



Power Connector PC2-EX Size B2 - Ex

INTRODUCTION

Cavotec Connectors develops electrical connectors that improve performance and protect critical applications in demanding environments.

The Cavotec PC2-EX is an Ex rated connector designed for hazardous environment and provides a safe and easy power supply in applications such as:

- Oil and gas – Petro-chemical – Offshore – Airport

Cavotec B2 compact and light design was possible with Cavotec's MWT technology enabling smaller pins to take high current with a minimal voltage drop. Its quick disconnect features are well appreciated for the power supply of top drives, pumps and motors.

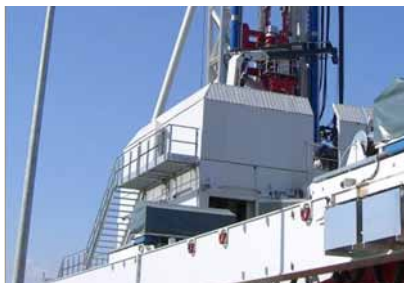
PRODUCT FEATURES

- Maximum voltage 690V, currents up to 660A
- Up to 25 pole insulator assembly covering cable size from 1,5mm² and up to 300mm²
- Certifications/Compliances: NEMKO 07ATEX1268X / EN 60079-0 :2011, IECEx NEM 14.0011X, EN 60079-1 :2007
- Ex Classification:



II 2G Ex d IIB T3 Gb, - 40°C ≤ Tamb ≤ +60°C

- IP66 (when mated or capped – if not, protection with covers secured with a retention wire)
- Plug & socket connection with a ¼ turn bayonet ring and a set screw to secure the bayonet ring from loosening
- Standard finishes: marine grade aluminium ISO 3522 - Hardware in stainless steel – For extreme conditions, the body can be anodized and painted (e.g. Offshore oil rigs)
- Pins:
 - Female contacts, male pins and cable terminals are made of silver plated brass
 - High safety standard with pilot pin being shorter than the phase pins ensuring they must be connected to a circuit breaker and touching live pins (except for multi pin)
 - Interchangeable pins without dismantling the connector
- De-energize all circuits before separating
- Easy wiring with male and female insulators fully interchangeable (between plug and socket) made in POM or Grivory HTV-4H1
- Cable terminals suit for cables of class 5, IEC 60228 – Screwed-in design for a quick and easy mounting procedure
- Cable glands: selected with sufficient Ex rating, IP66 and a continuous operating temperature up to +115°C – Must be mounted on the plug and socket and chosen carefully (depending on the cable type specification)
- An extra M16 cable gland for a pilot pin cable can be mounted on the socket



Land based drilling rig



Power supply cables for top drive on oil rig




Power supply container on oil rig

CERTIFICATION AND NORMS

The ATEX/IECEx certification has been made according to ATEX Directive 94/9/EC and IECEx 02, IEC 60079-1:2007, EN 60079-0:2011, and the certifying body is NEMKO of Norway.

The issued certificates are:

- NEMKO 05ATEX4254Q - (Cavotec Connectors)
- NEMKO 07ATEX1268X - (PC2 - Ex - B2)
- IECEx NEM 14.0011X

- The classification is:  II 2G Ex d IIB T3 Gb, - 40°C ≤ Tamb ≤ +60°C



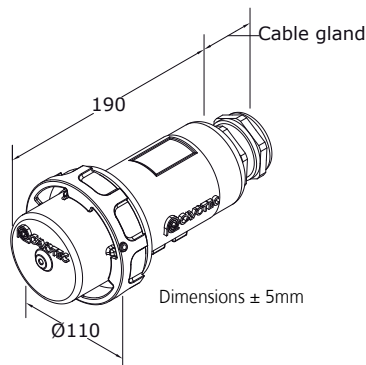
PLUG INVERTED PLUG STRAIGHT BAYONET FIT

No Pins (P&E+pil)	Max voltage (AC)	Pin ø (mm) Max Amp	Weight kg	Cross Section / mm ²	Recommended Amperage	Plug: Male Pins Product Code	Inv.plug: Female Contacts Product Code
1+2	690/230	10/250	2.2	10 **	80	PC2-EX-SB01-S100/XX	PC2-EX-TB01-S100/XX
				16	100	PC2-EX-SB01-0160/XX	PC2-EX-TB01-0160/XX
				25	125	PC2-EX-SB01-0250/XX	PC2-EX-TB01-0250/XX
				35	160	PC2-EX-SB01-0350/XX	PC2-EX-TB01-0350/XX
				50	200	PC2-EX-SB01-0500/XX	PC2-EX-TB01-0500/XX
				70*	250	PC2-EX-SB01-0700/XX	PC2-EX-TB01-0700/XX
1+2	690/230	20/800	2.3	95*	250	PC2-EX-SB01-0950/XX	PC2-EX-TB01-0950/XX
				95	300	PC2-EX-SB01-0950/XX	PC2-EX-TB01-0950/XX
				120	350	PC2-EX-SB01-1200/XX	PC2-EX-TB01-1200/XX
				150	420	PC2-EX-SB01-1500/XX	PC2-EX-TB01-1500/XX
				185	480	PC2-EX-SB01-1850/XX	PC2-EX-TB01-1850/XX
				240	540	PC2-EX-SB01-2400/XX	PC2-EX-TB01-2400/XX
4+2	690/230	8/200	2.2	300	660	PC2-EX-SB01-3000/XX	PC2-EX-TB01-3000/XX
				10	80	PC2-EX-SB04-0100/XX	PC2-EX-TB04-0100/XX
				16	100	PC2-EX-SB04-0160/XX	PC2-EX-TB04-0160/XX
				25	125	PC2-EX-SB04-0250/XX	PC2-EX-TB04-0250/XX
				35	160	PC2-EX-SB04-0350/XX	PC2-EX-TB04-0350/XX
				50*	200	PC2-EX-SB04-0500/XX	PC2-EX-TB04-0500/XX
5+2	500/230	8/200	2.2	70 (Earth 50 mm ²)	200	PC2-EX-SB04-0701/XX	PC2-EX-TB04-0701/XX
				10	80	PC2-EX-SB05-0100/XX	PC2-EX-TB05-0100/XX
				16	100	PC2-EX-SB05-0160/XX	PC2-EX-TB05-0160/XX
				25	125	PC2-EX-SB05-0250/XX	PC2-EX-TB05-0250/XX
				35*	160	PC2-EX-SB05-0350/XX	PC2-EX-TB05-0350/XX
				50*	200	PC2-EX-SB05-0500/XX	PC2-EX-TB05-0500/XX
18	500	3/40	2.2	1.5	20	PC2-EX-SB18-0015/XX	PC2-EX-TB18-0015/XX
				2.5	30	PC2-EX-SB18-0025/XX	PC2-EX-TB18-0025/XX
				4	40	PC2-EX-SB18-0040/XX	PC2-EX-TB18-0040/XX
25	50	3/40	2.2	1.5	20	PC2-EX-SB25-0015/XX	PC2-EX-TB25-0015/XX
				2.5	30	PC2-EX-SB25-0025/XX	PC2-EX-TB25-0025/XX

XX Additional product code depending on type of cable glands, keying or anodizing.

* Screw type cable terminal not available

** Available only with screw termina



EX CABLE GLAND



Size	Cable Range Øy (mm)
	Typical
M20s	9,5 - 15,9
M20	12,5 - 20,9
M25s	14,0 - 22,0
M25	18,2 - 26,2
M32	23,7 - 33,9
M40	27,9 - 40,4
M50s	35,2 - 46,7
M50	40,4 - 53,1
M63s	45,6 - 59,4

Typical used cable glands; can be changed without further notice.

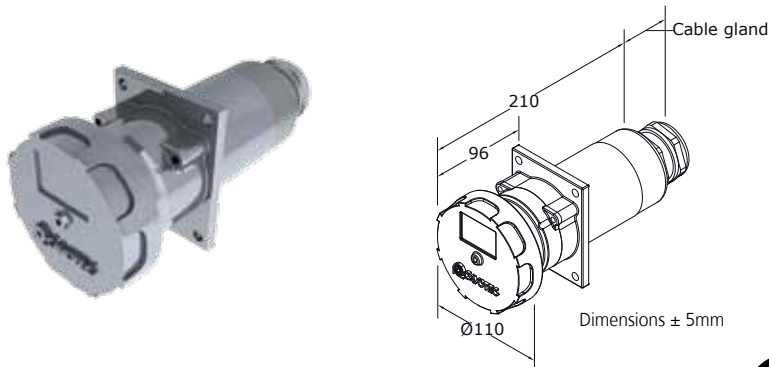
CONNECTOR INVERTED CONNECTOR / BAYONET FIT

No Pins (P&E+pil)	Max voltage (AC)	Pin ø (mm) Max Amp	Weight kg	Cross Section / mm ²	Recommended Amperage	Socket: Female Contacts Product Code	Inv.socket: Male Pins Product Code
1+2	690/230	10/250	2.2	10 **	80	PC2-EX-VB01-S100/XX	PC2-EX-WB01-S100/XX
				16	100	PC2-EX-VB01-0160/XX	PC2-EX-WB01-0160/XX
				25	125	PC2-EX-VB01-0250/XX	PC2-EX-WB01-0250/XX
				35	160	PC2-EX-VB01-0350/XX	PC2-EX-WB01-0350/XX
				50	200	PC2-EX-VB01-0500/XX	PC2-EX-WB01-0500/XX
				70*	250	PC2-EX-VB01-0700/XX	PC2-EX-WB01-0700/XX
1+2	690/230	20/800	2.3	95*	250	PC2-EX-VB01-0950/XX	PC2-EX-WB01-0950/XX
				120	350	PC2-EX-VB01-1200/XX	PC2-EX-WB01-1200/XX
				150	420	PC2-EX-VB01-1500/XX	PC2-EX-WB01-1500/XX
				185	480	PC2-EX-VB01-1850/XX	PC2-EX-WB01-1850/XX
				240	540	PC2-EX-VB01-2400/XX	PC2-EX-WB01-2400/XX
				300	660	PC2-EX-VB01-3000/XX	PC2-EX-WB01-3000/XX
4+2	690/230	8/200	2.2	10	80	PC2-EX-VB04-0100/XX	PC2-EX-WB04-0100/XX
				16	100	PC2-EX-VB04-0160/XX	PC2-EX-WB04-0160/XX
				25	125	PC2-EX-VB04-0250/XX	PC2-EX-WB04-0250/XX
				35	160	PC2-EX-VB04-0350/XX	PC2-EX-WB04-0350/XX
				50*	200	PC2-EX-VB04-0500/XX	PC2-EX-WB04-0500/XX
				70 (Earth 50 mm ²)	200	PC2-EX-VB04-0701/XX	PC2-EX-WB04-0701/XX
5+2	500/230	8/200	2.2	10	80	PC2-EX-VB05-0100/XX	PC2-EX-WB05-0100/XX
				16	100	PC2-EX-VB05-0160/XX	PC2-EX-WB05-0160/XX
				25	125	PC2-EX-VB05-0250/XX	PC2-EX-WB05-0250/XX
				35*	160	PC2-EX-VB05-0350/XX	PC2-EX-WB05-0350/XX
				50*	200	PC2-EX-VB05-0500/XX	PC2-EX-WB05-0500/XX
				18	20	PC2-EX-VB18-0015/XX	PC2-EX-WB18-0015/XX
18	500	3/40	2.2	2.5	30	PC2-EX-VB18-0025/XX	PC2-EX-WB18-0025/XX
				4	40	PC2-EX-VB18-0040/XX	PC2-EX-WB18-0040/XX
				25	20	PC2-EX-VB25-0015/XX	PC2-EX-WB25-0015/XX
25	50	3/40	2.2	1.5	20	PC2-EX-VB25-0015/XX	PC2-EX-WB25-0015/XX
				2.5	30	PC2-EX-VB25-0025/XX	PC2-EX-WB25-0025/XX

XX Additional product code depending on type of cable glands, keying or anodizing.

* Screw type cable terminal not available

** Available only with screw terminal.

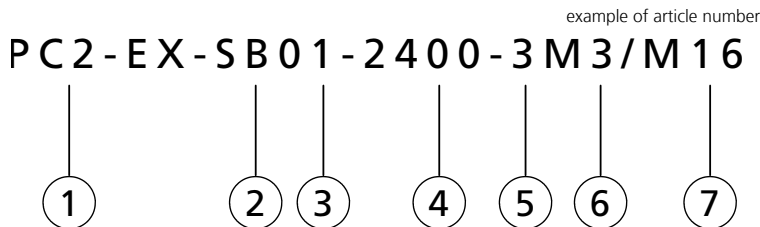


CODE GUIDE & FACTORY MARKING PLATE

CAVOTEC WWW.CAVOTEC.COM		Certificate ATEX: Nemko 07ATEX1268X
Manufactured by Cavotec Connectors AB, 245 34, Sweden		Certificate IECEx: NEM 14.0011X
Code:		Use cable suitable for a temperature of +115°C
Amperage:	Voltage:	- WARNING -
CE 0470	II 2 G Ex d IIB T3	DE-ENERGIZE ALL CIRCUITS BEFORE SEPARATING
Prod. date: 2014-10-29	Serial No:	IP66



Example of marking plate



- ① Power Connector Size
- ② SB = Plug
VB = Socket
RB = Connector
TB = Inverted Plug
WB = Inlet
PB = Inverted connector
- ③ N° of pins
- ④ Cross section of cable
- ⑤ Key grip
- ⑥ Colour
M = Red
M1 = Blue
M2 = Green
M3 = Yellow
M4 = Black
- ⑦ Cable gland if other than standard (M50x1,5) or extra gland

OPTIONAL ACCESSORIES

- Screw type cable terminals with conductor sleeve and 2 set screws
- Extra M16 Ex cable gland on the socket for an additional pilot circuit or monitoring cable
- PCX-49X60-002 Wall mounting bracket for Connector
- Anodising of plug and socket housing in natural red, blue, black or yellow
- Painting of plug and socket housing with 2K paint or clear coat

SPECIAL TOOLS



















Spanner tool for screw ring PCX-92120-130

Male pin Dia. 3-20mm	Female contact Dia. 3-20mm	Key width	Socket wrench (Part numb.)
PCX-11003-XXXX	PCX-12003-XXXX	5	PCX-92001-0051 PCX-92003-0051
PCX-11008-XXXX	PCX-12008-XXXX	12/13	PCX-92102-012
PCX-11010-XXXX	PCX-12010-XXXX	14/15	PCX-92102-0141
PCX-11020-XXXX	PCX-12020-XXXX	30/32	PCX-92102-030

WIRE CONVERSION CHART METRIC TO AWG / KCMIL

Cross section (mm²)	Equiv. AWG or kcmil	Equiv. Actual AWG in mm²
1,5	14	2,08
2,5	12	3,31
4	10	5,26
6	8	8,37
10	6	13,3
16	6	13,3
25	4	21,15
35	2	33,63
35	1	42,41
50	1/0	53,48
70	2/0	67,43
95	3/0	85,03
95	4/0	107,2
120	250	126,64
150	300	152
185	350	177,35
185	400	202,71
240	500	253,35
300	600	303,96
400	750	379,95
400	1000	506,6

POWER CONNECTORS PRODUCT RANGE

Size	Connection type	Model name	Keying position	Accessories	Certifications	1-pole	3-pole	4-pole			5-pole	8-pole	13-pole	18-pole	25-pole	24, 30 & 37-pole	50-pole				
PC1	Screw Ring	S1	12								40A 690V 4mm ²	20A 415V 2,5mm ²	10A 230V 1,5mm ²	10A 230V 1,5mm ²							
	Screw Ring	S1	2, 4, 6, 8, 10, 12		ATEX & IECEx 						30A 690V 4mm ²	20A* 415V* 2,5mm ²	10A* 230V* 1,5mm ²	10A* 230V* 1,5mm ²							
PC2	Push&Pull	X2	2, 3, 4, 5, 6, 7, 8, 9, 10, 12 Insulator keying: 1-11	Low interlocking (PC2-VL) Wall bracket Screw terminals		660A 690V 300mm ²	250A 690V 70mm ²	200A 690V 50mm ²			200A 415V 50mm ²			40A 500V 4mm ²	40A 50V 4mm ²						
	Bayonet	B2	Double keying 1-11 55 options		ATEX & IECEx 	660A 690V 300mm ²	250A 690V 70mm ²	200A 690V 50mm ²			200A 415V 50mm ²			40A 500V 4mm ²	40A 50V 4mm ²						
PC3	Eye Bolt	K3						170A 1,1kV 50mm ²													
PC4	Push&Pull	X4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	External FO 6ch Screw terminals				250A 1,1kV 70mm ²			200A 1,1kV 70mm ²					40A 500V 4mm ²					
	Screw Ring	S4	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Short bell				250A 1,1kV 70mm ²			200A 1,1kV 70mm ²										
	Eye Bolt	K4						250A 1,1kV 70mm ²													
PC5	Push&Pull	X5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	External FO 12ch Internal FO 8ch Screw terminals Kirk Key interlock Wall bracket				420A 1,1kV 185mm ² Internal fiber optic	350A 7,2kV 150mm ² 								40A 500V 4mm ²				
	Screw Ring	S5	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Internal FO 8ch Screw terminals				420A 1,1kV 185mm ² Internal fiber optic	350A 7,2kV 150mm ²		350A 1,1kV 185mm ²										
PC6	Push&Pull	X6	6.12	External FO 18ch Internal FO 12ch Screw terminals Kirk Key interlock Wall bracket				660A 1,1kV 300mm ² Internal fiber optic	480A 7,2kV 240mm ² Internal fiber optic	500A 12kV 185mm ²	480A 1,1kV 300mm ²										
	Screw Ring	S6	6.12					660A 1,1kV 300mm ²			660A 1,1kV 300mm ²										
PC7	Eye Bolt	K7						400A 8kV 185mm ²													
PC8	Eye Bolt	K8						440A 15kV 120mm ²													
PC9	Eye Bolt	K9						440A 25kV 150mm ²													

*Available Q2 2015