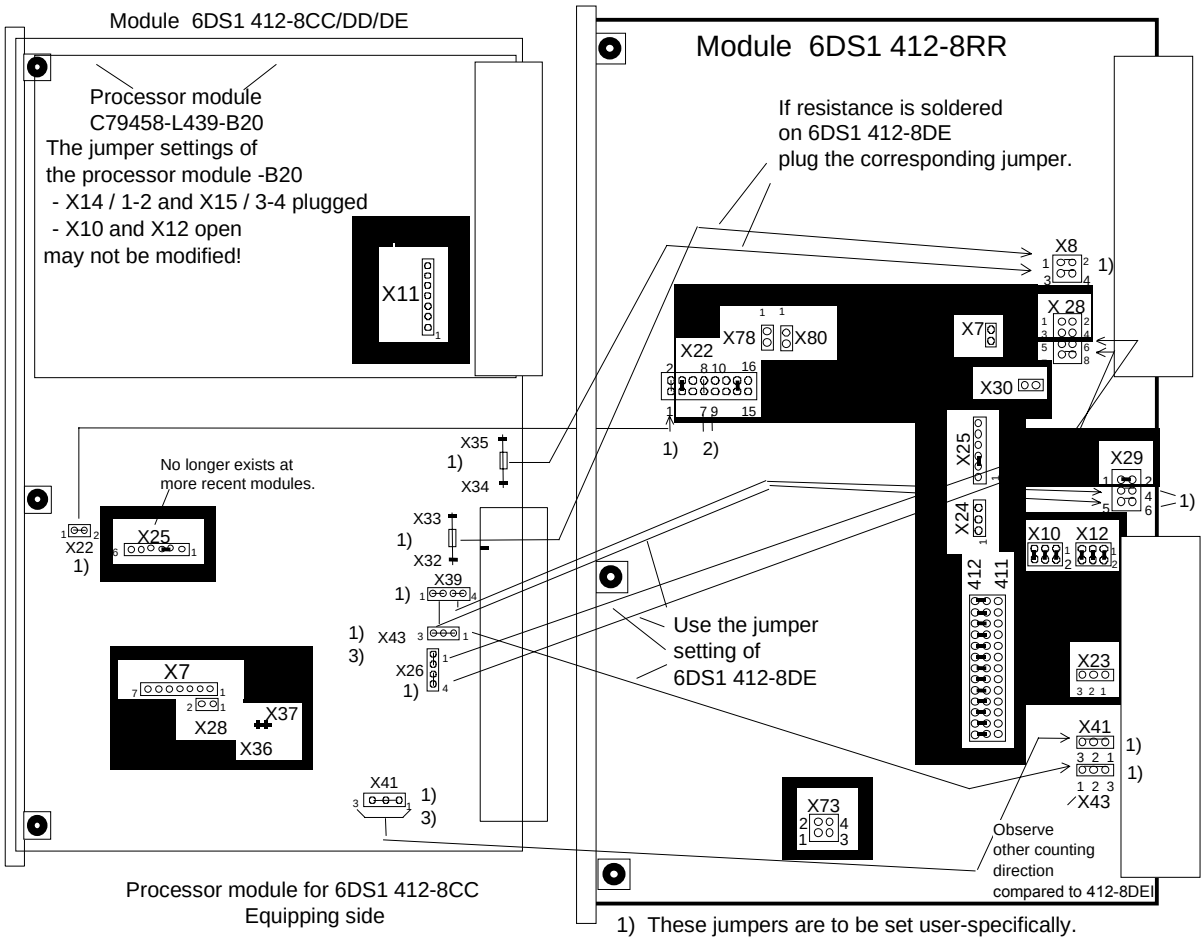
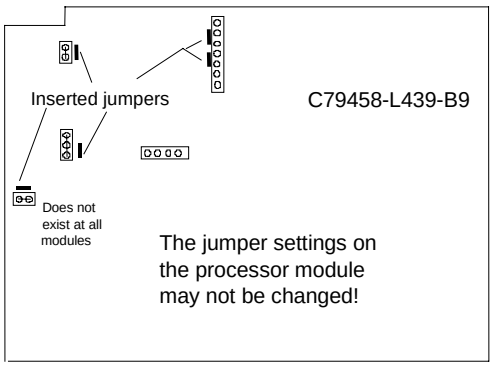
Settings of module 6DS1 412-8RR which replaces 6DS1 412-8CC/DD/DE





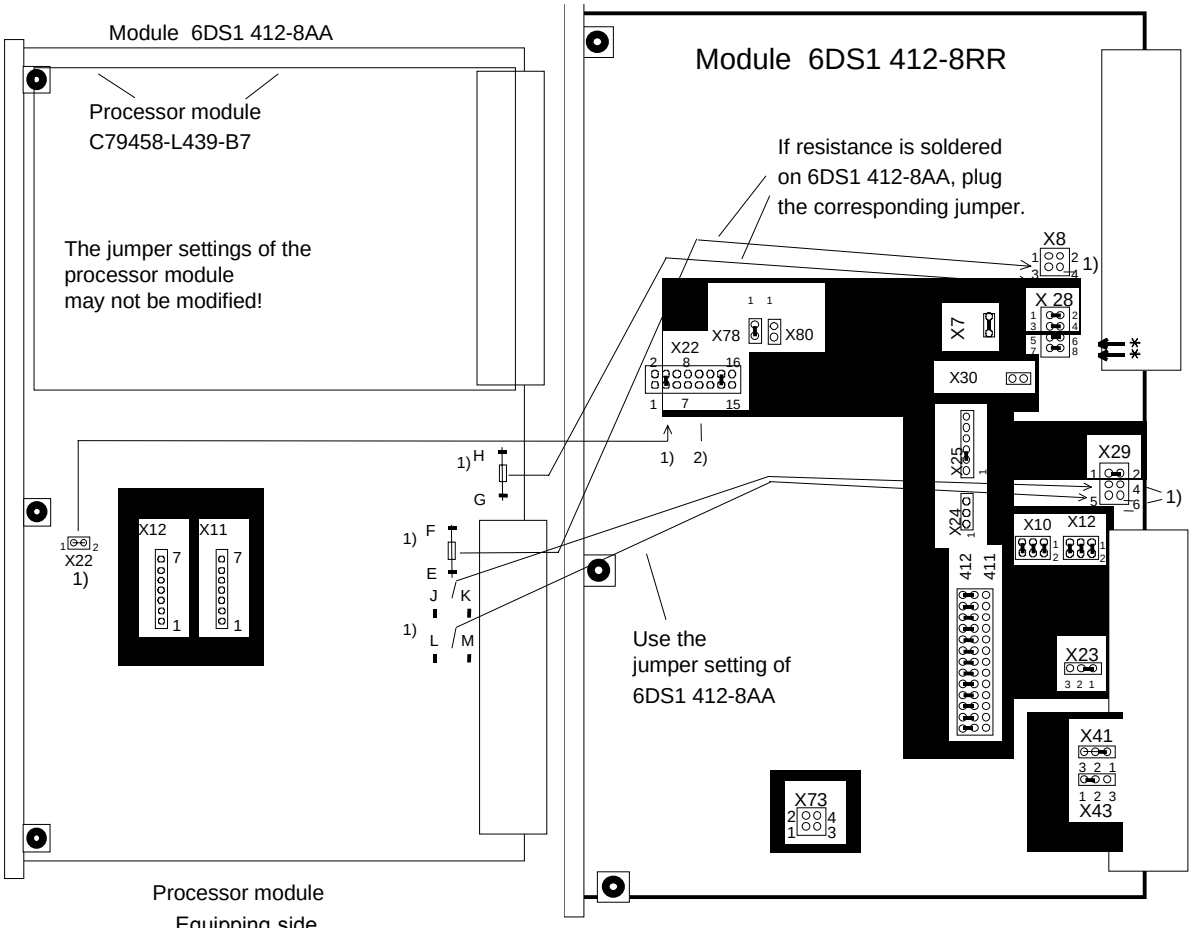
1) These jumpers are to be set user-specifically.

2) This jumper is to be set user-specifically.
Refer to the small table on Sheet 3.

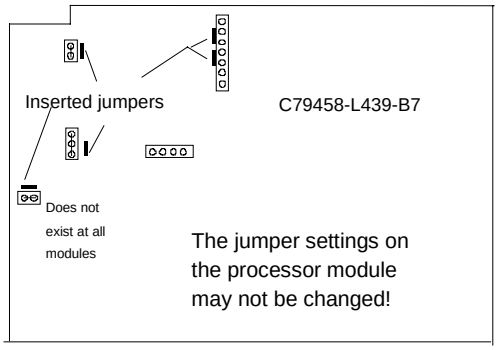
3) These jumpers do not exist at –8CC.
At –8RR the jumpers X41 and X43 have to
be in the delivery state.

The jumpers in these areas are used for works-internal tests and may not be changed.

Settings of module 6DS1 412-8RR which replaces 6DS1 412-8AA



Processor module
Equipping side



1)These jumpers are to be set user-specifically.

2 These jumpers are to be set as firmware variant R.
Please refer to the small chart on Sheet 3.

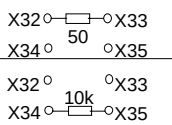
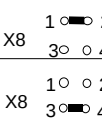
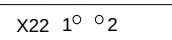
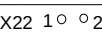
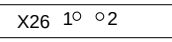
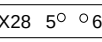
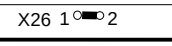
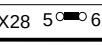
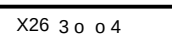
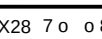
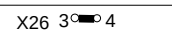
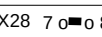
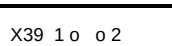
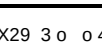
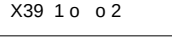
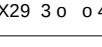
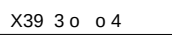
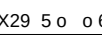
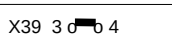
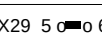
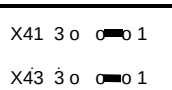
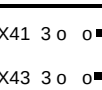
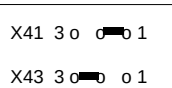
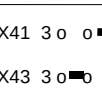
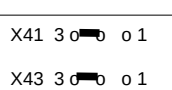
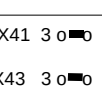
Caution!
* Changes compared to the delivery state

The jumpers in these areas are used for works-internal tests and may not be changed.

-8RR Jumper X22/		Module reports as FW variant
7-8	Plugged	**E** *)
	Open	R
9-10	Plugged	**D** *)
	Open	R

*) Also refer to Sheet 1 and 2

Caution!
* Changes compared to the delivery state
Only for 6DS1 412-8AA!

-8AA	-8CC/DD/DE	-8RR	Jumper function	Delivery state
			Analog input, EA,S,1 0 ... 20 mA	x
			Analog input, EA,S,1 0 ... +/- 10 V	
			Free input / output A,S,2	x
			Binary output A,S,2 flashes at processor failure	
			Analog input EA,S,4 with protective resistor	x
			Analog input EA,S,4 without protective	← *
			Analog input EA,S,3 with protective resistor	x
			Analog input EA,S,3 without protective resistor	← *
			Analog output AA,S,4 -250 ... 0 ... +250 uA	x
			Analog output AA,S,4 -10...0... +10V	
			Analog output AA,S,5 -250 ... 0 ... +250uA	
			Analog output AA,S,5 -10 ... 0 ...+10V	
			No	x
			Redundancy with single wiring X2 / f20 - X2 / f20	
			Redundancy with cross-wiring X2 / f20 - X2 / b18 and X2 / b18 - X2 / f20	

Compatibility

- Module 6DS1 412-8RR is compatible with regard to its pins and functions to module 6DS1 412-8AA/CC/DD/DE.
- Redundant operation is only possible with two identical modules 6DS1 412-8RR, 6DS1 412-8CC, 6DS1 412-8DD or two modules 6DS1 412-8DE, meaning that mixed operation with different variants of the 6DS1 412-8.. is not possible. The software versions of a redundant module pair have to agree.
- On-line upgrading from 6DS1 412-8DD/DE to 6DS1 412-8RR is possible, whereby the information below is to be observed. The variants -8CC **cannot** be upgraded on-line.
- If module 6DS1 412-8RR is used as the replacement module for 6DS1 412-8DE, jumper X22/7-8 has to be plugged. The module then signals towards GET-TM EA that it is firmware variant E. The version is formed from the version of the -8RR variant by adding 20: for example: R.02 -> E.**2**2.
  Refer to the small table on Sheet 2/3.

- If module 6DS1 412-8RR is used as the replacement module for 6DS1 412-8DD, jumper X22/9-10 has to be plugged. The module then signals towards GET-TM EA that it is firmware variant D. The version is formed from the version of the -8RR variant by adding 20: for example: R.02 -> D.**2**2.
  Refer to the small table on Sheet 2/3.

- If the module 6DS1 412-8RR is used as the replacement module for 6DS1 412-8AA/CC, neither jumper X22/7-8 nor jumper X22/9-10 may be inserted. The module then signals that it is firmware variant R.

- Structures of the 6DS1 412-8AA/CC can only be loaded in ASCII format.

The continuous controller module 6DS1 412-8RR is designed for use in the following systems:

System	From software release
AS 235 / AS235K [1) 2)]	F.03, G.01
AS 235H [1) 2)]	F.03, G.01
AS 230 [1) 2)]	F.03
ES 100 K [1) 2)]	-
AS 220 E	B.01, C.01, D.01
AS 220 EHF	B.01, C.01
AS 220 EA	A.06, B.04, R.01
AS 220 EAI	C.02

1) Use only without interrupt
2-wire measuring transducers are not permitted at AS 235 K and ES 100 K in the 235-V version

2) If both controller channels are used, the RSK blocks have to be installed under different XBs and with different AP parameters.

Information on on-line upgrading during redundancy operation in the AS 220 EA/EAI

At redundant use of module 6DS1 412-8DD/DE and failure of one of the two modules the fault or error may be eliminated by pair-wise on-line upgrading to module 6DS1 412-8RR, if two modules 6DS1 412-8RR are available as the replacement modules. Proceed as follows:

Note!

On-line upgrading of the modules 6DS1 412-8DD to 6DS1 412-8RR is only possible from firmware version R.02 on.

- First replace the failed module by a module 6DS1 412-8RR and download the structure of the previous module 6DS1 412-8DD/DE to this module. If necessary, the module structure can be copied from the master module.
- Wait until the module 6DS1 412-8RR displays that it is ready to operate by static lighting of the yellow reserve LED.
- The master state is transferred to the new module in order to check the complete functionality by means of the MAST command at the EAS/EAS-I (input: MAST, "Slot Number of the reserve module", 1;). Subsequent input: MAST, ”Slot Number of the reserve module”, 0; *)
- After the new module 6DS1 412-8RR has taken over the master state, take the other module 6DS1 412-8DD/DE out of operation by removing the module fuse and also replace it by a module 6DS1 412-8RR.
- Download the module structure to the second module 6DS1 412-8RR and switch to FR,1.
- Wait until the second module 6DS1 412-8RR displays that it is ready to operate by static lighting of the yellow reserve LED.
- The master state is transferred to the second new module in order to check the complete functionality by means of the MAST command at the EAS/EAS-I (input: MAST, "Slot Number of the new reserve module", 1;).
- Then reverse the MAST command by deselecting the EAS/EAS-I or by entering: MAST, ”Slot Number of the new reserve module”, 0; *)

*) Without this reversal the MAST command remains activated so that any further master-reserve changeover (for example at module faults or errors, not at a module failure) is blocked.

Use in TELEPERM ME AS 220 E and AS 220 EHF

The TÜV approvals for use in AS 220 EHF are contained in the manual AS 220 EHF Volume 1/2, Order No. C79000-G8000-C021 (from Version 13) in the chapter C79000-T8000-C256 (from Version 08).

Limitations at on-line structure changes of the I/O modules via the central unit
At AS 220 E with system software B.0x and C.0x or
At AS 220 EHF with system software B.0x.

Since the drivers in the above-mentioned system software variants do not support on-line enabling (and on-line acceptance into the EEPROM) of a modified user structure at the module, enabling of a modified user structure via the central unit is only possible via the operating sequence "FR,0;" and "FR,1;". (Operating "FR,1;" alone has no effect.) Please note furthermore that the changes are not signaled with the display "DIF" and will only take effect after being accepted.

The operation "FR,0;" has the following effects:

- The binary inputs are set to zero (with the exception of the outputs for control boards)
- The values at the analog outputs are held (frozen)
- The module-internal values, such as binary and analog flags, are set to zero or a default value.
- The driver in the central unit signals a processing inhibit. (BSP)

Resetting/pre-assignment of the module-internal values has a start-up effect at the module after the operation "FR,1,", so that the frozen analog values generally change abruptly.

Remedy:
If the above procedure for enabling a modified user structure cannot be used due to the effects on the process, changes to the user structure have to be carried out by means of a PC or programming device and the program package STRUK AS 220 EA via the front connector of the I/O module. (The configuring device OS 250 E is not suitable for the procedure.)

Note:
If the system AS 220 E is equipped with the software variant D.0x or if the system AS 220 EHF is equipped with the software variant C.0x, enabling of the modified user structure is possible via the central unit by means of the operation "FR,1;" without the effects described above.

Note!

Please enclose this product information into the following manuals:

TELEPERM ME
In the TME manual for controller modules 2/2 C79000-G8000-C443 before the ”Operating Instructions Continuous Controller Module ..... ” C79000-B8000-C404 or C79000-B8000-C314.

TELEPERM M
In the TM manual for function modules 1/2 C79000-G8000-C030 before the ”Operating Instructions Controller Module K, ... ” C79000-B8000-C257.

Further information on 6DS1 412-8RR: Please refer to the operating instructions C79000-B8000-C404 (from version 06), contained in the manual for controller modules C79000-G8000-C457 (TELEPERM ME) or in the manual for function modules 1/2 C79000-G8000-C030, from version 08 (TELEPERM M).