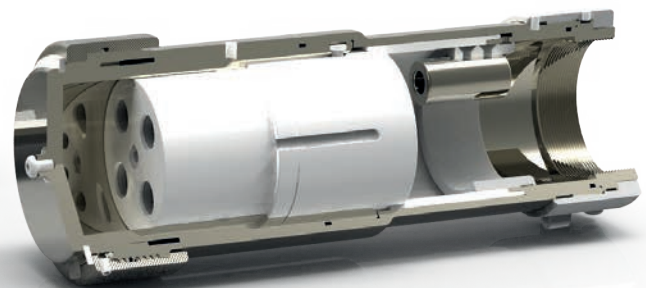


Tamb: -40°C to +60°C. II2 GD Exdb IIC Gb, Extb IIC Db T85
IP66, 67 and DTS01 deluge protected
Certificate No's Baseefa06ATEX0062X and IECEx BAS 06.0019X.

Connector Receptacle - CR



Connector Plug-CP



Hazardous Area Connectors

Certified ATEX / IECEx / EAC / INMETRO / cCSAus

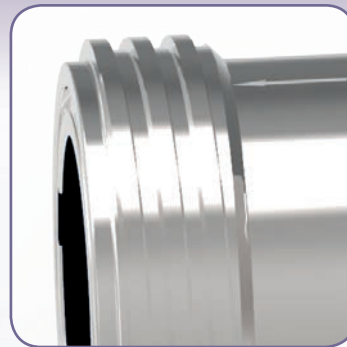
Power^{Ex} Features



①

Running Coupler

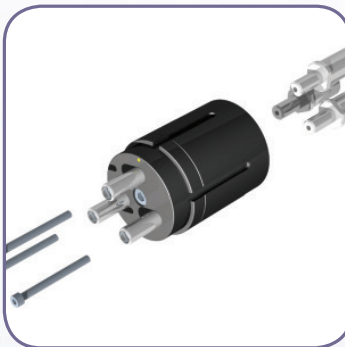
Allows the connector to be installed onto a pre-assembled cable gland.



④

Acme Thread at Mating Interface

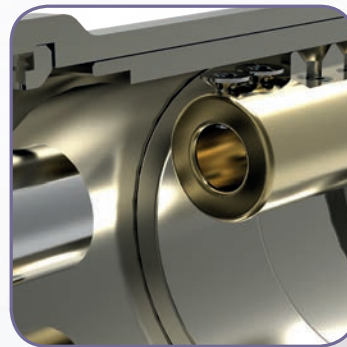
Unique ACME thread offers a smooth and quick fully mating action.



②

Easy Fieldwireable

Insert assembled outside connector shell to assist wiring and allow greater flexibility.



⑤

Internal Earth

Internal earth fitted as standard. Size to suit cables earthing facility.



③

Keying Position

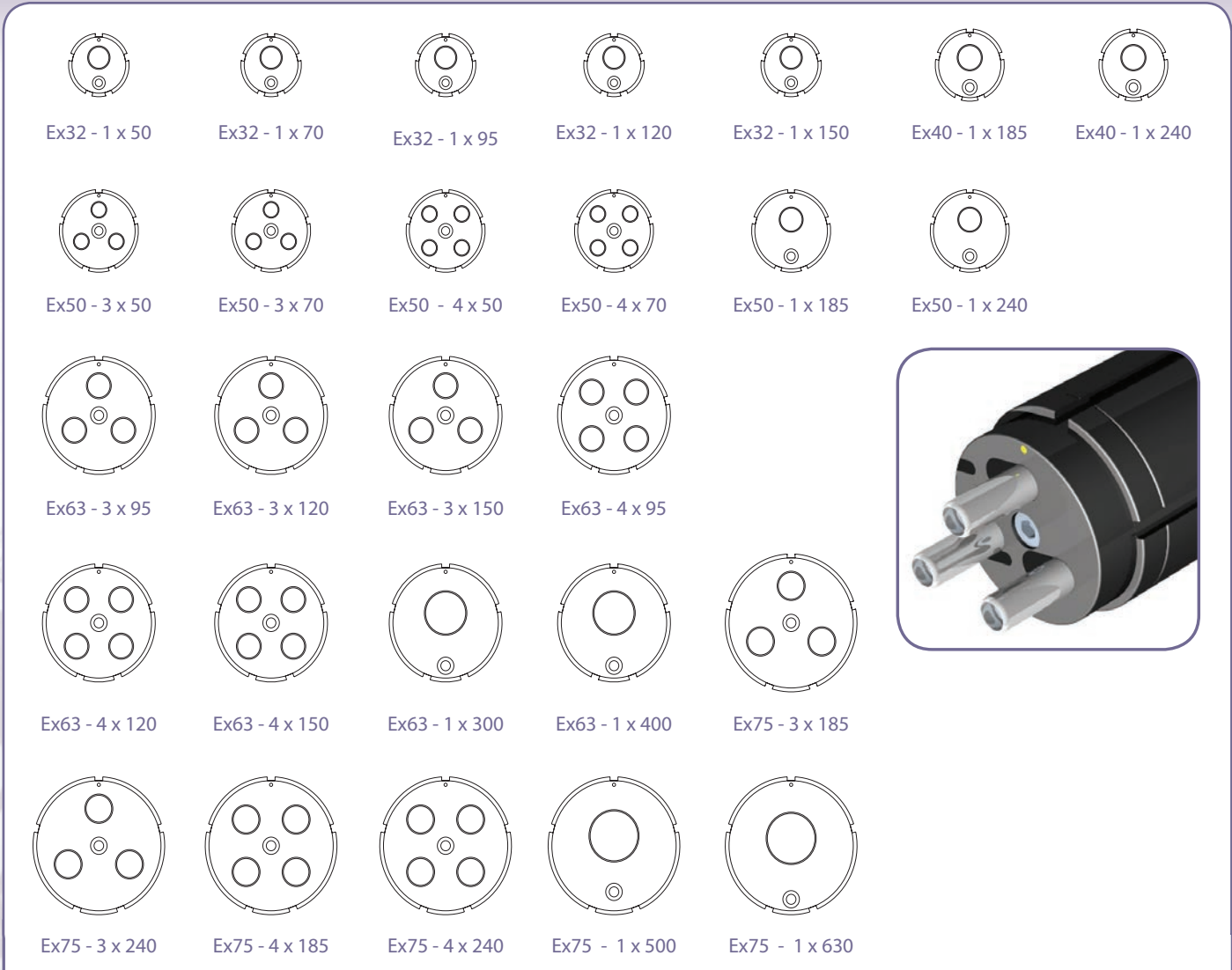
The unique visual 5 position insert keying system along with the integral machined keyway prevents contact damage and ensures safe use by eliminating the possibility of misconnection of adjacent circuits.



⑥


Multilam Technology

Tried and tested multiple high contact force, low resistance multilams used in all contacts.



HAWKE Ex SERIES DIMENSIONS (MM)


Configuration				
Shell Size 32	Shell Size 40	Shell Size 50	Shell Size 63	Shell Size 75
1 x 50mm ² + Earth	1 x 185mm ² + Earth	3 x 50mm ² + Earth	3 x 95mm ² + Earth	3 x 185mm ² + Earth
1 x 70mm ² + Earth	1 x 240mm ² + Earth	3 x 70mm ² + Earth	3 x 120mm ² + Earth	3 x 240mm ² + Earth
1 x 95mm ² + Earth	-	4 x 50mm ² + Earth	3 x 150mm ² + Earth	4 x 185mm ² + Earth
1 x 120mm ² + Earth	-	4 x 70mm ² + Earth	4 x 95mm ² + Earth	4 x 240mm ² + Earth
1 x 150mm ² + Earth	-	1 x 185mm ² + Earth	4 x 120mm ² + Earth	1 x 500mm ² + Earth
-	-	1 x 240mm ² + Earth	4 x 150mm ² + Earth	1 x 630mm ² + Earth
-	-	-	1 x 300mm ² + Earth	-
-	-	-	1 x 400mm ² + Earth	-


All Hawke Power  connectors have a maximum working voltage of (750V AC). Other voltages and contact configurations also available. contact Hawke International for details.

Hazardous Area Connectors

Certified ATEX / IECEx / EAC / INMETRO / cCSAus

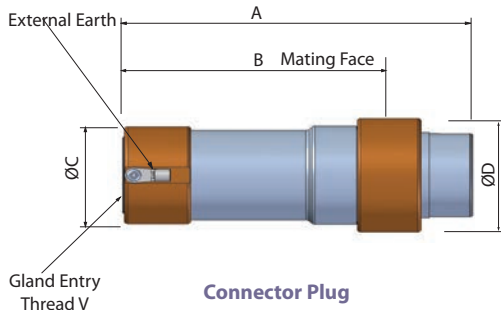
Power Order Code

When ordering, select relevant code from each block as shown in the example below: **Power**  Exd-50-S-CR-A-4-50-S-FLFRC-A-1

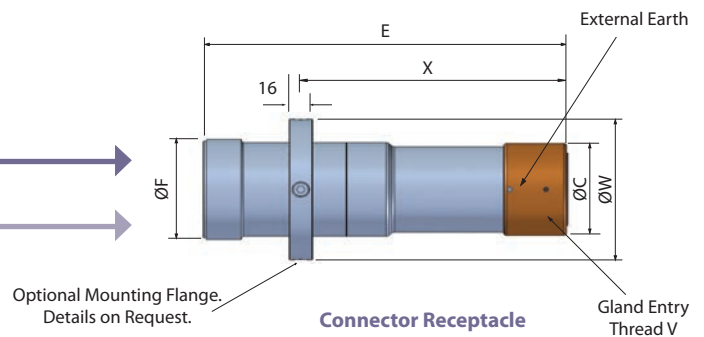
Power 	SELECT CODE	DESCRIPTION	EXAMPLE CODE
PROTECTION	Exd	Flameproof	Exd
SHELL SIZE	32	32	50
	40	40	
	50	50	
	63	63	
	75	75	
MATERIAL	B	Brass Note: (for single core cables, Brass must be used)	S
	S	Stainless Steel (as standard)	
	N	Nickel Plated Brass	
CONNECTOR STYLE	CP	Connector Plug	CR
	CR	Connector Receptacle	
INTERNAL EARTH SIZE	A	50mm ²	A
<i>Note: Should be at least 50% of phase conductor size</i>	B	70mm ²	
	C	95mm ²	
	D	120mm ²	
	E	150mm ²	
	F	185mm ²	
	G	240mm ²	
NUMBER OF CONTACTS		See Insert Selection Chart	4
CONTACT TYPE		CONTACT TYPE MAXIMUM CONDUCTOR ACCEPTANCE DIAMETER (mm)	50
	50	50mm ² 9.5	
	70	70mm ² 11.5	
	95	95mm ² 13	
	120	120mm ² 14.5	
	150	150mm ² 16.5	
	185	185mm ² 18.5	
	240	240mm ² 20.5	
	300	300mm ² 25	
	400	400mm ² 29	
	500	500mm ² 32	
	630	630mm ² 38	
INSERT TYPE	X	No Insert	S
	P	Pin	
	S	Socket	
ACCESSORIES	FL	Mounting Flange *	FLFRC
<i>* Note: only the connector receptacle (CR) can be flange mounted.</i>	FPC	Flameproof Plug Cap	
	FRC	Flameproof Receptacle Cap	
	PPC	Environmental Plug Cap	
	PRC	Environmental Receptacle Cap	
CERTIFICATION	A	ATEX/IECEx/EAC/INMETRO	A
	N	ATEX/IECEx/EAC/INMETRO /cCSAus* Voltage reduced to 600V	
AMBIENT RATING & TEMPERATURE CLASS	1	T5 +40°C Standard	1
<i>T5 +40°C will be supplied as standard if alternative not specified.</i>	2	T5 +50°C	
	3	T5 +60°C	
	4	T6 +40°C	
	5	T6 +50°C	
	6	T6 +60°C	

◆ Order code - see page 63

◆ *suitable for use in Zone 1 and Class I Div 2 areas in accordance with NEC

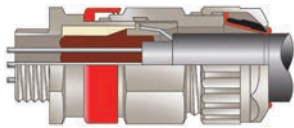


Connector Plug



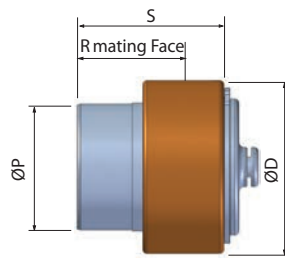
Connector Receptacle

For connector plugs and connector receptacles cable glands are required to terminate incoming cables. These can be selected from our cable gland section or our website.

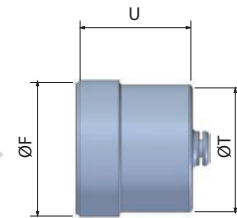


These glands include but are restricted to 501/453/UNIV and the ICG 653/UNIV. For portable application Hawke recommend the ICG 653/UNIV cable gland.

ICG 653/UNIV Cable Gland



Flameproof Receptacle Cap



Flameproof Plug Cap

The flameproof cap must be fitted to the connector before the power is restored to the disconnected circuit.

The receptacle cap and plug cap are available in acetal and provide an IP rating of IP66/67. They may only be used when the socket or plug is not re-energised following disconnection



HAWKE Ex SERIES DIMENSIONS (MM)

Dimension	Ex32P	Ex40P	Ex50P	Ex63P	Ex75P
A	228	228	228	228	238
B	168	168	168	168	178
ØC	60	66	76	89	101
ØD	73	79	89	102	114
E	251	251	251	251	261
ØF	67	73	82.5	95	108
ØP	48	55	65	78	90
R	60	60	60	60	60
S	75.5	75.5	75.5	75.5	76
ØT	61	68	77	90	102
U	68.5	68.5	68.5	68.5	68.5
Thread V (1.5mm Pitch)	M32*	M40*	M50*	M63*	M75*
ØW	100	106	116	129	141
X	184	184	184	184	194

*Other entry threads also available.

To select the shell size of the connector, it is essential that you calculate the dissipated wattage of the arrangement. This ensures that the arrangement does not exceed the maximum permitted temperature classification with regard to the upper ambient temperature for the area of installation. (Please refer to Table 1 for the maximum allowable dissipated wattage per connector size).

Connector Size	Upper ambient Temperature of +40°C		Upper ambient Temperature of +50°C		Upper ambient Temperature of +60°C	
	Temperature Class		Temperature Class		Temperature Class	
	T6	T5	T6	T5	T6	T5
Ex32P	20.5W	27.5W	15.75W	26W	7.5W	15.75W
Ex40P	22.5W	30.5W	17.5W	28W	8.7W	17.5W
Ex50P	25.8W	35.3W	20W	32.25W	10W	20W
Ex63P	30.2W	41.5W	23.5W	37.7W	11.7W	23.5W
Ex75P	36.3W	49.5W	28.25W	45.25W	14W	28.25W
Maximum allowable dissipated wattage						
<i>Other ambient temperature options can be extrapolated from Table 1 above, or contact Hawke International for more information.</i>						

Contact Size	Combined Cable & Contact Resistance $\mu(\text{Ohms})$	Contact Current Rating
50mm ²	514	190amps
70mm ²	387	240amps
95mm ²	283	290amps
120mm ²	239	340amps
150mm ²	202	385amps
185mm ²	170	440amps
240mm ²	144	520amps
300mm ²	82	590amps
400mm ²	67	670amps
500mm ²	54	720amps
630mm ²	45	780amps

Dissipated wattage calculation

Equation Definitions

- W = Dissipated wattage factor of the connector
- N = The number of conductors to be terminated/number of contacts required.
(Note: A contact comprises of a pin and socket).
- I = The current requirement per contact.
(Note: This must be equal to or less than the maximum current rating of the contact, as shown in table 2).
- R = The combined cable and contact resistance (see table 2)

Values pertinent to these definitions must then be input into the following equation to calculate the dissipated wattage (w) of your chosen arrangement:

$$W = N \times I^2 \times R$$

(Note: The results must be lower than the maximum figure shown in table 1 for the appropriate temperature class and ambient temperature).

e.g. T6 40°C ambient application with 4 x 95mm² conductors, running at 160 amps.

$$N = 4 \text{ contacts} \quad I = 160 \text{ amps} \quad R = 0.000283\Omega \quad (95\text{mm}^2 \text{ soldered combined cable and contact resistance})$$

Therefore $W = 4 \times 25600 \times 0.000283\Omega = 28.9 \text{ watts}$.

Therefore, an Ex63P Connector should be specified for this application as the shell size can accommodate the required 4 x 95mm² pin/socket inserts (SEE PAGE 68 - Insert Selection Table) and the resultant dissipated wattage (28.9 watts) is below the maximum permitted 30.2 watts (See Table 1).

This equation can also be transposed to facilitate the calculation of the maximum number of conductors permitted in your selected connector ① and the maximum allowable current within the upper ambient temperature of our location ②.

$$\textcircled{1} \quad N = \frac{W}{R \times I^2} \qquad \textcircled{2} \quad I = \sqrt{\frac{W}{N \times R}}$$

(Note: The result of equation ② must not exceed the maximum current rating of contacts (see Table 2).

Note: Unless otherwise requested, connectors will be marked as T5 with an upper ambient temperature of +40°C.