```
% Inputs
XIN1, XIN2 : VAR [tick -> real]
EPS        : VAR [tick -> posreal] % Assumption: positive deadband size

% Output
Q          : VAR [tick -> bool]

HYSTERESIS_st_impl (XIN1, XIN2, EPS, Q): bool =
  FORALL t:
    Q(t) =
      IF    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
```