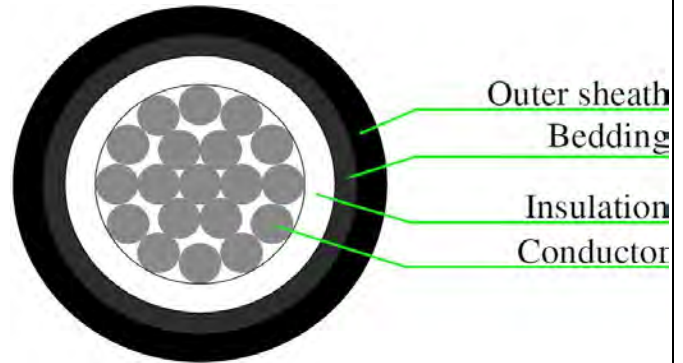




**SPECIFICATION**

**ELECTRIC CABLE: 1C X 120 mm<sup>2</sup>  
AL/X-HF-90/HFS-90-TP/HFS-90-TP [506M]**

**Cross Drawing**



**Description**

**Application:** This cable is primarily used for main power supply. It can be installed in cable ducts, in cable trunking, on cable trays, and on cable ladders.

Rated Voltage(V):	600/1000
Rated Temperature(°C):	90
Specification:	AS/NZS 5000.1、AS/NZS 1125 AS/NZS 3808、IEC 60754-1&2 IEC 61034-1&2、IEC 60332-3-24 Cat C

**Cable Construction**

<b>No. of Cores Conductor</b>	1
Material:	Plain aluminium wire
Cross-Sectional Area(mm <sup>2</sup> ):	120
Approx. Conductor Dia.(mm):	13.0
Class of Conductor:	Class 2
<b>Insulation</b>	
Material:	X-HF-90
Nom. Thickness(mm):	1.2
Approx. Dia. over insulation(mm):	15.5
<b>Bedding</b>	
Material:	LSZH(HFS-90-TP)
Nom. Thickness(mm):	1.0
<b>Outer Sheath</b>	
Material:	LSZH(HFS-90-TP)
Nom. Thickness(mm):	1.8
Min. Thickness(mm):	1.43
Approx. Dia. of cable(mm):	21.8
Approx. Weight of cable(kg/km):	550.0

**Color**

Insulation:	Natural
Bedding:	Black
Outer sheath:	Black

**Performance**

**Electrical characteristics**

1.Max. Conductor D.C. resistance at 20°C(Ω/km):	0.253
2.Max. Conductor D.C. resistance at 40°C(Ω/km):	0.273
3.Min. Insulation Resistance at 20°C(MΩ•km):	1000
4.Spark test A.C. voltage value(kV):	10
5.A.C. high voltage test for 5min(kV):	3.5
6.Current carrying capacities(A)	(In air ): 178 (Direct buried): 277 (Buried in duct): 221
*Ambient temperature: 40°C;Ground temperature: 25°C Burying depth: 1 m;Soil resistivity: 1°C•m/w	
7.Max. conductor temperature of 5s Short-circuit(°C):	250
8.Max. 1s Short-circuit rating(kA):	11.4
9.Reactance at 50Hz(Ω/km):	0.113

**Physical characteristics**

1.Min.bending radius(mm):	218
2.Construction test:	AS/NZS 5000.1
3.Flame retardant test:	IEC 60332-3-24 Cat C
4.Acrid gas emission test:	IEC 60754-1&2 (PH>4.3、C<10μS/mm)
5.Smoke emission test:	IEC 61034-1&2 (L.T.>60%)

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**Spec.No**

S-121129-01C

**Prepared by**

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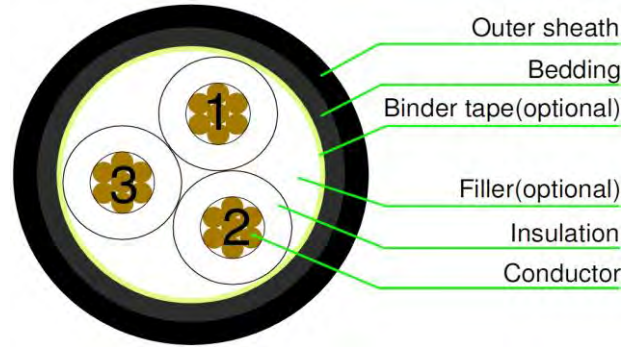
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**SPECIFICATION**

**CONTROL CABLE: 3C X 6 mm<sup>2</sup>  
TC/X-HF-90/HFS-90-TP/HFS-90-TP TYPE F[504M]**

**Cross Drawing**



**Description**

**Application:** This cable is primarily used for main power supply. It can be installed in cable ducts, in cable trunking, on cable trays, and on cable ladders.

Rated Voltage(V):	600/1000
Rated Temperature(°C):	90
Specification:	AS/NZS 5000.1、AS/NZS 1125 AS/NZS 3808、IEC 60754-1&2 IEC 61034-1&2、IEC 60332-3-24 Cat C

**Cable Construction**

<b>No. of Cores Conductor</b>	3
Material:	Tinned copper wire
Cross-Sectional Area(mm <sup>2</sup> ):	6
Approx. Conductor Dia.(mm):	3.12
Class of Conductor:	Class 2
<b>Insulation</b>	
Material:	X-HF-90
Nom. Thickness(mm):	0.7
Approx. Dia. over insulation(mm):	4.6
<b>Bedding</b>	
Material:	LSZH(HFS-90-TP)
Nom. Thickness(mm):	1.0
<b>Outer Sheath</b>	
Material:	LSZH(HFS-90-TP)
Nom. Thickness(mm):	1.8
Min. Thickness(mm):	1.43
Approx. Dia. of cable(mm):	17.2
Approx. Weight of cable(kg/km):	365.0

**Color**

Insulation:	White with black numbering
Bedding:	Black
Outer sheath:	Black

**Performance**

**Electrical characteristics**

1.Max. Conductor D.C. resistance at 20°C(Ω/km):	3.11
2.Max. Conductor D.C. resistance at 40°C(Ω/km):	3.35
3.Min. Insulation Resistance at 20°C(MΩ•km):	1000
4.Spark test A.C. voltage value(kV):	6
5.A.C. high voltage test for 5min(kV):	3.5
6.Current carrying capacities(A)	(In air ): 39 (Direct buried): 46 (Buried in duct): 46
*Ambient temperature: 40°C;Ground temperature: 25°C Burying depth: 1 m;Soil resistivity: 1°C•m/w	
7.Max. conductor temperature of 5s Short-circuit(°C):	250
8.Max. 1s Short-circuit rating(kA):	0.858
9.Reactance at 50Hz(Ω/km):	0.0887

**Physical characteristics**

1.Min.bending radius(mm):	172
2.Construction test:	AS/NZS 5000.1
3.Flame retardant test:	IEC 60332-3-24 Cat C
4.Acrid gas emission test:	IEC 60754-1&2 (PH>4.3、C<10μS/mm)
5.Smoke emission test:	IEC 61034-1&2 (L.T.>60%)

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S-121129-03C

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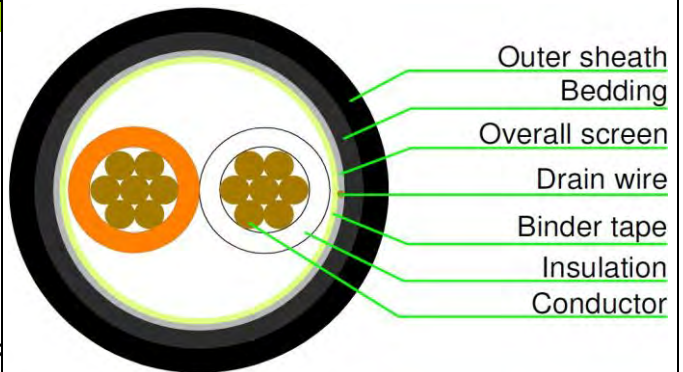
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**SPECIFICATION**

**CONTROL CABLE: 1P X 0.5 mm<sup>2</sup>**  
**TC/X-HF-90/OS/HFS-90-TP/HFS-90-TP TYPE H[504M]**

**Cross Drawing**



**Description**

**Application:** This cable is used in machines, measuring instrument, and control systems for the transmission of analogue and digit signals.

Rated Voltage(V): 600/1000  
 Rated Temperature(°C): 90  
 Specification: AS/NZS 2373、AS/NZS 1125  
 AS/NZS 3808、IEC 60754-1&2  
 IEC 61034-1&2、IEC 60332-3-24 Cat C

**Cable Construction**

<b>No. of Pairs</b>	1
<b>Conductor</b>	
Material:	Tinned copper wire
Cross-Sectional Area(mm <sup>2</sup> ):	0.5
Approx. Conductor Dia.(mm):	0.93
Class of Conductor:	Class 2
<b>Insulation</b>	
Material:	X-HF-90
Nom. Thickness(mm):	0.8
Approx. Dia. over insulation(mm):	2.6
<b>Drain wire</b>	
Material:	Tinned copper wire
Cross-Sectional Area(mm <sup>2</sup> ):	0.5
<b>Overall Screen</b>	
Material:	Al-foil(Al layer inside)
	100% wrapping over the binder tape
<b>Bedding</b>	
Material:	LSZH(HFS-90-TP)
Nom. Thickness(mm):	1.0
<b>Outer Sheath</b>	
Material:	LSZH(HFS-90-TP)
Nom. Thickness(mm):	1.8
Min. Thickness(mm):	1.43
Approx. Dia. of cable(mm):	11.8
Approx. weight of cable(kg/km):	120.0

**Color**

Insulation:	Orange、White
Bedding:	Black
Outer sheath:	Black

**Performance**

**Electrical characteristics**

1.Max. Conductor D.C. resistance at 20°C(Ω/km):	39.6
2.Max. Conductor D.C. resistance at 40°C(Ω/km):	42.7
3.Min. Insulation Resistance at 20°C(MΩ•km):	1000
4.Spark test A.C. voltage value(kV):	6
5.A.C. high voltage test for 5min(kV):	3.5
6.Current carrying capacities(A):	5
7.Max. conductor temperature of 5s Short-circuit(°C):	250
8.Max. 1s Short-circuit rating(kA):	0.072
9.Reactance at 50Hz(Ω/km):	0.134

**Physical characteristics**

1.Min.bending radius(mm):	94
2.Construction test:	AS/NZS 2373
3.Flame retardant test:	IEC 60332-3-24 Cat C
4.Acrid gas emission test:	IEC 60754-1&2
	(PH>4.3、C<10μS/mm)
5.Smoke emission test:	IEC 61034-1&2
	(L.T.>60%)

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S-121129-04C

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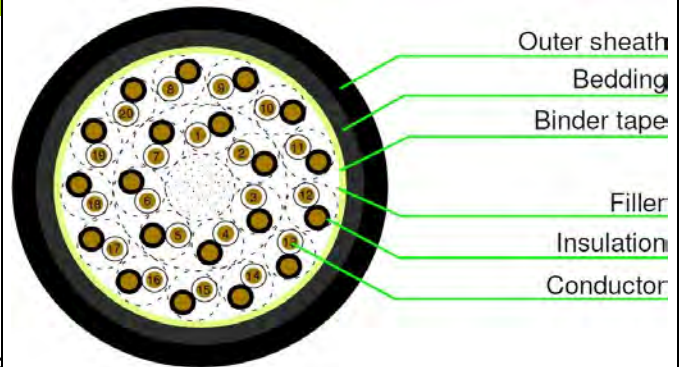
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**SPECIFICATION**

**CONTROL CABLE: 20P X 1 mm<sup>2</sup>  
TC/X-HF-90/HFS-90-TP/HFS-90-TP TYPE K[504M]**

**Cross Drawing**



**Description**

**Application:** This cable is used in machines, measuring instrument, and control systems for the transmission of analogue and digit signals.

Rated Voltage(V):	600/1000
Rated Temperature(°C):	90
Specification:	AS/NZS 2373、AS/NZS 1125 AS/NZS 500.1 AS/NZS 3808、IEC 60754-1&2 IEC 61034-1&2、IEC 60332-3-24 Cat C

**Cable Construction**

<b>No. of Pairs</b>	20
<b>Conductor</b>	
Material:	Tinned copper wire
Cross-Sectional Area(mm <sup>2</sup> ):	1
Approx. Conductor Dia.(mm):	1.13
Class of Conductor:	Class 1
<b>Insulation</b>	
Material:	X-HF-90
Nom. Thickness(mm):	0.7
Approx. Dia. over insulation(mm):	2.6
<b>Bedding</b>	
Material:	HFS-90-TP
Nom. Thickness(mm):	1.0
<b>Outer Sheath</b>	
Material:	HFS-90-TP
Nom. Thickness(mm):	1.8
Min. Thickness(mm):	1.43
Approx. Dia. of cable(mm):	30.7
Approx. weight of cable(kg/km):	880.0

**Color**

Insulation:	Black、White with numbering
Bedding:	Black
Outer sheath:	Black

**Performance**

**Electrical characteristics**

1.Max. Conductor D.C. resistance at 20°C(Ω/km):	18.2
2.Max. Conductor D.C. resistance at 40°C(Ω/km):	19.6
3.Min. Insulation Resistance at 20°C(MΩ•km):	1000
4.Spark test A.C. voltage value(kV):	6
5.A.C. high voltage test for 5min(kV):	3.5
6.Current carrying capacities(A):	7.5
7.Max. conductor temperature of 5s Short-circuit(°C):	250
8.Max. 1s Short-circuit rating(kA):	0.143
9.Reactance at 50Hz(Ω/km):	0.114

**Physical characteristics**

1.Min.bending radius(mm):	246
2.Construction test:	AS/NZS 5000.1
3.Flame retardant test:	IEC 60332-3-24 Cat C
4.Acrid gas emission test:	IEC 60754-1&2 (PH>4.3、C<10μS/mm)
5.Smoke emission test:	IEC 61034-1&2 (L.T.>60%)

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NOTE:The information contained in this data sheet is subject to normal manufacturing tolerance, specifications are subject to change without notice.

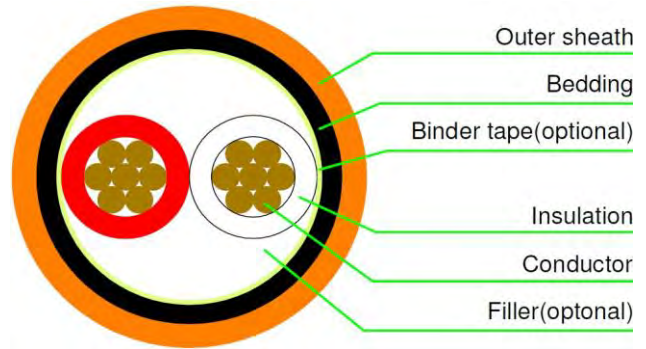




**SPECIFICATION**

**POWER CABLE: 2C X 16 mm<sup>2</sup>  
TC/X-HF-90/HFS-90-TP/HFS-90-TP [506M]**

**Cross Drawing**



**Description**

**Application:** This cable is designed for areas where the integrity of the electrical circuit is critical in maintaining power supply applications can be found in emergency lighting, control and power stations, fire alarm systems, underground tunnels and so on.

Rated Voltage(V): 600/1000  
 Rated Temperature(°C): 90  
 Specification: AS/NZS 5000.1、AS/NZS 1125  
 AS/NZS 3808、IEC 60754-1&2  
 IEC 61034-1&2、IEC 60332-3-24 Cat C

**Cable Construction**

**No. of Cores** 2  
**Conductor**  
 Material: Tinned copper wire  
 Cross-Sectional Area(mm<sup>2</sup>): 16  
 Approx. Conductor Dia.(mm): 5.1  
 Class of Conductor: Class 2  
**Insulation**  
 Material: X-HF-90  
 Nom. Thickness(mm): 0.7  
 Approx. Dia. over insulation(mm): 6.6  
**Bedding**  
 Material: HFS-90-TP  
 Nom. Thickness(mm): 1.0  
**Outer Sheath**  
 Material: HFS-90-TP  
 Nom. Thickness(mm): 1.8  
 Min. Thickness(mm): 1.43  
 Approx. Dia. of cable(mm): 20.5  
 Approx. weight of cable(kg/km): 550.0

**Color**

Insulation: Red, White  
 Bedding: Black  
 Outer sheath: Orange(UV-resistant)

**Performance**

**Electrical characteristics**

- 1.Max. Conductor D.C. resistance at 20°C(Ω/km): 1.16
  - 2.Max. Conductor D.C. resistance at 40°C(Ω/km): 1.25
  - 3.Min. Insulation Resistance at 20°C(MΩ•km): 1000
  - 4.Spark test A.C. voltage value(kV): 6
  - 5.A.C. high voltage test for 5min(kV): 3.5
  - 6.Current carrying capacities(A) (In air ): 83  
(Direct buried): 132  
(Buried in duct): 98
- \*Ambient temperature: 40°C;Ground temperature: 25°C  
 Burying depth: 1 m;Soil resistivity: 1°C•m/w
- 7.Max. conductor temperature of 5s Short-circuit(°C): 250
  - 8.Max. 1s Short-circuit rating(kA): 2.288
  - 9.Reactance at 50Hz(Ω/km): 0.0805

**Physical characteristics**

- 1.Min.bending radius(mm): 205
- 2.Construction test: AS/NZS 5000.1
- 3.Flame retardant test: IEC 60332-3-24 Cat C
- 4.Acrid gas emission test: IEC 60754-1&2  
(PH>4.3、C<10μS/mm)
- 5.Smoke emission test: IEC 61034-1&2  
(L.T.>60%)

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