

TLC511F

TLC511F Twin Line Positioning Controller

Berger Lahr TLC511F is a Twin Line TLC511 positioning controller for stepper-motor applications. The TLC511 family provides a 0.35 kW power class, 3 Arms rated motor current and configurable positioning interfaces.

CONTROLLED ENGINEERING COPY

IDENTITY	VERIFIED VALUE
Manufacturer	Berger Lahr
System family	Berger Lahr Twin Line Controller 51x
Part number	TLC511F
Document status	Controlled product and system reference

DOCUMENT SCOPE

Exact article identity, official technical data, host matching, installation checks, applications, precautions and controlled acceptance evidence.

MODEL-SPECIFIC ENGINEERING NOTE

Install TLC511F only in the documented Berger Lahr Twin Line Controller 51x position and preserve its exact wiring, interfaces and configuration. After controlled energization, verify diagnostics and stepper-motor positioning and controlled machine-axis motion before service release.

System Role and Architecture

Berger Lahr TLC511F is a Twin Line TLC511 positioning controller for stepper-motor applications. The TLC511 family provides a 0.35 kW power class, 3 Arms rated motor current and configurable positioning interfaces.

FUNCTION 1
TLC511 stepper positioning control

FUNCTION 2
0.35 kW and 3 Arms motor output class

FUNCTION 3
20 to 30 V DC control supply

FUNCTION 4
Configurable encoder and fieldbus modules

RELATED APTER POWER PAGES					
1	Siemens 6SL3120-2TE21-8AC0	2	Siemens 6SE7041-2WL84-1JC1	3	Siemens 6SL3352-6TG38-8AA3
4	Siemens 6SE7033-7EG84-1JF1	5	Siemens 6SE7035-1EJ84-1JC1	6	Siemens 6RY1803-0AA25-0AA1
7	Siemens 6SE7027-2TD84-6HF3	8	Siemens 6RY1243-0EA00	9	Siemens A5E00282044

MATCHED SYSTEM COMPONENTS

NO.	DOCUMENTED COMPONENT / ROLE
01	Berger Lahr Twin Line Controller 51x
02	Matched Berger Lahr Twin Line Controller 51x host and interfaces
03	Documented power, signal, communication and grounding connections
04	Approved configuration, diagnostics and acceptance record

SYSTEM INTEGRATION RECORD

INTEGRATION ITEM	DOCUMENTED ROLE
Host identity	Berger Lahr Twin Line Controller 51x
Interface role	stepper-motor positioning and controlled machine-axis motion
Field / power context	documented Berger Lahr Twin Line Controller 51x installed position
Commissioning evidence	Identity, wiring, configuration, diagnostics and controlled response recorded

INSTALLATION AND CONNECTION CHECKS

- 1

Confirm TLC511F, the TLC511 base execution and installed option modules.
- 2

Place the machine axis and power amplifier in the approved maintenance state.
- 3

Isolate mains, 24 V control and motor energy before disconnecting cables.
- 4

Record motor data, phase-current setting, encoder and fieldbus configuration.

Technical Specifications

Technical values below are limited to the named product record and directly applicable manufacturer documentation.

PARAMETER	VALUE	PARAMETER	VALUE
Product type	Twin Line positioning controller	Maximum documented motor-cable length	20 m
Controller family	TLC51x	Control supply	24 V DC PELV, reverse-polarity protected
Referenced base model	TLC511	Control-supply range	20 to 30 V DC
Application	Stepper-motor positioning	Control-supply ripple	Less than 2 V peak-to-peak
Mains voltage	1 x 230 V AC, -20% / +15%	Control input current	Less than 2.5 A without output loading
Mains frequency	47 to 63 Hz	Digital input high level	12 to 30 V DC at 3 mA minimum
Current consumption	2 A at 230 V AC	Digital input low level	5 V DC maximum at 0.5 mA maximum
Starting current	Less than 60 A	Digital output current	400 mA maximum
Power factor	Greater than 0.6	Analogue input	+10 V to -10 V, 5 kohm input resistance
Power loss	40 W maximum	Ambient temperature	0 to 50 degC
Mains buffering	Less than 5 ms	Relative humidity	15% to 85%, non-condensing
External fuse	10 A, characteristic C, K or similar	Degree of protection	IP20
Motor power class	0.35 kW	RS422-C encoder input frequency	400 kHz maximum
Switching frequency	16 kHz	RS485-C transmission rates	1200 to 38400 baud
Rated motor current	3 Arms	PBDP-C transmission rate	12 Mbaud maximum
Maximum motor speed	3000 rpm	CAN-C transmission rate	1 Mbaud maximum

ENGINEERING BOUNDARY

Confirm TLC511F, its exact Berger Lahr Twin Line Controller 51x role, installed position, power, interfaces, configuration, diagnostics and controlled acceptance evidence before release.

PRE-INSTALLATION CHECKS

1	Confirm TLC511F, the TLC511 base execution and installed option modules.	2	Place the machine axis and power amplifier in the approved maintenance state.
3	Isolate mains, 24 V control and motor energy before disconnecting cables.	4	Record motor data, phase-current setting, encoder and fieldbus configuration.

Applications and Engineering Context

Stepper-axis positioning

Controls a documented TLC511-compatible motor and positioning sequence.

Automated machine motion

Uses signal-interface inputs, outputs and ENABLE control for the approved machine cycle.

Encoder-referenced motion

Accepts the documented RS422 encoder arrangement for position feedback.

Fieldbus-controlled axis

Supports documented RS485, PROFIBUS DP or CAN module configurations when fitted.

TECHNICAL NOTE

Install TLC511F only in the documented Berger Lahr Twin Line Controller 51x position and preserve its exact wiring, interfaces and configuration. After controlled energization, verify diagnostics and stepper-motor positioning and controlled machine-axis motion before service release.

MODEL-SPECIFIC ACCEPTANCE EVIDENCE

CHECK	ACCEPTANCE CONDITION
Identity	TLC511F recorded
Host / carrier	Berger Lahr Twin Line Controller 51x
Physical interface	Installed terminals, ports and signals matched to the as-found record
Configuration	Approved host and channel configuration restored
Functional proof	Controlled test confirms stepper-motor positioning and controlled machine-axis motion

IMPORTANT NOTICE

Confirm TLC511F, its exact Berger Lahr Twin Line Controller 51x role, installed position, power, interfaces, configuration, diagnostics and controlled acceptance evidence before release.

Related Products and Source Record

Brand-qualified Apter Power navigation links are provided for system planning only; manufacturer evidence remains the named source record.

RELATED PRODUCTS ON APTER POWER

1

Siemens 6SL3120-2TE21-8AC0

View Siemens 6SL3120-2TE21-8AC0 page

2

Siemens 6SE7041-2WL84-1JC1

View Siemens 6SE7041-2WL84-1JC1 page

3

Siemens 6SL3352-6TG38-8AA3

View Siemens 6SL3352-6TG38-8AA3 page

4

Siemens 6SE7033-7EG84-1JF1

View Siemens 6SE7033-7EG84-1JF1 page

5

Siemens 6SE7035-1EJ84-1JC1

View Siemens 6SE7035-1EJ84-1JC1 page

6

Siemens 6RY1803-0AA25-0AA1

View Siemens 6RY1803-0AA25-0AA1 page

7

Siemens 6SE7027-2TD84-6HF3

View Siemens 6SE7027-2TD84-6HF3 page

8

Siemens 6RY1243-0EA00

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9

Siemens A5E00282044

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MANUFACTURER SOURCE RECORD

Twin Line Controller 51x Manual 9844 1113 117, edition c325, 11.00 | User-authorized Scribd copy of Berger Lahr manual

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RECOMMENDATION SCOPE

These links support product navigation and comparison. Technical values in this document are sourced only from the manufacturer record above.