Interface Control Document

Telescope Enclosure Control Subsystem HCD

Table of Contents

Telescope Enclosure Control Subsystem HCD

The HCD is responsible for converting commands and demands from the ENC assembly into the appropriate User Defined Datatypes (UDTs) and PLC tags and then transporting the data over Ethernet/IP to and from the PLC. It also converts information received from the PLC into CSW messages. All commands to the PLC have a command response

Subsyatem	Name	Prefix	Type	WBS ID
TCS	ENCHCD	TCS.TC.ENCH	HCD	TCS.TC.ENCH

Commands for ENCHCD

TCS ENC HCD commands.

Configuration: Initialize

Requirements:

Initialize command for ENC HCD

Arguments:

n/a

Configuration: Shutdown

Requirements:

Shutdown command for ENC HCD

Arguments:

n/a

Configuration: SmoothMove

Requirements:

SmoothMove

Arguments:

Name	Description	Type	Required
operation	Smooth move on or off	enum: (On, Off)	no
base	This will be used to define Base movement coordinates.	double	no
cap	This will be used to define Cap movement coordinates.	double	no
time	Time is used in Smooth Mode to specify enclosure movement timing.	double	no

Configuration: FastMove

Requirements:

FastMove

Arguments:

Name	Description	Type	Required
operation	FastMove on or off	enum: (On, Off)	no
base	This will be used to define Base movement coordinates.	double	no
cap	This will be used to define Cap movement coordinates.	double	no

Configuration: SmoothMoveToTrack

Requirements:

Marks enclosure in Track mode for smooth move

Arguments:

Name	Description	Type	Required
operation	SmoothMoveToTrack on or off	enum: (On, Off)	no
base	This will be used to define Base movement coordinates.	double	no
cap	This will be used to define Cap movement coordinates.	double	no
time	Time is used in Smooth Mode to specify enclosure movement timing.	double	no

Configuration: FastMoveToTrack

Requirements:

Marks enclosure in Track mode for fast move

Arguments:

Name	Description	Type	Required
operation	Fast MoveToTrack on or off	enum: (On, Off)	no
base	This will be used to define Base movement coordinates.	double	no
cap	This will be used to define Cap movement coordinates.	double	no

Configuration: TrackOff

Requirements:

Gets Enclosure out of track mode.

Arguments:

n/a

Configuration: DomeHalt

Requirements:

Stop all ENC motion.

Arguments:

n/a

Configuration: AntiFreezeOn

Requirements:

Sends the enclosure into antifreeze mode.

Arguments:

n/a

Configuration: AntiFreezeOff

Requirements:

Sends the enclosure outoff antifreeze mode.

Arguments:

n/a

Configuration: OpenShutter

Requirements:

Opens shutter.

Arguments:

n/a

Configuration: CloseShutter

Requirements:

Closes shutter.

Arguments:

n/a

Configuration: HaltShutter

Requirements:

Halts shutter.

Arguments:

n/a

Configuration: OpenExhaust

Requirements:

Opens exhaust.

Arguments:

n/a

Configuration: CloseExhaust

Requirements:

Closes Exhaust.

Arguments:

n/a

Configuration: OpenAllInnerVent

Requirements:

Opens all inner vents.

Arguments:

n/a

Configuration: CloseAllInnerVent

Requirements:

Closes all inner vents

Arguments:

n/a

Configuration: OpenAllOuterVent

Requirements:

Opens all outer vents.

Arguments:

n/a

Configuration: CloseAllOuterVent

Requirements:

Closes all outer vents.

Arguments:

n/a

Configuration: OpenAllInnerFlap

Requirements:

Opens all inner Flaps

Arguments:

n/a

Configuration: CloseAllInnerFlap

Requirements:

Closes all inner flaps.

Arguments:

n/a

Configuration: OpenAllOuterFlap

Requirements:

Opens all outer flaps.

Arguments:

n/a

Configuration: CloseAllOuterFlap

Requirements:

Closes all outer flaps.

Arguments:

n/a

Configurations Sent to Other Components

Name	Component	Subsystem
Initialize	ENC.ENC	ENC
Shutdown	ENC.ENC	ENC
SmoothMove	ENC.ENC	ENC
FastMove	ENC.ENC	ENC
SmoothMoveToTrack	ENC.ENC	ENC
FastMoveToTrack	ENC.ENC	ENC
TrackOff	ENC.ENC	ENC
DomeHalt	ENC.ENC	ENC
AntiFreezeOn	ENC.ENC	ENC
AntiFreezeOff	ENC.ENC	ENC
OpenShutter	ENC.ENC	ENC
CloseShutter	ENC.ENC	ENC
HaltShutter	ENC.ENC	ENC
OpenExhaust	ENC.ENC	ENC
CloseExhaust	ENC.ENC	ENC
OpenAllInnerVent	ENC.ENC	ENC
CloseAllInnerVent	ENC.ENC	ENC
OpenAllOuterVent	ENC.ENC	ENC
CloseAllOuterVent	ENC.ENC	ENC
OpenAllInnerFlap	ENC.ENC	ENC
OpenAllOuterFlap	ENC.ENC	ENC
CloseAllInnerFlap	ENC.ENC	ENC
CloseAllOuterFlap	ENC.ENC	ENC