

File created: 15-Aug-90 15:38:03 {DSK}<usr>local>lde>SOURCES>loops>LIBRARY>GAUGEALARMS.;2

changes to: (VARS GAUGEALARMSCOMS)  
(FNS AlarmMixin.OutOfRange)

previous date: 23-Feb-88 22:59:20 {DSK}<usr>local>lde>SOURCES>loops>LIBRARY>GAUGEALARMS.;1

Read Table: INTERLISP

Package: INTERLISP

Format: XCCS

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(RPAQQ GAUGEALARMSCOMS ((DECLARE%: DONTCOPY (PROP MAKEFILE-ENVIRONMENT GAUGEALARMS))  
  (CLASSES AlarmMixin)  
  (METHODS AlarmMixin.OutOfRange? AlarmMixin.Set AlarmMixin.SetTripPoints  
    AlarmMixin.TripPoints? AlarmMixin.Update)  
  (FNS AlarmMixin.OutOfRange)))  
  
(DECLARE%: DONTCOPY  
  
(PUTPROPS GAUGEALARMS MAKEFILE-ENVIRONMENT (:PACKAGE "IL" :READTABLE "INTERLISP" :BASE 10))  
)  
  
(DEFCLASSES AlarmMixin)  
  
(DEFCLASS AlarmMixin (MetaClass AbstractClass Edited%: (* RBGMartin "14-Apr-87 14:11")  
  doc "a mixin that adds alarm functionality to any gauge. This must be before the  
    gauge class in the Supers list so that the Alarm.Set method is invoked first.")  
  (Supers Object)  
  [ClassVariables (MiddleButtonItems ((Attached? 'Attached? "Print where gauge attached")  
    (Detach 'Detach "Detach gauge")  
    (TripPoints 'TripPoints? "Print the trip points")]  
  (InstanceVariables (lowTripPoint 0 doc "alarm is triggered when reading goes below this point")  
    (hiTripPoint 100 doc "alarm is triggered when reading goes above this point")  
    (flashNumber 2 doc "number of times alarm will flash when it is tripped. N arg to FLASHWINDOW.")  
    (flashInterval 100 doc "FLASHINTERVAL arg to FLASHWINDOW")))  
  
(\BatchMethodDefs)  
  
(METH AlarmMixin OutOfRange? NIL "returns T if alarm reading is outside of trip points" (category (AlarmMixin)))  
  
(METH AlarmMixin Set (newReading)  
  "This method checks to see if the newReading is inside or outside of the alarm trip points."  
  (category (AlarmMixin)))  
  
(METH AlarmMixin SetTripPoints (lowTripPoint hiTripPoint)  
  "changes the levels of the trip points for the alarm"  
  (category (AlarmMixin)))  
  
(METH AlarmMixin TripPoints? NIL "prints the value of the trip points in an attached window." (category (  
    AlarmMixin  
  )))  
  
(METH AlarmMixin Update NIL "Set up display window for instrument. Reinitialize to reflect current state"  
  (category (AlarmMixin)))  
  
[Method (AlarmMixin OutOfRange?)  
  self  
  "returns T if alarm reading is outside of trip points" ; edited: 8-Oct-86 20:55  
  (LET ((reading (@ reading)))  
    (OR (LESSP reading (@ lowTripPoint))  
      (GREATERP reading (@ hiTripPoint))  
    ))  
[Method ((AlarmMixin Set)  
  self newReading ; edited: 8-Oct-86 20:52  
  "This method checks to see if the newReading is inside or outside of the alarm trip points."  
  (PROG ((window (@ window))  
    (title (@ title))  
    (flashNumber (@ flashNumber))  
    (flashInterval (@ flashInterval)))  
    (COND  
      (( _ self OutOfRange?)  
        (* check to see if current reading is outside of the trip points. If so, the alarm is tripped, so it is inverted.  
        Set it back to normal before _Super.)  
        ( _ self Invert)))  
      ( _Super)  
    (COND  
      ((LESSP newReading (@ lowTripPoint))  
        (WINDOWPROP window 'TITLE (PACK* "Under ** " title))  
        (for FLASH to flashNumber do ( _ self Invert)
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                                (DISMISS flashInterval NIL 'NoBlock)
                                (_ self Invert)
                                (DISMISS flashInterval NIL 'NoBlock))
    (_ self Invert))
  ((GREATERP newReading (@ hiTripPoint))
   (WINDOWPROP window 'TITLE (PACK* "Over ** " title))
   (for FLASH to flashNumber do (_ self Invert)
    (DISMISS flashInterval NIL 'NoBlock)
    (_ self Invert)
    (DISMISS flashInterval NIL 'NoBlock))
   (_ self Invert))
  (T (WINDOWPROP window 'TITLE title])

(Method ((AlarmMixin SetTripPoints)
  self lowTripPoint hiTripPoint) ; RBGMartin 14-Apr-87 14:13
  "changes the levels of the trip points for the alarm"
  (_@
   lowTripPoint lowTripPoint)
  (_@
   hiTripPoint hiTripPoint)
  (_ self Update))

(Method ((AlarmMixin TripPoints?)
  self) ; RBGMartin 14-Apr-87 14:06
  "prints the value of the trip points in an attached window."
  (PROG ((pw (GETPROMPTWINDOW (@ window)
    2)))
    (CLEARW pw)
    (PRINTOUT pw "hi " (@ hiTripPoint)
     T "low " (@ lowTripPoint])

(Method ((AlarmMixin Update)
  self) ; RBGMartin 14-Apr-87 14:10
  "Set up display window for instrument. Reinitialize to reflect current state"
  (_Super)
  (COND
    ((_ self OutOfRange?)

     (* after gauge has been repainted, was its reading outside of the trip points? If so, invert it.)

     (_ self Invert])

  (\UnbatchMethodDefs)

(DEFINEQ

AlarmMixin.OutOfRange
  [LAMBDA (self) ; Edited 15-Aug-90 15:37 by jds
    (CL:MACROLET [[ArgsOfMethodBeingCompiled NIL ''(self]
                  (ClassNameOfMethodOwner NIL ''AlarmMixin)
                  (SelectorOfMethodBeingCompiled NIL ''OutOfRange)
                  (SelfOfMethodBeingCompiled NIL 'self)
                  [_Super
                   (&REST Send-Super-Args)
                   (COND
                     ((NULL Send-Super-Args)
                      ' (DOAPPLY* (FindSuperMethod self 'OutOfRange (LOADTIMECONSTANT (OldClass AlarmMixin)))
                                   self))
                     ((NEQ 'OutOfRange (CADR Send-Super-Args))
                      (ERROR "Selector to _Super does not match method selector" (CADR Send-Super-Args)))
                     ((NEQ 'self (CAR Send-Super-Args))
                      (ERROR "Can't _Super to other then first arg of method" (CDR Send-Super-Args)))
                     (T (APPEND ' (DOAPPLY* (FindSuperMethod self 'OutOfRange (LOADTIMECONSTANT (OldClass
                                                                                               AlarmMixin
                                                                                               )))
                                   self)
                          (CDDR Send-Super-Args]
                  [_Super?
                   (&REST Send-Super-Args)
                   (COND
                     ((NULL Send-Super-Args)
                      ' (DOAPPLY* (FindSuperMethod self 'OutOfRange (LOADTIMECONSTANT (OldClass AlarmMixin))
                                   (FUNCTION NIL))
                                   self))
                     ((NEQ 'OutOfRange (CADR Send-Super-Args))
                      (ERROR "Selector to _Super does not match method selector" (CADR Send-Super-Args)))
                     ((NEQ 'self (CAR Send-Super-Args))
                      (ERROR "Can't _Super to other then first arg of method" (CDR Send-Super-Args)))
                     (T (APPEND ' (DOAPPLY* (FindSuperMethod self 'OutOfRange (LOADTIMECONSTANT (OldClass
                                                                                               AlarmMixin
                                                                                               )))
                                   self)
                          (FUNCTION NIL))
                          self)
                          (CDDR Send-Super-Args]
                  [_SuperFringe
                   (&REST Send-Super-Args)
                   (COND

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[ (NULL Send-Super-Args)
  (LIST 'for 'cls 'in (LIST 'fetch 'localSupers 'of (LIST 'LOADTIMECONSTANT
                                                         (LIST 'OldClass class-name)))
    'do
      (LIST* 'DOAPPLY* [LIST* 'OR (LIST 'FetchMethod 'cls (LIST 'QUOTE selector))
                          ' ((FUNCTION NIL))
                        (NCONC args]
      ((NEQ 'OutOfRange (CADR Send-Super-Args))
        (ERROR "Selector to _Super does not match method selector" (CADR Send-Super-Args)))
      ((NEQ 'self (CAR Send-Super-Args))
        (ERROR "Can't _Super to other then first arg of method" (CDR Send-Super-Args)))
      (T (LIST* 'for 'cls 'in ' (fetch (class localSupers) of (LOADTIMECONSTANT (OldClass
                                                                                     AlarmMixin)
                                                                                     ))
        'bind
        [LIST 'argList '_ (LIST* 'MAPCAR [LIST 'QUOTE (CONS (CAR Send-Super-Args)
                                                             (NCONC (CDDR Send-Super-Args)
                                                             ]
                                                           ' ((FUNCTION EVAL]
        ' (do (APPLY (OR (FetchMethod cls 'OutOfRange)
                        (FUNCTION NIL))
                  argList]
      (LET ((reading (@ reading)))
        (OR (LESSP reading (@ lowTripPoint))
          (GREATERP reading (@ hiTripPoint))
        )
    )

(PUTPROPS GAUGEALARMS COPYRIGHT ("Venue & Xerox Corporation" 1986 1987 1988 1990))

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FUNCTION INDEX

AlarmMixin.OutOfRange .....2

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PROPERTY INDEX

GAUGEALARMS .....1

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