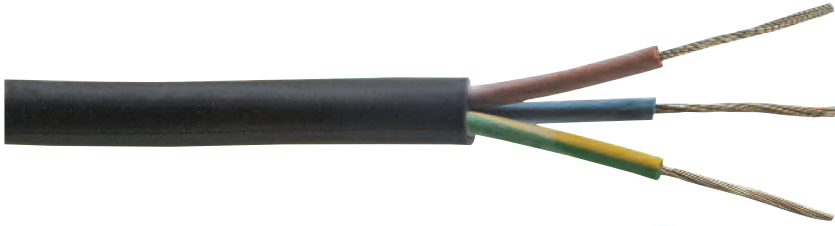


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Flexible Cables and Cords

Rubber Flexible up to 2.5mm EPR Insulated, HOFR Sheathed

90°C 300/500 V 318*TQ



Application

For mains supply or extension lead for portable or fixed equipment operating in high temperature zones. Particularly suitable for applications where contamination by oil and grease may occur.

*denotes number of cores.

Specifications

- In accordance with BS EN 50525-2-21 and Cenelec code H05BN4-F
- **Conductors:** Flexible Class 5 tinned copper conductors to BS EN 60228
- **Insulation:** EPR insulation Type EI.7 to BS7655
- **Core Identification:**
 - 2 core - blue, brown
 - 3 core - green/yellow, blue, brown
 - 4 core - green/yellow, brown, black, grey
- 5 core - green/yellow, brown, black, grey, blue
- **Sheath:** H.O.F.R sheath Type EM.7 to BS EN 50363-2-1 (black or white)
- Flame retardant to BS EN 60332-1-2
- **Temperature Rating:** 90°C maximum conductor operating temperature
- **Voltage Rating:** 300/500 V

Rubber Flexible up to 2.5mm² EPR Insulated, HOFR Sheathed

90°C 300/500 V 318***TQ**

Anixter Number	Nominal Conductor Area	Nominal Conductor Stranding	Insulation Thickness	Minimum O/D	Maximum O/D	Approximate Cable Weight
	mm ²	#/mm	mm	mm	mm	kg/km
Twin Core Type 3182TQ						
3182TQ-0005-##	0.5	16/0.2	0.6	5.4	7.1	51
3182TQ-0007-##	0.75	24/0.2	0.6	5.7	7.4	61
3182TQ-0010-##	1.0	32/0.2	0.6	6.1	8.0	74
3182TQ-0015-##	1.5	30/0.25	0.8	7.6	9.8	110
3182TQ-0025-##	2.5	50/0.25	0.9	9.0	11.6	156
Three Core Type 3183TQ						
3183TQ-0005-##	0.5	16/0.2	0.6	5.7	7.5	60
3183TQ-0007-##	0.75	24/0.2	0.6	6.2	8.1	76
3183TQ-0010-##	1.0	32/0.2	0.6	6.5	8.5	88
3183TQ-0015-##	1.5	30/0.25	0.8	8.0	10.4	132
3183TQ-0025-##	2.5	50/0.25	0.9	9.6	12.4	189
Four Core Type 3184TQ						
3184TQ-0007-##	0.75	24/0.2	0.6	6.8	8.8	91
3184TQ-0010-##	1.0	32/0.2	0.6	7.1	9.3	107
3184TQ-0015-##	1.5	30/0.25	0.8	9.0	11.6	166
3184TQ-0025-##	2.5	50/0.25	0.9	10.7	13.8	240
Five Core Type 3185TQ						
3185TQ-0007-##	0.75	24/0.2	0.6	7.6	9.9	112
3185TQ-0010-##	1.0	32/0.2	0.6	8.0	10.3	131
3185TQ-0015-##	1.5	30/0.25	0.8	9.8	12.7	197
3185TQ-0025-##	2.5	50/0.25	0.9	11.9	15.3	280

For white sheath use suffix -01

For black sheath use suffix -02

H05BN4-F only valid in sizes 0.75 and 1.0sqmm in Two and Three core only.

For further technical information see page 2:44.

Technical Specifications for Flexible Cords

Applicable to: 2491X, 218*Y, 318*Y, 309*Y, 318*B, 318*P, 318*TQ, 398*P
H05V-K, H03V-F, H05VV-F, H05V2V2-F, H05Z1Z1-F, H05RN-F, H05BN4-F, H07RN-F

CORRECTION FACTOR FOR AMBIENT TEMPERATURE

60°C rubber and PVC cords:

Ambient air temp °C	35	40	45	50	55
Rating factor	0.91	0.82	0.71	0.58	0.41

90°C rubber cords having a HOFR sheath or a heat-resisting PVC sheath and for 90°C heat-resisting PVC cords:

Ambient air temp °C	35 - 50	55	60	65	70
Rating factor	1.0	0.96	0.83	0.67	0.47

180°C rubber cords:

Ambient air temp °C	35 - 150	155	160	165	170	175
Rating factor	1.0	0.92	0.82	0.71	0.57	0.40

For cables where four or more cores or loaded, the following factors should be applied:

No. of cores loaded	4	5	6	7	10	12	14	19	24
Rating factor	0.78	0.72	0.67	0.63	0.56	0.53	0.51	0.45	0.42
No. of cores loaded	27	30	37	-	-	-	-	-	-
Rating factor	0.40	0.39	0.36	-	-	-	-	-	-

These factors need not be applied if the number of cores loaded does not exceed the square root of the total number of cores in the cable.

Technical Specifications for Flexible Cords

H05V-K, H03VV-F, H05VV-F, H05V2V2-F, H05Z1Z1-F, H05RN-F, H05BN4-F, H07RN-F

CURRENT CARRYING CAPACITY (Amperes):

Conductor Cross Sectional Area 1	Current Carrying Capacity	
	Single Phase a.c. 2	Three Phase a.c. 3
mm ²	A	A
0.5	3	3
0.75	6	6
1	10	10
1.25	13	-
1.5	16	16
2.5	25	20
4	32	25

VOLTAGE DROP (per Ampere per metre):

Conductor operating temperature: 60°C*

Conductor Cross Sectional Area 1	d.c. or Single Phase a.c. 2	Three Phase a.c. 3
mm ²	mV	mV
0.5	93	80
0.75	62	54
1	46	40
1.25	37	-
1.5	32	27
2.5	19	16
4	12	10

*NOTE: The tabulated values above are for 60°C rubber insulated and PVC-insulated flexible cords and for other types of flexible cords they are to be multiplied by the following factors:

For 90°C rubber or PVC insulated 1.09.

180°C rubber insulated 1.31.

GUIDE TO MINIMUM BENDING RADII ON FLEXIBLE CORDS AND CABLES

Cable Type	Cable Diameter (mm)			
	$\leq 8 \leq$	$> 8 \leq 12$	$> 12 \leq 20$	> 20
	M.B.R. (Minimum Bending Radius)			
Flexible Cable Thermoplastic (e.g. PVC)				
Fixed installation	3D	3D	4D	4D
Free movement*	5D	5D	6D	6D
Flexible Cable Elastomeric (e.g. rubber)				
Fixed installation	3D	3D	4D	4D
Free movement*	4D	4D	5D	6D

Where D = cable diameter.

The above values are based on recommendations given in BS7540 "Use of cables with a rated voltage not exceeding 450/750 V".

*These values do not apply to cables used on festoon, reeling drum, cranes, robotics, etc., where repetitive flexing and/or twisting is anticipated.

For further details refer to BS7540.