

Automotive Wire

FLRY-B – Thin Wall Insulation



Application

These thin-wall automotive cables are ideal for use in automotive and marine applications where its reduced insulation thickness and higher current carrying capacity both help to reduce weight and volume in complex wiring harnesses. The wire's lead free, PVC polymer, hard grade insulation, also offers excellent resistance to petrol, chemicals, and abrasion, and in addition is suitable for both low and high temperature applications.

Specifications

- In accordance with ISO 6722 and meeting BMW GS 95007-1, VW 60306, DBL 6312/MB 22014, Ford WSK 1A348-A, LV112, MAN 3135, Bosch 5 998 340, Fiat 91107/13, Fiat 91107/18 requirements
- **Conductors:** Flexible Class 5 copper conductors to BS EN 60228 with wires conforming to EN 13602 for CU-ETP-1
- **Insulation:** PVC insulation Class B to ISO 6722 (lead free).
- Flame retardant BS EN 60332-1-2
- **Temperature Rating:** -40°C + 105°C (3000 hours) mobile and fixed installations
- **Nominal Voltage:** 60 V d.c. (suitable for 12 Volt & 24 Volt systems)

Anixter Number	Nominal Conductor Area	Nominal Conductor Stranding	Insulation Thickness	Nominal O/D	Approximate Weight	Maximum d.c. Conductor Resistance @ 20°C
	mm ²	#/mm	mm	mm	kg/km	ohm/km
AUTO-TW005-##	0.5	16/0.2	0.28	1.6	6.6	37.1
AUTO-TW075-##	0.75	24/0.2	0.30	1.9	9	24.7
AUTO-TW010-##	1.0	32/0.2	0.30	2.1	11	18.5
AUTO-TW015-##	1.5	30/0.25	0.30	2.4	16	12.7
AUTO-TW020-##	2.0	28/0.3	0.35	2.8	22.5	9.42
AUTO-TW025-##	2.5	50/0.25	0.35	3.0	26	7.60
AUTO-TW030-##	3.0	45/0.3	0.40	3.2	33.5	6.15
AUTO-TW040-##	4.0	56/0.3	0.40	3.7	42	4.70
AUTO-TW045-##	4.5	65/0.3	0.40	4.0	49	4.26
AUTO-TW060-##	6.0	84/0.3	0.40	4.3	61	3.10
AUTO-TW085-##	8.5	120/0.3	0.50	5.4	90	2.31
AUTO-TW100-##	10	180/0.4	0.60	6.0	108	1.82
AUTO-TW160-##	16	126/0.4	0.65	7.9	170	1.16
AUTO-TW250-##	25	196/0.4	0.65	9.4	265	0.743

= colour:

01 = White 02 = Black 03 = Red 04 = Green 05 = Yellow 06 = Blue

07 = Brown 08 = Orange 09 = Grey 10 = Violet 12 = Pink 60 = Green/Yellow

Other colours available upon request.

Technical current ratings see page 2.43.

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Current Ratings for Automotive Cables

Ratings for other types of automotive wires should be based on the following table:

Nominal Conductor Size mm ²	Ambient Air Temperature °C	Approximate Current Rating (90°C Conductor Temp)	Approximate Current Rating (105°C Conductor Temp)
		A	A
0.22	40	8	9.1
0.35	40	10	11.6
0.5	40	13	14.7
0.75	40	16.5	18.8
1.0	40	19.5	22.3
1.5	40	24.5	28.1
2.0	40	30	35
2.5	40	34	38.8
3.0	40	35	40
4.0	40	42	48
4.5	40	44	51
6.0	40	51	58
8.5	40	63	72
10	40	68	78
16	40	88	100
20	40	102	116
25	40	114	130
35	40	136	155
40	40	149	170
50	40	158	180
70	40	184	210
95	40	202	230
120	40	237	270

N.B. Ratings are for guidance only, and assume single cable isolated in free air. If wires are to be grouped and touching, the following rating factors should be applied:

No. cables in group	2	3	4	5	6	7	8
Rating factor	0.80	0.70	0.65	0.60	0.56	0.53	0.50

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.