E-series/E1000-series Cable Guide

Overview

NOTE!

o All RS422 cables can be used for E-series and E1000-series!

o To use the E-series RS232 cables for E1000-series, the adapter **CAB12** has to be used!

o Cables for E1000 start at CAB30!

Cab01 (S5).pdf
Cab02 (Allen Bradley Micrologix RS232C).pdf
Cab03 (OMRON CS1).pdf
Cab04 (GE Fanuc RS422).pdf
Cab05 (MAC E Programming cable).pdf
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Cab08 485 Adapter.pdf
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Cab31 (E1000 AB Micrologix).pdf
Cab32 (E1000 OMRON C_CS1).pdf
Cab33 (E1000 Matsushita FP0_M_2_2SH).pdf
Cab34 (E1000 MELSEC SystemQ RS232).pdf
Cab36 (E1000 MPI Direct).pdf

CAB1 (Stock No 124261)

E-Series RS 232 to Siemens S5 PG using Siemens converter 6ES5 734-1BD20

25 pin D-sub (male) to 9 pin D-sub (female). The cable length is 0.5 m. The Siemens converter 6ES5 734-1BD20 (0.3m) must be used with this cable. The converter is connected to the programming port (PG) of the Siemens SIMATIC S5. The 25 pin D-sub connector of the CAB 1 cable is connected to the Siemens converter. The 9 pin D-sub connector of the CAB 1 cable is connected to the RS232C port of the operator terminal.

(Drawing 03305)
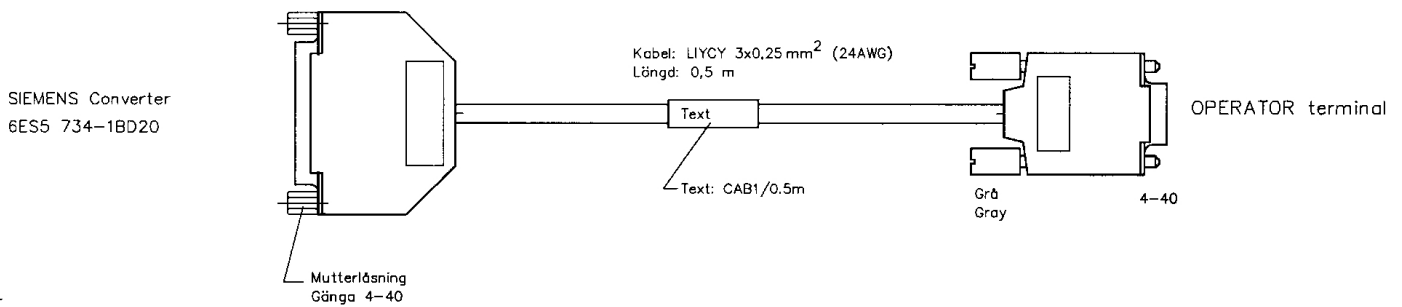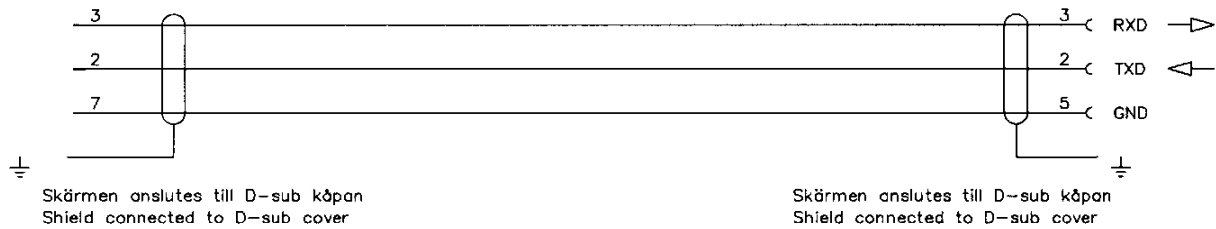
CAB2 (Stock No 124262)

E-Series RS232 to Allen Bradley Micrologix

8 pin MiniDin (male) to 9 pin D-sub connector (female). The cable length is 2 m. The MiniDin connector is connected to the Allen Bradley Micrologix programming port and the D-sub connector is connected to the RS232C port of the operator terminal.

(Drawing 03301)
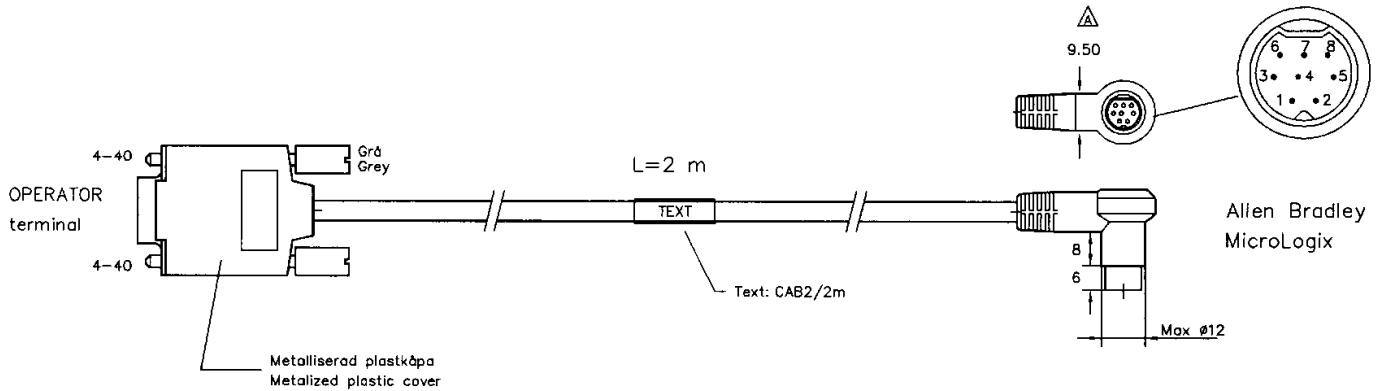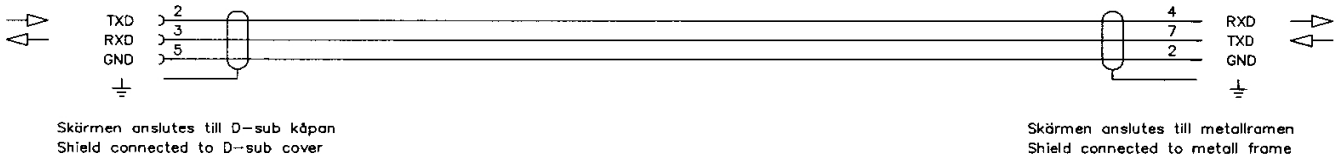
CAB3 (Stock No 124263)

E-Series RS232 to Omron C/CS1

9 pin D-sub (male) to 9 pin D-sub (female). The cable length is 3 m. The 9 pin D-sub connector (male) is connected to the OMRON C/CS1 and the 9 pin D-sub connector (female) is connected to the RS232C port of the operator terminal.

(Drawing 03304)
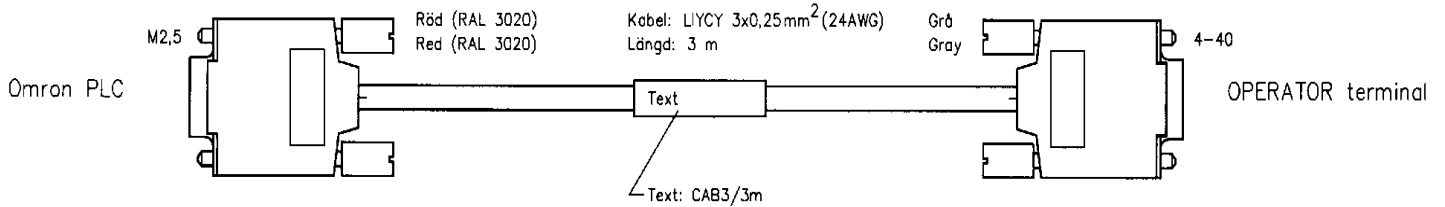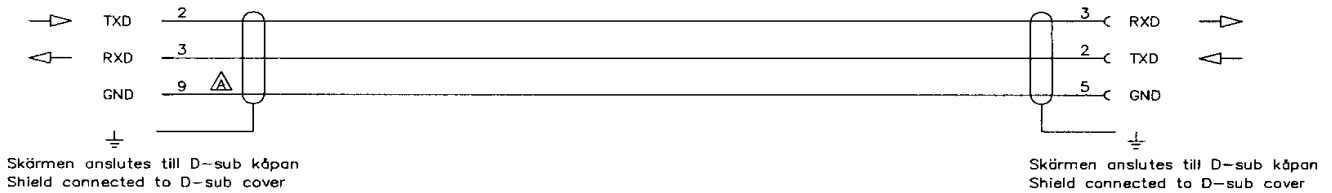
CAB4 (Stock No 124264)

E-Series RS422 to GE Fanuc

25 pin D-sub (male) to 15 pin D-sub (male). The cable length is 3 m. The 25 pin D-sub connector is connected to the RS422 port of the operator terminal and the 15 pin D-sub connector is connected to the GE FANUC Series 90.

(Drawing 03302)

CAB5 (Stock No 124265) General Purpose Cable

9 pin D-sub (female) to 9 pin D-sub (female). The cable length is 2.5 m. The CAB5 cable can be used in eleven different ways:

(1) In this case the CAB5 cable is used as a **programming cable** between a computer (PC) and an operator terminal. The black D-sub connector of the CAB5 cable is connected to the RS232C port of the operator terminal and the grey connector of the CAB5 cable is connected to one of the communication ports (COM 1/COM 2) of the computer.

(2) In this case the CAB5 is connected between an operator terminal and an **FX1N-232BD or FX2N-232BD**. The black D-sub connector of the CAB5 cable is connected to the RS232C port of the operator terminal and the grey connector of the CAB5 cable is connected to FX1N-232BD or FX2N-232BD.

(3) In this case the CAB5 cable is connected between the **MPI port of a SIMATIC S7-300/400** and an operator terminal. The adapter cable CAB11 MPI must be used with the CAB5 (Note: CAB 11 MPI cable length is 1.2 m). The CAB11 D-sub cable is connected to the MPI port of the SIMATIC S7, the other D-sub connector of the adapter is connected to the grey connector of the CAB5. The black connector of the CAB5 is then connected to the RS232C port of the operator terminal. **Note:** Not all operator terminals support the MPI protocol. Please refer to the driver list in the programming software for further information.

(4) In this case the CAB5 cable is connected between Siemens **SIMATIC S7/-300/400 PLCs** and the RS232C port of the operator terminal. SIMATIC S7/-300/400 must be supplemented with the **communication card CP341**. The black D-sub connector of the CAB5 cable is connected to the RS232C port of the operator terminal and the grey connector of the CAB5 cable is connected to the RS232C port of the communication card CP341.

(5) In this case the CAB5 cable is connected between Siemens **SIMATIC S5** (all models) and the RS232C port of the operator terminal. SIMATIC S5 must have the communication card **CP525** installed. The black D-sub connector of the CAB5 cable is connected to the RS232C port of the operator terminal and the grey connector of the CAB5 cable is connected to the RS232C port of the CP525 communication card.

(6) In this case the CAB5 cable is connected between the **Allen Bradley ControlLogix** and the RS232C port of the operator terminal. The black D-sub CP525 of the CAB5 cable is connected to the RS232C port of the operator terminal and the grey CP525 of the CAB5 cable is connected to the Allen Bradley ControlLogix.

(7) In this case the CAB5 cable is connected between the **Allen Bradley SLC 500, SLC 5/01, SLC 5/02, SLC 5/03, SLC 5/04 or SLC 5/05 PLC**s and the RS232C port of the operator terminal. When connecting the systems SLC 500, SLC 5/01 and SLC 5/02, the cable 1747-C13 and the module 1747-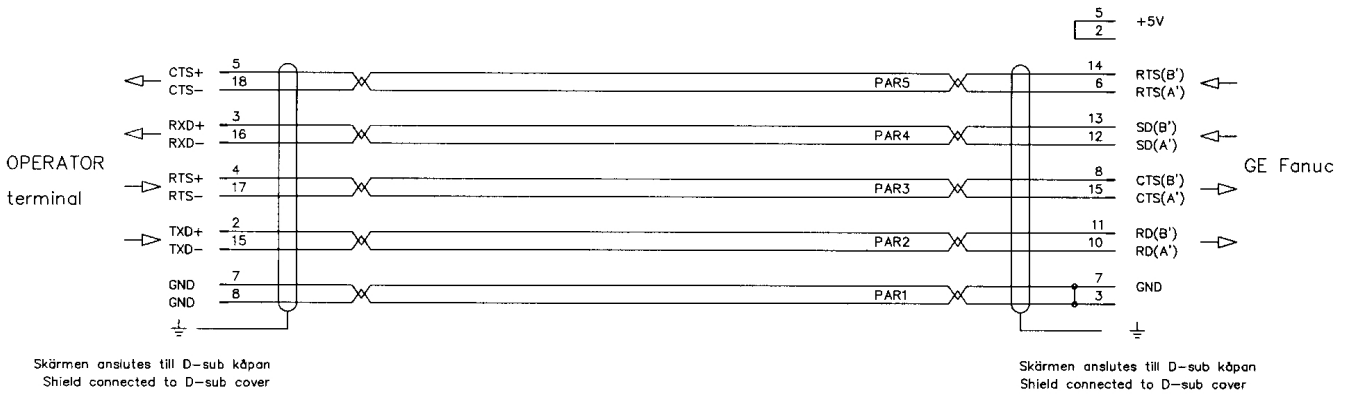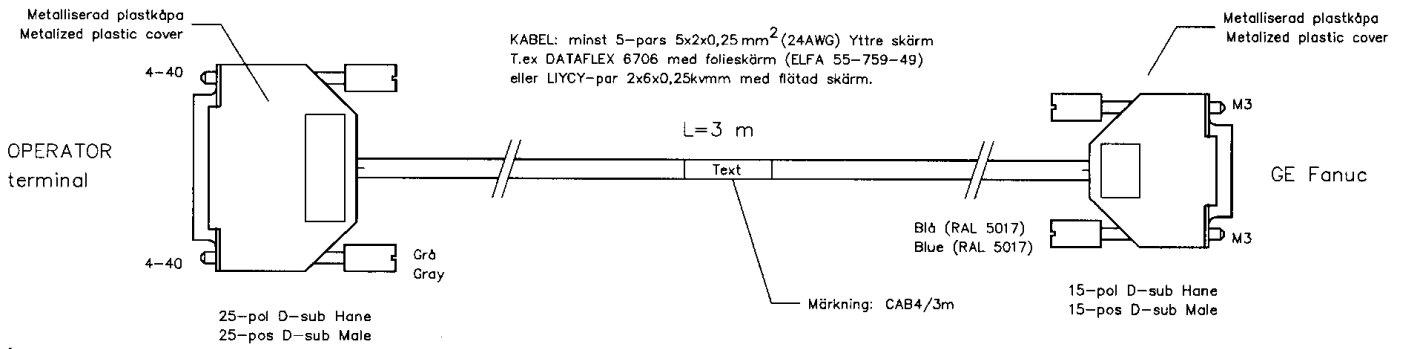KE from Allen Bradley must be used in conjunction with the CAB5 cable. The black D-sub connector of the CAB5 cable is connected to the RS232C port of the operator terminal and the grey connector of the CAB5 cable is connected to the 1747-KE module. The cable 1747-C13 is then connected between the 1747-KE module and the DH485 port of the Allen Bradley PLC system. The PLC systems SLC 5/03, SLC 5/04 and SLC 5/05 can be directly connected with the CAB5 cable by using the RS232C port of the PLC-system, it is recommendation however to use the Allen Bradley 1747-KE module due to it's galvanic isolation on the port.

(8) In this case the CAB5 cable is connected between the **B&R 2000 Series (Mininet)** and the E-terminals. The black D-sub connector of the CAB5 cable is connected to the RS232C port of the operator terminal and the grey connector of the CAB5 cable is connected to the PLC-system.

(9) In this case the CAB5 cable is connected between a **PC running Steeplechase VLC** and an E-Series. The black D-sub connector of the CAB5 cable is connected to the RS232C port of the operator terminal and the grey connector of the CAB5 cable is connected to the Steeplechase VLC host computer's RS232 port.

(10) In this case the CAB5 cable is connected between a **VT100** and the terminals. The black D-sub connector of the CAB5 cable is connected to the RS232C port of the operator terminal and the grey connector of the CAB5 cable is connected to the RS232 port of a VT100.

(11) In this case the CAB5 cable is connected between the RS232 port of the E-terminal and the RS232 port of the **Mitsubishi A1SJ71(Q,U)C24(-R2) and QJ71C24-R2 module**.

(Drawing 03300)

OPERATOR terminal

PC

BLACK

4-40

4-40

KABEL: LIYCY 3x0,25mm^2 (24AWG)
LENGTH: 2,5m or 3m

Text

GRAY   GRAY

4-40

4-40

Text: OPERATOR
TERMINAL

Text: CAB5/2,5m
or
CAB5/3m

Text: PC
PC
PC
PC

RS-232

9-pol D-sub Hona
9-pin D-sub Female

RS-232

9-pol D-sub Hona
9-pin D-sub Female

TXD 2
RXD 3
GND 5

Skärmen anslutes till D-sub kåpan
Shield connected to D-sub cover

2 RXD
3 TXD
5 GND
7 RTS
8 CTS
6 DSR
1 DCD
4 DTR

Skärmen anslutes till D-sub kåpan
Shield connected to D-sub cover
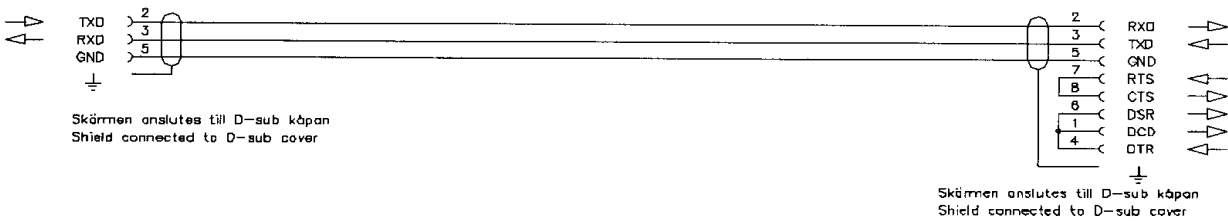
CAB6 (Stock No 124266)

RS422 to RS232 converter

25 pin D-sub (male) to 9 pin D-sub (female). The cable length is 3 m. The CAB6 can be used in six different ways:

1) In this case the CAB6 cable is used as **a programming cable** between a Computer (PC) and the operator terminals. The 25 pin D-sub connector is connected to the RS422 port of the operator terminal and the 9-pin D-sub connector is connected to one of the RS232 communication ports (COM 1/COM 2) of the computer.

2) In this case the CAB6 cable is connected between an **Allen Bradley ControlLogix** and the RS422 port of the operator terminal. The 25 pin D-sub connector is connected to the RS422 port of the operator terminal and the 9 pin D-sub connector is connected to the Allen Bradley PLC programming port.

3) In this case the CAB6 cable is connected between the **MPI port of a SIMATIC S7-300/400** and an operator terminal. In this case the adapter cable CAB11 MPI must be used with the CAB6 cable (Note: The CAB 11 MPI cable length is 1.2 m). The CAB11 D-sub connector cable is connected to the MPI port of the SIMATIC S7. The other D-sub connector of the adapter is connected to the 25 pin D-sub connector of the CAB6 cable. The 9 pin D-sub connector of the CAB6 cable is then connected to the RS422 port of the operator terminal.

4) In this case the CAB6 cable is connected between the **B&R 2000 series (Mininet)** and the RS422 port of the operator terminal. The 25 pin D-sub connector is connected to the RS422 port of the operator terminal and the 9 pin D-sub connector is connected to the PLC-system.

5) In this case the CAB6 cable is connected between a **PC running Steeplechase VLC** and the RS422 port of the operator terminal. The 25 pin D-sub connector is connected to the RS422 port of the operator terminal and the 9 pin D-sub connector is connected to the Steeplechase VLC host computer's RS232 port.

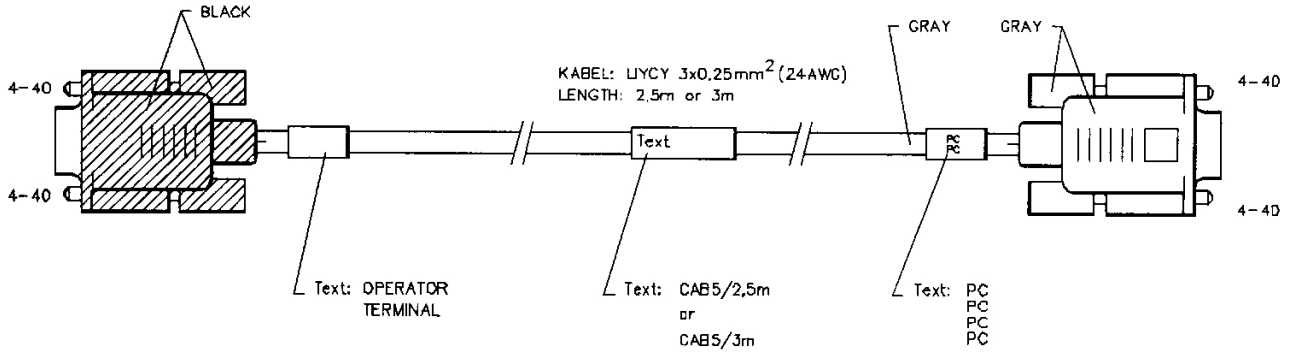6) In this case the CAB6 cable is connected between a **VT100** and the RS422 port of the operator terminal. The 25 pin D-sub connector is connected to the RS422 port of the operator terminal and the 9 pin D-sub connector is connected to the VT100's RS232 port.

(Drawing 03307)
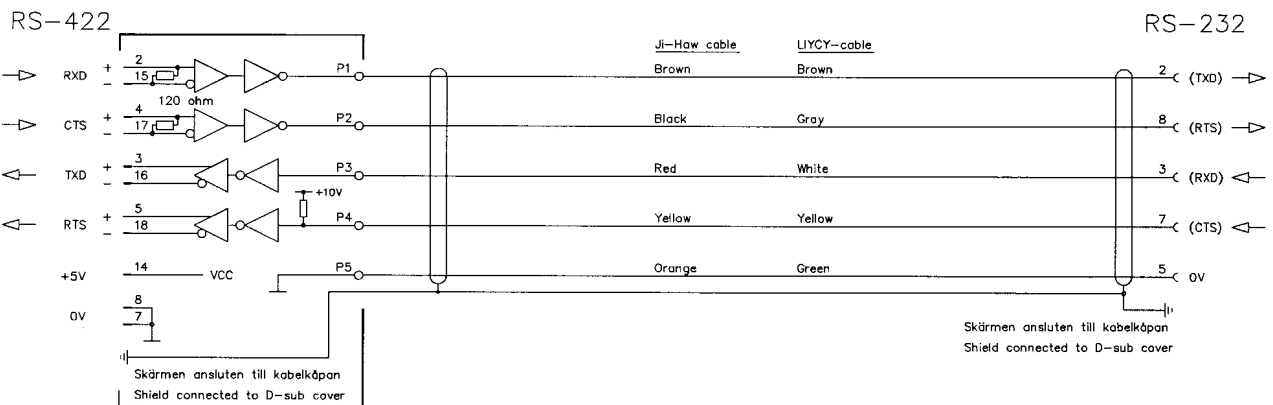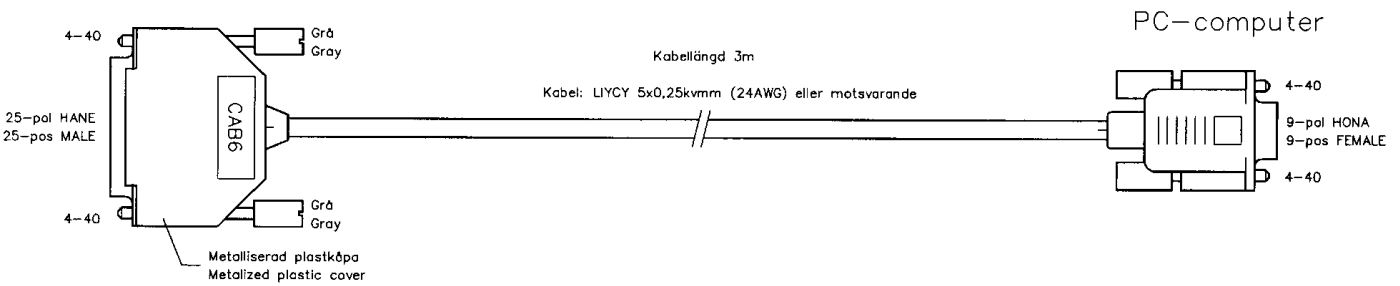
CAB7 (Stock No 124267)

E-Series RS422 to SIMATIC S5 Programming port

15 pin D-sub (male) to 25 pin D-sub (male). The cable length is 3 m. The 15 pin D-sub connector is connected to the programming port (PG) of the Siemens SIMATIC S5 and the 25 pin D-sub connector is connected to the RS422 port of the operator terminal.

(Drawing 03311)

Siemens PLC
20 mA current loop

Operator terminal
RS-422

15-pol D-sub Hane
15-pos D-sub Male

Kabellängd: 3m
Kabel: LIYCY 3x0,25 (24AWG) eller motsvarande Grå mantel

Grå / Gray   4-40

25-pol D-sub Hane
25-pos D-sub Male

Grå / Gray   4-40

Metalliserad plastkåpa
Metallized plastic cover

Metalliserad plastkåpa
Metallized plastic cover

RS-422

Current loop

TTY

7	Green	Grön	P1	14	+5V
12	Brown	Brun	P2	3 / 16	+ / -
2	White	Vit	P4	2 / 15	+ / -
6			P3	100 ohm	7 / 8 0V / 0V
11					
9					
13					

0V

Skärmen ansluten till kabelkåpan
Shield connected to D-sub cover

Skärmen ansluten till kabelkåpan
Shield connected to D-sub cover

CAB8 (Stock No 124268)

RS422 to RS485 converter

25 pin D-sub connector (male) to a connection block. CAB8 is an adapter that converts RS422 to RS485. The CAB 8 can be used to connect Siemens SIMATIC S7-200 PLCs to the HMIs using the PPI interface. The CAB8 can also be used to connect the E-Terminals to the FX-485 multi-drop network, and also for connecting onto Modbus networks.

(Drawing 03315)
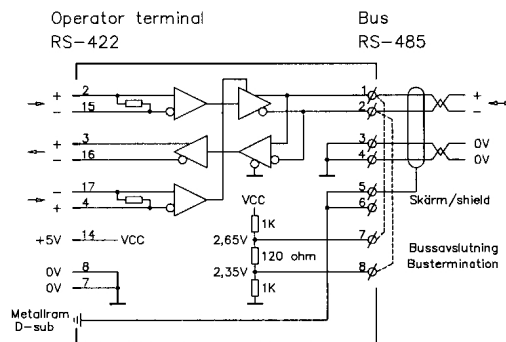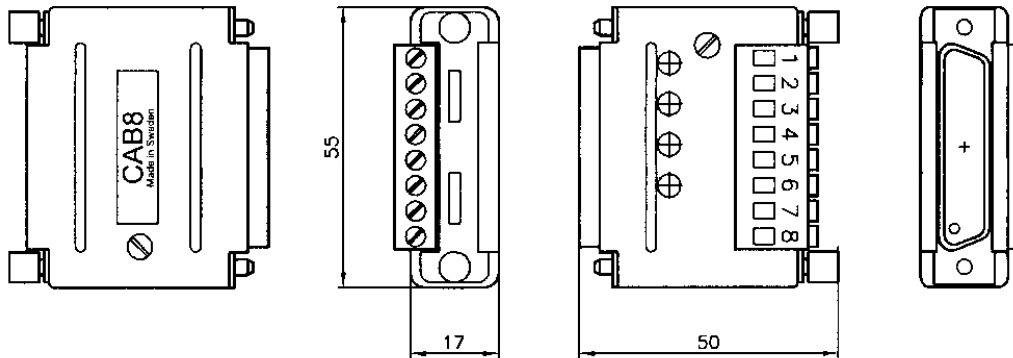
Cable between the PPI port of the Siemens SIMATIC-200 and CAB8
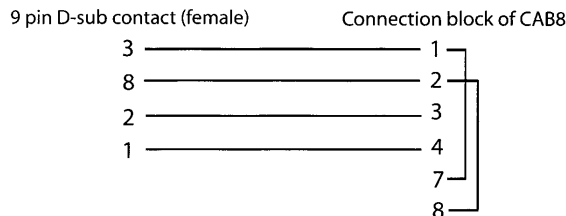
Max cable length = 1200 m

CAB9 (Stock No 130049)

E-Series RS422 to Mitsubishi FR-E/A-500 + FR-S-500 Frequency Inverters

Shielded RJ45 connector to a 25 pin D-sub connector (male). The cable length is 3 m. The RJ45 connector is connected to the Mitsubishi FREQROL FR-E/A and the D-sub connector is connected to the RS422 port of the operator terminal.

(Drawing 03320)
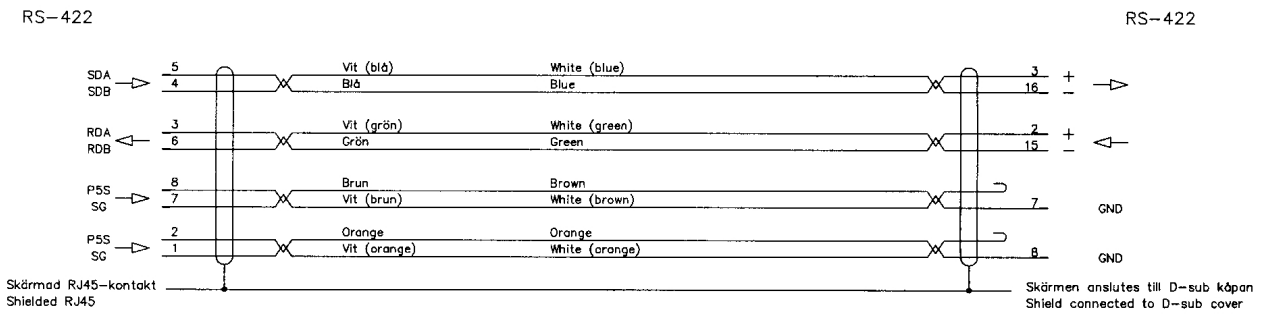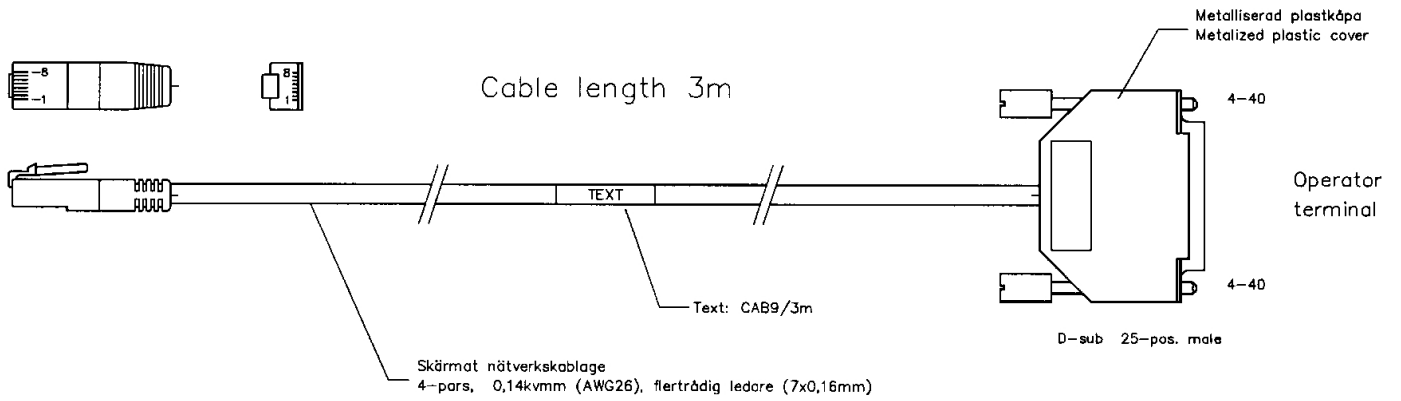
CAB10 (Stock No 130048)

E-Series RS422 to Allen Bradley DH485

RJ45 connector to a 25 pin D-sub connector (male). The cable length is 3 m. The RJ45 connector is connected to the DH485 port of an Allen Bradley PLC system and the D-sub connector is connected to the RS422 port of the operator terminal.

(Drawing 03350)

MITSUBISHI ELECTRIC
FACTORY AUTOMATION

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Tel: (02102) 4860 /// Fax: (02102) 486112 /// Email:info@mitsubishi-automation.com /// Web: www.mitsubishi-automation.com

CAB11 (Stock No 132351)

E-Series to Siemens S7 MPI

MPI adapter cable with 9 pin D-sub (male) to 9 pin D-sub (male). The cable length is 1.2 m. The cable CAB5 must be used with an adapter cable when using the terminals RS232. The cable CAB6 must be used with an adapter cable when using the terminals RS422. The D-sub adapter end of the cable is connected to the MPI port of the SIMATIC S7-300/400 and the other D-sub connector of the adapter is connected to the grey connector of cable CAB5/CAB6. The black connector of CAB5/CAB6 is then connected to the RS232/RS422 port of the operator terminal.

    LED1 off: The adapter has no power or is faulty
    LED1 on: The adapter is powered up
    LED2 on: The adapter is registered on the MPI network
    LED3 on: The adapter has established a connection on the MPI network
    LED3 flashing: The adapter is transmitting data

Note: Siemens S7-Lite programming software does not support MPI configuration

(Drawing 03359)
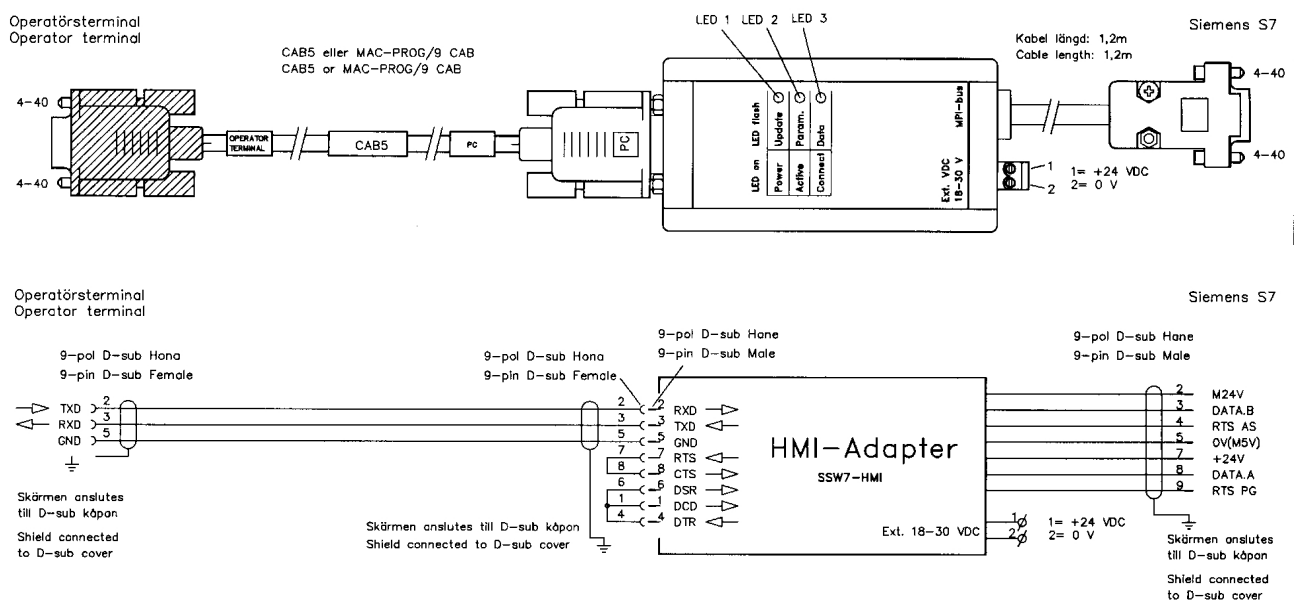
CAB12 (Stock No 138852)

RS232 Tx to Rx crossover/ E1000 adapter to E-series cables

Converter for RS232 Tx and Rx signal line crossover. 9 pin female to 9 pin male connector, DTE –DTE, DCE – DCE. This cable allows E-series to be connected to some controllers via a suitable PC programming cable, and is needed when connecting a Palm™ to the HMIs (must be used in conjunction with the Palm™ Serial HotSync® cable).

Switch in position 1: RTS/CTS crossed
Switch in position 2: RTS/CTS open
Switch in position 1: RTS/CTS looped

(Drawing 03356)
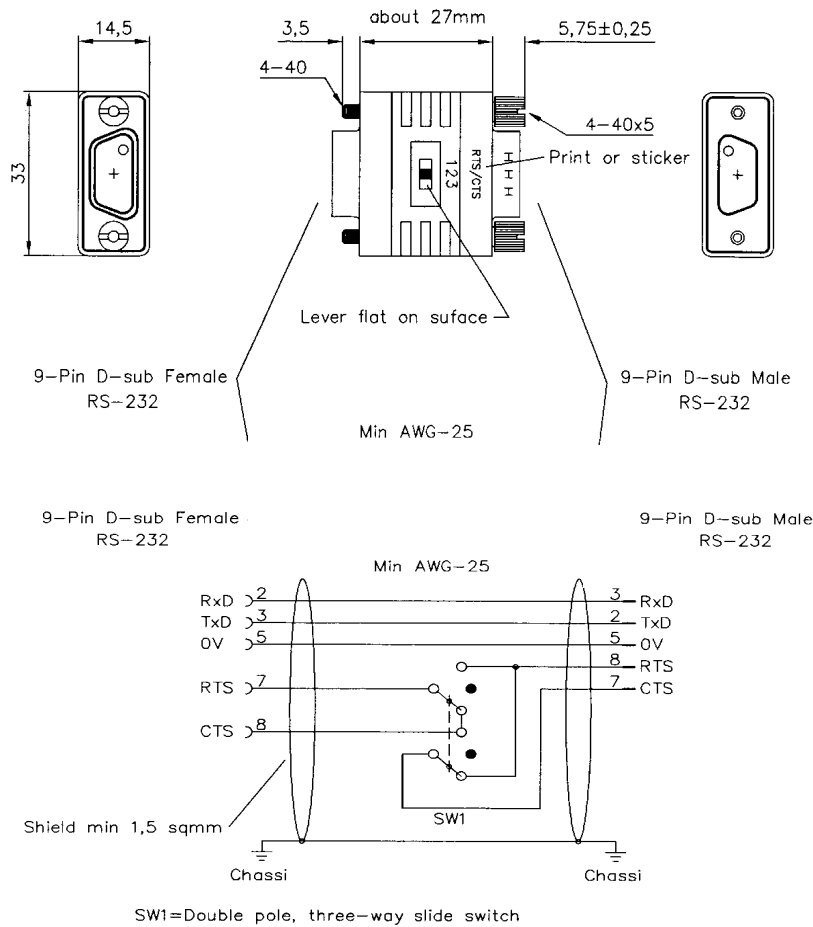
CAB13 (Stock No 134894=3m version)

E-Series RS422 to Mitsubishi Melservo MR-J2

20 pin 3M connector (male) to 25-pin D-sub (male). The cable is available in either 3m or 5m versions. The cables 3M connector is connected to the MELSERVO MR-J2 and the D-sub connector is connected to the RS422 port of the E-terminal.
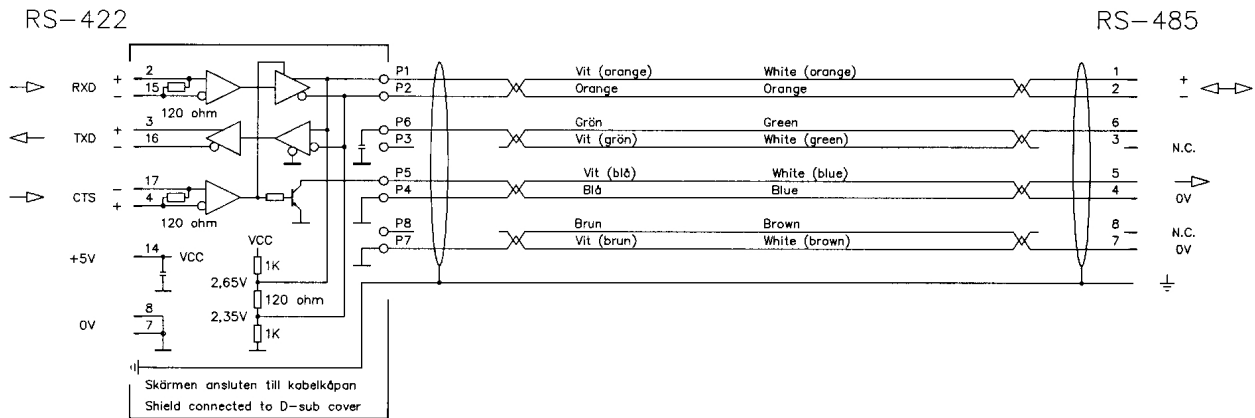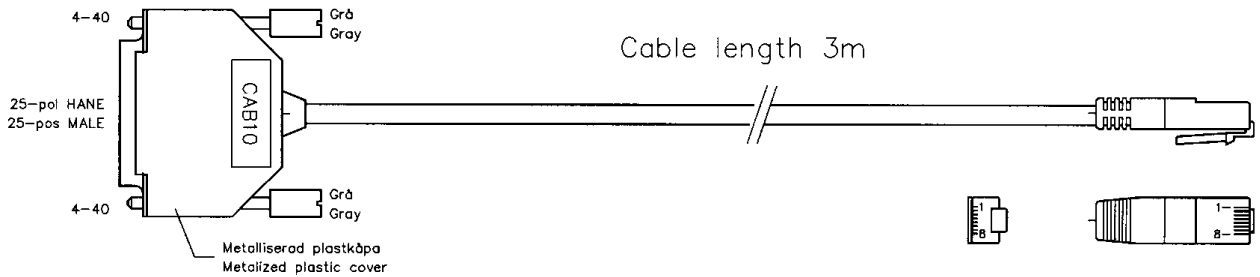
(Drawing 03361)

Metalliserad plastkåpa
Metallized plostic cover

4-40

4-40

CAB13

Längd: 3m/5m
Length: 3m/5m

Text

Kabel: 3-pars med skärm
Cabel: 3-pairs with shield
Grön mantel. Färg PANTONE 355U eller liknande
Green sheath. Colour PANTONE 355U or similar

20-polig 3M-kontakt 10120 "HANE" med 10320 hölje
20-pos 3M-connector 10120 "MALE" with 10320 cover

25-polig D-sub "HANE"
25-pos D-sub "MALE"

RS-422 | | RS-422

SDP 9		3 RxD+
SDN 19		16 RxD−
RDP 5		2 TxD+
RDN 15		15 TxD−
LG 1		7 0V
LG 11		8 0V
TRE 10		

Skärmen ansluten till kåpan
Shield connected to cover

Skärmen anlsuten till D-sub kåpan
Shield connected to D-sub cover

CAB14

E-Series RS232 to Matsushita FP0/M/2/2SH

RS232 connector 9 pin D-sub (female) to Mini-DIN5-pin male on PLC side

(Drawing 04790)
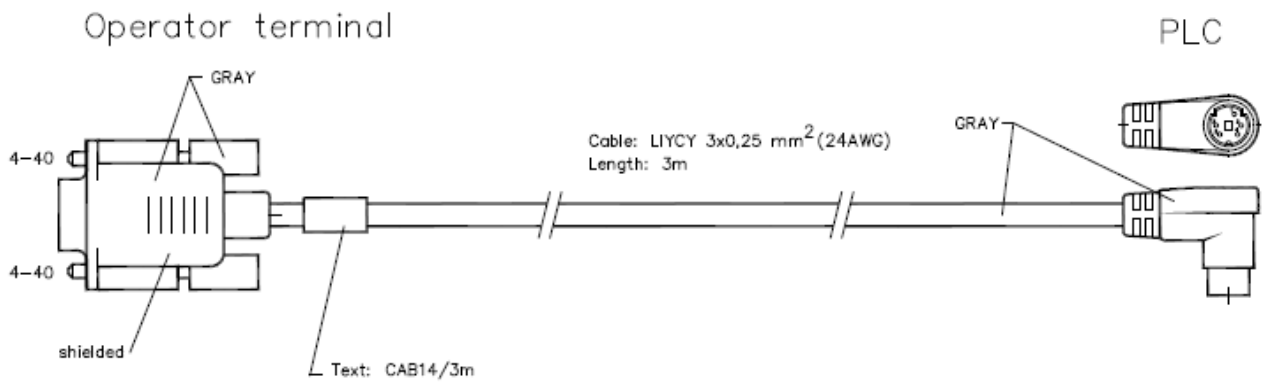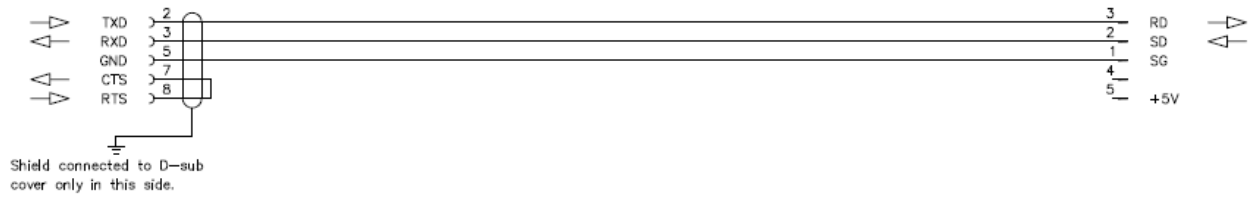
CAB15 (Stock no 160852)

E-Series RS422 CANopen adapter

RS422 adapter, 25 pin S-Sub male, can be used in combination with CAB23 as extension cable

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created by: FA-EBG Marketing department, Christian Nomine
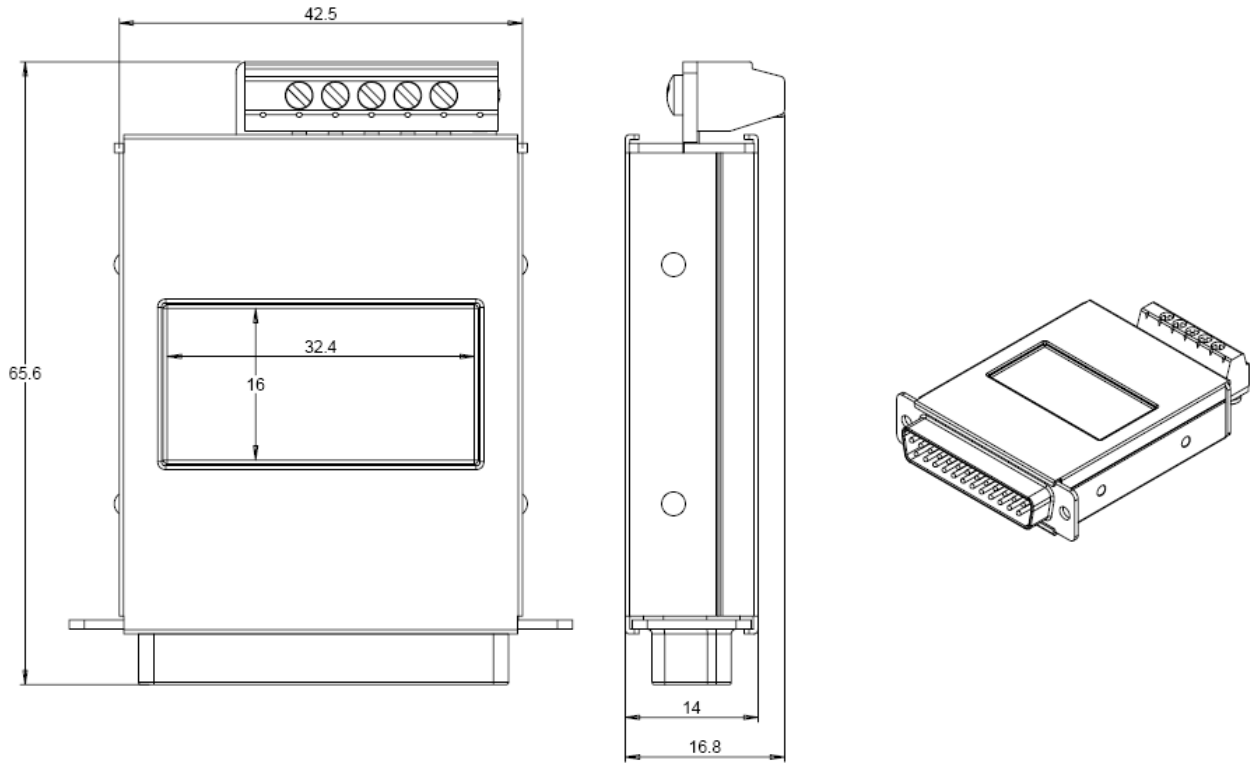
CAB16 (Stock No 140461=3M length)

E-Series RS232 to Mitsubishi System Q Series RS232

6 pin MiniDin (male) to 9 pin D-sub (female). The cable is available in the lengths of 1, 3, 5, 7, 10 and 15 m. The MiniDin connector is connected to the PLC CPU's RS232 port and the D-sub connector is connected to the RS232C port of the operator terminal.

(Drawing 03363)

CAB17 (Stock No 140472)

E-Series RS422 to Mitsubishi System Q RS232

6 pin MiniDin (male) to 25 pin D-sub (male). The cable length is 3 m. The MiniDin connector is connected to the PLC's CPU RS232 port and the D-sub connector is connected to the RS422 port of the operator terminal.

(Drawing 03365)

created by: FA-EBG Marketing department, Christian Nomine

CAB18 (Stock No 146856=5m length)

E-Series RS422 to A/AnS/FX

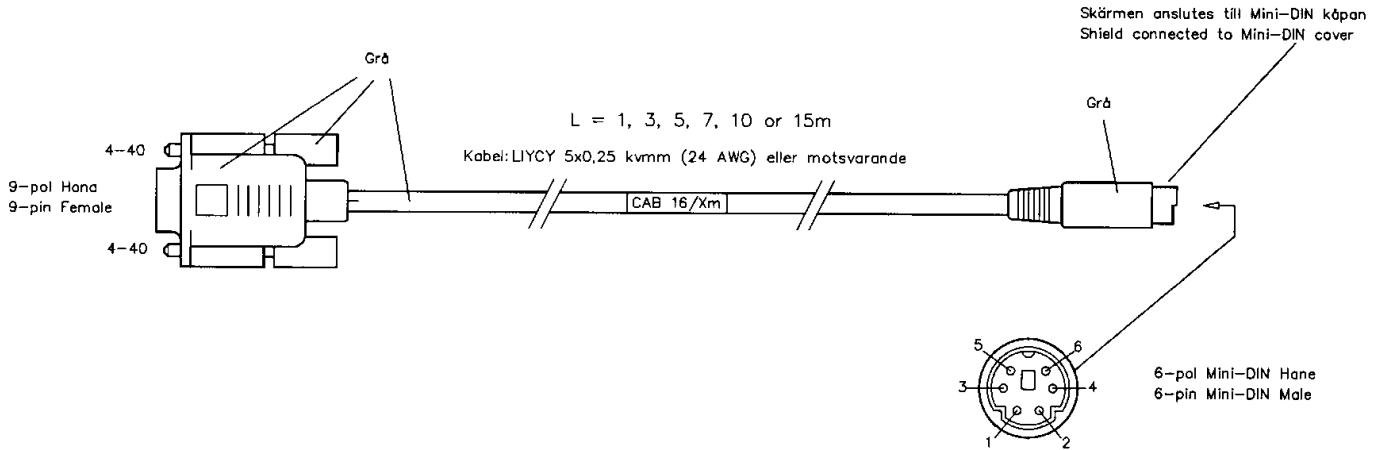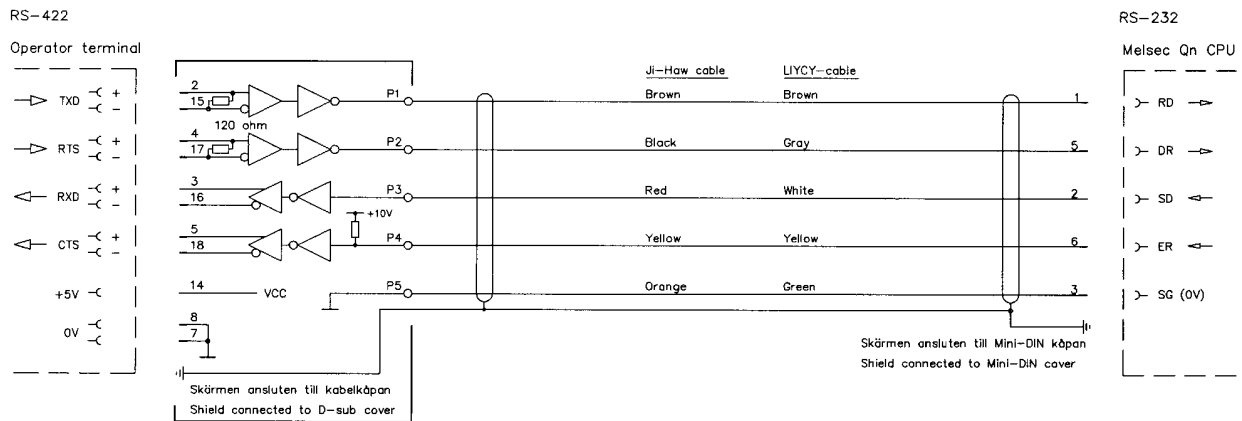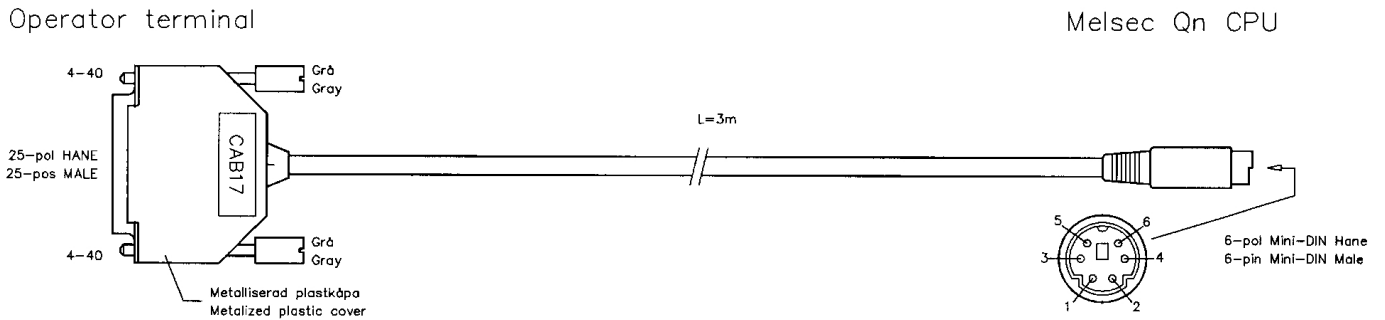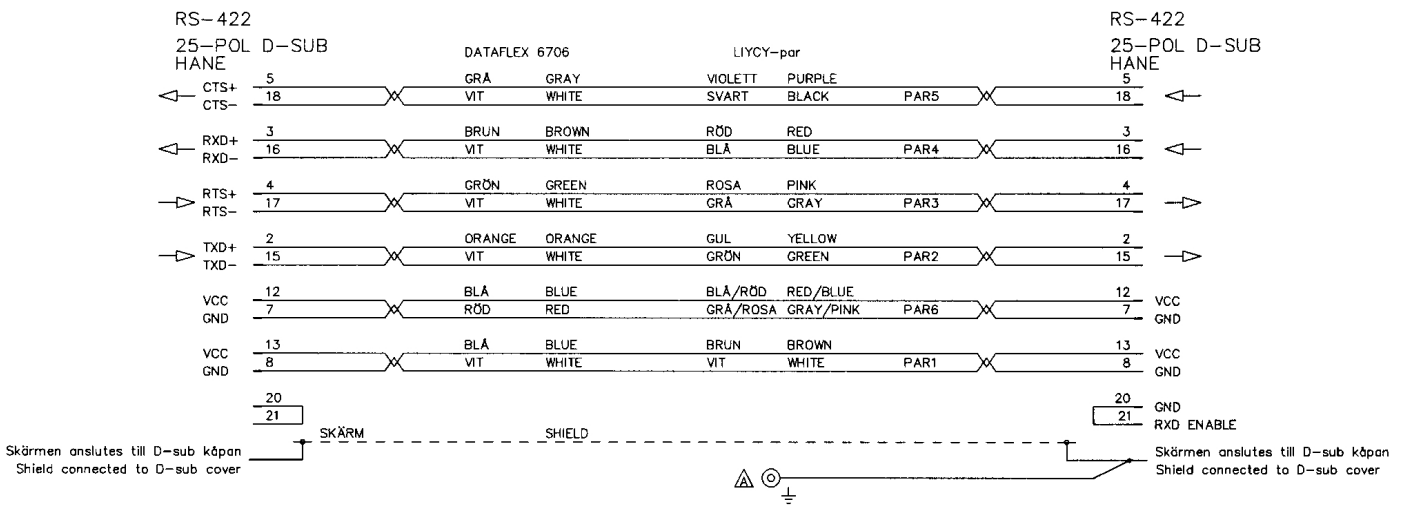25 pin D-sub (male) to 25 pin D-sub (male). The cable is available in the lengths of 3, 5, 7, 10 and 15m.

(Drawing 00757)

RS-422 25-POL D-SUB HANE		DATAFLEX 6706		LIYCY-par			RS-422 25-POL D-SUB HANE	
CTS+	5	GRÅ	GRAY	VIOLETT	PURPLE		5	
CTS−	18	VIT	WHITE	SVART	BLACK	PAR5	18	
RXD+	3	BRUN	BROWN	RÖD	RED		3	
RXD−	16	VIT	WHITE	BLÅ	BLUE	PAR4	16	
RTS+	4	GRÖN	GREEN	ROSA	PINK		4	
RTS−	17	VIT	WHITE	GRÅ	GRAY	PAR3	17	
TXD+	2	ORANGE	ORANGE	GUL	YELLOW		2	
TXD−	15	VIT	WHITE	GRÖN	GREEN	PAR2	15	
VCC	12	BLÅ	BLUE	BLÅ/RÖD	RED/BLUE		12	VCC
GND	7	RÖD	RED	GRÅ/ROSA	GRAY/PINK	PAR6	7	GND
VCC	13	BLÅ	BLUE	BRUN	BROWN		13	VCC
GND	8	VIT	WHITE	VIT	WHITE	PAR1	8	GND
	20						20	GND
	21		SKÄRM	SHIELD			21	RXD ENABLE

Skärmen anslutes till D-sub kåpan
Shield connected to D-sub cover

Skärmen anslutes till D-sub kåpan
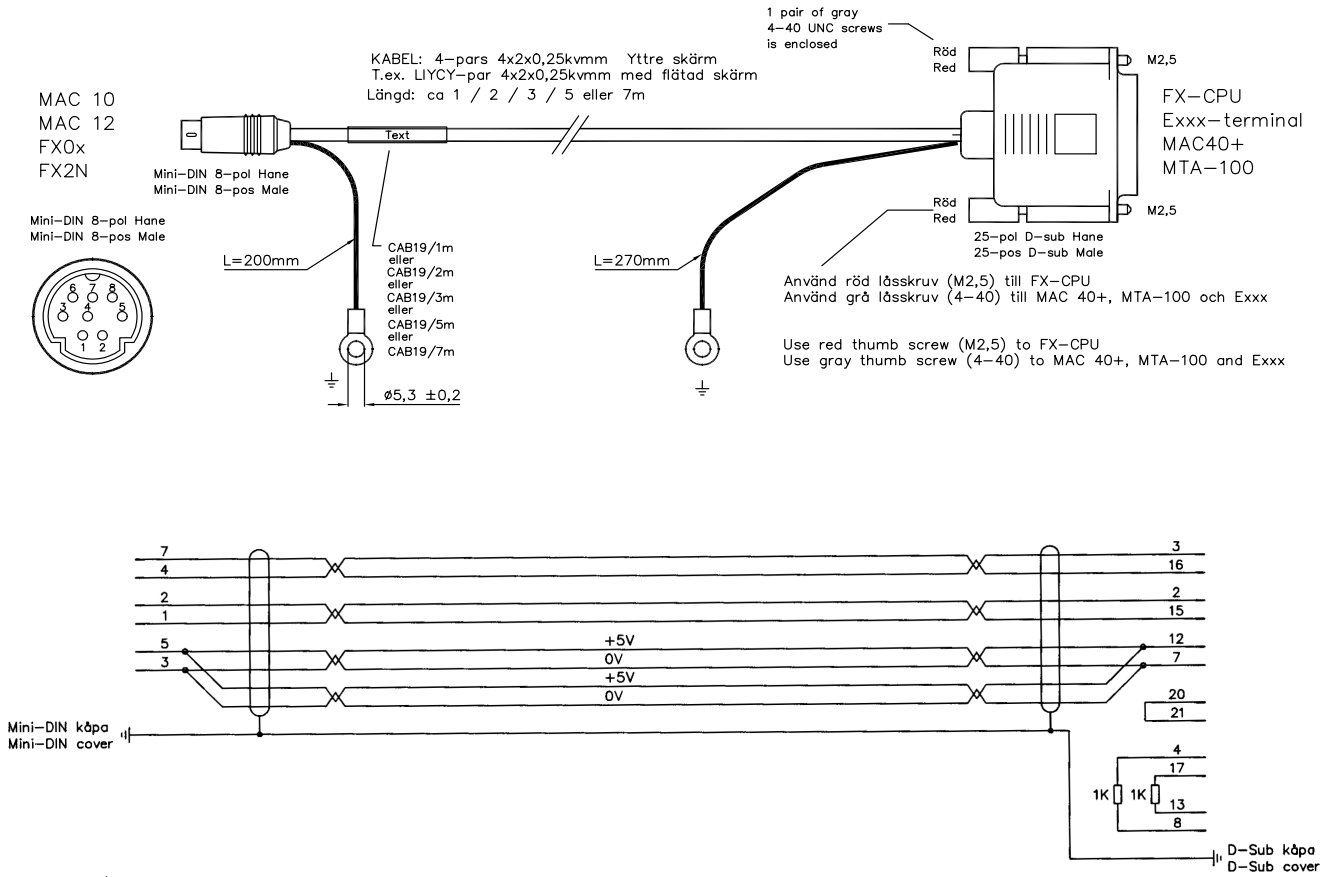Shield connected to D-sub cover

CAB19 (Stock No 87652 = 5M length)

E-Series RS422 to FXnN/FXnS/FX3U

25 pin D-sub (male) to 8 pin MiniDin (male). The cable is available in the lengths of 1, 3, 5, 7, 10 and 15 m.

(Drawing 02161)
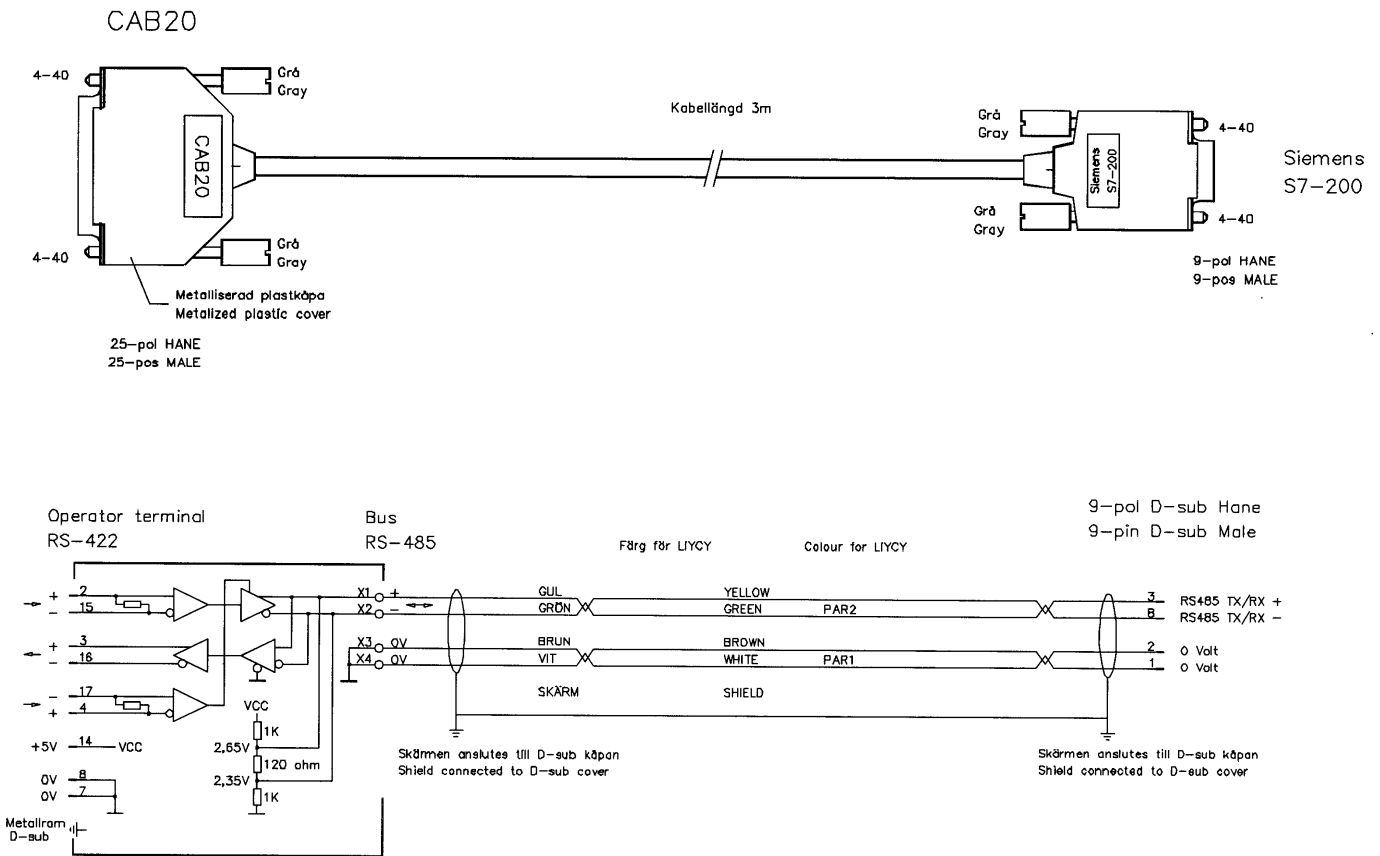
CAB20 (Stock No 149861)

E-Series RS422 to SIEMENS S7-200 using a PPI interface

Shielded 25 pin D-sub contact (male) to shielded 9 pin D-sub contact (male). The cable length is 3 m. The 25 pin D-sub connector is connected to the operator terminal and the 9 pin D-sub contact is connected to the SIEMENS S7-200 PPI port (PPI is point to point connection only).
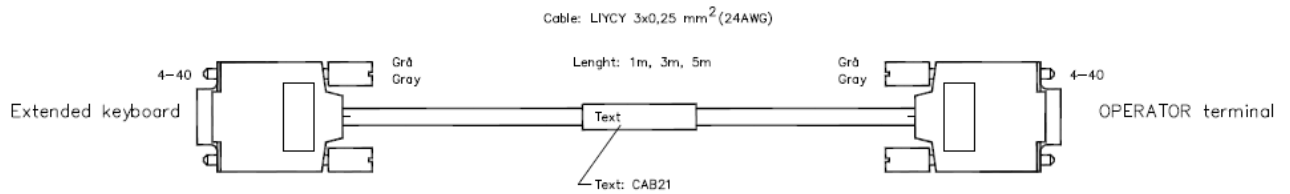
(Drawing 04480)

CAB21 (Stock No 160535)

E-Series RS232 to E-Key16 additional key

Shielded 9 pin D-sub contact (female) to shielded 9 pin D-sub contact (female). The cable length is 3 m.

(Drawing 03321)

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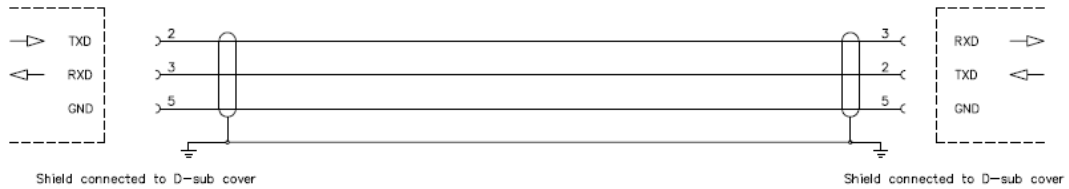Tel: (02102) 4860 /// Fax: (02102) 486112 /// Email:info@mitsubishi-automation.com /// Web: www.mitsubishi-automation.com
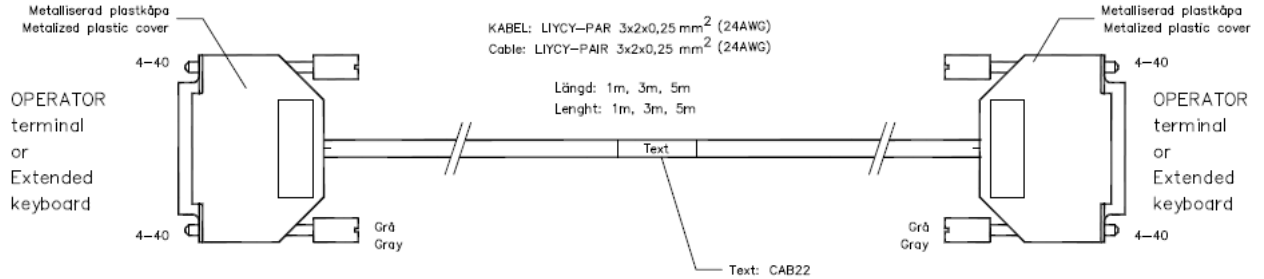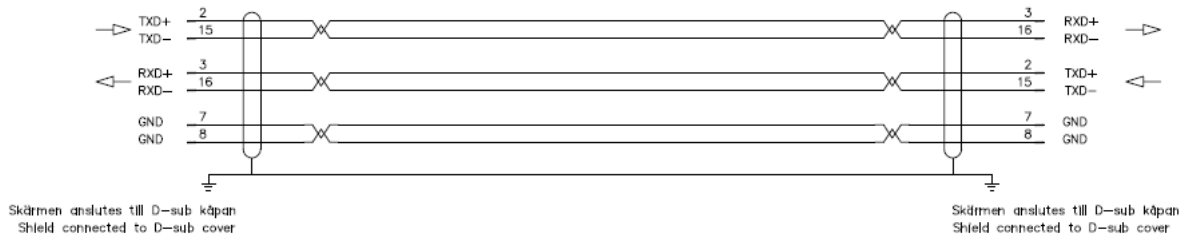
CAB22

E-Series RS422 to E-Key16 additional key

Shielded 25 pin D-sub contact (male) to shielded 25 pin D-sub contact (male). The cable length is 3 m.
Connect E-Key16 to E-series RS422 port or use the cable to connect two E-Key16 with each other.
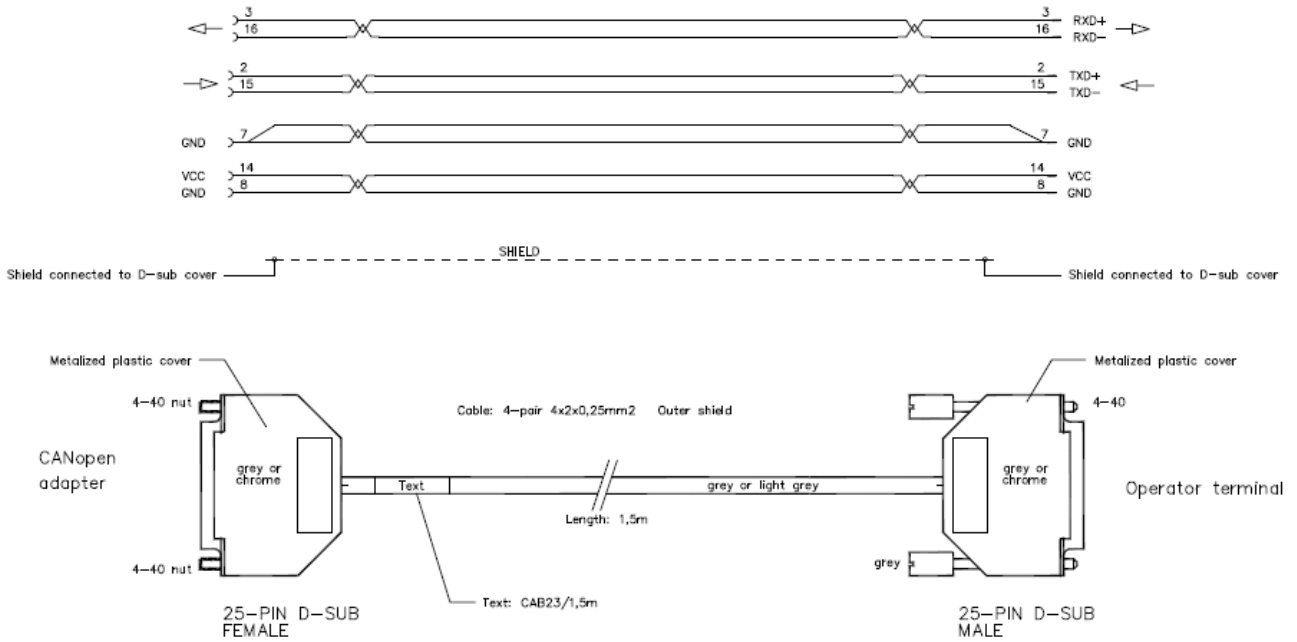
(Drawing 03323)

CAB23

Extension cable for CAB15 (CANopen Adapter, RS422 to RS422)

Shielded 25 pin D-sub contact (female) on CANopen adapter side to shielded 25 pin D-sub contact (male) on operator terminal side. The cable length is 3 m.

(Drawing 04353)

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created by: FA-EBG Marketing department, Christian Nomine

CAB30 (Stock No 163002)

RS232 **E1000** cable (universal use)

9 pin D-sub (female) to 9 pin D-sub (female). The cable length is 3 m. The CAB30 can be used in six different ways:

1) In this case the CAB30 cable is used as a **programming cable** between a Computer (PC) and the **E1000** operator terminals. The 9 pin D-sub connector is connected to the RS232 port of the operator terminal and the other 9-pin D-sub connector is connected to one of the RS232 communication ports (COM 1/COM 2) of the computer.

2) In this case the CAB30 cable is connected between a **Mitsubishi MELSEC FX1N-232BD, a Mitsubishi MELSEC FX2N-232BD or a FX3U-232BD** board and the RS232 port of the operator terminal.

3) In this case the CAB30 cable is connected between an **Allen Bradley ControlLogix** and the RS232 port of the operator terminal. The following PLCS are supported:
Allen-Bradley SLC 5/05, Allen Bradley SLC 500, Allen Bradley SLC 5/01, Allen Bradley SLC 5/02, Allen Bradley SLC 5/03 Allen Bradley SLC 5/04

4) In this case the CAB30 cable is connected between **an B+R 2000 series (Mininet)** and the RS232 port of the operator terminal.

(5) In this case the CAB30 cable is connected between the **MPI port of a SIMATIC S7-300/400** and an operator terminal. The adapter cable CAB11 MPI must be used with the CAB30 (Note: CAB 11 MPI cable length is 1.2 m). The CAB11 D-sub cable is connected to the MPI port of the SIMATIC S7, the other D-sub connector of the adapter is connected to the grey connector of the CAB5. The black connector of the CAB5 is then connected to the RS232C port of the operator terminal.
Note: Not all operator terminals support the MPI protocol. Please refer to the driver list in the programming software for further information.

(6) In this case the CAB30 cable is connected between Siemens **SIMATIC S7/-300/400 PLCs** and the RS232C port of the operator terminal. SIMATIC S7/-300/400 must be supplemented with the **communication card CP341**. The black D-sub connector of the CAB5 cable is connected to the RS232C port of the operator terminal and the grey connector of the CAB30 cable is connected to the RS232C port of the communication card CP341.
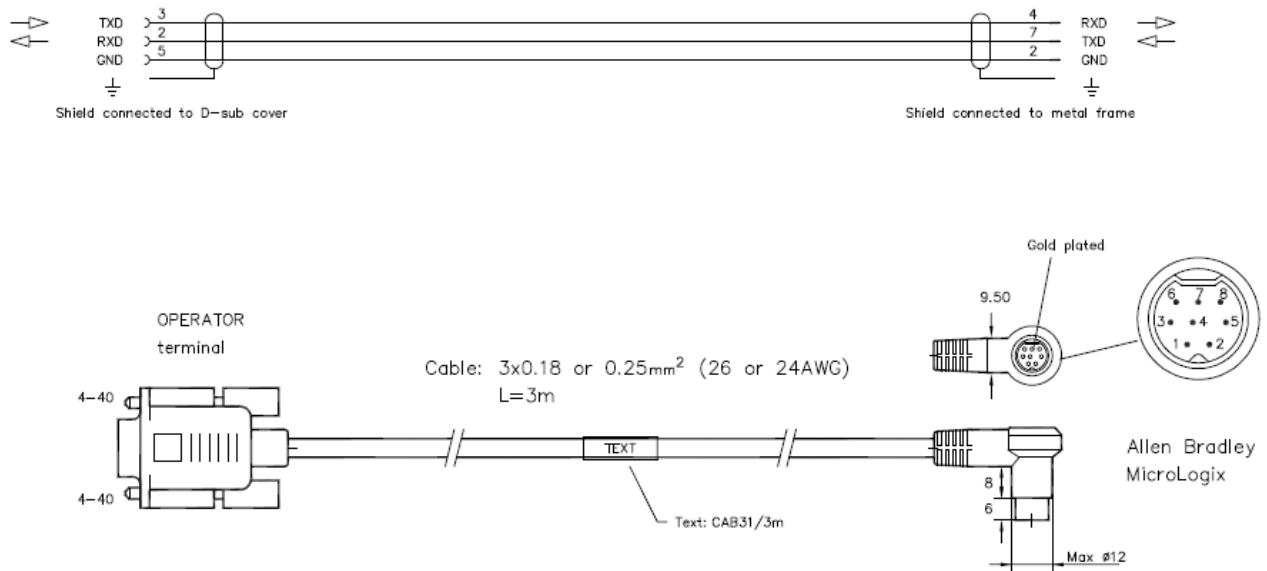
(Drawing 05400)
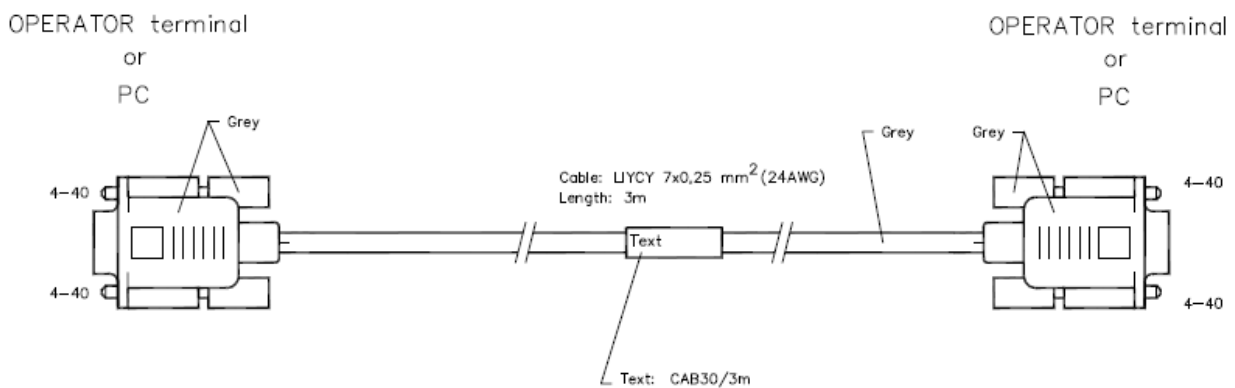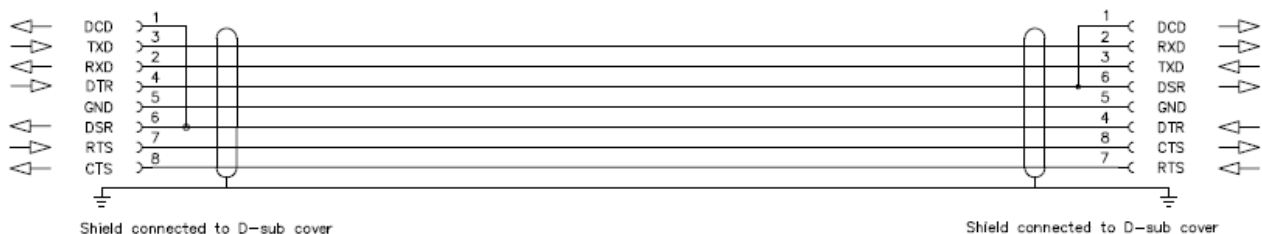
CAB31 (Stock No 163003)

RS232 **E1000** cable to Allen-Bradley Micrologix

9 pin D-sub (female) to MiniDin 8pin on PLC side
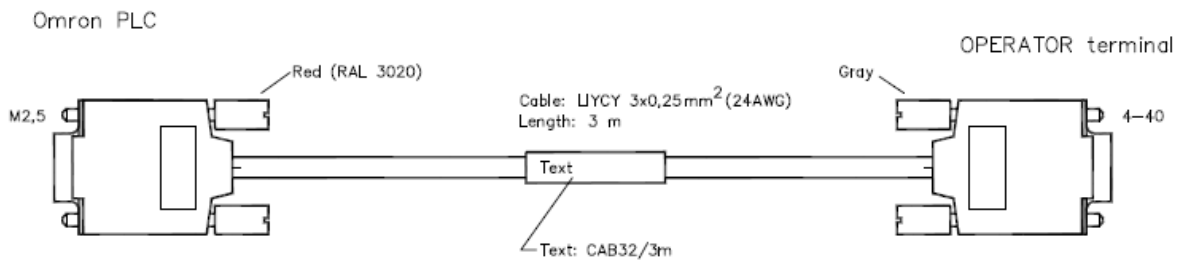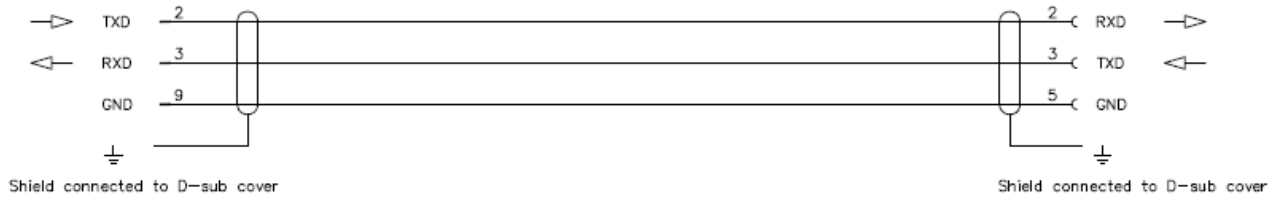
(Drawing 05401)

CAB32 (Stock No 163004)

RS232 **E1000** cable to OMRON C/CS1

9 pin D-sub (female) to 9 pin D-sub (male)
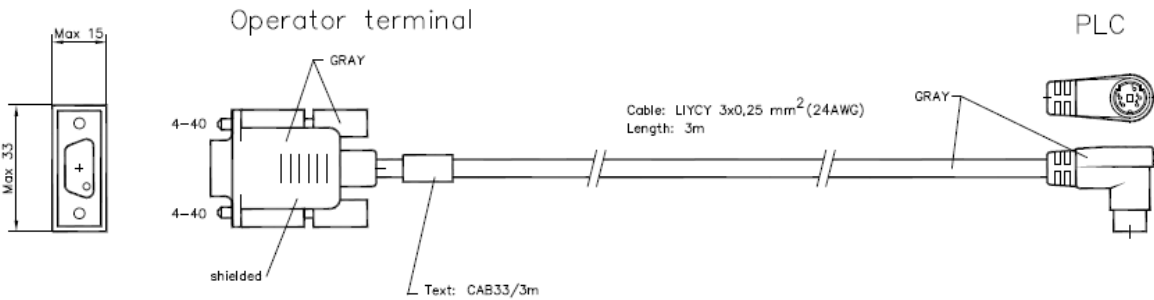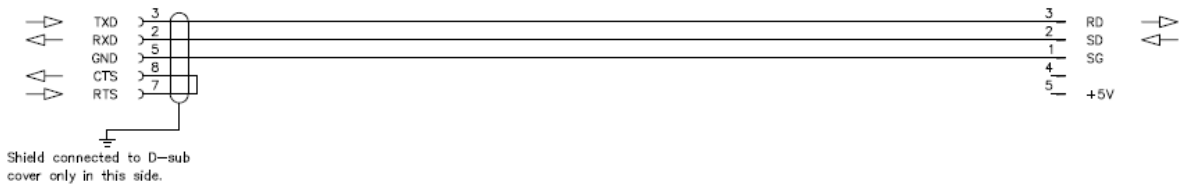
(Drawing 05402)

CAB33 (Stock No 163005)

RS232 **E1000** cable to Matsushita FP0/M/2/2SH

9 pin D-sub (female) to MiniDin 5 pin (male) on PLC side
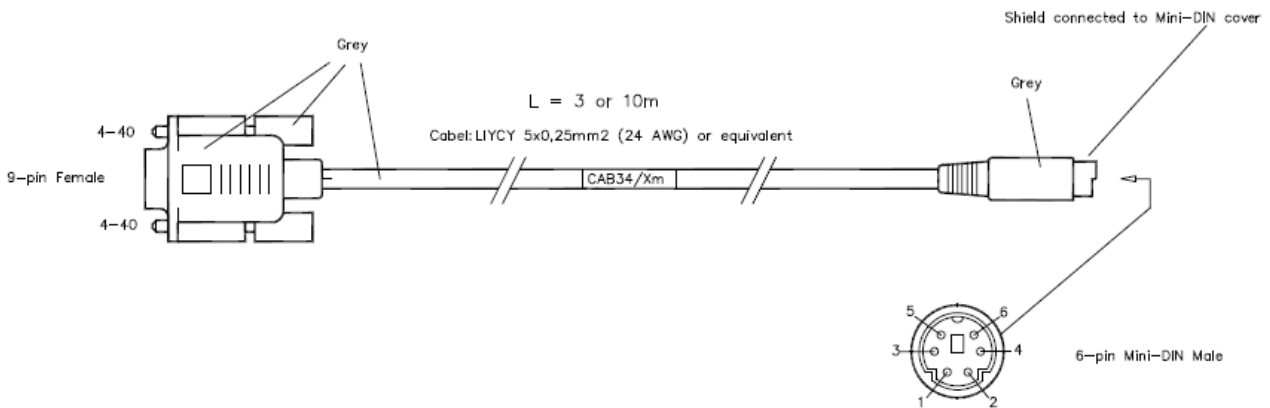
(Drawing 05403)

TXD	3			3	RD	
RXD	2			2	SD	
GND	5			1	SG	
CTS	8			4		
RTS	7			5	+5V	

Shield connected to D-sub
cover only in this side.

Operator terminal

PLC

Max 15

Max 33

GRAY

4-40

4-40

Cable: LIYCY 3x0,25 mm² (24AWG)
Length: 3m

GRAY

shielded

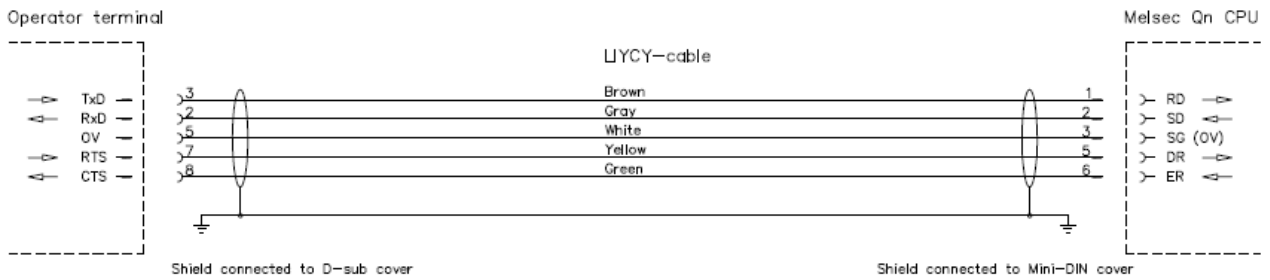Text: CAB33/3m

CAB34 (Stock No   163006 = 3m length,
163007 = 10m length)

RS232 **E1000** cable to **Mitsubishi System Q**

9 pin D-sub (female) to MiniDin 6 pin (male) on PLC side (CPU Port)

(Drawing 05404)

created by: FA-EBG Marketing department, Christian Nomine

CAB36

E1000 RS422 cable to Siemens MPI direct

RS422 D-sub 25 pin male on E1000 operator terminal to MPI connector to connect directly to MPI bus. Cable length 3m.

(Drawing 05408)