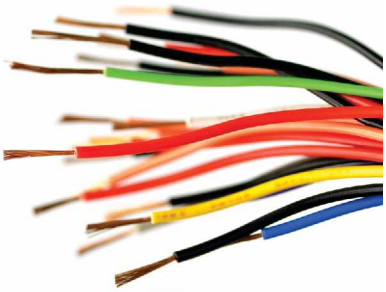
CABLE SELECTION

Swe-Check The fuse warehouse — *The Circuit Protection Specialists.*

Match Wire Gauge To Fuse

In order to protect wiring under all overload and short circuit conditions, it is necessary to standardize the fuse and wire selection process. Fuses have controlled opening characteristics, and each wire gauge has its respective current carrying capacity. Fuses need to be selected to always protect the wire insulation from damage. In the selection of wire gauge at various ambient temperatures, it is important to consider the worst case or highest ambient temperature for the application. Wires derate to a much higher degree than fuses, because wire insulation temperature capability is affected much more severely.



WIRE GAUGE SELECTION CHART

Wire Size		Maximum Continuous Current (Amperes)				
		At 25°C		At 80°C		At 105°C
mm²	AWG	GXL	GPT	GXL	GPT	GXL
0.3		15	10	11	4	9
0.5	20	21	15	16	6	13
0.75		27	21	20	7	17
0.8	18	31	22	23	7	19
1	16	33	23	25	9	20
1.5	15	43	30	33	12	27
2	14	50	36	37	14	32
2.5	13	60	42	45	15	38
3	12	68	47	51	18	42
4		80	56	61	22	50
5	10	90	65	68	23	58
6		103	73	78	28	64
8	8	125	87	96	30	79
10		146	103	111	40	90
13	6	170	120	129	47	105
19	4	221	156	166	61	137

Notes:
mm² = Millimetres Squared.
AWG = American Wire Gauge.

SAE J1128 Wire Insulation Types:

GXL : General purpose cross link polyethylene insulation wire with a maximum insulation temperature of 155°C. Type GXL automotive primary wire is the most common type. It works with most standard automotive wire connectors and may be applied in engine compartments where higher heat resistance is required according to SAE J-1128. GXL automotive wire is thin-walled, giving it a small diameter for hard-to-fit areas in trucks and trailers. Its recommended temperature range is -51°C to 125°C.

GPT : General purpose thermoplastic insulation wire with a maximum insulation temperature of 90°C. Type GPT automotive wire is intended for use whenever SAE J-1128 specifies general circuit wiring. GPT automotive primary wire features extruded insulation, and has a recommended temperature range of -40°C to 80°C.

We stock a huge range of fuses and holders to suit any applicaton.