```
% Inputs
XIN1, XIN2 : VAR [tick -> real]
EPS
           : VAR [tick -> posreal] % Assumption: positive deadband size
% Output
           : VAR [tick -> bool]
HYSTERESIS_st_impl (XIN1, XIN2, EPS, Q): bool =
  FORALL t:
   0(t) =
      ΙF
            init(t)
                                                      THEN False
      ELSIF Q(pre(t)) & XIN1(t) < (XIN2(t) - EPS(t)) THEN False
      ELSIF
                        XIN1(t) > (XIN2(t) + EPS(t)) THEN True
      ELSE
                                                           Q(pre(t))
      ENDIF
```