KEBA

Automation by innovation.



System Cables
Order Catalogue

Motor product ranges: LSN, LST, LSP connected to drive controllers: KeDrive D3, ServoOne CM, ServoOne, c-line Drives

System Cables Order Catalogue

ID no.: 0966.24B.1-00

Date: 05/2021

Subject to technical change without notice.
The content of our catalogue was compiled with the greatest care and attention, and based on the latest information available to us. We should nevertheless point out that this document cannot always be updated simultaneously with the on-going technical development of our products.
Information and specifications may be subject to change at any time. For information on the latest version, please visit www.keba.com.

The German version is the original of this order catalogue

TABLE OF CONTENTS

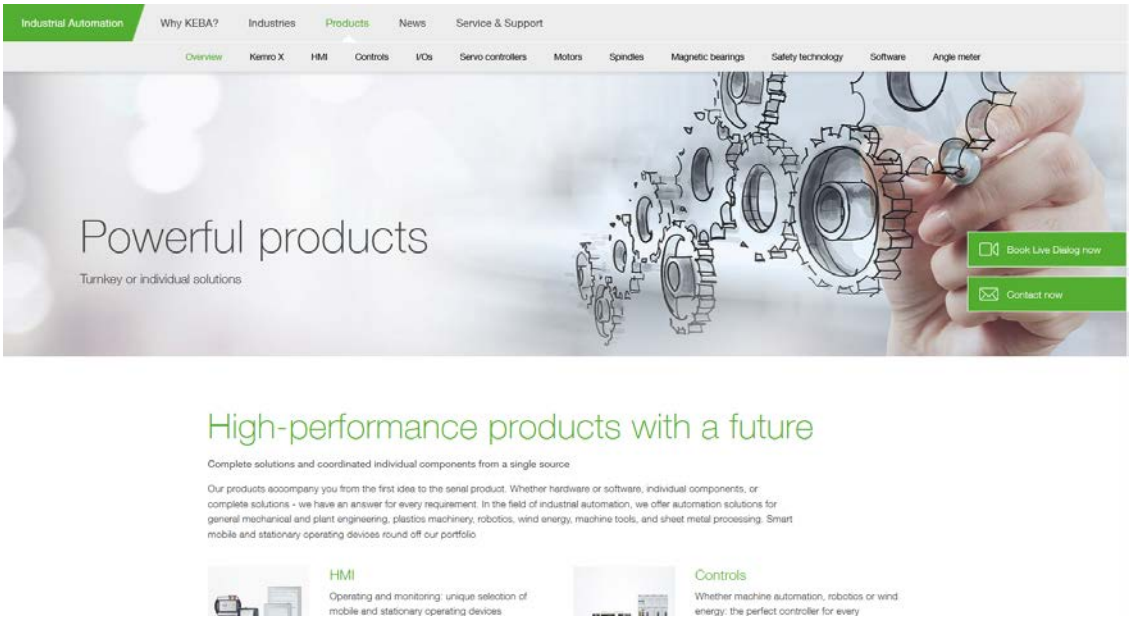
1 Introduction 5
1.1 About this catalogue 7
1.2 Other documentation 8

2 Encoder cables 9
2.1 Encoder cable for KeDrive D3 DA (ServoOne CM) 9
2.2 Encoder cable for ServoOne single-axis and multi-axis system 20
2.3 Encoder cables ServoOne junior 27
2.4 Encoder cables c-line Drives 33

3 Motor cables 41
3.1 Motor cable for KeDrive D3 DA (ServoOne CM) 43
3.2 Motor cables ServoOne 61
3.3 Motor cables ServoOne junior 73
3.4 Motor cables c-line Drives 91

Space for notes

1 Introduction



KEBA provides comprehensive information via the Internet. Whether you are looking for more detailed technical information on our products or on project planning and design, or want to contact our nearest representative - just visit our website: www.keba.com.

Or call us on +49 6441 966-0 to obtain detailed information material on our broad range of services, available in printed form as a convenient reference source.

Design-in

Professional project management that keeps you to deadlines and budgets is an important element of our joint success.
The sooner you get to market with your new solution the better.
That is why we can support
you in:

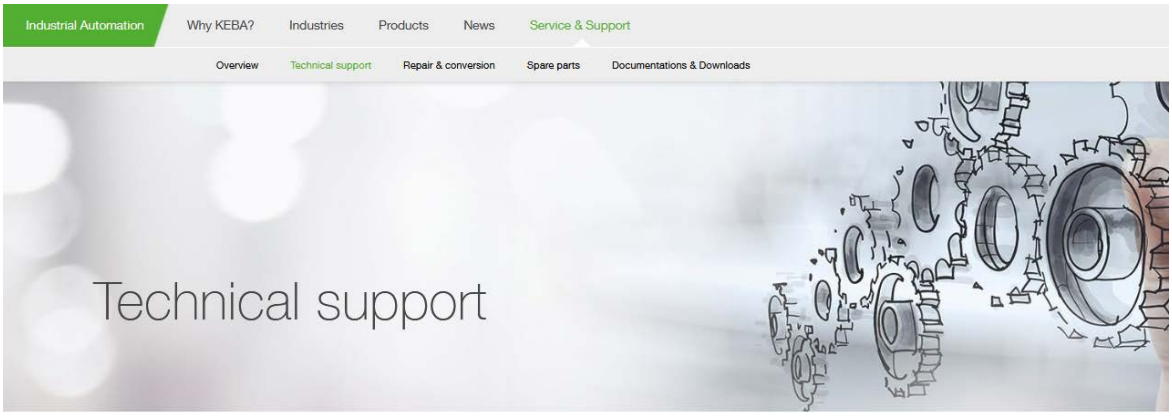
- Analysing requirements for
- Planning and drive design
- Preparing the functional specification
- Total cost analysis
- Project management

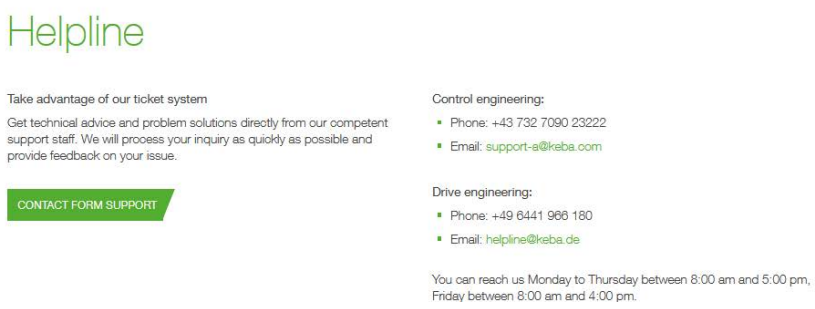
Logistics

To make ordering a routine exercise and reduce or even eliminate unnecessary formalities, the entire process is co-ordinated, from planning through ordering to spare parts supplies.

Software update service

As part of our product maintenance function we are continuously improving the quality of the drive system. Our software update service provides you with information on new releases and enhancements to the various firmware versions.





After-sales

You can call on our service and support wherever and whenever you need them. With our flexibility, fast response times, superior technical know-how and extensive user experience, we can offer a wide range of services, including:

- On-site commissioning.
- Advice and training.
- Repair / service concept.

Helpline

Our Helpline can assist you with:

- Telephone commissioning of standard products and systems.
- Evaluating error and diagnostic displays.
- Locating and dealing with repeatable faults.
- Software updates.

To contact the Helpline:

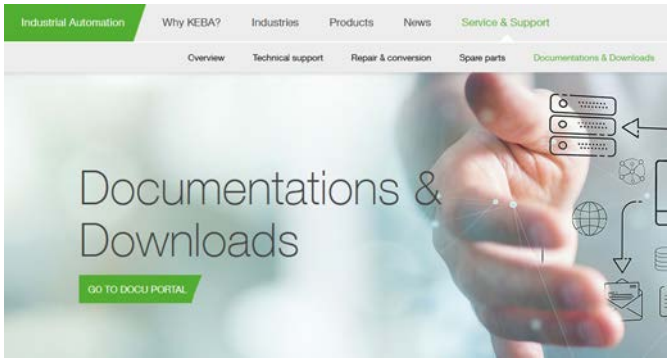
Address: KEBA Industrial Automation Germany GmbH
Gewerbestrasse 5-9
35633 Lahnau
Mo.-Fr.: 8 a.m. - 5 p.m. (CET)
Telephone: +49 (0) 6441 966-180
E-mail: helpline@lkeba.de

Internet:

- ▶ www.keba.com
- ▶ Support & Service
- ▶ Trouble Ticket

Downloads

You will find the latest comprehensive information on our products on our website www.keba.com in "Documentation & Downloads".



1.1 About this catalogue

General information:

For the straightforward assignment of the appropriate cable to our motors in the LSN, LST and LSP product ranges, this catalogue is sorted by the servocontrollers to be used.
Simply look for the servocontroller you are using, e.g. KeDrive D3 DA (ServoOne CM) and you will find all the suitable system cables in the corresponding chapter. The first half of the catalogue contains all the suitable encoder cables and in the second half, all the suitable motor power cables.
The encoder cables are available in a very wide range of designs, for example with straight or angled encoder connectors at the controller end as well as M23 connectors or the smaller I17 connector at the motor end. Furthermore, the encoder cables are sorted by the encoder types used. You will find a suitable one-cable solution (Hiperface DSL) in the motor cables chapter.
For your optimal system design, our motor power cables are available in a very wide range of conductor cross-sections.
(e.g. 0.5 mm^2 ... 16.0 mm^2 for 5 A, 10 A, 16 A, …)
If you have special requirements on your system cable and these requirements are not included in the cable catalogue, please contact us. We would be pleased to prepare a special solution together with you.

Advantages of KEBA system cables

- Many years of experience in design and manufacture
- Best EMC behaviour (shielding, signal cores twisted in pairs)
- 100 % inspected quality also during routine testing
- CE conformity is confirmed at the system level (KEBA servocontroller + motor + cable)
- Usage of only high-quality branded cables and connectors for best quality and reliability
- Very good price / performance ratio
- Functions confirmed with maximum cable lengths by in-house test laboratory.
- Suitable for energy chains
- IP67 protection (motor end) by means of matched connector
- Approvals: CE, UL, UR
- Colours as per DESINA for better overview in the switch cabinet
- Full flexibility in relation to length
- One-cable solution matched in extensive system test
- Retention of system responsibility

1.2 Other documentation

Documentation about the KEBA servomotors

Document	Contents	ID no.	File formats
LSP Servomotors Order Catalogue	Basic information about servomotors from KEBA, notes about ordering, characteristics and technical data, connector connection systems, accessories, planetary gearboxes, standards and acceptances.	0814.08B.x	PDF
LSN/LST Servomotors Order Catalogue	Basic information about servomotors from KEBA, notes about ordering, characteristics and technical data, connector connection systems, accessories, standards and acceptances	0814.05B.x	PDF
LSM Servomotors Order Catalogue	Basic information about servomotors from KEBA, notes about ordering, characteristics and technical data, cable tail connection systems, accessories, standards and acceptances	0814.07B.x	PDF
DS2 Synchronous Servomotor Order Catalogue	Basic information about servomotors from KEBA, notes about ordering, characteristics and technical data, connector connection systems, accessories, standards and acceptances	1173.00B.x	PDF
DA Three-Phase Asynchronous Motor	Basic information about three-phase asynchronous motors from KEBA, notes about ordering, characteristics and technical data, connector connection systems, accessories, standards and acceptances	1173.01B.x	PDF

NOTE:
Subject to technical change without notice. Information and specifications may be subject to change at any time.
You will find our latest documentation at www.keba.com in the "*Docu Portal*" section.

2 Encoder cables

2.1 Encoder cable for KeDrive D3 DA (ServoOne CM)
Order code

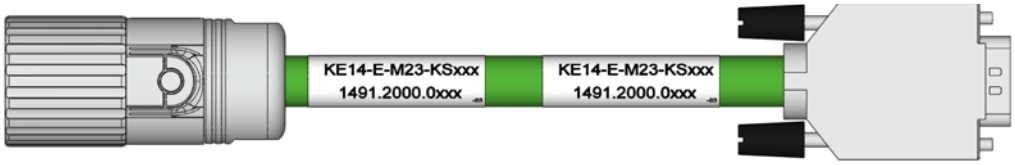
Article number:			14	91	.	0	1		0	0	.	0	0	1	0
Printed:			KE	14	-	R	I17	-			-	KS	0	1	0
Ready made encoder cables															
Encoder type	0:	R	Resolver												
	1:	H	Hiperface®												
	2:	E	EnDat® / SSI												
	3:	I	Incremental + zero pulse												
Connector, motor end	0:	M23	M23 connector motor end												
	1:	I17	I17 connector motor end												
- Spare -	0:	- Blank -													
Connector, controller end	0:	- Blank -	D-Sub straight												
	1:	W45	D-Sub 45° angled downward												
Additional option	0:	KS	Capable for energy chains												
Cable length	001:	001	1 m												
	010:	010	10 m												
	030:	030	30 m												

Encoder cable standard servomotors LST, LSN, LSP <=> KeDrive D3 DA (ServoOne CM) with EnDat/SSI

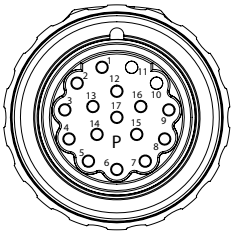
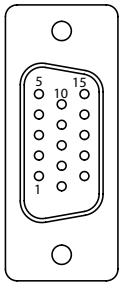
Cable type: KE14-E-M23-KSxxx

Order no.	1491.2000.0xxx
Compatible with	Encoder Exx, G3, G5, G12.x -> SSI/EnDat

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS +	2	
	2	REFCOS	1	
	3	SIN +	11	
	4	REFSIN	6	
	7	GND	8	
	8	Us 5.25 V	3	
	10	DATA+	4	
	11	DATA-	5	
	12	CLK+	14	
	13	CLK-	15	
	5,6,9,14,15,16,17	n.c.	7,9,10,12,13	
	Housing	Shield	Housing	

Technical data

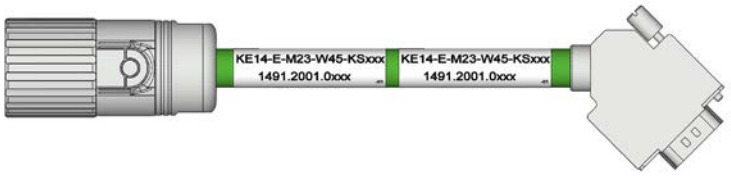
KE14-E-M23-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

Encoder cable standard servomotors LST, LSN, LSP <=> KeDrive D3 DA (ServoOne CM) with EnDat/SSI

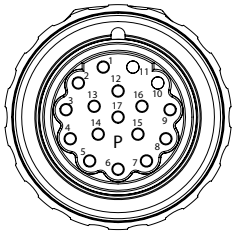
Cable type: KE14-E-M23-W45-KSxxx

Order no.	1491.2001.0xxx
Compatible with	Encoders: Exx, G3, G5, G12.x -> SSI/EnDat

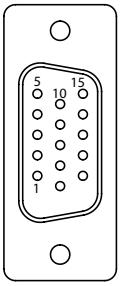
Figure



Connector pin assignment



Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS +	2	
	2	REFCOS	1	
	3	SIN +	11	
	4	REFSIN	6	
	7	GND	8	
	8	Us 5.25 V	3	
	10	DATA+	4	
	11	DATA-	5	
	12	CLK+	14	
	13	CLK-	15	
	5,6,9,14,15,16,17	n.c.	7,9,10,12,13	
	Housing	Shield	Housing	



Technical data

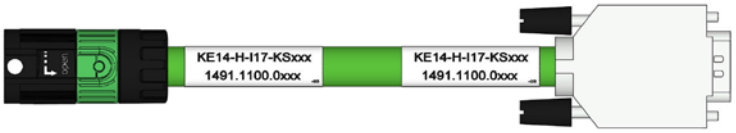
KE14-E-M23-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

Encoder cable standard servomotors LST, LSN, LSP <=> KeDrive D3 DA (ServoOne CM) with Hiperface

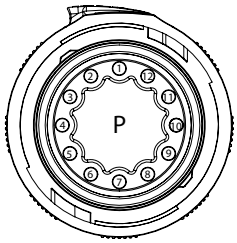
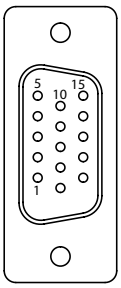
Cable type: KE14-H-I17-KSxxx

Order no.	1491.1100.0xxx
Compatible with	Encoders: Hxx, G6.xy -> Hiperface

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS +	2	
	2	REFCOS	1	
	3	SIN +	11	
	4	REFSIN	6	
	8	GND	8	
	7	Us 7-12 V	7	
	5	DATA+	4	
	6	DATA-	5	
	9,10,11,12	n.c.	3,9,10,12,13,14,15	
	Housing	Shield	Housing	

Technical data

KE14-H-I17-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

Encoder cable standard servomotors LST, LSN, LSP <=> KeDrive D3 DA (ServoOne CM) with Hiperface

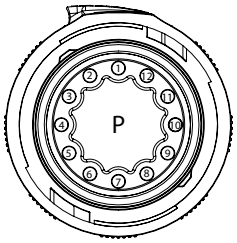
Cable type: KE14-H-I17-W45-KSxxx

Order no.	1491.1101.0xxx
Compatible with	Encoders: Hxx, G6.xy -> Hiperface

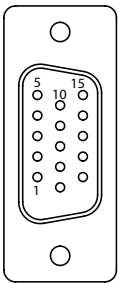
Figure



Connector pin assignment



Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS +	2	
	2	REFCOS	1	
	3	SIN +	11	
	4	REFSIN	6	
	8	GND	8	
	7	Us 7-12 V	7	
	5	DATA+	4	
	6	DATA-	5	
	9,10,11,12	n.c.	3,9,10,12,13,14,15	
	Housing	Shield	Housing	



Technical data

KE14-H-I17-W45-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

Encoder cable standard servomotors LST, LSN, LSP <=> KeDrive D3 DA (ServoOne CM) with Hiperface

Cable type: KE14-H-M23-KSxxx

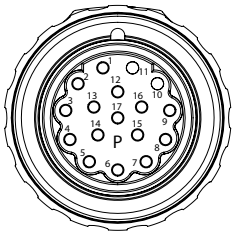
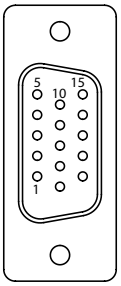
Order no. 1491.1000.0xxx

Compatible with Encoders: Hxx, G6.xy -> Hiperface

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS +	2	
	2	REFCOS	1	
	3	SIN +	11	
	4	REFSIN	6	
	7	GND	8	
	9	Us 7-12 V	7	
	10	DATA+	4	
	11	DATA-	5	
	5,6,8,12,13,14,15,16,17	n.c.	3,9,10,12,13,14,15	
	Housing	Shield	Housing	

Technical data

KE14-H-M23-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

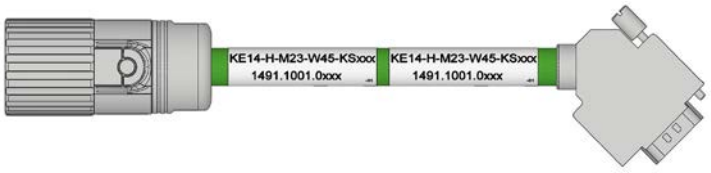
Encoder cable standard servomotors LST, LSN, LSP <=> KeDrive D3 DA (ServoOne CM) with Hiperface

KE14-H-M23-W45-KSxxx

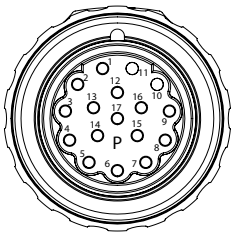
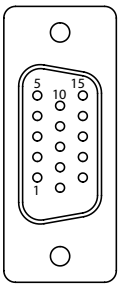
Order no. 1491.1001.0xxx

Compatible with Encoders: Hxx, G6.xy -> Hiperface

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS +	2	
	2	REFCOS	1	
	3	SIN +	11	
	4	REFSIN	6	
	7	GND	8	
	9	Us 7-12 V	7	
	10	DATA+	4	
	11	DATA-	5	
	5,6,8,12,13,14,15,16,17	n.c.	3,9,10,12,13,14,15	
	Housing	Shield	Housing	

Technical data

KE14-H-M23-W45-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

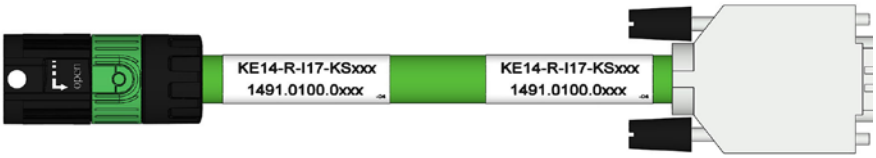
Encoder cable standard servomotors LST, LSN, LSP <=> KeDrive D3 DA (ServoOne CM) with resolver

Cable type: KE14-R-I17-KSxxx

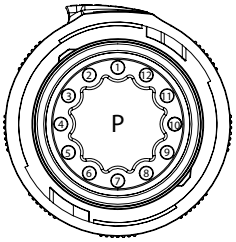
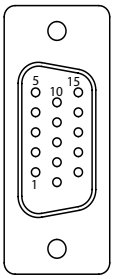
Order no. 1491.0100.0xxx

Compatible with Encoders: RxP, xR -> Resolver

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS + (S1)	2	
	2	COS - (S3)	1	
	3	SIN + (S2)	11	
	4	SIN - (S4)	6	
	5	REF + (R1)	10	
	6	REF - (R2)	9	
	7, 8, 9, 10, 11, 12	n.c.	3,4,5,7,8,12,13,14,15	
	Housing	Shield	Housing	

Technical data

KE14-R-I17-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

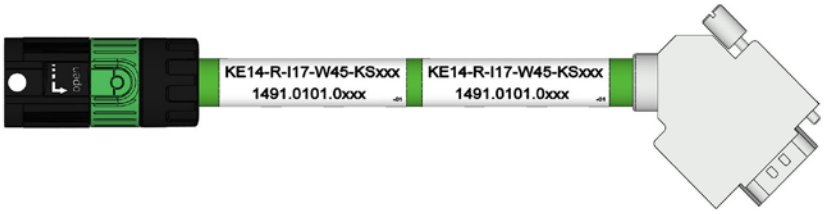
Encoder cable standard servomotors LST, LSN, LSP <=> KeDrive D3 DA (ServoOne CM) with resolver

Cable type: KE14-R-I17- W45-KSxxx

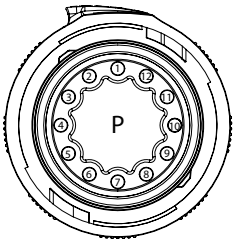
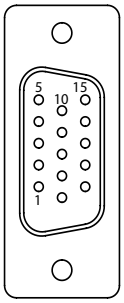
Order no. 1491.0101.0xxx

Compatible with Encoders: RxP, xR -> Resolver

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS + (S1)	2	
	2	COS - (S3)	1	
	3	SIN + (S2)	11	
	4	SIN - (S4)	6	
	5	REF + (R1)	10	
	6	REF - (R2)	9	
	7, 8, 9, 10, 11, 12	n.c.	3,4,5,7,8,12,13,14,15	
	Housing	Shield	Housing	

Technical data

KE14-R-I17- W45-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

Encoder cable standard servomotors LST, LSN, LSP <=> KeDrive D3 DA (ServoOne CM) with resolver

Cable type: KE14-R-M23-KSxxx

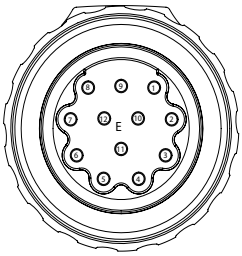
Order no. 1491.0000.0xxx

Compatible with Encoders: RxP, xR -> Resolver

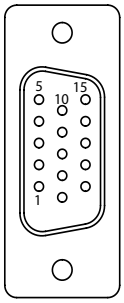
Figure



Connector pin assignment



Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS + (S1)	2	
	2	COS - (S3)	1	
	3	SIN + (S2)	11	
	4	SIN - (S4)	6	
	6	REF + (R1)	10	
	7	REF - (R2)	9	
	5, 8, 9, 10, 11, 12	n.c.	3,4,5,7,8,12,13,14,15	
	Housing	Shield	Housing	



Technical data

KE14-R-M23-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

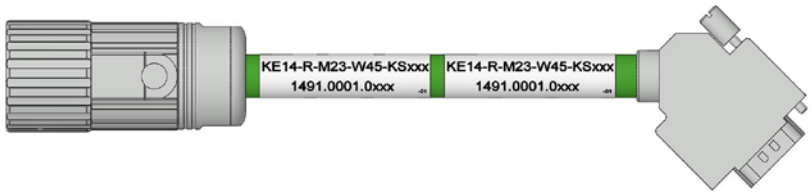
Encoder cable standard servomotors LST, LSN, LSP <=> KeDrive D3 DA (ServoOne CM) with resolver

Cable type: KE14-R-M23-W45-KSxxx

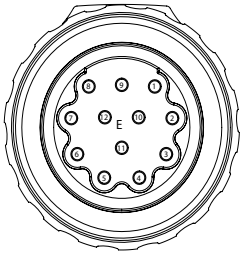
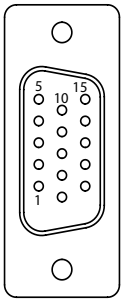
Order no. 1491.0001.0xxx

Compatible with Encoders: RxP, xR -> Resolver

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS + (S1)	2	
	2	COS - (S3)	1	
	3	SIN + (S2)	11	
	4	SIN - (S4)	6	
	5	REF + (R1)	10	
	6	REF - (R2)	9	
	7, 8, 9, 10, 11, 12	n.c.	3,4,5,7,8,12,13,14,15	
	Housing	Shield	Housing	

Technical data

KE14-R-M23-W45-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

2.2 Encoder cable for ServoOne single-axis and multi-axis system
Order code

Article number:	11	99	.	0	1		1	0	.	0	0	1	0
Printed:	KE	11	-	R	I17	-	T		-	KS	0	1	0

Ready made encoder cables

Encoder type	0:	R	Resolver
	1:	H	Hiperface®
	2:	E	EnDat® / SSI
	3:	I	Incremental + zero pulse
Connector	0:	M23	M23 connector motor end
	1:	I17	I17 connector motor end
Thermal monitoring	0:	- Blank -	No thermal monitoring
	1:	T	Thermal monitoring included
- Spare -	0:	- Blank -	
Additional option	0:	KS	Capable for energy chains
Cable length	001:	001	1 m
	010:	010	10 m
	050:	050	50 m

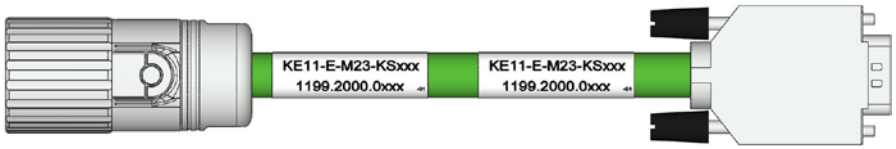
Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne with EnDat/SSI

Cable type: KE11-E-M23-KSxxx

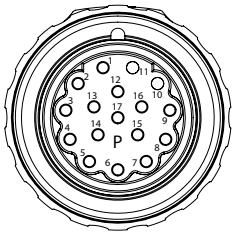
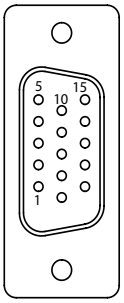
Order no. 1199.2000.0xxx

Compatible with Encoders: Exx, G3, G5, G12.x -> SSI/EnDat

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS+	2	
	2	REFCOS	1	
	3	SIN+	11	
	4	REFSIN	6	
	7	GND	8	
	8	Us 5.25 V	3	
	10	DATA+	4	
	11	DATA-	5	
	12	CLK+	14	
	13	CLK-	15	
	16	Sense+	12	
	17	Sense-	13	
	5,6,9,14,15	n.c.	7,9,10	
	Housing	Shield	Housing	

Technical data

KE11-E-M23-KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

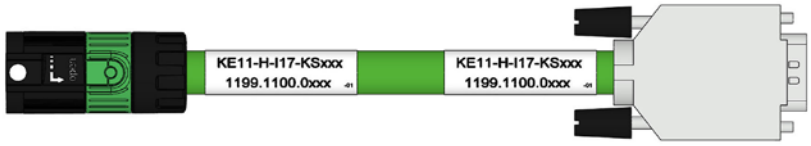
Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne with Hiperface

Cable type: KE11-H-I17-KSxxx

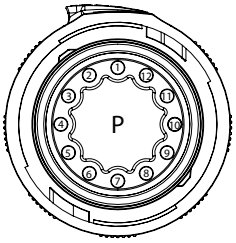
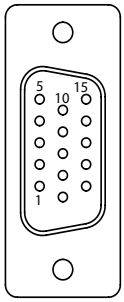
Order no. 1199.1100.0xxx

Compatible with Encoders: Hxx, G6.xy -> Hiperface

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS+	2	
	2	REFCOS	1	
	3	SIN+	11	
	4	REFSIN	6	
	8	GND	8	
	7	Us 7-12 V	3	
	5	DATA+	4	
	6	DATA-	5	
		Jumper to 7	12	
		Jumper to 12	7	
	9,10,11,12	n.c.	9,10,13,14,15	
	Housing	Shield	Housing	

Technical data

KE11-H-I17-KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

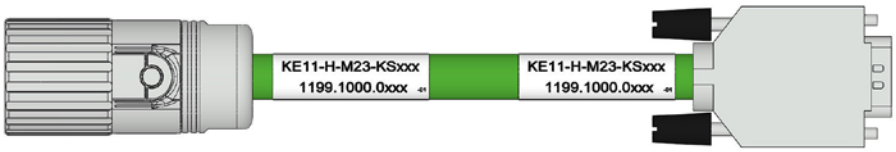
Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne with Hiperface

Cable type: KE11-H-M23-KSxxx

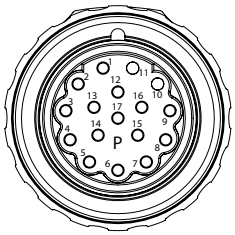
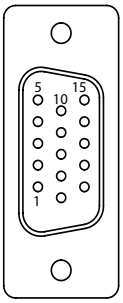
Order no. 1199.1000.0xxx

Compatible with Encoders: Hxx, G6.xy -> Hiperface

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS+	2	
	2	REFCOS	1	
	3	SIN+	11	
	4	REFSIN	6	
	7	GND	8	
	9	Us 7-12 V	3	
	10	DATA+	4	
	11	DATA-	5	
		Jumper to 7	12	
		Jumper to 12	7	
	5,6,8,12,13,14,15,16,17	n.c.	9,10,13,14,15	
	Housing	Shield	Housing	

Technical data

KE11-H-M23-KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

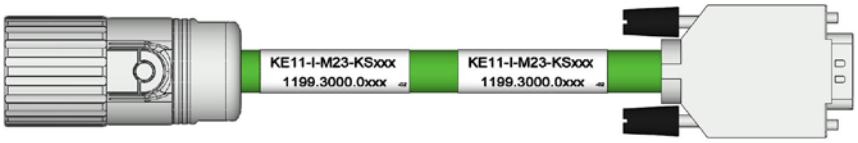
Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne with Sin/Cos, TTL encoder

Cable type: KE11-I-M23-KSxxx

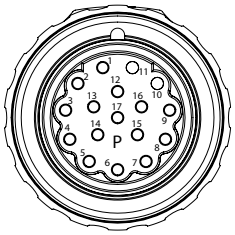
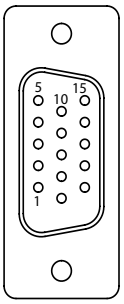
Order no. 1199.3000.0xxx

Compatible with Encoders: Sin/Cos, TTL -> Incremental encoder with zero pulse

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	A+/COS+	2	
	2	A-/COS -	1	
	3	B+/SIN+	11	
	4	B-/REFSIN	6	
	7	GND	8	
	8	Us max. 5.25 V	3	
	5	R+	10	
	6	R-	9	
	16	Sense+	12	
	17	Sense-	13	
	5,6,9,12,13,14,15	n.c.	4,5,7,14,15	
	Housing	Shield	Housing	

Technical data

KE11-I-M23-KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

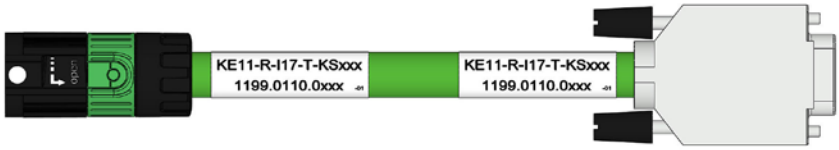
Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne with resolver

Cable type: KE11-R-I17-T-KSxxx

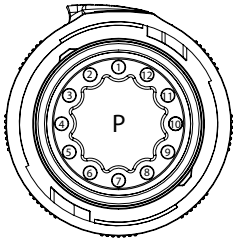
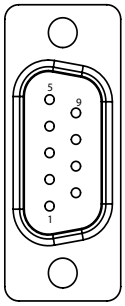
Order no. 1199.0110.0xxx

Compatible with Encoders: RxP, xR -> Resolver

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS + (S1)	3	
	2	COS - (S3)	8	
	3	SIN + (S2)	1	
	4	SIN - (S4)	2	
	5	REF + (R1)	6	
	6	REF - (R2)	7	
	9	Thermo+	5	
	10	Thermo-	9	
	7,8,11,12	n.c.	4	
	Housing	Shield	Housing	

Technical data

KE11-R-I17-T-KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

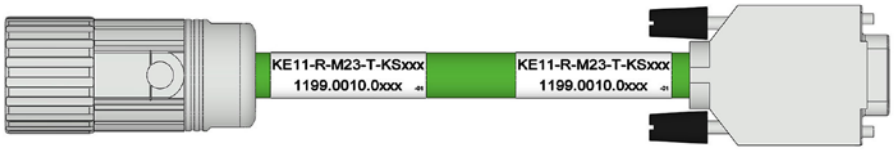
Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne with encoder

Cable type: KE11-R-M23-T-KSxxx

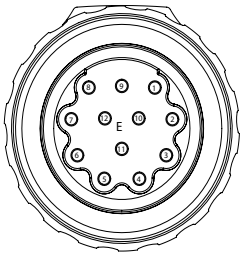
Order no. 1199.0010.0xxx

Compatible with Encoders: RxP, xR -> Resolver

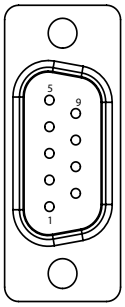
Figure



Connector pin assignment



Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS + (S1)	3	
	2	COS - (S3)	8	
	3	SIN + (S2)	1	
	4	SIN - (S4)	2	
	6	REF + (R1)	6	
	7	REF - (R2)	7	
	11	Thermo+	5	
	12	Thermo-	9	
	5,8,9,10	n.c.	4	
	Housing	Shield	Housing	



Technical data

KE11-R-M23-T KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

2.3 Encoder cables ServoOne junior

Order code

Article number:	13	99	.	0	1		1	0	.	0	0	1	0
Printed:	KE	13	-	R	I17	-	T		-	KS	0	1	0

Ready made encoder cables

Encoder type	0:	R	Resolver
	1:	H	Hiperface®
	2:	E	EnDat® / SSI
	3:	I	Incremental + zero pulse
Connector	0:	M23	M23 connector motor end
	1:	I17	I17 connector motor end
Thermal monitoring	0:	- Blank -	No thermal monitoring
	1:	T	Thermal monitoring included
- Spare -	0:	- Blank -	
Additional option	0:	KS	Capable for energy chains
Cable length	001:	001	1 m
	010:	010	10 m
	030:	030	30 m

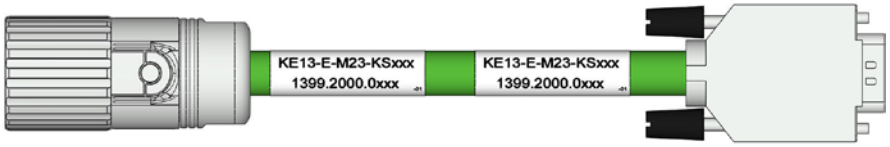
Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne junior with EnDat/SSI

Cable type: KE13-E-M23-KSxxx

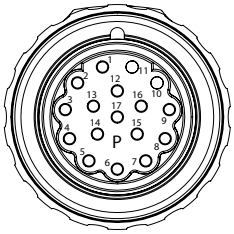
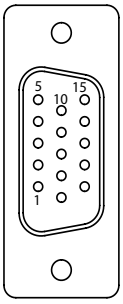
Order no. KE13-E-M23-KSxxx

Compatible with Encoders: Exx, G3, G5, G12.x -> SSI/EnDat

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS+	2	
	2	REFCOS	1	
	3	SIN+	11	
	4	REFSIN	6	
	7	GND	8	
	8	Us max 5.25 V	3	
	10	DATA+	4	
	11	DATA-	5	
	12	CLK+	14	
	13	CLK-	15	
	16	Sense+	12	
	17	Sense-	13	
	5,6,9,14,15	n.c.	7,9,10	
	Housing	Shield	Housing	

Technical data

KE13-E-M23-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

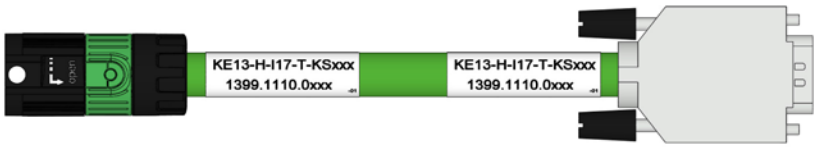
Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne junior with Hiperface

Cable type: KE13-H-I17-T-KSxxx

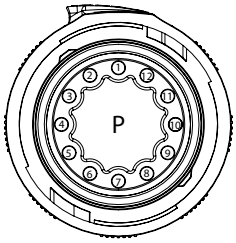
Order no. 1399.1110.0xxx

Compatible with Encoders: Hxx, G6.xy -> Hiperface

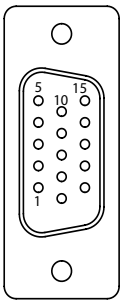
Figure



Connector pin assignment



Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS+	2	
	2	REFCOS	1	
	3	SIN+	11	
	4	REFSIN	6	
	8	GND	8	
	7	Us 7-12 V	3	
	5	DATA+	4	
	6	DATA-	5	
	9	TEMP+	10	
	10	TEMP-	9	
		Jumper to 7	12	
		Jumper to 12	7	
	11.12	n.c.	13,14,15	
	Housing	Shield	Housing	



Technical data

KE13-H-I17-T-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne junior with Hiperface

Cable type: KE13-H-M23-KSxxx

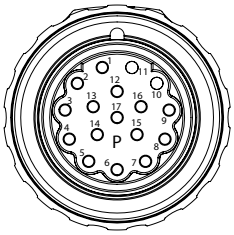
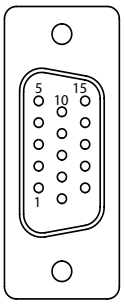
Order no. 1399.1000.0xxx

Compatible with Encoders: Hxx, G6.xy -> Hiperface

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS+	2	
	2	REFCOS	1	
	3	SIN+	11	
	4	REFSIN	6	
	7	GND	8	
	9	Us 7-12 V	3	
	10	DATA+	4	
	11	DATA-	5	
		Jumper to 7	12	
		Jumper to 12	7	
	5,8,12,13,14,15,16.17	n.c.	9,10,13,14,15	
	Housing	Shield	Housing	

Technical data

KE13-H-M23-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

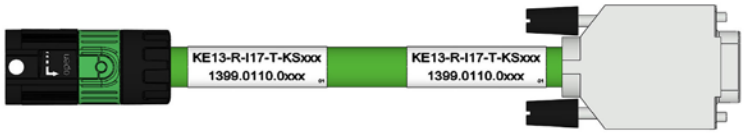
Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne junior with resolver

Cable type: KE13-R-I17-T-KSxxx

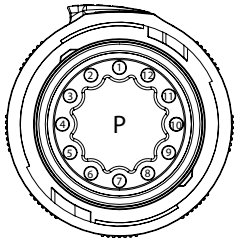
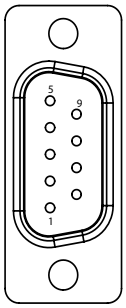
Order no. 1399.0110.0xxx

Compatible with Encoders: RxP, xR -> Resolver

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS + (S1)	3	
	2	COS - (S3)	8	
	3	SIN + (S2)	1	
	4	SIN - (S4)	2	
	5	REF + (R1)	6	
	6	REF - (R2)	7	
	9	Thermo+	5	
	10	Thermo-	9	
	7,8,11,12	n.c.	4	
	Housing	Shield	Housing	

Technical data

KE13-R-I17-T-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

Encoder cable standard servomotors LST, LSN, LSP <=> ServoOne junior with resolver

Cable type: KE13-R-M23-T-KSxxx

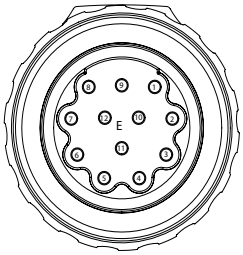
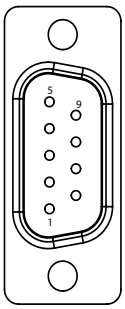
Order no. 1399.0010.0xxx

Compatible with Encoders: RxP, xR -> Resolver

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS + (S1)	3	
	2	COS - (S3)	8	
	3	SIN + (S2)	1	
	4	SIN - (S4)	2	
	6	REF + (R1)	6	
	7	REF - (R2)	7	
	11	Thermo+	5	
	12	Thermo-	9	
	5,8,9,10	n.c.	4	
	Housing	Shield	Housing	

Technical data

	KE13-R-M23-T-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

2.4 Encoder cables c-line Drives

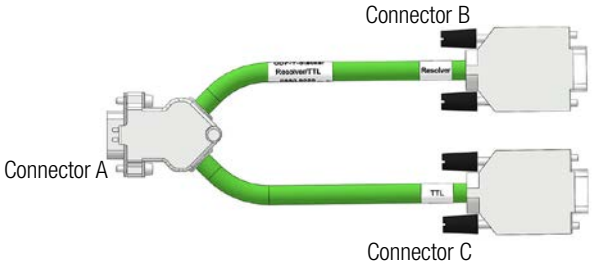
Ready made encoder cables			
Designation	**Encoder type**	**Connector, motor end**	**Controller**
CDF-Y-connector resolver/TTL	Resolver / TTL	15-pin-HD D-Sub	CDF
KRY2-CDF-KSxxx	Resolver	M23	CDF
KRY2-KSxxx	Resolver	M23	CDD, CDE
KGH2-KSxxx	Hiperface®	M23	CDD
KGH3-KSxxx	Hiperface®	M23	CDE
KGS2-KSxxx	EnDat® / SSI	M23	CDD, CDE

Encoder cable CDF-Y adapter for resolver and TTL

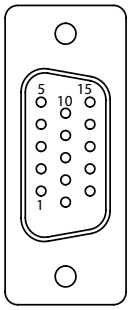
Cable type: CDF-Y-connector resolver/TTL

Order no. 0980.9029

Figure

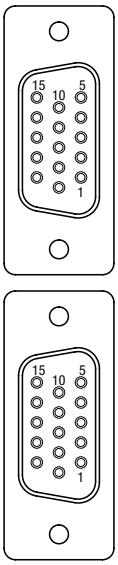


Connector pin assignment



Connector A (controller end)	Pin	Connector A (device)	Connector B (resolver)	Connector C (TTL)
	1	Sinus-(S4)	Sinus-(S4)	n.c.
	2	Sinus+(S2)	Sinus+(S2)	n.c.
	3	+5 V(150 mA)	n.c.	+5 V(150 mA)
	4	A+	n.c.	A+
	5	A-	n.c.	A-
	6	Cosine-(S3)	Cosine-(S3)	n.c.
	7	REF-(R2)	REF-(R2)	n.c.
	8	n.c.	n.c.	GND
	9	PTC- (KTY/Klixon)	PTC- (KTY/Klixon)	n.c.
	10	PTC- (KTY/Klixon)	PTC- (KTY/Klixon)	n.c.
	11	Cosine+(S1)	Cosine+(S1)	n.c.
	12	REF-(R2)	REF-(R2)	n.c.
	13	n.c.	n.c.	n.c.
	14	B+	n.c.	B+
	15	B-	n.c.	B-

Connector B and C (controller end)



Technical data

CDF-Y-connector resolver/TTL	
Cable length	0.12 m
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 20
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	35 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

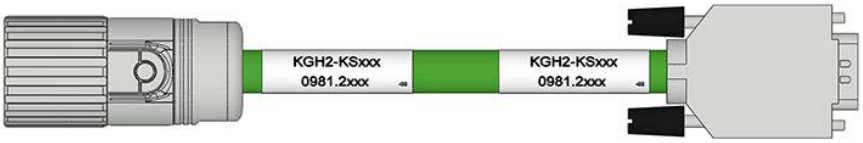
Encoder cable standard servomotors LST, LSN, LSP <=> CDD3000 with Hiperface

Cable type: KGH2-KSxxx

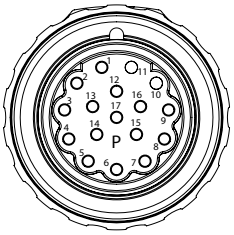
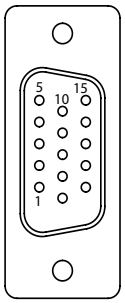
Order no. 0981.2xxx

Compatible with Encoders: Hxx, G6.xy -> Hiperface

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS+	2	
	2	REFCOS	1	
	3	SIN+	11	
	4	REFSIN	6	
	7	GND	8	
	9	Us 7-12 V	3	
	10	DATA+	4	
	11	DATA-	5	
	5,6,8,12,13,14,16.17	n.c.	7,9,10,12,13,14,15	
	Housing	Shield	Housing	

Technical data

KGH2-KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

Encoder cable standard servomotors LST, LSN, LSP <=> CDE3000 with Hiperface

Cable type: KGH3-KSxxx

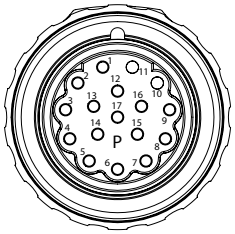
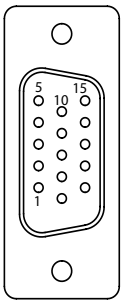
Order no. 0981.3xxx

Compatible with Encoders: Hxx, G6.xy -> Hiperface

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS+	2	
	2	REFCOS	1	
	3	SIN+	11	
	4	REFSIN	6	
	7	GND	8	
	9	Us 7-12 V	3	
	10	DATA+	4	
	11	DATA-	5	
		Jumper to 7	12	
		Jumper to 12	7	
	5,6,8,12;13,14,15,16,17	n.c.	9,10,13,14,15	
	Housing	Shield	Housing	

Technical data

KGH3-KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

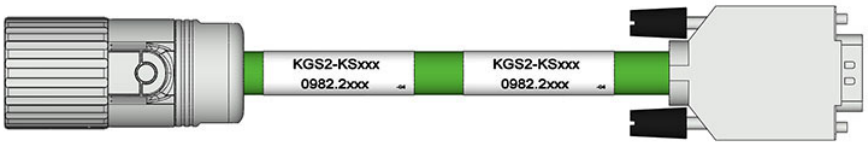
Encoder cable standard servomotors LST, LSN, LSP <=> CDD3000 with EnDat/SSI

Cable type: KGS2-KSxxx

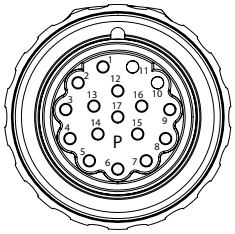
Order no. 0982.2xxx

Compatible with Encoders: Exx, G3, G5, G12.x -> SSI/EnDat

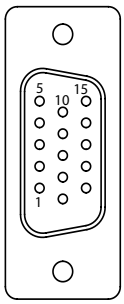
Figure



Connector pin assignment



Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS+	2	
	2	REFCOS	1	
	3	SIN+	11	
	4	REFSIN	6	
	7	GND	8	
	8	Us max 5.25 V	3	
	10	DATA+	4	
	11	DATA-	5	
	12	CLK+	14	
	13	CLK-	15	
	16	Sense+	12	
	17	Sense-	13	
	5,6,9,14,15	n.c.	7,9,10	
	Housing	Shield	Housing	



Technical data

KGS2-KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	8.5 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.100 kg/m

Encoder cable standard servomotors LST, LSN, LSP <=> CDF3000 with resolver

Cable type: KRY2-CDF-KSxxx

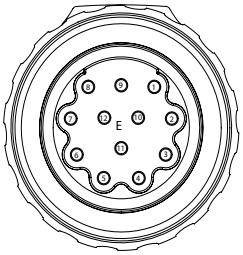
Order no. 0980.3xxx

Compatible with Encoders: RxP, xR -> Resolver

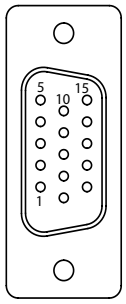
Figure



Connector pin assignment



Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS + (S1)	11	
	2	COS - (S3)	6	
	3	SIN + (S2)	2	
	4	SIN - (S4)	1	
	6	REF + (R1)	12	
	7	REF - (R2)	7	
	11	Thermo+	10	
	12	Thermo-	9	
	5,8,9,10	n.c.	3,4,5,8,13,14,15	
	Housing	Shield	Housing	



Technical data

KRY2-CDF-KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

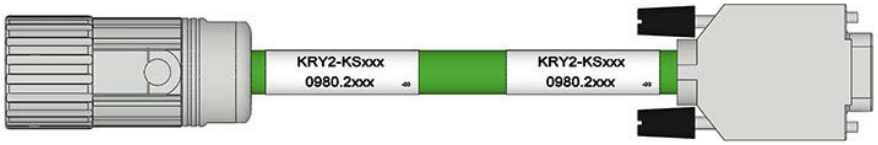
Encoder cable standard servomotors LST, LSN, LSP <=> CDD/CDE3000 with resolver

Cable type: KRY2-KSxxx

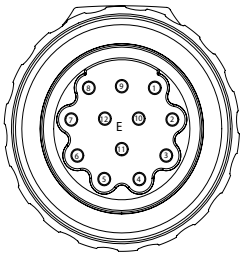
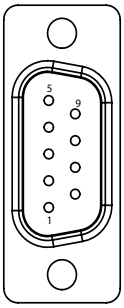
Order no. 0980.2xxx

Compatible with Encoders: RxP, xR -> Resolver

Figure



Connector pin assignment

Connector A (motor end)	Des. connector A	Function	Des. connector B	Connector B (controller end)
	1	COS + (S1)	3	
	2	COS - (S3)	8	
	3	SIN + (S2)	1	
	4	SIN - (S4)	2	
	6	REF + (R1)	6	
	7	REF - (R2)	7	
	11	Thermo+	5	
	12	Thermo-	9	
	5,8,9,10	n.c.	4	
	Housing	Shield	Housing	

Technical data

KRY2-KSxxx	
Cable length	1 m to max. 50 m (special length on request)
Temperature range, in state with movement	-30 °C to +80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67 (connector A)
Rated voltage, signal	160 V AC/DC max.
Rated current, signal	3 A max.
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s² (depending on travel length)
Min. bending cycles	5 000 000
Bending radius, fixed laying	4 x Dk
Bending radius, multiple movement	7.5 x Dk
Diameter Dk of the cable	7.1 mm
Diameter Dc connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.071 kg/m

Space for notes

3 Motor cables

During the dimensioning of the cables, the local and national regulations, standards and the situation related to the specific application are to be taken into account.
The following table lists the minimum current carrying capacity (corresponding to DIN VDE 0298, Part 4 - flexible laying of heat-resistant cables, laying cables and wires on open racks) in conjunction with the cable cross-sections for KEBA cables at an ambient temperature of 40 °C.

Cable designation	Cable cross-section	Current carrying capacity at 40 °C
5 A	0.5 mm²	7.8 A
10 A	1.0 mm²	13 A
16 A	1.5 mm²	15.7 A
24 A	2.5 mm²	22.6 A
35 A	4 mm²	29.6 A
45 A	6 mm²	38.3 A
63 A	10 mm²	53 A

NOTE:
It is to be checked whether the conditions listed in the table apply to the specific application. It may be necessary to select different cable cross-sections depending on the application and the applicable standards.

Space for notes

3.1 Motor cable for KeDrive D3 DA (ServoOne CM) Order code

Article number:	14	90	.	0	1		0		1	.	0		0	1	0
Printed:	KM	14	-	3PHBT		-	M23	-	16 A	-	KS		0	1	0

Ready made motor cables

Controller end	0:		KeDrive D3 DA (ServoOne CM) BG1+BG2	
	3:		KeDrive D3 DA (ServoOne CM) BG3	
Cable layout	1:	3PHBT	3-phases + earth + brake + thermo	
	2:	3PHBD	3-phases + earth + brake + Hiperface DSL®	
	3:	3PHBTD	3-phases + earth + brake + thermo / HIPERFACE DSL®	
Connector	0:	M23	M23 connector motor end	
	1:	I17	I17 connector motor end	
	4:	M40	M40 connector motor end	
	6:	I40	M40 connector motor end with data pair for Hiperface DSL®	
	8:	I23	M23 connector motor end with data pair for Hiperface DSL®	
Rated current	0:	10 A	Cable cross-section 1 mm²	(I17 + M23)
	1:	16 A	Cable cross-section 1.5 mm²	(I17 + M23)
	2:	24 A	Cable cross-section 2.5 mm²	(I17 + M23 + M40)
	3:	5 A	Cable cross-section 0.5 mm²	(I17 + M23)
	4:	35 A	Cable cross-section 4.0 mm²	(M23 + M40)
	5:	45 A	Cable cross-section 6 mm²	(M40)
	6:	63 A	Cable cross-section 10 mm²	(M40)
Additional option	0:	KS	Capable for energy chains	
Cable length	001:	001	1 m	
	010:	010	10 m	
	030:	030	30 m	

Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBTD-I17-5A-KSxxx

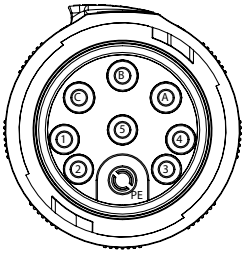
Order no. 1490.0313.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL (only for BG1 and BG2)

Figure



Connector pin assignment



Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	1	Hiperface DSL+/Temp+	Blue	
	2	Hiperface DSL-/Temp-	White	
	3	Brake+	5	
	4	Brake-	6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM14-3PHBTD-I17-5A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	0.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	5 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.3 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.13 kg/m

Motor cable KeDrive D3 DA (KeDrive D3 DA (ServoOne CM)) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBTD-I17-10A-KSxxx

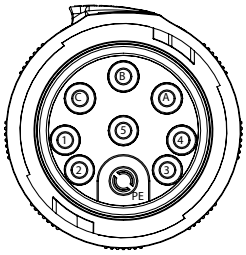
Order no. 1490.0310.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL (only for BG1 and BG2)

Figure



Connector pin assignment



Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/ green	
	1	Hiperface DSL+/Temp+	Blue	
	2	Hiperface DSL-/Temp-	White	
	3	Brake+	5	
	4	Brake-	6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM14-3PHBTD-I17-10A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	10 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.21 kg/m

Motor cable KeDrive D3 DA (KeDrive D3 DA (ServoOne CM)) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBTD-I17-16A-KSxxx

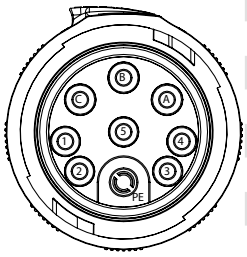
Order no. 1490.0311.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL (only for BG1 and BG2)

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	1	Hiperface DSL+/Temp+	Blue	
	2	Hiperface DSL-/Temp-	White	
	3	Brake+	5	
	4	Brake-	6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM14-3PHBTD-I17-16A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.22 kg/m

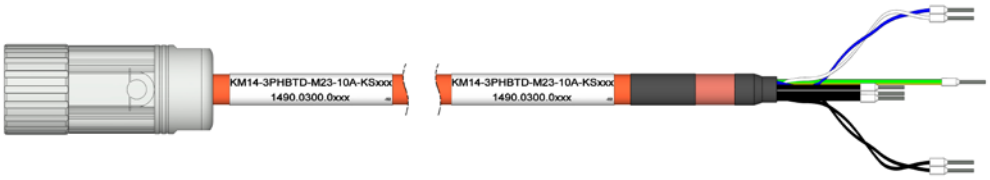
Motor cable KeDrive D3 DA (KeDrive D3 DA (ServoOne CM)) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBTD-M23-5A-KSxxx new

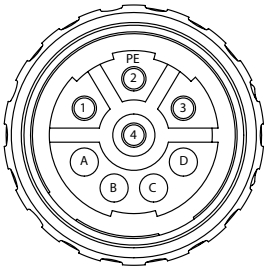
Order no. 1490.0303.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL (limited)

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	2 (PE)	Protective earth conductor	Yellow/green	
	C	Hiperface DSL+/Temp+	Blue	
	D	Hiperface DSL-/Temp-	White	
	A	Brake+	5	
	B	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM14-3PHBTD-M23-5A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	0.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	5 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.3 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.13 kg/m

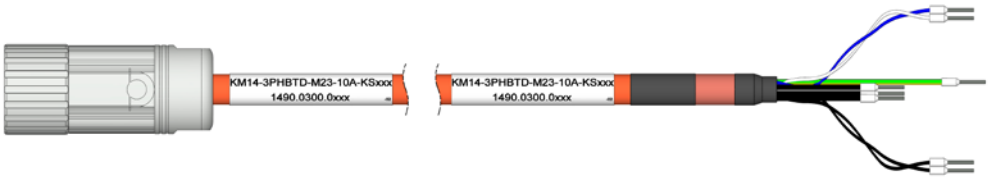
Motor cable KeDrive D3 DA (KeDrive D3 DA (ServoOne CM)) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBTD-M23-10A-KSxxx

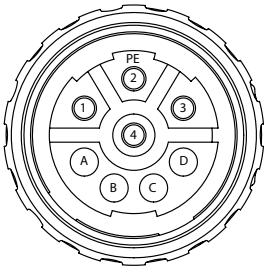
Order no. 1490.0300.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL (limited)

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	2 (PE)	Protective earth conductor	Yellow/green	
	C	Hiperface DSL+/Temp+	Blue	
	D	Hiperface DSL-/Temp-	White	
	A	Brake+	5	
	B	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	M14-3PHBTD-M23-10A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	10 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.21 kg/m

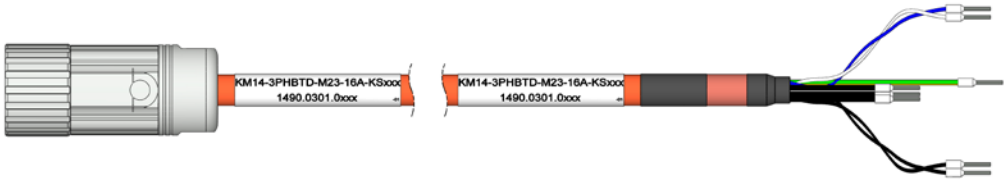
Motor cable ServoOne CM <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBTD-M23-16A-KSxxx

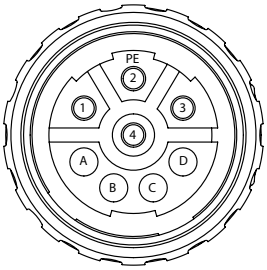
Order no. 1490.0301.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL (limited)

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	2 (PE)	Protective earth conductor	Yellow/green	
	C	Hiperface DSL+/Temp+	Blue	
	D	Hiperface DSL-/Temp-	White	
	A	Brake+	5	
	B	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM14-3PHBTD-M23-16A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.22 kg/m

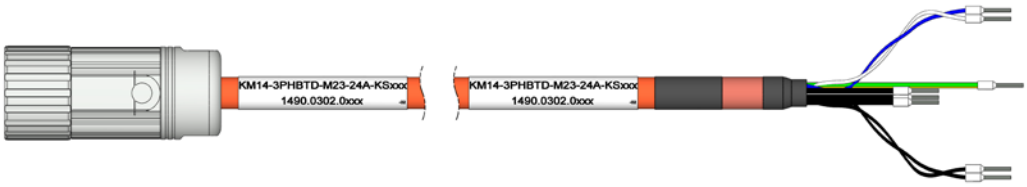
Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBT-M23-24A-KSxxx

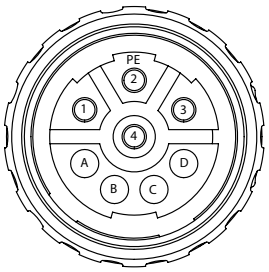
Order no. 1490.0302.0xxx

Compatible with KeDrive D3/ ServoOne CM BG1+BG2

Figure



Connector pin assignment



Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	2 (PE)	Protective earth con-ductor	Yellow/ green	
	C	Temp+	Blue	
	D	Temp-	White	
	A	Brake+	5	
	B	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM14-3PHBT-M23-24A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	2.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	24 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	13.9 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.31 kg/m

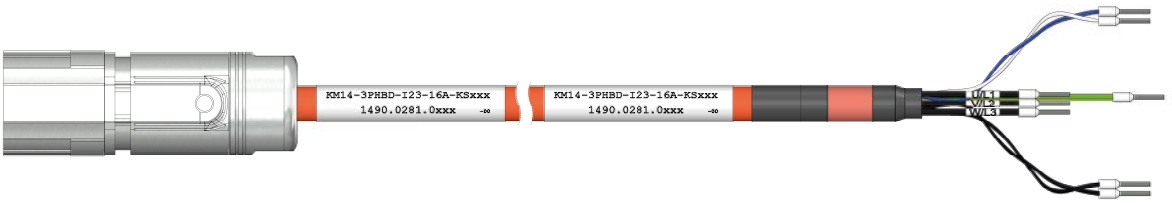
Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBD-I23-16A-KSxxx new

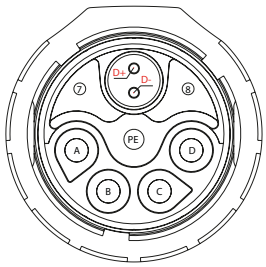
Order no. 1490.0281.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	(PE)	Protective earth conductor	Yellow/green	
	D+	HDSL+	Blue	
	D-	HDSL-	White	
	7	Brake+	5	
	8	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM14-3PHBD-I23-16A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.31 kg/m

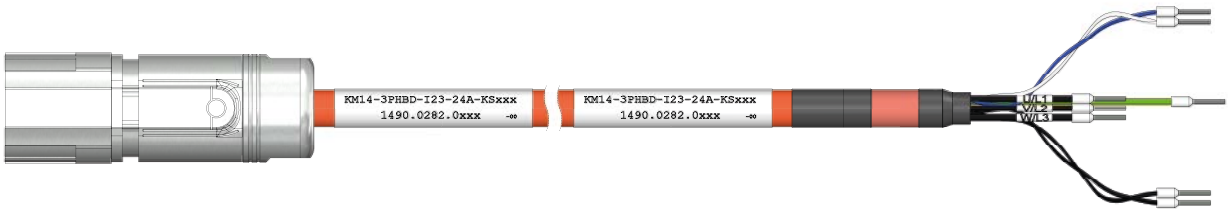
Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBD-I23-24A-KSxxx new

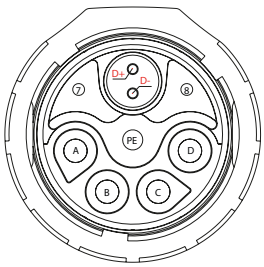
Order no. 1490.0282.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL (limited)

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	(PE)	Protective earth conductor	Yellow/green	
	D+	HDSL+	Blue	
	D-	HDSL-	White	
	7	Brake+	5	
	8	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM14-3PHBD-I23-24A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	2.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	24 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.31 kg/m

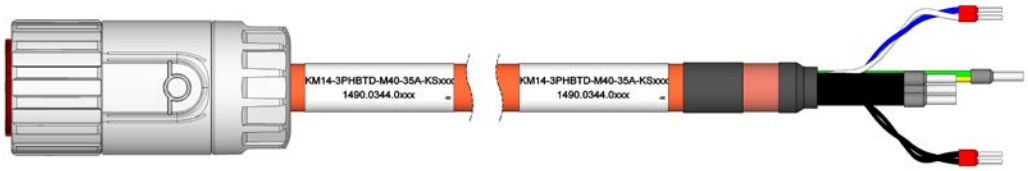
Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBT-M40-35A-KSxxx

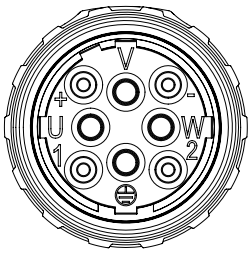
Order no. 1490.0344.0xxx

Compatible with KeDrive D3 DA (ServoOne CM) without HDSL, KeDrive D3 DA (ServoOne CM) BG1+BG2

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	U	Phase U	U/L1	Flying lead
	V	Phase V	V/L2	
	W	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	1	Temp+	Blue	
	2	Temp-	White	
	+	Brake+	5	
	-	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

KM14-3PHBT-M40-35A-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	4.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	35 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	16 mm
Diameter Ds connector A	46 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.42 kg/m

NOTE:
35A cable is not suitable for Hiperface DSL.

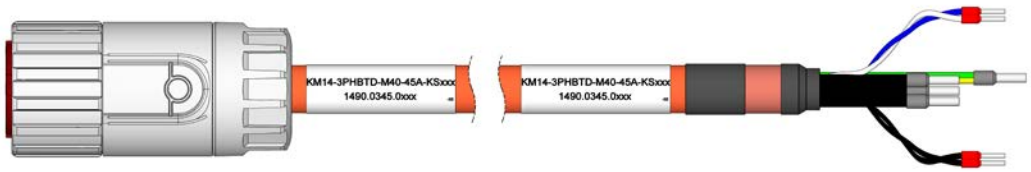
Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3PHBT-M40-45A-KSxxx

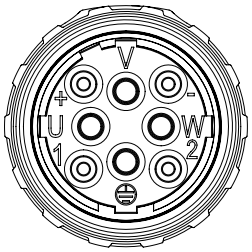
Order no. 1490.0345.0xxx

Compatible with KeDrive D3 DA (ServoOne CM) without HDSL, KeDrive D3 DA (ServoOne CM) BG1+BG2

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	U	Phase U	U/L1	Flying lead
	V	Phase V	V/L2	
	W	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/ green	
	1	Temp+	Blue	
	2	Temp-	White	
	+	Brake+	5	
	-	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

KM14-3PHBT-M40-45A-KSxxx	
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	6.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	45 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	18 mm
Diameter Ds connector A	46 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.54 kg/m

NOTE:
45A cable is not suitable for Hiperface DSL.

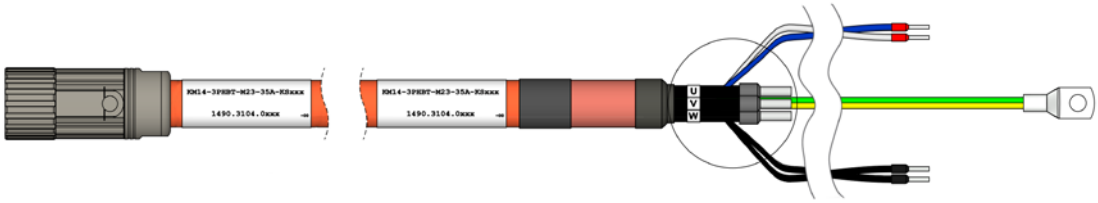
Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3-3PHBT-M23-35A-KSxxx new

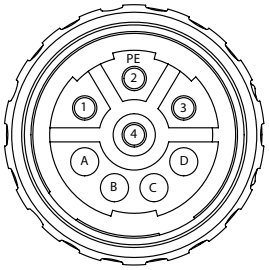
Order no. 1490.3104.0xxx

Compatible with KeDrive D3 DA (ServoOne CM) BG3

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	2 (PE)	Protective earth conductor	Yellow/ green	
	C	Temp+	Blue	
	D	Temp-	White	
	A	Brake+	5	
	B	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM14-3-3PHBT-M23-35A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	4.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N/I_{PEAK}	35 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	15.9 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.42 kg/m

Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3-3PHBT-M40-35A-KSxxx new

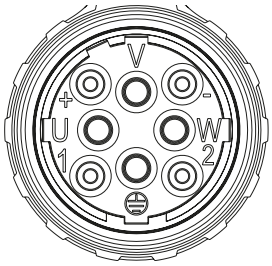
Order no. 1490.3144.0xxx

Compatible with KeDrive D3 DA (ServoOne CM) BG3 without HDSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	U	Phase U	U/L1	Flying lead
	V	Phase V	V/L2	
	W	Phase W	W/L3	
	(PE)	Protective earth conductor	Yellow/ green	
	1	Temp+	Blue	
	2	Temp-	White	
	+	Brake+	5	
	-	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM14-3-3PHBT-M40-35A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	4.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N/I_{PEAK}	35 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	15.9 mm
Diameter Ds connector A	46 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.42 kg/m

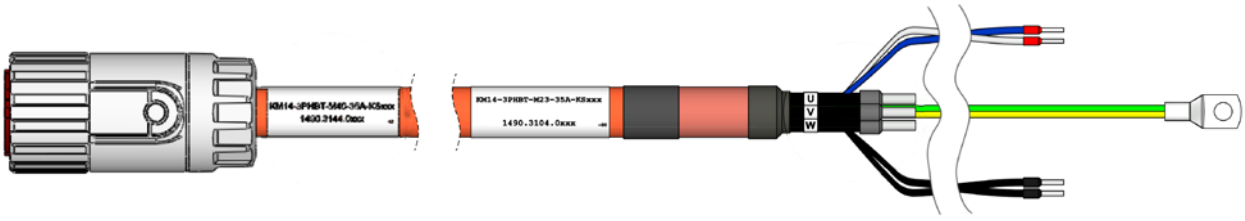
Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3-3PHBT-M40-45A-KSxxx new

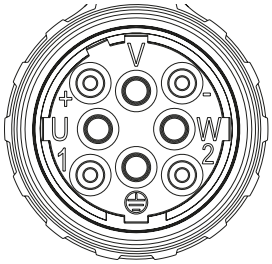
Order no. 1490.3145.0xxx

Compatible with KeDrive D3 DA (ServoOne CM) BG3 without HDSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	U	Phase U	U/L1	Flying lead
	V	Phase V	V/L2	
	W	Phase W	W/L3	
	(PE)	Protective earth conductor	Yellow/ green	
	1	Temp+	Blue	
	2	Temp-	White	
	+	Brake+	5	
	-	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM14-3-3PHBT-M40-45A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	6.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N/I_{PEAK}	45 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	18 mm
Diameter Ds connector A	46 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.54 kg/m

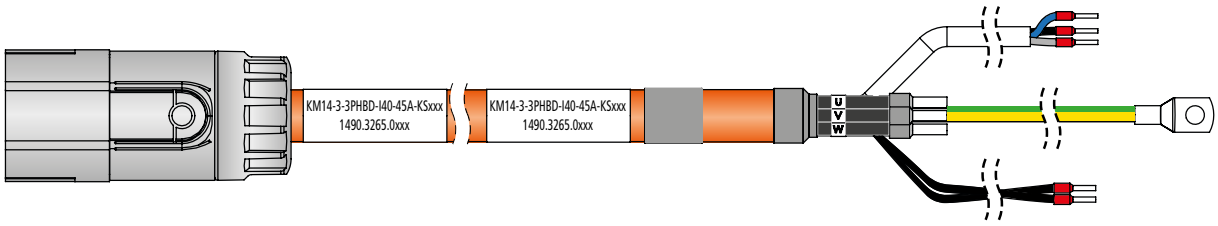
Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3-3PHBD-I40-45A-KSxxx new

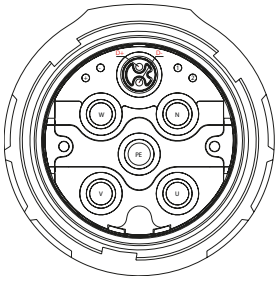
Order no. 1490.3265.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL KeDrive D3 DA (ServoOne CM) BG3 with HDSL

Figure



Connector pin assignment



Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	U	Phase U	U/L1	Flying lead
	V	Phase V	V/L2	
	W	Phase W	W/L3	
	(PE)	Protective earth conductor	Yellow/green	
	1	n.c.		
	2	n.c.		
	+	Brake+	5	
	-	Brake-	6	
	D+	Hiperface DSL+	Blue	
	D-	Hiperface DSL-	White	
	Housing	Outer shield	Copper	

Technical data

	KM14-3-3PHBD-I40-45A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	6.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N/I_{PEAK}	45 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	18 mm
Diameter Ds connector A	46 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.54 kg/m

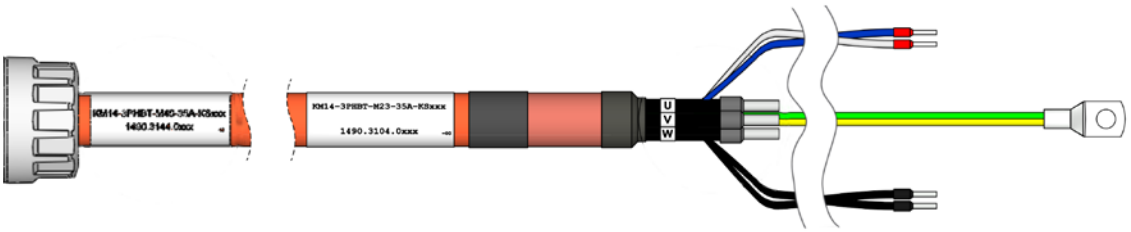
Motor cable KeDrive D3 DA (ServoOne CM) <=> LST, LSN, LSP standard servomotors

Cable type: KM14-3-3PHBT-M40-63A-KSxxx new

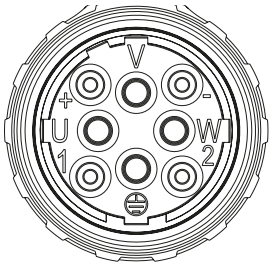
Order no. 1490.3146.0xxx

Compatible with KeDrive D3 DA (ServoOne CM) BG3 without HDSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	U	Phase U	U/L1	Flying lead
	V	Phase V	V/L2	
	W	Phase W	W/L3	
	(PE)	Protective earth conductor	Yellow/green	
	1	Temp+	Blue	
	2	Temp-	White	
	+	Brake+	5	
	-	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM14-3-3PHBT-M40-63A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	10 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N/I_{PEAK}	61 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	21 mm
Diameter Ds connector A	46 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.76 kg/m

Space for notes

3.2 Motor cables ServoOne

Order code

ServoOne		Article number:	11 98 . 0 0 0 1 . 0 0 1 0
		Printed:	KM 11 - 3PH - M23 - 16 A - KS 0 1 0

Ready made motor cables

Cable layout	00:	3PH	3-phases + earth
	01:	3PHBT	3-phases + earth + brake + thermo
Connector	0:	M23	M23 connector motor end
	1:	I17	I17 connector motor end
	4:	M40	M40 connector motor end
Rated current	0:	10 A	Cable cross-section 1 mm²
	1:	16 A	Cable cross-section 1.5 mm²
	2:	24 A	Cable cross-section 2.5 mm²
	3:	5 A	Cable cross-section 0.5 mm²
	4:	35 A	Cable cross-section 4 mm²
	6:	63 A	Cable cross-section 10 mm²
Additional option	0:	KS	Capable for energy chains
Cable length	001:	001	1 m
	010:	010	10 m
	050:	050	50 m

Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PHBT-I17-5A-KSxxx

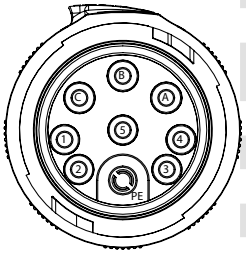
Order no. 1198.0113.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/ green	
	1	Temp+	Blue	
	2	Temp-	White	
	3	Brake+	5	
	4	Brake-	6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM11-3PHBT-I17-5A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	0.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	5 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.3 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.13 kg/m

Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PHBT-I17-10A-KSxxx

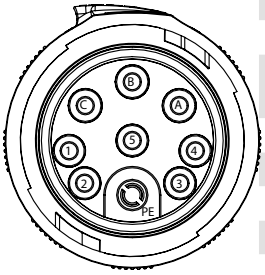
Order no. 1198.0110.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth con-ductor	Yellow/ green	
	1	Temp+	Blue	
	2	Temp-	White	
	3	Brake+	5	
	4	Brake-	6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM11-3PHBT-I17-10A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	1.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	10 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.6 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.21 kg/m

Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PHBT-I17-16A-KSxxx

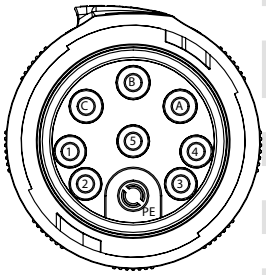
Order no. 1198.0111.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	1	Temp+	Blue	
	2	Temp-	White	
	3	Brake+	5	
	4	Brake-	6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM11-3PHBT-I17-16A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.22 kg/m

Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PHBT-M23-5A-KSxxx

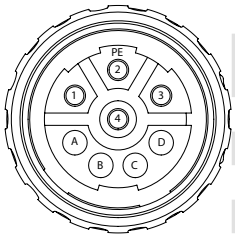
Order no. 1198.0103.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	C	Temp+	Blue	
	D	Temp-	White	
	A	Brake+	5	
	B	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM11-3PHBT-M23-5A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	0.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	5 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.3 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.13 kg/m

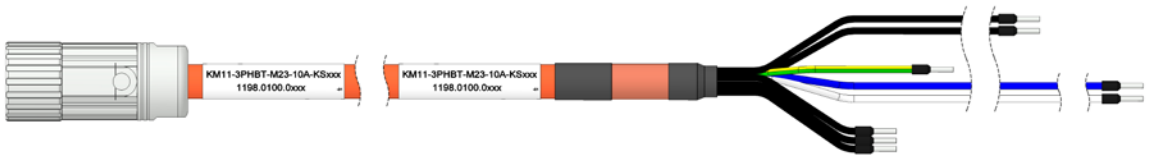
Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PHBT-M23-10A-KSxxx

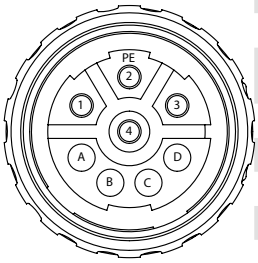
Order no. 1198.0100.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	C	Temp+	Blue	
	D	Temp-	White	
	A	Brake+	5	
	B	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM11-3PHBT-M23-10A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	1.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N/I_{PEAK}	10 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.6 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.21 kg/m

Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PHBT-M23-16A-KSxxx

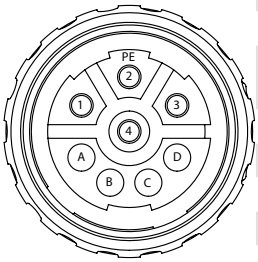
Order no. 1198.0101.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/ green	
	C	Temp+	Blue	
	D	Temp-	White	
	A	Brake+	5	
	B	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM11-3PHBT-M23-16A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N/I_{PEAK}	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.22 kg/m

Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PHBT-M23-24A-KSxxx

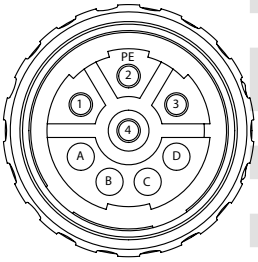
Order no. 1198.0102.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/ green	
	C	Temp+	Blue	
	D	Temp-	White	
	A	Brake+	5	
	B	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM11-3PHBT-M23-24A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	2.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N/I_{PEAK}	24 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	13.9 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.31 kg/m

Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PHBT-M40-35A-KSxxx

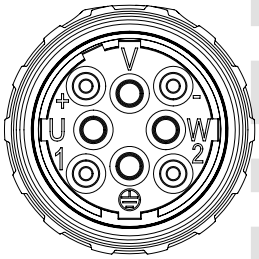
Order no. 1198.0144.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	U	Phase U	U/L1	Flying lead
	V	Phase V	V/L2	
	W	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/ green	
	1	Temp+	Blue	
	2	Temp-	White	
	+	Brake+	5	
	-	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM11-3PHBT-M40-35A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	4.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power I_N/I_{PEAK}	630 V AC/DC max.
Rated current, power	35 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	15.9 mm
Diameter Ds connector A	46 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.42 kg/m

Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PHBT-M40-63A-KSxxx

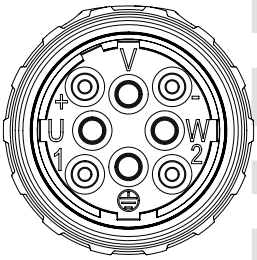
Order no. 1198.0146.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	U	Phase U	U/L1	Flying lead
	V	Phase V	V/L2	
	W	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/ green	
	1	Temp+	Blue	
	2	Temp-	White	
	+	Brake+	5	
	-	Brake-	6	
	Housing	Outer shield	Copper	

Technical data

	KM11-3PHBT-M40-63A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	10 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N/I_{PEAK}	63 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	21 mm
Diameter Ds connector A	46 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.76 kg/m

Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PH-M23-16A-KSxxx

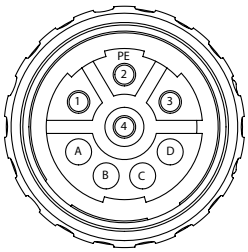
Order no. 1198.0001.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/ green	
	C, D, A, B	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM11-3PH-M23-16A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N/I_{PEAK}	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.1 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.20 kg/m

Motor cable ServoOne <=> LST, LSN, LSP standard servomotors

Cable type: KM11-3PH-M23-24A-KSxxx

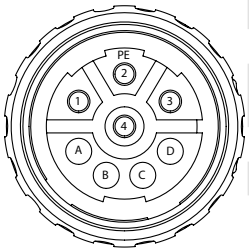
Order no. 1198.0002.0xxx

Compatible with ServoOne

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	C, D, A, B	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM11-3PH-M23-24A-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	2.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	24 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	10.6 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.30 kg/m

3.3 Motor cables ServoOne junior

Order code

ServoOne junior															
	Article number:	13	98	.	0	0		0		1	.	0	0	1	0
	Printed:	KM	13	-	3PH		-	M23	-	16 A	-	KS	0	1	0

Ready made motor cables

Cable layout	00:	3PH	3-phases + earth
	01:	3PHBT	3-phases + earth + brake + thermo
	02:	3PHBD	3-phases + earth + brake + Hiperface DSL®
Connector	0:	M23	M23 connector motor end
	1:	I17	I17 connector motor end
Rated current	0:	10 A	Cable cross-section 1 mm²
	1:	16 A	Cable cross-section 1.5 mm²
	2:	24 A	Cable cross-section 2.5 mm²
	3:	5 A	Cable cross-section 0.5 mm²
Additional option	0:	KS	Capable for energy chains
Cable length	001:	001	1 m
	010:	010	10 m
	030:	030	30 m

Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBD-I17-5A-KSxxx

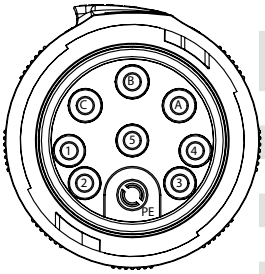
Order no. 1398.0213.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL (length limited)

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	1	Hiperface DSL+	D+/blue	
	2	Hiperface DSL-	D-/white	
	Housing	Inner shield	⏚	
	3	Brake+	BR+/5	
	4	Brake-	BR-/6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBD-I17-5A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	0.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	5 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.3 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.13 kg/m

Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBD-I17-10A-KSxxx

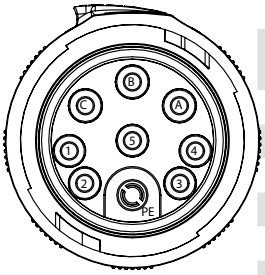
Order no. 1398.0210.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL

Figure



Connector pin assignment



Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	1	Hiperface DSL+	D+/blue	
	2	Hiperface DSL-	D-/white	
	Housing	Inner shield	⏚	
	3	Brake+	BR+/5	
	4	Brake-	BR-/6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBD-I17-10A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	10 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.6 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.21 kg/m

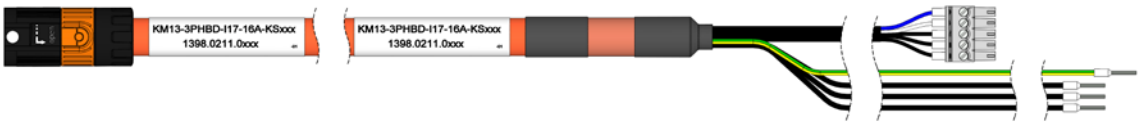
Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBD-I17-16A-KSxxx

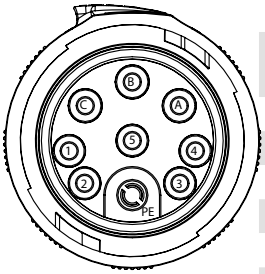
Order no. 1398.0211.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL Dxx, G7.xy -> Hiperface DSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	1	Hiperface DSL+	D+/blue	
	2	Hiperface DSL-	D-/white	
	Housing	Inner shield	⏚	
	3	Brake+	BR+/5	
	4	Brake-	BR-/6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBD-I17-16A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.22 kg/m

Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: -3PHBD-M23-5A-KSxxx

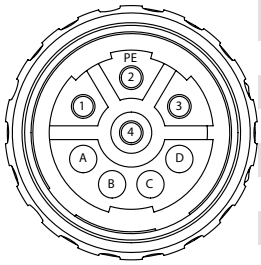
Order no. 1398.0203.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	2 (PE)	Protective earth conductor	Yellow/green	
	3	Phase W	W/L3	
	4	Phase V	V/L2	
	Housing	Inner shield	⏚	
	A	Brake+	BR+/5	
	B	Brake-	BR-/6	
	C	Hiperface DSL+	D+/blue	
	D	Hiperface DSL-	D-/white	
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBD-M23-5A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	0.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	5 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.3 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.13 kg/m

Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBD-M23-10A-KSxxx

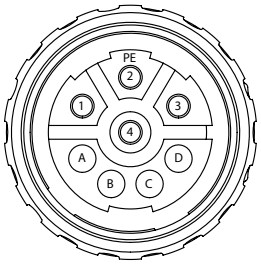
Order no. 1398.0200.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL

Figure



Connector pin assignment



Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	2 (PE)	Protective earth conductor	Yellow/green	
	3	Phase W	W/L3	
	4	Phase V	V/L2	
	Housing	Inner shield	⏚	
	A	Brake+	BR+/5	
	B	Brake-	BR-/6	
	C	Hiperface DSL+	D+/blue	
	D	Hiperface DSL-	D-/white	
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBD-M23-10A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	10 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.6 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.21 kg/m

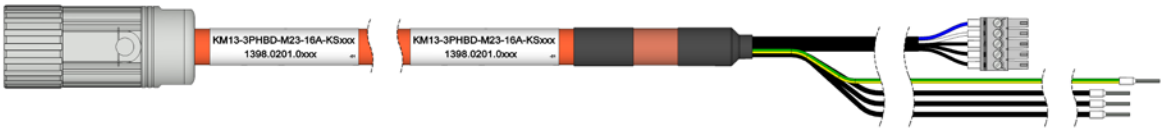
Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBD-M23-16A-KSxxx

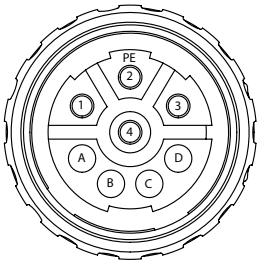
Order no. 1398.0201.0xxx

Compatible with Encoders: Dxx, G7.xy -> Hiperface DSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	2 (PE)	Protective earth conductor	Yellow/green	
	3	Phase W	W/L3	
	4	Phase V	V/L2	
	Housing	Inner shield	⏚	
	A	Brake+	BR+/5	
	B	Brake-	BR-/6	
	C	Hiperface DSL+	D+/blue	
	D	Hiperface DSL-	D-/white	
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBD-M23-16A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.22 kg/m

Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBT-I17-5A-KSxxx

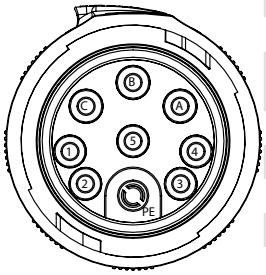
Order no. 1398.0113.0xxx

Compatible with ServoOne junior without HDSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	1	Temp+	Blue	
	2	Temp-	White	
	3	Brake+	5	
	4	Brake-	6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBT-I17-5A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	0.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	5 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.3 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.13 kg/m

Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBT-I17-10A-KSxxx

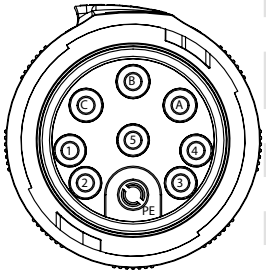
Order no. 1398.0110.0xxx

Compatible with ServoOne junior without HDSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	1	Temp+	Blue	
	2	Temp-	White	
	3	Brake+	5	
	4	Brake-	6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBT-I17-10A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	10 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.6 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.21 kg/m

Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBT-I17-16A-KSxxx

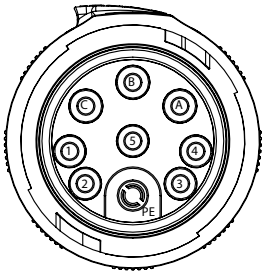
Order no. 1398.0111.0xxx

Compatible with ServoOne junior without HDSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/green	
	1	Temp+	Blue	
	2	Temp-	White	
	3	Brake+	5	
	4	Brake-	6	
	5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBT-I17-16A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.22 kg/m

Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBT-M23-5A-KSxxx

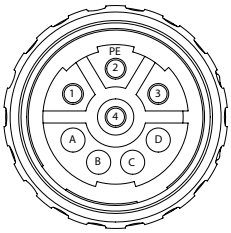
Order no. 1398.0103.0xxx

Compatible with ServoOne junior without HDSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	2 (PE)	Protective earth conductor	Yellow/ green	
	3	Phase W	W/L3	
	4	Phase V	V/L2	
	A	Brake+	5	
	B	Brake-	6	
	C	Temp+	Blue	
	D	Temp-	White	
	Housing	Outer shield	Copper	

Technical data

Technical data	KM13-3PHBT-M23-5A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	0.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	5 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.3 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.13 kg/m

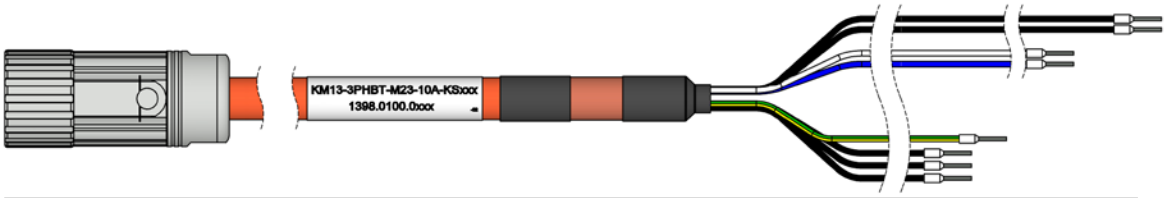
Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBT-M23-10A-KSxxx

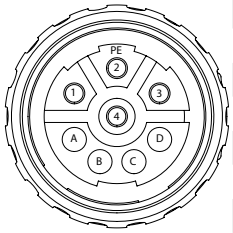
Order no. 1398.0100.0xxx

Compatible with ServoOne junior without HDSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	2 (PE)	Protective earth conductor	Yellow/green	
	3	Phase W	W/L3	
	4	Phase V	V/L2	
	A	Brake+	5	
	B	Brake-	6	
	C	Temp+	Blue	
	D	Temp-	White	
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBT-M23-10A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.0 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	10 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.6 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.21 kg/m

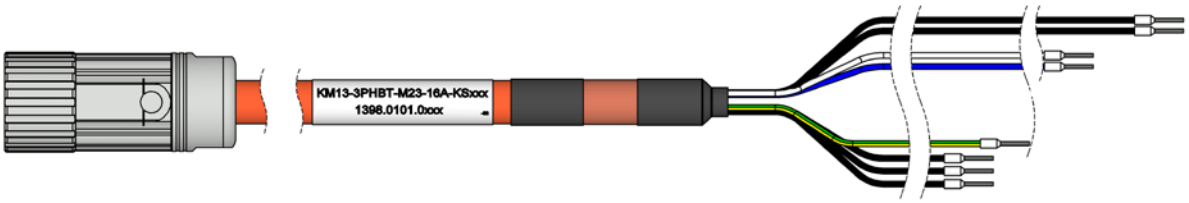
Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBT-M23-16A-KSxxx

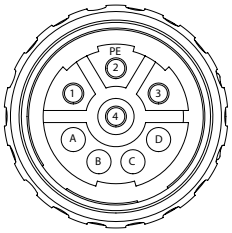
Order no. 1398.0101.0xxx

Compatible with ServoOne junior without HDSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	2 (PE)	Protective earth conductor	Yellow/green	
	3	Phase W	W/L3	
	4	Phase V	V/L2	
	A	Brake+	5	
	B	Brake-	6	
	C	Temp+	Blue	
	D	Temp-	White	
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBT-M23-16A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.22 kg/m

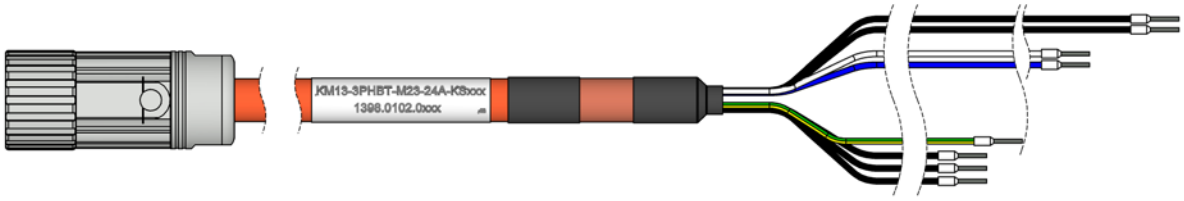
Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PHBT-M23-24A-KSxxx

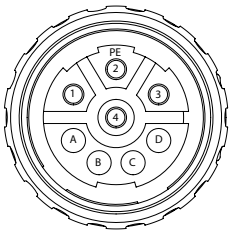
Order no. 1398.0102.0xxx

Compatible with ServoOne junior without HDSL

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	2 (PE)	Protective earth conductor	Yellow/green	
	3	Phase W	W/L3	
	4	Phase V	V/L2	
	A	Brake+	5	
	B	Brake-	6	
	C	Temp+	Blue	
	D	Temp-	White	
	Housing	Outer shield	Copper	

Technical data

	KM13-3PHBT-M23-24A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	2.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	24 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	13.9 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.31 kg/m

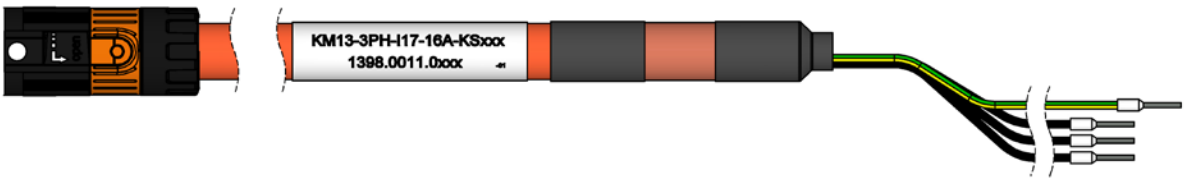
Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PH-I17-16A-KSxxx

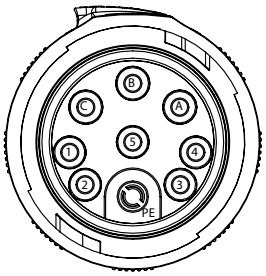
Order no. 1398.0011.0xxx

Compatible with ServoOne junior without HDSL and without thermal monitoring

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	A	Phase U	U/L1	Flying lead
	B	Phase V	V/L2	
	C	Phase W	W/L3	
	PE	Protective earth conductor	Yellow/ green	
	1, 2, 3, 4, 5	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM13-3PH-I17-16A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power I_N	630 V AC/DC max.
Rated current, power	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.1 mm
Diameter Ds connector A	20 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.22 kg/m

Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PH-M23-16A-KSxxx

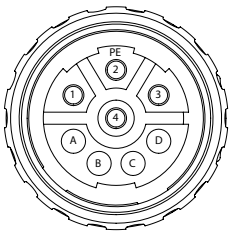
Order no. 1398.001.0xxx

Compatible with ServoOne Junior without HDSL and without thermal monitoring

Figure



Connector pin assignment



Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	2 (PE)	Protective earth conductor	Yellow/green	
	3	Phase W	W/L3	
	4	Phase V	V/L2	
	A, B, C, D	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM13-3PH-M23-16A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	1.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	16 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	9.1 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.20 kg/m

Motor cable ServoOne junior <=> LST, LSN, LSP standard servomotors

Cable type: KM13-3PH-M23-24A-KSxxx

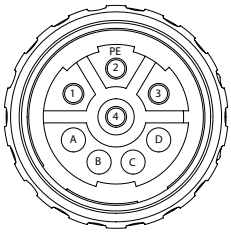
Order no. 1398.0002.0xxx

Compatible with ServoOne Junior without HDSL and without thermal monitoring

Figure



Connector pin assignment

Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	2 (PE)	Protective earth conductor	Yellow/green	
	3	Phase W	W/L3	
	4	Phase V	V/L2	
	A, B, C, D	n.c.		
	Housing	Outer shield	Copper	

Technical data

	KM13-3PH-M23-24A-KSxxx
Cable length	1 m to max. 30 m (special length on request)
Cable cross-section, power (U, V, W)	2.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	24 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	5 m/s
Max. acceleration	50 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	10.7 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.21 kg/m

Space for notes

3.4 Motor cables c-line Drives

Ready made motor cables			
Designation	**Cable layout**	**Connector, motor end**	**Controller**
KM2-KSxxx	3-phases + earth + brake + thermo	M23	CDD, CDE, CDF

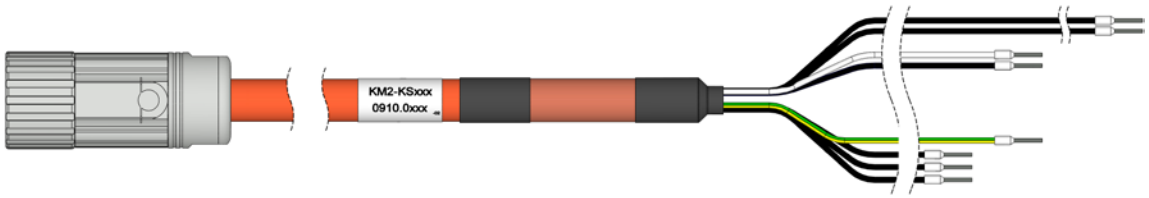
Motor cable CDD/CDE <=> LST, LSN, LSP standard servomotors

Cable type: KM2-KSxxx

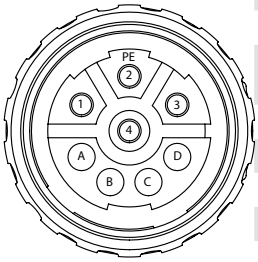
Order no. 0910.0xxx

Compatible with C-line Drives

Figure



Connector pin assignment



Motor connector	Des. motor connector	Function	Des./colour	Connection controller end
	1	Phase U	U/L1	Flying lead
	4	Phase V	V/L2	
	3	Phase W	W/L3	
	2 (PE)	Protective earth conductor	Yellow/ green	
	A	Brake+	5	
	B	Brake-	6	
	C	Temp+	Blue	
	D	Temp-	White	
	Housing	Outer shield	Copper	

Technical data

	KM2-KSxxx
Cable length	1 m to max. 50 m (special length on request)
Cable cross-section, power (U, V, W)	2.5 mm^2
Temperature range, in state with movement	-30 °C to 80 °C
Temperature range, in state without movement	-40 °C to +80 °C
Protection	Inserted IP 66/67
Rated voltage, power	630 V AC/DC max.
Rated current, power I_N	24 A
Pollution degree	3, as per EN 61984 para. 6.19.2.2
Overvoltage category	III, as per EN 61984 para. 6.19.2.2
Maximum installation altitude	2000 m max., as per EN 61984 para. 6.19.2.2
Oil resistance outer material	HD 22.10 Annex A, DIN EN 60811-2-1
Flame-retardant	As per IEC 60332-1-2, UL758 cable flame test
Environmental impact	RoHS compliant, halogen-free, silicone-free, CFC-free
Capable for energy chains	Yes
Max. traversing speed	4 m/s
Max. acceleration	30 m/s^2 (depending on travel)
Min. bending cycles	5 million
Bending radius, fixed laying	5 x Dk
Bending radius, laying with movement	7 x Dk
Diameter Dk of the cable	11.7 mm
Diameter Ds connector A	28 mm
Approval	UL758 (AWM) style 21223 (sheath) and UL758 (AWM) style 21223 (sheath) and style 10492 (core)
Cable weight	0.22 kg/m

Date: 05/2021 • ID no.: 0966.24B.1-00

Fit for the future with bundled competencies

KEBA AG is an internationally successful electronics business based in Linz/Austria with subsidiaries worldwide. Based on the motto "Automation by innovation." KEBA has for 50 years developed and manufactured innovative automation solutions of the highest quality for a very wide range of sectors.

www.keba.com

KEBA AG Headquarters, Gewerbepark Urfahr, 4041 Linz/Austria, telephone: +43 732 7090-0, fax: +43 732 730910, keba@keba.com

KEBA Industrial Automation Germany GmbH, Gewerbestraße 5-9, 35633 Lahnau, telephone: +49 6441 966-0, fax: +49 6441 966-137, info@keba.de

KEBA Group worldwide
China • Germany • India • Italy • Japan • Netherlands
Austria • Romania • Switzerland • South Korea • Taiwan
Czech Republic • Turkey • USA

Copyright © 2021 KEBA All rights reserved.
All content of the documentation, in particular the text, photographs and graphics it contains are protected by copyright. The copyright lies, unless otherwise expressly stated, with KEBA Industrial Automation Germany GmbH.