TeSys Active

TeSys island – Digital Motor Management Solution

ATEX Adaptation Guide

TeSys offers innovative and connected solutions for motor starters.

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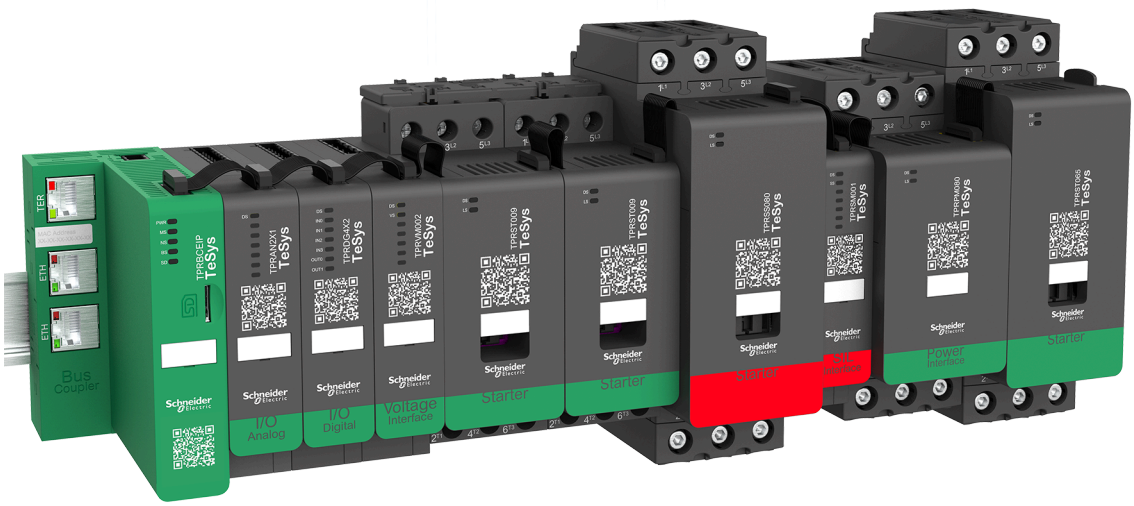

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Table of Contents

Safety Information

Important Information

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, service, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING

WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a hazardous situation which, if not avoided, **could result** in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction and operation of electrical equipment and its installation, and has received safety training to recognize and avoid the hazards involved.

About the Document

Document Scope

This guide provides information about the ATEX adaptation for TeSys™ island. It covers the purpose of the adaptation, installation requirements, and operational guidelines.

Validity Note

This guide is valid for all TeSys island configurations.

The characteristics of the products described in this document are intended to match the characteristics that are available on www.se.com. As part of our corporate strategy for constant improvement, we may revise the content over time to enhance clarity and accuracy. If you see a difference between the characteristics in this document and the characteristics on www.se.com, consider www.se.com to contain the latest information.

General Cybersecurity Information

In recent years, the growing number of networked machines and production plants has seen a corresponding increase in the potential for cyber threats, such as unauthorized access, data breaches, and operational disruptions. You must, therefore, consider all possible cybersecurity measures to help protect assets and systems against such threats.

To help keep your Schneider Electric products secure and protected, it is in your best interest to implement the cybersecurity best practices as described in the Cybersecurity Best Practices document.

Schneider Electric provides additional information and assistance:

- Subscribe to the Schneider Electric security newsletter.
- Visit the Cybersecurity Support Portal web page to:
  - Find Security Notifications.
  - Report vulnerabilities and incidents.
- Visit the Schneider Electric Cybersecurity and Data Protection Posture web page to:
  - Access the cybersecurity posture.
  - Learn more about cybersecurity in the cybersecurity academy.
  - Explore the cybersecurity services from Schneider Electric.

Related Documents

Document title	Document number
TeSys island – System, Installation, and Operation Guide	DOCA0270EN
TeSys island – Quick Start Guide for EcoStruxure Control Expert Classic	DOCA0236EN
TeSys island – DTM Library Read Me	DOCA0238EN
TeSys island – Firmware Release Notes	DOCA0224EN
TeSys island – DTM Release Notes	DOCA0239EN

Document title	Document number
TeSys island – Functional Safety Guide	8536IB1904EN
TeSys island – Third Party Function Block Guide	8536IB1905EN
TeSys island – EtherNet/IP™ – Quick Start and Function Block Library Guide	DOCA0271EN
TeSys island – DTM Online Help Guide	8536IB1907
TeSys island – PROFINET and PROFIBUS – Quick Start and Function Block Library Guide	DOCA0272EN
TeSys island – Product Environmental Profile	ENVPEP1904009
TeSys island – Product End of Life Instructions	ENVEOLI1904009
TeSys island, Bus Coupler TPRBCEIP – Instruction Sheet	MFR44097
TeSys island, Bus Coupler TPRBCPFN – Instruction Sheet	MFR44098
TeSys island, Bus Coupler TPRBCPFB – Instruction Sheet	GDE55148
TeSys island, Starters and Power Interface Modules, Size 1 and 2 – Instruction Sheet	MFR77070
TeSys island, Starters and Power Interface Modules, Size 3 – Instruction Sheet	MFR77085
TeSys island, Input/Output Modules – Instruction Sheet	MFR44099
TeSys island, SIL Interface and Voltage Interface Modules – Instruction Sheet	MFR44100

To find documents online, visit the Schneider Electric download center (www.se.com/ww/en/download/).

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Introduction

TeSys Master Range

TeSys is an innovative motor control and management solution from the global market leader. TeSys offers connected, efficient products and solutions for switching and protection of motors and electrical loads in compliance with all major global electrical standards.

TeSys island Concept

TeSys island is a modular, multifunctional system providing integrated functions inside an automation architecture, primarily for the direct control and management of low-voltage loads. TeSys island can switch, help protect, and manage motors up to 80 A (AC-3/AC-3e) installed in an electrical control panel.

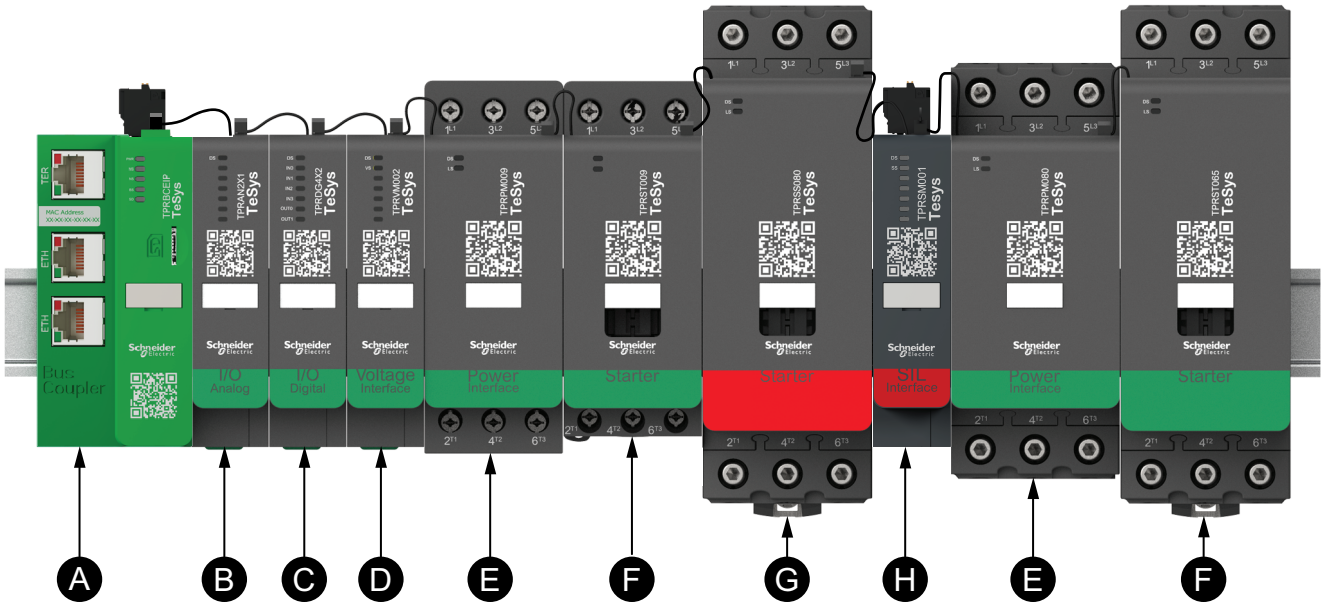
This system is designed around the concept of TeSys avatars. These avatars:

- Represent both the logical and physical aspects of the automation functions.
- Determine the configuration of the TeSys island.

The logical aspects of the TeSys island are managed with software tools, covering all phases of product and application lifecycle: design, engineering, commissioning, operation, and maintenance.

The physical TeSys island consists of a set of devices installed on a single DIN rail and connected together with flat cables providing the internal communication between modules. The external communication with the automation environment is made through a single bus coupler module, and the TeSys island is seen as a single node on the network. The other modules include starters, power interface modules, analog and digital I/O modules, voltage interface modules, and SIL (Safety Integrity Level according to the IEC 61508 Standard series) interface modules, covering a wide range of operational functions.

TeSys island Overview



A	Bus Coupler	E	Power Interface Module
B	Analog I/O Module	F	Standard Starter
C	Digital I/O Module	G	SIL Starter
D	Voltage Interface Module	H	SIL Interface Module

ATEX Adaptation for TeSys island

Atmosphères Explosibles Directive (ATEX) is a European Directive that governs equipment used in environments with potentially explosive atmospheres, such as oil and gas, chemical, mining, and timber industries. The Directive ensures that equipment limits the risks to become a source of ignition, helping protect both personnel and infrastructure.

To meet ATEX Directive requirements, when integrated into systems operating in ATEX-classified zones, TeSys island must:

- Be installed outside the ATEX zone.
- Be associated with a suitable external device that is ATEX-certified as a motor protection device for its overload protection function. This device must also be installed outside the ATEX zone.

Role of MPCB in ATEX Environment

In ATEX environments, the external ATEX–certified MPCB provides motor protection. It replaces the thermal overload and current phase loss protection of TeSys island and ensures compliance with ATEX safety standards.

In TeSys island, when ATEX mode is enabled, protections for thermal overload, current phase loss, and motor overheat are disabled. The thermal overload and current phase loss protections are managed externally by the MPCB. Other protections, such as ground fault, unbalance, and phase reversal, remain active and can be enabled as usual. This approach ensures that thermal overload and current phase loss are controlled by ATEX-certified devices while the system continues to benefit from additional safety features.

The external ATEX–certified MPCB in ATEX environments has to be installed outside of ATEX zones and ensures the following:

- Maintain compliance with ATEX Directive.
- Ensure safe tripping during overload, fault, or short-circuit conditions.
- Enable manual isolation and reset capabilities.

MPCB Selection

The rated current of the ATEX-certified MPCB, such as GV2ME, GV2P, or GV3P must be selected based on the full-load current (FLC) of the motor and application conditions such as ambient temperature and starting characteristics. To prevent false tripping or insufficient protection, ensure that the MPCB setting matches the protection requirements of the motor.

NOTE:

Always refer to the available ATEX instruction sheet for general rules of use, startup, configuration, and maintenance.

- GV2ME Instruction Sheet – 1672546
- GV2P Instruction Sheet – 1672546
- GV3P Instruction Sheet – 1672548

Refer the following tables for suggested configurations:

Type 1 Coordination

Typical power ratings of 3-phase motors, 50/60 Hz-in IEC category AC-3e									Circuit Breaker Reference	Setting Range of Thermal Trips (A)	References of: Standard Starters SIL Starters Power Interface Modules
400/415 V			440 V			500 V					
P	Ie	Iq	P	Ie	Iq	P	Ie	Iq			
kw	A	kA	kW	A	kA	kW	A	kA			
0.06	0.2	50	0.06	0.16	50				GV2ME02 GV2ME02AP*	0.16...0.25	TPRST009 TPRSS009 TPRPM009
0.09	0.3	50	0.09	0.28	50	–	–	–	GV2ME03 GV2ME03AP*	0.25...0.40	TPRST009 TPRSS009 TPRPM009
0.12	0.44	50	0.12	0.37	50	–	–	–	GV2ME04	0.40...0.63	TPRST009
–	–	–	0.18	0.55	50	–	–	–	GV2ME04AP*		TPRSS009 TPRPM009
0.18	0.6	50	0.25	0.76	50				GV2ME05	0.63...1	TPRST009
0.25	0.85	50	–	–	–				GV2ME05AP*		TPRSS009 TPRPM009
0.37	1.1	50	0.37	1	50	0.37	0.88	50	GV2ME06	1...1.6	TPRST009
0.55	1.5	50	0.55	1.36	50	0.55	1.2	50	GV2ME06AP*		TPRSS009 TPRPM009
–	–	–	–	–	–	0.75	1.5	50	GV2ME06 GV2ME06AP*	1...1.6	TPRST009 TPRSS009 TPRPM009
0.75	1.9	50	0.75	1.7	50	–	–	–	GV2ME07	1.6...2.5	TPRST009
–	–	–	–	–	–	1.1	2.2	50	GV2ME07AP*		TPRSS009 TPRPM009
1.1	2.7	50	1.1	2.5	50	1.5	2.9	50	GV2ME08	2.5...4	TPRST009
1.5	3.6	50	1.5	3.3	50	2.2	3.9	50	GV2ME08AP*		TPRSS009 TPRPM009
2.2	4.9	50	2.2	4.5	50	–	–	–	GV2ME10	4...6.3	TPRST009
–	–	–	–	–	–	3	5.2	50	GV2ME10AP*		TPRSS009

Type 1 Coordination (Continued)

Typical power ratings of 3-phase motors, 50/60 Hz-in IEC category AC-3e									Circuit Breaker Reference	Setting Range of Thermal Trips (A)	References of: Standard Starters SIL Starters Power Interface Modules
400/415 V			440 V			500 V					
P	Ie	Iq	P	Ie	Iq	P	Ie	Iq			
kw	A	kA	kW	A	kA	kW	A	kA			
											TPRPM009
–	–	–	3	5.9	50	–	–	–	GV2ME14 GV2ME14AP*	6...10	TPRST009 TPRSS009 TPRPM009
3	6.5	50	–	–	–	4	6.8	10	GV2ME14	6...10	TPRST009
4	8.5	50	4	7.8	15	5.5	9.2	10	GV2ME14AP*		TPRSS009 TPRPM009
5.5	11.5	15	5.5	10.5	8	7.5	12.4	6	GV2ME16 GV2ME16AP*	9...14	TPRST025 TPRSS025 TPRPM038
7.5	15.5	15	7.5	13.7	8	9	13.9	6	GV2ME20	13...18	TPRST025
–	–	–	9	14.1	8	–	–	–	GV2ME20AP*		TPRSS025 TPRPM038
9	18.1	15	11	20	6	11	17.6	4	GV2ME21 GV2ME21AP*	17...23	TPRST025 TPRSS025 TPRPM038
11	22	15	–	–	–	15	23	4	GV2ME22 GV2ME22AP*	20...25	TPRST025 TPRSS025 TPRPM038
15	29	10	15	27	6	18.5	28	4	GV2ME32 GV2ME32AP*	24...32	TPRST038 TPRSS038 TPRPM038
18.5	35	50	18.5	32	50	22	33	10	GV3P40	30...40	TPRST065 TPRSS065 TPRPM080
22	41	50	22	39	50	30	44	10	GV3P50	37...50	TPRST065 TPRSS065 TPRPM080
30	55	50	30	50	50	37	53	10	GV3P65	48...65	TPRST065 TPRSS065 TPRPM080
37	66	50	–	–	–	–	–	–	GV3P73	62...73	TPRST080 TPRSS080 TPRPM080
* Thermal trips available in CEE Zone Only											

Type 2 Coordination

Typical power ratings of 3-phase motors, 50/60 Hz-in IEC category AC-3e									Circuit Breaker Reference	Setting Range of Thermal Trips (A)	References of: Standard Starters SIL Starters Power Interface Modules
400/415 V			440 V			500 V					
P	Ie	Iq	P	Ie	Iq	P	Ie	Iq			
kw	A	kA	kW	A	kA	kW	A	kA			
0.06	0.2	100	0.06	0.19	100	–	–	–	GV2P02 or GV2ME02 or GV2ME02AP*	0.16...0.25	TPRST009 TPRSS009 TPRPM009
0.09	0.3	100	0.09	0.28	100	–	–	–	GV2P03 or GV2ME03 or GV2ME03AP*	0.25...0.4	TPRST009 TPRSS009 TPRPM009
0.12	0.44	100	0.12	0.37	100	–	–	–	GV2P04 or GV2ME04	0.4...0.63	TPRST009 TPRSS009 TPRPM009
–	–	–	0.18	0.55	100	–	–	–	or GV2ME04AP*		
0.18	0.6	100	–	–	–	–	–	–	GV2P05 or GV2ME05	0.63...1	TPRST009 TPRSS009 TPRPM009
0.25	0.85	100	0.25	0.76	100	–	–	–	or GV2ME05AP*		
0.37	1.1	100	0.37	0.99	100	0.37	0.88	100	GV2P06 or GV2ME06	1...1.6	TPRST009 TPRSS009 TPRPM009
0.55	1.5	100	0.55	1.36	100	0.55	1.2	100	or GV2ME06AP*		
–	–	–	–	–	–	0.75	1.5	100	GV2P06 or GV2ME06 or GV2ME06AP*	1...1.6	TPRST009 TPRSS009 TPRPM009
0.75	1.9	100	0.75	1.68	100	1.1	2.2	100	GV2P07 or GV2ME07 or GV2ME07AP*	1.6...2.5	TPRST009 TPRSS009 TPRPM009
1.1	2.7	100	1.1	2.5	100	1.5	2.9	100	GV2P08 or GV2ME08	2.5...4	TPRST009 TPRSS009 TPRPM009
1.5	3.6	100	1.5	3.3	100	2.2	3.9	100	or GV2ME08AP*		
2.2	4.9	100	–	–	–	–	–	–	GV2P10 or GV2ME10 or GV2ME10AP*	4...6.3	TPRST009 TPRSS009 TPRPM009
–	–	–	2.2	4.5	50	3	5.2	50	GV2ME10 or GV2ME10AP*	4...6.3	TPRST009 TPRSS009 TPRPM009
–	–	–	2.2	4.5	100	–	–	–	GV2P10	4...6.3	TPRST00 TPRSS009 TPRPM009
–	–	–	–	–	–	3	5.2	100			
3	6.5	100	3	5.9	100 or	–	–	–	GV2P14 or GV2ME14	6...10	TPRST009 TPRSS009 TPRPM009
4	8.5	100	–	–	50	–	–	–	or GV2ME14AP*		
–	–	–	4	7.8	15	4	6.8	10	GV2ME14	6...10	TPRST009 TPRSS009 TPRPM009
–	–	–	–	–	–	5.5	9.2	10	or GV2ME14AP*		

Type 2 Coordination (Continued)

Typical power ratings of 3-phase motors, 50/60 Hz-in IEC category AC-3e									Circuit Breaker Reference	Setting Range of Thermal Trips (A)	References of: Standard Starters SIL Starters Power Interface Modules
400/415 V			440 V			500 V					
P	Ie	Iq	P	Ie	Iq	P	Ie	Iq			
kw	A	kA	kW	A	kA	kW	A	kA			
–	–	–	–	–	–	4	6.8	50	GV2P14	6...10	TPRST025 TPRSS025 TPRPM038
–	–	–	4	7.8	20	5.5	9.2	50			
5.5	11.5	100	5.5	10.5	50 or 8	7.5	12.4	42 or 6	GV2P16 or GV2ME16 or GV2ME16AP*	9...14	TPRST025 TPRSS025 TPRPM038
–	–	–	7.5	14.1	50 or 8	9	13.9	42 or 6			
7.5	15.5	50 or 15	9	16.9	20 or 8	–	–	–	GV2P20 or GV2ME20 or GV2ME20AP*	13...18	TPRST025 TPRSS025 TPRPM038
9	18.1	50 or 15	11	20	20 or 6	11	17.6	10 or 6	GV2P21 or GV2ME21 or GV2ME21AP*	17...23	TPRST025 TPRSS025 TPRPM038
11	22	50 or 15	–	–	–	–	–	–	GV2P22 or GV2ME22 or GV2ME22AP*	20...25	TPRST025 TPRSS025 TPRPM038
–	–	–	–	–	–	15	23	10 or 6	GV2P22	20...25	TPRST038 TPRSS038 TPRPM038
15	29	50 or 10	15	27	20 or 6	18.5	28	10 or 4	GV2P32 or GV2ME32 or GV2ME32AP*	24...32	TPRST038 TPRSS038 TPRPM038
18.5	35	50	–	–	–	–	–	–	GV3P40	30...40	TPRST065 TPRSS065 TPRPM080
–	–	–	18.5	32	50	22	33	10	GV3P40	30...40	TPRST065 TPRSS065 TPRPM080
22	41	50	–	–	–	–	–	–	GV3P50	37...50	TPRST065 TPRSS065 TPRPM080
–	–	–	22	39	50	30	44	10	GV3P50	37...50	TPRST065 TPRSS065 TPRPM080
30	55	50	30	50	50	–	–	–	GV3P65	48...65	TPRST065 TPRSS065 TPRPM080
–	–	–	–	–	–	37	53	10	GV3P65	48...65	TPRST065 TPRSS065

Type 2 Coordination (Continued)

Typical power ratings of 3-phase motors, 50/60 Hz-in IEC category AC-3e									Circuit Breaker Reference	Setting Range of Thermal Trips (A)	References of: Standard Starters SIL Starters Power Interface Modules
400/415 V			440 V			500 V					
P	Ie	Iq	P	Ie	Iq	P	Ie	Iq			
kw	A	kA	kW	A	kA	kW	A	kA			
											TPRPM080
37	66	50	–	–	–	–	–	–	GV3P73	62...73	TPRST080 TPRSS080 TPRPM080
* Thermal trips available in CEE Zone Only											

Installation

ATEX-certified MPCBs and TeSys island system must be installed outside the explosive (ATEX) zone.

ATEX-certified MPCBs must be installed upstream of the TeSys island modules. No hardware changes are required to TeSys island system components.

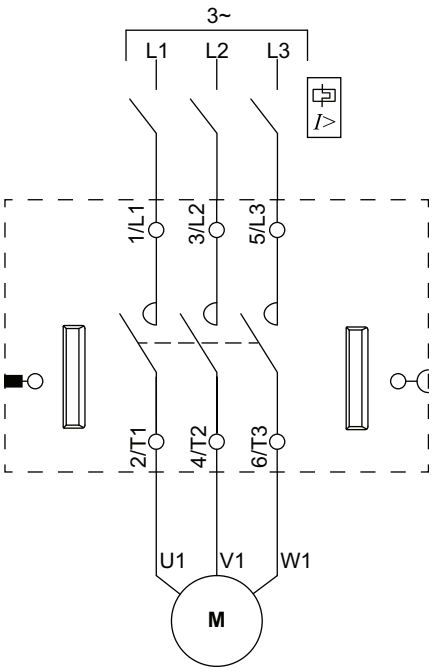
NOTE:

- ATEX implementation is for motor applications only.
- Only one MPCB should be used per motor.
- Do not use a single MPCB for multiple avatars. Each avatar must have its own MPCB.

Avatar Wiring Schematics and Accessory Diagrams

Motor One Direction

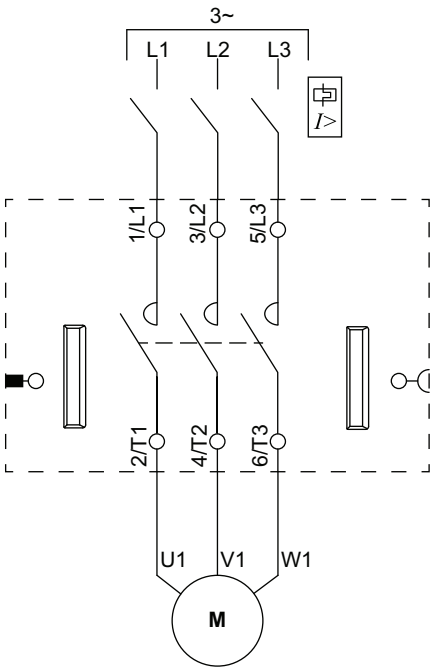
Wiring Diagram



Motor One Direction - SIL Stop, W. Cat 1/2

NOTE: Safety Integrity Level should be according to IEC 61508 standards. Wiring Category 1 and Category 2 should be according to ISO 13849 standards.

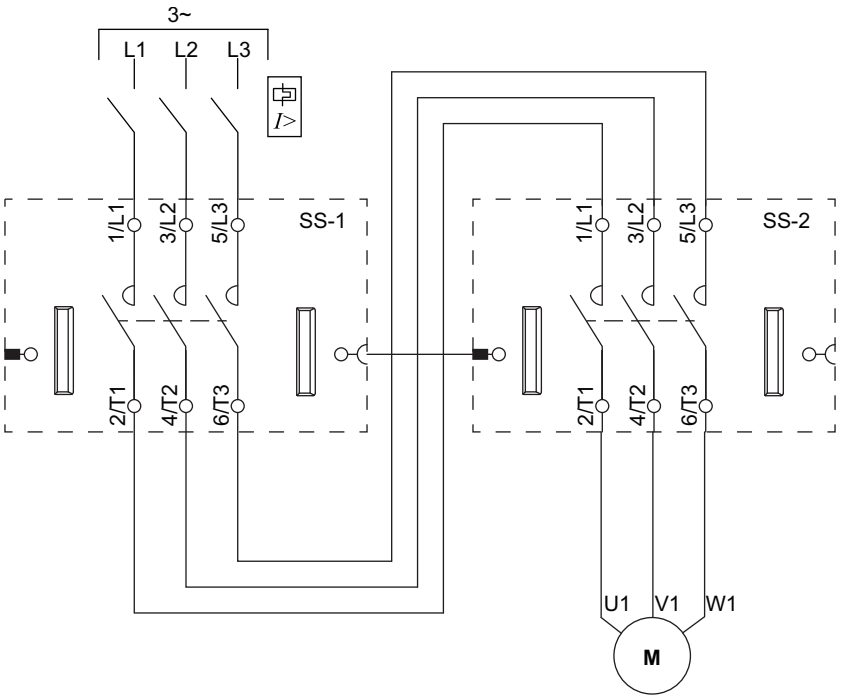
Wiring Diagram



Motor One Direction - SIL Stop, W. Cat 3/4

NOTE: Safety Integrity Level should be according to IEC 61508 standards. Wiring Category 1 and Category 2 should be according to ISO 13849 standards.

Wiring Diagram

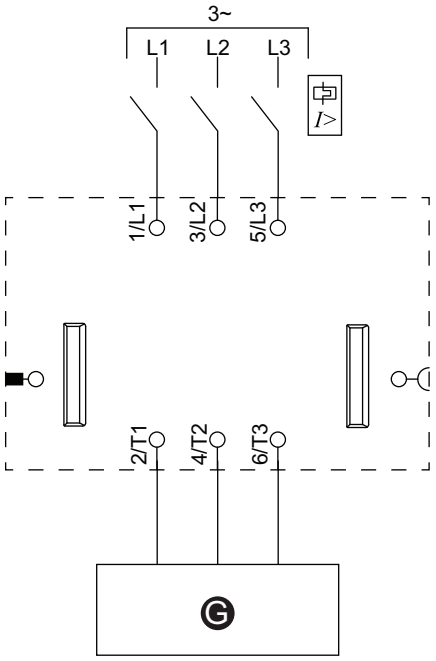


Legend

SS-1	SIL starter 1
SS-2	SIL starter 2

Power Interface without I/O (Measure)

Wiring Diagram

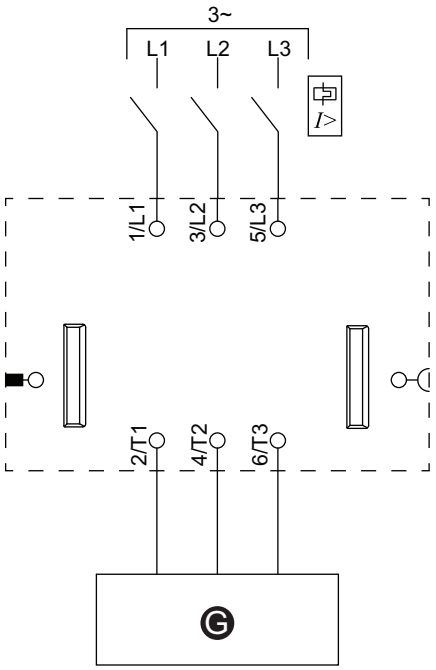


Legend

G	Motor, soft starter, or variable speed drive

Power Interface with I/O (Control)

Wiring Diagram

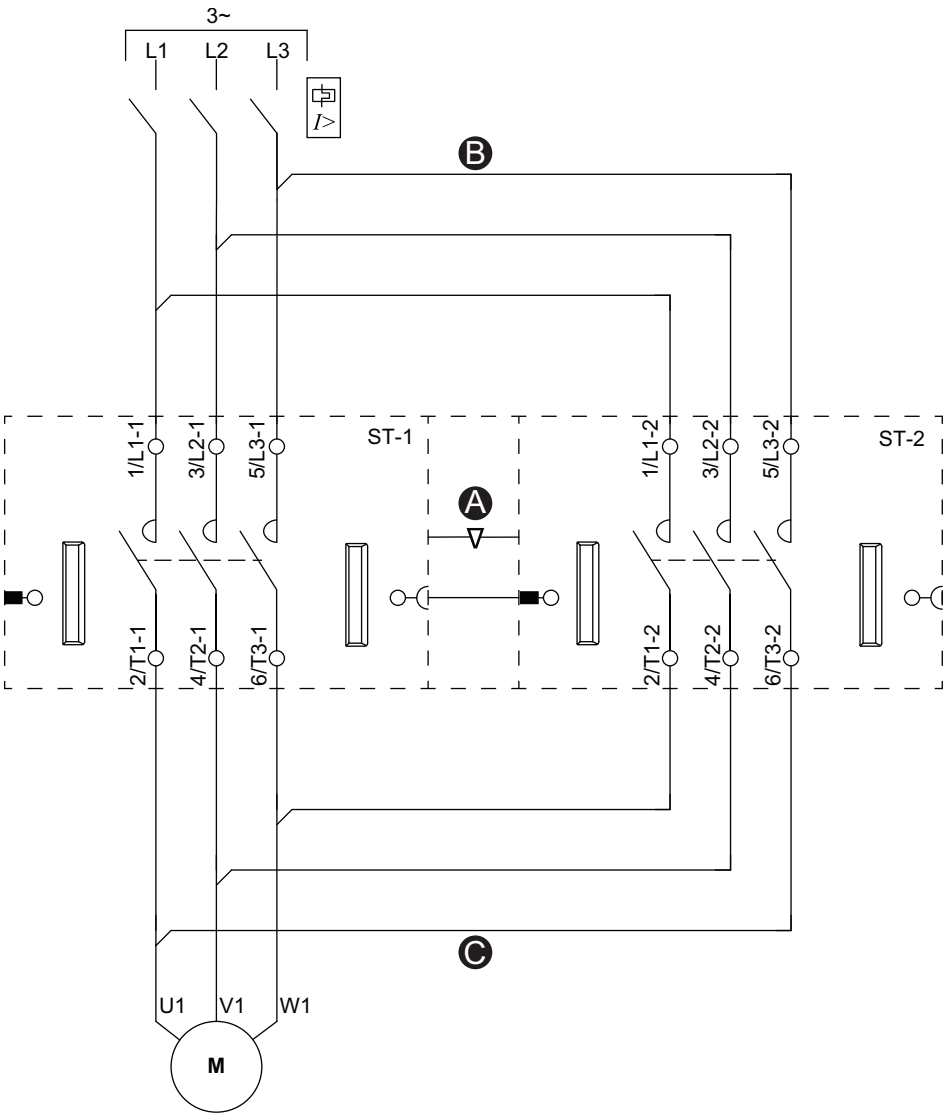


Legend

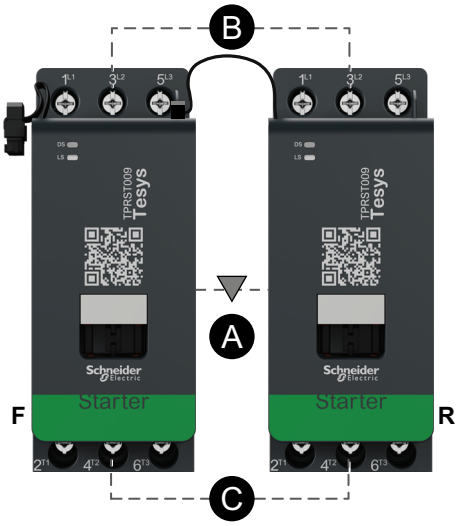
G	Motor, soft starter, or variable speed drive

Motor Two Directions

Wiring Diagram



Accessories



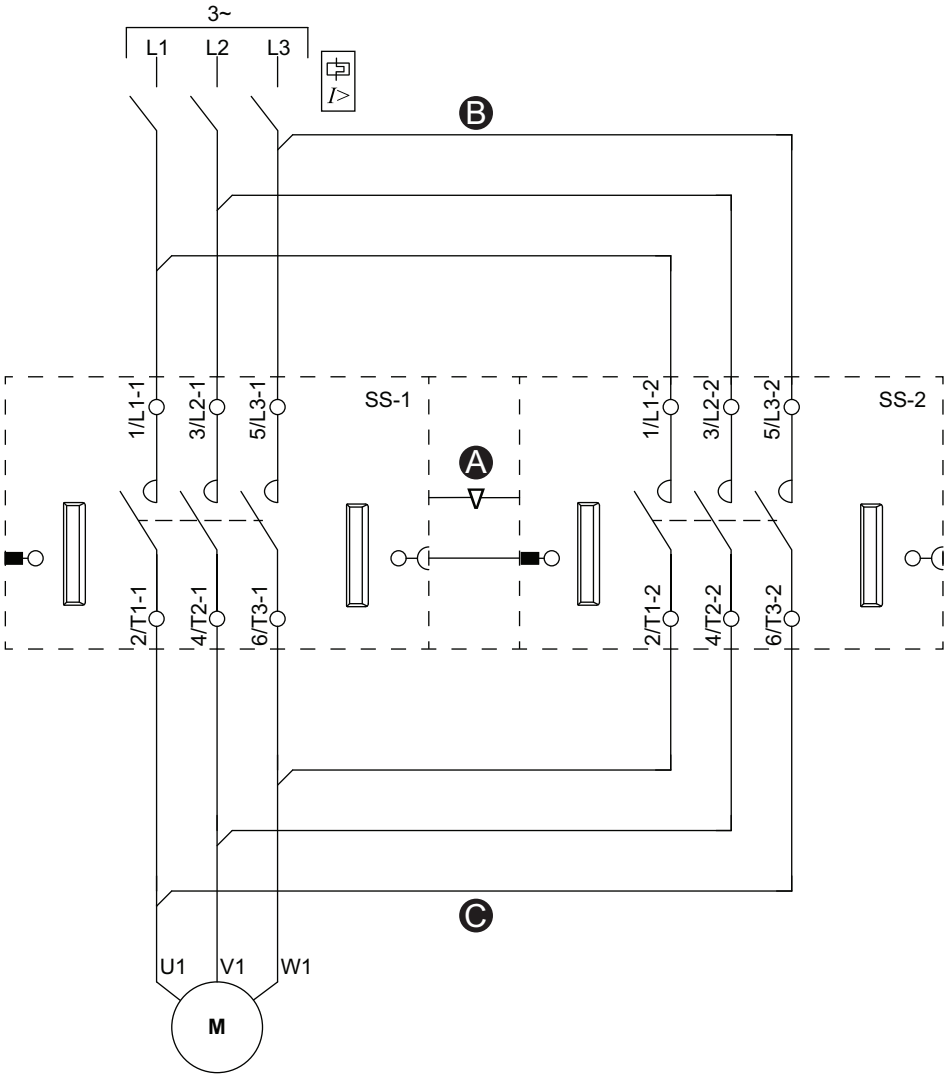
Legend

A	Mechanical interlock
B	Parallel link
C	Reversing link
F	Forward starter
R	Reverse starter
ST-1	Starter 1
ST-2	Starter 2

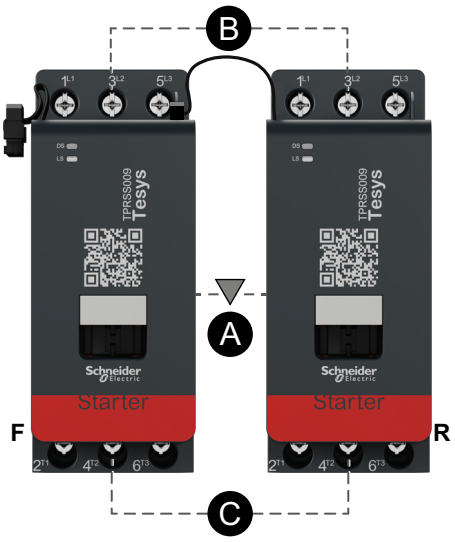
Motor Two Directions - SIL Stop, W. Cat 1/2

NOTE: Safety Integrity Level should be according to IEC 61508 standards. Wiring Category 1 and Category 2 should be according to ISO 13849 standards.

Wiring Diagram



Accessories



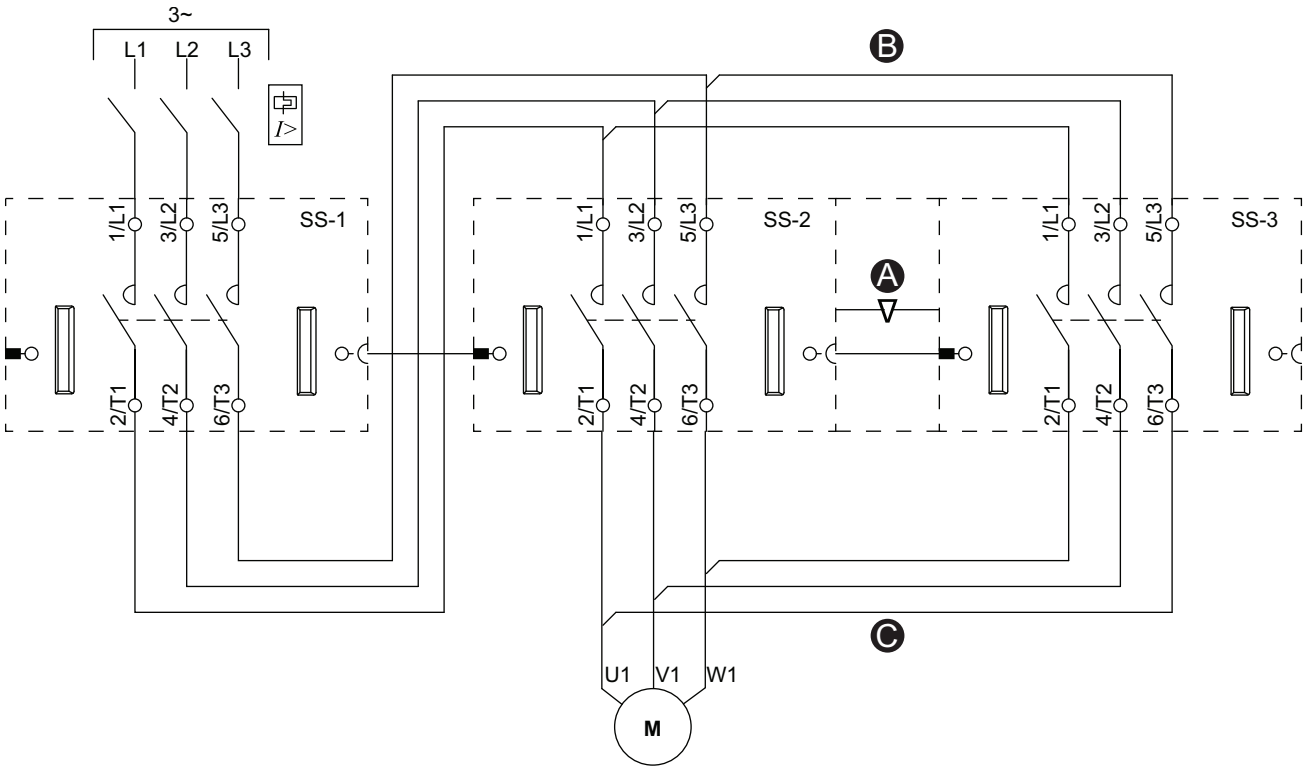
Legend

A	Mechanical interlock
B	Parallel link
C	Reversing link
F	Forward
R	Reverse
SS-1	SIL starter 1
SS-2	SIL starter 2

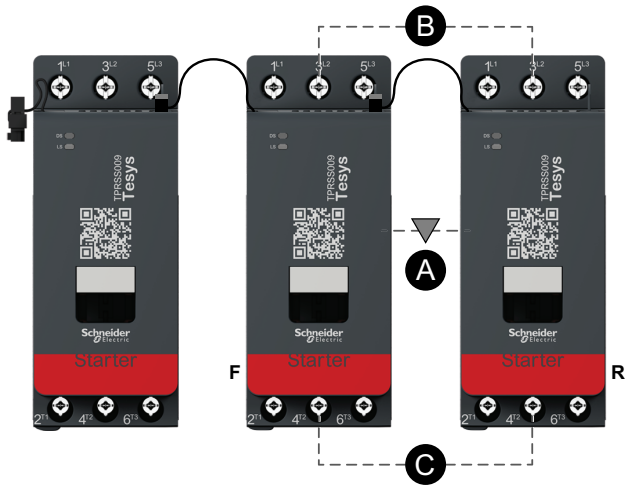
Motor Two Directions - SIL Stop, W. Cat 3/4

NOTE: Safety Integrity Level should be according to IEC 61508 standards. Wiring Category 3 and Category 4 should be according to ISO 13849 standards.

Wiring Diagram



Accessories

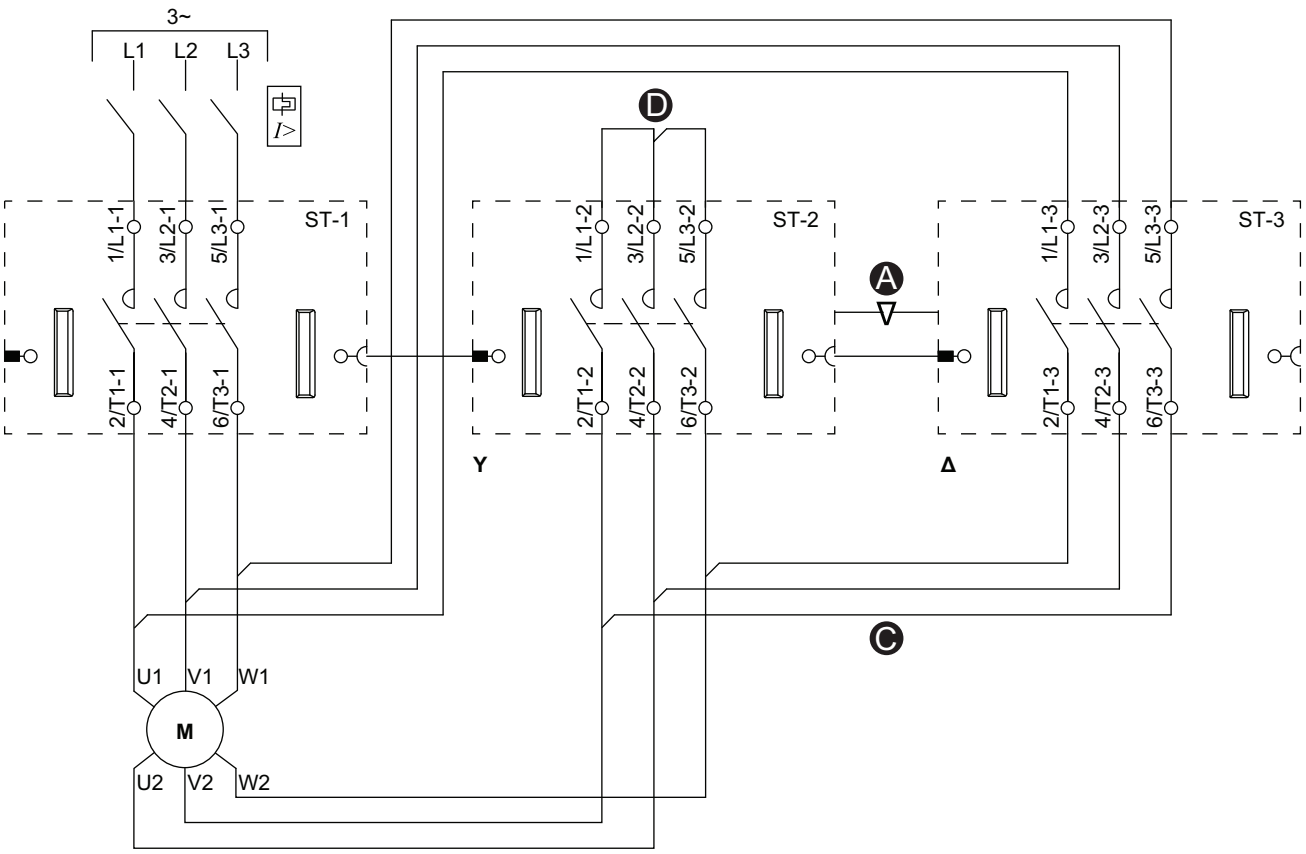


Legend

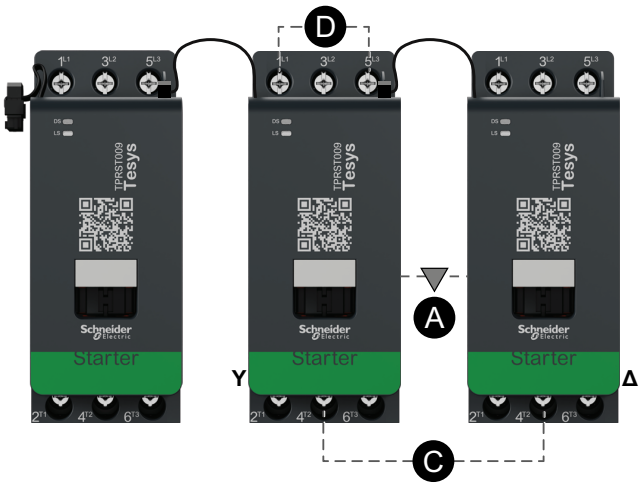
A	Mechanical interlock
B	Parallel link
C	Reversing link
F	Forward
R	Reverse
SS-1	SIL starter 1
SS-2	SIL starter 2
SS-3	SIL starter 3

Motor Y/D One Direction

Wiring Diagram



Accessories

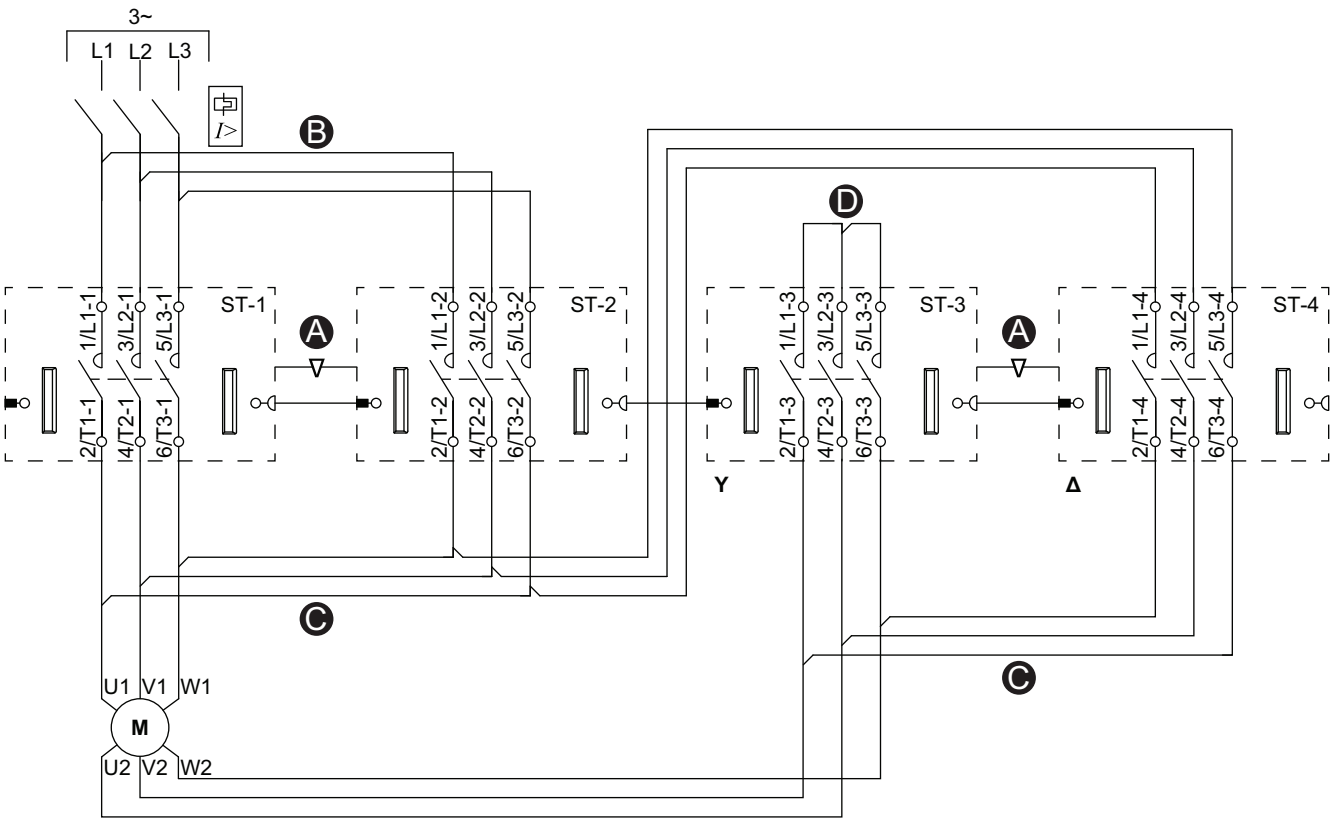


Legend

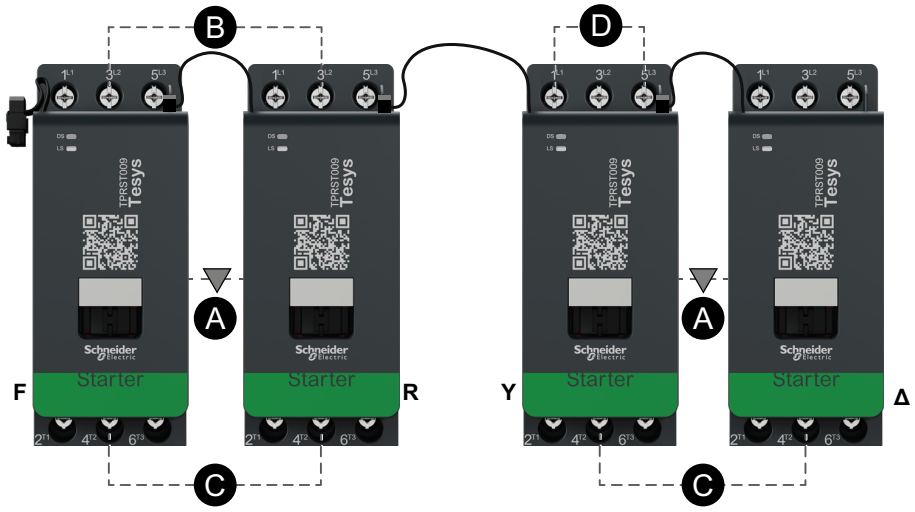
A	Mechanical interlock
C	Reversing link
D	Shorting block
Y	Wye
Δ	Delta
ST-1	Starter 1
ST-2	Starter 2
ST-3	Starter 3

Motor Y/D Two Directions

Wiring Diagram



Accessories

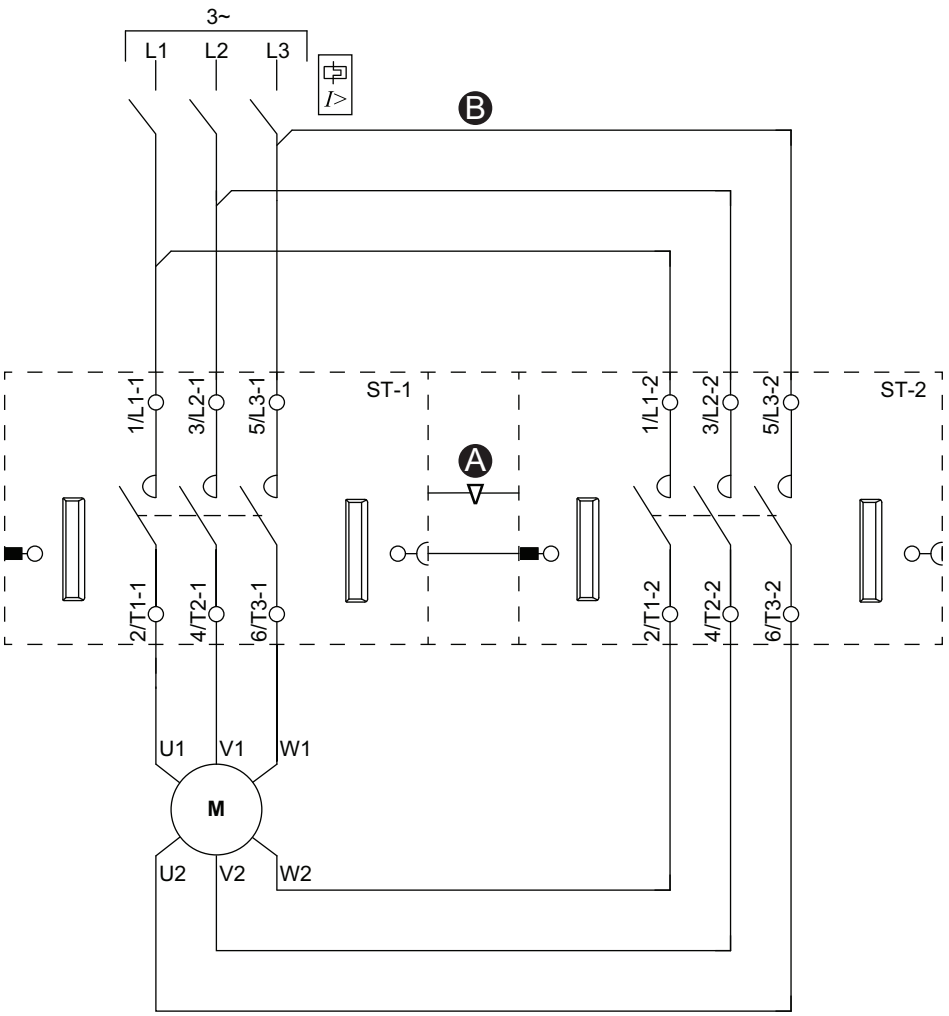


Legend

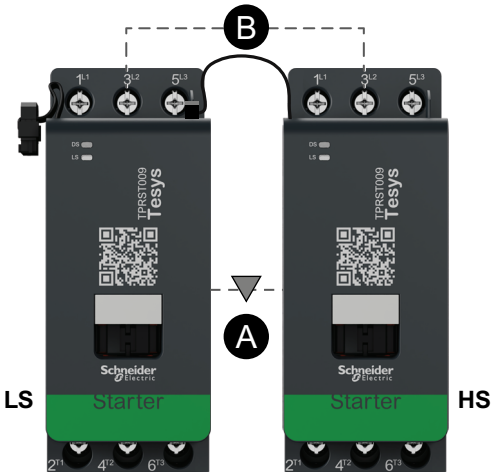
A	Mechanical interlock
B	Parallel link
C	Reversing link
D	Shorting block
F	Forward
R	Reverse
Y	Wye
Δ	Delta
ST-1	Starter 1
ST-2	Starter 2
ST-3	Starter 3
ST-4	Starter 4

Motor Two Speeds

Two Speed Wiring Diagram



Accessories

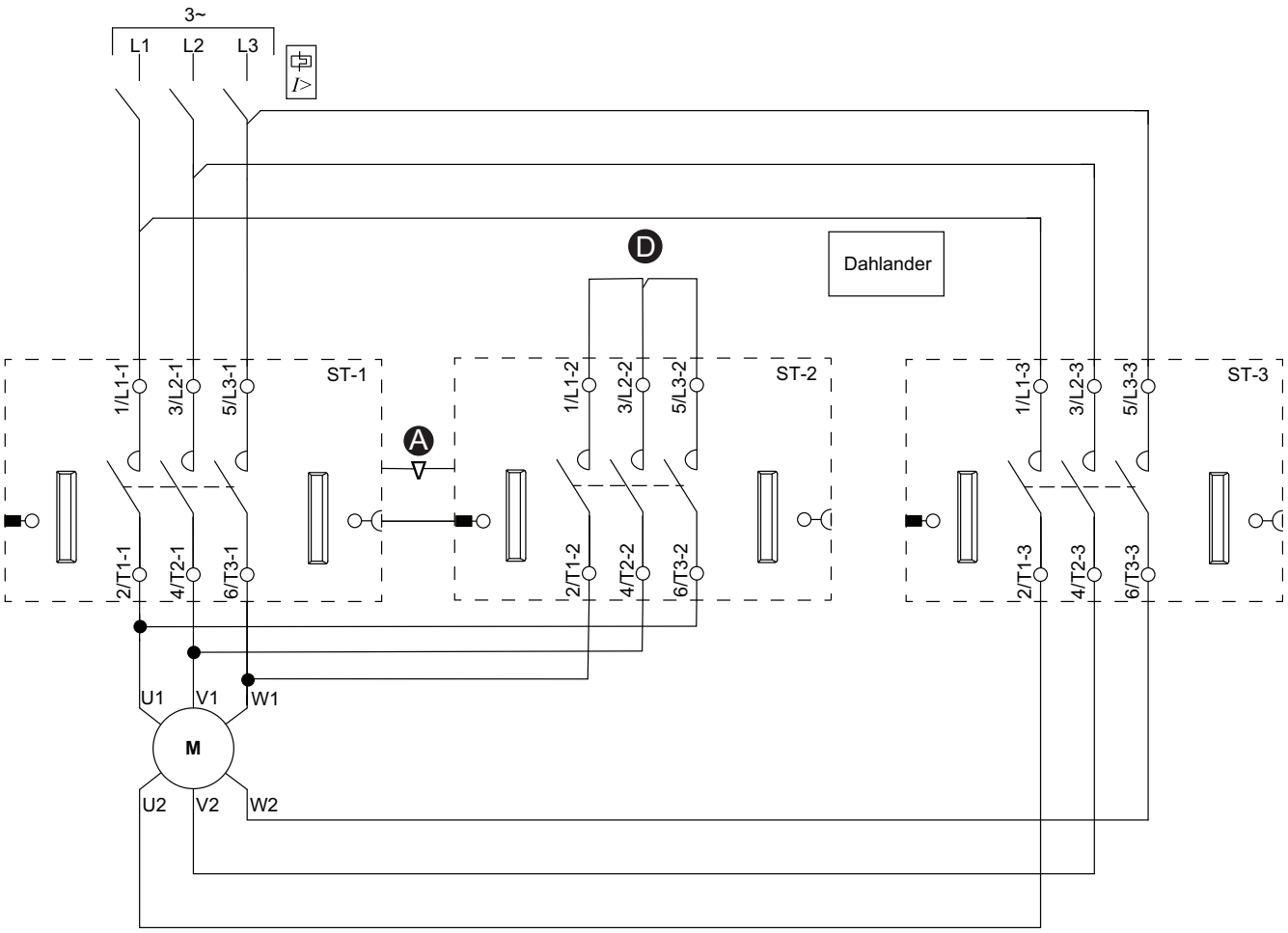


Legend

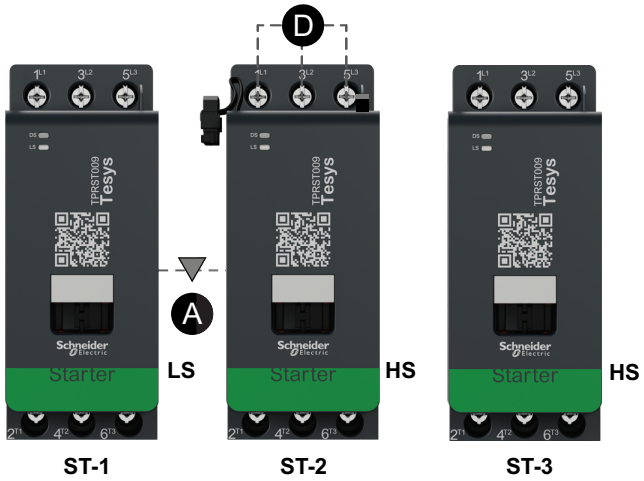
A	Mechanical interlock
B	Parallel link
LS	Low speed
HS	High speed
ST-1	Starter 1
ST-2	Starter 2

Motor Two Speeds with Dahlandar Option

Two Speed Wiring Diagram



Accessories



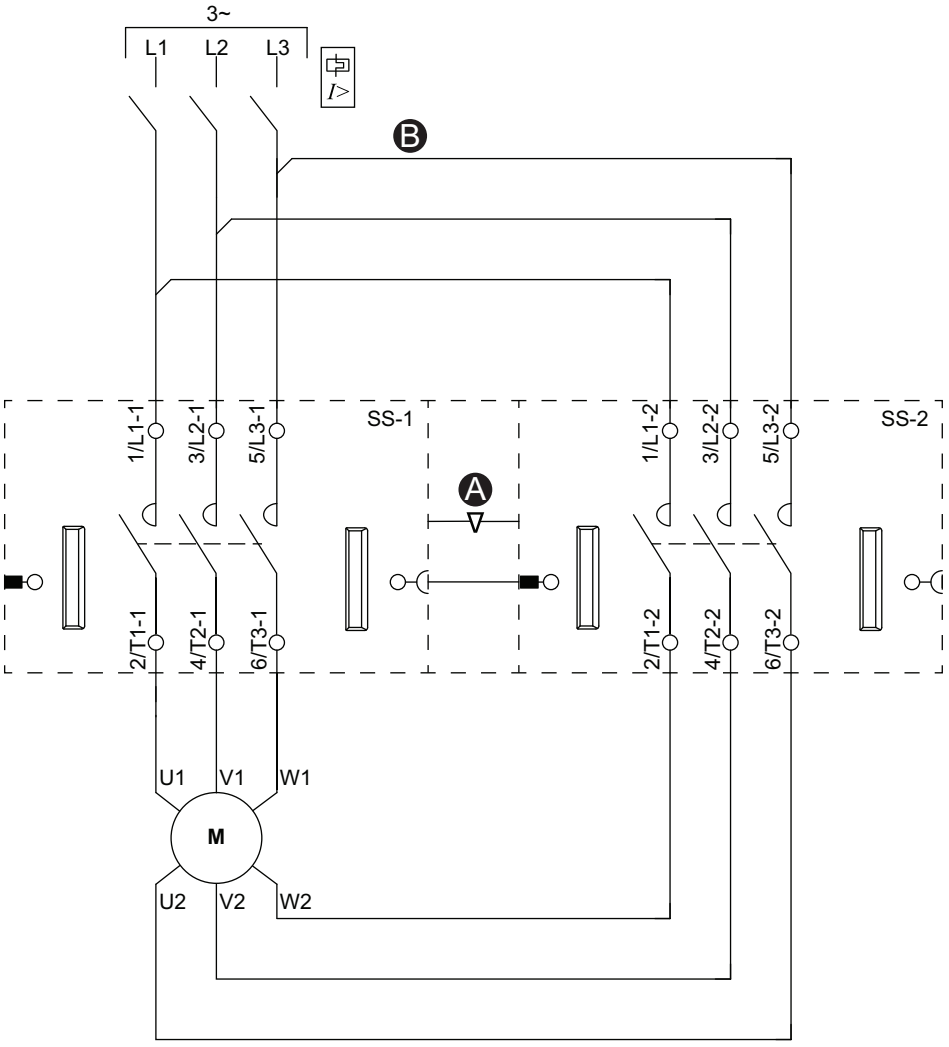
Legend

A	Mechanical interlock
D	Shorting block
LS	Low speed
HS	High speed
ST-1	Starter 1
ST-2	Starter 2
ST-3	Starter 3

Motor Two Speeds - SIL Stop, W. Cat 1/2

NOTE: Safety Integrity Level should be according to IEC 61508 standards. Wiring Category 1 and Category 2 should be according to ISO 13849 standards.

Two Speed Wiring Diagram



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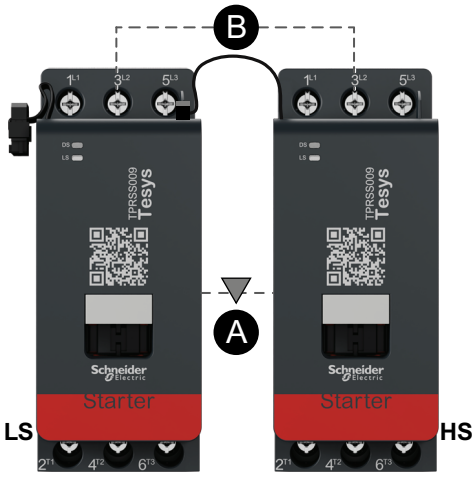


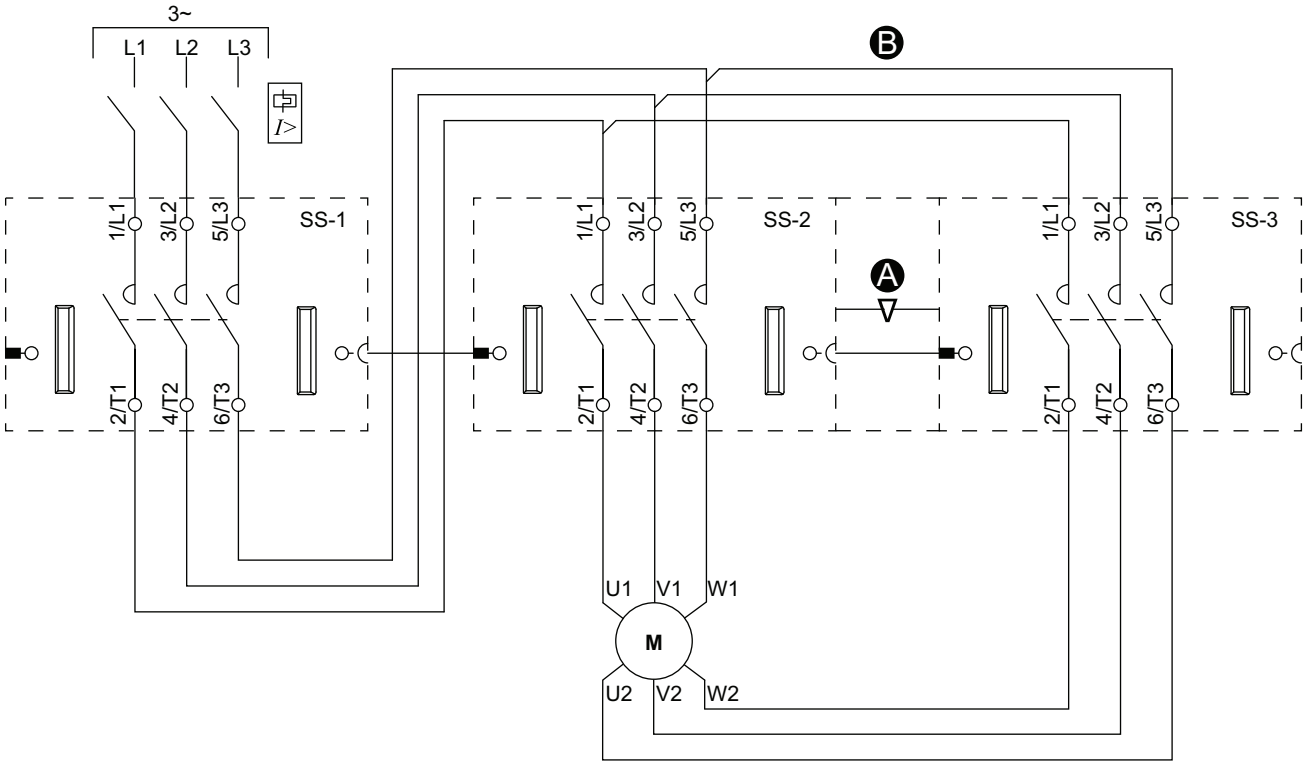
Legend

A	Mechanical interlock
B	Parallel link
LS	Low speed
HS	High speed
SS-1	SIL starter 1
SS-2	SIL starter 2

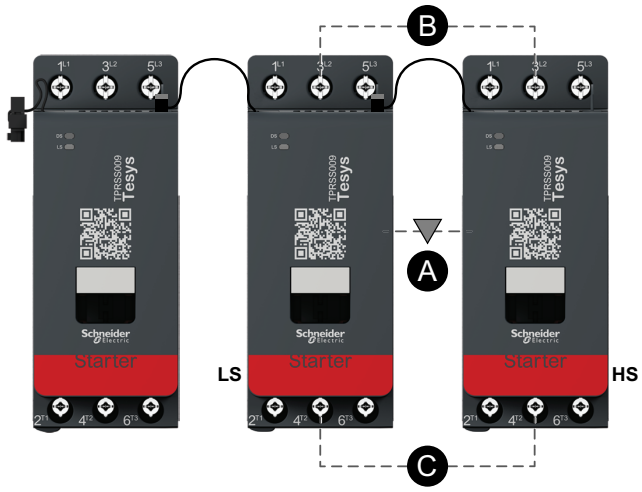
Motor Two Speeds - SIL Stop, W. Cat 3/4

NOTE: Safety Integrity Level should be according to IEC 61508 standards. Wiring Category 3 and Category 4 should be according to ISO 13849 standards.

Two Speed Wiring Diagram



Accessories

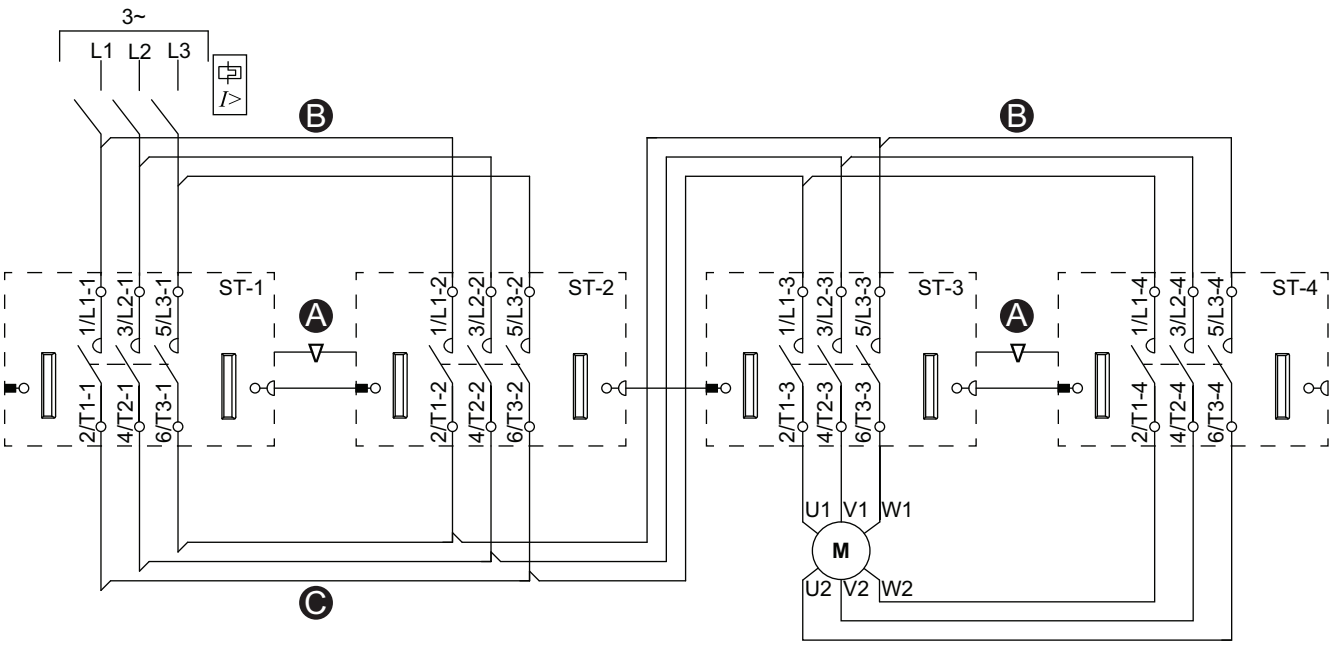


Legend

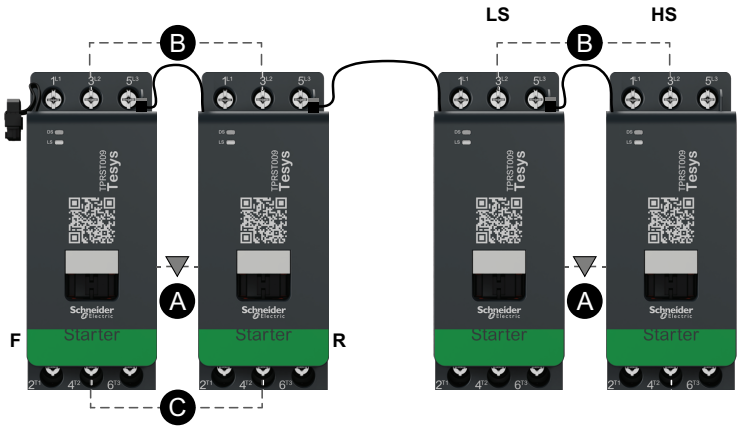
A	Mechanical interlock
B	Parallel link
LS	Low speed
HS	High speed
SS-1	SIL starter 1
SS-2	SIL starter 2
SS-3	SIL starter 3

Motor Two Speeds Two Directions

Two Speed Wiring Diagram



Accessories



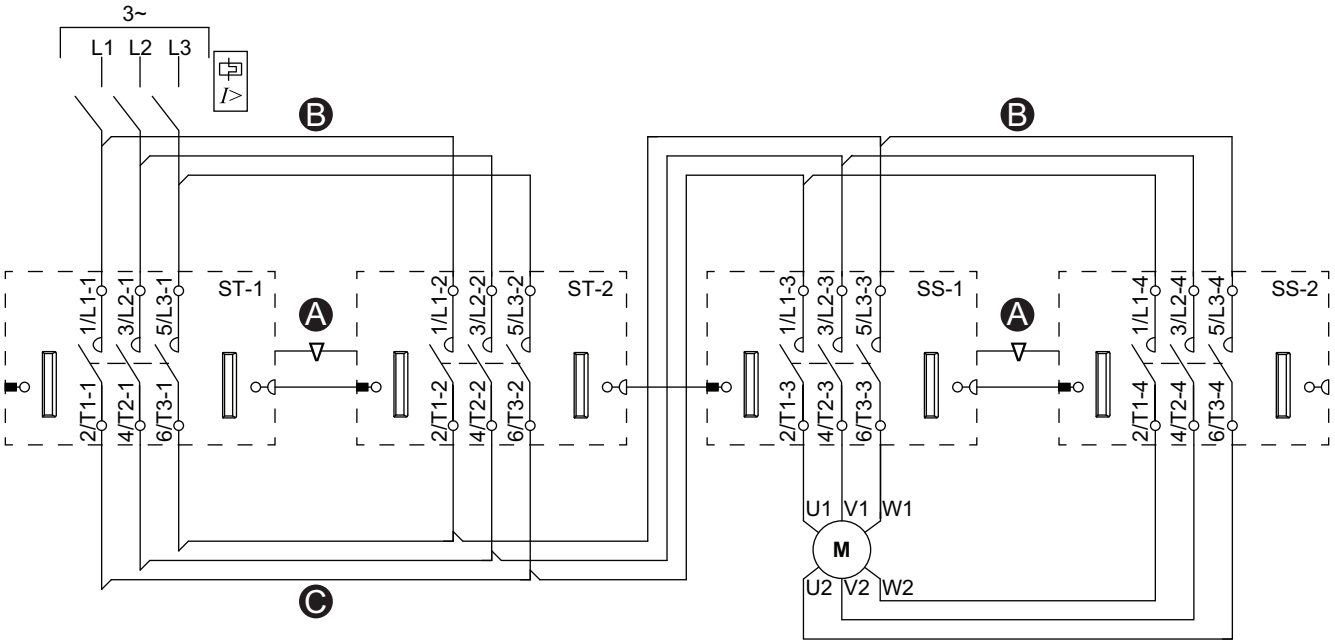
Legend

A	Mechanical interlock
B	Parallel link
C	Reversing link
F	Forward
R	Reverse
LS	Low speed
HS	High speed
ST-1	Starter 1
ST-2	Starter 2
ST-3	Starter 3
ST-4	Starter 4

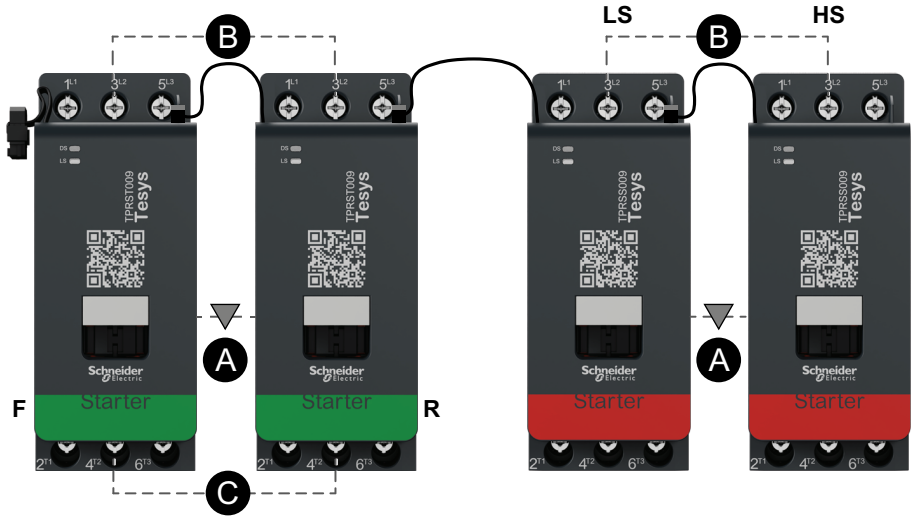
Motor Two Speeds Two Directions - SIL Stop, W. Cat 1/2

NOTE: Safety Integrity Level should be according to IEC 61508 standards. Wiring Category 1 and Category 2 should be according to ISO 13849 standards.

Two Speed Wiring Diagram



Accessories



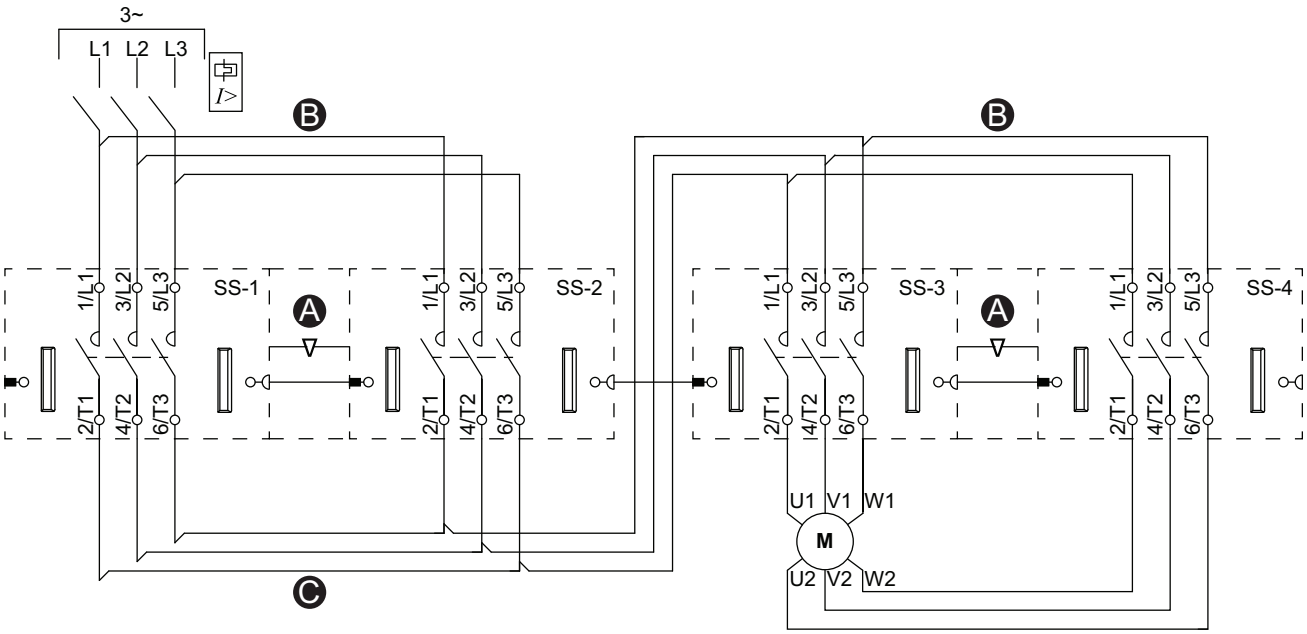
Legend

A	Mechanical interlock
B	Parallel link
C	Reversing link
F	Forward starter
R	Reverse starter
LS	Low speed
HS	High speed
ST-1	Starter 1
ST-2	Starter 2
SS-1	SIL starter 1
SS-2	SIL starter 2

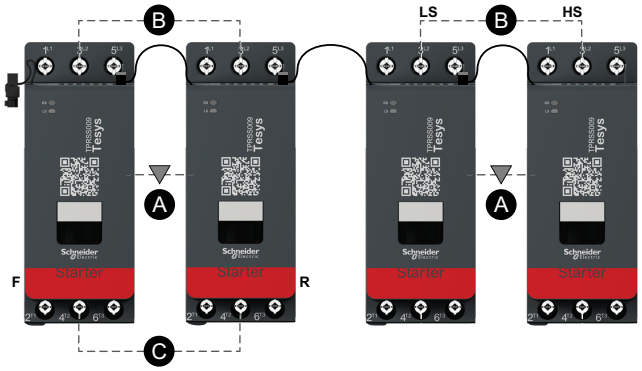
Motor Two Speeds Two Directions - SIL Stop, W. Cat 3/4

NOTE: Safety Integrity Level should be according to IEC 61508 standards. Wiring Category 3 and Category 4 should be according to ISO 13849 standards.

Two Speed Wiring Diagram



Accessories

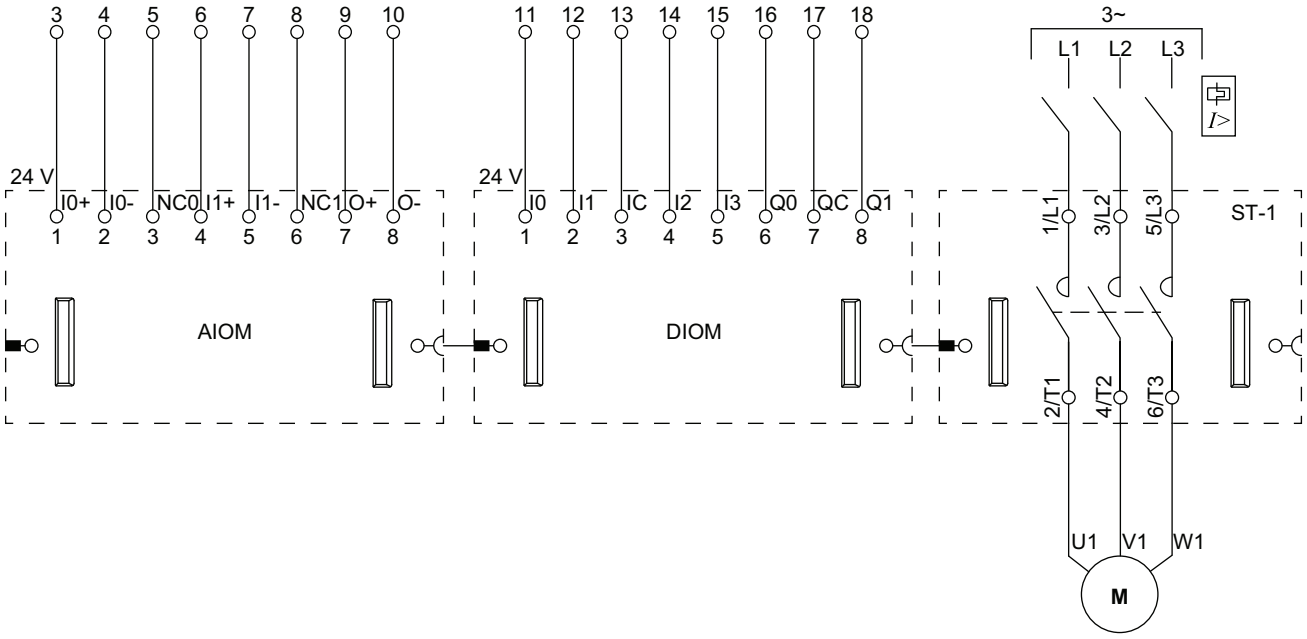


Legend

A	Mechanical interlock
B	Parallel link
C	Reversing link
F	Forward starter
R	Reverse starter
LS	Low speed
HS	High Speed
SS-1	SIL starter 1
SS-2	SIL starter 2
SS-3	SIL starter 3
SS-4	SIL starter 4

Pump

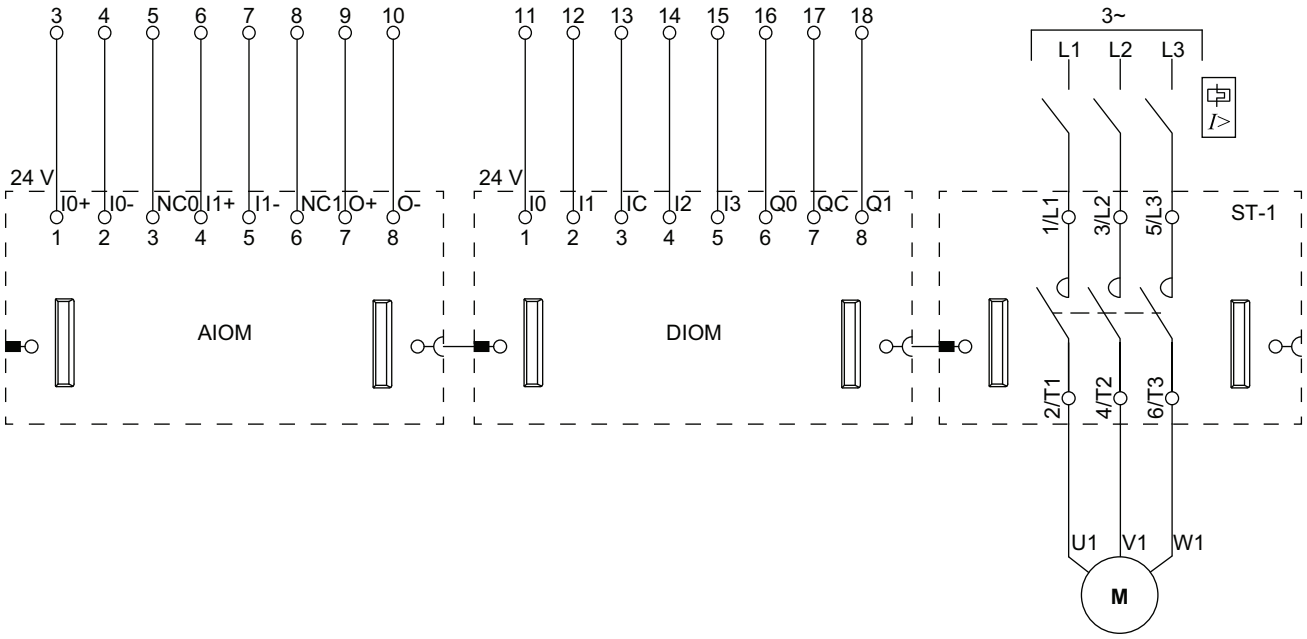
Wiring Diagram



NOTE: Analog I/O modules (AIOMs) and digital I/O modules (DIOMs) are configurable.

Conveyor One Direction

Wiring Diagram

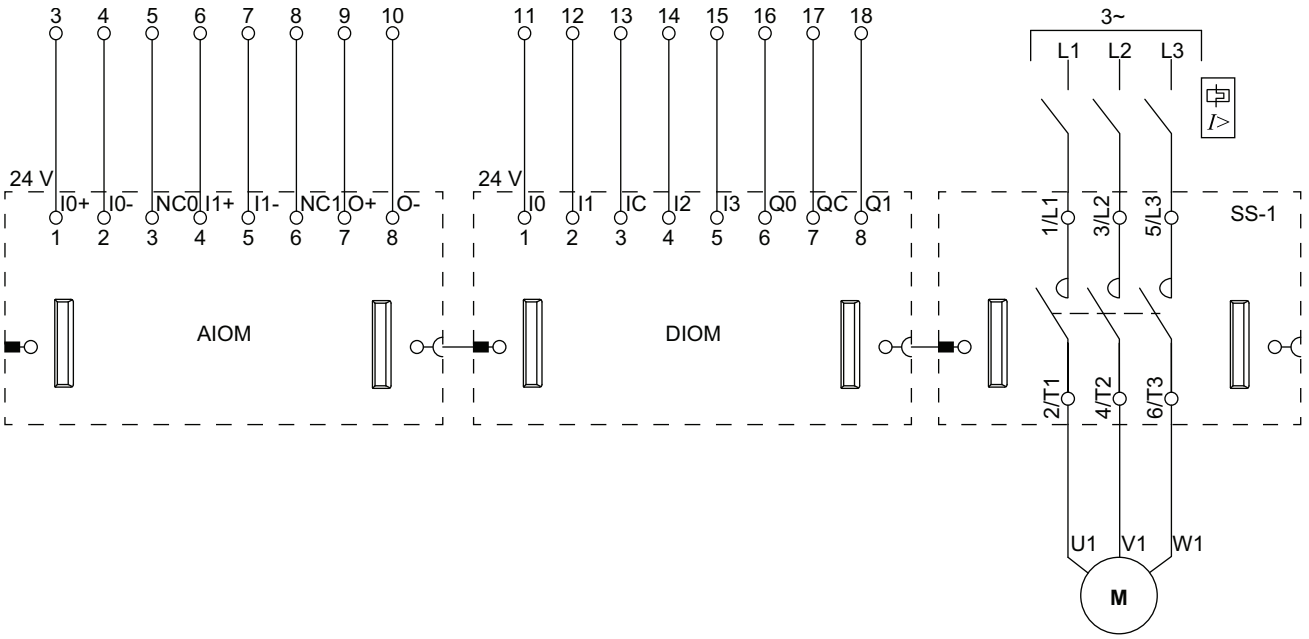


NOTE: Analog I/O modules (AIOMs) and digital I/O modules (DIOMs) are configurable.

Conveyor One Direction - SIL Stop, W. Cat 1/2

NOTE: Safety Integrity Level should be according to IEC 61508 standards. Wiring Category 1 and Category 2 should be according to ISO 13849 standards.

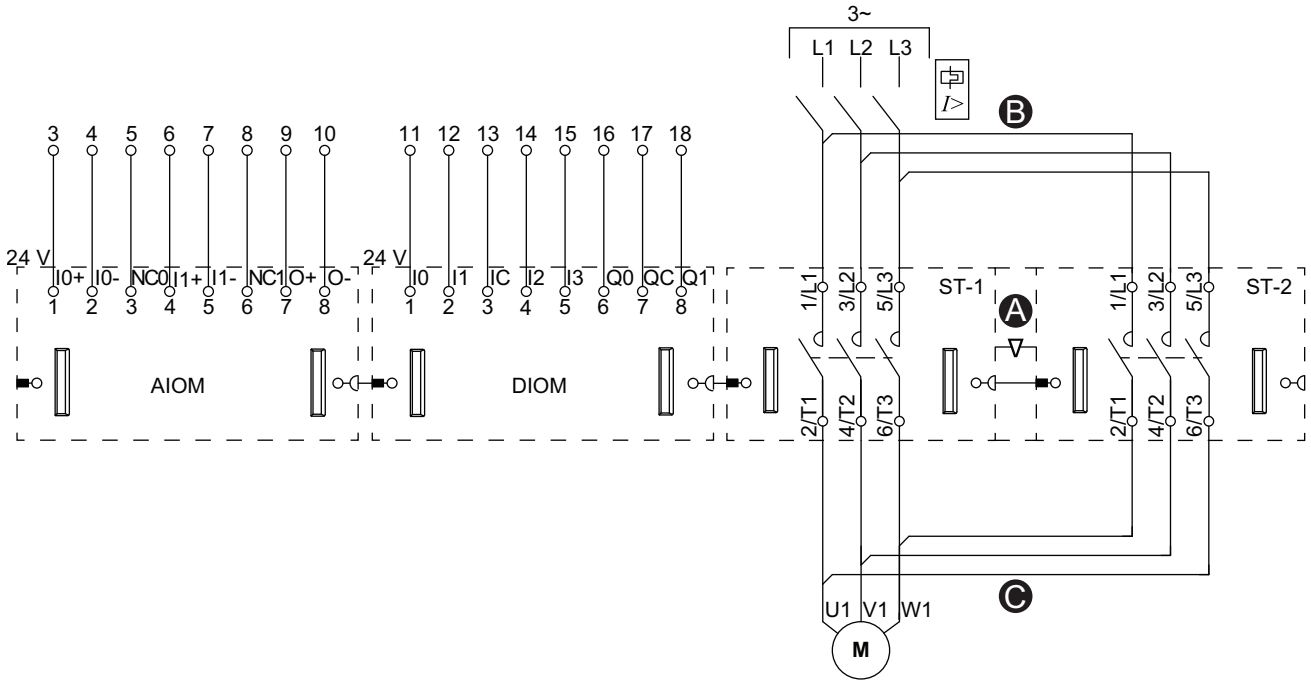
Wiring Diagram



NOTE: Analog I/O modules (AIOMs) and digital I/O modules (DIOMs) are configurable.

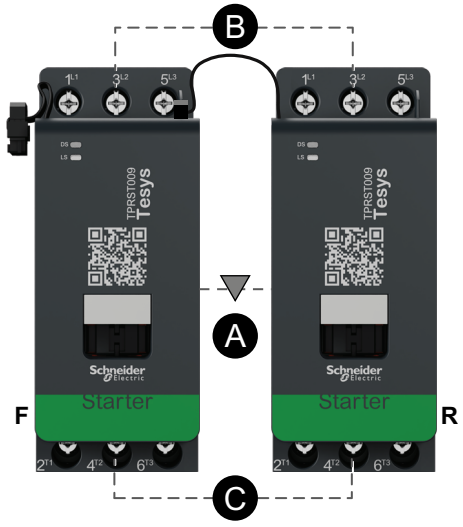
Conveyor Two Directions

Wiring Diagram



NOTE: Analog I/O modules (AIOMs) and digital I/O modules (DIOMs) are configurable.

Accessories



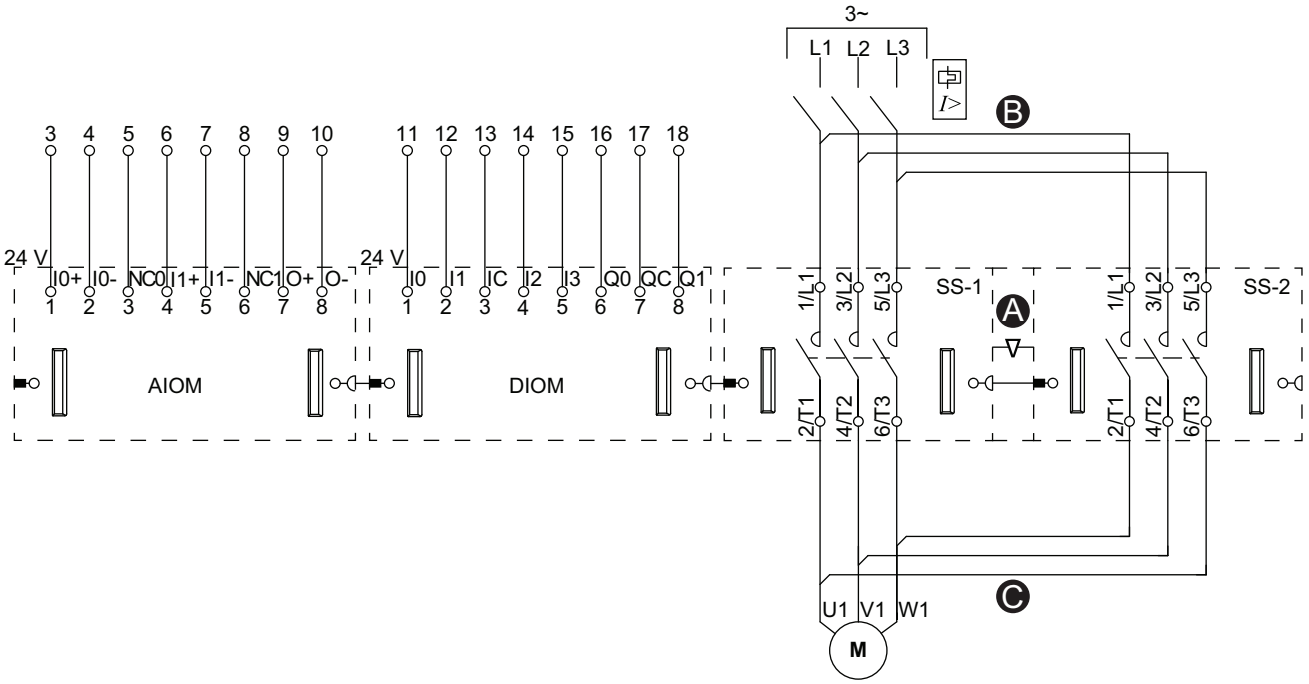
Legend

A	Mechanical interlock
B	Parallel link
C	Reversing link
F	Forward starter
R	Reverse starter
ST-1	Starter 1
ST-2	Starter 2

Conveyor Two Directions - SIL Stop, W. Cat 1/2

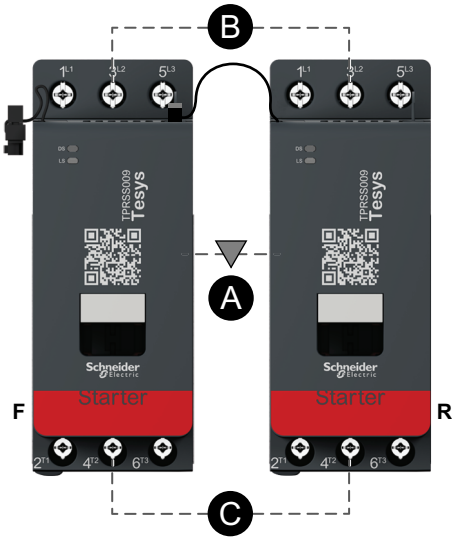
NOTE: Safety Integrity Level should be according to IEC 61508 standards. Wiring Category 1 and Category 2 should be according to ISO 13849 standards.

Wiring Diagram



NOTE: Analog I/O modules (AIOMs) and digital I/O modules (DIOMs) are configurable.

Accessories



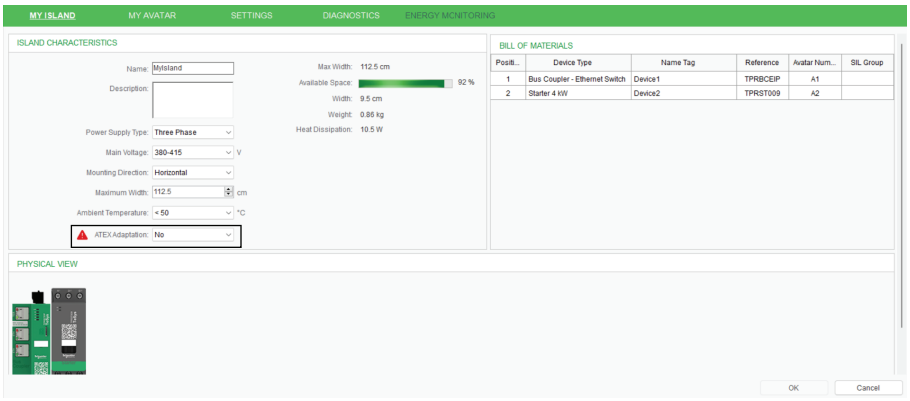
Legend

A	Mechanical interlock
B	Parallel link
C	Reversing link
F	Forward
R	Reverse
SS-1	SIL starter 1
SS-2	SIL starter 2

ATEX Configuration in TeSys Island

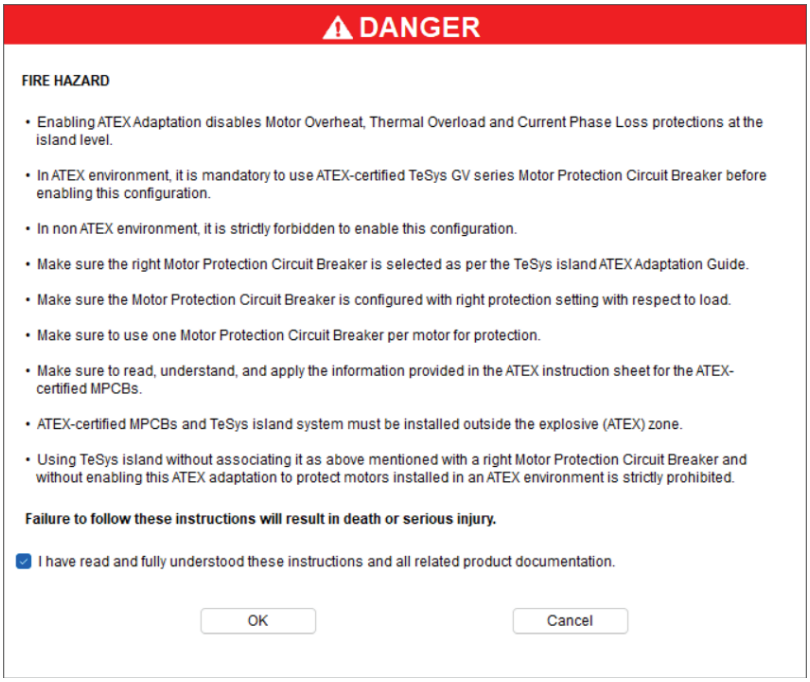
Configuration

ATEX mode can be enabled from the TeSys island DTM Library on SoMove configuration tool, under **MY ISLAND > ISLAND CHARACTERISTICS**. A two-step authentication mechanism is required to activate the ATEX configuration.



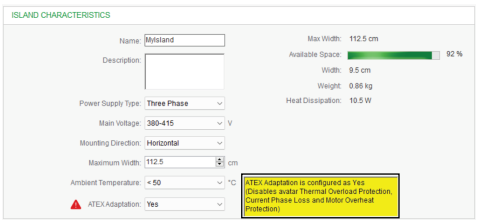
NOTE: ATEX enable or disable events are logged in the system audit log.

The system displays a danger message in the SoMove configuration tool when the ATEX configuration is turned on.

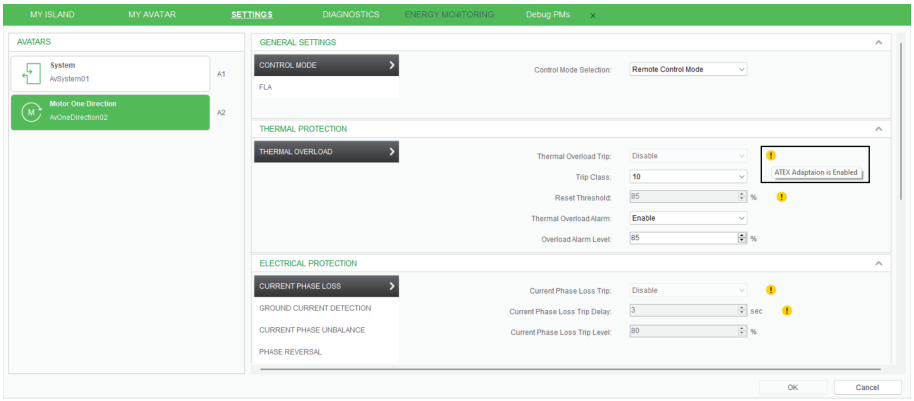


Once the ATEX Adaptation is configured as yes:

- A message is displayed under the **ISLAND CHARACTERISTICS** section.



- The system disables internal protection such as thermal overload, current phase loss, and motor overheat, and updates the avatar configuration file accordingly. The **ATEX Adaptation is Enabled** message is displayed in the **SETTINGS** tab.



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The following table shows the compatibility of TeSys island avatars with ATEX configuration:

Name		Icon	ATEX Adaptation
System Avatar			**NA**
Device Avatars	**Switch**		**NA**
	Switch - SIL Stop, W. Cat 1/2		**NA**
	Switch - SIL Stop, W. Cat 3/4		**NA**
	Digital I/O		**NA**
	Analog I/O		**NA**
Load Avatars	**Power Interface without I/O (measure)**		✓
	Power Interface with I/O (control)		✓
	Motor One Direction		✓
	Motor One Direction - SIL Stop, W. Cat 1/2		✓
	Motor One Direction - SIL Stop, W. Cat 3/4		✓
	Motor Two Directions		✓
Load Avatars	**Motor Two Directions - SIL Stop, W. Cat 1/2**		✓
	Motor Two Directions - SIL Stop, W. Cat 3/4		✓

Name		Icon	ATEX Adaptation
	Motor Y/D One Direction		✓
	Motor Y/D Two Directions		✓
	Motor Two Speeds		✓
	Motor Two Speeds - SIL Stop, W. Cat 1/2		✓
	Motor Two Speeds - SIL Stop, W. Cat 3/4		✓
	Motor Two Speeds Two Directions		✓
	Motor Two Speeds Two Directions - SIL Stop, W. Cat 1/2		✓
	Motor Two Speeds Two Directions - SIL Stop, W. Cat 3/4		✓
	Resistor		**NA**
	Power Supply		**NA**
	Transformer		**NA**
Application Avatars	**Pump**		✓
	Conveyor		✓
	Conveyor One Direction - SIL Stop, W. Cat 1/2		✓
	Conveyor Two Directions		✓
	Conveyor Two Directions - SIL Stop, W. Cat 1/2		✓
NOTE: W. Cat refers to wiring category.			

Operation

When ATEX mode is enabled, protections such as thermal overload, current phase loss, and motor overheat are disabled internally. Other protections, such as ground fault, phase reversal, stall detection (as applicable per the selected avatar), and voltage monitoring, remain active and configurable.

The system displays a danger message in the SoMove configuration tool to alert you of this change.

Communication Protocols

To ensure consistent behavior and protection management, ATEX adaptation applies across all supported communication protocols.

Schneider Electric Industries SAS
35 rue Joseph Monier
92500 Rueil Malmaison
France

www.se.com

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