

DEF 61-12 Part 18 Type 1 “LFH” Equipment Wires

120°C, 600V



Application

For internal wiring of electronic and other equipment. Incorporates LFH (Limited Fire Hazard) insulation for reduced levels of smoke and toxic fumes in the event of a fire.

Specifications

- In accordance with DEF 61-12 Part 18.
- **Conductors:** Solid or stranded tinned copper conductors to BS 2G 231.
- **Insulation:** Thin-wall LFH insulation to DEF 61-12 Part 18 for Category 1 equipment wire displaying following characteristics:
Oxygen index: 30% minimum.
Temperature index: 250°C minimum.
HCL emission @ 800°C: 0.5% maximum.
Toxicity index: ≤ 0.2 .
- Flame retardant to BS 3G 230.
- **Temperature Rating:** 120°C maximum conductor operating temperature.
- **Voltage Rating:** 600V a.c./800V d.c.

DEF 61-12 Part 18 Type 1 “LFH” Equipment Wires

120°C, 600V

N.S.N. 6145-99-891-	Anixter Number A10DW-891-	Colour	Cond Size AWG	Nominal Cond Area mm ²	Nominal Cond Stranding #/mm	Thickness of Insulation mm	Minimum O/D mm	Maximum O/D mm	Approx Cable Weight kgs/km
9431	9431	Red	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9432	9432	Blue	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9433	9433	Green	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9434	9434	Yellow	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9435	9435	Black	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9436	9436	White	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9437	9437	Brown	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9438	9438	Violet	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9439	9439	Orange	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9440	9440	Grey	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9441	9441	Pink	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9442	9442	Green/Yellow	30	0.05	1/0.25	0.20	0.55	0.70	0.92
9443	9443	Red	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9444	9444	Blue	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9445	9445	Green	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9446	9446	Yellow	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9447	9447	Black	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9448	9448	White	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9449	9449	Brown	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9450	9450	Violet	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9451	9451	Orange	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9452	9452	Grey	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9453	9453	Pink	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9454	9454	Green/Yellow	26	0.12	1/0.40	0.20	0.70	0.85	2.0
9455	9455	Red	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9456	9456	Blue	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9457	9457	Green	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9458	9458	Yellow	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9459	9459	Black	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9460	9460	White	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9461	9461	Brown	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9462	9462	Violet	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9463	9463	Orange	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9464	9464	Grey	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9465	9465	Pink	23	0.28	1/0.60	0.20	0.90	1.05	3.95
9466	9466	Green/Yellow	23	0.28	1/0.60	0.20	0.90	1.05	3.95

Continued overleaf. . .

DEF 61-12 Part 18 Type 1 "LFH" Equipment Wires

120°C, 600V

N.S.N. 6145-99-891-	Anixter Number A10DW-891-	Colour	Cond Size AWG	Nominal Cond Area mm ²	Nominal Cond Stranding #/mm	Thickness of Insulation mm	Minimum O/D mm	Maximum O/D mm	Approx Cable Weight kgs/km
9467	9467	Red	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9468	9468	Blue	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9469	9469	Green	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9470	9470	Yellow	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9471	9471	Black	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9472	9472	White	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9473	9473	Brown	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9474	9474	Violet	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9475	9475	Orange	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9476	9476	Grey	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9477	9477	Pink	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9478	9478	Green/Yellow	19	0.63	1/0.90	0.20	1.20	1.35	7.9
9479	9479	Red	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9480	9480	Blue	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9481	9481	Green	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9482	9482	Yellow	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9483	9483	Black	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9484	9484	White	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9485	9485	Brown	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9486	9486	Violet	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9487	9487	Orange	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9488	9488	Grey	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9489	9489	Pink	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9490	9490	Green/Yellow	30	0.055	7/0.10	0.20	0.60	0.75	1.1
9491	9491	Red	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9492	9492	Blue	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9493	9493	Green	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9494	9494	Yellow	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9495	9495	Black	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9496	9496	White	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9497	9497	Brown	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9498	9498	Violet	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9499	9499	Orange	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9500	9500	Grey	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9501	9501	Pink	28	0.079	7/0.12	0.20	0.65	0.80	1.5
9502	9502	Green/Yellow	28	0.079	7/0.12	0.20	0.65	0.80	1.5

DEF 61-12 Part 18 Type 1 “LFH” Equipment Wires

120°C, 600V

N.S.N. 6145-99-891-	Anixter Number A10DW-891-	Colour	Cond Size AWG	Nominal Cond Area mm ²	Nominal Cond Stranding #/mm	Thickness of Insulation mm	Minimum O/D mm	Maximum O/D mm	Approx Cable Weight kgs/km
9503	9503	Red	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9504	9504	Blue	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9505	9505	Green	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9506	9506	Yellow	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9507	9507	Black	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9508	9508	White	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9509	9509	Brown	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9510	9510	Violet	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9511	9511	Orange	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9512	9512	Grey	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9513	9513	Pink	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9514	9514	Green/Yellow	26	0.15	19/0.10	0.20	0.80	0.95	2.9
9515	9515	Red	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9516	9516	Blue	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9517	9517	Green	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9518	9518	Yellow	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9519	9519	Black	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9520	9520	White	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9521	9521	Brown	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9522	9522	Violet	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9523	9523	Orange	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9524	9524	Grey	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9525	9525	Pink	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9526	9526	Green/Yellow	24	0.20	19/0.12	0.20	0.90	1.05	3.45
9527	9527	Red	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9528	9528	Blue	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9529	9529	Green	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9530	9530	Yellow	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9531	9531	Black	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9532	9532	White	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9533	9533	Brown	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9534	9534	Violet	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9535	9535	Orange	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9536	9536	Grey	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9537	9537	Pink	22	0.40	19/0.15	0.20	1.05	1.20	4.9
9538	9538	Green/Yellow	22	0.40	19/0.15	0.20	1.05	1.20	4.9

Continued overleaf. . .

DEF 61-12 Part 18 Type 1 "LFH" Equipment Wires

120°C, 600V

N.S.N. 6145-99-891-	Anixter Number A10DW-891-	Colour	Cond Size AWG	Nominal Cond Area mm ²	Nominal Cond Stranding #/mm	Thickness of Insulation mm	Minimum O/D mm	Maximum O/D mm	Approx Cable Weight kgs/km
9539	9539	Red	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9540	9540	Blue	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9541	9541	Green	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9542	9542	Yellow	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9543	9543	Black	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9544	9544	White	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9545	9545	Brown	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9546	9546	Violet	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9547	9547	Orange	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9548	9548	Grey	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9549	9549	Pink	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9550	9550	Green/Yellow	20	0.60	19/0.20	0.20	1.30	1.50	7.36
9551	9551	Red	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9552	9552	Blue	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9553	9553	Green	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9554	9554	Yellow	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9555	9555	Black	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9556	9556	White	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9557	9557	Brown	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9558	9558	Violet	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9559	9559	Orange	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9560	9560	Grey	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9561	9561	Pink	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9562	9562	Green/Yellow	18	1.00	19/0.25	0.20	1.55	1.75	10.4
9563	9563	Red	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9564	9564	Blue	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9565	9565	Green	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9566	9566	Yellow	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9567	9567	Black	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9568	9568	White	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9569	9569	Brown	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9570	9570	Violet	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9571	9571	Orange	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9572	9572	Grey	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9573	9573	Pink	16	1.20	19/0.30	0.20	1.80	2.00	16.5
9574	9574	Green/Yellow	16	1.20	19/0.30	0.20	1.80	2.00	16.5

DEF 61-12 Part 18 Type 1 “LFH” Equipment Wires

120°C, 600V

N.S.N. 6145-99-891-	Anixter Number A10DW-891-	Colour	Cond Size AWG	Nominal Cond Area mm ²	Nominal Cond Stranding #/mm	Thickness of Insulation mm	Minimum O/D mm	Maximum O/D mm	Approx Cable Weight kgs/km
9575	9575	Red	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9576	9576	Blue	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9577	9577	Green	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9578	9578	Yellow	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9579	9579	Black	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9580	9580	White	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9581	9581	Brown	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9582	9582	Violet	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9583	9583	Orange	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9584	9584	Grey	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9585	9585	Pink	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9586	9586	Green/Yellow	14	2.00	37/0.25	0.25	2.15	2.35	20.7
9587	9587	Red	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9588	9588	Blue	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9589	9589	Green	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9590	9590	Yellow	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9591	9591	Black	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9592	9592	White	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9593	9593	Brown	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9594	9594	Violet	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9595	9595	Orange	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9596	9596	Grey	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9597	9597	Pink	12	2.60	37/0.30	0.25	2.50	2.70	27.1
9598	9598	Green/Yellow	12	2.60	37/0.30	0.25	2.50	2.70	27.1

N.B: Wire braid screened versions with or without sheath also available. Details available upon request.

Minimum bend radius Flexing Applications 10D
 Fixed Applications 4D

Where D = overall diameter of cable.

For further technical information see page 5-8

Technical Information

DEF 61-12 Part 18 Type 1 "LFH" Equipment Wires

Conductor Size AWG	Nominal Conductor Stranding #/mm	Maximum d.c. Conductor Resistance @ 20°C ohms/km	Maximum a.c. Conductor Resistance @ 120°C ohms/km	Current Rating@ 105°C A
30	1/0.25	383.5	534.2	0.3
26	1/0.40	145.6	202.8	0.8
23	1/0.60	64.0	89.1	1.8
19	1/0.90	28.5	39.7	4.0
30	7/0.10	336.0	468.0	0.3
28	7/0.12	259.0	360.8	0.5
26	19/0.10	141.5	197.1	0.8
24	19/0.12	95.6	133.1	1.3
22	19/0.15	60.0	83.6	2.2
20	19/0.20	33.2	46.2	3.7
18	19/0.25	21.1	29.4	5.8
16	19/0.30	14.5	20.2	7.7
14	37/0.25	10.9	15.2	11.4
12	37/0.30	7.6	10.6	15.6

N.B: Current ratings quoted assume single isolated cable in FREE AIR, ambient air temperature of 105°C and conductor operating temperature of 120°C.

For ambient air temperatures other than 105°C, the following rating factors should be applied:

Ambient air temp °C	60	65	70	75	80	85	90	95	100
Rating factor	2.0	1.91	1.83	1.73	1.63	1.53	1.41	1.29	1.15

Where cables are to be grouped, the following rating factors apply:

No. of cables grouped and touching	2	3	4	5	10	15	20	25
Rating factor	0.80	0.70	0.65	0.60	0.45	0.40	0.36	0.33