

台达 DOP 系列触摸屏与各品牌 PLC 通讯连线

1. GE VERMAX 编程电缆制作（电脑接口第一个串口）：

PLC PC

(9 SUB MALE) (9 SUB FEMALE)

2 (T) 2 (R)

3 (R) 3 (T)

5 (G) 5 (G)

2. GE 90—30 系列（CPU351/352/363/364）编程电缆制作（RS232 端口 6 脚 RJ11 型）：

PLC PC

(6 RJ11 MALE) (9 SUB FEMALE)

2 (T) 2 (R)

5 (R) 3 (T)

3 (G) 5 (G)

3. GE 90-30、90-70、VersaMax 编程电缆制作（RS232 端口 6 脚 RJ11 型）：

PLC RS422/RSRS232 PC

(15 SUB MALE) (9 SUB FEMALE)

12 (T-) (R+) (T) 2 (R)

13 (T+) (R-) (R) 3 (T)

10 (R-) (T+) (G) 5 (G)

11 (T+) (T-)

9 (RT)

6 (RTS-)

15 (CTS-)

6 (RTS+)

15 (CTS+)

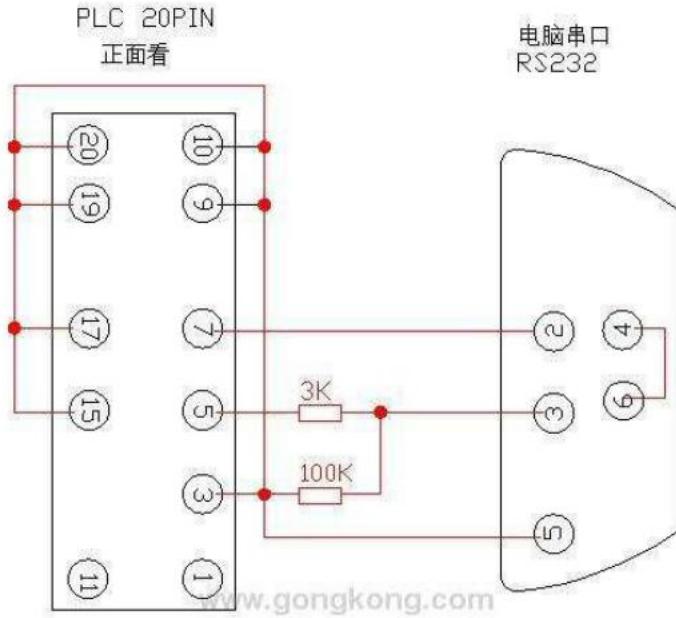
注意：下，GE 90-70 有两个 15 SUB FEMALE 串口，用第二个串口方便编程，即使用 GE 公司生产的编程电缆。

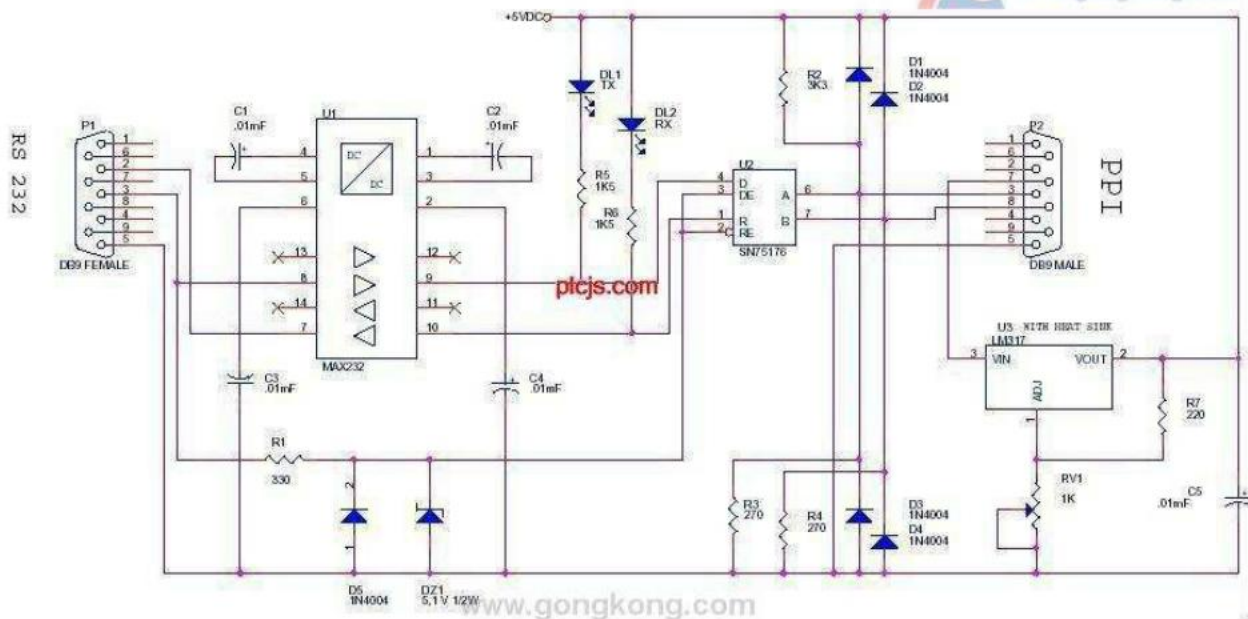
4. GE 公司生产的编程电缆（GE 90-30、90-70、VersaMax），在调试过程中不够长，需要延长，延长线的制作为图 1

注意：下，GE 90-70 有两个 15 SUB FEMALE 串口，用第二个串口方便编程，即使用 GE 公司生产的编程电缆。

欧姆龙 CPM1A 编程电缆制作资料 (如图)

欧姆龙 CPM1A 系列 PLC 编程电缆接线图 www.gongkong.com



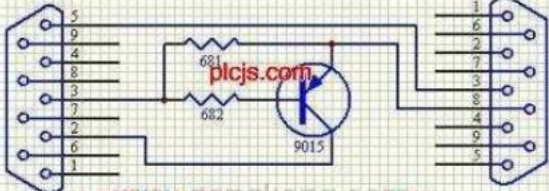


S7-200编程电缆接线图



接PC RS232

接PLC



由数学家网制作: <http://www.hz1bl.com>



西门子S7-200编程电缆

在S7-200 CN CPU224下在以9.6kbps 和19.2kbps 都能通过



西门子S7-200编程电缆

在S7-200 CN CPU224下在以9.6kbps 和19.2kbps 都能通过

www.gongkong.com

我的主页网址: <http://plcjiemi.51.com>

西门子 s7-200 和 300 编程电缆制作 方法

自制 PLC 编程电缆

摘要：由于品牌不同的 PLC 其编程电缆不能通用，而原装编程电缆又价格不菲，给学习和使用 PLC 带来了不便。本文通过分析 PLC 编程接口的几种通信接口标准和物理结构，详细说明了各种不同接口形式的 PLC 编程电缆的制作方法，自制编程电缆成本低制作方便，可以实现原装电缆的所有功能。

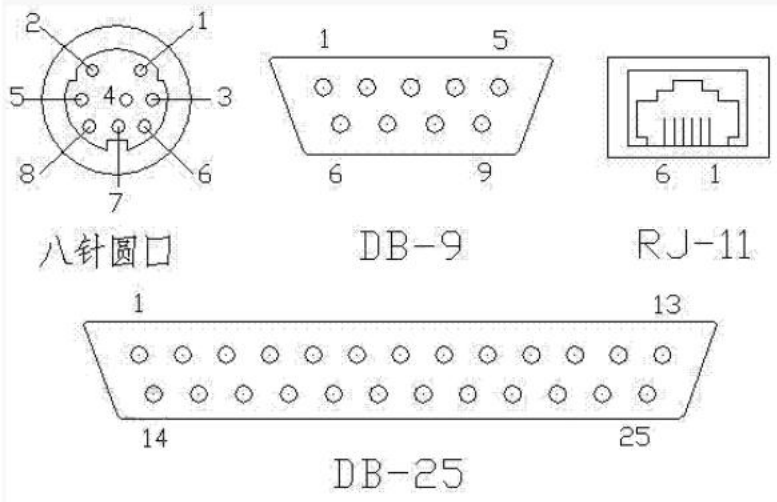
关键词：PLC 编程口 通信接口标准 编程电缆 接口转换器

一、前言

随着可编程控制器 (PLC) 在工业控制领域的广泛应用, PLC 编程成了电气工程技术人员必须掌握的专业技能。可编程控制器的品牌众多, 欧、美、日、韩及台湾的 PLC 纷纷抢滩大陆, 在给使用者提供了多种选择的同时, 也给使用者带来了小小麻烦。由于不同品牌 PLC 的编程电缆互不通用, 买一根原装电缆往往上千元。对于以学习为主要目的以及经常碰到不同品牌 PLC 的技术人员来说, 如果能够有办法花较低的价格自制一根编程电缆, 无疑为他们提供了方便。PLC 虽然品牌众多, 但各种品牌的 PLC 其编程接口不外乎几种形式。在 PLC 说明书提供的技术手册里一般都会提供编程口的引脚定义, 这就为自制编程线提供了可能。下面我就 PLC 编程口的几种串行通信接口标准和物理结构, 详细说明如何 DIY 一根适用的编程电缆。

二、PLC 编程口的型式

编程电缆一端与 PC 的 COM 口相连, 另一端与 PLC 的编程口相连, PC 端的 COM 口均为 RS232C 接口, DB-9 针形插头, 而 PLC 的编程口按接口标准一般可分为三种, 即 RS232、RS485、RS422, 按物理结构可分为五种, 即八针圆口 (DIN-8), 九针 D 形口 (DB-9), 二十五针 D 形口 (DB-25), RJ11 口以及专用接口, 其中以前两种居多, 各接口引脚排列如图 1 所示。



为了做好编程电缆, 首先要大概了解一下这三种串行通信接口标准, RS-232、RS-422 与 RS-485 是三种串行数据接口标准, 接口标准只对接口的电气特性做出规定, 而不涉及接插件、电缆或协议, 所以同一种接口标准可以有不同的物理结构, 如 DB-9、DB-25 等。

RS-232 是 PC 机与通信工业中应用最广泛的一种串行接口, RS-232C 总线标准设有 25 条信号线, 包括一个主通道和一个辅助通道, 多数情况下只使用主通道, 常用九条信号线 (九针 D 形口), 各引脚定义如表 1 所示。对于一般双工通信, 仅需几条信号线就可实现, 如发送数据 TXD 和接收数据线 RXD 以及逻辑地线 GND, RS232C 只能点对点通讯, 传输距离短, 共模抑制能力差。

RS-485 采用平衡发送和差分接收, 因此具有抑制共模干扰的能力, 它使用一对双绞线, 将其中一根定义为 A (TXD-/RXD-), 另一根定义为 B (TXD+/RXD+), 不需要数字地线, 速率在 100kbps 及以下时通信距离达 1200 米以上。RS-485 可以联网构成分布式系统, 其允许最多并联 32 台驱动器和 32 台接收器, RS-485 只能实现半双工通信。

RS-232 接口引脚定义

25 针 9 线 编写描述

2 3 TXD 发送数据

3 2 RXD 接收数据

4 7 RTS 请求发送

5 8 CTS 允许发送

6 6 DSR 通讯设备准备好

7 5 GND 信号地

8 1 CD 载波检测

20 4 DTR 数据终端准备好

22 9 RI 响铃指示器

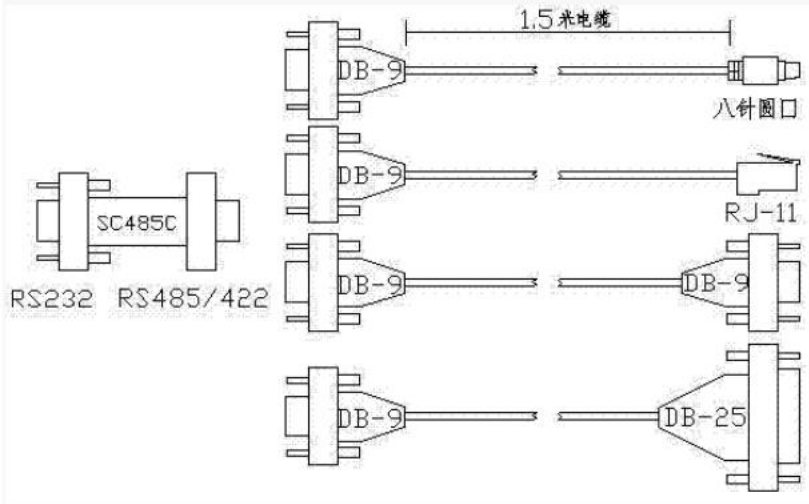
表

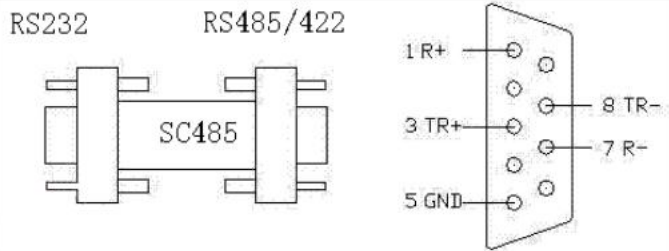
RS-422 接口标准主要是为克服 RS-232 接口标准的通讯距离短和传输速率慢而建立的。RS-422 标准是一种以平衡方式传输的标准，使用二对双绞线，每个信号以两根信号线来传输，即发送数据 TXD+、TXD-，接收数据 RXD+、RXD-，逻辑电平是由两条传输线之间的电位差来决定的，由于采用了双绞传输，大大增强了抗共模干扰的能力，因此最大数据传输率可达 10Mbps（传送 15m 时），若传输速率降到 90kbPs 时，则最大距离可达 1200m，可实现全双工通信。

三、编程电缆的制作

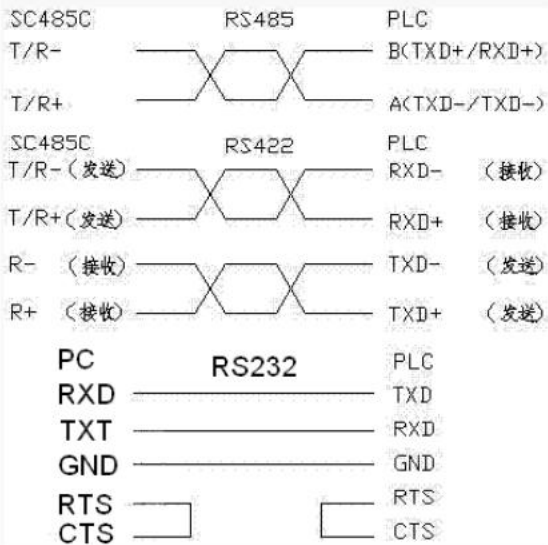
各厂家的编程电缆的作用就是将 PLC 端的 RS485、RS422 格式的数据转换为 PC 端的 RS232C 格式的数据，PLC 端如果是 RS232 则只要按规则直接连接即可。因此要自制 PLC 编程电缆，就必须将 PLC 端的 RS485、RS422 转换为 PC 机能够识别的 RS232C，PC 才能与 PLC 通信，完成下载、上传、监控等工作，这就涉及到一个接口标准转换的问题。实现接口转换有几种方法：一是用简易的电平转换电路，但一种电路只能针对一种 PLC，且功能不全，性能也不太可靠，甚至可能会损坏 PC 机的串口；二是用专用的接口转换 IC，但业余实现起来比较复杂，不适合自制。这里我们使用一种成品通讯接口转换器，可以实现 RS232/RS485/RS422 的转换，由于是专用的通讯接口转换器，使用起来很方便且性能可靠，价格也比较低。

这类产品市场上比较多，以四川绵阳四星电子的产品 SC-485C 接口转换器为例，该转换器用于 RS232 到 RS485/RS422 的通讯转换，体积小巧，只有两个 DB-9 插头大小，采用串口奇电技术，不需外接电源，SC-485C 的结构及引脚定义如图二所示，RS232 端为 DB-9 的孔座，可以直接插在 PC 机的 COM 口上，RS485/RS422 端为 DB-9 的针座，RS485 可使用 3 脚和 8 脚，RS422 可用 3 脚、8 脚、1 脚和 7 脚。利用该接口转换器制作编程电缆如图三所示，左侧为 SC-485C 接口转换器，右侧从上而下分别为 DIN-8、RJ11、DB-9 和 DB25 插头的编程电缆，电缆靠近接口转换器一边的插头均为 DB-9 孔座插头，另一头均为针插头，分别对应不同物理结构的 PLC 编程口。





接线时根据 PLC 端是 RS485 还是 RS422 选择对应的引脚，按照“发送接接收，接收接发送，正接正，负接负”的规律连接，SC-485C 接口转换器与 PLC RS485、RS422 接口接线图和 PC 与 PLC RS232 接口接线图见四。



要做好一根编程电缆，除了要完成 RS232/RS485/RS422 之间的接口转换外，还必须了解 PLC 编程口各引脚的定义，因为即使是采用同一种接口标准，不同厂家的 PLC 其引脚分布也是不相同的。表一提供了几种主流 PLC 的引脚定义，供自制时参考。本列表的 PLC 可以查阅该机的技术手册，也可以到网上找一个通用型人机界面 (HMI) 的说明书，在 HMI 与各家 PLC 联机的连线说明中可以找到市场上绝大多数 PLC 的引脚定义。

部份 PLC 编程口引脚定义

PLC 型号 接口标准 接口外形 引脚定义

S7-200 RS485 DB-9 3B/6A

TIWDO/NEZA RS485 DIN-6 1A/2B

LGmasterK 系列 RS232 DB-9 2RXD/3TXD/5GND

FX2N/FX0N RS422 DIN-8 1RXD-/2RXD+/4TXD-/7TXD+

OMRON CH200HS RS232 DB-9 2TXD/3RXD/7GND/4RTS/5CTS

AB SLC503/504 RS232 3TXD/2RXD/5GND/7RTS/8CTS

ABB COMLI RS232 6TXD/7RXD/5GND

(SLAVE MODE)

KOYO DIRECT DL RS232 RJ11 4TXD/3RXD/1GND

表二

四、结束语

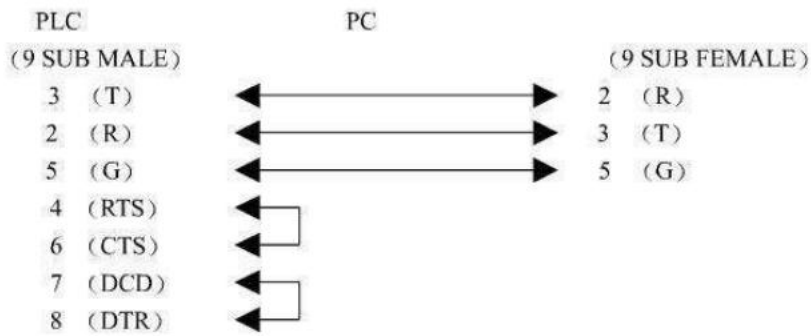
一种原装电缆只能在一种 PLC 上使用，而一种接口转换器配上不同接插件可以组合成一套编程电缆，几乎可以在任何品牌的 PLC 上使用。接口转换器和接插件在通信市场都能买到，而且价格便宜，总成本仅需原装电缆价格的十分之一左右，制作也非常简便。自制的编程电缆可以在 PC 与 PLC 之间可以完成程序上传、下载、在线热插等功能。在功能和可靠性上比起原装电缆来可以说是毫不逊色。

[引用 | 回复](#)

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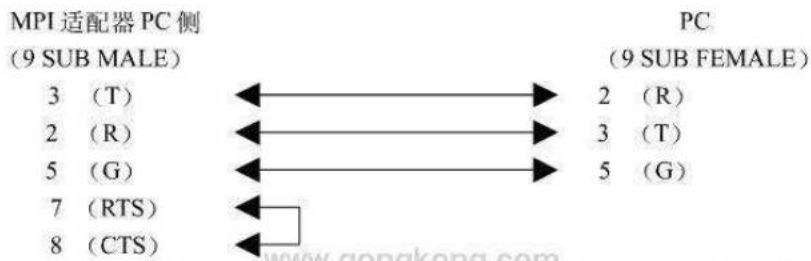
[工控网论坛置顶贴](#)

s7-200，PPI 通讯方式 1：用 siemens 的 PPI 编程电缆 2：用 rs232/485 转换器，485 与 plc 的 PPI 口的连接方式是： 3-Data+ 8-Data- s7-300、400：通过 MPI 通讯，用 siemens 的适配器（PC-Adapter），适配器的另一端直接和 plc 的 MPI 口相连，适配器的另一端采用下面的连接方式。 1-1 2-3 //发送端 3-2 //接收端 4-6 //发送确认 5-5 //共地 6-4 //接收确认 7-8 //发送完成 8-7 //接受完成 9-9 Profibus： 1：用专用电缆，一般是 A1-A1 B1-B1 2：自己制作 3-3 8-8



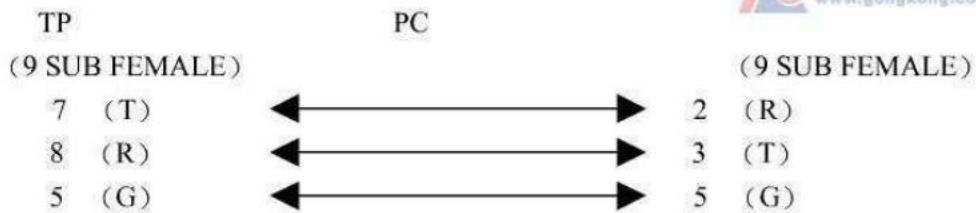
6 施耐德公司的 MODIDCON QUANTUM 若有以太网模块编程电缆制作: 即 RJ45 网络线。它是一款无需通过串口下载配置即可编程 PLC。

7 SIEMENS S7—300/400 编程电缆 (SIEMENS 公司称为 MPI 适配器, 接 PC 机串口的为 6ES7 972-0CA23-0XA0,) 的延长线 (SIEMENS 公司称为编程电缆或者 MPI 电缆 6ES7) 制作:



目前 SIEMENS 公司生产了接 PC 机 USB 口的为 6ES7 972-0CB20-0XA0MPI 适配器。

11、WEINVIEW 触摸屏的编程电缆制作：



www.gongkong.com



富士 spb plc 的编程电缆内部接线图！

一端 8 芯水晶头，一端 rs232 9 孔。

RJ45 端 3-----TD+

4-----TD-

5-----RD+

6-----RD-

1, 2, 7, 8-----NC





SPB 为 RS422 模式，因此令一端你需要一个 RS232 转 RS422 的转换器，然后对应转换器上的引脚分布进行接线。

另，低版本的软件会导致通讯失败，请使用高版本的软件。



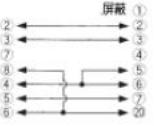
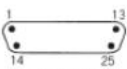
制作三菱 FX 系列 PLC 编程电缆

用于三菱 FX1S、FX1N、FX2N、FX2NC 及 A 系列 PLC 编程使用。

第一步：制作一根 FX-422CABO。

电缆名	主要用途和规格		
FX-422CAB0[1.5m]	与FX-232AW/AWC组合，传送程序。		
	FX-232AW/AWC 接口	接线图	FX _{1n} ,FX _{2n} ,FX _{3n} ,FX _{4n} ,FX _{5n} ,FX _{6n} .
	 D-SUB 25针母头		 MINI DIN 8针公头

第二步：制作一根 F2-232CAB-1

型号(长度)	主要用途和规格		
F2-232CAB-1[3.0m]	与FX-232AW/AWC组合，传送程序。		
	电脑 (9针)	接线图	FX-232AW/AWC型接口
	 D-SUB 9针母头		 D-SUB 25针公头

第三步：把上以两根线的 25 针母接头和公插头对接。

好了，一根三菱 PLC 编程电缆 SC-09 就制作完成了。

电脑与 PLC/COM1H 系列的编程电缆 XW22-200S-CV 的制作

PLC-PC: 2-2 3-3 4-8 5-7 9-5

LG PLC 编程电缆制作方法

使用 RS232 串行口和屏蔽电缆制作。

公 2 (白) (-----) 母 3 (白)。

公 3 (黄) (-----) 母 2 (黄)。

公 5 (红) (-----) 母 5 (红)。

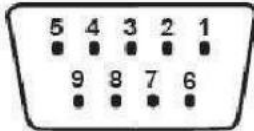
屏蔽层加护套焊接在金属外壳上。

以上颜色为白底。假如线径太粗接口卡不平，可以先用电工胶带固定和加粗后再安装接口外壳。

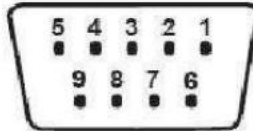
触摸屏 WeinView/EasyView 编程电缆制作方法

触摸屏 WeinView/EasyView 编程电缆制作方法

编号：WP



WeinView/EasyView 侧
PLC[RS485]/ PC[RS232]
DB 9 芯针座



PC 机侧 COM1
DB 9 芯针座



制作方法如下：

1.直连编程电缆，该制作方法当初是参考三菱 PLC 编程电缆制作方法。当初网上没有关于富士 PLC 编程电缆制作的方法，在触摸屏论坛上看到富士 PLC 采用 RS422 通讯，并下载了通讯口图如图所示，开始准备用 RS232/422 转换器制作，单本没有买到。想起三菱 PLC 也是 RS422 通讯，网上很多三菱编程电缆制作图，就下载了一个三菱接线图并制作了一个富士编程电缆。

开始用电阻制作的编程电缆用 V1.0 中文版富士软件联机成功率极低，10%左右。在车间用笔记本成功率 0，就到郑州购买 RS232/422 模块制作另一根编程电缆，谁知道用转换器制作的编程电缆在办公室成功率 0，车间就更不用说了。就一直用电阻连接的编程电缆并把 PLC 拆到办公室输入程序再安装到车间。直到后来才有好心的工友朋友说 V1.0 中文版软件是在 WIN98 系统联机的软件，XP 系统必须用 V2.0 以后的版本。下载安装 V2.0 版本软件，两种方法制作的编程电缆都可以用。

[attach]42[/attach]

4 RTX+ -----5 GND

6 TXD+ -----5 GND

3 RXD- -----2.2K 电阻-----3 RXD

5 TXD- -----2.2K 电阻-----2 TXD

将 PLC 的 4(RXD+),6(TXD+)脚的导线与电脑 9 芯母头的 5 脚连接(该脚是 RS232 的 GND)。

3 脚(RXD-)通过 2.2k 欧的电阻与 9 芯的 3 脚相连。

5 脚(TXD-)通过 2.2k 欧电阻与 9 芯的 2 脚相连

2.通过 RS232-RS422 转换头相连

到电脑市场购买一个 RS232-422 转换头(25 元左右，比电阻连接的安全)，按转换头的说明书的说明与 6 芯水晶头接 RTX+接 RTX+，RTX-接 RTX-，TXD+接 TXD+，TXD-接 TXD-连接就可。

后有朋友联机不成功，我总结有以下原因导致他们没有成功：

1 如果有 USB/RS232 转换器，注意转换器必须单独供电，如果转换器可以用+5V 供电，可以直接用 PLC 的+5V 电源。如果转换器是+9V 供电的可能需要另外增加一个直流电源了；

2 软件必须用 2.0 英文版本，1.0 中文版本可以在下面编程用，1.0 在 WIN98 系统可用，在 XP 系统联机成功率不高（偶然可以成功一次）。

3 判断接线是否正确，可以把水晶头插到 PLC 编程口（PLC NB2 有一个口不是编程口，不要插错）测量+5V 是否是 1/7 和 2/8 脚，好几个朋友都是把水晶头上下程序弄错，好几个朋友都是把通讯口 1-8 的次序弄颠倒了，插到 PLC 通讯口后测量 1 脚和 2 脚+5V 极性判断是否接错。

制作 AB SLC500/03 的编程电缆

R232C 采用 9 针 D 型插头。

2-3。

3-2

5-5

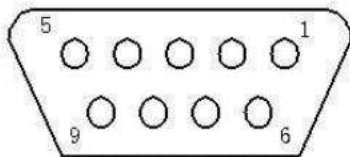
4-6

7-8

两头都用凸型插头即可。

plcmod 微机，所有 232 接口都用这种连接方式。

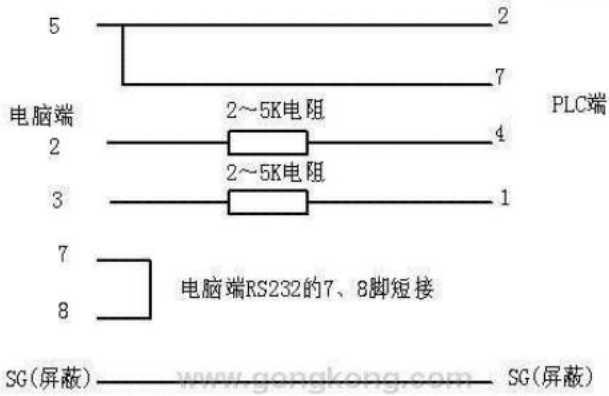
三菱 PLC 编程电缆制作资料



电脑端, RS232母头插头



PLC端, 422公头插头



s7200 与 TP170B 通讯电缆的制作

3---3, 6---8.

F930GOT-BWD-C 的编程电缆

PC HMI

2-----3

3-----2

4-----6.8

5-----5

6.8-----4

4400 与 OMRON CP1H 的通讯电缆制作

plc-----fmi

3 3

2 2

9 5

4. 5 短

串行通讯电缆的制作 RS-232 通讯电缆的制作

无论是 9 孔插头，还是 25 孔插头，其串行通讯电缆连接时都要遵照下列对接关系：

SG-----SG TXD-----RXD RXD-----TXD RTS-----CTS
CTS-----RTS DTR-----DSR DSR-----DTR

根据上述对接关系，就可以非常方便地连接串行通讯电缆。这里顺便介绍一下上述各引脚所代表的含义：

SG 英文全称为 Signal Ground/Common Return，表示信号地；

TXD 指 Transmitted Data，表示数据发送；

RXD 指 Received Data，表示接收数据；

RTS 指 Request To Send，表示发送请求；

CTS 指 Clear To Send，表示清除请求；

DTR 指 Data Terminal Ready，表示数据终端准备就绪；

DSR 指 Data Signal Rate Selector，表示数据速率准备就绪。

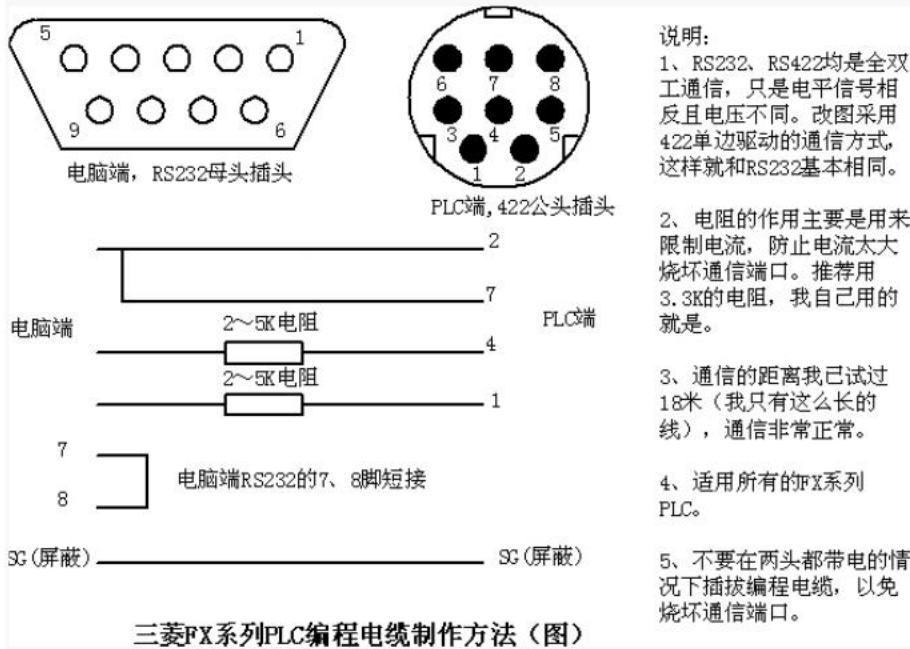
在制作 9 芯串口连线时，需要 2 个 9 孔插头和 1.5 米长的至少 7 芯的扁平电缆，引脚连线如下所示。

9 孔插头—9 孔插头引脚连线为：2-3、3-2、4-6、5-5、6-4、7-8、8-7。

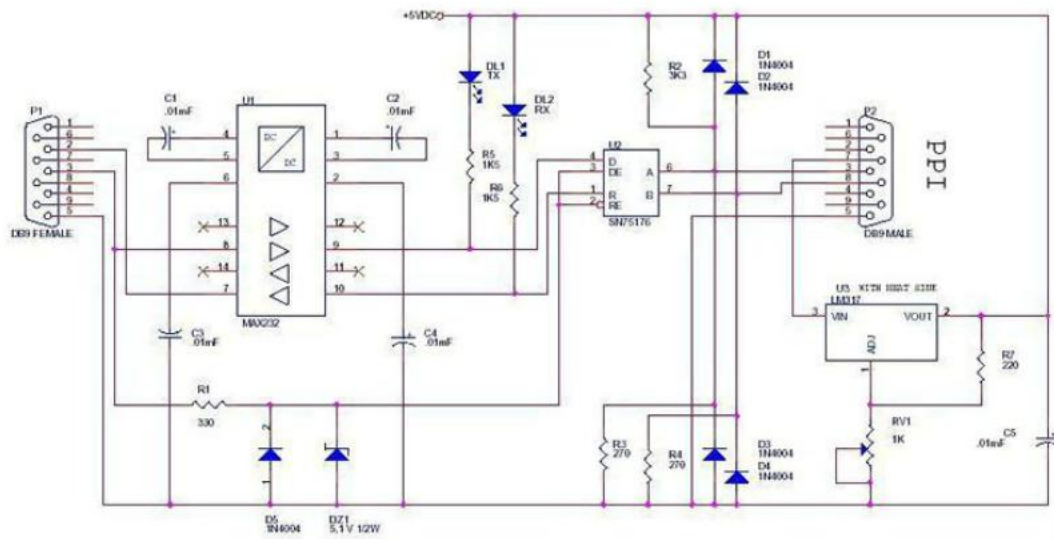
9 孔插头—25 孔插头引脚连线为：2-2、3-3、4-6、5-7、6-20、7-5、8-4。

25 孔插头—25 孔插头引脚连线为：2-3、3-2、4-5、5-4、6-20、7-7、20-6。

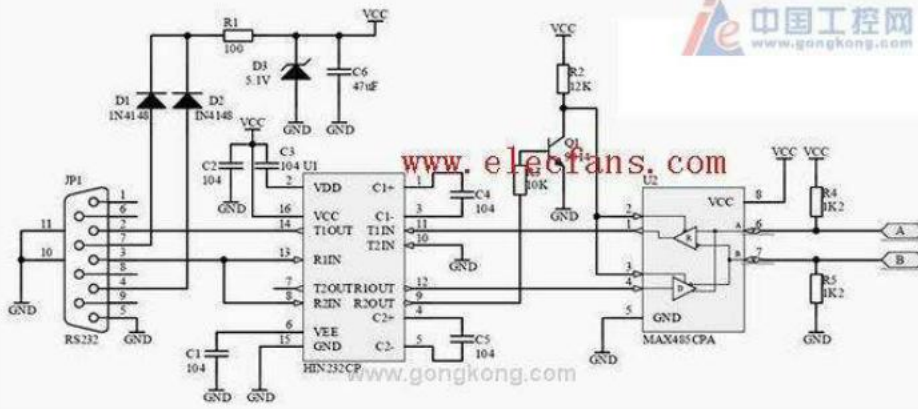
三菱 FX 系列编程电缆



RS 232

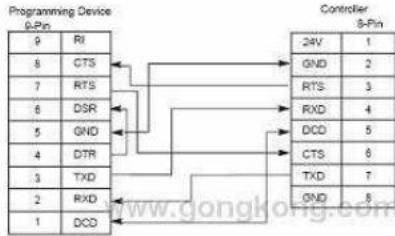
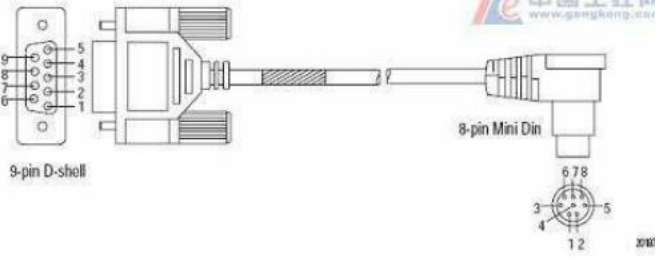


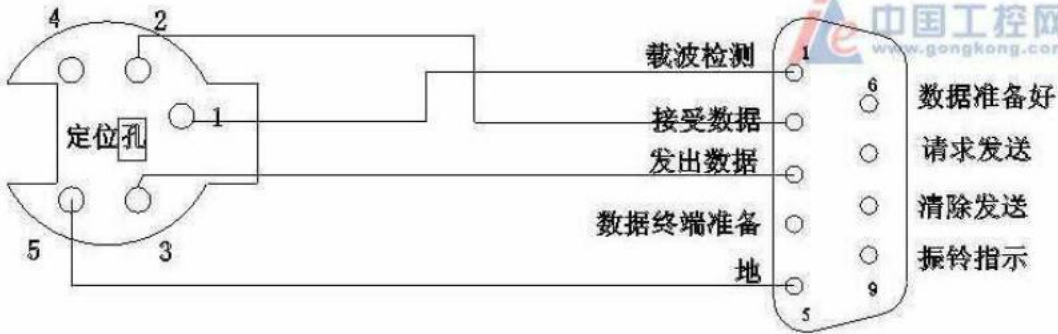
RS232 转 RS485 自制线版原理图



AB 的 PLC 编程电缆

1761-CBL-PM02 Series B Cable

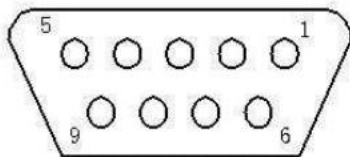




PLC侧插座 (不是插头)

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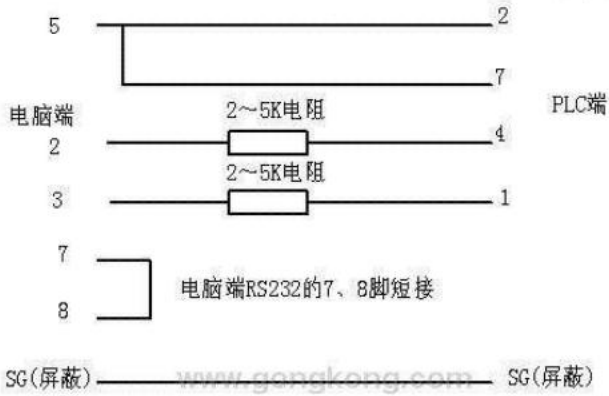
PC:9针串行口



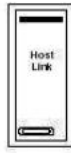
电脑端, RS232母头插头



PLC端, 422公头插头



C200H - LK201
3G2C7 - LK201
3G2A6 - LK201
CV500 - LK201 (Port 1)

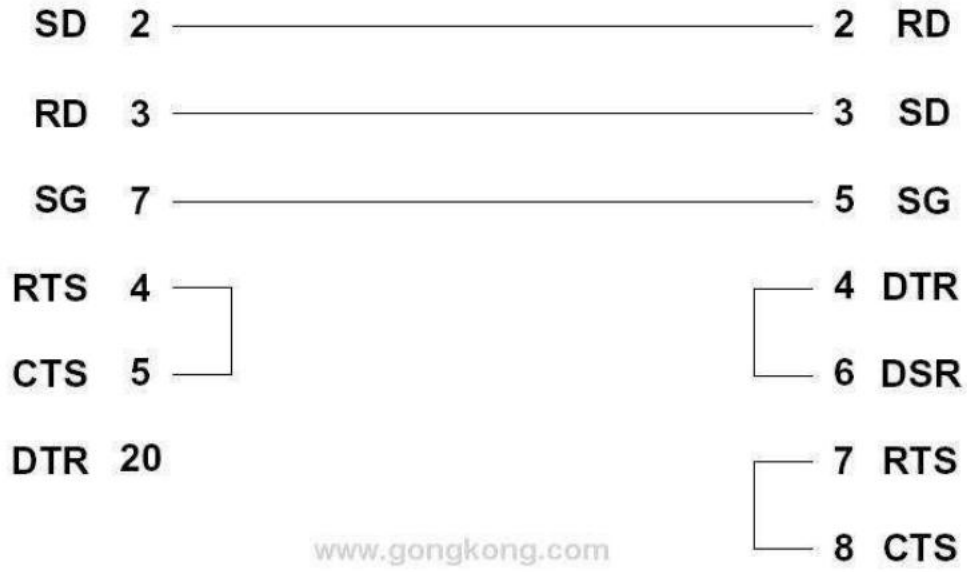


25-pin

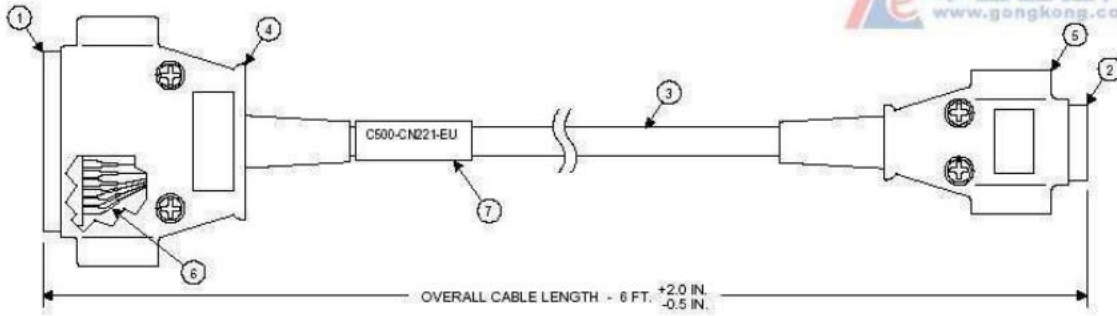
Cable Part Number C500 - CN221 - EU



AT Computer (9-pin)



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CABLE C500-CN221-EU

1. DB-25 MALE CONNECTOR WITH SOLDER CUPS
2. DE-9 FEMALE CONNECTOR WITH SOLDER CUPS
3. 3 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE
4. OMRON DB-25 BACKSHEL W/ 2.6MM JACK SCREWS, P/N XM2S-2511
5. OMRON DE-9 BACKSHELL W/ #4-40 JACK SCREWS, P/N XM2S-0913
6. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
7. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA. POSITION APPROXIMATELY AS SHOWN.

FROM #1 PIN	TO #2 PIN
TXD 2	2 RXD
RXD 3	3 TXD
*4 to 5	nc
nc	*4 to 6
nc	*7 to 8
COM 7	5 COM
1 to SHIELD	nc

* PIN TO PIN JUMPERS

-	-	-	-	APPROVAL	DATE	MATERIAL	C500 BASIC/ASCII/LINK TO IBM-AT COMPUTER CABLE	
-	-	-	-	DRWN	OBA 11-2-94	FINISH	DRWG NO:	PFP0015A
-	-	-	-	CHCKD		TOLERANCE	UNITS: ENGLISH	FILE NAME: -
-	-	-	-	APRVD			SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND			SHEET: 1 OF 1	Omron Electronics, Inc. Omron Manufacturing of America

C200H - LK201
3G2C7 - LK201
3G2A6 - LK201
CV500 - LK201 (Port 1)

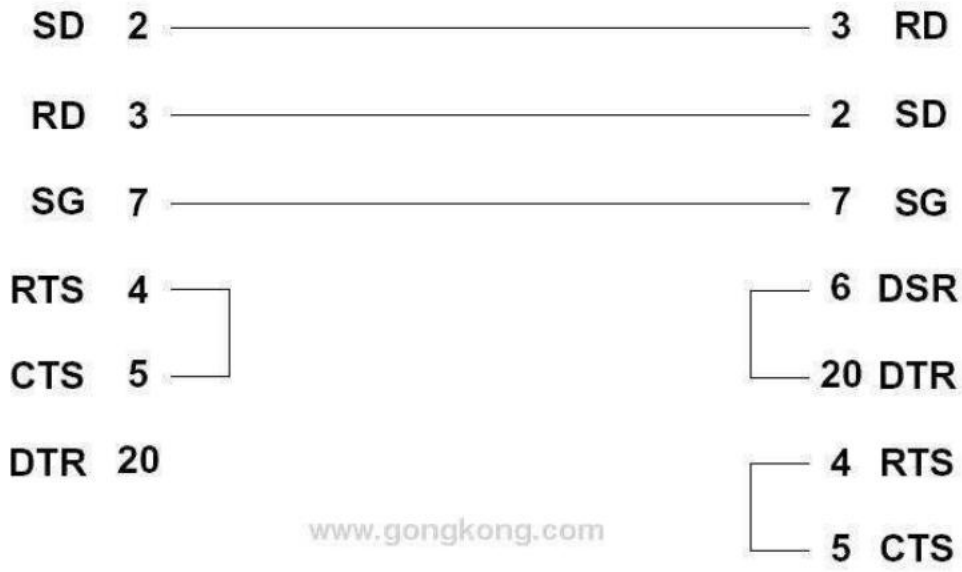


25-pin

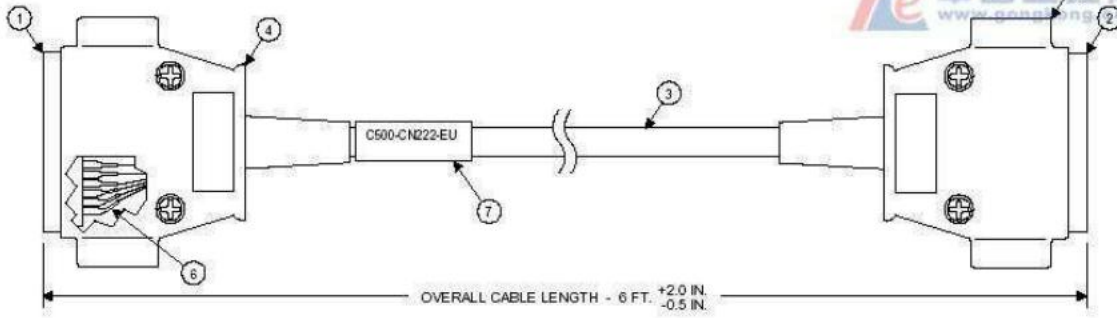
Cable Part Number C500 - CN222 - EU



XT Computer (25-pin)



www.gongkong.com



CABLE C500-CN222-EU

1. DB-25 MALE CONNECTOR WITH SOLDER CUPS
2. DB-25 FEMALE CONNECTOR WITH SOLDER CUPS
3. 3 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE
4. OMRON DB-25 BACKSHELL W/ 2.6MM JACK SCREWS, P/N XM2S-2511
5. OMRON DB-25 BACKSHELL W/ #4-40 JACK SCREWS, P/N XM2S-2513
6. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
7. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA. POSITION APPROXIMATELY AS SHOWN.

FROM #1 PIN	TO #2 PIN
TXD 2	3 RXD
RXD 3	2 TXD
*4 to 5	nc
nc	*6 to 20
nc	*4 to 5
COM 7	7 COM
1 to SHIELD	nc

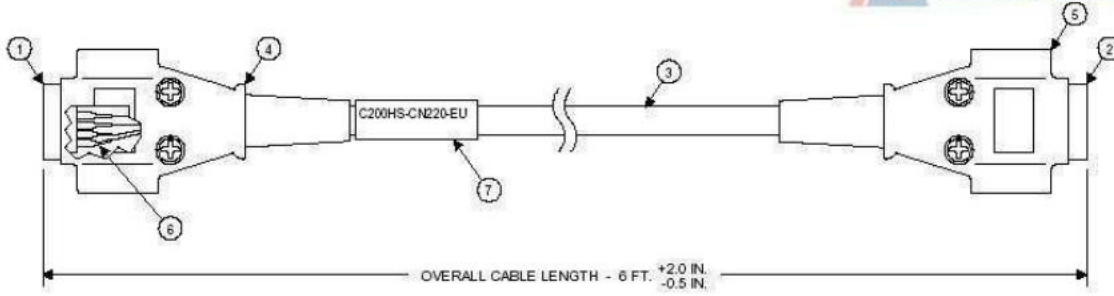
* PIN TO PIN JUMPERS

APPROVAL	DATE	MATERIAL	C500 BASIC/ASCII/LINK TO IBM-XT COMPUTER CABLE	
DRWN	11-2-94	FINISH:	DRWG NO:	PFP0016A
CHCKD		TOLERANCE	UNITS: ENGLISH	FILE NAME: -
APRVD			SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND

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Omron Electronics, Inc.
Omron Manufacturing of America

SHEET: 1 OF 1



CABLE C200HS-CN220-EU

1. DE-9 MALE CONNECTOR WITH SOLDER CUPS
2. DE-9 FEMALE CONNECTOR WITH SOLDER CUPS
3. 3 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE
4. OMRON DE-9 BACKSHELL W/ 2.6MM JACK SCREWS, P/N XM2S-0911
5. OMRON DE-9 BACKSHELL W/ #4-40 JACK SCREWS, P/N XM2S-0913
6. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
7. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA. POSITION APPROXIMATELY AS SHOWN.

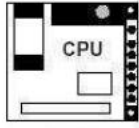
FROM #1 PIN	TO #2 PIN
TXD 2	2 RXD
RXD 3	3 TXD
*4 to 5	nc
nc	*4 to 6
nc	*7 to 8
SG 9	5 SG
1 to SHIELD	nc

* PIN TO PIN JUMPERS

-	-	-	-	APPROVAL	DATE	MATERIAL	HOST LINK PORT TO IBM-AT COMPUTER CABLE	
-	-	-	-	DRWN	OBA	10-26-94	FINISH	DRWG NO: PFP0010A
-	-	-	-	CHKD			UNITS: ENGLISH	FILE NAME: -
-	-	-	-	APRVD			SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND			TOLERANCE	SHEET: 1 OF 1

OMRON Omron Electronics, Inc.
Omron Manufacturing of America

CV500 - LK201 (Port 2)
CVM1 built-in Hostlink
C200HS built-in Hostlink
COM1 built-in Hostlink
IDSC built-in Hostlink

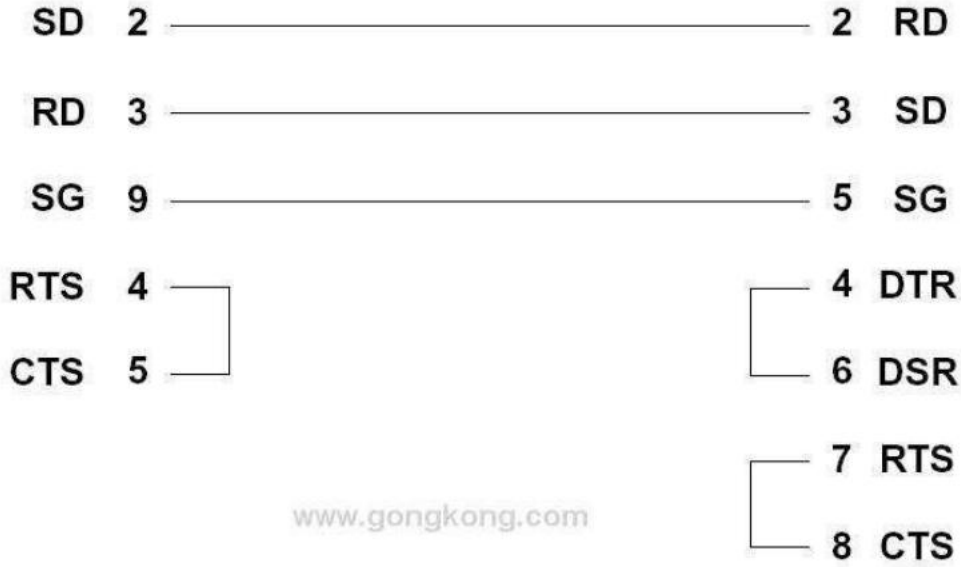


9-pin

Cable Part Number C200HS - CN220 - EU

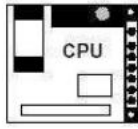


AT Computer (9-pin)



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CVM1 built-in Hostlink
C200HS built-in Hostlink
CQM1 built-in Hostlink

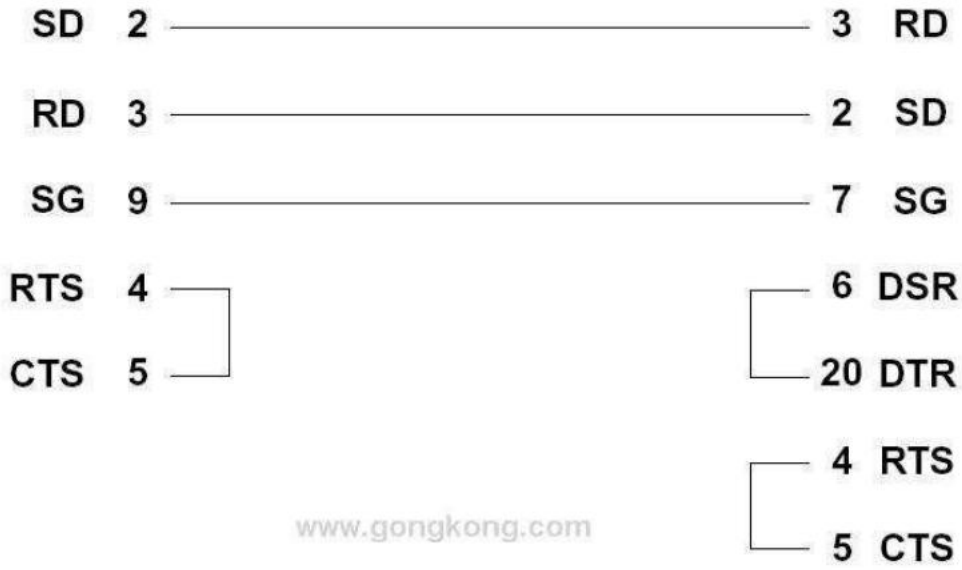


9-pin

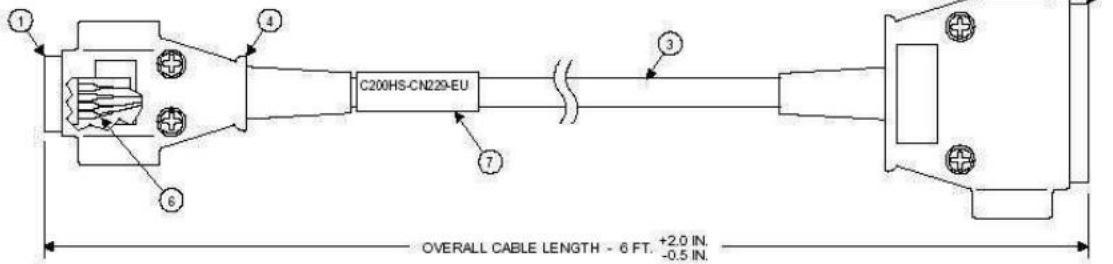
Cable Part Number
C200HS - CN229 - EU



XT Computer (25-pin)



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CABLE C200HS-CN229-EU

FROM #1 PIN	TO #2 PIN
TXD 2	3 RXD
RXD 3	2 TXD
*4 to 5	nc
nc	*6 to 20
nc	*4 to 5
SG 9	7 SG
1 to SHIELD	nc

* PIN TO PIN JUMPERS

-	-	-	-	-	APPROVAL	DATE	MATERIAL: -	HOST LINK PORT TO IBM-XT COMPUTER CABLE	
-	-	-	-	-	DRWN	OBA	10-26-94	FINISH: -	DRWG NO: PFP0011A
-	-	-	-	-	CHKD	-	-	UNITS: ENGLISH	FILE NAME: -
-	-	-	-	-	APRVD	-	-	SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND	-	-	-	SHEET: 1 OF 1	Omron Electronics, Inc. Omron Manufacturing of America

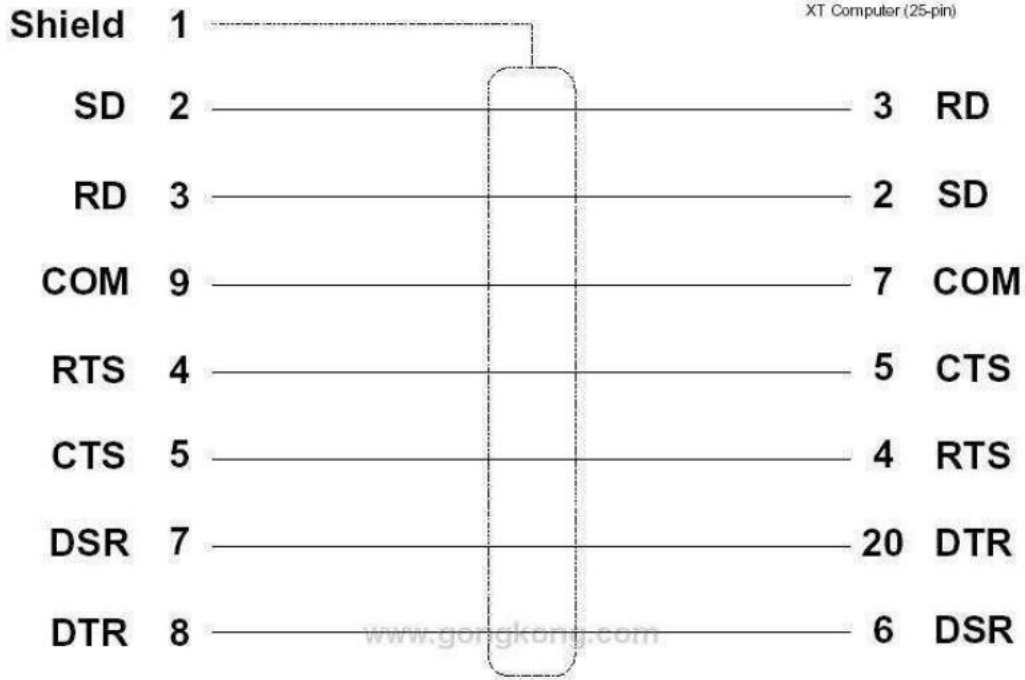
C200H-ASC02
C200H-BASIC/ASCII



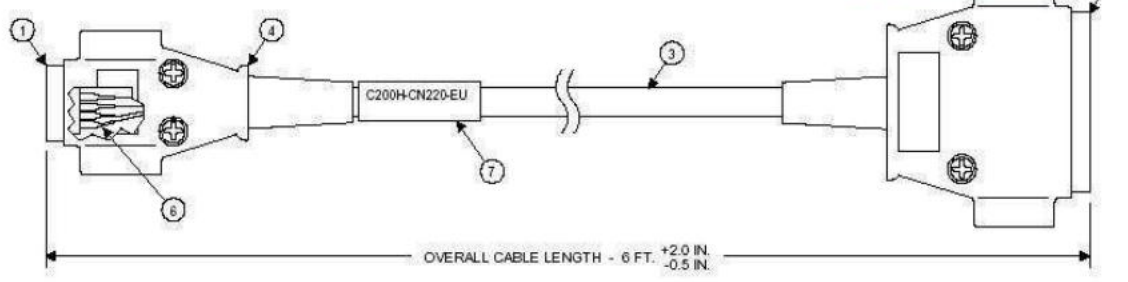
Cable Part Number C200H - CN220 - EU



XT Computer (25-pin)



www.gongkong.com



CABLE C200H-CN220-EU

1. DE-9 MALE CONNECTOR WITH SOLDER CUPS
2. DB-25 FEMALE CONNECTOR WITH SOLDER CUPS
3. 7 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE
4. OMRON DE-9 BACKSHELL W/ 2.6MM JACK SCREWS, P/N XM2S-0911
5. OMRON DB-25 BACKSHELL W/ #4-40 JACK SCREWS, P/N XM2S-2513
6. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
7. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA. POSITION APPROXIMATELY AS SHOWN.

	FROM #1 PIN	TO #2 PIN	
TXD	2	3	RXD
RXD	3	2	TXD
RTS	4	5	CTS
CTS	5	4	RTS
	6		nc
DSR	7	20	DTR
DTR	8	6	DSR
COM	9	7	COM
	1 to SHIELD		nc

-	-	-	-	APPROVAL	DATE	MATERIAL	C200H BASIC/ASCII MODULE TO IBM-XT COMPUTER CABLE	
-	-	-	-	DRWN	10-18-94	FINISH	DRWG NO: PFP0006B	
-	-	-	-	CHCKD		TOLERANCE	UNITS: ENGLISH	FILE NAME: -
B	ADDED ITEMS #6 AND 7	-	10-18-94	APRVD		SCALE: NONE	SHEET: 1 OF 1	SIZE: A
A	ORIGINAL	-	7-14-94			Omron Electronics, Inc. Omron Manufacturing of America		
REV	DESCRIPTION	COS NO	DATE	SGND				

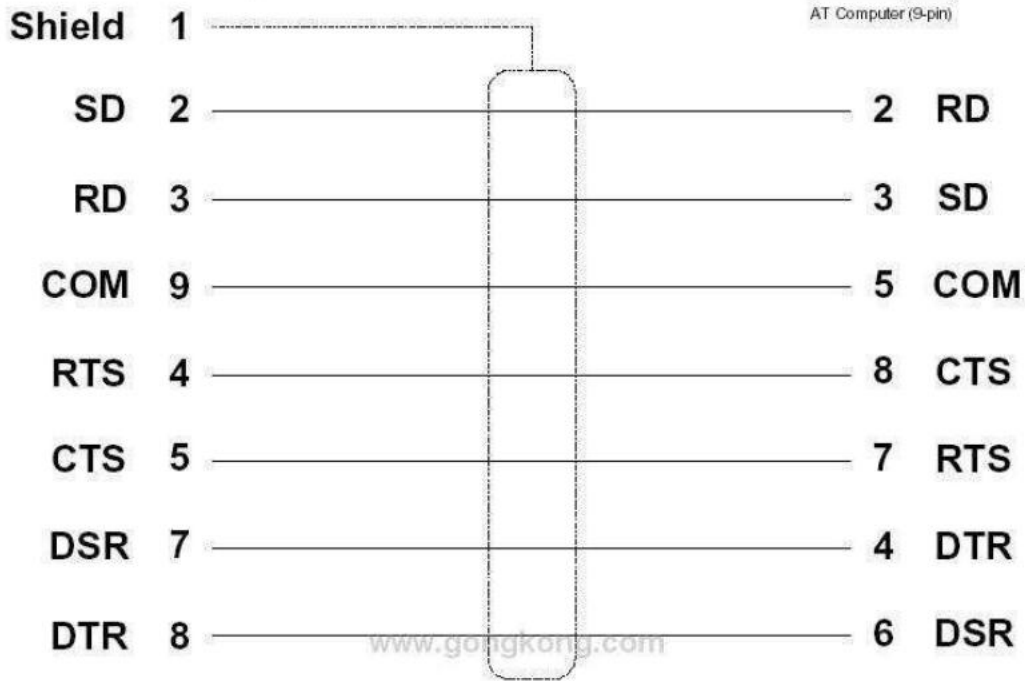
C200H-ASC02
C200H-BASIC/ASCII



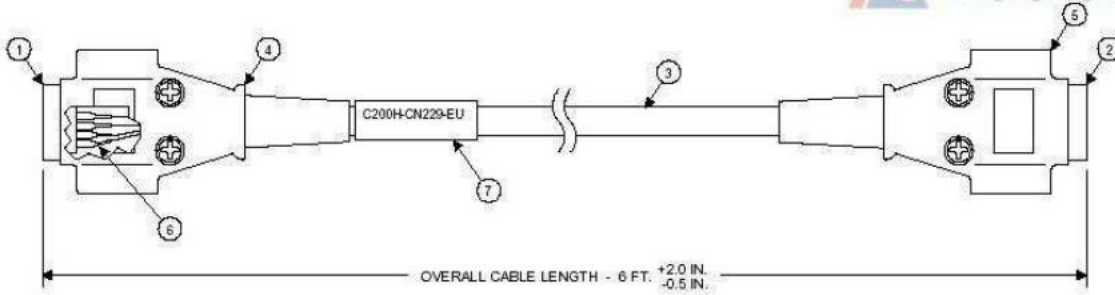
Cable Part Number C200H - CN229 - EU



AT Computer (9-pin)



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CABLE C200H-CN229-EU

1. DE-9 MALE CONNECTOR WITH SOLDER CUPS
2. DE-9 FEMALE CONNECTOR WITH SOLDER CUPS
3. 7 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE
4. OMRON DE-9 BACKSHELL W/ 2.6MM JACK SCREWS, P/N XM2S-0911
5. OMRON DE-9 BACKSHELL W/ #4-40 JACK SCREWS, P/N XM2S-0913
6. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
7. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA. POSITION APPROXIMATELY AS SHOWN.

	FROM #1 PIN	TO #2 PIN	
TXD	2	2	RXD
RXD	3	3	TXD
RTS	4	8	CTS
CTS	5	7	RTS
	6	nc	
DSR	7	4	DTR
DTR	8	6	DSR
COM	9	5	COM
	1 to SHIELD	nc	

-	-	-	-	APPROVAL	DATE	MATERIAL	C200H BASIC/ASCII MODULE TO IBM-AT COMPUTER CABLE	
-	-	-	-	DRWN	OBA	10-18-94	FINISH	DRWG NO: PFP0005B
B	ADDED ITEMS #6 AND 7	-	10-18-94	CHCKD	TOLERANCE		UNITS: ENGLISH	FILE NAME: -
A	ORIGINAL	-	7-14-94	APRVD			SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND			SHEET: 1 OF 1	Omron Electronics, Inc. Omron Manufacturing of America

NT11S, NT20S,
NT600S, NT30,
NT30C, NT620S/620C

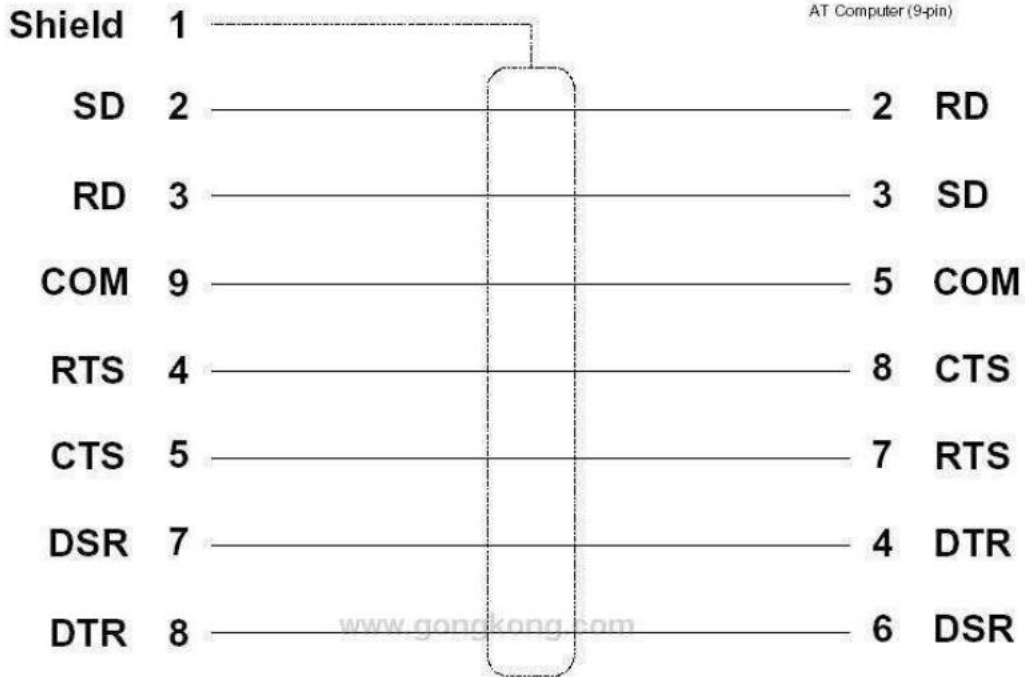


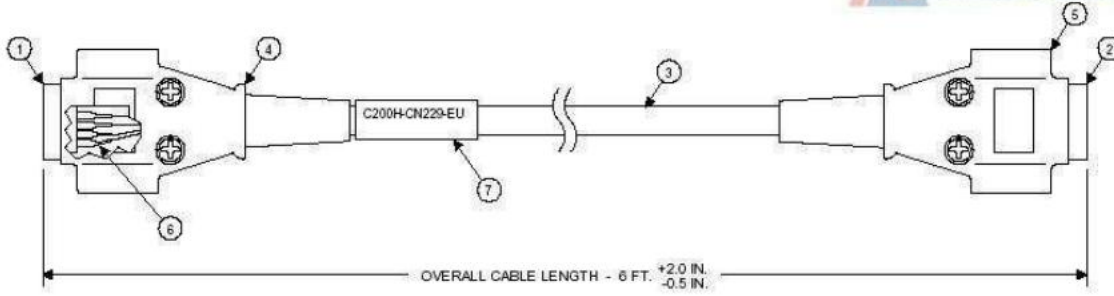
Cable Part Number C200H - CN229 - EU



AT Computer (9-pin)

9-pin





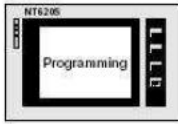
CABLE C200H-CN229-EU

1. DE-9 MALE CONNECTOR WITH SOLDER CUPS
2. DE-9 FEMALE CONNECTOR WITH SOLDER CUPS
3. 7 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE
4. OMRON DE-9 BACKSHELL W/ 2.6MM JACK SCREWS, P/N XM2S-0911
5. OMRON DE-9 BACKSHELL W/ #4-40 JACK SCREWS, P/N XM2S-0913
6. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
7. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA. POSITION APPROXIMATELY AS SHOWN.

FROM #1 PIN	TO #2 PIN
TXD 2	2 RXD
RXD 3	3 TXD
RTS 4	8 CTS
CTS 5	7 RTS
6	nc
DSR 7	4 DTR
DTR 8	6 DSR
COM 9	5 COM
1 to SHIELD	nc

-	-	-	-	APPROVAL	DATE	MATERIAL	C200H BASIC/ASCII MODULE TO IBM-AT COMPUTER CABLE	
-	-	-	-	DRWN	10-18-94	FINISH	DRWG NO:	PFP0005B
-	-	-	-	OBDA		TOLERANCE	UNITS: ENGLISH	FILE NAME: -
B	ADDED ITEMS #6 AND 7	10-18-94		CHCKD			SCALE: NONE	SIZE: A
A	ORIGINAL	7-14-94		APRVD			SHEET: 1 OF 1	
REV	DESCRIPTION	COS NO.	DATE	SGND			Omron Electronics, Inc. Omron Manufacturing of America	

NT11S, NT20S,
NT600S, NT30,
NT30C, NT620S/620C

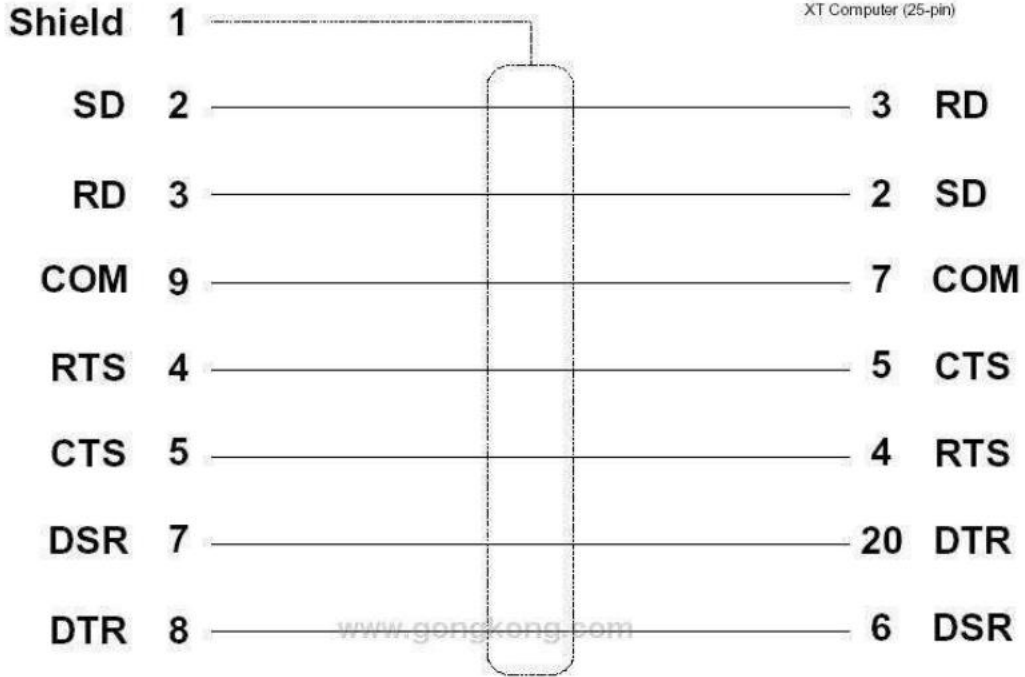


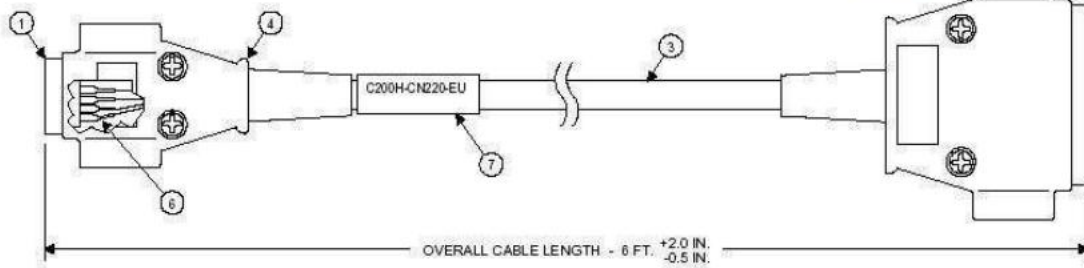
Cable Part Number C200H - CN220 - EU



XT Computer (25-pin)

9-pin





CABLE C200H-CN220-EU

1. DE-9 MALE CONNECTOR WITH SOLDER CUPS
2. DB-25 FEMALE CONNECTOR WITH SOLDER CUPS
3. 7 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE
4. OMRON DE-8 BACKSHELL W/ 2.6MM JACK SCREWS, P/N XM2S-0911
5. OMRON DB-25 BACKSHELL W/ #4-40 JACK SCREWS, P/N XM2S-2513
6. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
7. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA. POSITION APPROXIMATELY AS SHOWN.

FROM #1 PIN	TO #2 PIN
TXD 2	3 RXD
RXD 3	2 TXD
RTS 4	5 CTS
CTS 5	4 RTS
6	nc
DSR 7	20 DTR
DTR 8	6 DSR
COM 9	7 COM
1 to SHIELD	nc

-	-	-	-	-	APPROVAL	DATE	MATERIAL: -	C200H BASIC/ASCII MODULE TO IBM-XT COMPUTER CABLE	
-	-	-	-	-	DRWN	OBA	10-18-94	FINISH: -	DRWG NO: PFP0006B
B	ADDED ITEMS #6 AND 7	-	10-18-94	-	CHCKD			UNITS: ENGLISH	FILE NAME: -
A	ORIGINAL	-	7-14-94	-	APRVD			SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND				SHEET: 1 OF 1	Omron Electronics, Inc. Omron Manufacturing of America

3/10 | 14/14

| 2010-07-01 12:20:35 45 页

1 图 1 2 图 2 图 3

欧姆龙全套编程电缆 2:

NT11S, NT20S,
NT600S, NT30,
NT30C, NT820/620S



9-pin male

Cable Part Number
C200H - CN510 - EU

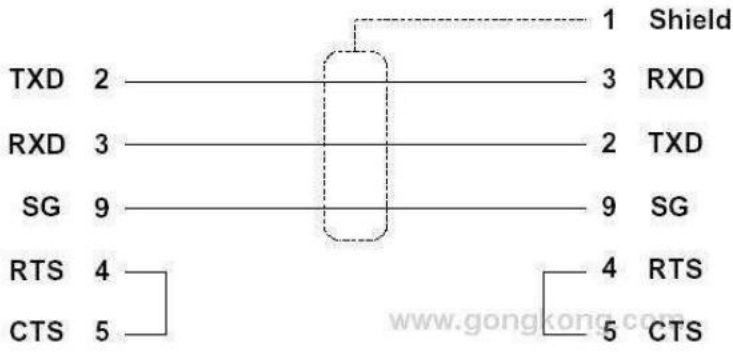
CV500 - LK201 (Port 2)
CVM1 built-in port
C200HS built-in port
CQM1 built-in port
IDSC built-in port

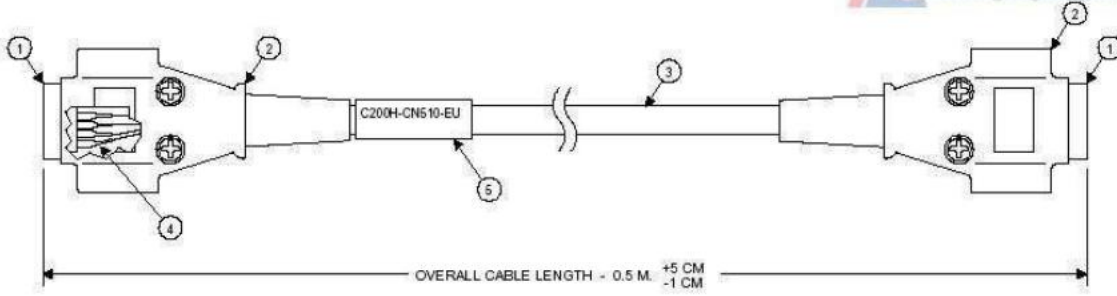


9-pin male



CV500-LK201 (Port 2)
CVM1 built-in port
C200HS built-in port
CQM1 built-in port
IDSC built-in port





CABLE C200H-CN510-EU

1. DE-9 MALE CONNECTOR WITH SOLDER CUPS, QTY 2
2. OMRON DE-9 BACKSHELL W/ 2.6MM JACK SCREWS, QTY 2
OMRON CAT. NO. XM2S-0911, PIM NO. 4584252-0
3. 3 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE*
4. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
5. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA TYPE. POSITION APPROXIMATELY AS SHOWN.

* RECOMMENDED: CAROL #C0743, 6 CONDUCTOR CABLE

	FROM PIN	TO PIN
TXD	2	3 RXD
RXD	3	2 TXD
	nc	4 to 5*
	4 to 5*	nc
+5	6	nc
COM	9	9 COM
	nc	1 to SHIELD

* JUMPER PINS 4 TO 5 IN EACH CONNECTOR

-	-	-	-	-	APPROVAL	DATE	MATERIAL: -	S-SERIES PT to C-CV SERIES CPU PORT	
-	-	-	-	-	DRWN	OBA	11-28-95	FINISH: -	DRWG NO: PFP0017-A
-	-	-	-	-	CHKD			UNITS: ENGLISH	FILE NAME: -
-	-	-	-	-	APRVD			SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND				TOLERANCE: -	SHEET: 1 OF 1

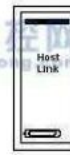
NT11S, NT20S, NT30,
NT30C, NT600S,
NT620C/620S



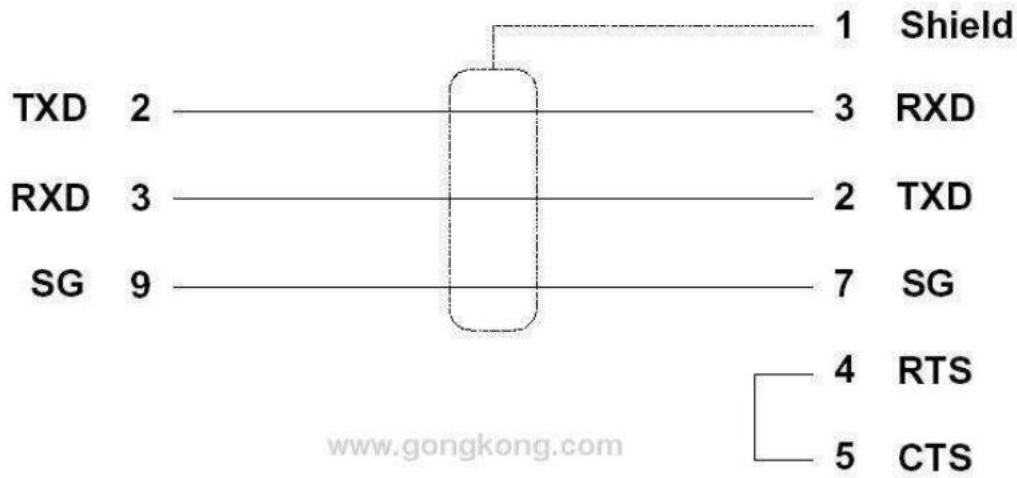
9-pin male

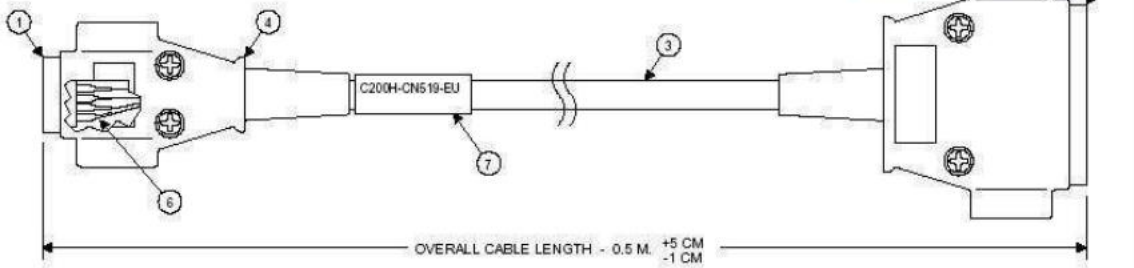
Cable Part Number
C200H-519-EU (50 cm)
C200H-329-EU (3M)
C200H-529-EU (5M)

C500 - LK203
C200H - LK201
3G2A6 - LK201
3G2C7 - LK201
CV500 - LK201 (Port 1)



25-pin





CABLE C200H-CN519-EU

1. DE-9 MALE CONNECTOR WITH SOLDER CUPS
2. DB-25 MALE CONNECTOR WITH SOLDER CUPS
3. 3 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE
4. OMRON DE-9 BACKSHELL W/ 2.6MM JACK SCREWS, CAT. XM2S-0911, PIM 4584252-0
5. OMRON DB-25 BACKSHELL W/ 2.6MM JACK SCREWS, CAT. XM2S-2511, PIM 4584254-0
6. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
7. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA TYPE, POSITION APPROXIMATELY AS SHOWN.

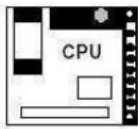
* RECOMMENDED: CAROL #C0743, 6 CONDUCTOR CABLE

FROM #1 PIN	TO #2 PIN
TXD 2	3 RXD
RXD 3	2 TXD
nc	4 to 5*
--	--
+5 6	nc
COM 9	7 COM
nc	1 to SHIELD

* JUMPER PINS 4 TO 5

-	-	-	-	APPROVAL	DATE	MATERIAL	S-SERIES PT to C-CV SERIES HOST LINK MODULE	
-	-	-	-	DRWN	OBA	11-28-95	FINISH	DRWG NO: PFP0020-A
-	-	-	-	CHKD			UNITS: ENGLISH	FILE NAME: -
-	-	-	-	APRVD			SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND			SHEET: 1 OF 1	Omron Electronics, Inc. Omron Manufacturing of America

CPM1 / CQM1 / C200H /
IDSC



9-pin male

Cable Part Number

C200H - CN320 - EU

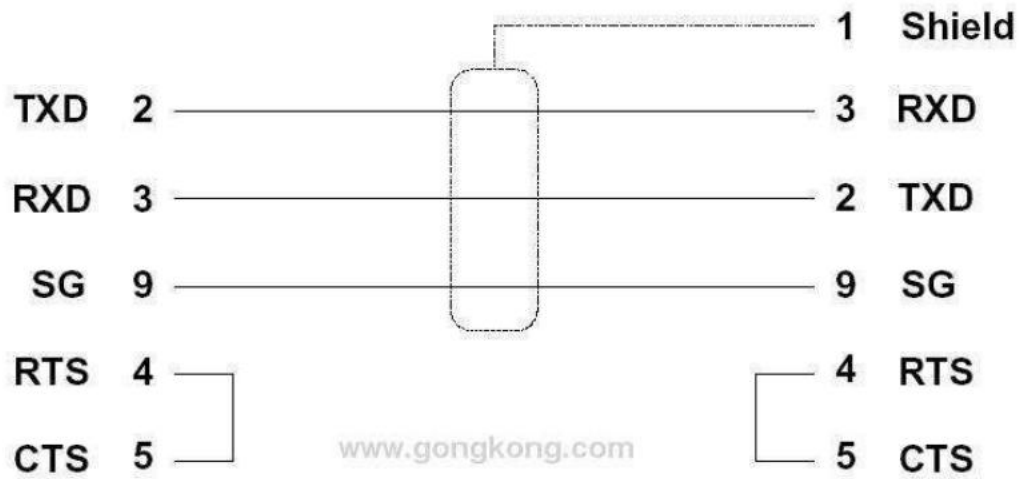
C200H - CN520 - EU

(one-to-one link)

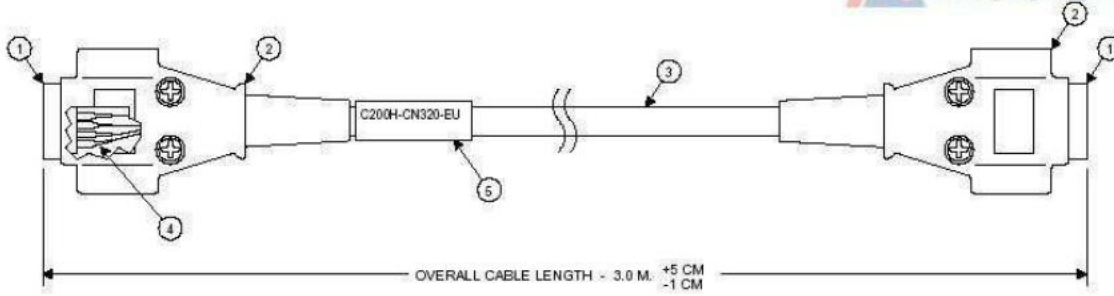
CPM1 / CQM1 / C200H /
IDSC



9-pin male



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CABLE C200H-CN320-EU

1. DE-9 MALE CONNECTOR WITH SOLDER CUPS, QTY 2
2. OMRON DE-9 BACKSHELL W/ 2.6MM JACK SCREWS, QTY 2
OMRON CAT. NO. XM2S-0911, PIM NO. 4584252-0
3. 3 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE*
4. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
5. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA TYPE. POSITION APPROXIMATELY AS SHOWN.

* RECOMMENDED: CAROL #C0743, 6 CONDUCTOR CABLE

FROM PIN	TO PIN
TXD 2	3 RXD
RXD 3	2 TXD
nc	4 to 5*
4 to 5*	nc
+5 6	nc
COM 9	9 COM
nc	1 to SHIELD

* JUMPER PINS 4 TO 5 IN EACH CONNECTOR

-	-	-	-	APPROVAL	DATE	MATERIAL	S-SERIES PT to C-CV SERIES CPU PORT	
-	-	-	-	DRWN	OBA 11-28-95	FINISH	DRWG NO:	PFP0018-A
-	-	-	-	CHKD		TOLERANCE	UNITS: ENGLISH	FILE NAME: -
-	-	-	-	APRVD			SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND			SHEET: 1 OF 1	Omron Electronics, Inc. Omron Manufacturing of America

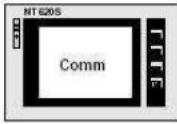
3/10 | 14/14

| 2010-07-01 12:22:02 46 页

1 图 1 附件 下载

欧姆龙全套编程电缆 3:

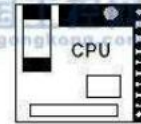
NT11S, NT20S, NT30,
NT30C, NT600S,
NT620C/620S



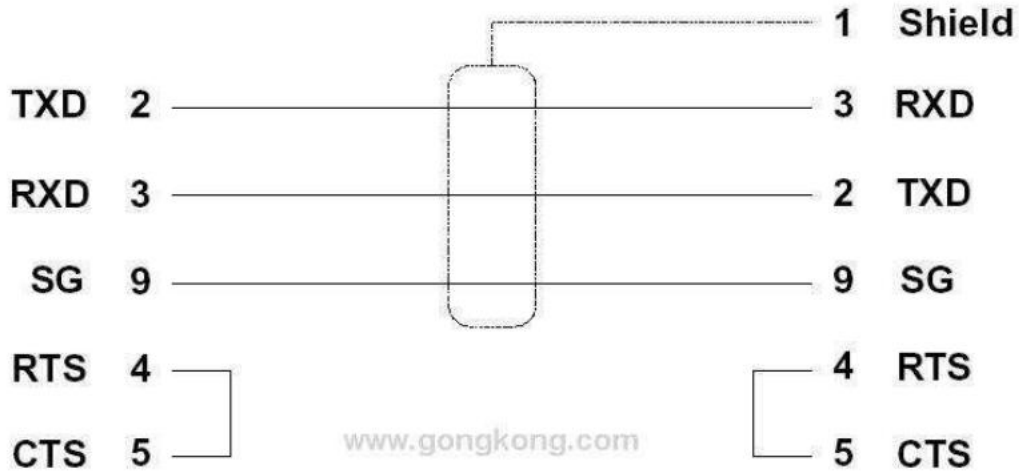
9-pin male

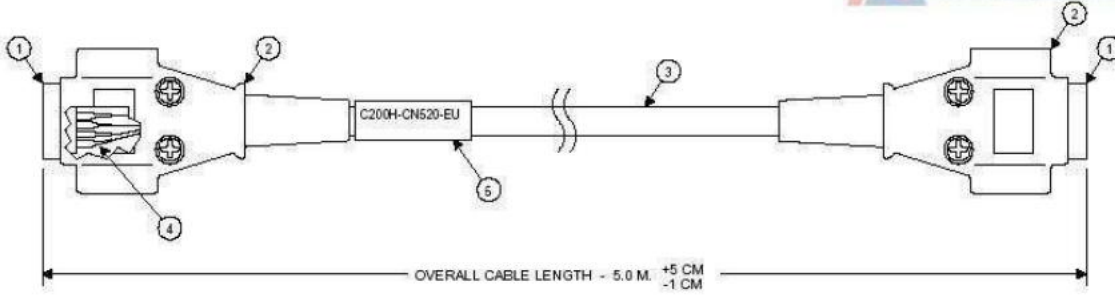
Cable Part Number
C200H - CN320 - EU
C200H - CN520 - EU

CV500 - LK201 (Port 2)
CVM1 built-in port
C200HS built-in port
CQM1 built-in port
CPM1 - CIF01
IDSC built-in port



9-pin male





CABLE C200H-CN520-EU

1. DE-9 MALE CONNECTOR WITH SOLDER CUPS, QTY 2
2. OMRON DE-9 BACKSHELL W/ 2.6MM JACK SCREWS, QTY 2
OMRON CAT. NO. XM2S-0911, PIM NO. 4584252-0
3. 3 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE*
4. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
5. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT. HELVETICA TYPE. POSITION APPROXIMATELY AS SHOWN.

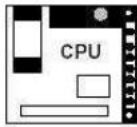
* RECOMMENDED: CAROL #C0743, 6 CONDUCTOR CABLE

FROM PIN	TO PIN
TXD 2	3 RXD
RXD 3	2 TXD
nc	4 to 5*
4 to 5*	nc
+5 6	nc
COM 9	9 COM
nc	1 to SHIELD

* JUMPER PINS 4 TO 5 IN EACH CONNECTOR

-	-	-	-	APPROVAL	DATE	MATERIAL	S-SERIES PT to C-CV SERIES CPU PORT	
-	-	-	-	DRWN	OBA	11-28-95	FINISH	DRWG NO: PFP0019-A
-	-	-	-	CHKD			UNITS: ENGLISH	FILE NAME: -
-	-	-	-	APRVD			SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND			TOLERANCE	SHEET: 1 OF 1

CV500 - LK201 (Port 2)
 CVM1 built-in port
 C200HS built-in port
 CQM1 built-in port
 CPM1- CIF01
 IDSC built-in port



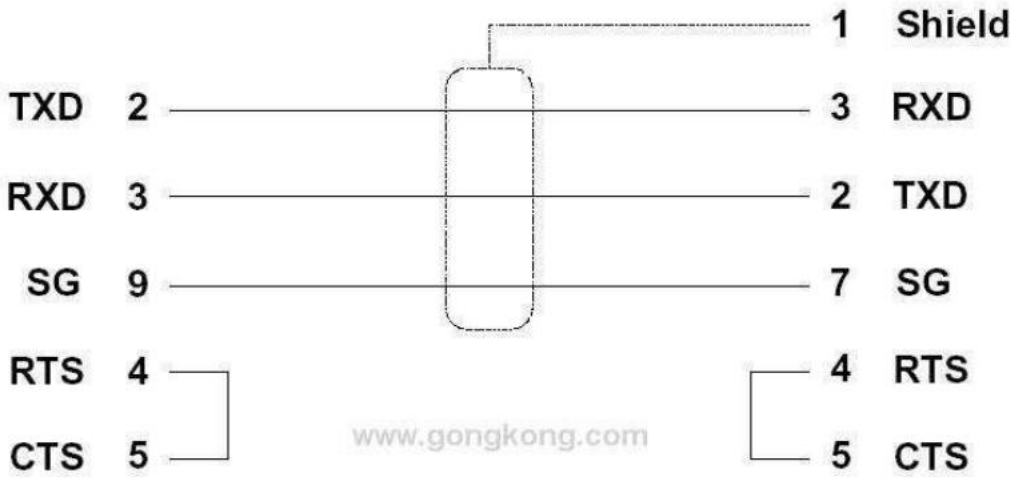
9-pin male

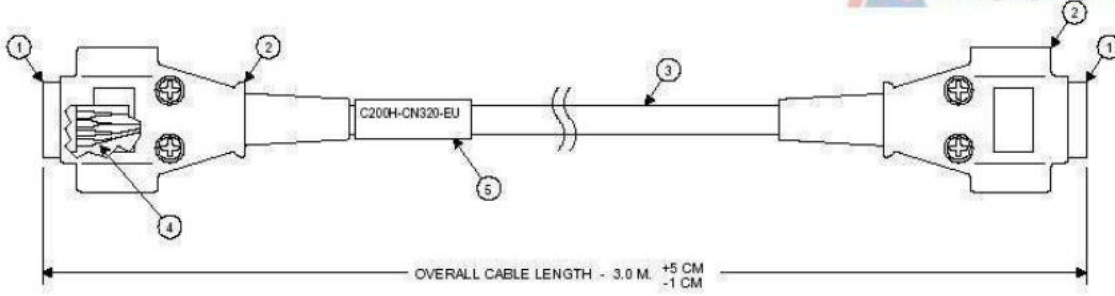
Cable Part Number
 C200H - CN320 - EU
 C200H - CN520 - EU

PT (NT600M - LK201)



9-pin male





CABLE C200H-CN320-EU

1. DE-9 MALE CONNECTOR WITH SOLDER CUPS, QTY 2
2. OMRON DE-9 BACKSHELL W/ 2.6MM JACK SCREWS, QTY 2
OMRON CAT. NO. XM2S-0911, PIM NO. 4584252-0
3. 3 CONDUCTOR, 24 AWG STRANDED, FOIL SHIELD, PVC JACKETED CABLE*
4. HEAT SHRINK TUBING TO COVER SOLDERED CONNECTION, BOTH ENDS
5. HEAT SHRINK TUBING, WHITE WITH PRINTED PART NUMBER AS SHOWN IN BLACK, 8 PT., HELVETICA TYPE. POSITION APPROXIMATELY AS SHOWN.

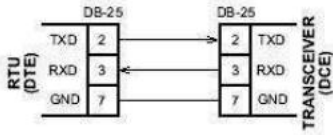
* RECOMMENDED: CAROL #C0743, 6 CONDUCTOR CABLE

FROM PIN	TO PIN
TXD 2	3 RXD
RXD 3	2 TXD
nc	4 to 5*
4 to 5*	nc
+5 6	nc
COM 9	9 COM
nc	1 to SHIELD

* JUMPER PINS 4 TO 5 IN EACH CONNECTOR

-	-	-	-	APPROVAL	DATE	MATERIAL	S-SERIES PT to C-CV SERIES CPU PORT	
-	-	-	-	DRWN	OBA	11-28-95	FINISH	DRWG NO: PFP0018-A
-	-	-	-	CHKD			UNITS: ENGLISH	FILE NAME: -
-	-	-	-	APRVD			SCALE: NONE	SIZE: A
REV	DESCRIPTION	COS NO.	DATE	SGND			SHEET: 1 OF 1	Omron Electronics, Inc. Omron Manufacturing of America

DB-25 to DB-25 Example



DB-9 to DB-25 Example



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MDS x710A/C 数传电台编程线

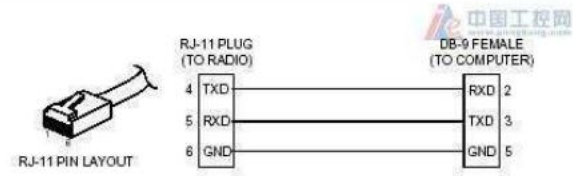
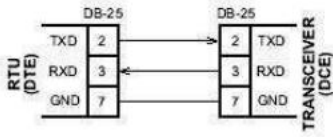


Figure 15. RJ-11 to DB-9 Adapter Cable

MDS 3624A-OEM 数传电台通讯线

DB-25 to DB-25 Example



DB-9 to DB-25 Example



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