HOW TO ORDER

Power cables for the stepper drives (only for the STDF drives)

STCF - **P** - **02**

Stepper cable series

Type:
− P: Power cable

Cable length:
− 02: 2 m
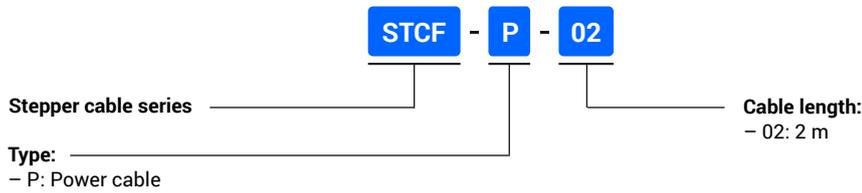
Signal cables for the stepper drives (only for the STDF drives)

STCF - **S** - **EC** - **02**

Stepper cable series

Type:
− S: Signal cable

Drive protocol/control:
− EC: EtherCAT
− EN: Ethernet based communication
− PD: Pulse-direction control

Cable length:
− 02: 2 m
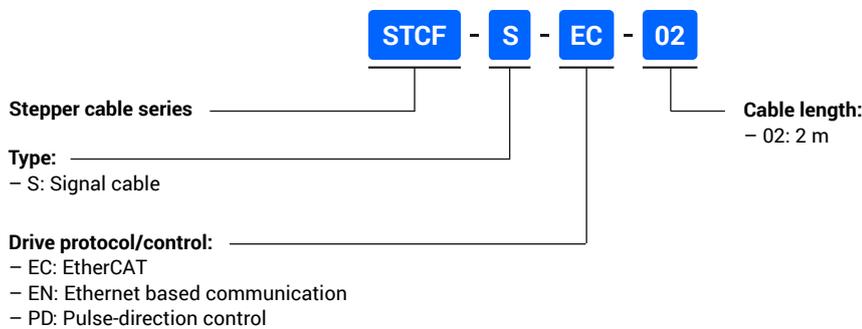
Drive-to-motor cables for the stepper motors (only for STDF/STDL drives and STMN motors)

STCF - **E** - **A8** - **05**

Stepper cable series
− STCF: for STDF drives
− STCS: for STDL drives

Type:
− M: Motor cable
− E: Encoder cable
− B: Brake cable

Connector type and size:

Cable length:
− 03: 3 m
− 05: 5 m
− 10: 10 m

A **8**

Connector type:
− S: Straight
− A: Angled

Connector size:
− 8: M8
− 12: M12
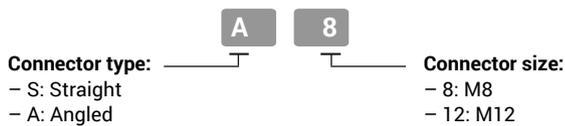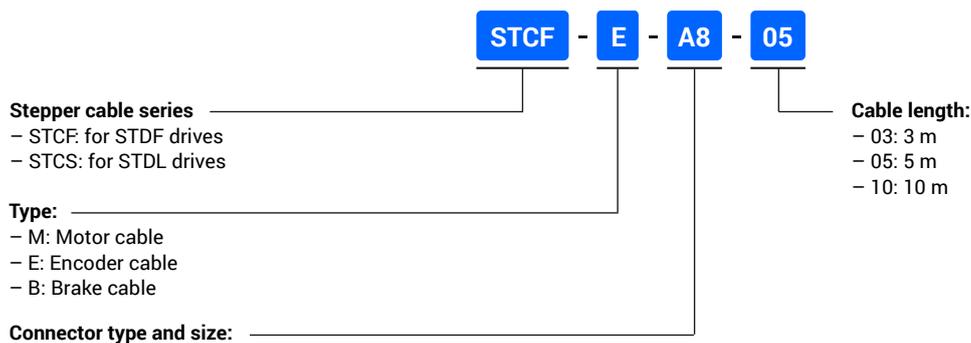
ⓘ For possible cable combinations, please refer to the table on page »5«

In order to improve the products in this catalogue the specifications are subject to change without notice.

POWER CABLE

Connection cable between STDF drive and power supply.
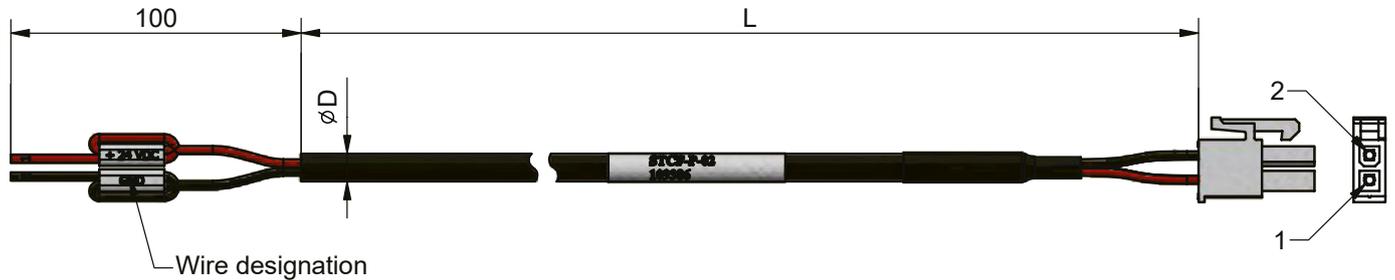
Wire designation

Dimensions	Power cable
	STCF-P-02
L [m]	2
ØD [mm]	4,6

Wire code	Wire designation	Pin number
Red	+24 V DC	1
Black	GND	2

SIGNAL CABLE

Connection cables between STDF drive and PLC/PC for different protocols.

Dimension	Signal cable		
	STCF-S-PD-02	STCF-S-EC-02	STCF-S-EN-02
L[1] [m]	2		
ØD[1] [mm]	6,4	6,4	6,9

[1] For symbol designation see the dimensional drawings of signal cables below.

Pulse-direction

Connection cable between the drive and PLC/PC for Pulse-direction based control.

Sample of wire designation
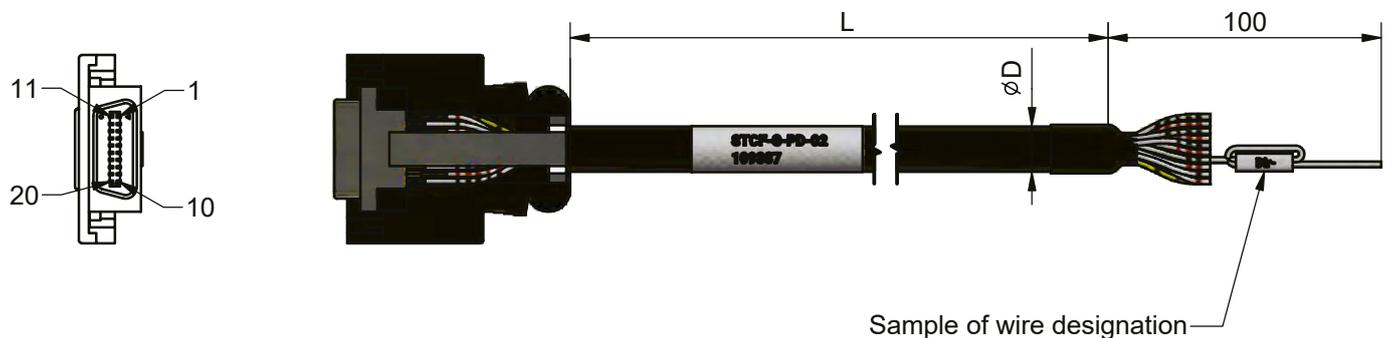
Wire colour code	Wire designation	Wire colour code	Wire designation	Wire colour code	Wire designation
White, 1 red dot	Pulse+	White, 4 black dots	B−	Yellow, 3 red dots	(OCInput)
White, 1 black dot	Pulse−	White, 5 red dots	I+	Yellow, 3 black dots	Brake+
White, 2 red dots	Dir+	White, 5 black dots	I−	Yellow, 4 red dots	Brake−
White, 2 black dots	Dir−	Yellow, 1 red dot	Alarm	Yellow, 4 black dots	GND_S
White, 3 red dots	A+	Yellow, 1 black dot	InPosition	Yellow, 5 red dots	GND_24 V
White, 3 black dots	A−	Yellow, 2 red dots	ServoOff	Yellow, 5 black dots	24 V DC
White, 4 red dots	B+	Yellow, 2 black dots	AlarmRst	Shield	/

EtherCAT

Connection cables between the drive and PLC/PC for EtherCAT communication.
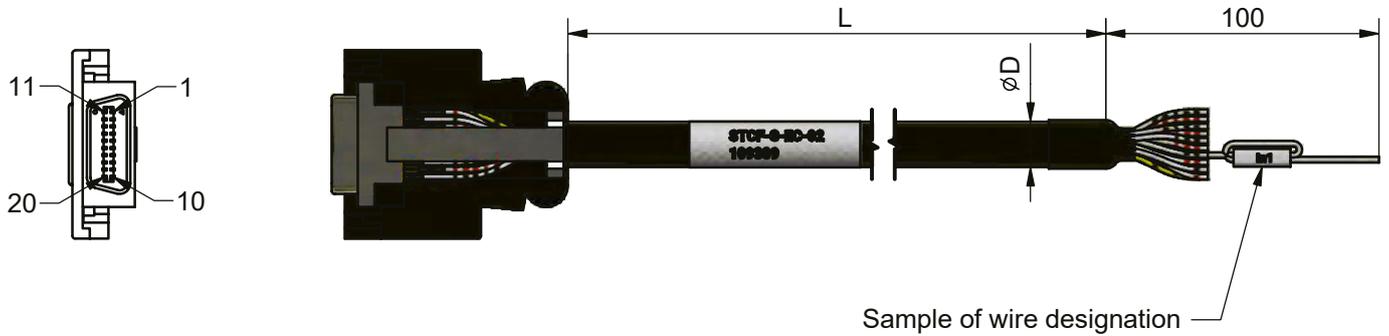
Sample of wire designation

Wire colour code	Wire designation
White, 1 red dot	Limit+
White, 1 black dot	Limit−
White, 2 red dots	Origin
White, 2 black dots	In1
White, 3 red dots	In2
White, 3 black dots	In3
White, 4 red dots	In4

Wire colour code	Wire designation
White, 4 black dots	In5
White, 5 red dots	In6
White, 5 black dots	In7
Yellow, 1 red dot	Out1
Yellow, 1 black dot	Out2
Yellow, 2 red dots	Out3
Yellow, 2 black dots	Out4

Wire colour code	Wire designation
Yellow, 3 red dots	Out5
Yellow, 3 black dots	Out6
Yellow, 4 red dots	Brake+
Yellow, 4 black dots	Brake−
Yellow, 5 red dots	GND_24 V
Yellow, 5 black dots	24 V DC
Shield	/

Ethernet

Connection cables between the drive and PLC/PC for Ethernet communication.
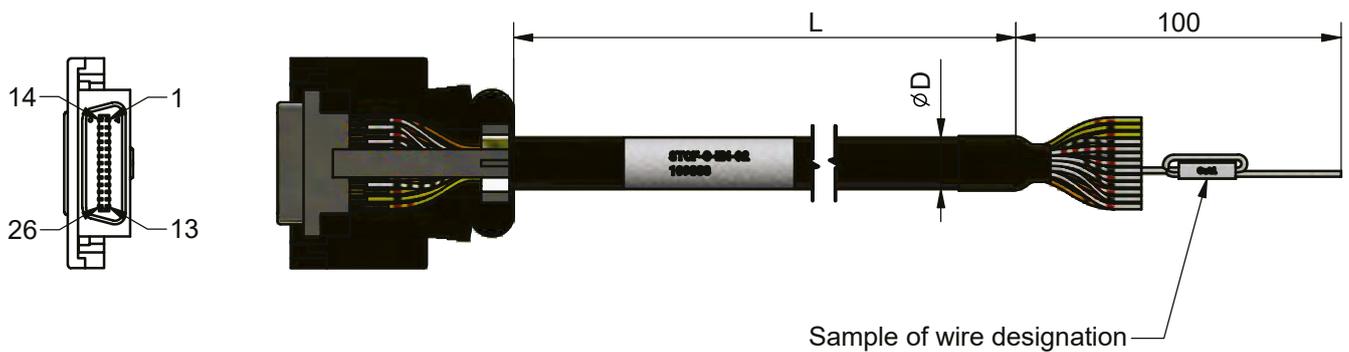
Sample of wire designation

Wire colour code	Wire designation
White, 1 red dot	Limit+
White, 1 black dot	Limit−
White, 2 red dots	Origin
White, 2 black dots	In1
White, 3 red dots	In6
White, 3 black dots	In7
White, 4 red dots	CmpOut
White, 4 black dots	Out1
White, 5 red dots	Out2

Wire colour code	Wire designation
White, 5 black dots	Out3
Yellow, 1 red dot	Out4
Yellow, 1 black dot	Out5
Yellow, 2 red dots	Out6
Yellow, 2 black dots	In2
Yellow, 3 red dots	In3
Yellow, 3 black dots	In4
Yellow, 4 red dots	In5
Yellow, 4 black dots	In8

Wire colour code	Wire designation
Yellow, 5 red dots	In9
Yellow, 5 black dots	Out7
Orange, 1 red dot	Out8
Orange, 1 black dot	Out9
Orange, 2 red dots	Brake+
Orange, 2 black dots	Brake−
Orange, 3 red dots	GND_24 V
Orange, 3 black dots	24 V DC
Shield	/

DRIVE-TO-MOTOR CABLES

Drive-to-motor cables include encoder, motor and brake cables. All the cables are flexible and can be used in combination with energy chains. Available lengths of the cables are 3 m, 5 m or 10 m.

Technical data

Type	Code	Diameter	Length	Min. bending radius [mm]	Temperature range	
					Fixed	Flexing
			[m]	[mm]	[°C]	[°C]
Encoder	STCF-E-A12-xx	6,7	3/5/10	50,25	−40/+70	+5/+70
	STCF-E-S12-xx	6,7				
	STCS-E-A12-xx	6,3		63	−20/+80	-25/+60
	STCS-E-S12-xx	6,3				
Motor	STCF-M-A12-xx	5,1		38,25	−40/+70	+5/+70
	STCF-M-S12-xx	5,1				
	STCS-M-A12-xx	5,7		57	−20/+80	-25/+60
	STCS-M-S12-xx	5,7				
Brake	STCF-B-A8-xx	4,5		33,72	−40/+70	+5/+70
	STCF-B-S8-xx	4,5				

Encoder cable

Connection cables between the drive and motor encoder. Available with a straight and angled M12 connector on the encoder side. An angled connector is always positioned towards the shaft of the motor.

STCF-E-A12-xx/ STCF-E-S12-xx (for STDF drives)

In order to improve the products in this catalogue the specifications are subject to change without notice.

UNIMOTION   33
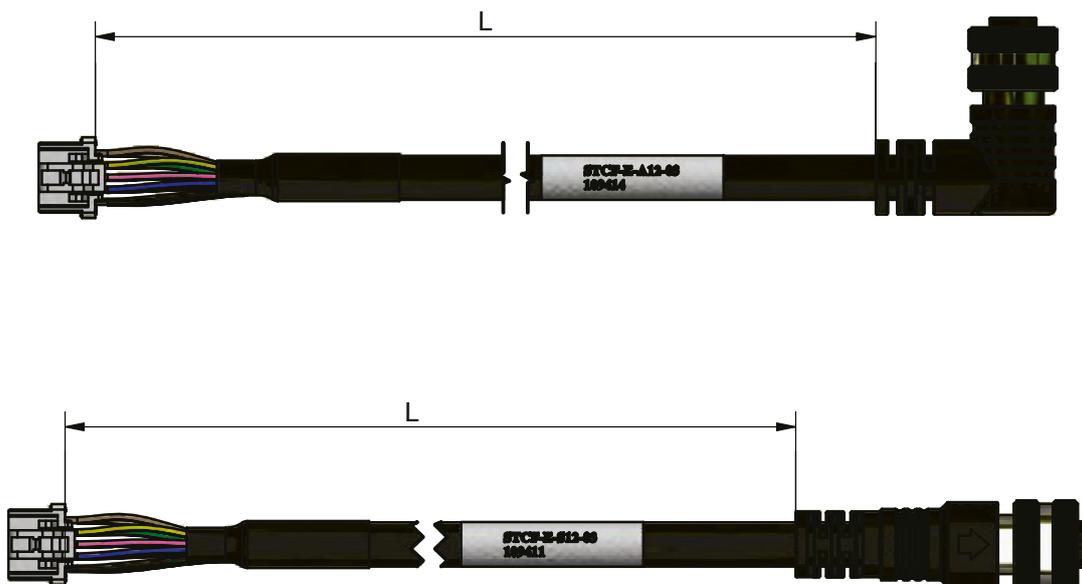
STCS-E-A12-xx/ STCS-E-S12-xx (for STDL drives)

Cable pin allocation:

| Pin number	Wire colour	Pin on STDL drive
1	brown	3; A+
2	white	4; A−
3	blue	5; B+
4	black	6; B−
5	gray	2; GND
6	pink	8; I−
7	violet	7; I+
8	orange	1; 5 V (DC)
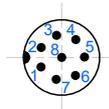
Motor cable

Connection cables between the drive and motor. Available with a straight and angled M12 connector on the motor side. An angled connector is always positioned towards the shaft of the motor.

STCF-M-A12-xx/ STCF-M-S12-xx (for STDF drives)
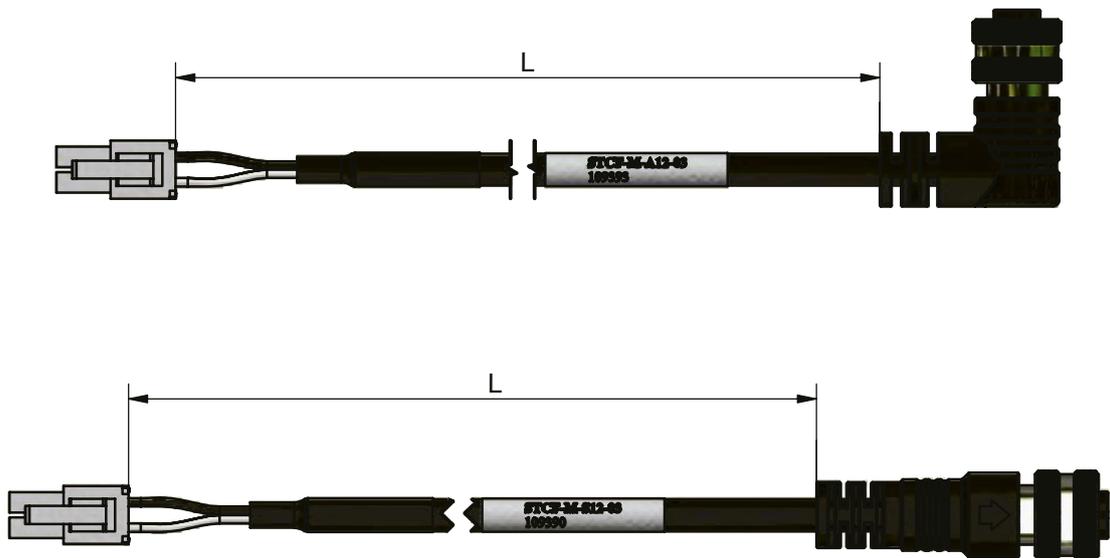
STCS-M-A12-xx/ STCS-M-S12-xx (for STDL drives)

In order to improve the products in this catalogue the specifications are subject to change without notice.

UNIMOTION   35
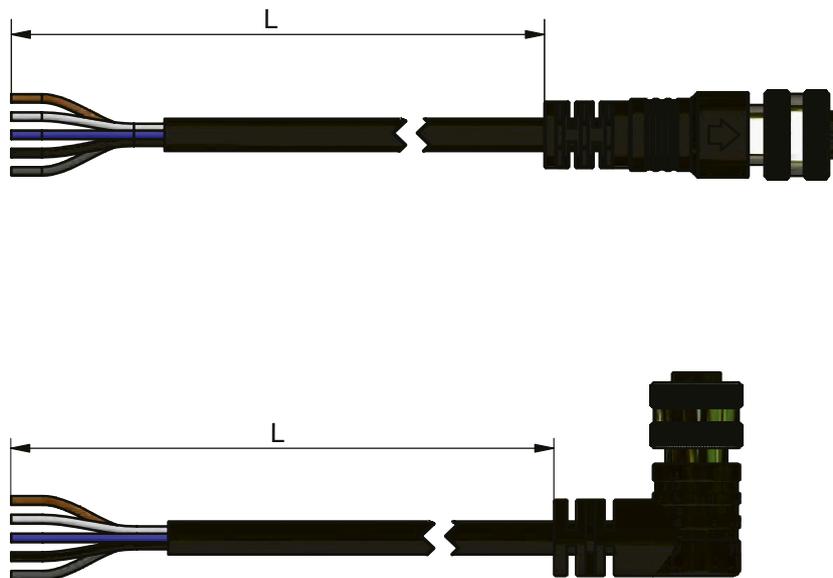
Cable pin allocation:

Pin number	Wire colour	Pin on STDL drive
1	brown	1; A−
2	white	2; A+
3	blue	3; B+
4	black	4; B−
5	gray	Not connected
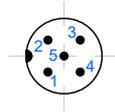
Brake cable

Connection cables between the drive and brake. Available with a straight and angled M8 connector on the motor side. Only for the motors with brake. An angled connector is always positioned towards the shaft of the motor.

STCF-B-A8-xx / STCF-B-S8-xx (for STDF and STDL drives)

Wire designation

Wire designation

In order to improve the products in this catalogue the specifications are subject to change without notice.
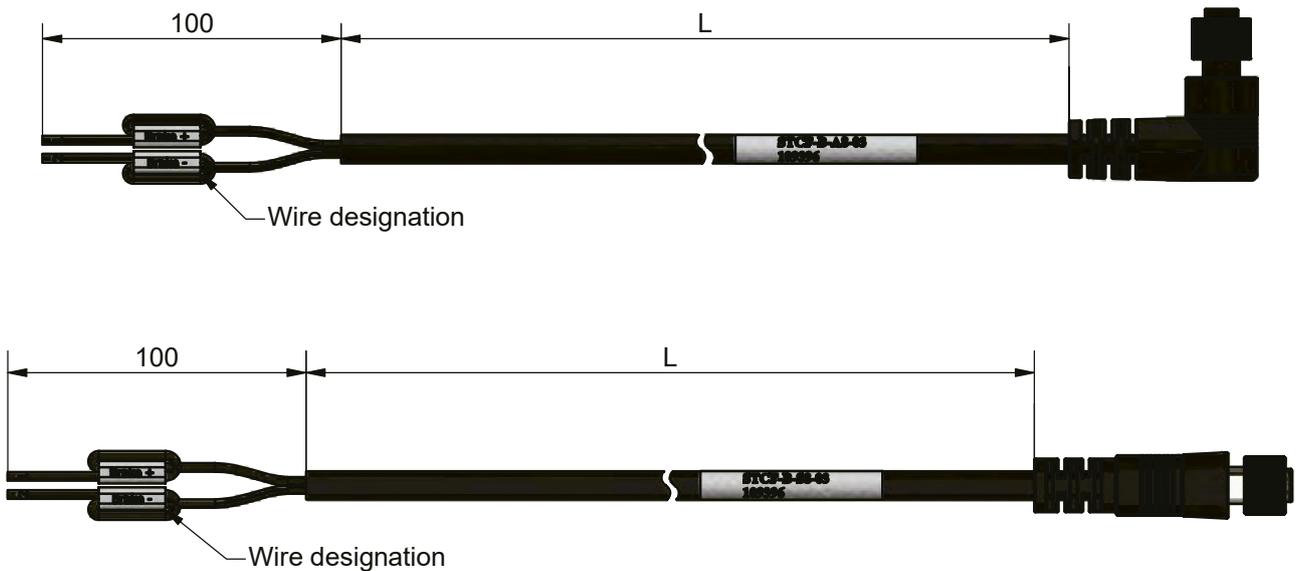
Connector dimensions

In the table below the dimensions of the connector cables in reference to the motors are presented.

Connector size	Straight	Angular	
	L1	L2	L3
M8	47	31	26
M12	55,5	40	23,5