

④ Wire size and fuse capacity

- Improper use of wire harnesses may result in fire or equipment breakdown.
- If additional wire harnesses are required, select appropriate wires according to the load current to be added, the circuit length, and the harness route.
- Use electric wires for automobiles (JIS-certified wires such as AV, AVS, AVX, AEX, or equivalent).
- When using an AEX wire, parts used with it such as protection tube, corrugated tube, vinyl tape, etc. should also be heat-proofed.
- When using a wire whose size is 5mm² or larger, solder the pressured part inside the wire terminal to prevent it from heating.

Permissible temperature and current of electric wire

Wire type	Allowable temperature	Allowable current							Remarks
		0.5 mm ²	0.85 mm ²	1.25 mm ²	2 mm ²	3 mm ²	5 mm ²	8 mm ²	
AV	80°C	9A	11A	14A	20A	27A	36A	47A	Standard
AVS	80°C	8A	11A	14A	19A	26A	35A	No spec.	Standard
AVX	90°C	8A	10A	13A	17A	24A	33A	43A	for high temp.
AEX	110°C	7A	9A	12A	17A	23A	32A	42A	for high temp.

- Fuse capacity, wire size and circuit length
 - Fuse capacity on the power source side determines usable wire size and circuit length.
 - Select appropriate wire size in consideration of the fuse capacity on the power source side and the wire route. If a wire is connected to an equipment that produces relative movement, the size of the wire should be 0.85mm² or larger so as to prevent wire breaking.

Permissible current of fuse, wire size and circuit length

Fuse			Wire size and circuit length						
Type	Rating capacity	Allowable continuous current	0.5 mm ²	0.85 mm ²	1.25 mm ²	2 mm ²	3 mm ²	5 mm ²	8 mm ²
Blade fuse	5A	3.5A	Max.25m	Max.40m	–	–	–	–	–
	7.5A	5.2A	Max.15m	Max.25m	Max.40m	–	–	–	–
	10A	7.0A	Max.10m	Max.20m	Max.30m	–	–	–	–
	15A	10.5A	Max.5m	Max.10m	Max.15m	Max.30m	Max.45m	–	–
	20A	14.0A	×	Max.5m	Max.10m	Max.20m	Max.30m	–	–
	25A	17.5A	×	×	Max.10m	Max.15m	Max.25m	Max.40m	–
SBF (Slow-blow fuse)	30A	15.0A	×	×	×	Max.10m	Max.15m	Max.30m	Max.45m
	40A	20.0A	×	×	×	×	Max.10m	Max.20m	Max.30m
	50A	25.0A	×	×	×	×	×	Max.15m	Max.25m
	60A	30.0A	×	×	×	×	×	Max.15m	Max.20m
	80A	40.0A	×	×	×	×	×	×	Max.15m
	100A	50.0A	×	×	×	×	×	×	Max.10m

Legend: ×: Cannot be used –: 50m at max.