaning you must reassemble it proceeding in the opposite direction as indicated in the scheme F for ECD-1.. or scheme G for ECD-2.. and then restore power to the junction box.

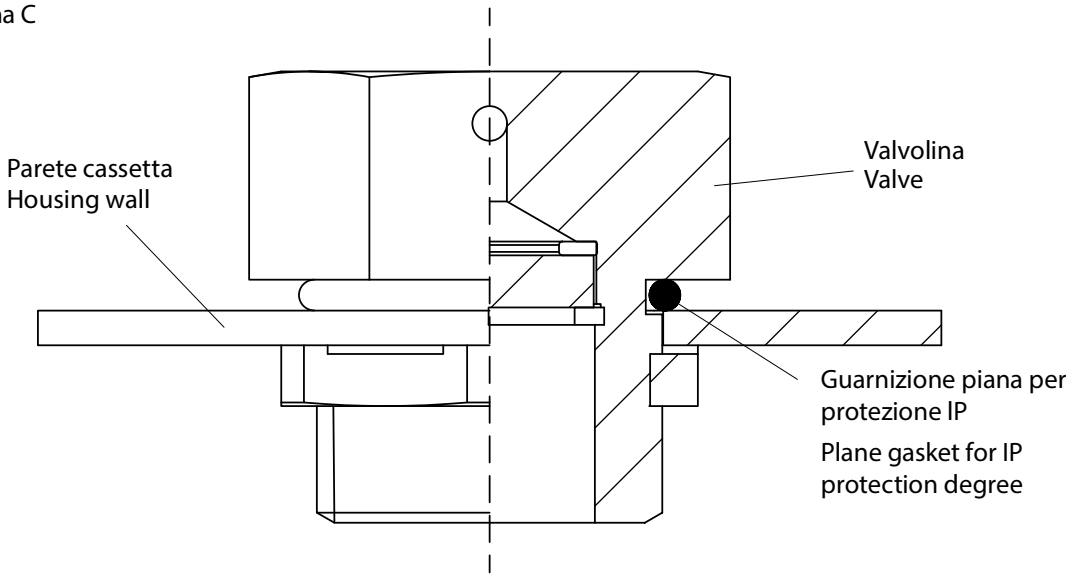
SCHEMA A
Schema A



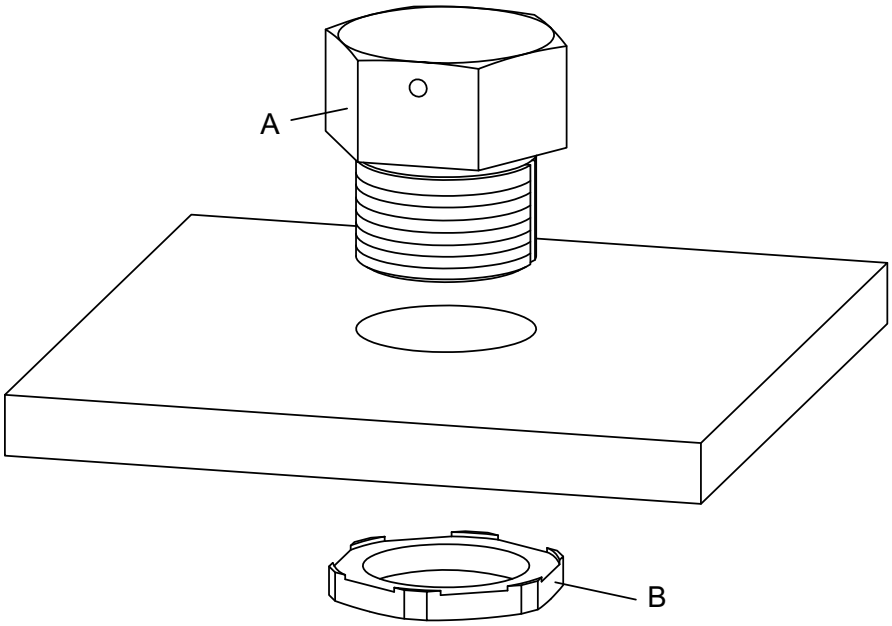
SCHEMA B
Schema B



SCHEMA C
Schema C

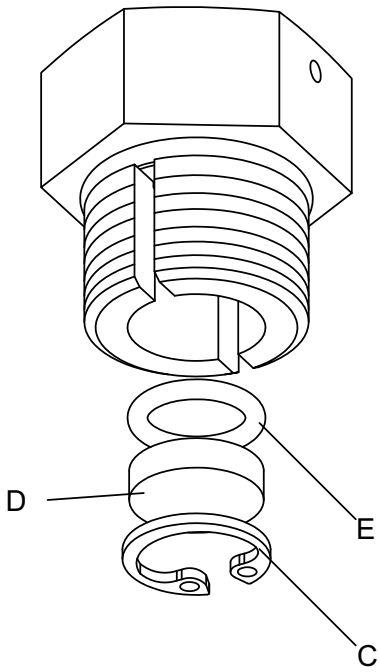


SCHEMA D
Schema D



1 - SMONTARE LA VALVOLINA (A) DALLA CASSETTA, DOPO AVER TOLTO TENSIONE DALLA STESSA, AGENDA SUL CONTRODADO (B).
2 - TOGLIERE CON L'AIUTO DI PINZE APPOSITE, LA RONDELLA ELASTICA (C), QUINDI TOGLIERE IL FILTRO (D) E L'O-RING (E)
3 - EFFETTUARE LA PULIZIA DEL COMPONENTE ECDE
4 - RIMONTARE LA VALVOLINA ECDE PROCEDENDO IN SENSO INVERSE A QUANTO INDICATE NEI PUNTI PRECEDENTI

1 - USING THE LOCKNUT (B) STRIP DOWN THE VALVE (A) FROM THE JUNCTION BOX, AFTER CUTTING POWER FROM IT.
2 - REMOVE THE INTERNAL RETAINS RING (C) WITH THE PROPER PLIERS, THEN REMOVE THE FILTER (D) AND THE O-RING (E)
3 - MAKE THE CLEANING OF THE COMPONENT ECDE
4 - REASSEMBLE THE VALVE ECDE PROCEEDING IN THE OPPOSITE DIRECTION AS INDICATED IN THE ABOVE MENTIONED POINTS



CORTEM s.p.a.
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Cod.Fisc. e Partita Iva **IT00052120318**
Eco-contributo RAEE assolto ove dovuto n° Registro A.E.E. IT08020000001818

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Member of CORTEM GROUP
To be sure to be safe.

DICHIARAZIONE DI CONFORMITA' *DECLARATION OF CONFORMITY*

N° 0215

Il costruttore:
We:

CORTEM S.p.A.
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34070 VILLESSE (GO) - ITALY

Dichiara con la presente la conformità allo schema IECEx, del Prodotto
Hereby declares the conformity to IECEx scheme, of the Product

Valvole di sfiato e drenaggio: Breather and drain valves:	**ECDE…**
Modo di protezione: *Protection mode:*	**Ex eb IIC Gb** **Ex tb IIIC Db** **IP66**
Temperatura ambiente: *Ambient temperature:*	**-60°C÷+150°C**
Certificato: *Certificate:*	**IECEx CML 16.0124X**

In accordo con le seguenti norme IEC:
In accordance with the following IEC Standards:

IEC 60079-0: 2011 Ed.6.0
IEC 60079-7: 2015 Ed.5.0
IEC 60079-31:2013 Ed.2.0
IEC 60529: 2001

Villesse, 29.09.2016

Firma
Signature . . . . . .
Riccardo Gratton
Vice-president