

# DM SERIES

## CABLE OVERVIEW AND CONNECTION DIAGRAMS

### CABLE OVERVIEW

#### Cable overview

#### Cable connections

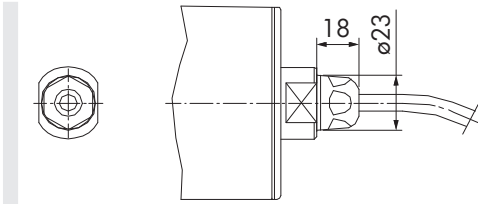


Fig.: Straight hygienic connector, IP69k stainless steel

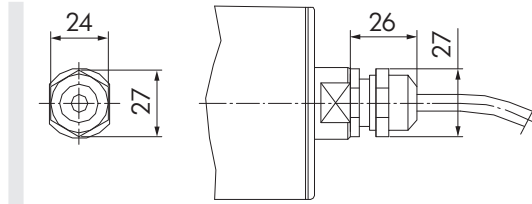


Fig.: Straight connector, brass or stainless steel

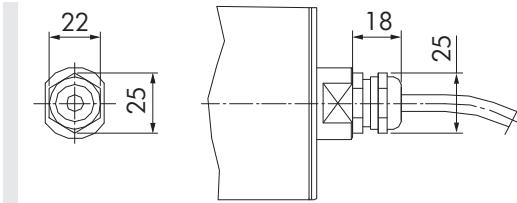


Fig.: Straight EMC connector, brass or stainless steel

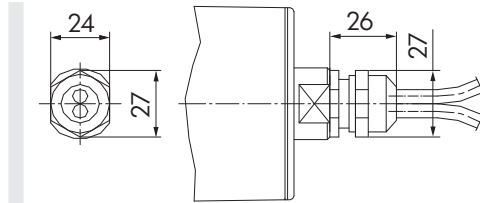


Fig.: Straight connector for encoder, brass or stainless steel

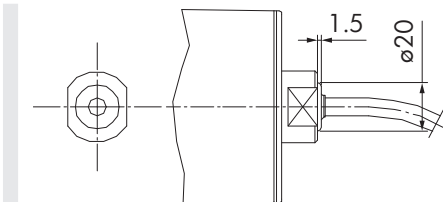


Fig.: Protective cap made of PU

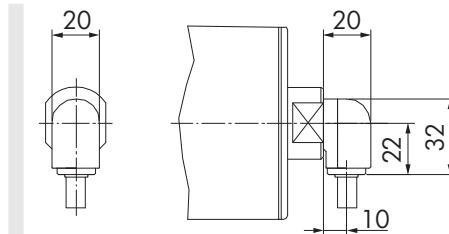


Fig.: Elbow connector, technopolymer

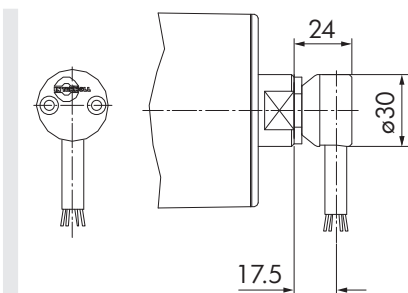


Fig.: Elbow connector, stainless steel, also for encoders

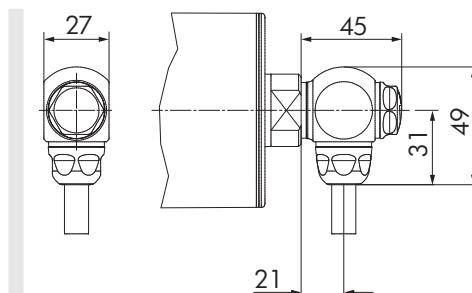


Fig.: 90° hygienic connector

# DM SERIES CABLE OVERVIEW AND CONNECTION DIAGRAMS CABLE OVERVIEW

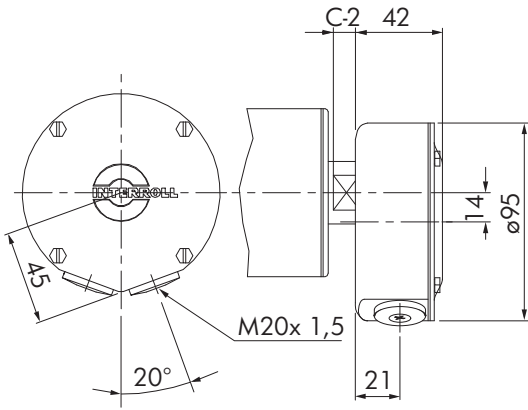


Fig.: Terminal box, stainless steel

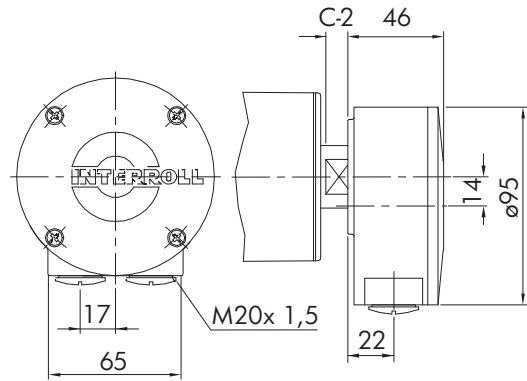


Fig.: Terminal box, aluminum

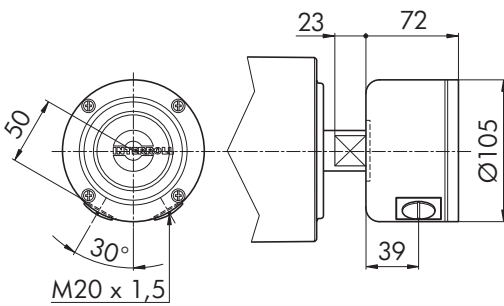


Fig.: Terminal box, technopolymer

Cable specification: Cable types  
Available cable lengths: 1 m, 3 m, 5 m, 10 m

All cable connection dimensions are approximate.

# DM SERIES

## CABLE OVERVIEW AND CONNECTION DIAGRAMS

### CABLE OVERVIEW

#### Plug connection (hygienic design)

The new plug connection is the ideal solution for a quick initial installation and significantly less maintenance effort. Connecting and disconnecting the cables to the motor is simple and can be performed safely and very quickly in just a few steps. Complete disassembly is not needed for motor maintenance or the replacement of a damaged cable. Only the pressing screw and the shell nipple must be loosened and completely unscrewed from the shaft end. Then the connector can easily be pulled out. The assembly is just as simple, in reverse order: The connector engages in the intended position. Then the shell nipple and pressing screw are screwed in and firmly tightened to the block.

#### Technical data

<b>Shaft design</b>	For shaft diameter min. 30 mm and width across flats WAF min. 25 mm
<b>Materials</b>	Stainless steel, TPU seals
<b>Connection</b>	Star/delta configuration with thermal controller contact (shield optional)
<b>Cable lengths</b>	1 m, 3 m, 5 m, 10 m
<b>Delivery</b>	Cable not installed, screw components installed on cable
<b>Electrical data</b>	In compliance with DIN EN 61984
<b>Voltage</b>	230/400 V
<b>Amperage</b>	Max. 5 A
<b>Temperature range</b>	+2 to +40 °C Lower temperatures on request
<b>Protection rate</b>	IP69k after complete assembly
<b>Hygiene requirement</b>	Suitable for cleaning with high-pressure cleaner
<b>Directives</b>	CE certified, EHEDG certified, use of chemicals permissible according to ECOLAB
<b>Mounting tool</b>	Open-end wrench 14 mm and 20 mm

The minimum length of the drum motor with plug connection increases by 59 mm.

# DM SERIES CABLE OVERVIEW AND CONNECTION DIAGRAMS CABLE OVERVIEW

## Dimensions

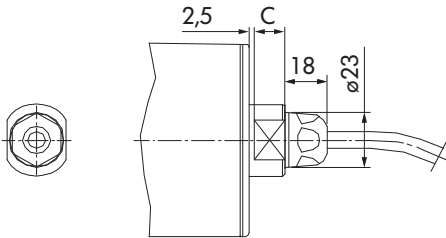


Fig.: Straight plug connection, qualified for hygienic cleaning, IP69k, stainless steel

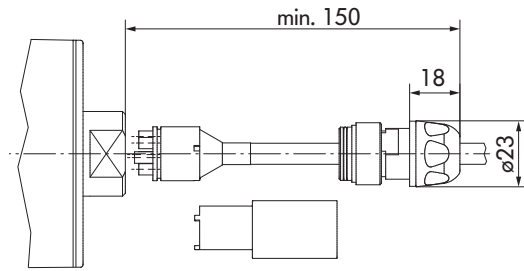


Fig.: Mounting dimensions with a mounting tool

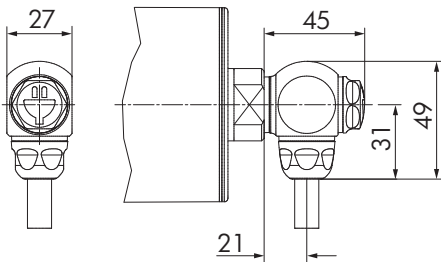


Fig.: 90° plug connection

# DM SERIES

## CABLE OVERVIEW AND CONNECTION DIAGRAMS

### CABLE OVERVIEW

#### Cable types of DM series

To reduce EMC emissions, please use a shielded cable for operating the motor via a frequency inverter. No halogen-free cable is available for motors with UL certification or an output over 1500 W.

#### Cable with 7 main cores

Article number	1107481	1107478	1107477	1107479	1000569	1118469
<b>Cross section</b>	0.5 mm <sup>2</sup>	0.75 mm <sup>2</sup>	0.75 mm <sup>2</sup>	0.75 mm <sup>2</sup>	0.75 mm <sup>2</sup>	1.3 mm <sup>2</sup>
<b>Numeric code and color code</b>	Numeric code + color code	Numeric code + color code	Numeric code + color code	Numeric code + color code	Numeric code + color code	Numeric code + color code
<b>Insulation conductors (main cores)</b>	ETFE	ETFE	ETFE	PP	PVC	ETFE
<b>Data cores (number)</b>	2	2	2	2	–	2
<b>Cross section</b>	0.5 mm <sup>2</sup>	0.5 mm <sup>2</sup>	0.5 mm <sup>2</sup>	0.5 mm <sup>2</sup>	–	0.5 mm <sup>2</sup>
<b>Numeric code and color code</b>	Color code	Color code	Color code	Color code	–	Color code
<b>Insulation conductors (data cores)</b>	ETFE	ETFE	ETFE	PP	–	ETFE
<b>Insulation of outer sheath</b>	PVC	PVC	PVC	TPU	PVC	PVC
<b>Halogen-free</b>	No	No	No	Yes	No	No
<b>Color of outer sheath</b>	Gray	Gray	Gray	Gray	Black	Gray
<b>Shielded</b>	Copper-tinned	Copper-tinned	–	Copper-tinned	–	Copper-tinned
<b>Outer diameter</b>	7.7 ± 0.2 mm	8.4 ± 0.2 mm	7.3 ± 0.2 mm	8.4 ± 0.2 mm	7.15 ± 0.2 mm	11 ± 0.2 mm
<b>Operating voltage</b>	600 V	600 V	600 V	600 V	300/500 V	600 V
<b>Temperature range</b>	–30 to +105 °C according to UL	–30 to +105 °C according to UL	–30 to +105 °C according to UL	–30 to +105 °C	–30 to +105 °C –40 to +80 °C according to UL	–30 to +105 °C according to UL
<b>Approval</b>	cULus	cULus	cULus	None	cULus	cULus

# DM SERIES

## CABLE OVERVIEW AND CONNECTION DIAGRAMS

### CABLE OVERVIEW

#### Cable with 4 main cores

Article number	1107480	1107482	1118470
Cross section	0.75 mm <sup>2</sup>	0.75 mm <sup>2</sup>	1.3 mm <sup>2</sup>
Numeric code and color code	Numeric code + color code	Numeric code + color code	Numeric code + color code
Insulation conductors (main cores)	ETFE	PP	ETFE
Data cores (number)	2	2	2
Cross section	0.5 mm <sup>2</sup>	0.5 mm <sup>2</sup>	0.5 mm <sup>2</sup>
Numeric code and color code	Color code	Color code	Color code
Insulation conductors (data cores)	ETFE	PP	ETFE
Insulation of outer sheath	PVC	TPU	PVC
Halogen-free	No	Yes	No
Color of outer sheath	Gray	Gray	Gray
Shielded	Copper-tinned	Copper-tinned	Copper-tinned
Outer diameter	7.6 ± 0.2 mm	7.6 ± 0.2 mm	8.0 ± 0.2 mm
Operating voltage	600 V	600 V	600 V
Temperature range	-30 to +105 °C according to UL	-30 to +105 °C	-30 to +105 °C according to UL
Approval	cULus	None	cULus

DL series

DM series

DP series

Application Notes

# DM SERIES

## CABLE OVERVIEW AND CONNECTION DIAGRAMS

### CABLE OVERVIEW

#### External plug connection cable types

Article number		Cable length	Plain cable article number	Voltage selection	
Straight design	90° design			Asynchronous motor 230 or 400 V Synchronous motor	Asynchronous motor 230/400 V
61114712	61116487	1 m	1107480	●	
61114713	61116488	3 m	1107480	●	
61114715	61116489	5 m	1107480	●	
61114716	61116490	10 m	1107480	●	
61114280	61116483	1 m	1107482	●	
61114281	61116484	3 m	1107482	●	
61114282	61116485	5 m	1107482	●	
61114283	61116486	10 m	1107482	●	
61114272	61116479	1 m	1107481		●
61114273	61116480	3 m	1107481		●
61114274	61116481	5 m	1107481		●
61114275	61116482	10 m	1107481		●
61114255	61116471	1 m	1107477		●
61114256	61116472	3 m	1107477		●
61114257	61116473	5 m	1107477		●
61114258	61116474	10 m	1107477		●
61114265	61116475	1 m	1107479		●
61114266	61116476	3 m	1107479		●
61114267	61116477	5 m	1107479		●
61114268	61116478	10 m	1107479		●

# DM SERIES

## CABLE OVERVIEW AND CONNECTION DIAGRAMS

### CONNECTION DIAGRAMS

## Connection diagrams

### Abbreviations

ye/gn	= yellow/green	or	= orange
bn	= brown	vi	= violet
bk	= black	rd	= red
gy	= gray	wh	= white
bu	= blue	FI	= Frequency inverter
TC	= Thermal controller (WSK)	NC	= Not connected
BR	= Electromagnetic brakes		

### Rotation

**Note:** The rotational direction of the drum motor is shown on the connection diagrams. The rotation indicated is correct when looking at the motor from the connection side.

### Cable connections synchronous motor

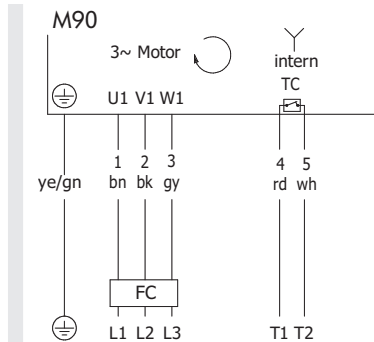


Fig.: 3-phase, 4+2-core cable, winding for 1 voltage, star connection

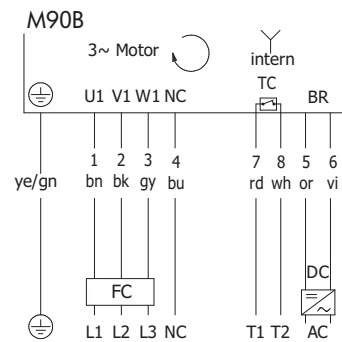


Fig.: 3-phase, 7+2-core cable, winding for 1 voltage, star connection

### Terminal box for synchronous motor

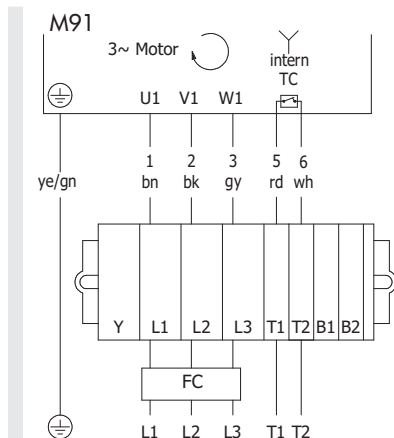


Fig.: 3-phase, 4+2-core cable, winding for 1 voltage, star connection

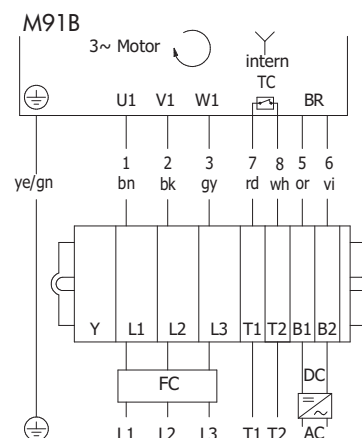


Fig.: With brake, 3-phase, 7+2 core cable, winding for 1 voltage, star connection



# DM SERIES

## CABLE OVERVIEW AND CONNECTION DIAGRAMS

### CONNECTION DIAGRAMS

#### Cable connections 3-phase asynchronous motor

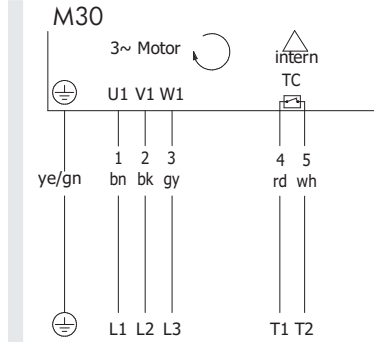


Fig.: 3-phase, 4+2 core cable, winding for 1 voltage, delta connection

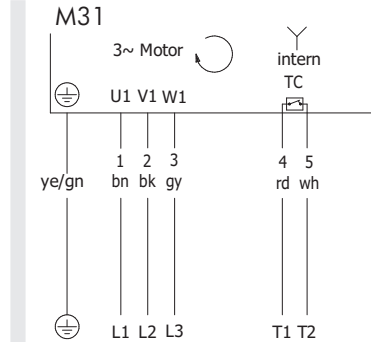


Fig.: 3-phase, 4+2-core cable, winding for 1 voltage, star connection

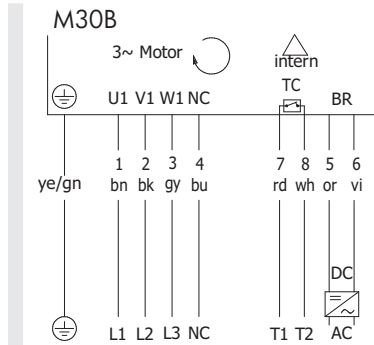


Fig.: With brake, 3-phase, 7+2 core cable, winding for 1 voltage, delta connection

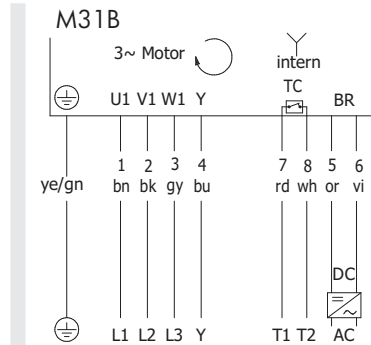


Fig.: With brake, 3-phase, 7+2 core cable, winding for 1 voltage, star connection

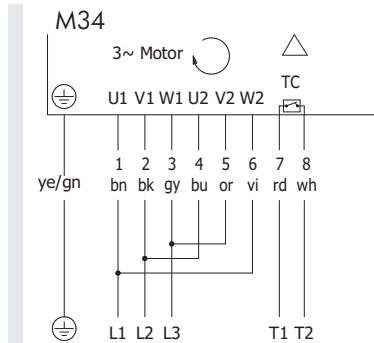


Fig.: 3-phase, 7+2 core cable, winding for 2 voltages, delta connection

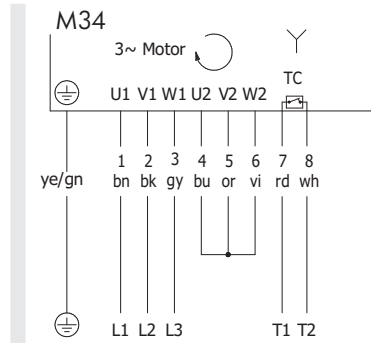


Fig.: 3-phase, 7+2-core cable, winding for 2 voltages, star connection

# DM SERIES

## CABLE OVERVIEW AND CONNECTION DIAGRAMS

### CONNECTION DIAGRAMS

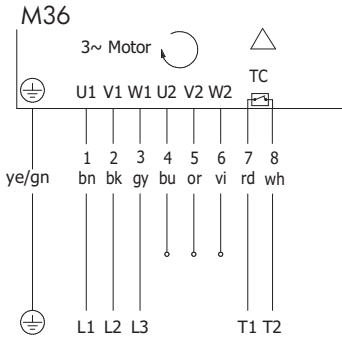


Fig.: 3-phase, 7+2 core cable, 2 speeds, delta connection

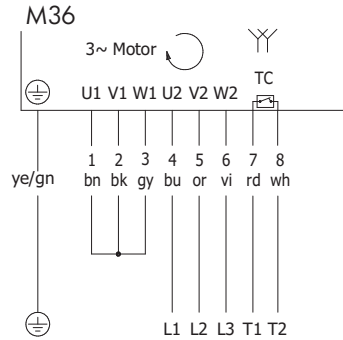


Fig.: 3-phase, 7+2 core cable, 2 speeds, double-star connection

#### Terminal box 3-phase asynchronous motor

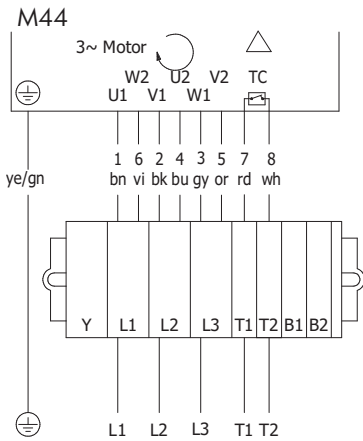


Fig.: 3-phase, winding for 2 voltages, delta connection

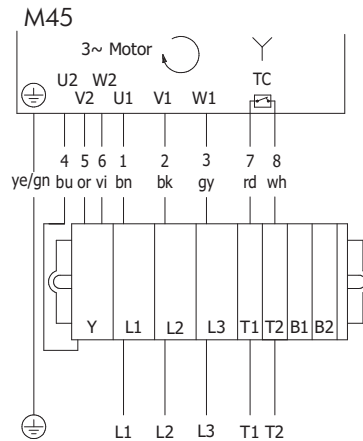


Fig.: 3-phase, winding for 2 voltages, star connection

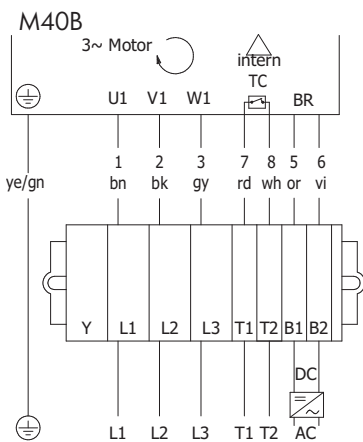


Fig.: With brake, 3-phase, winding for 1 voltage, delta connection

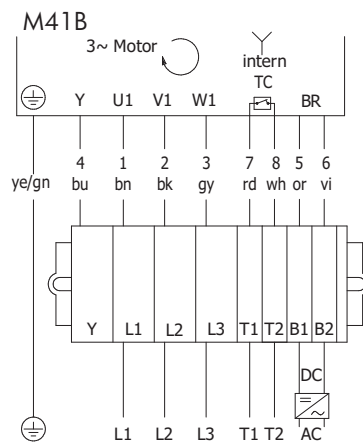


Fig.: With brake, 3-phase, winding for 1 voltage, star connection

# DM SERIES

## CABLE OVERVIEW AND CONNECTION DIAGRAMS

### CONNECTION DIAGRAMS

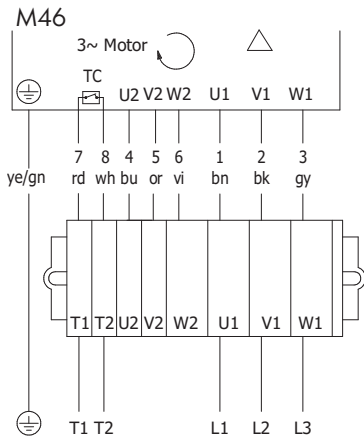


Fig.: 3-phase, 7+2 core cable, 2 speeds, delta connection

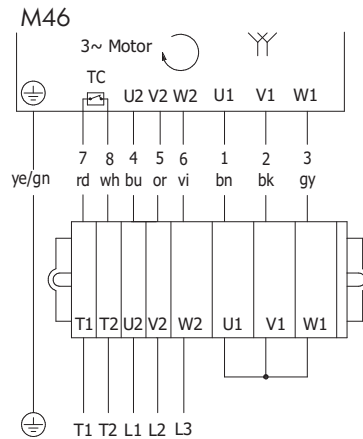


Fig.: 3-phase, 7+2 core cable, 2 speeds, double-star connection

### Cable connections 1-phase asynchronous motor

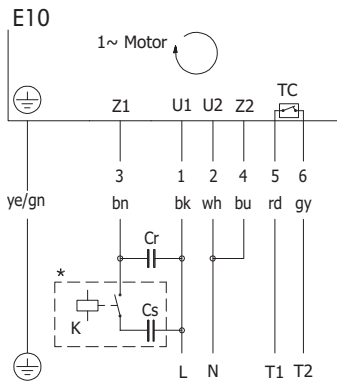


Fig.: 1-phase, 7-core cable

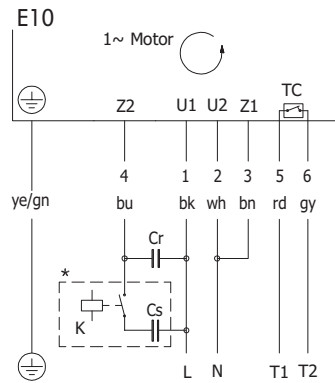


Fig.: 1-phase, 7-core cable

# DM SERIES

## CABLE OVERVIEW AND CONNECTION DIAGRAMS

### CONNECTION DIAGRAMS

#### Terminal box 1-phase asynchronous motor

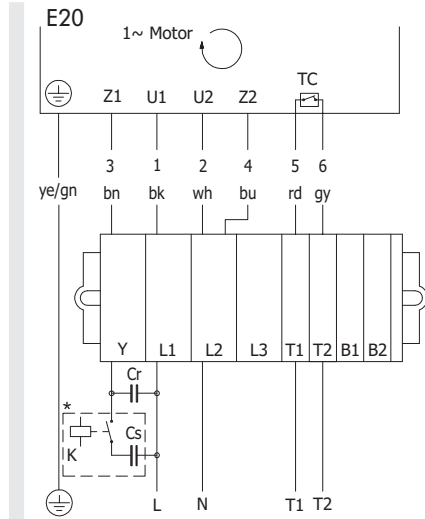


Fig.: 1-phase, 7-core cable

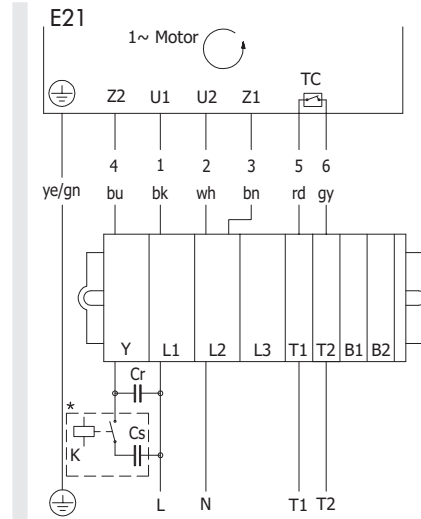


Fig.: 1-phase, 7-core cable

For more information about the starting relay, see page 182