

ES930.1
Multi-I/O Module
Pin Assignment and Accessories



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ES930.1 - Pin Assignment and Accessories R04 EN - 02.2018

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1 Pin Assignment and Accessories

1.1 Pin assignment

1.1.1 "DO" connection

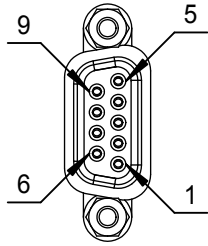


Fig. 1-1 "DO" connection

ES930.1 "DO" connection		Meaning
Pin	Signal	
1	DO_CH1	Digital output channel 1
2	DO_CH2	Digital output channel 2
3	DO_CH3	Digital output channel 3
4	DO_CH4	Digital output channel 4
5	DO_CH5	Digital output channel 5
6	DO_CH6	Digital output channel 6
7	DO_GND	Digital output channel, ground *)
8	DO_GND	Digital output channel, ground *)
9	DO_GND	Digital output channel, ground *)

*) : common ground

A 9-pin DSUB socket is installed at the "DO" connection.

An overview of the assignment of the open ends of the CBAV421.1 cable for use at the "DO" connection is located in chapter 1.2.2 on page 19.



CAUTION!

Users who want to fit their own cables for the "DO" connection must observe the notes about the design of the CBAV421.1 cable offered by ETAS to avoid damage to the module (see chapter 1.2.2 on page 19).

1.1.2 "DI" connection

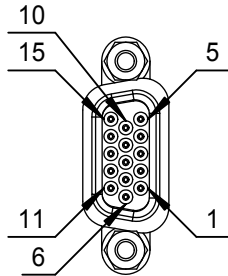


Fig. 1-2 "DI" connection

ES930.1 "DI" connection		Meaning
Pin	Signal	
1	DI_CH1	Digital input channel 1
2	DI_CH2	Digital input channel 2
3	DI_CH3	Digital input channel 3
4	DI_CH4	Digital input channel 4
6	DI_CH1_GND	Digital input channel 1, ground *)
7	DI_CH2_GND	Digital input channel 2, ground *)
8	DI_CH3_GND	Digital input channel 3, ground *)
9	DI_CH4_GND	Digital input channel 4, ground *)
5, 10, 11, 12, 13, 14, 15	N.C.	Not connected

*) : common ground

A 15-pin high density DSUB socket is installed at the "DI" connection.

An overview of the assignment of the open ends of the CBAV420.1 cable for use at the "DI" connection is located in chapter 1.2.1 on page 15.

**CAUTION!**

Users who want to fit their own cables for the "DI" connection, must observe the notes about the design of the CBAV420.1 cable offered by ETAS to avoid damage to the module (see chapter 1.2.1 on page 15).

**CAUTION!**

Please observe the recommendation for measurement setups with different ground potentials or with measurement points separated in distance (see chapter 1.2.1 on page 15).

1.1.3 "AO" connection

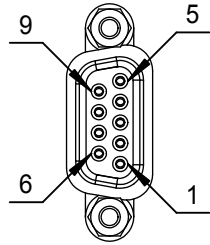


Fig. 1-3 "AO" connection

ES930.1 "AO" connection		Meaning
Pin	Signal	
1	AO_CH1	Analog output channel 1
2	AO_CH2	Analog output channel 2
3	AO_CH3	Analog output channel 3
4	AO_CH4	Analog output channel 4
5	N.C.	Not connected
6	N.C.	Not connected
7	AO_GND	Analog output channel, ground ^{*)}
8	AO_GND	Analog output channel, ground ^{*)}
9	AO_GND	Analog output channel, ground ^{*)}

^{*)} : common ground

A 9-pin DSUB socket is installed at the "AO" connection.

An overview of the assignment of the open ends of the CBAV421.1 cable for use at the "AO" connection is located in chapter 1.2.2 on page 19.

**CAUTION!**

Users who want to fit their own cables for the "AO" connection, must observe the notes about the design of the CBAV421.1 cable offered by ETAS to avoid damage to the module (see chapter 1.2.2 on page 19).

1.1.4 "AI 5-8" connection

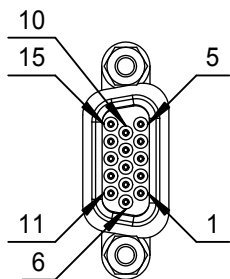



Fig. 1-4 "AI 5-8" connection

ES930.1 "AI 5-8" connection		Meaning
Pin	Signal	
1	AI_CH5	Analog input channel 5
2	AI_CH6	Analog input channel 6
3	AI_CH7	Analog input channel 7
4	AI_CH8	Analog input channel 8
5	N.C.	Not connected
6	AI_CH5_GND	Analog input channel 5, ground
7	AI_CH6_GND	Analog input channel 6, ground
8	AI_CH7_GND	Analog input channel 7, ground
9	AI_CH8_GND	Analog input channel 8, ground
10	N.C.	Not connected
11	SensorSupply_CH3	Sensor power supply, channel 3
12	SensorSupply_CH3_GND	Sensor power supply, channel 3, ground
13	SensorSupply_CH4	Sensor power supply, channel 4
14	SensorSupply_CH4_GND	Sensor power supply, channel 4, ground
15	N.C.	Not connected

A 15-pin high density DSUB socket is installed at the "AI 5-8" connection.
 An overview of the assignment of the open ends of the CBAV420.1 cable for use at the "AI 5-8" connection is located in chapter 1.2.1 on page 15.

 **CAUTION!** *Users who want to fit their own cables for the "AI 5-8" connection, must observe the notes about the design of the CBAV420.1 cable offered by ETAS to avoid damage to the module (see chapter 1.2.1 on page 15).*

1.1.5 "AI 1-4" connection

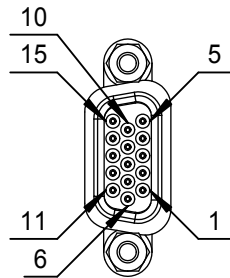


Fig. 1-5 "AI 1-4" connection

ES930.1 "AI 1-4" connection		Meaning
Pin	Signal	
1	AI_CH1	Analog input channel 1
2	AI_CH2	Analog input channel 2
3	AI_CH3	Analog input channel 3
4	AI_CH4	Analog input channel 4
5	N.C.	Not connected
6	AI_CH1_GND	Analog input channel 1, ground
7	AI_CH2_GND	Analog input channel 2, ground
8	AI_CH3_GND	Analog input channel 3, ground
9	AI_CH4_GND	Analog input channel 4, ground
10	N.C.	Not connected
11	SensorSupply_CH1	Sensor power supply, channel 1
12	SensorSupply_CH1_GND	Sensor power supply, channel 1, ground
13	SensorSupply_CH2	Sensor power supply, channel 2
14	SensorSupply_CH2_GND	Sensor power supply, channel 2, ground
15	N.C.	Not connected

A 15-pin high density DSUB socket is installed at the "AI 1-4" connection.

An overview of the assignment of the open ends of the CBAV420.1 cable for use at the "AI 1-4" connection is located in chapter 1.2.1 on page 15.



CAUTION!

Users who want to fit their own cables for the "AI 1-4" connection, must observe the notes about the design of the CBAV420.1 cable offered by ETAS to avoid damage to the module (see chapter 1.2.1 on page 15).

1.1.6 "PS" connection

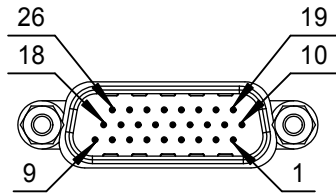


Fig. 1-6 "PS" connection

ES930.1 "PS" connection		Meaning
Pin	Signal	
1, 10	PS_CH1	Power stage, channel 1
2, 11	PS_CH2	Power stage, channel 2
3, 12	PS_CH3	Power stage, channel 3
4, 13	PS_CH4	Power stage, channel 4
5, 14	PS_CH5	Power stage, channel 5
6, 15	PS_CH6	Power stage, channel 6
7, 8, 9, 16, 17, 18, 26	PS_GND	Power stage, external power supply ground
19, 20, 21, 22, 23, 24, 25	PS_UBAT	Power stage, external power supply

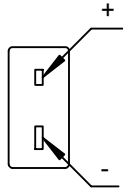
A 26-pin high density DSUB plug is installed at the "PS" connection.

An overview of the assignment of the open ends of the CBAV422.2 cable for use at the "PS" connection is located in chapter 1.2.3 on page 21.

**CAUTION!**

Users who want to fit their own cables for the "DO" connection, must observe the notes about the design of the CBAV422.1 cable offered by ETAS to avoid damage to the module (see chapter 1.2.3 on page 21).

1.1.7 "TH1-4" connection

**Fig. 1-7** "TH1-4" connection

ES930.1 "TH1-4" connection		Meaning
Pin	Signal	
+	In+	Input (+)
-	In-	Input (-)

Mini-TC sockets are installed at the "TH1-4" connections.

1.1.8 "IN" connection

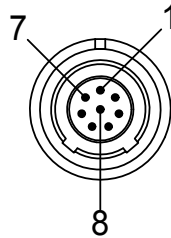


Fig. 1-8 "IN" connection

ES930.1 "IN" connection		Meaning
Pin	Signal	
1	UBatt	Operating voltage
2	Ground	Ground
3	RX-	Receive data, minus
4	TX-	Send data, minus
5	RX+	Receive data, plus
6	Ground	Ground
7	UBatt	Operating voltage
8	TX+	Send data, plus

A LEMO 1B 8-pin connector with L-coding (connection identified in green) is installed at the "IN" connection.

1.1.9 "OUT" connection

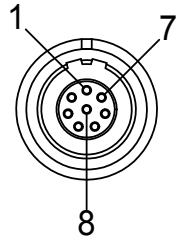


Fig. 1-9 "OUT" connection

ES930.1 "IN" connection		Meaning
Pin	Signal	
1	UBatt	Operating voltage
2	UBatt	Operating voltage
3	Ground	Ground
4	RX+	Receive data, plus
5	TX-	Send data, minus
6	RX-	Receive data, minus
7	Ground	Ground
8	TX+	Send data, plus

A LEMO 1B 8-pin socket with A-coding (connection identified in yellow) is installed at the "OUT" connection.

1.2 Cable for inputs and outputs

The CBAV420.1 cable is used for the inputs, the CBAV421.1 cable for the outputs and the CBAV422.1 cable for the half bridges (power stages) (see Fig. 1-10 on page 14 and the following table).

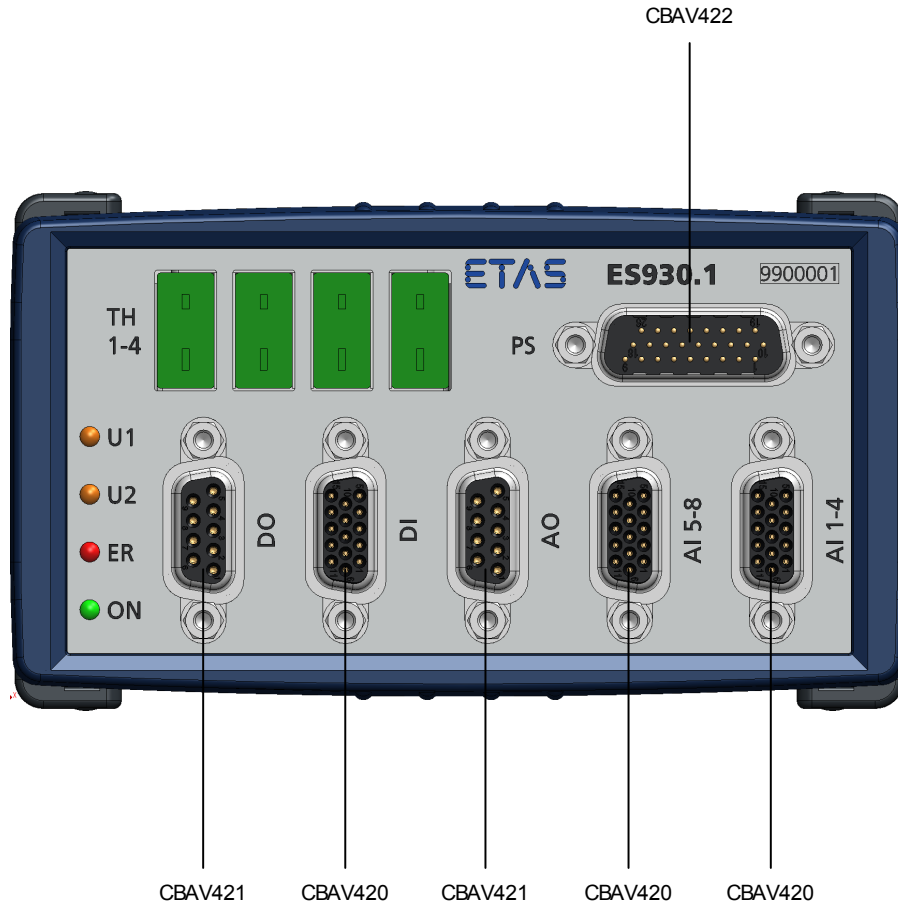


Fig. 1-10 Cable for inputs and outputs

ES930.1 connection		Cable
TH1-4	Thermo channel	Thermocouple
PS	Power stages	CBAV422.1
DO	Digital outputs	CBAV421.1
DI	Digital inputs	CBAV420.1
AO	Analog outputs	CBAV421.1
AI 5-8	Analog inputs	CBAV420.1
AI 1-4	Analog inputs	CBAV420.1

For the connection of the inputs and outputs of the module, three CBAV420.1 cables, two CBAV421.1 cables and one CBAV422.1 cable are required.

The open connections of the cables CBAV420.1, CBAV421.1 and CBAV422.1 can be fitted individually by the user, so that it can be adapted to the specific plug connector system of the measuring setup.

1.2.1 CBAV420.1 cable

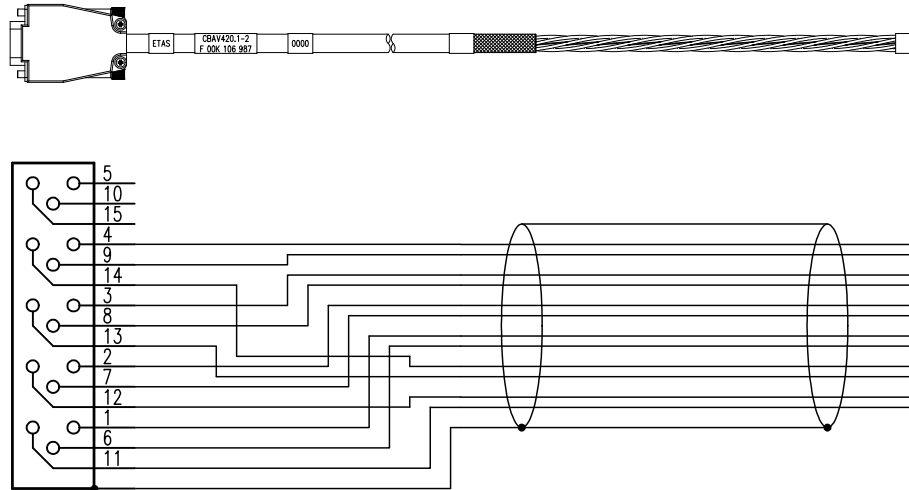


Fig. 1-11 CBAV420.1 cable with wiring plan

Product	Length	Order number
CBAV420.1-2	2 m / 6.5 ft	F 00K 106 987

Recommendation for measurement setups with different ground potentials or with measurement points separated in distance



CAUTION!

To avoid in such measurement setups fault currents within the module ES930.1 between the ground terminals of the connector "DI", we recommend to connect the ground connections DI_CH1_GND to DI_CH4_GND either at the open end of the CBAV240.1 cable or directly in the connector of a self-assembled cable. Cables with such connections may be used only at the connector "DI".

Assignment of the CBAV420.1 cable when used at "DI" connection

HD-SUBD	Signal	Open cable end	
Pin		Pair	Color
4	DI_CH4	1	white
9	DI_CH4_GND	1	brown
3	DI_CH3	2	green
8	DI_CH3_GND	2	yellow
2	DI_CH2	3	gray
7	DI_CH2_GND	3	pink
1	DI_CH1	4	blue
6	DI_CH1_GND	4	red
14	N.C.	5	black
13	N.C.	5	violet
12	N.C.	6	gray/pink
11	N.C.	6	red/blue
5, 10, 15	N.C.		
Housing		Shield	

Assignment of the CBAV420.1 cable when used at "AI 5-8" connection

HD-SUBD	Signal	Open cable end	
Pin		Pair	Color
4	AI_CH8	1	white
9	AI_CH8_GND	1	brown
3	AI_CH7	2	green
8	AI_CH7_GND	2	yellow
2	AI_CH6	3	gray
7	AI_CH6_GND	3	pink
1	AI_CH5	4	blue
6	AI_CH5_GND	4	red
14	SensorSupply_CH4_GND	5	black
13	SensorSupply_CH4	5	violet
12	SensorSupply_CH3_GND	6	gray/pink
11	SensorSupply_CH3	6	red/blue
5, 10, 15	N.C.		
Housing		Shield	

Assignment of the CBAV420.1 cable when used at "AI 1-4" connection

HD-SUBD	Signal	Open cable end	
Pin		Pair	Color
4	AI_CH4	1	white
9	AI_CH4_GND	1	brown
3	AI_CH3	2	green
8	AI_CH3_GND	2	yellow
2	AI_CH2	3	gray
7	AI_CH2_GND	3	pink
1	AI_CH1	4	blue
6	AI_CH1_GND	4	red
14	SensorSupply_CH2_GND	5	black
13	SensorSupply_CH2	5	violet
12	SensorSupply_CH1_GND	6	gray/pink
11	SensorSupply_CH1	6	red/blue
5, 10, 15	N.C.		
Housing		Shield	

Overview: Assignment of the CBAV420.1 cable for use at the connections "DI", "AI 5-8" and "AI 1-4"

Pin	"DI" / "AI 1-4" / "AI 5-8"	"DI" connection	"AI 5-8" connection	"AI 1-4" connection	CBAV420.1: Open cable end	
		Signal	Signal	Signal	Pair	Color
4		DI_CH4	AI_CH8	AI_CH4	1	white
9		DI_GND	AI_CH8_GND	AI_CH4_GND	1	brown
3		DI_CH3	AI_CH7	AI_CH3	2	green
8		DI_GND	AI_CH7_GND	AI_CH3_GND	2	yellow
2		DI_CH2	AI_CH6	AI_CH2	3	gray
7		DI_GND	AI_CH6_GND	AI_CH2_GND	3	pink
1		DI_CH1	AI_CH5	AI_CH1	4	blue
6		DI_GND	AI_CH5_GND	AI_CH1_GND	4	red
14		N.C.	SensorSupply_CH4_GND	SensorSupply_CH2_GND	5	black
13		N.C.	SensorSupply_CH4	SensorSupply_CH2	5	violet
12		N.C.	SensorSupply_CH3_GND	SensorSupply_CH1_GND	6	gray/pink
11		N.C.	SensorSupply_CH3	SensorSupply_CH1	6	red/blue
5, 10, 15		N.C.	N.C.	N.C.		
Housing					Shield	

1.2.2 CBAV421.1 cable

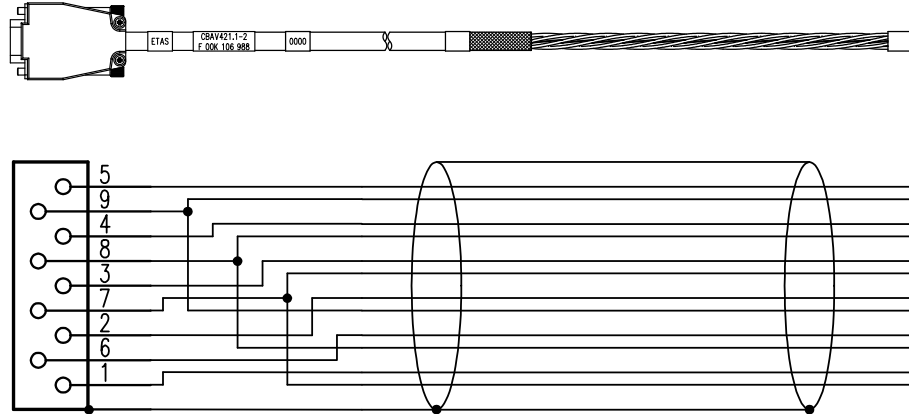


Fig. 1-12 CBAV421.1 cable with wiring plan

Product	Length	Order number
CBAV421.1-2	2 m / 6.5 ft	F 00K 106 988

Assignment of the CBAV421.1 cable when used at "DO" connection

SUBD Pin	Signal	Open cable end Pair	Color
5	DO_CH5	1	white
9	DO_GND	1	brown
4	DO_CH4	2	green
8	DO_GND	2	yellow
3	DO_CH3	3	gray
7	DO_GND	3	pink
2	DO_CH2	4	blue
9	DO_GND	4	red
6	DO_CH6	5	black
8	DO_GND	5	violet
1	DO_CH1	6	gray/pink
7	DO_GND	6	red/blue
Housing		Shield	

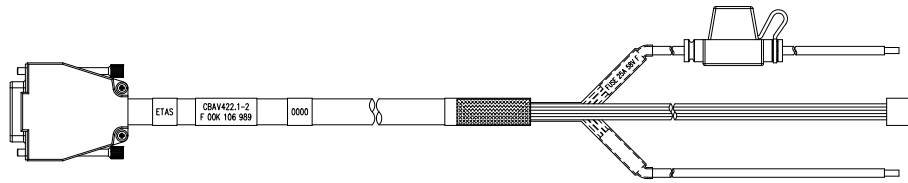
Assignment of the CBAV421.1 cable when used at the "AO" connection

SUBD		Open cable end	
Pin	Signal	Pair	Color
5	N.C.	1	white
9	AO_GND	1	brown
4	AO_CH4	2	green
8	AO_GND	2	yellow
3	AO_CH3	3	gray
7	AO_GND	3	pink
2	AO_CH2	4	blue
9	AO_GND	4	red
6	N.C.	5	black
8	AO_GND	5	violet
1	AO_CH1	6	gray/pink
7	AO_GND	6	red/blue
Housing		Shield	

Overview: Assignment of CBAV421.1 cable for use at the connections "DO" and "AO"

DO / AO	DO connection	AO connection	CBAV421.1: Open cable end	
Pin	Signal	Signal	Pair	Color
5	DO_CH5	N.C.	1	white
9	DO_GND	AO_GND	1	brown
4	DO_CH4	AO_CH4	2	green
8	DO_GND	AO_GND	2	yellow
3	DO_CH3	AO_CH3	3	gray
7	DO_GND	AO_GND	3	pink
2	DO_CH2	AO_CH2	4	blue
9	DO_GND	AO_GND	4	red
6	DO_CH6	N.C.	5	black
8	DO_GND	N.C.	5	violet
1	DO_CH1	AO_CH1	6	gray/pink
7	DO_GND	AO_GND	6	red/blue
Housing				

1.2.3 CBAV422.1 cable



Page A

Page B

Page C

Page D

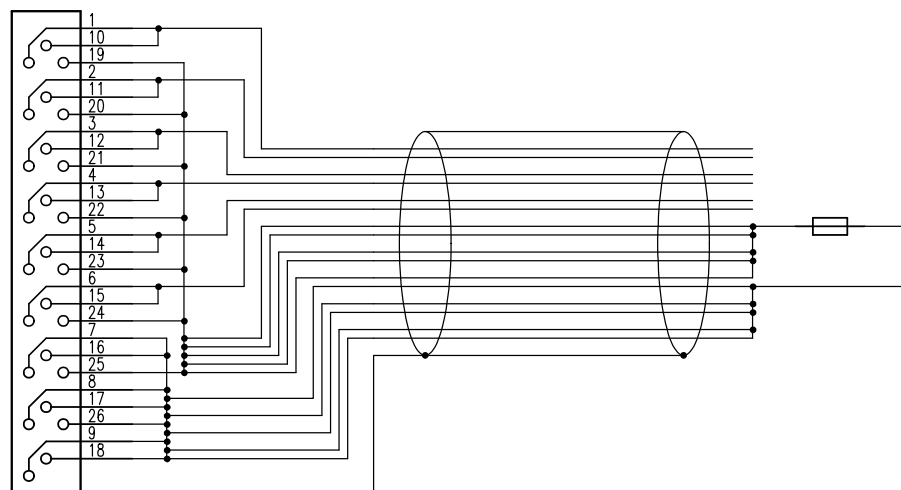


Fig. 1-13 CBAV422.1 cable with wiring plan

Product	Length	Order number
CBAV422.1-2	2 m / 6.5 ft	F 00K 106 989

Fuse

A replaceable fuse is located in the connection for the operating voltage in the CBAV422.1 cable:

MINI flat automotive fuse, quick-response, 42 V, 25 A

Fitting the cable by user**CAUTION!****Electrical overload of the cable is possible!**

*Always cable all PS_UBAT connections together!
All PS_GND connections must be cabled together!*

**CAUTION!****Half bridges could be destroyed!**

*When fitting your own cables, the half bridges must be protected
with a fuse in the operating voltage feed for the half bridges!*

Assignment of the CBAV422.1 cable when used at the "PS" connection

HD-SUBD Pin	Signal	Open cable end Color	
1, 10	PS_CH1	white	Page C
2, 11	PS_CH2	brown	
3, 12	PS_CH3	green	
4, 13	PS_CH4	yellow	
5, 14	PS_CH5	gray	
6, 15	PS_CH6	pink	
19, 20, 21,	PS_UBAT	blue	Page B
22, 23, 24,	PS_UBAT	red	
25	PS_UBAT	black	
	PS_UBAT	violet	
	PS_UBAT	gray/pink	
7, 8, 9, 16,	PS_GND	red/blue	Page D
17, 18, 26	PS_GND	white/green	
	PS_GND	brown/green	
	PS_GND	white/yellow	
	PS_GND	yellow/brown	
Housing		Shield	

1.3 Cable for the connections "IN"/ "OUT"

1.3.1 Ethernet cable

CBE400.2 cable

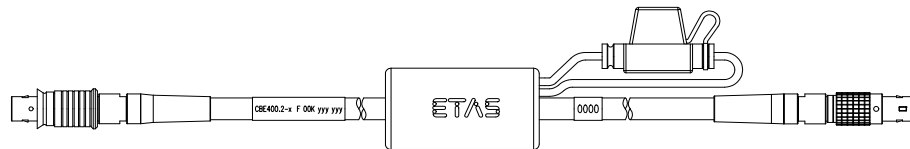


Fig. 1-14 CBE400.2 cable

Ethernet and voltage supply connection of an ES4xx/ES63x/ES93x measuring module at an ES600 network module or at an ES592/ES593-D/ES595 interface module. Robust, waterproof and dust-proof (IP67).

Product	Length	Order number
CBE400.2-3	3 m	F 00K 104 920

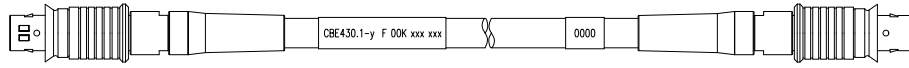
CBE401.1 cable



Fig. 1-15 CBE401.1 cable

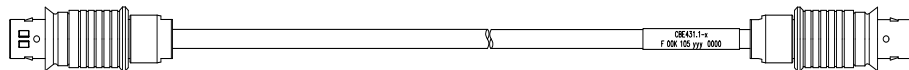
Ethernet and voltage supply connection of an ES4xx/ES63x/ES93x measuring module at an ES600 network module or at an ES592/ES593-D/ES595 interface module. Robust, waterproof and dust-proof (IP67).

Product	Length	Order number
CBE401.1-0m5	0.5 m	F 00K 106 128

CBE430.1 cable**Fig. 1-16** CBE430.1 cable

Cable for chaining ES4xx/ES63x/ES93x modules. Robust, waterproof and dust-proof (IP67).

Product	Length	Order number
CBE430.1-0m45	0.45 m	F 00K 104 923

CBE431.1 cable**Fig. 1-17** CBE431.1 cable

Flexible cable for chaining successive ES4xx/ES63x/ES93x modules. Robust, waterproof and dust-proof (IP67).

Product	Length	Order number
CBE431.1-0m14	0.14 m	F 00K 105 676
CBE431.1-0m30	0.30 m	F 00K 105 685

CBEX400.1 cable

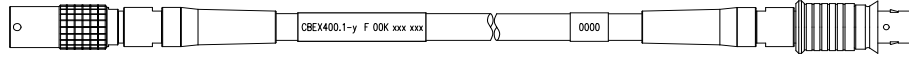


Fig. 1-18 CBEX400.1 cable

Ethernet extension cable for ES4xx/ES63x/ES93x modules. Robust, waterproof and dust-proof (IP67).

Product	Length	Order number
CBEX400.1-3	3 m	F 00K 105 294

1.3.2 Combined Ethernet and power supply cable

CBEP410.1 cable

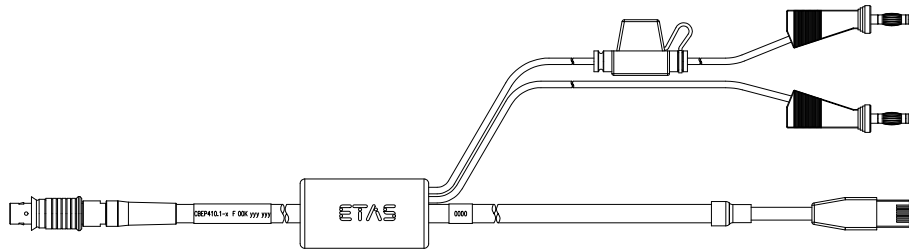
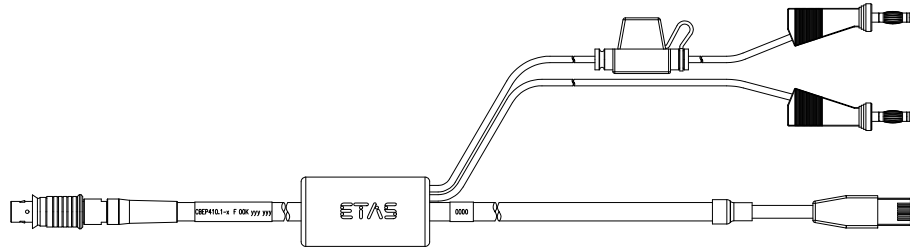


Fig. 1-19 CBEP410.1 cable

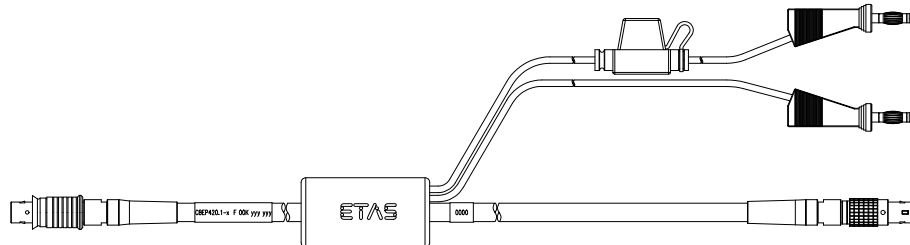
Connection of an ES4xx/ES63x/ES93x module to PC and power supply (stand-alone operation). Supply battery in the vicinity of the module. Robust, waterproof and dust-proof (IP67).

Product	Length	Order number
CBEP410.1-3	3 m	F 00K 104 927

CBEP415.1 cable**Fig. 1-20** CBEP415.1 cable

Connection of an ES4xx/ES63x/ES93x module to PC and power supply (stand-alone operation). Supply battery at the other end (i.e. in the trunk). Robust, waterproof and dust-proof (IP67).

Product	Length	Order number
CBEP415.1-5	5 m	F 00K 105 680

CBEP420.1 cable**Fig. 1-21** CBEP420.1 cable

Ethernet and voltage supply connection of an ES4xx/ES63x/ES93x measurement module with an ES600 network module or ES592/ES593-D/ES595 interface module (if the current consumption of the connected ES4xx/ES63x chain exceeds 2.5 A), an ES1135 simulation/system controller card or an ES720 drive recorder. Robust, waterproof and dust-proof (IP67).

Product	Length	Order number
CBEP420.1-3	3 m	F 00K 105 292

CBEP425.1 cable

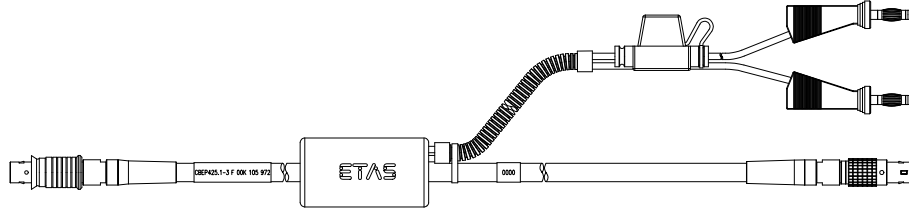


Fig. 1-22 CBEP425.1 cable

Ethernet and voltage supply connection of an ES4xx/ES63x/ES93x measurement module with an ES600 network module or ES592/ES593-D/ES595 interface module (if the current consumption of the connected ES4xx/ES63x chain exceeds 2.5 A), an ES1135 simulation/system controller card or an ES720 drive recorder. Robust, waterproof and dust-proof (IP67).

Product	Length	Order number
CBEP425.1-3	3 m	F 00K 105 972

CBEP430.1 cable

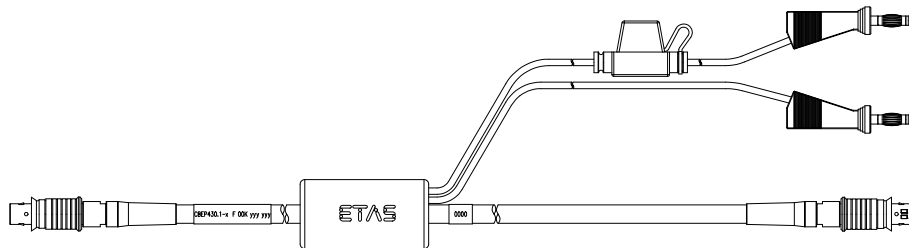


Fig. 1-23 CBEP430.1 cable

To chain ES4xx/ES63x/ES93x modules and connect an ES4xx/ES63x/ES93x chain to an ES910 rapid prototyping module. Additional connection to the power supply to compensate for voltage losses in long chains. Robust, waterproof and dust-proof (IP67).

Product	Length	Order number
CBEP430.1-0m5	0.5 m	F 00K 104 928

1.4 Protective caps

The connections "IN" and "OUT" of the ES930.1 can be protected with different protective caps according to the operating conditions.

1.4.1 Cap CAP_Lemo_1B

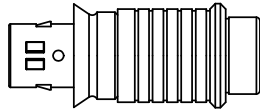


Fig. 1-24 Cap CAP_Lemo_1B

The cap CAP_Lemo_1B protects the connection "IN" or "OUT" against dirt according to IP67.

Product	Order number
CAP_Lemo_1B	F 00K 105 298

1.4.2 Cap CAP_Lemo_1B_LC

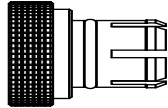


Fig. 1-25 Cap CAP_Lemo_1B_LC

The cap CAP_Lemo_1B_LC protects the connection "IN" or "OUT" in an inexpensive way against dirt.

Product	Order number
CAP_Lemo_1B_LC	F 00K 105 683

2 Ordering information

2.1 ES930.1

Order name	Short name	Order number
ES930.1 Multi-I/O Module	ES930.1	F 00K 104 250

Scope of supplies

ES930.1 Multi-I/O Module,
T-Bracket for Housing,
List "Content of this Package",
Calibration-Certification,
ES930 Safety Advice,
China-RoHS-leaflet_Compact_green_cn

Note

Cables are not part of the scope of supplies of the module and must be ordered separately (see chapter 2.2.1 on page 29).

2.2 Accessories

2.2.1 Cables

Note

At the connections of the ES930.1, the ETAS cables listed in this user's guide should be used as far as possible. The maximum permissible cable lengths must be adhered to.

Note

If you require customized cables, please contact your ETAS contact partner or sales.de@etas.com.

Note

For the connection of the inputs and outputs of the module, three CBAV420.1 cables, two CBAV421.1 cables and one CBAV422.1 cable are required.

Cables for the connectors "AI" and "DI"

Order name	Short name	Order number
ES930 Input Cable, DSUB - Open Wire (15fc - 15c), 2 m / 6.5 ft	CBAV420.1-2	F 00K 106 987

Cables for the connectors "AO" and "DO"

Order name	Short name	Order number
ES930 Output Cable, DSUB - Open Wire (9fc - 9c), 2 m / 6.5 ft	CBAV421.1-2	F 00K 106 988

Cables for the connector "PS"

Order name	Short name	Order number
ES930 Power Stage Cable, DSUB - Open Wire (26mc-26c), 2 m / 6.5 ft	CBAV422.1-2	F 00K 106 989

*Cables for the connectors "IN" and "OUT"***Ethernet cable:**

Order name	Short name	Order number
Ethernet Chain Connection Cable, Lemo 1B FGF - Lemo 1B FGL (8mc-8fc), 3 m	CBE400.2-3	F 00K 104 920
Ethernet Chain Connection Cable, Highly Flexible, Lemo 1B FGF - Lemo 1B FGL (8mc-8fc), 0.5 m	CBE401.1-0m5	F 00K 106 128
Ethernet Chain Connection Cable, Lemo 1B FGA - Lemo 1B FGL (8mc-8fc), 0m45	CBE430.1-0m45	F 00K 104 923
Ethernet Chain Connection Cable, Highly Flexible, Lemo 1B FGA - Lemo 1B FGL (8mc-8fc, 0m14)	CBE431.1-0m14	F 00K 105 676
Ethernet Chain Connection Cable, Highly Flexible, Lemo 1B FGA - Lemo 1B FGL (8mc-8fc, 0m30)	CBE431.1-0m30	F 00K 105 685
Ethernet Extension Cable, Lemo 1B PHL - Lemo 1B FGL (8mc-8fc), 3 m	CBEX400.1-3	F 00K 105 294

Combined Ethernet and power supply cable:

Order name	Short name	Order number
Ethernet PC Connection and Power Supply Cable, Lemo 1B FGL - RJ45 - Banana (8fc-8mc-2mc), 3 m	CBEP410.1-3	F 00K 104 927
Ethernet PC Connection and Power Supply Cable, Power Feeder close to PC, Lemo 1B FGL - RJ45 - Banana (8fc-8mc-2mc), 5 m	CBEP415.1-5	F 00K 105 680
Ethernet Connection and Power Supply Cable, Lemo 1B FGF - Lemo 1B FGL - Banana (8mc-8fc-2mc), 3 m	CBEP420.1-3	F 00K 105 292
Ethernet Connection and Power Supply Cable, Power Feeder close to Interface Module, Lemo 1B FGF - Lemo 1B FGL - Banana (8mc-8fc-2mc), 3 m	CBEP425.1-3	F 00K 105 972
Ethernet Chain Connection and Power Supply Cable, Lemo 1B FGL - Lemo 1B FGA - Banana (8fc-8mc-2mc), 0m5	CBEP430.1-0m5	F 00K 104 928

2.2.2 Protective caps

Order name	Short name	Order number
Cap to protect open Lemo 1B sockets against dirt	CAP_Lemo_1B	F 00K 105 298
Cap to protect open Lemo 1B sockets against dirt, cost effective	CAP_Lemo_1B_ LC	F 00K 105 683

2.2.3 Housing accessories

Order name	Short name	Order number
T-bracket for ES600 housing	ES600_H_TB	F 00K 001 925

2.2.4 Device calibration

Order name	Short name	Order number
Calibration Service for ES930.1	K_ES930	F 00K 106 991

3 **ETAS Contact Addresses**

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ETAS Subsidiaries and Technical Support

For details of your local sales office as well as your local technical support team and product hotlines, take a look at the ETAS website:

ETAS subsidiaries WWW: www.etas.com/en/contact.php

ETAS technical support WWW: www.etas.com/en/hotlines.php

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