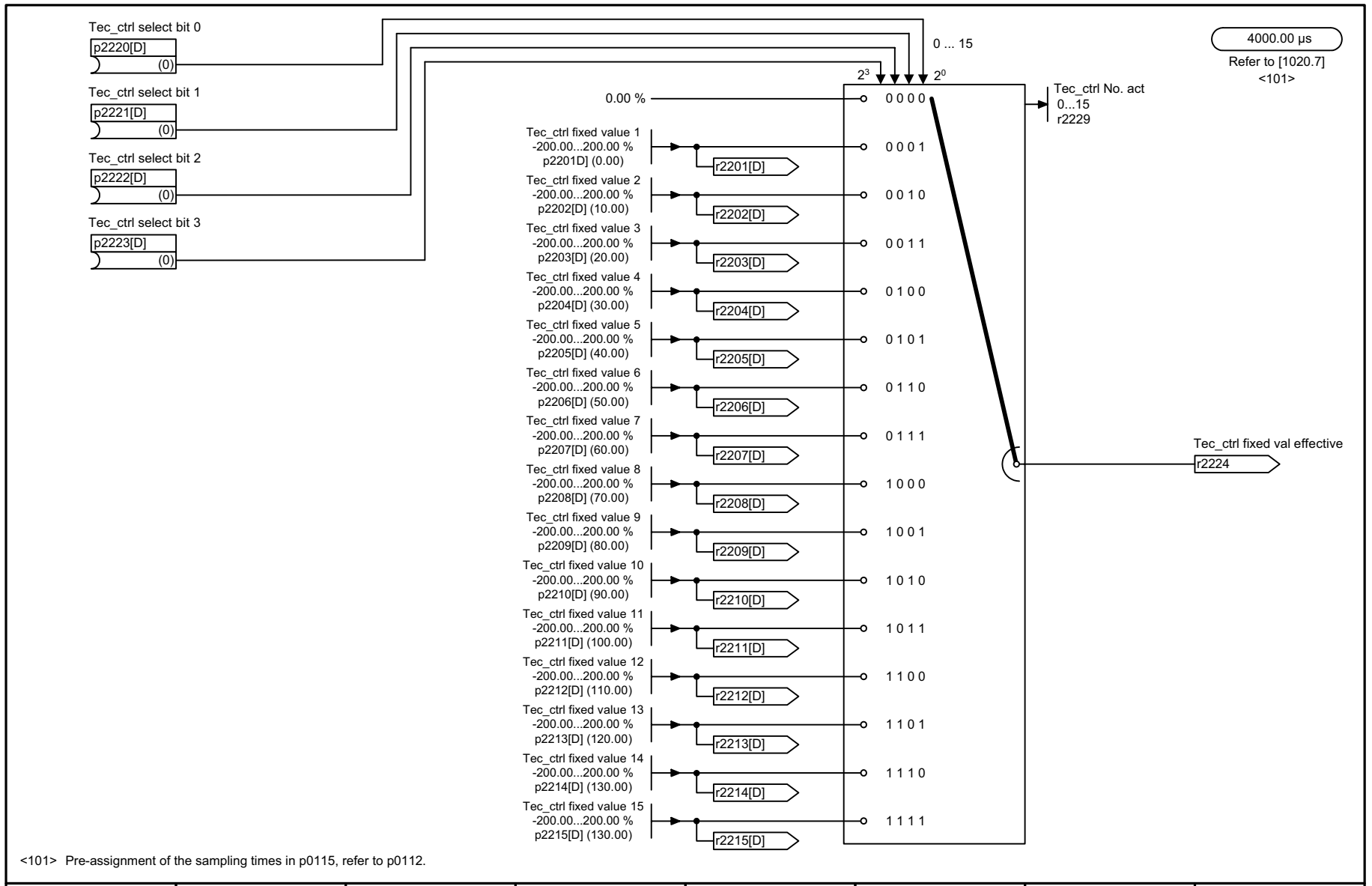


2.15 Technology controller

Function diagrams

7950 – Fixed values (r0108.16 = 1)	2-695
7954 – Motorized potentiometer (r0108.16 = 1)	2-696
7958 – Control (r0108.16 = 1)	2-697



<101> Pre-assignment of the sampling times in p0115, refer to p0112.

1	2	3	4	5	6	7	8
DO: SERVO, VECTOR					fp_S01_7950_en.vsd	Function diagram	
Technology controller - fixed values (r0108.16 = 1)					28.10.04 V02.02.00	SINAMICS S	
							- 7950 -

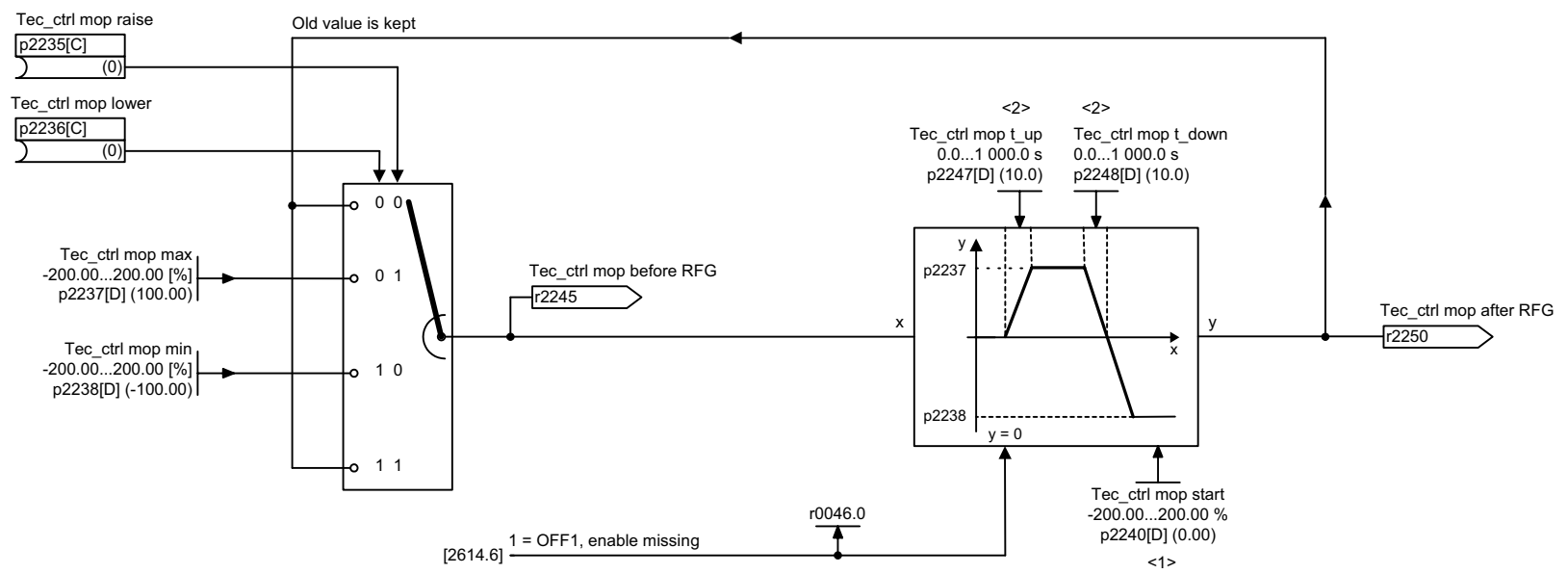
Picture 2-136 7950 – Fixed values (r0108.16 = 1)

4000.00 µs
Refer to [1020.7]
<101>

Tec_ctrl Mop config
0000...0111
p2230[D] (0110)

Data save active 0 The setpoint for the motorized potentiometer is not saved and after ON is entered using p2240.
1 The setpoint for the motorized potentiometer is saved and after ON is entered using p2231.

Initial rounding-off active 0 Without initial rounding-off.
1 With initial rounding-off. The ramp-up/down time set is exceeded accordingly.

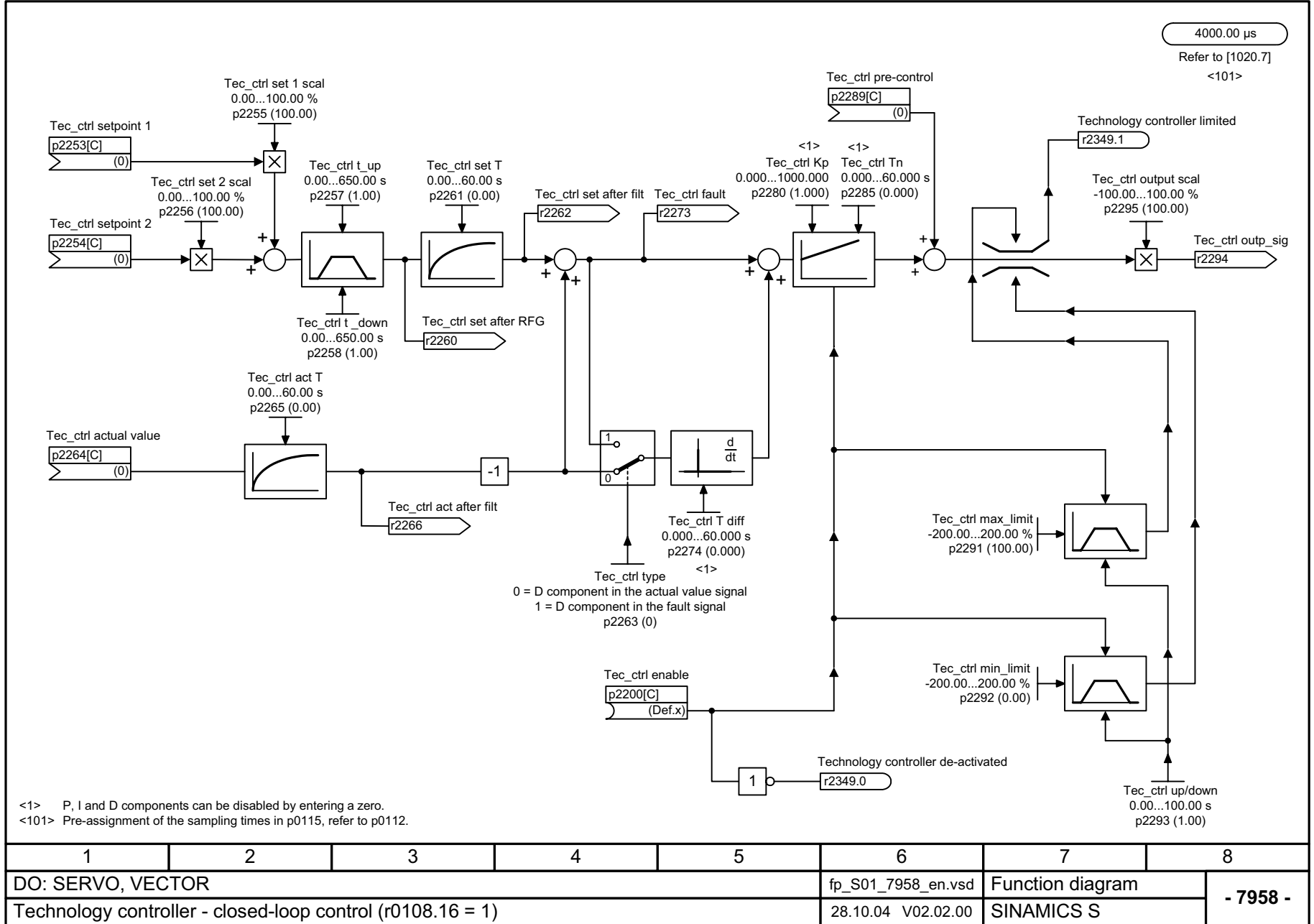


<1> For p2230.0 = 0, this setpoint is entered after ON.
<2> If the initial rounding-off is active (p2230.2 = 1), the selected ramp-up and ramp-down times are appropriately exceeded.
<101> Pre-assignment of the sampling times in p0115, refer to p0112.

1	2	3	4	5	6	7	8
DO: SERVO, VECTOR					fp_S01_7954_en.vsd	Function diagram	
Technology controller - motorized potentiometer (r0108.16 = 1)					28.10.04 V02.02.00	SINAMICS S	
							- 7954 -

Picture 2-137 7954 – Motorized potentiometer (r0108.16 = 1)

Picture 2-138 7958 – Control (r0108.16 = 1)

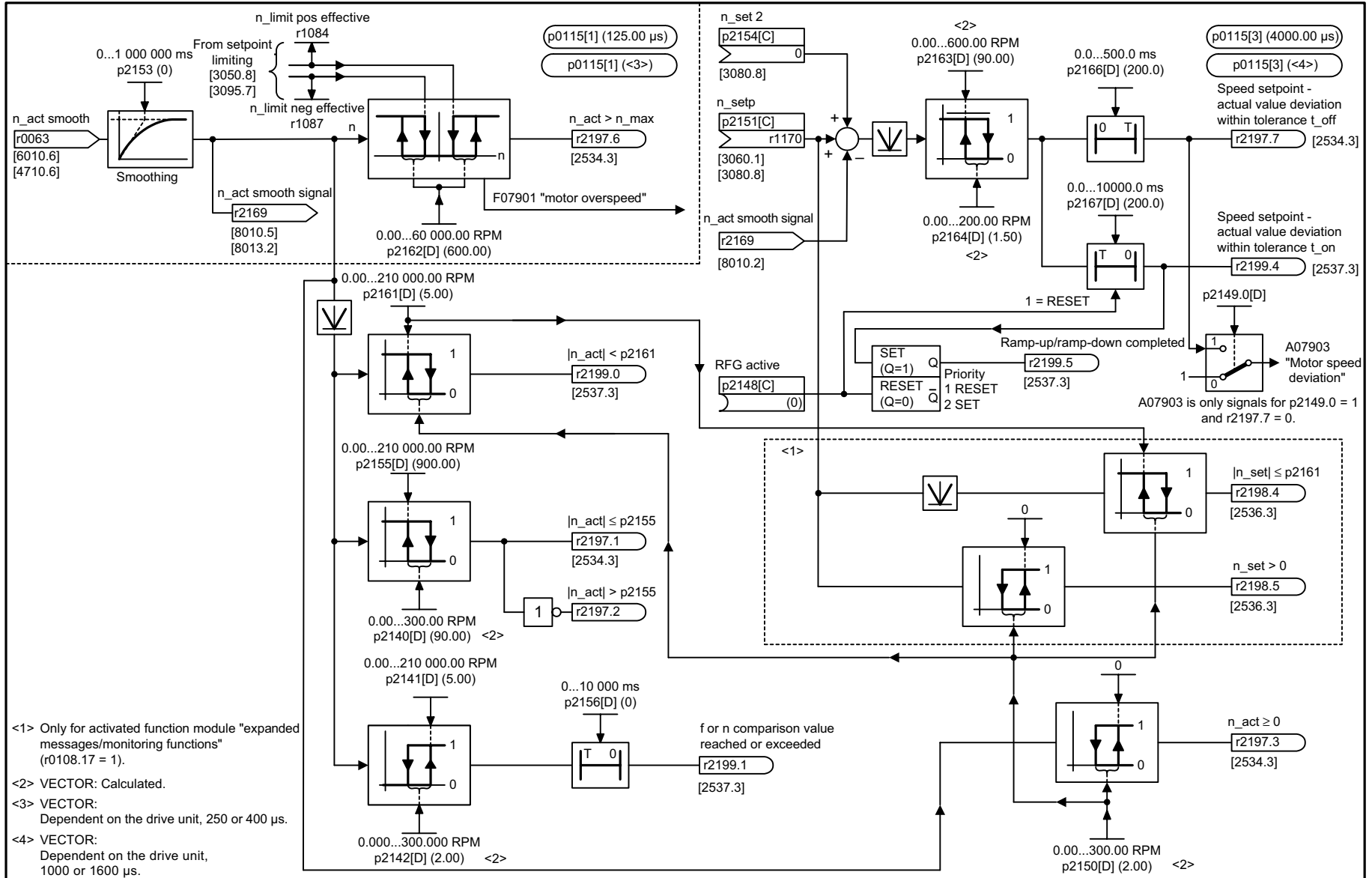


2.16 Signals and monitoring functions

Function diagrams

8010 – Speed messages	2-699
8012 – Torque messages/signals, motor locked/stalled	2-700
8013 – Load monitoring (r0108.17 = 1)	2-701
8014 – Thermal monitoring, power module	2-702
8016 – Thermal motor monitoring	2-703

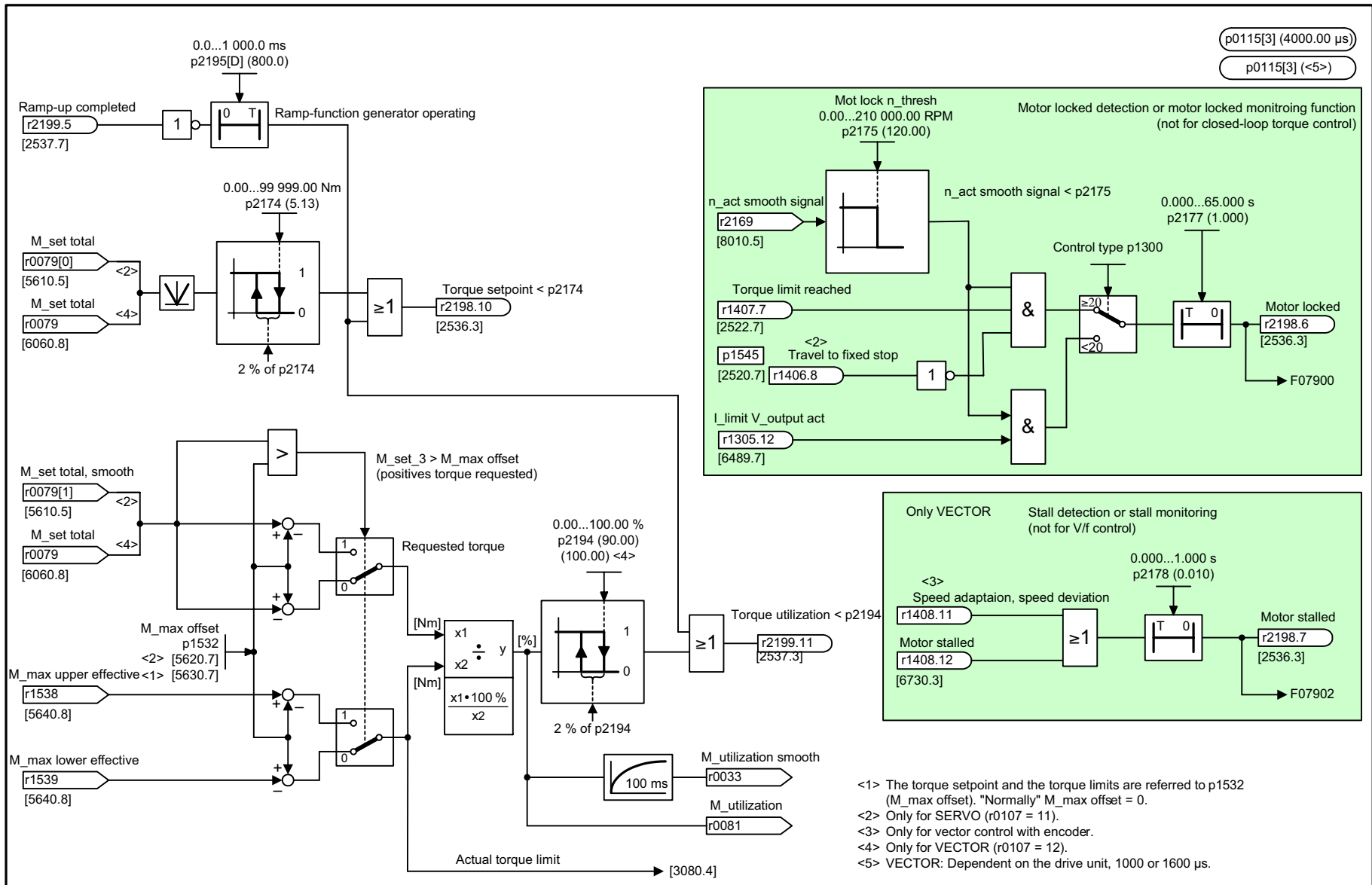
Picture 2-139 8010 - Speed messages



<1> Only for activated function module "expanded messages/monitoring functions" (r0108.17 = 1).
 <2> VECTOR: Calculated.
 <3> VECTOR: Dependent on the drive unit, 250 or 400 μ s.
 <4> VECTOR: Dependent on the drive unit, 1000 or 1600 μ s.

1	2	3	4	5	6	7	8
DO: SERVO, VECTOR					fp_S01_8010_en.vsd	Function diagram	
Messages and monitoring functions - speed messages/signals					07.10.04 V02.02.00	SINAMICS S	
							- 8010 -

Function diagrams
Signals and monitoring functions



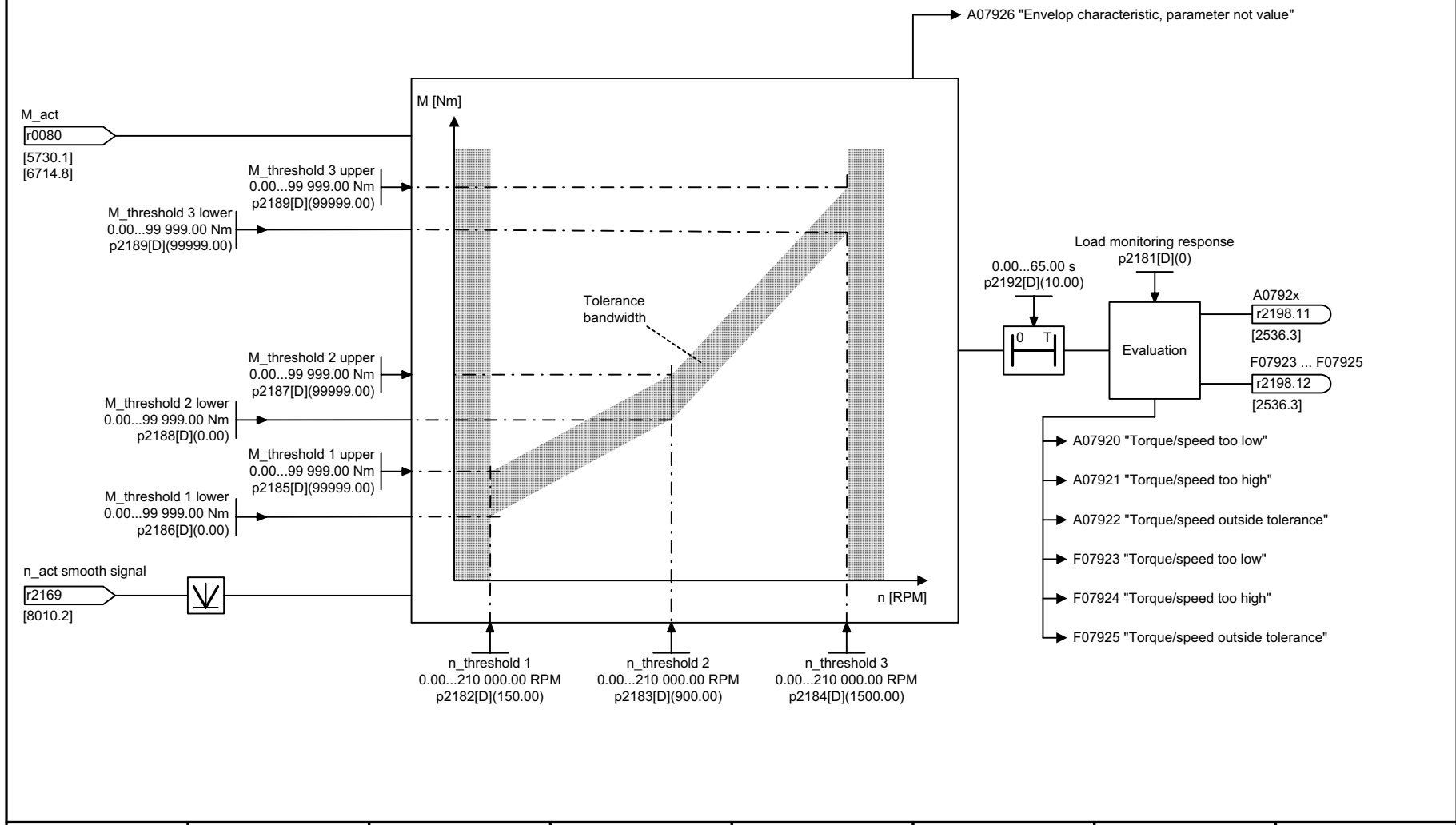
- <1> The torque setpoint and the torque limits are referred to p1532 (M_max offset). "Normally" M_max offset = 0.
- <2> Only for SERVO (r0107 = 11).
- <3> Only for vector control with encoder.
- <4> Only for VECTOR (r0107 = 12).
- <5> VECTOR: Dependent on the drive unit, 1000 or 1600 μs.

1	2	3	4	5	6	7	8
DO: SERVO, VECTOR					fp_S01_8012_en.vsd	Function diagram	
Messages and monitoring functions- torque messages/signals, motor locked/stalled					19.10.04 V02.02.00	SINAMICS S	
							- 8012 -

Picture 2-140 8012 – Torque messages/signals, motor locked/stalled

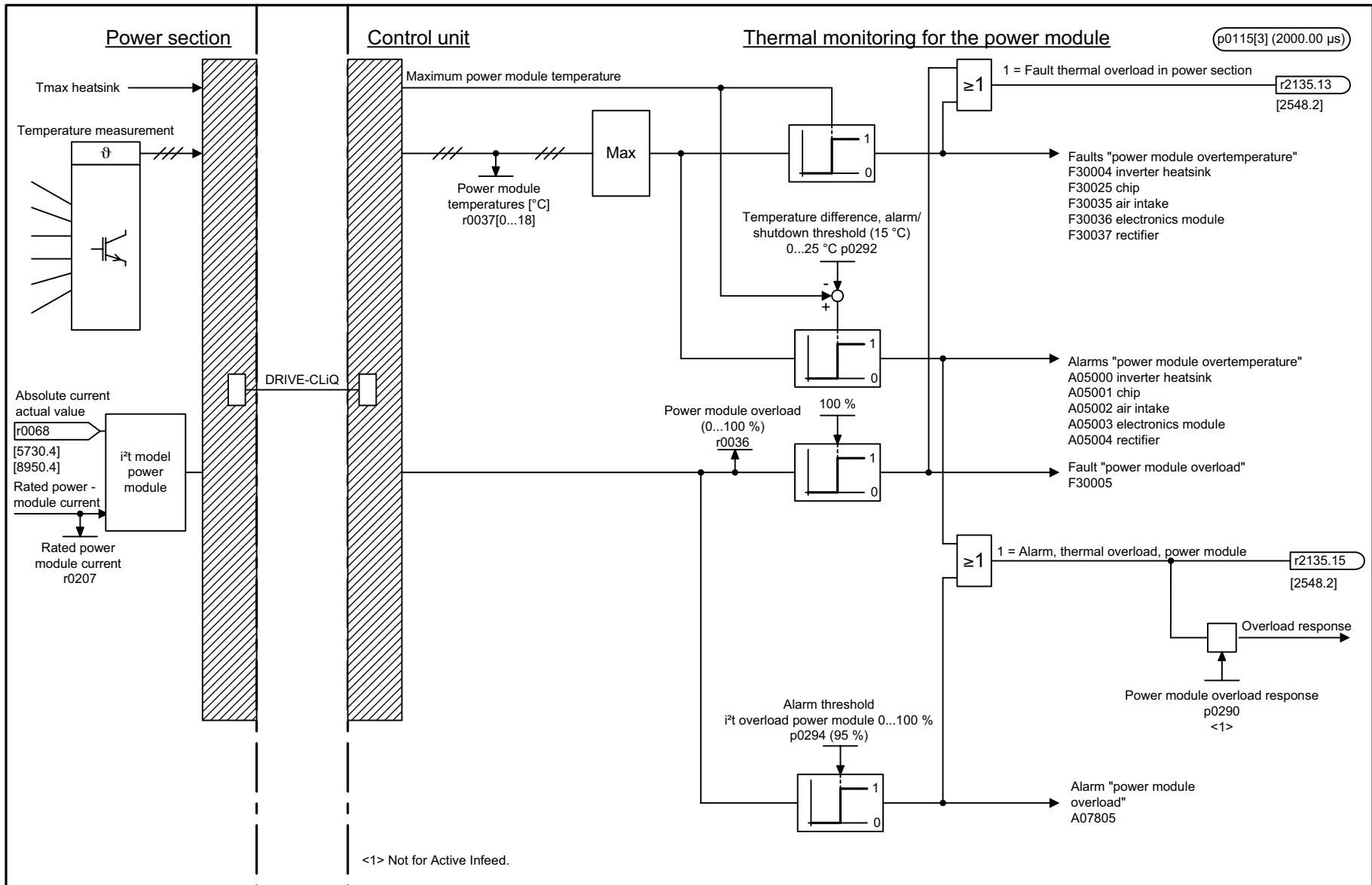
p0115[3] (4000.00 μs)

Picture 2-141 8013 – Load monitoring (r0108.17 = 1)



Function diagrams
Signals and monitoring functions

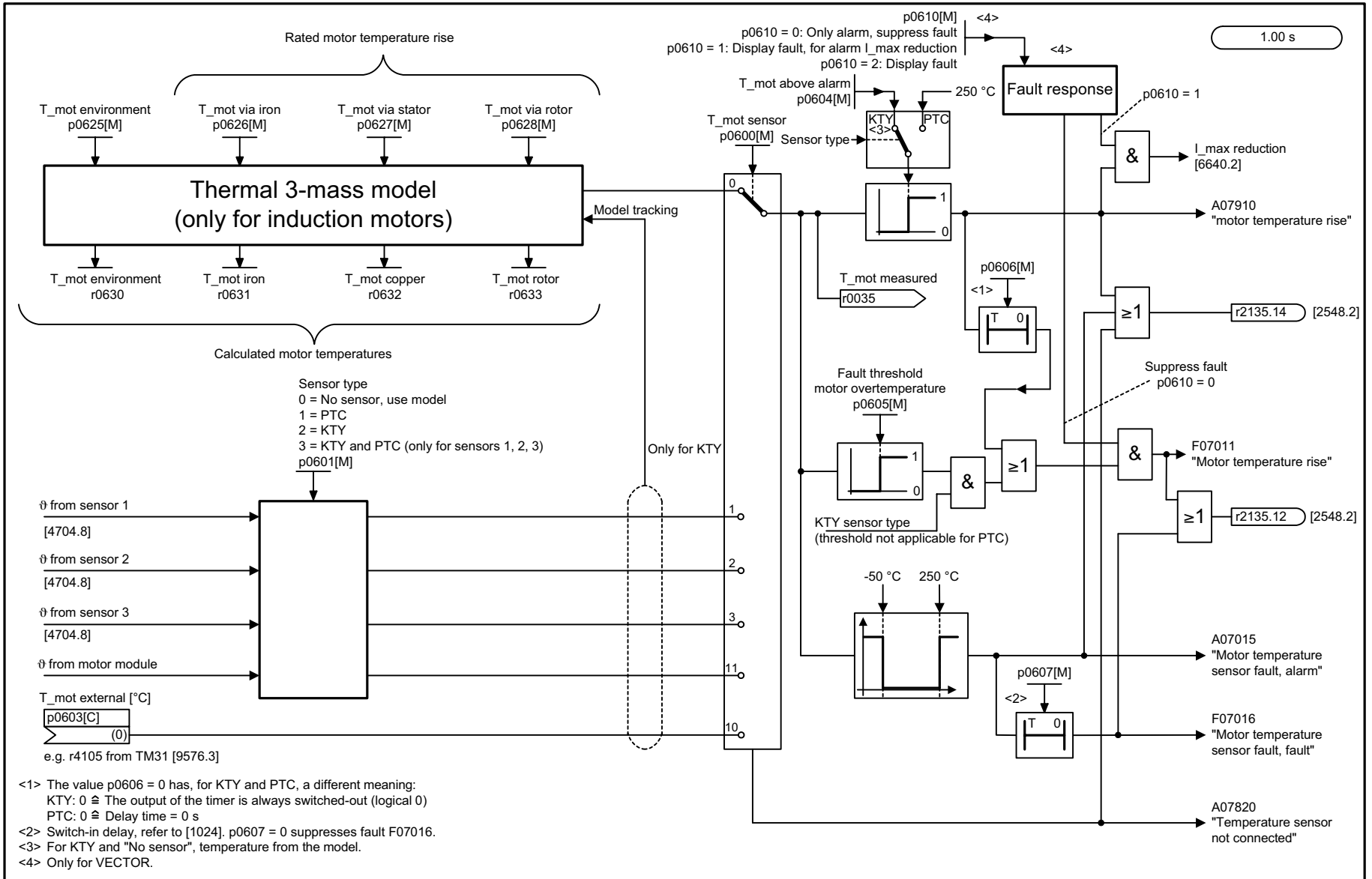
1	2	3	4	5	6	7	8
DO: SERVO, VECTOR					fp_S01_8013_en.vsd	Function diagram	
Messages and monitoring functions - load monitoring (r0108.17 = 1)					29.09.04 V02.02.00	SINAMICS S	
							- 8013 -



1	2	3	4	5	6	7	8
DO: A_INF, SERVO, VECTOR					fp_S01_8014_en.vsd	Function diagram	
Messages and monitoring functions - thermal monitoring, power module					01.10.04 V02.02.00	SINAMICS S	
							- 8014 -

Picture 2-142 8014 – Thermal monitoring, power module

Picture 2-143 8016 – Thermal motor monitoring



<1> The value p0606 = 0 has, for KTY and PTC, a different meaning:
 KTY: 0 ≙ The output of the timer is always switched-out (logical 0)
 PTC: 0 ≙ Delay time = 0 s
 <2> Switch-in delay, refer to [1024]. p0607 = 0 suppresses fault F07016.
 <3> For KTY and "No sensor", temperature from the model.
 <4> Only for VECTOR.

1	2	3	4	5	6	7	8
DO: SERVO, VECTOR					fp_S01_8016_en.vsd	Function diagram	
Messages and monitoring functions - thermal motor monitoring					30.09.04 V02.02.00	SINAMICS S	
							- 8016 -

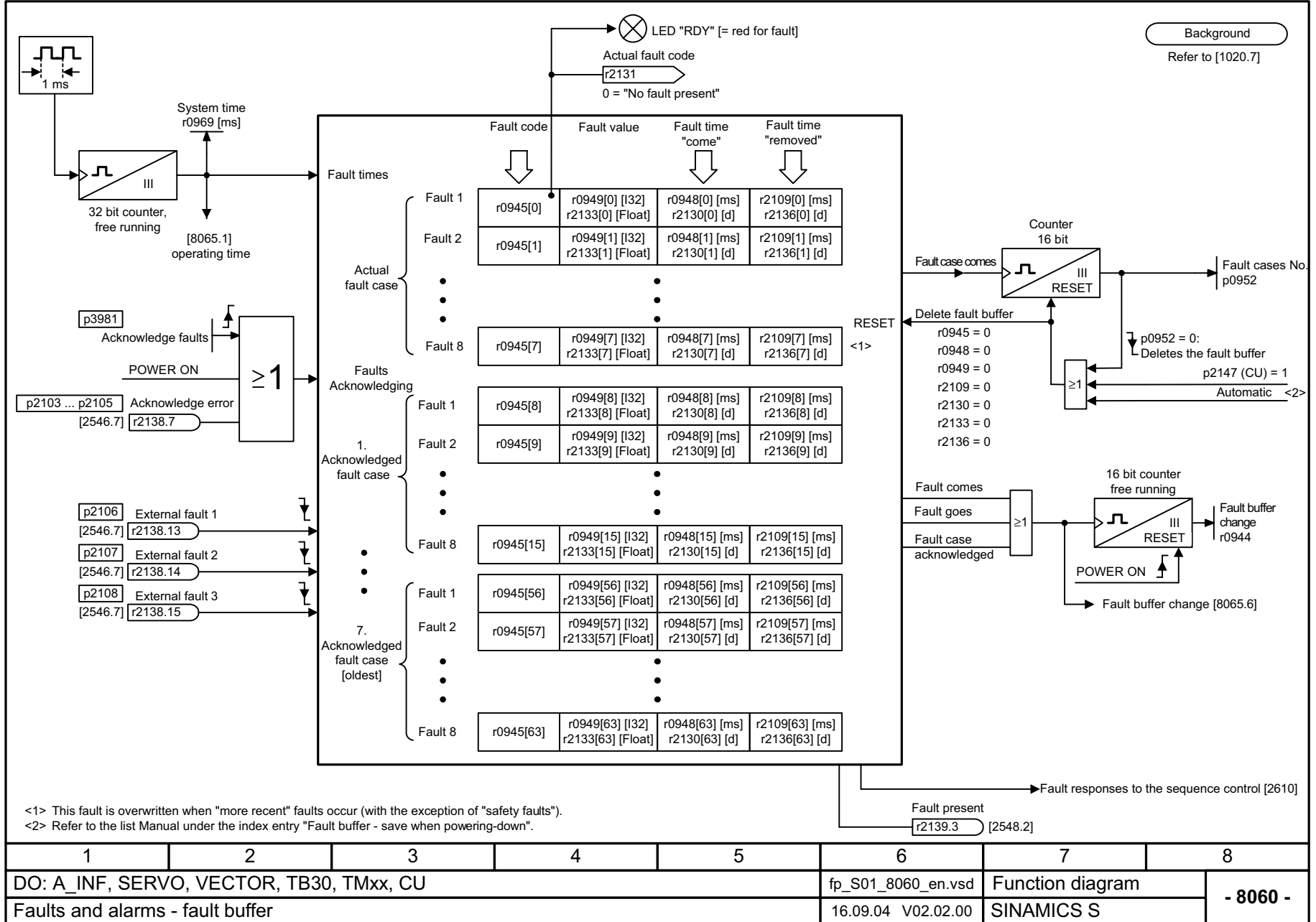
Function diagrams
 Signals and monitoring functions

2.17 **Faults and alarms**

Function diagrams

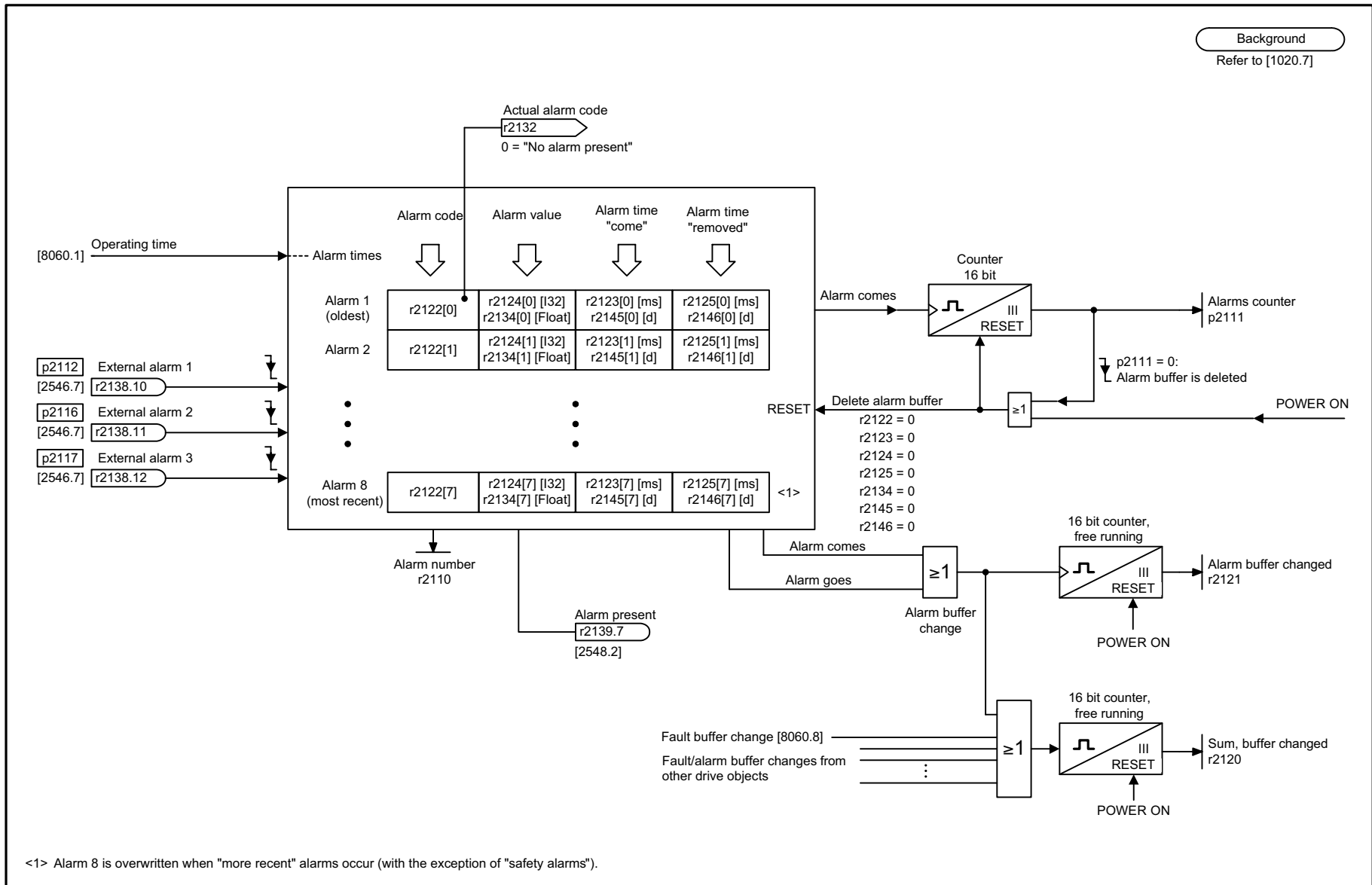
8060 – Fault buffer	2-705
8065 – Alarm buffer	2-706
8070 – Fault/alarm trigger word (r2129)	2-707
8075 – Fault/alarm configuration	2-708

Picture 2-144 8060 – Fault buffer



1	2	3	4	5	6	7	8
DO: A_INF, SERVO, VECTOR, TB30, TMxx, CU					fp_S01_8060_en.vsd	Function diagram	
Faults and alarms - fault buffer					16.09.04 V02.02.00	SINAMICS S	
							- 8060 -

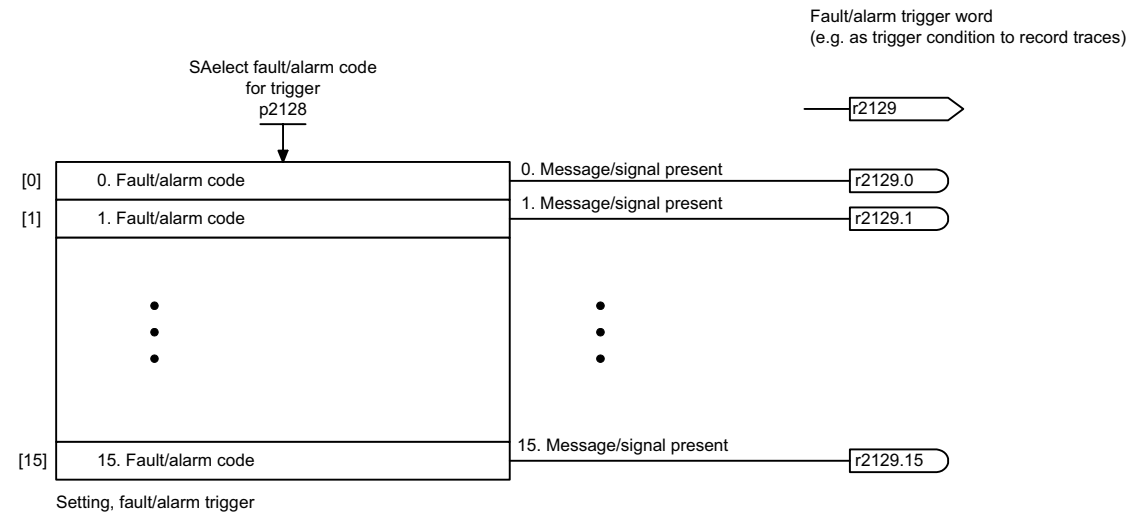
Background
Refer to [1020.7]



Picture 2-145 8065 – Alarm buffer

1	2	3	4	5	6	7	8
DO: A_INF, SERVO, VECTOR, TMxx, CU					fp_S01_8065_en.vsd	Function diagram	
Faults and alarms - alarm buffer					15.09.04 V02.02.00	SINAMICS S	
							- 8065 -

Background
Refer to [1020.7]

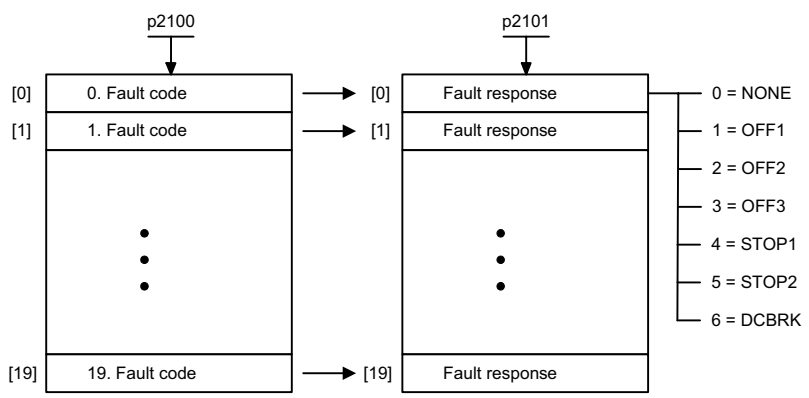


Picture 2-146 8070 – Fault/alarm trigger word (r2129)

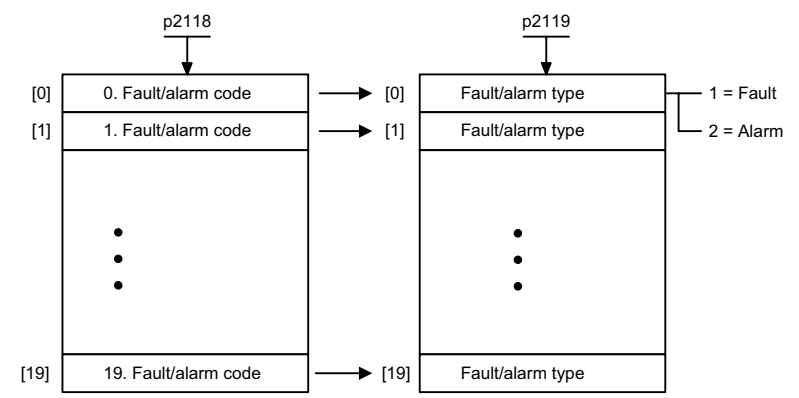
1	2	3	4	5	6	7	8
DO: A_INF, SERVO, VECTOR, TMxx, CU					fp_S01_8070_en.vsd	Function diagram	
Faults and alarms - Fault/alarm trigger word (r2129)					26.05.04 V02.02.00	SINAMICS S	
							- 8070 -

Background
Refer to [1020.7]

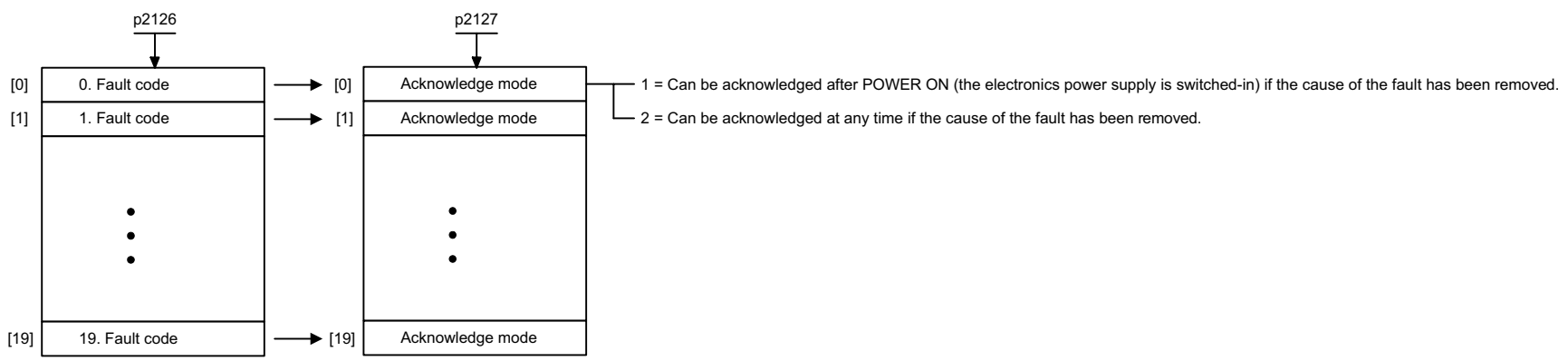
Changing the fault response for a maximum of 20 faults <1>



Changes the message type - fault <==> alarm for a maximum of 20 faults/alarms <1>



Changes the acknowledge mode for max. 20 faults <1>



<1> In the factory setting, fault responds, acknowledge mode and message type are practically and sensibly pre-assigned for all faults and alarms. Possible changes can only be made in an individual value range that is specified by SIEMENS. When the message type is changed, the supplementary information "moves" from fault value r0949 to alarm value r2124 and vice versa.

1	2	3	4	5	6	7	8
DO: A_INF, SERVO, VECTOR, TMxx, CU					fp_S01_8075_en.vsd	Function diagram	
Faults and alarms - fault/alarm configuration					02.08.04 V02.02.00	SINAMICS S	
							- 8075 -

Picture 2-147 8075 – Fault/alarm configuration