Assembly instructions

DC electric enclosure

These assembly instructions must always be used together with our DC operating instructions

Original assembly instructions

Manufacturer

Demag Cranes & Components GmbH
Forststrasse 16
40597 Düsseldorf, Germany
www.demagcranes.com
info@demagcranes.com

Please fill in the following table before first putting the unit into service. This provides you with definitive documentation of your Demag DC chain hoist and important information if you ever have to contact the manufacturer or his representative.

Owner
Where in use
Size
Serial number
Year of manufacture
Operating voltage
Control voltage
Frequency
Circuit diagram number

Tab. 1

The metric system is used in this document and all figures are shown with a comma as the decimal separator.

Table of contents

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1 General

1.1 DC electric enclosure

The electric equipment also serves to convert signals between pole-changing DC chain hoists with tri-state signal transmission (DCS with PWM signals) and crane systems that are fitted with conventional electric contactor controls.
The DC Polu box is used as a contactor control arrangement between a chain hoist and trolley to control AC drives (e.g. for long-travel drives or slewing cranes fitted with a driven slewing mechanism).
The signal converter, terminal box and DC Polu box can be fitted to the DC chain hoist motor for sizes DC 1 - 15. It may be necessary to fit them in a different position depending on any other equipment (e.g. Harting connector in the power supply line or geared limit switch for DC 1 - 15).
On DC-Pro 16 - 25 units, the signal is modified with 3TK and KT3 plug-in modules (42 - 230 V, 50/60 Hz). These are integrated beneath the electrical equipment cover.
Depending on the application, crane bridge enclosures must be selected with EU11 - EU34 trolleys and for installations with AC motors for the travel drive.

WARNING

Non-compliance with operating and maintenance regulations

Danger to life and limb.

This documentation contains additional information for operating DC chain hoists. It must be used together with our operating instructions. Please pay particular attention to the safety instructions in the operating instructions.

1.2 DC documents

Further documents are available for sub-assemblies/components in addition to these assembly instructions. If required, the corresponding documents are supplied or can be ordered separately, even if special designs or additional options differing from these assembly instructions are ordered.

Documents [1]		Part no.
Technical data/catalogues	Demag DC-Pro 1 – 25 chain hoist Demag DCS-Pro 1 – 15 chain hoist	203 525 44
	Demag DC-Com chain hoist	203 571 44
	U11-U34/DC/DCM/DK trolley	203 569 44
	Clamp-fitted buffer	203 313 44
	KBK crane construction kit, project engineering and components	202 976 44
Operating instructions/component parts	DC-Pro 1 - 15, DC-Com 1 -10 chain hoist	211 273 44
	DC-Pro 16 - 25 chain hoist	211 033 44
	KBK installations	206 076 44
Assembly – Adjustment – Dimensions	KDDC/UDDC articulated trolley	211 159 44
	E11-E34 DC travel drive (I)	214 810 44
	E11-E34 DC travel drive (II) (circuit diagrams)	211 229 44
	DRC-DC radio control system	214 689 44
	DRC-DC quick-step instructions	211 045 44
	DC geared limit switches	211 011 44
	PGS parallel grippers	214 095 44
	DC Polu box	211 249 44
	DC electric enclosure	211 250 44
	Friction force checking device	206 973 44
	DC PWM/3ST signal converter	211 094 44
	DCS analogue/PWM signal converter	214 951 44
	DSC-EX control pendant	214 832 44
	DSE-10C control pendant	214 998 44
	DC protective sleeve	211 227 44
	VG11-34 EU11-34 dual-output gearbox	211 122 44
	DSC strain relief device	211 092 44
Log book	DC test and inspection booklet	214 745 44
	Certificates	235 309 44

Tab. 2

[1] The documents can be ordered from the relevant Demag office.

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1.3 Symbols/signal words

Important safety information and instructions are marked by corresponding symbols and signal words in these instructions.
Safety instructions and information must be followed. Exercise particular caution to ensure that accidents, injuries and damage are avoided in such cases.
Locally applicable accident prevention regulations and general safety regulations must also be followed.
The following symbols and instructions warn against possible injuries or damage and are intended to assist you in your work.

DANGER

This symbol indicates an immediate hazard which can result in serious injury or death.

– Follow these instructions at all times and be particularly careful and cautious.

WARNING

This symbol indicates a possibly hazardous situation which might result in serious injury or death.

– Follow these instructions at all times and be particularly careful and cautious.

CAUTION

This symbol indicates a possibly hazardous situation which might result in medium to light injury or damage.

– Follow these instructions at all times and be particularly careful and cautious.

Operating hazard for the machine.

- This symbol indicates information on appropriate use of the machine.
- This symbol in the operating instructions indicates all warnings which, if not complied with, may result in malfunctions or damage.

1.4 Notice on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

Demag Cranes & Components GmbH is fully aware of its obligations under Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). Twice a year the EU publishes a Candidate list of Substances of Very High Concern (“SVHC”) for Authorization. Producers and EU-importers have the duty to inform their EU customers when a product contains SVHCs in a concentration above 0.1 % weight by weight. Some Demag products do include small quantities of SVHCs, such as lead which is typically used in brass and in certain steel materials. These cases are exemptions, as there are currently no satisfactory alternatives available for such substances. We are actively searching for alternatives to substitute articles including SVHCs.

For a list of SVHCs, please see https://www.demagcranes.com/en/company/reach-notice.

2 Schematic diagrams

2.1 Crane with chain hoist and contactor control, control pendant on the chain hoist

2.1.1 Replacement of the hoist unit

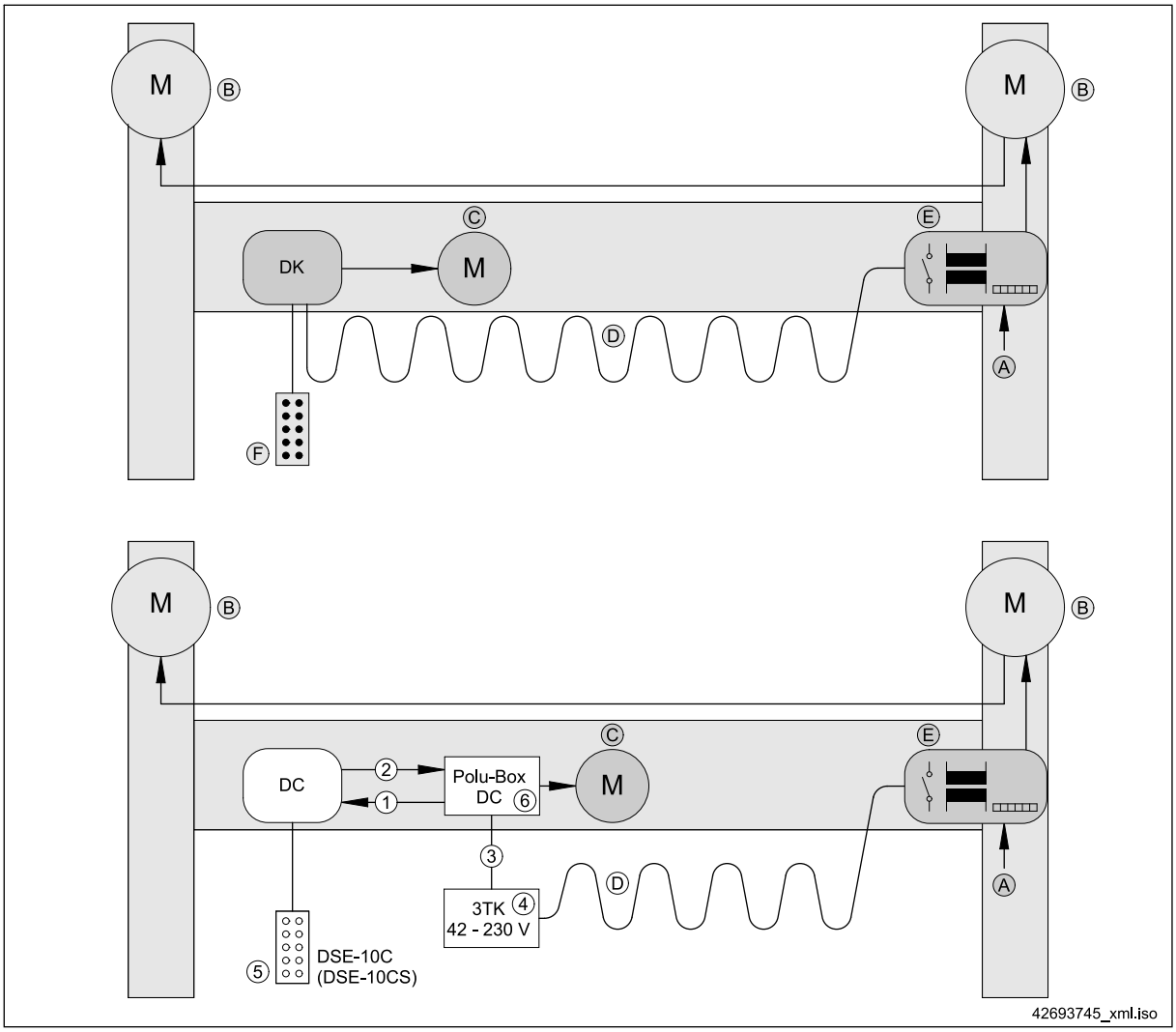

Fig. 1 Crane with chain hoist and contactor control, control pendant on the chain hoist, replacement of the hoist unit

	Item	Designation	Remark	Technical data	Part no.
New	1	Power cable			720 072 45
New	2	Control cable		10-pole, 1,5 m	720 070 45
New	3	Round cable	Power supply and signal	YMHYK-J 12x1,5	504 945 44
New	4	3TK signal converter	Control voltage 42, 48, 115, 230 V	⇒ Fig. 9, Page 14	772 176 45
New	5	Control pendant		DSE-10C	773 352 45
				DSE-10CS	773 353 45
New	6	DC Polu box		⇒ Tab. 2, Page 4	772 280 45
	A	Mains supply cable		4-pole	by the customer
	B	Long-travel motors			
	C	Cross-travel motor			
	D	Flat cable	Power supply and signal		
	E	Crane bridge enclosure	also with transformer and contactor		
	F	Control pendant			

Tab. 3

New parts must be ordered for the components that are **"not greyed out"** or they must be re-wired.

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2.1.2 Replacement of the travelling hoist

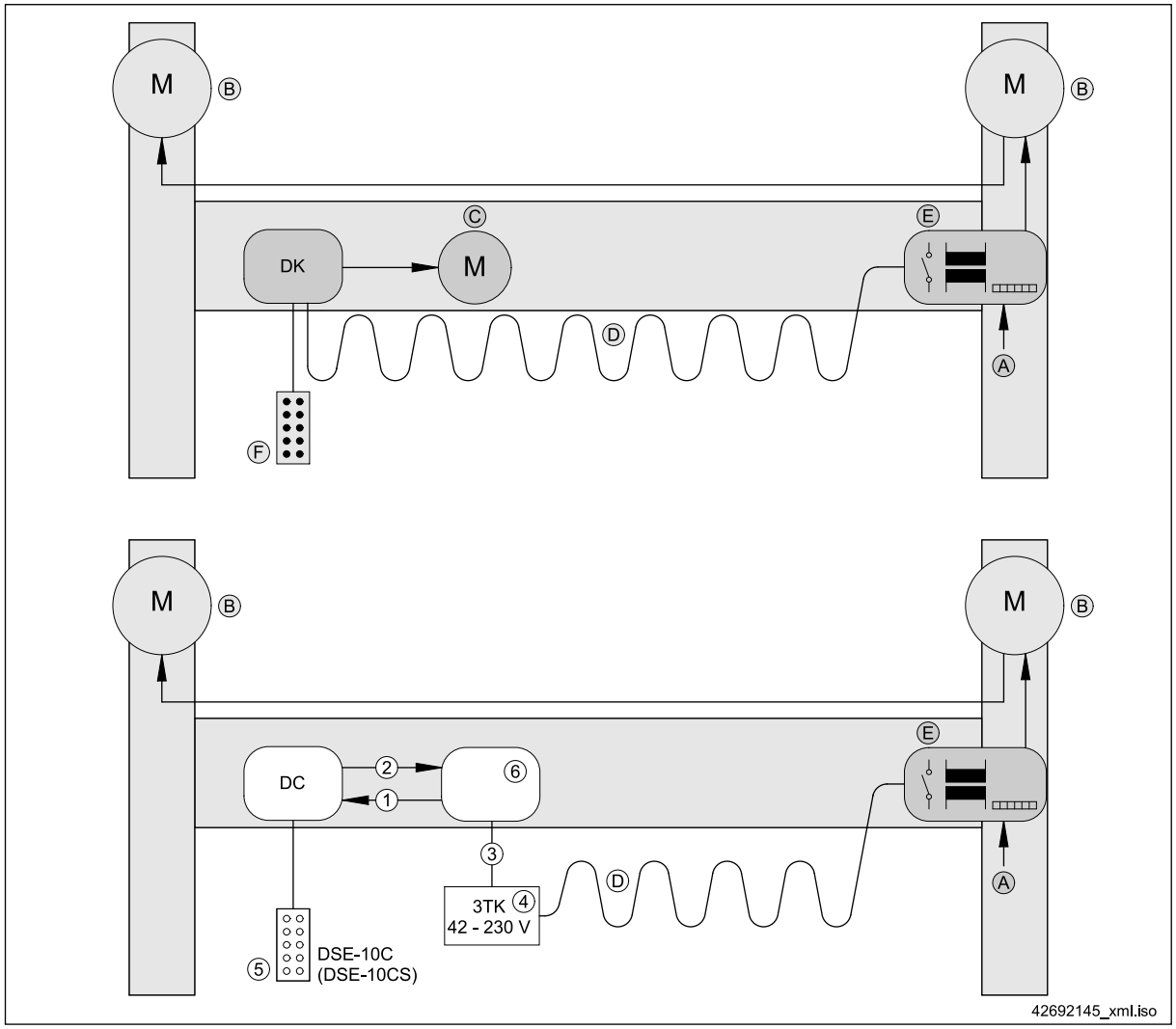

Fig. 2 Crane with chain hoist and contactor control, control pendant on the chain hoist, replacement of the travelling hoist

	Item	Designation	Remark	Technical data	Part no.
New	1	Power cable			720 072 45
New	2	Control cable		10-pole, 1,5 m	720 070 45
New	3	Round cable	Power supply and signal	YMHYK-J 12x1,5	504 945 44
New	4	3TK signal converter	Control voltage 42, 48, 115, 230 V	⇒ Fig. 9, Page 14	772 176 45
New	5	Control pendant		DSE-10C	773 352 45
				DSE-10CS	773 353 45
New	6	Travel drive	Drive for long or cross travel	E11	716 570 45
				E22-C	716 950 45
				E34	716 740 45
	A	Mains supply cable		4-pole	by the customer
	B	Long-travel motors			
	C	Cross-travel motor			
	D	Flat cable	Power supply and signal		
	E	Crane bridge enclosure	also with transformer and contactor		
	F	Control pendant			

Tab. 4

New parts must be ordered for the components that are **"not greyed out"** or they must be re-wired.

2.2 Crane with chain hoist and contactor control, mobile control pendant

2.2.1 Replacement of the hoist unit

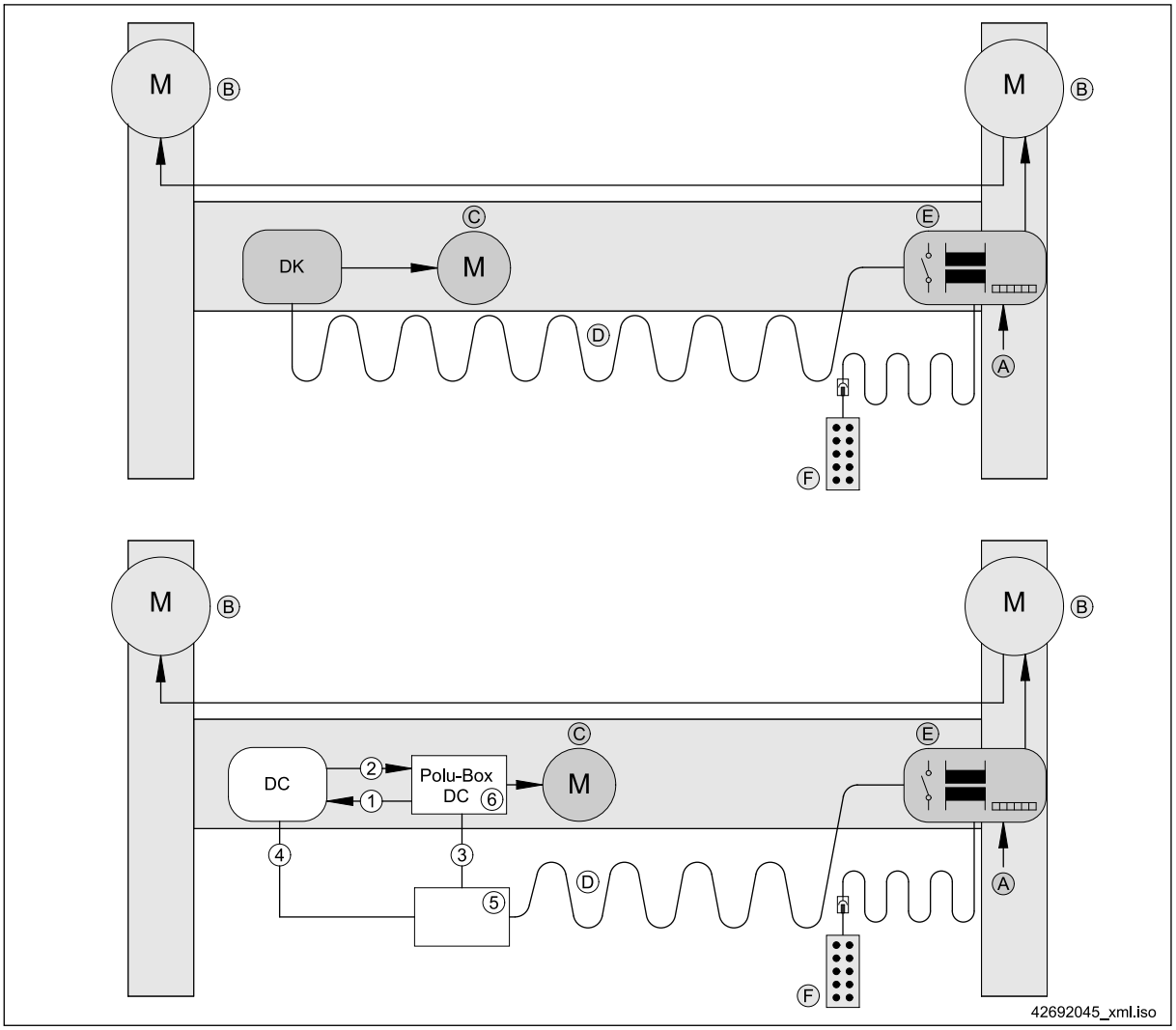

Fig. 3 Crane with chain hoist and contactor control, mobile control pendant, replacement of the hoist unit

	Item	Designation	Remark	Technical data	Part no.
New	1	Power cable			720 072 45
New	2	Control cable		10-pole, 1,5 m	720 070 45
New	3	Round cable	to the trolley	YMHYK-J 4x1,5	504 931 44
New	4	Control cable		10-pole, 1,5 m	772 062 45
New	5	KT3 signal converter	Control voltage 42, 48, 110, 115 V	⇒ Fig. 10, Page 16	772 177 45
		DT3 signal converter	230 V control voltage	⇒ Fig. 11, Page 18	772 166 45
New	6	DC Polu box		⇒ Tab. 2, Page 4	772 280 45
	A	Mains supply cable		4-pole	by the customer
	B	Long-travel motors			
	C	Cross-travel motor			
	D	Flat cable	Power supply and signal		
	E	Crane bridge enclosure	also with transformer and contactor		
	F	Control pendant			

Tab. 5

New parts must be ordered for the components that are **"not greyed out"** or they must be re-wired.

2.2.2 Replacement of the travelling hoist

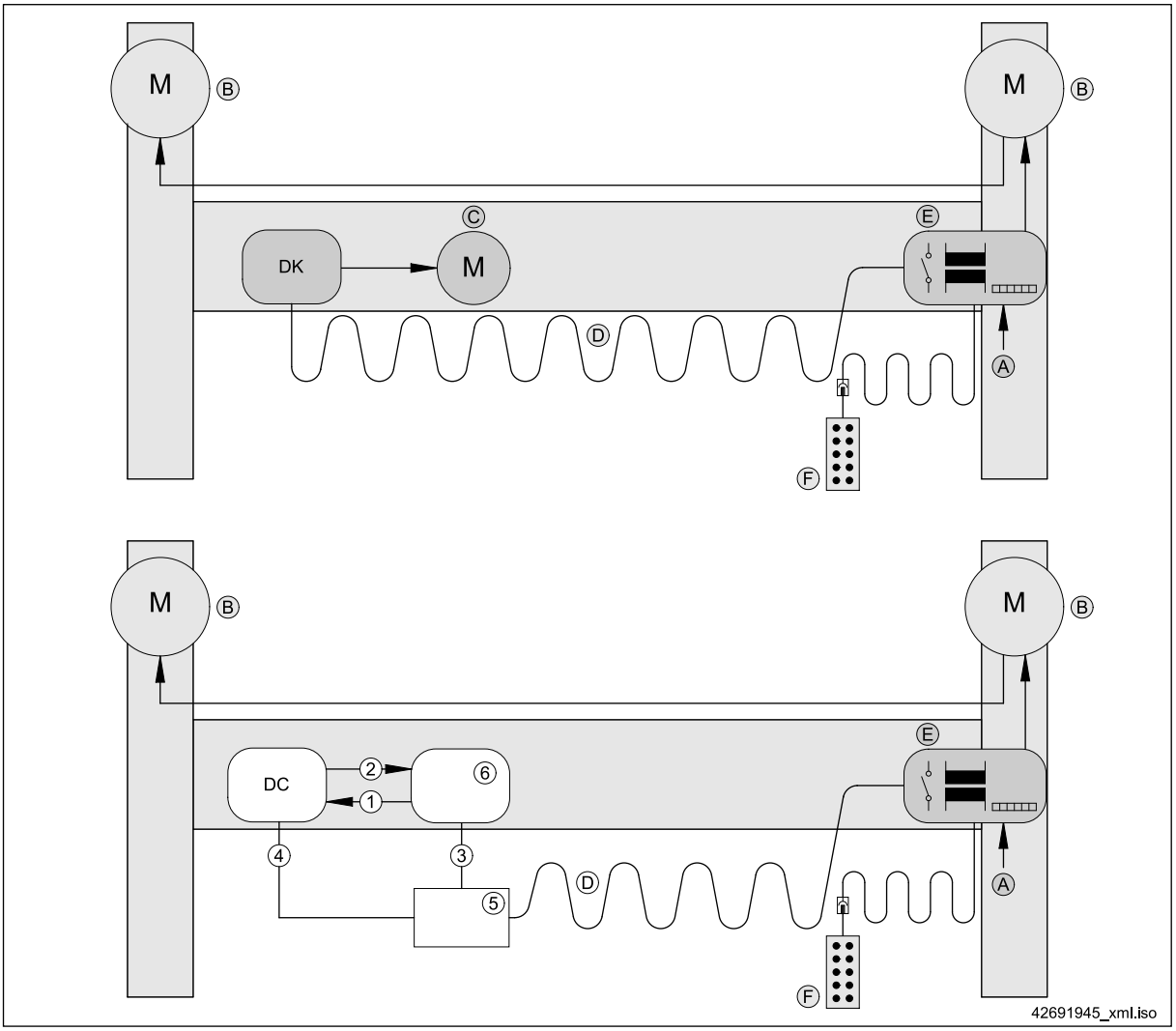

Fig. 4 Crane with chain hoist and contactor control, mobile control pendant, replacement of the travelling hoist

	Item	Designation	Remark	Technical data	Part no.
New	1	Power cable			720 072 45
New	2	Control cable		10-pole, 1,5 m	720 070 45
New	3	Round cable	to the trolley	YMHYK-J 4x1,5	504 931 44
New	4	Control cable		10-pole, 1,5 m	772 062 45
New	5	KT3 signal converter	Control voltage 42, 48, 110, 115 V	⇒ Fig. 10, Page 16	772 177 45
		DT3 signal converter	230 V control voltage	⇒ Fig. 11, Page 18	772 166 45
New	6	Travel drive	Drive for long or cross travel	E11	716 570 45
				E22-C	716 950 45
				E34	716 740 45
	A	Mains supply cable		4-pole	by the customer
	B	Long-travel motors			
	C	Cross-travel motor			
	D	Flat cable	Power supply and signal		
	E	Crane bridge enclosure	also with transformer and contactor		
	F	Control pendant			

Tab. 6

New parts must be ordered for the components that are **"not greyed out"** or they must be re-wired.

3 Device overview

3.1 Universal electric equipment box (part no. 772 167 45)

Fig. 5

Universal electric equipment boxes are equipped with cage clamp terminals for power and signal distribution. They are terminal boxes without any cables designed for specific applications and can be used for connecting larger conductor cross-sections with smaller conductor cross-sections, for example.

Technical data:

- Colour RAL 9005,
- IP 55 enclosure,
- Weight approx. 1 kg,
- Dimensions 185 mm x 163 mm x 102 mm (WxHxD),
- Ambient temperature -20 °C to +60 °C,
- Wear-resistant, weather-resistant PA 6 plastic.

Included in the scope of delivery:

- Terminal box and terminal strip,
- Cable glands (twist-type cable entry glands: 2x M20, 3x M25, 1x M25 flat; 2x M20, 2x M25 union),
- Mounting plate and screws (part no. 718 383 45).

Universal electric equipment boxes are used as a basis for the following terminal boxes:

- 3T3 terminal box,
- Manual travelling hoist terminal box,
- DC/diode terminal box.

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3.2 3T3 terminal box (part no. 772 174 45)

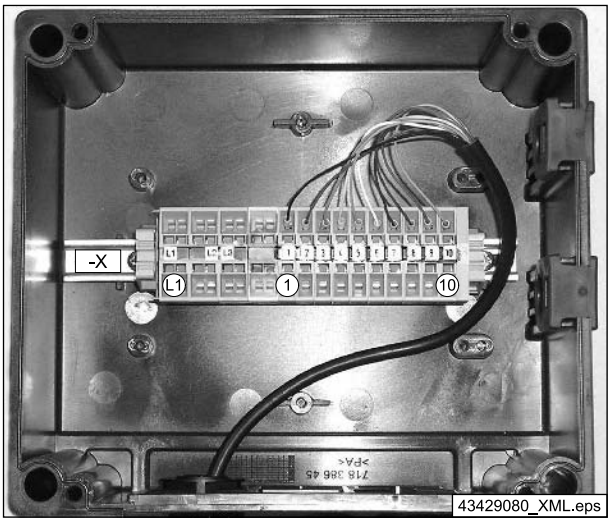

Fig. 6 PIN 1 = ①

3T3 terminal boxes are used for DC chain hoists that are equipped with a special control pendant and 2TY control cable, for example.

Included in the scope of delivery:

- Universal electric equipment box,
- 10-pole 1,5 m control cable with RJ45 connector and bayonet lock (part no. 772 073 45).

Terminal	Function	No.	Signal	Conductor	Notes
-X	Power cable	L1			230 V to 575 V +/- 10% 50/60 Hz
		L1			
		L2			
		L2			
		L3			
		L3			
		PE			
		PE			
	Control pendant input	1	Special F1	BK	10-pole 1,5 m control cable with RJ45 connector and bayonet lock
		2	Crane forwards	BN	
		3	Crane reverse	BU	
		4	Emergency stop	YE	
		5	Control pendant supply	OG	
		6	Lifting	WH	
		7	Lowering	VT	
		8	Travelling hoist right	RD	
		9	Travelling hoist left	GN	
		10	Special F2	GY	

Tab. 7

3.3 Manual travelling hoist terminal box (part no. 772 175 45)

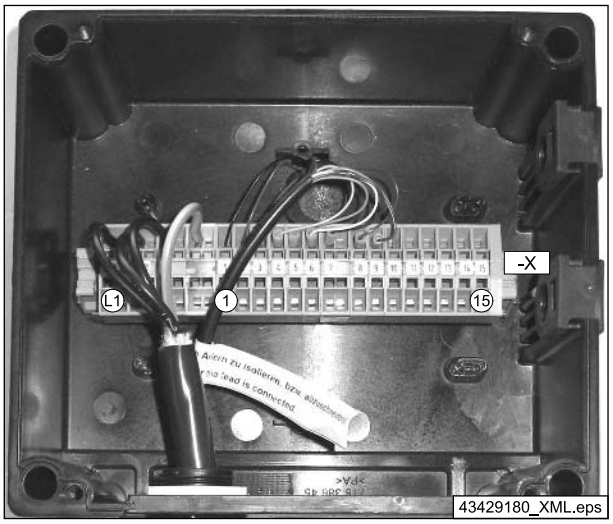

Fig. 7 PIN 1 = ①

Manual travelling hoist terminal boxes are used for KBK crane installations with manual cross-travel and electric long-travel motions, for example.

Included in the scope of delivery:

- Universal electric equipment box,
- 4-pole 1,5 m power cable with DC 1 - 15 mains connector (part no. 772 068 45),
- 10-pole 1,5 m control cable with RJ45 connector (part no. 772 069 45).

Terminal	Function	No.	Signal	Conductor	Notes
-X	Power cable	L1	L1	1	230 V to 575 V +/- 10% 50/60 Hz
		L1			
		L2	L2	2	
		L2			
		L3	L3	3	
		L3			
		PE	PE ⏚	GNGE	
		PE			
	Control pendant input	1	Special F1	BK	10-pole 1,5 m control cable with RJ45 connector
		2	Crane forwards	BN	
		3	Crane reverse	BU	
		4	Emergency stop	YE	
		5	Control pendant supply	OG	
		6	24 V AC from chain hoist	WH	
		7	Reference 24 V AC	VT	
		7			
		8	Travelling hoist right	RD	
		9	Travelling hoist left	GN	
		10	Special F2	GY	
		11			
		12			
		13			
		14			
		15			

Tab. 8

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3.4 DC/diode terminal box (part no.: DC 1-15 ➔ 772 165 45; DC 16-25 ➔ 772 168 45)

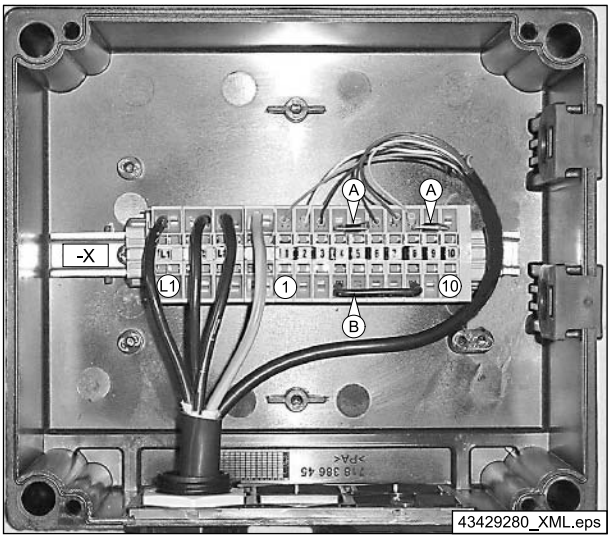

Fig. 8 PIN 1 = ①, diodes (A), wire jumper (B)

DC/diode terminal boxes are used for the control of 2-stage DC chain hoists with the help floating contacts supplied by the customer, for example. Cannot be used for variable-speed DC chain hoists.
The DC chain hoists are controlled by a 24 V AC signal with tri-state transmission (half wave/full wave). The DC/diode terminal box is connected with corresponding floating contacts to generate the tri-state signal using the integrated diodes.

Included in the scope of delivery:

- Universal electric equipment box,
- 4-pole 1,5 m power cable with DC 1 - 15 mains connector (part no. 772 068 45) or 4-pole 1,5 m power cable and DC 16 - 25 mains connector,
- 10-pole 1,5 m control cable with RJ45 connector and bayonet lock (part no. 772 073 45),
- Modular terminals and diodes.

Terminal	Function	No.	Signal	Conductor	Notes
-X	Power cable	L1	L1	1	230 V to 575 V +/- 10% 50/60 Hz
		L1			
		L2	L2	2	
		L2			
		L3	L3	3	
		L3			
		PE	PE ⏚	GNGE	
		PE			
	Control pendant input	1	24 V AC	OG	10-pole 1,5 m control cable with RJ45 connector and bayonet lock (unused conductors shortened) Wire jumper: 4 ➔ 8 Diode: 4 ➔ 5 Diode: 8 ➔ 9
		2	Lifting	WH	
		3	Lowering	VT	
		4			
		5			
		6	Travelling hoist right	RD	
		7	Travelling hoist left	GN	
		8	Emergency stop	GY	
		9			
		10			

Tab. 9

3.5 3TK signal converter (part no. 772 176 45)

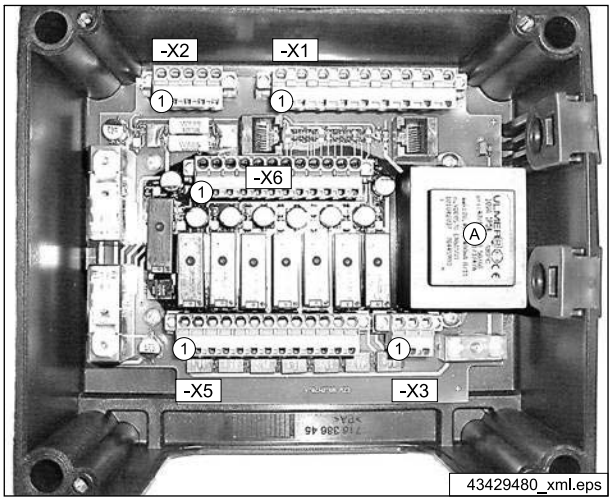

Fig. 9 PIN 1 = ①, control transformer (A)

3TK signal converters are used for converting tri-state signals from a control pendant/radio control into floating contacts for conventional contactor controls.
3TK signal converters are used for DC chain hoists with tri-state signals (control pendant/radio control) in connection with conventionally controlled (contactor-controlled) cranes and /or travelling hoists.
The "Forwards", "Reverse", "Fast" (for the long-travel motion), "Right", "Left", "Fast" (for the cross-travel motion) as well as the "Special signal_1", "Special signal_2" and "Emergency-stop" (safety relay) control signals are available as floating contacts.

Included in the scope of delivery:

- Terminal box and terminal strip,
- Cable glands (twist-type cable entry glands: 2x M20, 3x M25, 1x M25 flat; 2x M20, 2x M25 union),
- Mounting plate and screws (part no. 718 383 45).
- Switching relay and control transformer for 42 V, 48 V, 115 V, 230 V control voltage connection.

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Terminal	Function	No.	Signal
-X1	Main current from crane ➔ travelling hoist (point-to-point terminals)	1	L1
		2	
		3	
		4	L2
		5	
		6	
		7	L3
		8	
		9	
-X2	Earth point-to-point terminals	1	PE ⏚
		2	
		3	
		4	
		5	
-X3	Control voltage reference point	1	48 V
		2	115 V
		3	230 V
-X5	Control signals for travelling hoist or crane controls (conventional)	1	Emergency stop
		2	Control voltage of travelling hoist or crane controls (48 V, 115 V or 230 V)
		3	
		4	Right (travelling hoist)
		5	Fast (travelling hoist)
		6	Left (travelling hoist)
		7	Reverse (crane)
		8	Fast (crane)
		9	Forwards (crane)
		10	Special F2 (-)
		11	Special F2 (+)
		12	Special F1 (-)
		13	Special F1 (+)
-X6	Control signals from the chain hoist or cross-travel drive (tri-state)	1	Special F1
		2	Forwards
		3	Reverse
		4	Emergency stop
		5	Control pendant supply
		6	-
		7	-
		8	Right
		9	Left
		10	Special F2
		11	Reference voltage
		12	Special F1

Tab. 10

3.6 KT3 signal converter (part no. 772 177 45)

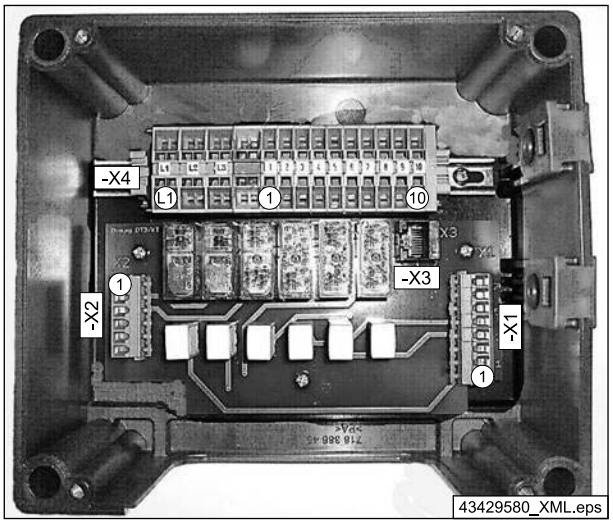

Fig. 10 PIN 1 = ①

KT3 signal converters are used to convert conventional "Lift", "Lower", "Fast", "Right", "Left" and "Fast" signals into tri-state signals for a travelling hoist fitted with a DC chain hoist.
The emergency-stop signal muss be provided by the customer via the crane switch contactor.

Included in the scope of delivery:

- Terminal box and terminal strip,
- Cable glands (twist-type cable entry glands: 2x M20, 3x M25, 1x M25 flat; 2x M20, 2x M25 union),
- Mounting plate and screws (part no. 718 383 45),
- Signal converter module for 42 V, 48 V, 110 V, 115 V.

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Terminal	Function	No.	Signal	Conductor	Notes
-X1	110/115 V control voltage signals	1	Lifting		
		2	Lowering		
		3	Fast		
		4	Right		
		5	Left		
		6	Fast		
		7			
		8	Control voltage reference potential		
-X2	42/48 V control voltage signals	1	Lifting		
		2	Lowering		
		3	Fast		
		4	Right		
		5	Left		
		6	Fast		
-X3	Control signals to the chain hoist	1	Special F1	BK	10-pole 1,5 m control cable with RJ45 connector and bayonet lock
		2	Crane forwards	BN	
		3	Crane reverse	BU	
		4	Emergency stop	YE	
		5	Control pendant supply	OG	
		6	Lifting	WH	
		7	Lowering	VT	
		8	Travelling hoist right	RD	
		9	Travelling hoist left	GN	
		10	Special F2	GY	
-X4	Main current point-to-point terminals	L1			
		L1			
		L2			
		L2			
		L3			
		L3			
		PE			
		PE			
	Control current point-to-point terminals	1			
		2			
		3			
		4			
		5			
		6			
		7			
		8			
		9			
		10			

Tab. 11

3.7 DT3 signal converter (part no. 772 166 45)

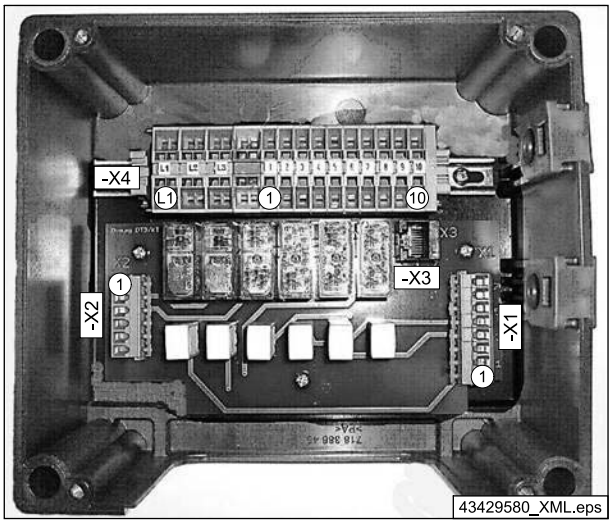

Fig. 11 PIN 1 = ①

DT3 signal converters are used to convert conventional "Lift", "Lower", "Fast", "Right", "Left" and "Fast" signals into tri-state signals for a travelling hoist fitted with a DC chain hoist.
The emergency-stop signal muss be provided by the customer via the crane switch contactor.

Included in the scope of delivery:

- Terminal box and terminal strip,
- Cable glands (twist-type cable entry glands: 2x M20, 3x M25, 1x M25 flat; 2x M20, 2x M25 union),
- Mounting plate and screws (part no. 718 383 45),
- Signal converter module for 230 V.

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Terminal	Function	No.	Signal	Conductor	Notes
-X1	400 V control voltage signals	1	Lifting		
		2	Lowering		
		3	Fast		
		4	Right		
		5	Left		
		6	Fast		
		7			
		8	Control voltage reference potential		
-X2	230 V control voltage signals	1	Lifting		
		2	Lowering		
		3	Fast		
		4	Right		
		5	Left		
		6	Fast		
-X3	Control signals to the chain hoist	1	Special F1	BK	10-pole 1,5 m control cable with RJ45 connector and bayonet lock
		2	Crane forwards	BN	
		3	Crane reverse	BU	
		4	Emergency stop	YE	
		5	Control pendant supply	OG	
		6	Lifting	WH	
		7	Lowering	VT	
		8	Travelling hoist right	RD	
		9	Travelling hoist left	GN	
		10	Special F2	GY	
-X4	Main current point-to-point terminals	L1			
		L1			
		L2			
		L2			
		L3			
		L3			
		PE			
		PE			
	Control current point-to-point terminals	1			
		2			
		3			
		4			
		5			
		6			
		7			
		8			
		9			
		10			

Tab. 12

3.8 KRBG crane bridge enclosure (part no. 772 400 45)

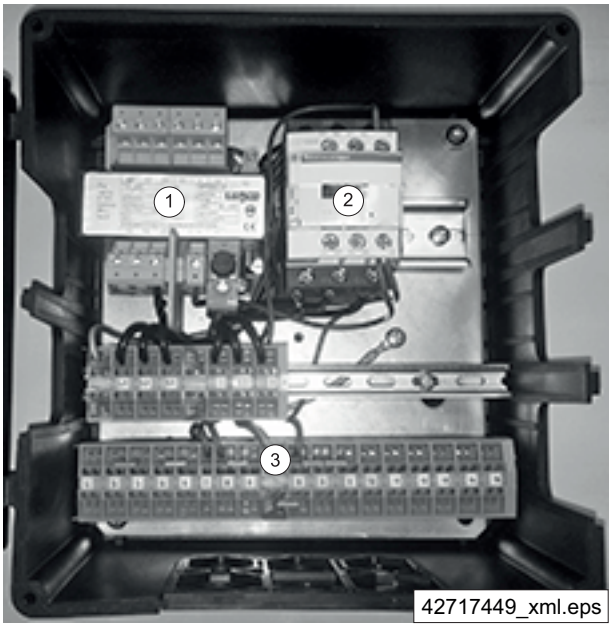

Fig. 12 (replaces KRBG enclosure, part no. 772 278 45)

Item	Designation
1	Control transformer
2	Crane switch contactor
3	Connection of power/signal distribution

Tab. 13

KRBG crane bridge enclosures are used to provide power supply for crane installations with DC systems (tri-state signals).
They are fitted with a control transformer (24 V AC), a crane switch contactor and cage clamp terminals for power and signal distribution.

Technical data:

- Colour RAL 9005 (jet black)
- IP 55 enclosure
- Weight 4,0 kg
- Dimensions 243 mm x 232 mm x 181 mm (WxHxD)
- Ambient temperature -20 °C to +60 °C
- Wear-resistant, weather-resistant PA 6 GF 30 V0 plastic; flame-retardant to UL94 V0

Included in the scope of delivery:

- Enclosure and terminal strip
- Crane switch contactor
- 24 V AC control transformer

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Terminal	Function	No.	Signal	Notes
-X1	Main current	L1	Power supply phase L1	230 V to 575 V +/- 10% 50/60 Hz
		L2	Power supply phase L2	
		L3	Power supply phase L3	
		PE	Protective earth conductor	
		1	Power supply switched phase L1'	
		2	Power supply switched phase L2'	
		3	Power supply switched phase L3'	
		PE	Protective earth conductor	
	Control signals	4	Enable	Point-to-point terminal
		5	Crane forwards	Point-to-point terminal
		6	Crane reverse	Point-to-point terminal
		7	Control pendant supply	24 V AC from the control transformer
		8	Emergency stop	Crane contactor control
		9	24 V AC reference voltage	Control transformer
		10	Travelling hoist right	Point-to-point terminal
		11	Travelling hoist left	Point-to-point terminal
		12	Lifting	Point-to-point terminal
		13	Lowering	Point-to-point terminal
		14		Reserve
		15		Reserve

Tab. 14

3.9 KRBG 2 crane bridge enclosure (part no. 772 410 45, from 04/2019)

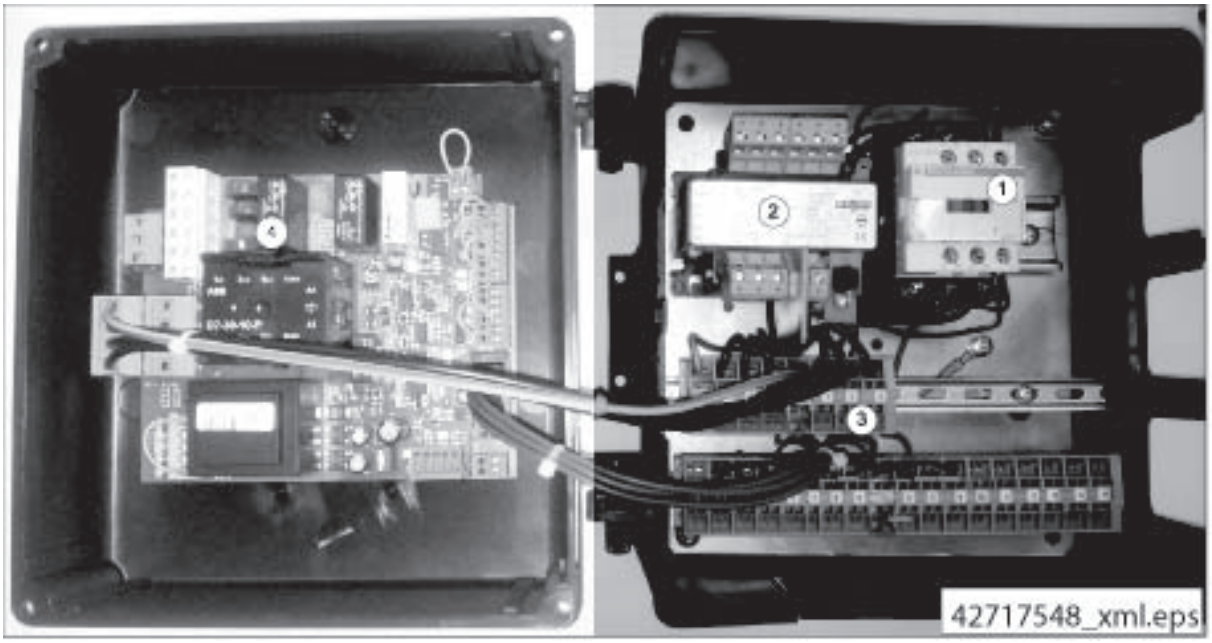

Fig. 13

Item	Designation	Item	Designation
1	Crane switch contactor	3	Connection of power/signal distribution
2	Control transformer	4	Polu board

Tab. 15

KRBG 2 crane bridge enclosures are used to provide power supply, signal distribution and for the control of pole-changing motors (max. 2x 750 W) for crane installations with DC systems (tri-state signals).
They are fitted with a control transformer (24 V AC), a crane switch contactor, a Polu box and cage clamp terminals for power and signal distribution.

Technical data:

- Colour RAL 9005 (jet black)
- IP 55 enclosure
- Weight 4,7 kg
- Dimensions 243 mm x 232 mm x 181 mm (WxHxD)
- Ambient temperature -20 °C to +60 °C
- Wear-resistant, weather-resistant PA 6 GF 30 V0 plastic; flame-retardant to UL94 V0

Included in the scope of delivery:

- Enclosure and terminal strip
- Crane switch contactor
- 24 V AC control transformer
- Integrated DC Polu board

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Terminal	Function	No.	Signal	Notes
-X1	Main current	L1	Power supply phase L1	230 V to 575 V +/- 10% 50/60 Hz
		L2	Power supply phase L2	
		L3	Power supply phase L3	
		PE	Protective earth conductor	
		1	Power supply switched phase L1'	
		2	Power supply switched phase L2'	
		3	Power supply switched phase L3'	
		PE	Protective earth conductor	
	Control signals	4	Enable	Point-to-point terminal
		5	Crane forwards	Control signal to Polu box
		6	Crane reverse	Control signal to Polu box
		7	Control pendant supply	24 V AC from the control transformer
		8	Emergency stop	Crane contactor control
		9	24 V AC reference voltage	Control transformer
		10	Travelling hoist right	Point-to-point terminal
		11	Travelling hoist left	Point-to-point terminal
		12	Lifting	Point-to-point terminal
		13	Lowering	Point-to-point terminal
		14	24 V DC	Point-to-point terminal
		15	Enable	Point-to-point terminal

Tab. 16

4 Accessories

4.1 Mounting arrangements

Mounting examples

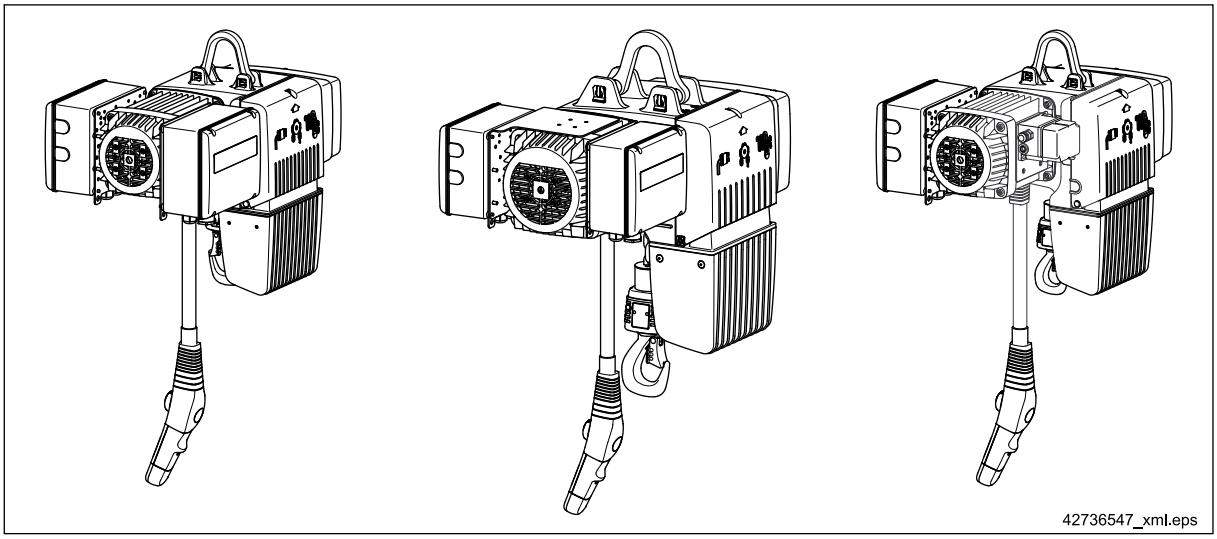

Fig. 14

DC 5 with 2 electric enclosures	DC 10 with 2 electric enclosures	DC 5 with 1 electric enclosure and 1 GGS

Tab. 17

An additional electric enclosure may need to be installed for certain applications.
The bore holes on the motor ribs serve as attachment points for the mounting plate.

Designation	Chain hoist size	Part no.	Weight [kg]
Enclosure mounting pate	DC 1 - 25	718 383 45	0,460
Angle bracket	DC 10 - 25	718 335 45	1,150

Tab. 18

Mounting combinations

Mounting combination	Mounting position 1 ⇒ Fig. 15, Page 25	Mounting position 2 ⇒ Fig. 15, Page 25
I	Electric enclosure	Electric enclosure
II	Geared limit switch (GGS)	Electric enclosure
III	Geared limit switch (GGS)	Harting power connector fitting
IV	Harting power connector fitting	Electric enclosure
V	Harting power connector fitting	
VI	DCS 10 external braking resistor	Electric enclosure
VII	Geared limit switch (GGS)	DCS 10 external braking resistor
VIII	DCS 10 external braking resistor	Harting power connector fitting

Electric enclosure = Universal E box, 3T3 terminal box, manual travelling hoist terminal box, DC/diode terminal box, 3TK signal converter, KT3 signal converter, DT3 signal converter

Tab. 19

The enclosure is always installed on the motor on the control pendant side if a geared limit switch or Harting power connector fitting is installed.

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Dimensions

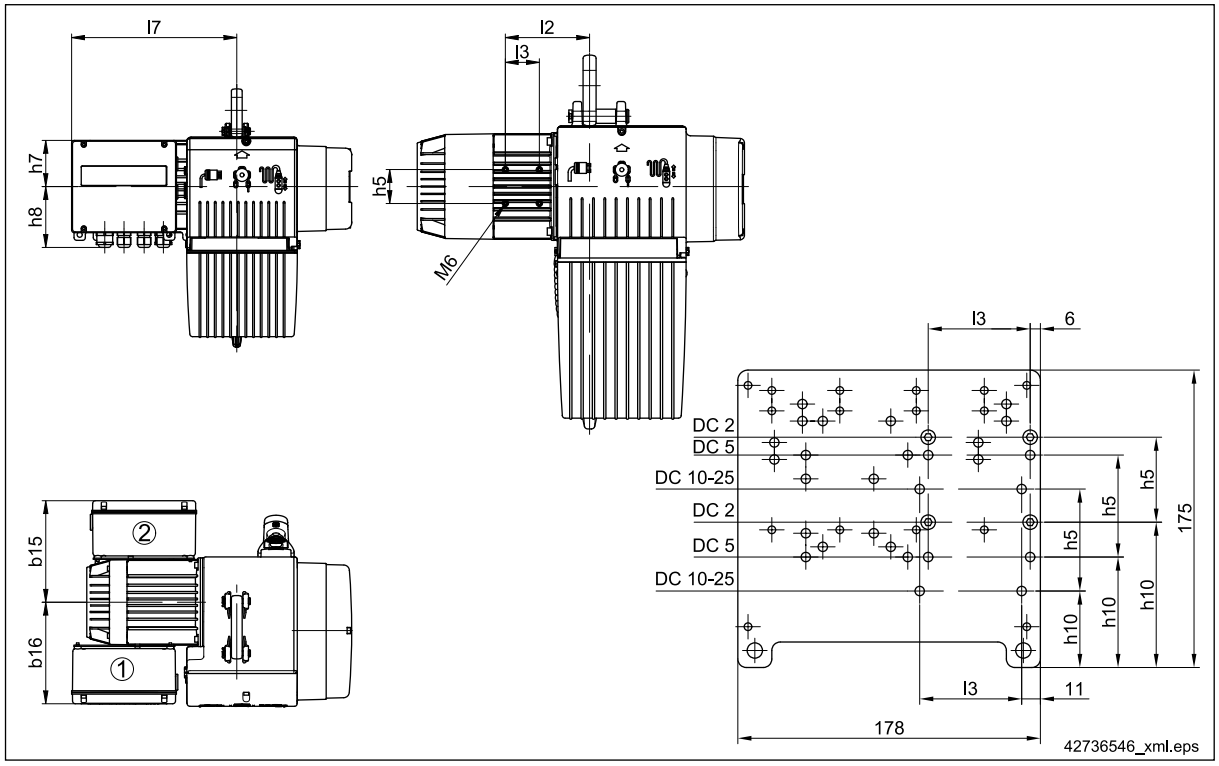

Fig. 15 Mounting positions ① + ②

Chain hoist size	Reeving	b15 [mm]	b16 [mm]	l2 [mm]	l3 [mm]	l7 [mm]	h5 [mm]	h7 [mm]	h8 [mm]	h10 [mm]
DC 1 - 2	1/1	167	167	170	60	286	50	66	123	85,5
DC 5		180	180	175		292	60	82	107	65
DC 10		211	198	182		294		102	87	45
	2/1			147		259				
DC 15	1/1			198		310				
	2/1									
DC 16 - 25	1/1			177		294		82	107	
	2/1									

Tab. 20

4.2 Cables

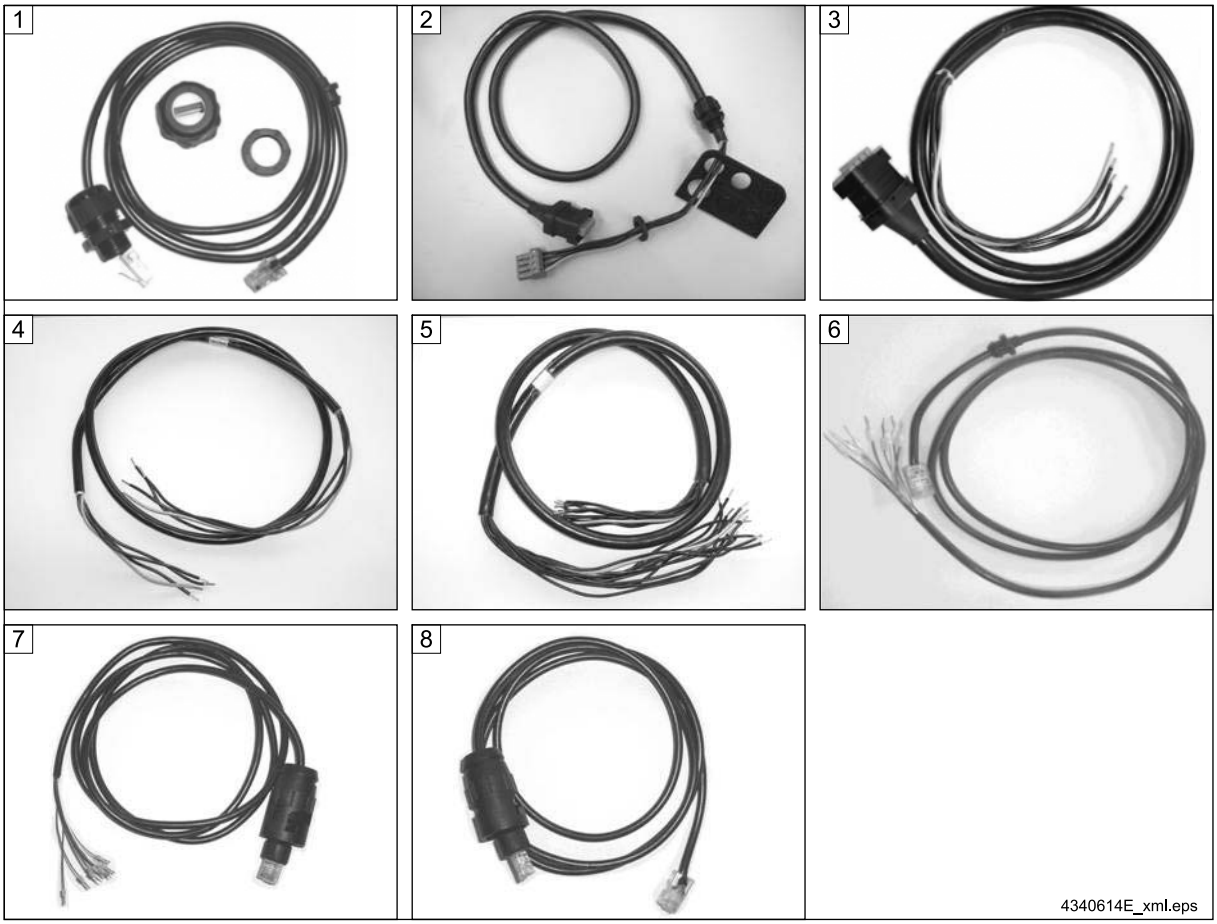

Fig. 16

Item	Designation	Chain hoist size	Part no.	No. of wires	Length [m]	Weight [kg]
1	Control cable set for E11-E34 travelling hoist, flat cable union	DC 1 - 15	720 070 45	10	1,5	0,10
2	Mains connection cable set for E11-E34 travelling hoist, plug-in module		720 072 45	4		0,44
3	Power cable with power supply plug and loose conductor ends		772 068 45			0,50
4	KT3 power cable with loose conductor ends		720 125 45			0,10
5	3TK power cable with loose conductor ends		720 126 45	12		0,35
6	Manual travelling hoist control cable with RJ45 plug connector and loose conductor ends		772 069 45	10		0,10
7	Control cable with bayonet connector and loose conductor ends		772 073 45			0,08
8	Control cable with bayonet connector and RJ45 connector		772 062 45			0,05

Tab. 21

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4.3 Mobile control system

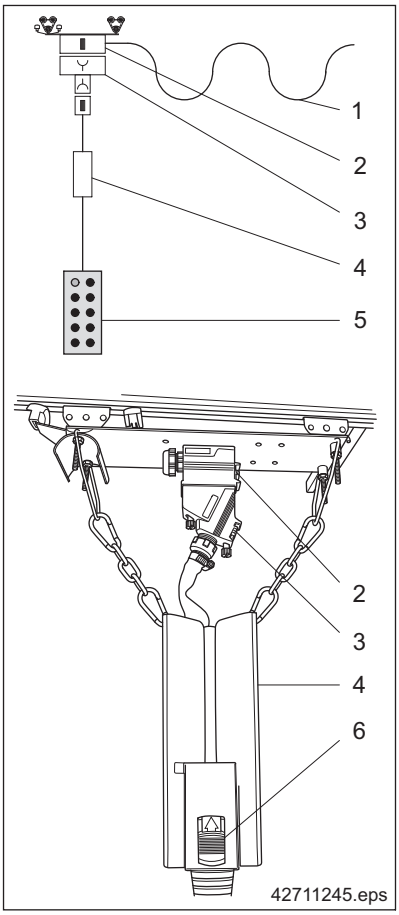

Fig. 17

Component parts			
Item	**Designation**	**Comprising**	**Part no.**
1	11-pole + PE flat cable		720 139 45
2	Connector enclosure cpl. X40 ⇒ Fig. 18, Page 27	Socket enclosure	720 187 45
		Mounting frame	
		VC-AMS8 pin insert	
		Flat cable union	
3	Connector adapter cpl.	Bayonet lock	720 087 45
		VC-MP-1-R-M25 bush enclosure	
		VC-TR1/2M bush frame	
		VC-TFS8 socket insert	
4	Cable collector		720 065 45
5	DSE-10C control pendant		773 352 45
6	Control cable locking mechanism		-

Tab. 22

Height-adjustable standard control cables H4, H5, H8, H11 must be used if a cable collector is fitted.

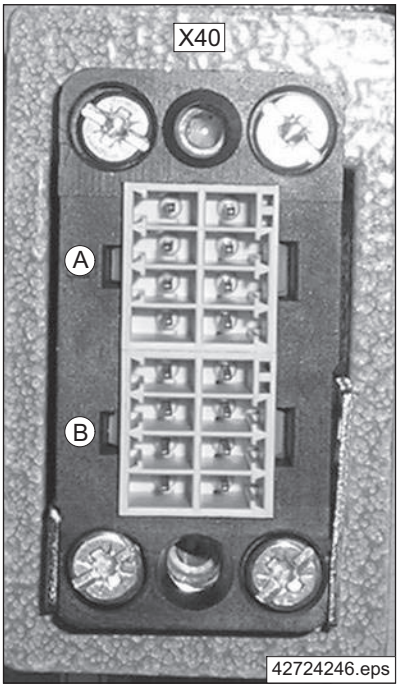

Fig. 18

X40 plug connector pin assignment					
Signal	**Con-duc-tor**	**PIN**		**Con-duc-tor**	**Signal**
-	-	B4	B8	11	Reference potential (24 V)
PE	PE	B3	B7	-	-
-	-	B2	B6	-	-
Special 2 (horn)	8	B1	B5	10	Right
Left	4	A4	A8	7	Lowering
Lifting	3	A3	A7	9	Control voltage (24 V, STS)
Emergency stop	2	A2	A6	6	Reverse
Forwards	1	A1	A5	5	Special 1 (F1/F2)

Tab. 23

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