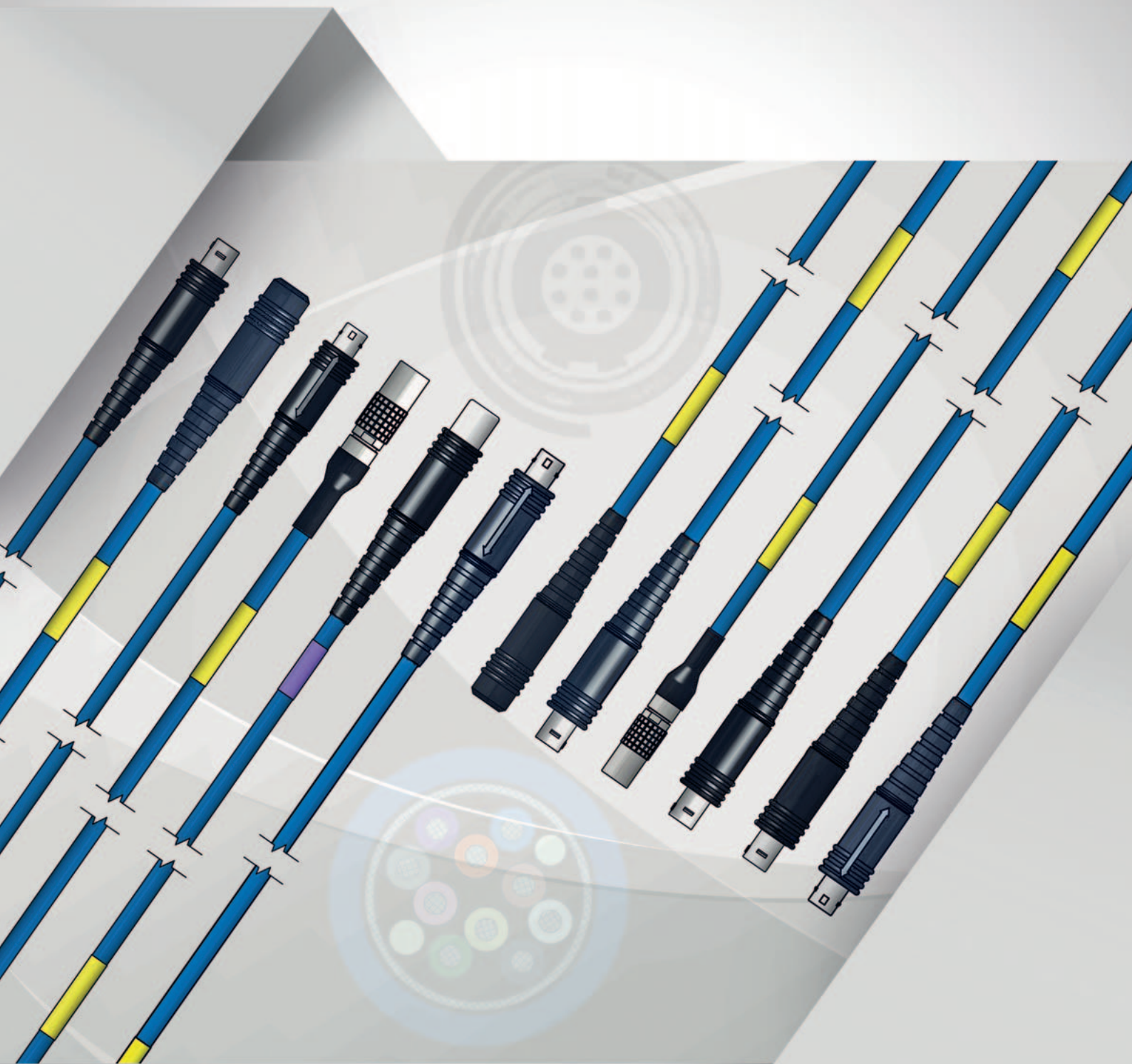


ADAPTATION FOR ETAS MEASURING TECHNIQUE



Adaptation for ETAS measuring technique

Content

■ Introduction

The automobile technical development in automobile industry often faces challenges in wiring sensor systems for measuring tasks. This also applies for application fields of ETAS measuring technique as for example measurement and calibration of parameters and variables of control devices. A typical example is the implementation of measurements in already pre-equipped vehicles in which all cables were already placed. In case that in the measuring chain "control device – port cable – module " only one component isn't compatible, the implementation of the measurements has to be realized by the corresponding adaptation. For this SAB BRÖCKSKES has developed special solutions.

Individual cable lengths, new productions even for very small quantities , individual marking and direct service on site complement our product range.

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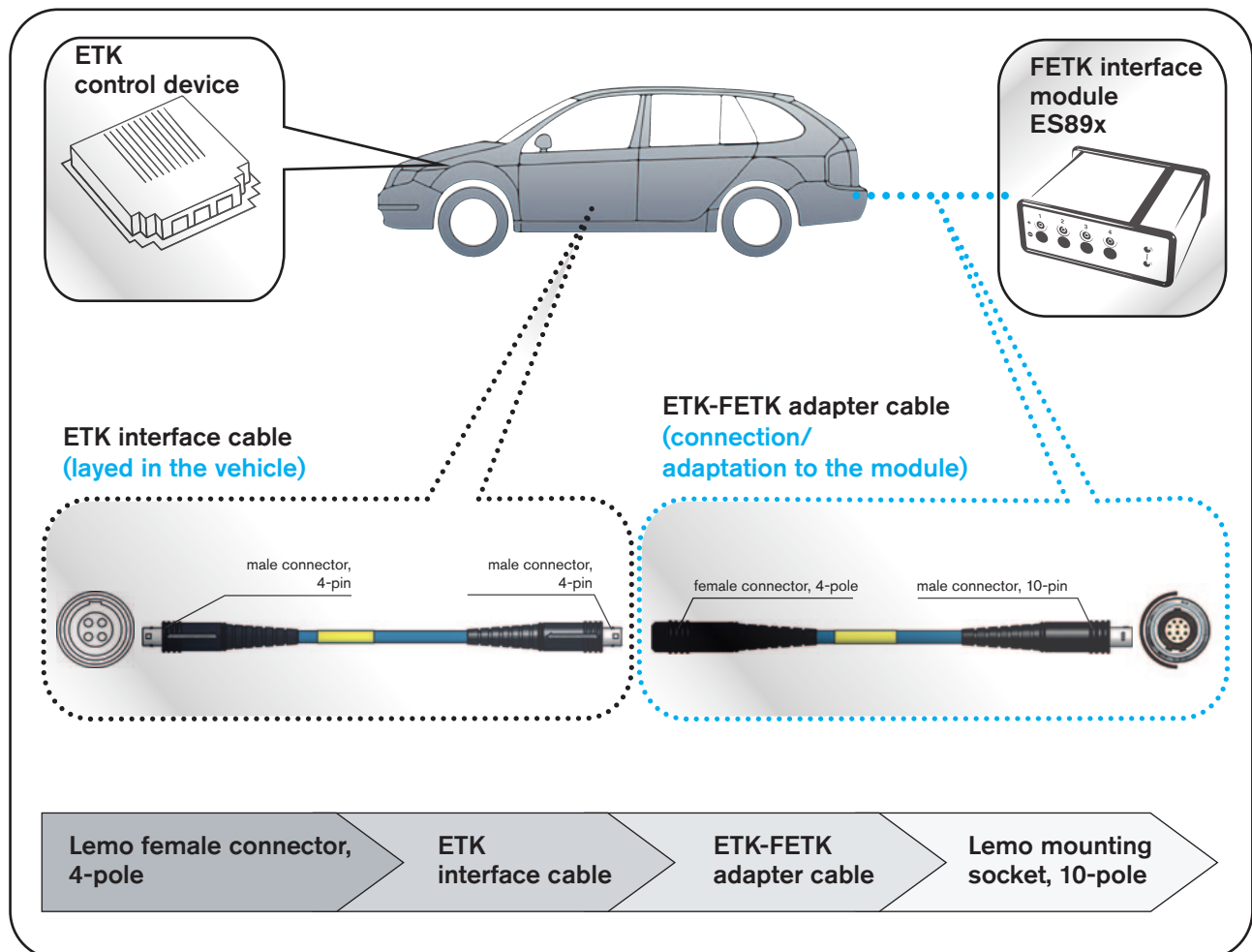
Interfaces for ETAS measuring technique

Survey measuring chain

■ Application examples

The ETK control device and the ETK interface cable are placed in the vehicle. Nevertheless, a FETK interface module ES89x is used. Now an appropriate adapter cable is needed which makes the ETK interface cable compatible with the FETK interface module ES89x. This is demonstrated in the following figure.

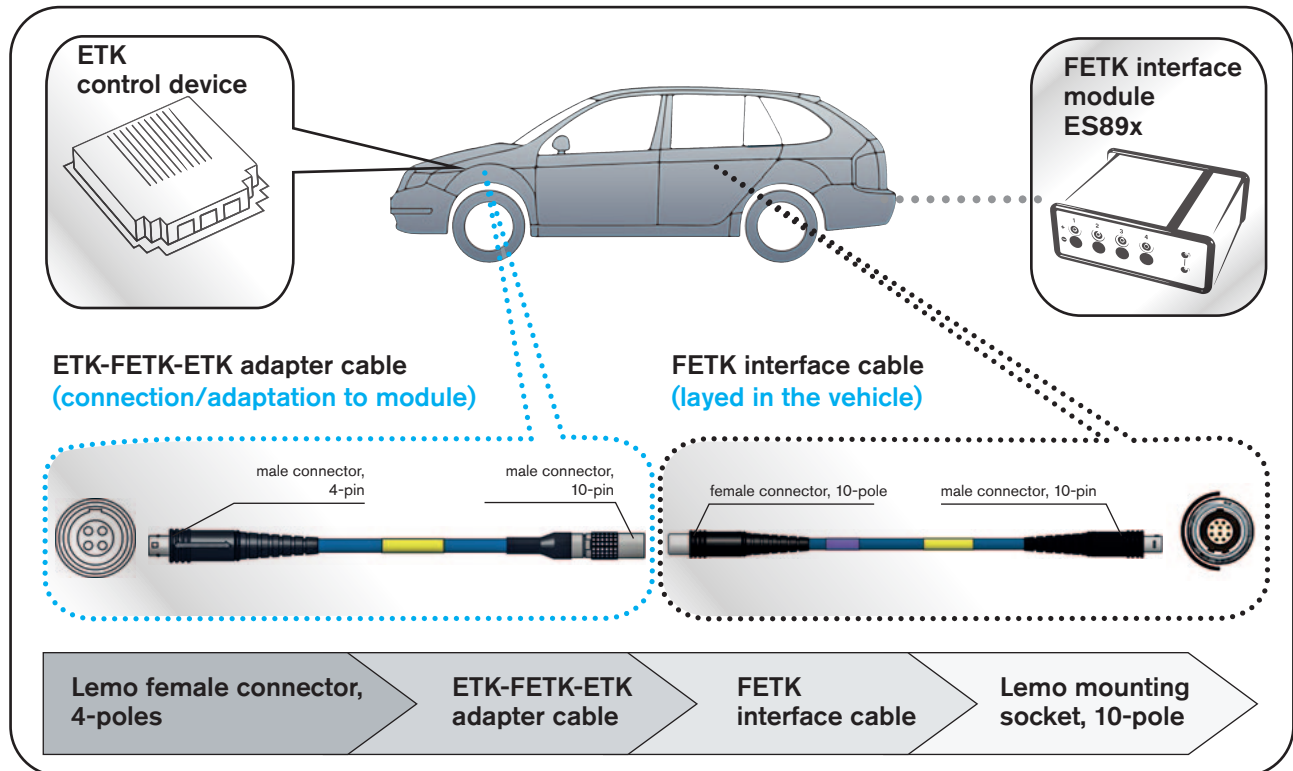
■ Application example for catalogue page 5



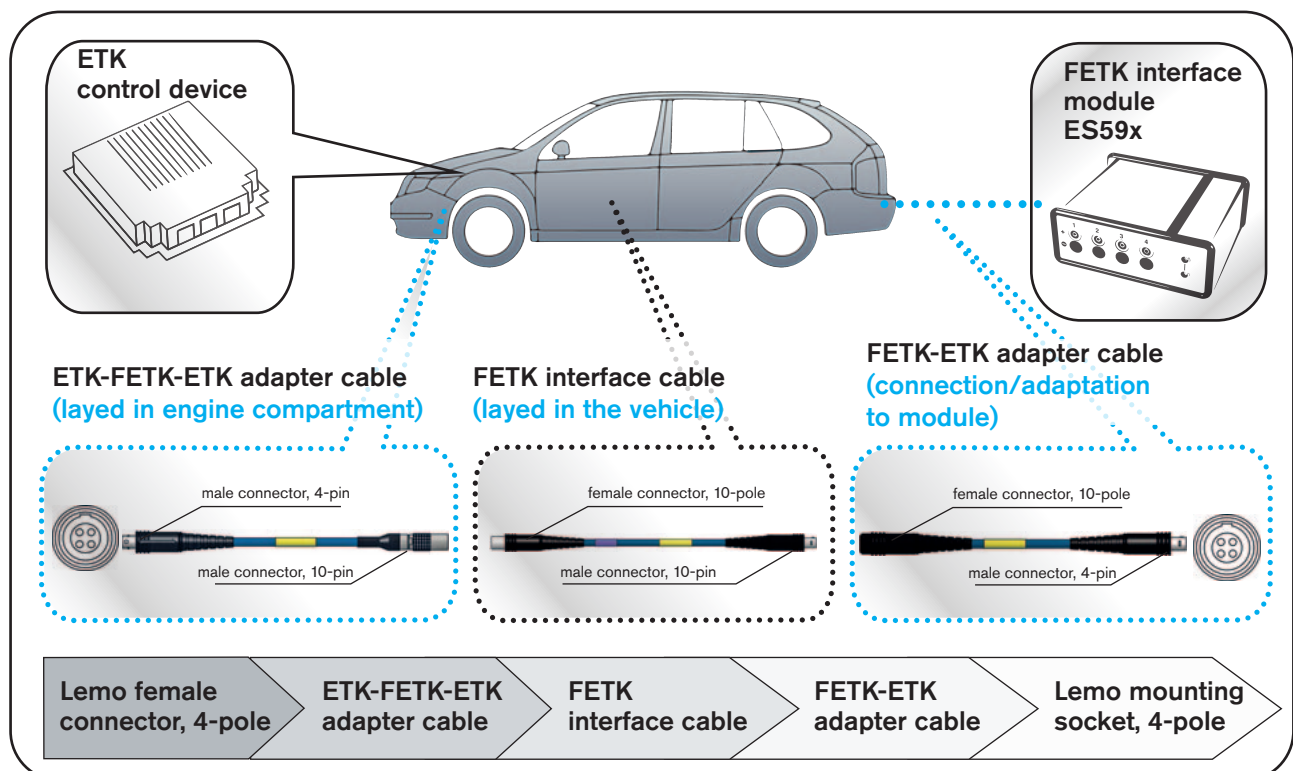
Interfaces for ETAS measuring technique

Survey measuring chain

■ Application example for catalogue page 6



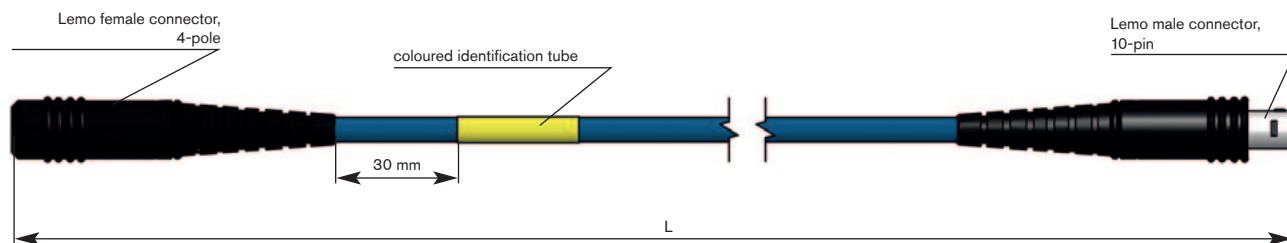
■ Application example for catalogue page 7



Adapter cable for ETAS measuring technique

ETK - FETK adapter

with Lemo female connector 4-pole and Lemo male connector 10-pin



Application range:

Connection of ETK cable CBM150.1
with FETK interface module ES89x

SURVEY

Measuring chain:

Control device:	ETK control device
Interface cable:	ETK interface cable (catalogue page 8)
Adaptation:	ETK - FETK adapter cable (catalogue page 5)
Interface module:	FETK interface module for example ES89x

Connector:

Side 1:	Lemo female connector 4-pole
Side 2:	Lemo male connector 10-pin

Configuration examples:

item no.	sheath material	length „L“ in cm
S3833-4499-00030	PUR	30
S3833-4267-00030	silicone	30

SAB marking:

item no., order no., length

PUR Cable data:

Dimension:	2 x 2 x 0,22 mm ²
Insulation:	TPFK
Screen:	global braiding 100%
Outer sheath:	PUR, colour blue, matt surface
Outer diameter:	approx. 5,5 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 350 V
Temperature range:	-40°C/+90°C (+125°C / 2500h)
Oil resistance:	very good - TPU acc. to EN50363-10-2

SILICONE Cable data:

Dimension:	2 x 2 x 0,22 mm ²
Insulation:	TPFK
Screen:	global braiding 100%
Outer sheath:	Besilen®, colour blue
Outer diameter:	approx. 5,8 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 350 V
Temperature range	
fixed laying:	-40°C/+180°C
flexible application:	-25°C/+180°C



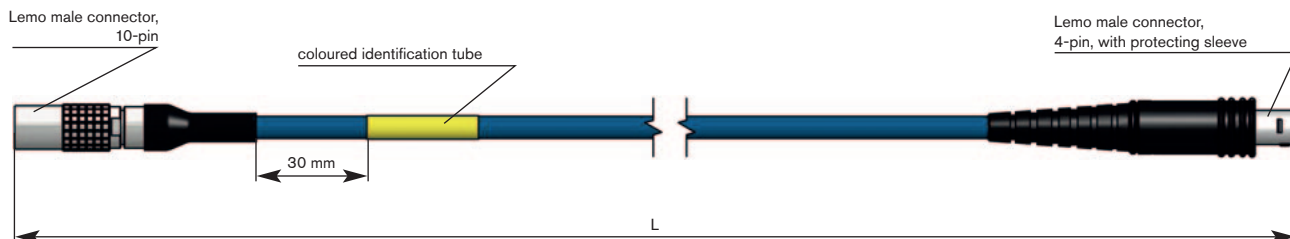
Further service issues:

- individual marking by shrinkable sleeve as for example with internal material no. or barcode

Adapter cable for ETAS measuring technique

ETK - FETK - ETK adapter

with Lemo male connector 10-pin and Lemo male connector 4-pin



Application range:

Connection of FETK cable CBE.260.1 with ETK control device*

*Note: If the FETK cable is layed in the vehicle and is used as interface cable between ETK control device and ETK interface module the adaption is necessary towards control device and interface module.

SURVEY

Measuring chain:

Control device:	ETK control device
Adaptation:	ETK-FETK-ETK adapter cable (catalogue page 5)
Interface cable:	FETK interface cable (catalogue page 10)
Adaptation:	FETK - ETK adapter cable (catalogue page 7)
Interface module:	ETK interface module for example ES59x FETK interface module for example ES89x

Connector:

Side 1:	Lemo male connector 10-pin
Side 2:	Lemo male connector 4-pin

Configuration examples:

item no.	sheath material	length „L“ in cm
S3833-4493-00030	PUR	30
S3833-4500-00030	silicone	30

SAB marking:

item no., order no., length

PUR Cable data:

Dimension:	2 x 2 x 0,22 mm ²
Insulation:	TPFK
Screen:	global braiding 100%
Outer sheath:	PUR, colour blue, matt surface
Outer diameter:	approx. 5,5 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 350 V
Temperature range:	-40°C/+90°C (+125°C / 2500h)
Oil resistance:	very good - TPU acc. to EN50363-10-2

SILICONE Cable data:

Dimension:	2 x 2 x 0,22 mm ²
Insulation:	TPFK
Screen:	global braiding 100%
Outer sheath:	Besilen®, colour blue
Outer diameter:	approx. 5,8 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 350 V
Temperature range	
fixed laying:	-40°C/+180°C
flexible application:	-25°C/+180°C



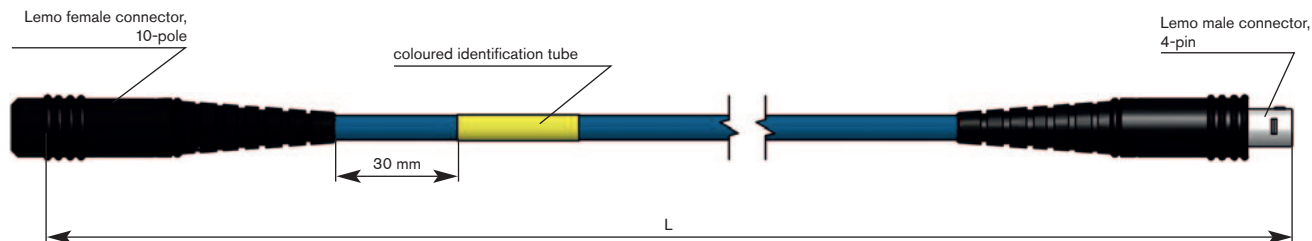
Further service issues:

- individual marking by shrinkable sleeve as for example with internal material no. or barcode

Adapter cable for ETAS measuring technique

FETK - ETK adapter

with Lemo female connector 10-pole and Lemo male connector 4-pin



Application range:

Connection of FETK cable CBE.260.1 with ETK interface module for example ES59x*

*Note: If the FETK cable is layed in the vehicle and is used as interface cable between ETK control device and ETK interface module the adaption is necessary towards control device and interface module.

SURVEY

Measuring chain:

Control device:	ETK control device
Adaptation:	ETK-FETK-ETK adapter cable (catalogue page 5)
Interface cable:	FETK interface cable (catalogue page 10)
Adaptation:	FETK - ETK adapter cable (catalogue page 7)
Interface module:	ETK interface module for example ES59x

Connector:

Side 1:	Lemo female connector 10-pole
Side 2:	Lemo male connector 4-pin

Configuration examples:

item no.	sheath material	length „L“ in cm
S3833-4501-00030	PUR	30
S3833-4502-00030	silicone	30

SAB marking:

item no., order no., length

PUR Cable data:

Dimension:	2 x 2 x 0,22 mm ²
Isolation:	TPFK
Screen:	global braiding 100%
Outer sheath:	PUR, colour blue, matt surface
Outer diameter:	approx. 5,5 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 350 V
Temperature range:	-40°C/+90°C (+125°C / 2500h)
Oil resistance:	very good - TPU acc. to EN50363-10-2

SILICONE Cable data:

Dimension:	2 x 2 x 0,22 mm ²
Insulation:	TPFK
Screen:	global braiding 100%
Outer sheath:	Besilen®, colour blue
Outer diameter:	approx. 5,8 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 350 V
Temperature range	
fixed laying:	-40°C/+180°C
flexible application:	-25°C/+180°C



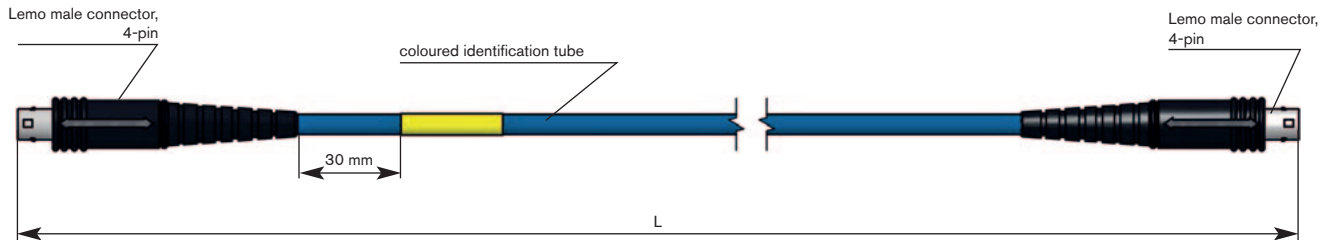
Further service issues:

- individual marking by shrinkable sleeve as for example with internal material no. or barcode

Interface cable for ETAS measuring technique

ETK interface cable

with Lemo male connector 4-pin at both sides



Application range:

Connection of ETK control device with ETK interface module for example ES59x

SURVEY

Measuring chain:

Control device:	ETK control device
Interface cable:	ETK interface cable
Interface module:	ETK interface module for example ES59x

Connector:

Side 1:	Lemo male connector 4-pin
Side 2:	Lemo male connector 4-pin

Configuration examples:

item no.	sheath material	length „L“ in cm
S3833-4219-00100	PUR	100
S3833-4218-00100	silicone	100

SAB marking:

item no., order no., length

PUR Cable data:

Dimension:	2 x 2 x 0,22 mm ²
Isolation:	TPFK
Screen:	global braiding 100%
Outer sheath:	PUR, colour blue, matt surface
Outer diameter:	approx. 5,5 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 350 V
Temperature range:	-40°C/+90°C (+125°C / 2500h)
Oil resistance:	very good - TMPU acc. to EN50363-10-2

SILICONE Cable data:

Dimension:	2 x 2 x 0,22 mm ²
Isolation:	TPFK
Screen:	global braiding 100%
Outer sheath:	Besilen®, colour blue
Outer diameter:	approx. 5,8 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 350 V
Temperature range	
fixed laying:	-40°C/+180°C
flexible application:	-25°C/+180°C



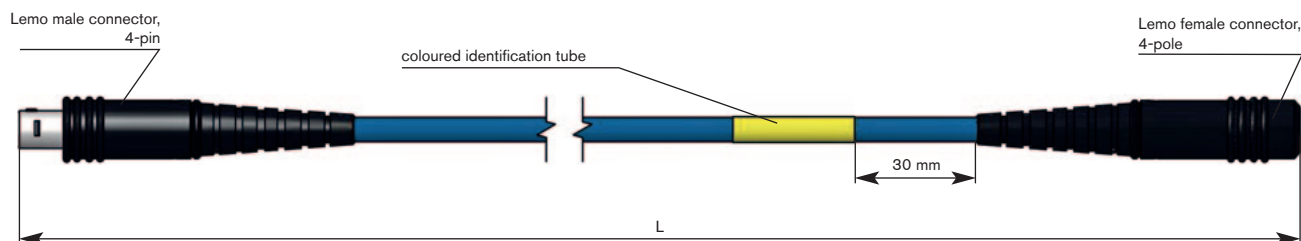
Further service issues:

- individual marking by shrinkable sleeve as for example with internal material no. or barcode

Extension cable for ETAS measuring technique

ETK extension

with Lemo male connector 4-pin and Lemo female connector 4-pole



Application range:

Extension of ETK interface cable and connection to ETK interface module for example ES59x

SURVEY

Measuring chain:

Interface cable:	ETK interface cable (catalogue page 8)
Extension cable:	ETK extension cable
Interface module:	ETK interface module for example ES59x

Cable data:

Dimension:	2 x 2 x 0,22 mm ²
Isolation:	TPFK
Screen:	global braiding 100%
Outer sheath:	Besilen®, colour blue
Outer diameter:	approx. 5,8 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 350 V
Temperature range	
fixed laying:	-40°C/+180°C
flexible application:	-25°C/+180°C

Connector:

Side 1:	Lemo male connector 4-pin
Side 2:	Lemo female connector 4-pole

Configuration example:

item no.	length „L“ in cm
S3833-4568-00100	100

SAB marking:

item no., order no., length



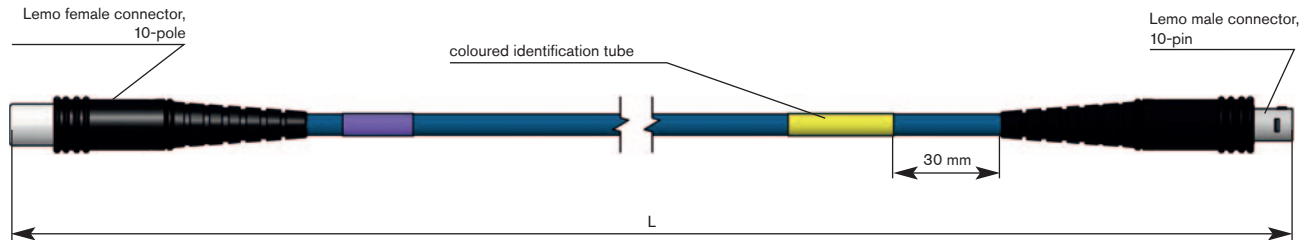
Further service issues:

- individual marking by shrinkable sleeve as for example with internal material no. or barcode

Interface cable for ETAS measuring technique

FETK interface cable

with Lemo female connector 10-pole and Lemo male connector 4-pin



Application range:

Connection of FETK control device with FETK interface module for example ES89x

SURVEY

Measuring chain:

Control device:	FETK control device
Interface cable:	FETK interface cable
Interface module:	FETK interface module for example ES59x

Cable data:

Dimension:	4 x 2 x AWG26 + 2 x AWG24
Isolation:	TPFK
Screen:	global braiding 100%
Outer sheath:	PUR, colour blue, matt surface
Outer diameter:	approx. 6,6 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 90 V
Temperature range:	-40°C/+90°C (+125°C / 2500h)
Oil resistance:	very good - TMPU acc. to EN50363-10-2

Connector:

Side 1:	Lemo female connector 10-pole
Side 2:	Lemo male connector 10-pin

Configuration example:

item no.	length „L“ in cm
S1631-4013-00300	300

SAB marking:

item no., order no., length



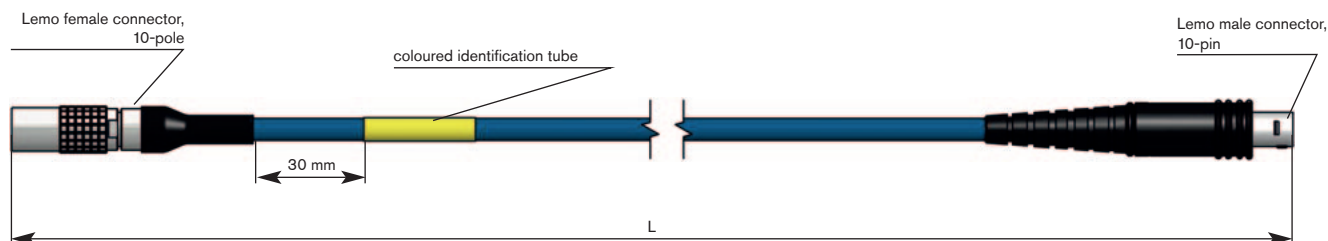
Further service issues:

- individual marking by shrinkable sleeve as for example with internal material no. or barcode

Extension cable for ETAS measuring technique

FETK extension

with Lemo female connector 10-pole and Lemo male connector 10-pin



Application range:

Extension of FETK interface cable and connection to FETK interface module for example ES89x

SURVEY

Measuring chain:

Interface cable:	FETK interface cable (catalogue page 10)
Extension cable:	FETK extension cable
Interface module:	FETK interface module for example ES59x

Connector:

Side 1:	Lemo female connector 10-pole
Side 2:	Lemo male connector 10-pin

Configuration example:

item no.	length „L“ in cm
S1631-4112-00100	100

SAB marking:

item no., order no., length

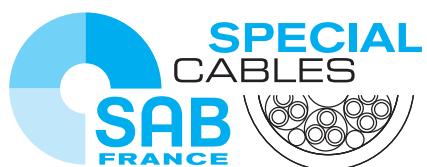
Cable data:

Dimension:	4 x 2 x AWG26 + 2 x AWG24
Isolation:	TPFK
Screen:	global braiding 100%
Outer sheath:	PUR, colour blue, matt surface
Outer diameter:	approx. 6,6 mm
Min. bending radius:	10 x d
Peak operating voltage:	max. 90 V
Temperature range	-40°C/+90°C (+125°C / 2500h)
Oil resistance:	very good - TMPU acc. to EN50363-10-2



Further service issues:

- individual marking by shrinkable sleeve as for example with internal material no. or barcode



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