CMW-Message : **mA cable protection**

Release (SPS - internal) :
1. break down of a 4-20mA input of the CSC-HU from customer
2. Input of CSC-HU is defect
3. Output of Customer control unit is damaged **First check for trouble clearance (SEG or authorized partner) :**
1. Check mA-output from the WTC
2. Wiring check till the CSC-HU
3. Check input from CSC-HU

First check for trouble clearance (by SEG trained customer) :
1. Check mA-output from the WTC
2. Wiring check till the CSC-HU
3. Check input from CSC-HU

First check for trouble clearance (not trained customer) :
Check mA-output from the WTC

SEG - service in warranted case urgent necessary :
NO

CMW-Message : **Conv: mA protection**

Release (SPS - internal) :
1. break down of a 4-20mA input of the CSC-SU from CSC-HU
2. Input of CSC-SU is defect
3. Output of CSC-HU is damaged

First check for trouble clearance (SEG or authorized partner) :
1. Check output CSC-HU
2. Check input CSC-SU

First check for trouble clearance (by SEG trained customer) :
1. Check output CSC-HU
2. Check input CSC-SU

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
NO

CMW-Message : **Conv. fault**

Release (SPS - internal) :
1. Digital input CSC-SU failure
2. Message over CAN-Bus
3. following failures at the CSC-SU run to a general CSC-SU failure
-Input voltage fault
-DC-link-over voltage
-DC-link-under voltage
-Input

current failure
-IGBT-over temperature
-Commissioning is missing

First check for trouble clearance (SEG or authorized partner) :
1.see detailed information at the CMW-SU
2. Hardware- and parameter check at the SU

First check for trouble clearance (by SEG trained customer) :
1. see detailed information at the CMW-SU
2. Hardware- and parameter check at the SU

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **Excitation fault**

Release (SPS - internal) :
1. Attend to Zk-priming charger timeout
2. Voltage setpoint phase sequence check not reached
3. Voltage scheduled value U-Gen not reached
4. Attend to B6-charge:timeout
5. Zk-rated voltage not reached
6. Generator rated frequency not reached **First check for trouble clearance (SEG or authorized partner) :**
Check of point 1-6

First check for trouble clearance (by SEG trained customer) :
Check of point 1-6

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **CAN-bus error**

Release (SPS - internal) :
1. Canbus interupted -> internal Canbus
2. Canbus shut down -> fieldbus to external PLC

First check for trouble clearance (SEG or authorized partner) :
Check the CAN-connection (internal/external) **First check for trouble clearance (by SEG trained customer) :**
Check the CAN-connection (internal/external) **First check for trouble clearance (not trained customer) :**
Check the CAN-connection (internal/external) **SEG - service in warranted case urgent necessary :**
NO

CMW-Message : **Gen. current fault**

Release (SPS - internal) :
Tripping at exceed the rough internal protection: I_Gen_max **First check for trouble clearance (SEG or authorized partner) :**
Overload: check the power curve from the WKA

First check for trouble clearance (by SEG trained customer) :
Overload: check the power curve from the WKA

First check for trouble clearance (not trained customer) :
Overload: check the power curve from the WKA

SEG - service in warranted case urgent necessary :
Yes

CMW-Message : **Gen. voltage high**

Release (SPS - internal) :
Tripping at overvoltage value of the rough internal protection:U_Gen_max

First check for trouble clearance (SEG or authorized partner) :
Hardware - and parametercheck **First check for trouble clearance (by SEG trained customer) :**
not possible **First check for trouble clearance (not trained customer) :**
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **Gen. voltage low**

Release (SPS - internal) :
Tripping at fall below the rough internal protection:U_Gen_min

First check for trouble clearance (SEG or authorized partner) :
Hardware- and parametercheck **First check for trouble clearance (by SEG trained customer) :**
not possible **First check for trouble clearance (not trained customer) :**

SEG - service in warranted case urgent necessary :
Yes

CMW-Message : **Gen. CB I> | I>>**

Release (SPS - internal)

1.Circuit breaker has tripped with overvoltage **First check for trouble clearance (SEG or authorized partner) :**

1. Overload: check of the power curve from the WTC
2. Short circuit:

Check of the overload from the IGBT-power section;
Check on short circuit from the electrical connection

3. Note the manintance instruction from the circuit breaker **First check for trouble clearance (by SEG trained customer) :**

1. Overload: check of the power curve from the WTC
2. Short circuit:

Check of the overload from the IGBT-power section;
Check on short circuit from the electrical connection

3. Note the manintance instruction from the circuit breaker **First check for trouble clearance (not trained customer) :**

Overload: check of the power curve from the WTC

SEG - service in warranted case urgent necessary :

NO

CMW-Message **: <u>Hardware protection</u>**

Release (SPS - internal) :
1. CSC initialization must be finished
2. CSC self-test C167 must be finished
3. CSC self-test DSP must be finished **First check for trouble clearance (SEG or authorized partner) :**
Check of the hardware **First check for trouble clearance (by SEG trained customer) :**
not possible **First check for trouble clearance (not trained customer) :**
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **IGBT over-load**

Release (SPS - internal) :
light error from IGBT power section **First check for trouble clearance (SEG or authorized partner) :**
1. Check if failure isn´t finished
2. Check of the hardware-section
3. Check of the overload from the IGBT power section; Check short circuits from the electrical connections
4. If necessary insulation measurement of the stator (at diconnected IGBT-power section)
5. Insulation measurement of the power-section (at disconnected rotor)
6. Check of the IGBT´s

First check for trouble clearance (by SEG trained customer) :
1. Check if failure isn´t finished
2. Check of the hardware-section
3. Check of the overload from the IGBT power section; Check short circuits from the electrical connections
4. If necessary insulation measurement of the stator (at diconnected IGBT-power section)
5. Insulation measurement of the power-section (at disconnected rotor)
6. Check of the IGBT´s

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **Heat-sink overtemp.**

Release (SPS - internal) :
Digital input overtemperatur 1+2

First check for trouble clearance (SEG or authorized partner) :
1. Heat sink system o.k.?
2. Environmentle conditions ok?
3. Overload: Check of the power curve from the WTC

First check for trouble clearance (by SEG trained customer) :
1. Heat sink system o.k.?
2. Environmentle conditions ok?
3. Overload: Check of the power curve from the WTC

First check for trouble clearance (not trained customer) :
1. Heat sink system o.k.?
2. Environmentle conditions ok?
3. Overload: Check of the power curve from the WTC

SEG - service in warranted case urgent necessary :
NO

CMW-Message : **Conv: heat-sink temp.**

Release (SPS - internal) :
The CSC-SU message about IGBT overtemperature to CSC-HU

First check for trouble clearance (SEG or authorized partner) :
1. Heat sink o.K?
2. Environmental conditions o.k. ?
3. Overload: check power curve of the WTC

First check for trouble clearance (by SEG trained customer) :
1. Heat sink o.K?
2. Environmental conditions o.k. ?
3. Overload: check power curve of the WTC

First check for trouble clearance (not trained customer) :
1. Heat sink o.K?
2. Environmental conditions o.k. ?
3. Overload: check power curve of the WTC

SEG - service in warranted case urgent necessary :
NO

CMW-Message : **Commissioning missing**

Release (SPS - internal) :
1. Wrong phase sequence stator
2. Wrong phase sequence rotor
3. Rotor short circuit at the inrush current
4. Mains voltage converter is connected wrong
5. Generator voltage converter is connected wrong
6. Geno voltage angle unequal 90° -> position encoder wrong trimed
7. Commissioning not complett **First check for trouble clearance (SEG or authorized partner) :**
Check of the points 1-7

First check for trouble clearance (by SEG trained customer) :
Check of the points 1-7

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
NO

CMW-Message : **Pickup fault**

Release (SPS - internal) :
Some signals from the position encoder are missing over a certain period-> shut down **First check for trouble clearance (SEG or authorized partner) :**
1. Check of the true running (technical data)
2. Measurement of the tracks (A/B/N)
3. Check the wiring between position encoder and CSC-HU

First check for trouble clearance (by SEG trained customer) :
1. Check of the true running (technical data)
2. Measurement of the tracks (A/B/N)
3. Check the wiring between position encoder and CSC-HU

First check for trouble clearance (not trained customer) :
check of the true running (see technical data)

SEG - service in warranted case urgent necessary :
NO

CMW-Message : **Pickup warning**

Release (SPS - internal) :
The signal from the position encoder is missing over a certain period -> Warning **First check for trouble clearance (SEG or authorized partner) :**
check of the true running (see technical data)

First check for trouble clearance (by SEG trained customer) :
check of the true running (see technical data)

First check for trouble clearance (not trained customer) :
check of the true running (see technical data)

SEG - service in warranted case urgent necessary :
NO

CMW-Message : **DC-Link volt. too high**

Release (SPS - internal) :
Light error from MS3-> Uzk to high **First check for trouble clearance (SEG or authorized partner) :**
1. Check if the failure isn´s finished
2. Check of the hardware-selection
3. Check short circuits of the electrical connections
4. Check the IGBT´s

First check for trouble clearance (by SEG trained customer) :
1. Check if the failure isn´s finished
2. Check of the hardware-selection
3. Check short circuits of the electrical connections
4. Check the IGBT´s

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **Mains fault**

Release (SPS - internal) :
Release (SPS - internal) :

1. Digital input mains failure

2. 1 phase mains failure

3. 3 phase mains failure

4. rough internal protection (Isolated operation -> U_Net)

5. rough internal protection (mains parallel ->U_Net or U_Gen)

6. summenstromfehler

7. Sum current error

First check for trouble clearance (SEG or authorized partner) :

1. Grid recovering isn´t finished
2. Parametercheck of the network master relay
3. Check of the CSC-HU-inlet

First check for trouble clearance (by SEG trained customer) :

1. Grid recovering isn´t finished
2. Parametercheck of the network master relay
3. Check of the CSC-HU-inlet

First check for trouble clearance (not trained customer) :

not possible

SEG - service in warranted case urgent necessary :

NO

CMW-Message : **Mains current fault**

Release (SPS - internal) :
Tripping at exceed the roug internal protection: I_Net_max

First check for trouble clearance (SEG or authorized partner) :
Overload: check the power curve from the WTC

First check for trouble clearance (by SEG trained customer) :
Overload: check the power curve from the WTC

First check for trouble clearance (not trained customer) :
Overload: check the power curve from the WTC

SEG - service in warranted case urgent necessary :
Yes

CMW-Message : **Parameter not valid**

Release (SPS - internal) :
no valid set of parameter on the flashdisk **First check for trouble clearance (SEG or authorized partner) :**
load the valid set of parameters **First check for trouble clearance (by SEG trained customer) :**
not possible **First check for trouble clearance (not trained customer) :**
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **Ringline shut down**

Release (SPS - internal) :
digital input "ringline shut down" missing

First check for trouble clearance (SEG or authorized partner) :
1. Check of the fuses and protective circuit breaker according to the circuit diagram
2. Check inlet CSC-HU
3. If necessary current measurement
4. Check the adjustment

First check for trouble clearance (by SEG trained customer) :
1. Check of the fuses and protective circuit breaker according to the circuit diagram
2. Check inlet CSC-HU
3. If necessary current measurement
4. Check the adjustment

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
NO

CMW-Message : **Ringline alarm**

Release (SPS - internal) :
digital input "ringline warning" missing

First check for trouble clearance (SEG or authorized partner) :
1. Check of the fuses and protective circuit breaker according to the circuit diagram
2. Check inlet CSC-HU
3. If necessary current measurement
4. Check the adjustment

First check for trouble clearance (by SEG trained customer) :
1. Check of the fuses and protective circuit breaker according to the circuit diagram
2. Check inlet CSC-HU
3. If necessary current measurement
4. Check the adjustment

First check for trouble clearance (not trained customer) :
not possible

SEG - service in warranted case urgent necessary :
NO

CMW-Message : **Gen. C.B. fault**

Release (SPS - internal) :
CB response is not coming after the adjusted delay time

First check for trouble clearance (SEG or authorized partner) :
1. Check of the wiring and the selection
2. Pick up the operation cycle number **First check for trouble clearance (by SEG trained customer) :**
1. Check of the wiring and the selection
2. Pick up the operation cycle number **First check for trouble clearance (not trained customer) :**
Pick up the operation cycle number **SEG - service in warranted case urgent necessary :**
Yes at SEG – LV, no at other suppliers

CMW-Message : **Emergency Stop**

Release (SPS - internal) :
1. Emergency off loop is open **First check for trouble clearance (SEG or authorized partner) :**
Close the safety ring line **First check for trouble clearance (by SEG trained customer) :**
Close the safety ring line **First check for trouble clearance (not trained customer) :**
Close the safety ring line **SEG - service in warranted case urgent necessary :**
NO

CMW-Message : **Conv. input fault**

Release (SPS - internal) :
1. Tripping by fall below the roug internal protection: U_SU_min 1.
2. Tripping by exceed the rough internal protection: U_SU_max 2.

First check for trouble clearance (SEG or authorized partner) :
Hardware- and parameter check **First check for trouble clearance (by SEG trained customer) :**
not possible **First check for trouble clearance (not trained customer) :**
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **Conv. current fault**

Release (SPS - internal) :
Tripping by exceed rough internal protection: I_SU_max **First check for trouble clearance (SEG or authorized partner) :**
Hardware- and parameter check **First check for trouble clearance (by SEG trained customer) :**

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **DC-Link-voltage <**

Release (SPS - internal) :
Tripping by fall below rough internal protection: U_Zk_min

First check for trouble clearance (SEG or authorized partner) :
Hardware- and parameter check **First check for trouble clearance (by SEG trained customer) :**
not possible **First check for trouble clearance (not trained customer) :**
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **DC-Link voltage >**

Release (SPS - internal) :
Tripping by exceeding rough internal protection: U_Zk_max

First check for trouble clearance (SEG or authorized partner) :
Hardware- and parameter check **First check for trouble clearance (by SEG trained customer) :**
not possible **First check for trouble clearance (not trained customer) :**
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **MS3->GSC->MSC Loop**

Release (SPS - internal)
1. light error form IGBT power section (CSC-SU)
2. light failure from MS3

First check for trouble clearance (SEG or authorized partner) :
1. Check if failure isn´t finished
2. Check of the hardware-section
3. Check of the overload from the IGBT power section; Check short circuits from the electrical connections
4. If necessary insulation measurement of the stator (at diconnected IGBT-power section)
5. Insulation measurement of the power-section (at disconnected rotor)
6. Check of the IGBT´s

First check for trouble clearance (by SEG trained customer) :
1. Check if failure isn´t finished
2. Check of the hardware-section
3. Check of the overload from the IGBT power section; Check short circuits from the electrical connections
4. If necessary insulation measurement of the stator (at diconnected IGBT-power section)
5. Insulation measurement of the power-section (at disconnected rotor)
6. Check of the IGBT´s

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **Conv. Reply Signal activ**

Release (SPS - internal)
After switch off the CSC-SU, it is not allowed that 2s later the 24VSignal "Nominal DC link voltage is reached" is still active. This may cause an failure of the hardware **First check for trouble clearance (SEG or authorized partner) :**
Hardware check (Output CSC-SU/Watchdog); (Input CSC-HU

/ Watchdog)

First check for trouble clearance (by SEG trained customer) :
not possible **First check for trouble clearance (not trained customer) :**
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **Synchronizing fault**

Release (SPS - internal) :

System is not synchronous (after timeout of the synchronous time)

First check for trouble clearance (SEG or authorized partner) :
1. Check of the stator filter capacitor
2. Check of the IGBT-current curve; check the selection from the hardware
3. Check IGBT´s
4. Check of the generator vector angle; Check the parameter form the vectorcheck

First check for trouble clearance (by SEG trained customer) :
1. Check of the stator filter capacitor
2. Check of the IGBT-current curve; check the selection from the hardware
3. Check IGBT´s

First check for trouble clearance (not trained customer) :
not possible

SEG - service in warranted case urgent necessary :
Yes

CMW-Message : **DC-Link-voltage-low**

Release (SPS - internal) :
Digital HU- input "rated voltage dc-link"

switched off, even though the HU-output "SU-rated voltage is set
First check for trouble clearance (SEG or authorized partner) :
Hardware- and parametercheck at the CSC-SU

First check for trouble clearance (by SEG trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
Yes

CMW-Message : **WTC release missing**

Release (SPS - internal) :
24V at the digital input WTC-status are not fixed

First check for trouble clearance (SEG or authorized partner) :
1. Check WTC- output of the WTC
2. Check of wiring till the CSC-HU
3. Check input of the CSC-HU

First check for trouble clearance (by SEG trained customer) :
1. Check WTC- output of the WTC
2. Check of wiring till the CSC-HU
3. Check input of the CSC-HU

First check for trouble clearance (not trained customer) :
Check WTC- output of the WTC

SEG - service in warranted case urgent necessary :
NO

CMW-Message : **Under-speed**

Release (SPS - internal) :
Release at undershooting of min. rpm, if frequency converter is operating.

First check for trouble clearance (SEG or authorized partner) :
parameter check **First check for trouble clearance (by SEG trained customer) :**
not possible **First check for trouble clearance (not trained customer) :**
not possible **SEG - service in warranted case urgent necessary :**
NO

CMW-Message : **Over-speed**

Release (SPS - internal) :
Release at overshooting of max. rpm, if frequency converter is operating.

First check for trouble clearance (SEG or authorized partner) :
parameter check **First check for trouble clearance (by SEG trained customer) :**
not possible **First check for trouble clearance (not trained customer) :**
not possible **SEG - service in warranted case urgent necessary :**
NO

CMW-Message : **Cooling-system error**

Release (SPS - internal) :
During the startup of the converter the checkback signal of the cooling system is missing.

First check for trouble clearance (SEG or authorized partner) :
1. Check of cooling system
2. Check of digital input of CSC-HU
3. Check of checkback signal from cooling system to the CSC-HU

First check for trouble clearance (by SEG trained customer) :
1. Check of cooling system
2. Check of digital input of CSC-HU
3.Check of checkback signal from cooling system to the CSC-HU

First check for trouble clearance (not trained customer) :
1. Check of cooling system **SEG - service in warranted case urgent necessary :**
NO

CMW-Message : **Rotor overcurrent**

Release (SPS - internal) :
A too big rotor current has occurred.

First check for trouble clearance (SEG or authorized partner) :
1. Check of the hardware-section
2. Check of the overload from the IGBT power section
3. Check short circuits from the electrical connections
4. Insulation measurement of the rotor (at disconnected IGBT-power section)
5. Insulation measurement of the power-section (at disconnected rotor)
6. Check of the IGBTs

First check for trouble clearance (by SEG trained customer) :
1. Check of the hardware-section
2. Check of the overload from the IGBT power section
3. Check short circuits from the electrical connections
4. Insulation measurement of the rotor (at disconnected IGBT-power section)
5. Insulation measurement of the power-section (at disconnected rotor)
6. Check of the IGBTs

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
YES

CMW-Message : **Temperature warning**

Release (SPS - internal) :
The temperature of the cooling circuit is higher than the warning threshold.

First check for trouble clearance (SEG or authorized partner) :
1. parameter check
2. check of the temperature sensors
3. check of the cooling circuit
4. check the interface for the 4-20mA signal **First check for trouble clearance (by SEG trained customer) :**
1. check of the temperature sensors
2. check of the cooling system
3. check the interface for the 4-20mA signal **First check for trouble clearance (not trained customer) :**
1. check of the temperature sensors
2. check of the cooling system **SEG - service in warranted case urgent necessary :**
YES

CMW-Message : **Temperature shut down**

Release (SPS - internal) :
The temperature of the cooling circuit is higher than the shut down threshold.

First check for trouble clearance (SEG or authorized partner) :
1. parameter check
2. check of the temperature sensors
3. check of the cooling circuit
4. check the interface for the 4-20mA signal **First check for trouble clearance (by SEG trained customer) :**
1. check of the temperature sensors
2. check of the cooling system
3. check the interface for the 4-20mA signal **First check for trouble clearance (not trained customer) :**
1. check of the temperature sensors
2. check of the cooling system **SEG - service in warranted case urgent necessary :**
YES

CMW-Message : **GSC Overcurrent**

Release (SPS - internal) :
A too big GSC current has occurred.

First check for trouble clearance (SEG or authorized partner) :
1. Check of the hardware-section
2. Check of the overload from the IGBT power section
3. Check short circuits from the electrical connections
4. Insulation measurement of the power-section (at disconnected rotor)
5. Check of the IGBTs

First check for trouble clearance (by SEG trained customer) :
1. Check of the hardware-section
2. Check of the overload from the IGBT power section
3. Check short circuits from the electrical connections
4. Insulation measurement of the power-section (at disconnected rotor)
5. Check of the IGBTs

First check for trouble clearance (not trained customer) :
not possible **SEG - service in warranted case urgent necessary :**
YES

CMW-Message : **duZK/dt error**

Release (SPS - internal) :
A too big change of the dc-link voltage has occurred **First check for trouble clearance (SEG or authorized partner) :**
1. parameter check
2. check of IGBT power section
3. check of dc link voltage measurement (MS3) **First check for trouble clearance (by SEG trained customer) :**
1. check of IGBT power section
2. check of dc link voltage measurement (MS3) **First check for trouble clearance (not trained customer) :**
not possible **SEG - service in warranted case urgent necessary :**
YES