List of Measurements and description

CpuTemperature	Mean CPU temperature of the control and data acquisition computer
DurationPickToPick	Time interval between two consecutive fuse pickings of the robotic arm
DurationRobotFromFeederToTestBench	Time needed by the robot to move from the feeder to the test bench
DurationRobotFromTestBenchToFeeder	Time needed by the robot to move from the test bench to the feeder
DurationTestBenchClosed	Duration of the gripper of the test bench closure while the fuse is tested
EPOSCurrent	Current passing through the EPOS (the EC motor that sorts the fuses on the conveyor belt)
EPOSPosition	Position of the EPOS (the EC motor that sorts the fuses on the conveyor belt)
EPOSVelocity	Velocity of the EPOS (the EC motor that sorts the fuses on the conveyor belt)
ErrorFrame	Counter of the error frames from the camera observing the fuses while they're on the feeder
FeederAction1	The feeder (which brings the fuses form the conveyor belt to the picking area) can perform 4 possible actions (corresponding to 4 different degrees of freedom)
FeederAction2	The feeder (which brings the fuses form the conveyor belt to the picking area) can perform 4 possible actions (corresponding to 4 different degrees of freedom)
FeederAction3	The feeder (which brings the fuses form the conveyor belt to the picking area) can perform 4 possible actions (corresponding to 4 different degrees of freedom)
FeederAction4	The feeder (which brings the fuses form the conveyor belt to the picking area) can perform 4 possible actions (corresponding to 4 different degrees of freedom)

FeederBackgroundIlluminationIntensity	The feeder has a background illumination LED checking if the feeder is dirty or not
FuseCycleDuration	Time between picking a fuse and putting it again into the feeder
FuseHeatSlope	Slope coefficient obtained from a linear fit of the fuse's heating up
FuseHeatSlopeNOK	Slope coefficient obtained from a linear fit of the fuse heating up. Case of an anomalous fuse (not heating up as expected, slope lower than a user-predefined threshold)
FuseHeatSlopeOK	Slope coefficient obtained from a linear fit of the fuse heating up. Case of a normal fuse
FuseIntoFeeder	Trigger indicating if a fuse has been thrown into the feeder
FuseOutsideOperationalSpace	Trigger indicating that the fuse position has been estimated as outside the picking area
FusePicked	Trigger indicating if a fuse has been successfully picked
FuseTestResult	Trigger indicating if either a fuse is not working well at all (it is not conducting any current) or if it works but it is not heating up as expected or if it works fine
Humidity	Humidity of the workspace
IntensityTotalImage	Intensity of the total image provided by the camera observing the fuse picking area
IntensityTotalThermoImage	Intensity of the total image provided by the thermal camera measuring the fuse heating
LightBarrieActiveTaskDuration2	The light barrier is either triggered (active) or not (passive). When a fuse goes through it, it gets triggered**.** These signals measure how long the light barrier is triggered. Some of these measurements have been used for debugging and can be discarded (they contain only zeros)

LightBarrierActiveTaskDuration1	The light barrier is either triggered (active) or not (passive). When a fuse goes through it, it gets triggered**.** These signals measure how long the light barrier is triggered. Some of these measurements have been used for debugging and can be discarded (they contain only zeros)
LightBarrierActiveTaskDuration1b	The light barrier is either triggered (active) or not (passive). When a fuse goes through it, it gets triggered**.** These signals measure how long the light barrier is triggered. Some of these measurements have been used for debugging and can be discarded (they contain only zeros)
LightBarrierPassiveTaskDuration1	The light barrier is either triggered (active) or not (passive). When a fuse goes through it, it gets triggered**.** These signals measure how long the light barrier is triggered. Some of these measurements have been used for debugging and can be discarded (they contain only zeros)
LightBarrierPassiveTaskDuration1b	The light barrier is either triggered (active) or not (passive). When a fuse goes through it, it gets triggered**.** These signals measure how long the light barrier is triggered. Some of these measurements have been used for debugging and can be discarded (they contain only zeros)
LightBarrierPassiveTaskDuration2	The light barrier is either triggered (active) or not (passive). When a fuse goes through it, it gets triggered**.** These signals measure how long the light barrier is triggered. Some of these measurements have been used for debugging and can be discarded (they contain only zeros)
LightBarrierTaskDuration	The light barrier is either triggered (active) or not (passive). When a fuse goes through it, it gets triggered**.** These signals measure how long the light barrier is triggered. Some of these measurements have been used for debugging and can be discarded (they contain only zeros)

NumberEmptyFeeder	How many times there were no fuses into the fuse picking area
NumberFuseDetected	How many fuses were successfully detected in the fuse picking area
NumberFuseEstimated	How many fuses were successfully estimated in the fuse picking area (simple counter algorithms based on pixel values)
Pressure	Pressure measured in the pressure tank (used for the feeder barrier)
ProcessCpuLoadNormalized	Process CPU Load normalized for the control and acquisition computer
ProcessMemoryConsumption	Process memory consumption of the control and acquisition computer
SharpnessImage	The sharpness of the image provided by the camera observing the fuse picking area
SmartMotorPositionError	Position error of the motor controlling the big conveyor belt
SmartMotorSpeed	Speed of the motor controlling the big conveyor belt
Temperature	Temperature of the workspace
TemperatureThermoCam	Workspace Temperature measured by the thermal camera (the thermal camera measures both the fuse temperature and the surrounding temperature)
TotalCpuLoadNormalized	Total CPU Load normalized for the control and acquisition computer
TotalMemoryConsumption	TotalMemory consumption for the control and acquisition computer
Vacuum	Vacuum of the vacuum gripper
VaccumFusePicked	Vacuum measured while the fuse is picked by the robot
VacuumValveClosed	Vacuum measured while the valve connecting the vacuum pump and the vacuum gripper is closed

ValidFrame	Counter of the valid frames from the camera observing the fuses while they're on the feeder
ValidFrameOptrisPIIRCamera	Counter of the error frames from the thermal camera observing the fuses while they're on the feeder

List of fields and description

vCnt	How many measurements (events) are present within the 10 seconds acquisition interval
value	Mean of the measurements (events) within the 10 seconds acquisition interval
vTrend	Derivative-based trend feature of the measurements (events) calculated within the 10 seconds acquisition interval
vMax	Maximum value among the measurements (events) recorded within the 10 seconds acquisition interval
vMin	Minimum value among the measurements (events) recorded within the 10 seconds acquisition interval
vStd	Standard Deviation over the measurements (events) within the 10 seconds acquisition interval
vFreq	Frequency of the measurements (events) within the 10 seconds acquisition interval