

```
(* DECLARATION *)
```

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```

```
| HYSTERESIS |
```

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|           |
```

```
REAL --|XIN1      Q|-- BOOL
```

```
REAL --|XIN2      |
```

```
REAL --|EPS       |
```

```
|           |
```

```
+-----+
```

```
FUNCTION_BLOCK HYSTERESIS
```

```
(* Boolean hysteresis on difference *)
```

```
(* of REAL inputs, XIN1 - XIN2 *)
```

```
VAR_INPUT XIN1, XIN2, EPS : REAL; END_VAR
```

```
VAR_OUTPUT Q : BOOL := 0; END_VAR
```

```
IF Q THEN IF XIN1 < (XIN2 - EPS) THEN Q := 0; END_IF ;
```

```
ELSIF XIN1 > (XIN2 + EPS) THEN Q := 1 ;
```

```
END_IF ;
```

```
END_FUNCTION_BLOCK
```