```
1   MACHINE
2      Generic
3   SEES
4      GenericCtx
5   VARIABLES   t , x_p , x_s
6   INVARIANTS
7      inv1 :  t ∈ RRealPlus
8      inv2 :  x_p ∈ RReal ⇸ S
9      inv3 :  Closed2Closed(Rzero, t) ⊆ dom(x_p)
10     inv4 :  x_s ∈ STATES
11  EVENTS
12     INITIALISATION
13     THEN
14        act1 :  t := Rzero
15        act2 :  x_p :∈ {Rzero} → S
16        act3 :  x_s :∈ STATES
17     END
18
19     Transition
20     ANY   s
21     WHERE
22        grd1 :  s ∈ ℙ1(STATES)
23     THEN
24        act1 :  x_s :∈ s
25     END
26
27     Sense
28     ANY   s , p
29     WHERE
30        grd1 :  s ∈ ℙ1(STATES)
31        grd2 :  p ∈ ℙ(STATES × RReal × S)
32        grd3 :  (x_s ↦ t ↦ x_p(t)) ∈ p
33     THEN
34        act1 :  x_s :∈ s
35     END
36
37     Behave
38     ANY   e , Inv , tp
39     WHERE
40        grd1 :  e ∈ DE(S)
41        grd2 :  Solvable(Closed2Closed(t, tp), e)
42        grd3 :  Inv ⊆ S
43        grd4 :  x_p(t) ∈ Inv
44        grd5 :  tp ∈ RRealPlus
45        grd6 :  t ↦ tp ∈ lt
46        grd7 :  CBAPsolutionOfFIS(t, tp, x_p, e, Inv)
47     THEN
48        act1 :
49           t, x_p :|
50              x_p' ∈ RReal ⇸ S ∧ t' = tp∧
51              Closed2Closed(Rzero, t') ⊆ dom(x_p')∧
52              CBAPsolutionOf(t, t', x_p, x_p', e, Inv)
53     END
54
55     Actuate
56     ANY   e , s , Inv , tp
57     WHERE
58        grd1 :  e ∈ DE(S)
59        grd2 :  Solvable(Closed2Closed(t, tp), e)
60        grd3 :  s ⊆ STATES
61        grd4 :  x_s ∈ s
62        grd5 :  Inv ⊆ S
63        grd6 :  x_p(t) ∈ Inv
64        grd7 :  tp ∈ RRealPlus
65        grd8 :  t ↦ tp ∈ lt
66        grd9 :  CBAPsolutionOfFIS(t, tp, x_p, e, Inv)
67     THEN
68        act1 :
69           t, x_p :|
70              x_p' ∈ RReal ⇸ S ∧ t' = tp∧
71              Closed2Closed(Rzero, t') ⊆ dom(x_p')∧
72              CBAPsolutionOf(t, t', x_p, x_p', e, Inv)
73     END
```

74
75 **END**