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Annex 1 of the Report to the Certificate

M6A 106824 0001 Rev. 02

Z10 106824 0002 Rev. 02

Drive System

**SOMANET servo drive: Safety functions STO and SBC as
part of the SOMANET Node 400/1000/2000 and SOMANET
Circulo 7/9
and
SOMANET Circulo 7/9 Safe Motion Module**

Manufacturer:

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**Report No.: SS94610C
Revision 1.2 of the annex, dated 2023-04-13**

Testing Body:

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Revision Log

Revision	Name	Date	Changes/History
1.0	K. Leupold	2019-12-19	Initial
1.1	K. Leupold	2021-02-03	Include SOMANET Circulo 7/9 SS96242T
1.2	K. Leupold	2023-04-13	Include SOMANET Circulo Safe Motion Module SS100550T



1 Safety-Certified Components

The following variants are covered by Certificate no. M6A 106824 0001, Z10 106824 0002 and the report to the certificate, report no. SS94610C.

The following system components are certified 'safety-related'. This allows the components to be used to process safety critical signals and functions.

2 Software

2.1 Diagnostics Module

Filename	Safety-Firmware-Version
safety.h	V1.1.0
Module_safety.xc	V1.1.0

2.2 Safe Motion Module

Filename	Safety-Firmware-Version
40701_RELEASE_MCUa_V1.0.bin Checksum: 0xC2800F04	V1.0
40701_RELEASE_MCUb_V1.0.bin Checksum: 0x8F9519E0	
40701_RELEASE_Update_V1.0.bin Checksum: 0xCD17679F	



3 Hardware

3.1 SOMANET Node 400/1000/2000 Safety

Model Name	Model Part Number	Version
SOMANET Node Safety	STN-xx-xx-xxxxSB-xxx	A.3 (SOMANET Safety Module)

STN - V V - C C - N N E E SB - xxx

Nominal Supply Voltage (V)

24 = 24 V
48 = 48 V

MAX Phase Current RMS (A)

13 = 13.2 A
33 = 33 A
66 = 66 A

Network Communication

EC = EtherCAT
EN = Ethernet
CN = CAN
RS = Real Time Serial
RT = Real Time Ethernet
SC = SERCOS
PN = PROFINET
PL = POWERLINK

Encoder Option

F0 =
Encoder Port 1: Encoder Port 2:
Hall Hall
ABI ABI
BiSS-C BiSS-C
SSI SSI
A-Format I2C

F1 =
Encoder Port 1: Encoder Port 2:
Half-Duplex Hall
ABI ABI
BiSS-C BiSS-C
SSI SSI
A-Format I2C

Options

[blank] = No additions
A = Analog options

A1 = differential 5V
A2 = differential 10V
A3 = single ended 5V
A4 = single ended 10V
A5 = single ended 20V

C = Power Connector:

C1 = no connector
C2 = custom connector
C3 = wires

H = Heatsink

H1 = custom variant 1
H2 = custom variant 2
H3 = custom variant 3
(...)

P = Power Supply

P1 = 24V AUX enabled



3.2 SOMANET Circulo 7/9

Model Name	Model Part Number	Version
SOMANET Circulo 7	CR7-xx-xx-xxxx xx-xxx	B.3:01 / B.4:01 (Circulo 7 Control Module) C.1:01 (Circulo 7 Connector Module) C.1.00 (Circulo 7 Drive Module) B.2:00 (Circulo 7 Safe Motion Module)
SOMANET Circulo 9	CR9-xx-xx-xxxx xx-xxx	B.3:01 / B.4:01 (Circulo 9 Control Module) C.1.00 (Circulo 9 Connector Module) C.1:00 (Circulo 9 Drive Module) B.2:00 (Circulo 9 Safe Motion Module)

PPP - VV - CC - NNEPSS - XXXX

Product ID

CR7 = Circulo7
CR9 = Circulo9

Nominal Supply

Voltage (V)
48 = 24-48 V

MAX Phase

Current RMS (A)
24 = 24 A
60 = 60 A

Network Communication

EC = EtherCAT

Encoder Option

N = No integrated encoder
A = pos. 1 / abs. magnetic / 19-bit (CR7), 20-bit (CR9)
B = pos. 2 / abs. magnetic / 19-bit (CR7), 20-bit (CR9)
D = pos. 1 & 2 / abs. magnetic / 19-bit (CR7), 20-bit (CR9)

Ports

N = ECAT/ENET_STO In/Out
External Encoders
Digital IO
Analog Input
SDI
L = ECAT/ENET_STO In/Out
Digital IO
Analog Input
SDI
B = ECAT/ENET_STO In/Out
External Encoder 2
BiSS 3
Digital IO (no DIO1,2)
Analog Input
SDI

Functional Safety

[blank] = STO and SBC (default)
SM = Safe Motion

Options

[blank] = No additions
B = Brake
1 = single brake present (obsolete)
C = Power Connector:
1 = no connector
2 = custom connector
3 = wires
H = Heatsink
1 = custom variant 1
2 = custom variant 2
F = Capacitance (Farads)
1 =
E = Encoder
1 = port 2 transceivers placed
2 = port 2 transceivers placed
and 3rd Biss enabled (obsolete)

Munich, 2023-04-13

P. Weiß
Technical Certifier