

## Special Data Communication cable

### ◆ Standard

Special data communication cable is manufactured according to Q/320412HLC018.

### ◆ Application

Special data communication cable is used for command communications of the domestic large enterprises.

### ◆ Product Property

- (1) Rated voltage: 500V。
- (2) The minimum operating temperature: -40℃。
- (3) The maximum long-term operating temperature of conductor: 70℃ for PE insulated cable; 90℃ for XLPE insulated cable。
- (4) The minimum laying temperature: 0℃, It should be pre-heated if it is below the minimum laying temperature.

### ◆ Product Code and Explanation

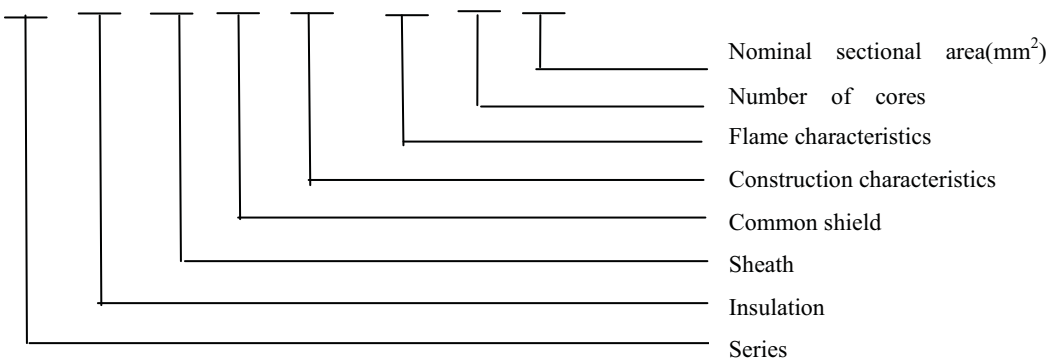
#### 1. Code Explanation (Table 1)

Table 1

Component element	Code	Explanation
Series	DSC	Special data communication cable
Insulation	Y	LDPE
	YJ	XLPE
	E	HDPE
Sheath	V	PVC
Overall screening	P	Copper wire braided
	P1	Tinned copper wire braided
	P2	Copper/plastic wrapped
	P3	Aluminum/plastic wrapped
Construction characteristics	ZR	Combined flexible
	R	Flexible
	S	Twisted
Flame characteristics	ZA	Flame retardant
	ZB	Low smoke low halogen flame retardant

#### 2. Type Explanation

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#### 3. Example Explanation

Example: Flame retardant PE insulated PVC sheathed copper wire braid overall screened combined calling communication flexible cable, 3 cores 2.0mm<sup>2</sup>, 6 pairs 0.75mm<sup>2</sup>, 1 core 0.75mm<sup>2</sup>, is indicated as:  
 ZA-DSCYVPZR 3×2.0+6×2×0.75+1×0.75 (or DSCYVPZR 16 cores)

### ◆ Technical Data

- (1) DC resistance of conductor at 20℃: no more than 26.0Ω/km for 0.75mm<sup>2</sup>; no more than 9.8Ω/km for 2.0mm<sup>2</sup>.
- (2) Insulation resistance at 20℃: no more than 3000MΩ·km for 0.75mm<sup>2</sup>; no more than 1000MΩ·km for 2.0mm<sup>2</sup>.
- (3) It can withstand 2500V/5min high voltage test between insulated conductor/ insulated conductor and screened.

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- (4) The operating capacitance of the pairs (1kHz) is no more than 100pF/m.  
 (5) The capacitance unbalance between pairs is no more than 250pF when the cable is 250m in length and the test frequency is 1 kHz.  
 (6) The cable (ZA/ZB) can pass the bunched flame resistance test according to IEC60332; the Low smoke low halogen cable (ZB) also can pass the measurement test of smoke density according to IEC61034 and the determination test of halogen acid gas ( $HCL \leq 100mg/g$ ) according to IEC60754.

### ◆ Type and Name, Structure and Diameter

#### 1. Type and Name (Table 2)

Table 2

Type	Name
DSC-CPEV-S	PE insulated twisted copper/plastic tape wrapped PVC sheathed Simultaneous transmission data communication cable
DSC-CPEE-S	PE insulated twisted copper/plastic tape wrapped PE sheathed Simultaneous transmission data communication cable
DSC-ZR-CPEV-S	PE insulated twisted copper/plastic tape wrapped flame retardant PVC sheathed Simultaneous transmission data communication cable
DSC-ZR-CPEE-S	PE insulated twisted copper/plastic tape wrapped flame retardant PE sheathed Simultaneous transmission data communication cable
ZA-DSCYVZR	Flame retardant PE insulated PVC sheathed combined flexible special data communication cable
ZA-DSCYVPZR	Flame retardant PE insulated PVC sheathed copper wire braided overall screened combined flexible special data communication cable
ZA-DSCYVP <sub>2</sub> ZR	Flame retardant PE insulated PVC sheathed copper/plastic wrapped overall screened combined flexible special data communication cable
ZA-DSCYVP <sub>3</sub> ZR	Flame retardant PE insulated PVC sheathed aluminum/plastic wrapped overall screened combined flexible special data communication cable
ZA-DSCYJVZR	Flame retardant XLPE insulated PVC sheathed combined flexible special data communication cable
ZA-DSCYJVPZR	Flame retardant XLPE insulated PVC sheathed copper wire braided overall screened combined flexible special data communication cable
ZA-DSCYJVP <sub>2</sub> ZR	Flame retardant XLPE insulated PVC sheathed copper/plastic wrapped overall screened combined flexible special data communication cable
ZA-DSCYJVP <sub>3</sub> ZR	Flame retardant XLPE insulated PVC sheathed aluminum/plastic wrapped overall screened combined flexible special data communication cable
ZA-DSCYV	Flame retardant PE insulated PVC sheathed special data communication cable
ZA-DSCYVP	Flame retardant PE insulated PVC sheathed copper wire braided overall screened special data communication cable
ZA-DSCYVP <sub>2</sub>	Flame retardant PE insulated PVC sheathed copper/plastic wrapped overall screened special data communication cable
ZA-DSCYVP <sub>3</sub>	Flame retardant PE insulated PVC sheathed aluminum/plastic wrapped overall screened special data communication cable
ZA-DSCYJV	Flame retardant XLPE insulated PVC sheathed special data communication cable
ZA-DSCYJVP	Flame retardant XLPE insulated PVC sheathed copper wire braided overall screened special data communication cable
ZA-DSCYJVP <sub>2</sub>	Flame retardant XLPE insulated PVC sheathed copper/plastic wrapped overall screened special data communication cable
ZA-DSCYJVP <sub>3</sub>	Flame retardant XLPE insulated PVC sheathed aluminum/plastic wrapped overall screened special data communication cable
ZB-DSCYVZR	Low smoke low halogen flame retardant PE insulated PVC sheathed combined flexible special data

Type	Name
	communication cable
ZB-DSCYVPZR	Low smoke low halogen flame retardant PE insulated PVC sheathed copper wire braided overall screened combined flexible special data communication cable
ZB-DSCYVP <sub>2</sub> ZR	Low smoke low halogen flame retardant PE insulated PVC sheathed copper/plastic wrapped overall screened combined flexible special data communication cable
ZB-DSCYVP <sub>3</sub> ZR	Low smoke low halogen flame retardant PE insulated PVC sheathed aluminum/plastic wrapped overall screened combined flexible special data communication cable
ZB-DSCYJVZR	Low smoke low halogen flame retardant XLPE insulated PVC sheathed combined flexible special data communication cable
ZB-DSCYJVPZR	Low smoke low halogen flame retardant XLPE insulated PVC sheathed copper wire braided overall screened combined flexible special data communication cable
ZB-DSCYJVP <sub>2</sub> ZR	Low smoke low halogen flame retardant XLPE insulated PVC sheathed copper/plastic wrapped common screened combined flexible special data communication cable
ZB-DSCYJVP <sub>3</sub> ZR	Low smoke low halogen flame retardant XLPE insulated PVC sheathed aluminum/plastic wrapped overall screened combined flexible special data communication cable
ZB-DSCYV	Low smoke low halogen flame retardant PE insulated PVC sheathed special data communication cable
ZB-DSCYVP	Low smoke low halogen flame retardant PE insulated PVC sheathed copper wire braided overall screened special data communication cable
ZB-DSCYVP <sub>2</sub>	Low smoke low halogen flame retardant PE insulated PVC sheathed copper/plastic wrapped overall screened special data communication cable
ZB-DSCYVP <sub>3</sub>	Low smoke low halogen flame retardant PE insulated PVC sheathed aluminum/plastic wrapped overall screened special data communication cable
ZB-DSCYJV	Low smoke low halogen flame retardant XLPE insulated PVC sheathed special data communication cable
ZB-DSCYJVP	Low smoke low halogen flame retardant XLPE insulated PVC sheathed copper wire braided overall screened special data communication cable
ZB-DSCYJVP <sub>2</sub>	Low smoke low halogen flame retardant XLPE insulated PVC sheathed copper/plastic wrapped overall screened special data communication cable
ZB-DSCYJVP <sub>3</sub>	Low smoke low halogen flame retardant XLPE insulated PVC sheathed aluminum/plastic wrapped overall screened special data communication cable

## 2. Construction Dimension (Table 3~4)

Table 3

Specification core× nominal cross-sectional area(mm <sup>2</sup> )	Calculated outer diameter (mm)	
	Overall screened	Non-screened
2×0.75 (2cores)	11.5	7.8
3×2.0+3×2×0.75 (9cores)	21.0	18.5
3×2.0+6×2×0.75+1×0.75 (16cores)	22.0	19.0
3×2.0+8×2×0.75 (19cores)	26.0	25.0
3×2.0+11×2×0.75 (25cores)	27.0	26.0

Table 4  
Thickness of sheath and approx. diameter of CPEV-S

Conductor Dia. mm	Pairs	Thickness of sheath mm	Outer diameter mm	Conductor Dia. mm	Pairs	Thickness of sheath mm	Outer diameter mm
0.5	1	1.3	7.0	0.8~0.9	1	1.3	8.0
	2	1.3	9.0		2	1.3	10.0
	3	1.3	10.0		3	1.3	11.0
	4	1.3	10.5		4	1.3	11.5
	5	1.4	11.5		5	1.4	12.5
	7	1.5	12.0		7	1.5	13.5
	10	1.5	13.0		10	1.5	17.0
	15	1.5	15.0		15	1.5	18.0
	20	1.5	17.0		20	1.5	20.0
	25	1.5	19.0		25	1.5	22.0
	30	1.5	21.0		30	1.6	25.0
	50	1.5	26.0		50	1.8	30.0
	75	1.6	30.0		75	2.0	37.0
	100	1.7	34.0		100	2.2	42.0
	150	1.9	39.0		150	2.5	49.0
200	2.0	47.0	200	2.7	55.0		
0.65~0.7	1	1.3	7.5	1.2	1	1.4	10
	2	1.3	9.5		2	1.4	12
	3	1.3	10.5		3	1.5	13
	4	1.3	11.0		4	1.5	13.5
	5	1.4	12.0		5	1.5	14.5
	7	1.5	13.0		7	1.5	15.5
	10	1.5	16.5		10	1.5	19
	15	1.5	17.5		15	1.5	20
	20	1.5	19.0		20	1.6	23
	25	1.5	21.0		25	1.7	25
	30	1.5	23.0		30	1.8	28
	50	1.5	29.0		50	2.1	33
	75	1.7	35.0		75	2.4	40.5
	100	1.8	41.0		100	2.6	45.5
	150	2.1	47.0		150	3.0	52.5
200	2.2	53.0	200	3.3	58.5		