

## Heat-shrinkable Cable Breakouts for Power Cables

Raychem low voltage breakouts are an easily installed, light weight insulation for sealing the crutches of plastic, paper and rubber insulated cables up to 1 kV. Raychem cable breakouts offer savings in weight, space and time over conventional methods and make overhead installation and cable transport easier. Requiring no special tools or skills, installation is completed within minutes by simply heating the breakout. The diameter then reduces to tightly grip the outer jacket and the cores. At the same time, the pre-coated adhesive melts and reliably seals the cable crutch against moisture and the environment. The heat-shrinkable feature also means smaller inventories, as each breakout size will shrink to fit several different sizes and types of cables. Made from semi-rigid cross-linked polyolefin, these medium wall breakouts also offer resistance to abrasion, weathering, and atmospheric pollution.

As one of the world's leading manufacturers of heat-shrinkable materials, we offer a wide range of tubings and moulded parts for any application where a sealed, protective, insulating or fluid resistant cover is required over uniform or irregularly shaped objects. Our products are available in a wide variety of materials to meet the demands of the modern electrical power industry.

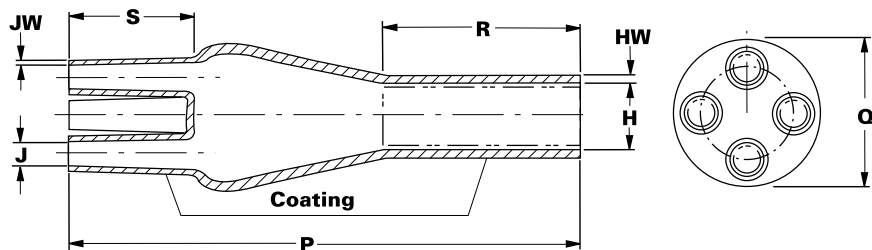


## Cable Breakouts

## Properties and Ordering Information

Cable Breakout Properties	Test Method	Material Requirements	
<b>Tensile Strength</b>	ISO 37	10.5 MPa min.	
<b>Ultimate Elongation</b>	ISO 37	300% min.	
<b>Density</b>	ISO 1183 Method A	1.0 - 1.3 g/cm <sup>3</sup>	
<b>Hardness</b>	ISO 868	40 - 60 Shore D	
<b>Accelerated Ageing</b>	7 days at 150°C ± 2°C	ISO 188	
	Tensile Strength	ISO 37	8.5 MPa min.
	Ultimate Elongation	ISO 37	100% min.
<b>Low Temperature Flexibility</b>	4 hours at -40°C ± 3°C	ASTM D2671 Procedure C	No cracking
<b>Dielectric Strength</b>	IEC 60243	100 kV/cm min.	
<b>Volume Resistivity</b>	IEC 60093	1x10 <sup>12</sup> Ω cm min.	
<b>Dielectric Constant</b>	IEC 250	8.0 max.	
<b>Water Absorption</b>	24 hours at 23°C ± 2°C	ISO 62 Method 1	0.5% max.
<b>Weathering</b>	The material from which cable breakouts are made contains carbon black to protect it from ultra-violet radiation.		

### Ordering Information



### Standard Products/Dimensions

Part Number	Number of Cores	Size of Conductor (mm <sup>2</sup> )	H		J		P	R	S	Q	HW	JW
			a min	b max	a min	b max						
302K333/S	2	4 - 25	28	9.2	15	4.1	90	20	25	15	3.2	1.6
302K224/S	2	35 - 150	48	32	22	7	172	-	70	34	2.0	2.0
302K466/S	2	185 - 300	86	42	40	17	200	-	75	45	2.5	2.5
402W533/S	3	4 - 35	38	13	16	4.2	103	45	28	22	2.7	1.5
402W516/S	3	50 - 150	63	22	26	9	180	85	40	35	3.5	1.5
402W520/S	3	-	70	23	27	9	159	107	52	32	4.0	2.0
402W525/S	3	-	85	32	32	12	180	130	50	38	3.0	2.5
402W530/S	3	-	90	42	38	15.5	180	130	50	46	2.7	2.7
402W526/S	3	185 - 300	95	28	44	13	205	90	45	42	3.5	2.5
402W248/S	3	-	115	45	52	22	240	100	60	64	4.0	2.5
402W545/S	3	-	124	58	51	22	239	188	51	65	3.0	3.2
402W439/S	3	-	170	60	60	30	252	90	66	85	4.2	2.6
502S013/S	4	-	23	9.5	7	2	60	-	17	13	2.0	1.2
502K033/S	4	4 - 35	45	16.5	14	3.4	90	71	25	-	2.5	1.9
502K046/S	4	35 - 70	45	19	20	7	165	75	40	45	3.5	2.0
502K016/S	4	70 - 150	75	25	25	9	217	100	44	50	3.5	2.0
502K020/S	4	-	80	25	27	9	177	100	44	35	3.5	2.0
502K026/S	4	185 - 300	100	31	40	13.5	223	103	51	50.4	3.5	2.5
502R810/S	3 + 1*	-	170	60	50*	23*	255	90	65	109	4.0	3.5
*One of 4 outlets dim = 43/19												
603W035/S	4 + 1*	-	68	26	30*	7*	182	75	40	45	3.2	2.2
603W040/S	4 + 1**	-	85	26	33**	7**	182	75	40	45	3.2	2.2
*One of 5 outlets dim = 20/6      ** One of 5 outlets dim = 27/6												
903K015/S	7 + 1*	-	50	25	23*	6.5*	163.5	97.5	33	53.5	3.5	2.2
*One of 8 outlets dim = 6/2.8												

- Notes**
- Dimensions in millimeters  
a = as supplied  
b = after free recovery
  - Drawing depicts typical part.
  - The recommended application range is from 20% above the recovered diameter to 20% below the expanded diameter.

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