ADDENDUM

This information applies only to the MS12001 Cable Assembly Test System user guide.

New SCPI Commands Available

New commands are available for your system. You can find the details below.

Quick Reference Command Tree

Command						Parameter(s)	P.
CONFigure	LM	CHANnel				<Channel>	3
		CHANnel?					4
	POWer	LEVel				<PowerLevel>	5
	WAVelength					<Wavelength>	6
	WAVelength?						7
DEFine	LM	GROup?					8
		GROup	ADD			<LmPosition>	9
	RM	GROup?					10
		GROup	ADD			<RmPosition>	11
DELete	LM	GROup					12
	RM	GROup					13
DIAGnostic	WAVelength					<Wavelength>	14
	WAVelength?						15
	LASer					<State>	16
	LASer?						17
	POWer?						18
	IOR					<RefractionIndex>	19
	IOR?						20
FETCh	POWer	LEVel?					21
INITialize							22
LM	SELect					<LmSerialNumber>	23
	SELect?						24

Command						Parameter(s)	P.
MEASure	POWer	LEVel					25
READ	COMPonent	POSition?				<Mtj1Il>,<Mtj1Length>	26
	IL?						27
	INTermal	REFLectance?				<IL>	28
	LENGth?					<IL>	29
	MM	REFLectance?				<IL>,<InternalReflectance>,<Length>	30
	SM	REFLectance?				<IL>,<Length>	31
RM	SELect					<RmSerialNumber>	32
	SELect?						33
	SNUMber?					<Wavelength>	34
	WAVelength	LIST?					35
STATus?							36
WAVelength	LIST?						37

Product-Specific Commands—Description

:CONFigure:LM:CHANnel	
Description	This command specifies the channel number of the LM that is currently selected (from the group of MS12-PM01 modules).
Syntax	:CONFigure:LM:CHANnel<wsp><Channel>
Parameter(s)	*Channel:* The program data syntax for <Channel> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element. Corresponds to the channel number of the LM module that is currently selected (from the group of MS12-PM01 modules). By default, this value is set to 1, which corresponds to the measurement channel of an LM that is part of an MS12 module.

:CONFigure:LM:CHANnel?

Description	This query returns the channel number of the LM that is currently selected (from the group of MS12-PM01 modules).
Syntax	:CONFigure:LM:CHANnel?
Parameter(s)	None
Response Syntax	<Channel>
Response(s)	*Channel:* The response data syntax for <Channel> is defined as a <NR1 NUMERIC RESPONSE DATA> element. Returns the channel number of the LM that is currently selected (from the group of MS12-PM01 modules).

:CONFigure:POWer:LEVel

Description	This command specifies the new power level coefficient that will be associated with the RM that is currently selected (from the group of MS12 modules) and with the LM that is currently selected (from the group of MS12-PM01 modules), for the wavelength that is currently selected.
Syntax	:CONFigure:POWer:LEVel<wsp><PowerLevel>
Parameter(s)	*PowerLevel:* The program data syntax for <PowerLevel> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element. Represents the new power level coefficient corresponding to the RM and LM that are currently selected, for the current wavelength.

:CONFigure:WAVelength

Description	This command specifies the wavelength, in meters (m), for the RM that is currently selected (from the group of MS12 modules).
Syntax	:CONFigure:WAVelength<wsp><Wavelength>
Parameter(s)	*Wavelength:* The program data syntax for <Wavelength> is defined as a <NONDECIMAL NUMERIC PROGRAM DATA> element. Corresponds to the wavelength, in meters (m), for the RM that is currently selected.

:CONFigure:WAVelength?

Description	This query returns the current wavelength, in meters (m), for the RM that is currently selected (from the group of MS12 modules).
Syntax	:CONFigure:WAVelength?
Parameter(s)	None
Response Syntax	<Wavelength>
Response(s)	*Wavelength:* The response data syntax for <Wavelength> is defined as a <NR3 NUMERIC RESPONSE DATA> element. Returns the current wavelength, in meters (m), for the RM that is currently selected (from the group of MS12 modules).

:DEFine:LM:GROup?

Description	This query returns a list of the serial numbers of all LM modules that are part of the MS12-PM01 modules group.
Syntax	:DEFine:LM:GROup?
Parameter(s)	None
Response Syntax	<LmSerialNumberList>
Response(s)	*LmSerialNumberList:* The response data syntax for <LmSerialNumberList> is defined as a <DEFINITE LENGTH ARBITRARY BLOCK RESPONSE DATA> element. Returns a list of the serial numbers of all LM modules that are part of the MS12-PM01 module group.

:DEFine:LM:GROup:ADD	
Description	This command adds an LM to the group of MS12-PM01 modules. This group will be taken into account during the initialization.
Syntax	:DEFine:LM:GROup:ADD<wsp><LmPosition>
Parameter(s)	*LmPosition:* The program data syntax for <LmPosition> is defined as a <STRING PROGRAM DATA> element. Corresponds to the unit and slot number of the LM. Always begin with 0.0..
Example(s)	DEF:LM:GROU:ADD 0.0.1.0

:DEFine:RM:GROup?

Description	This query returns a list of the serial numbers of all RM modules that are part of the group of MS12 modules.
Syntax	:DEFine:RM:GROup?
Parameter(s)	None
Response Syntax	<RmSerialNumberList>
Response(s)	*RmSerialNumberList:* The response data syntax for <RmSerialNumberList> is defined as a <DEFINITE LENGTH ARBITRARY BLOCK RESPONSE DATA> element. Returns a list of the serial numbers of all RM modules that are part of the MS12 module group.

:DEFine:RM:GROup:ADD

Description	This command adds an RM to the group of MS12 modules. This group will be taken into account during the initialization. The LM module that is part of the MS12 will be added to the configuration of the system automatically.
Syntax	:DEFine:RM:GROup:ADD<wsp><RmPosition>
Parameter(s)	*RmPosition:* The program data syntax for <RmPosition> is defined as a <STRING PROGRAM DATA> element. Corresponds to the unit and slot number of the RM. Always begin with 0.0..
Example(s)	DEF:RM:GROU:ADD 0.0.1.1

:DELete:LM:GROup

Description	This command deletes the group of MS12-PM01 modules.
Syntax	:DELete:LM:GROup
Parameter(s)	None

:DELete:RM:GROup

Description	This command deletes the group of MS12 modules.
Syntax	:DELete:RM:GROup
Parameter(s)	None

:DIAGnostic:WAVelength

Description	This command specifies the wavelength, in meters (m) to be used for manual operation. It will dictate the RM and LM which will be used by the LASer command.
Syntax	:DIAGnostic:WAVelength<wsp><Wavelength>
Parameter(s)	*Wavelength:* The program data syntax for <Wavelength> is defined as a <NONDECIMAL NUMERIC PROGRAM DATA> element. Corresponds to the wavelength, in meters (m), used in manual operation.
Example(s)	DIAG:WAV 1.625e-6

:DIAGnostic:WAVelength?

Description	This query returns the current wavelength, in meters (m), to be used for manual operation.
Syntax	:DIAGnostic:WAVelength?
Parameter(s)	None
Response Syntax	<Wavelength>
Response(s)	*Wavelength:* The response data syntax for <Wavelength> is defined as a <NR3 NUMERIC RESPONSE DATA> element. Returns the current wavelength, in meters (m), used in manual operation.

:DIAGnostic:LASer

Description	This command turns ON or OFF the laser selected by the DIAGnose:WAVelength command.
Syntax	:DIAGnostic:LASer<wsp><State>
Parameter(s)	*State:* The program data syntax for <State> is defined as a <Boolean Program Data> element. The <State> special forms ON and OFF are accepted on input for increased readability. ON corresponds to 1 and OFF corresponds to 0. The <State> parameter enables or disables the laser used in manual operation 1 or ON, turns it on. 0 or OFF, turns it off.
Example(s)	DIAG:LAS ON DIAG:LAS 1 DIAG:LAS OFF DIAG:LAS 0

:DIAGnostic:LASer?

Description	This query returns the ON/OFF Status of the laser selected by the DIAGnose:WAVelength command.
Syntax	:DIAGnostic:LASer?
Parameter(s)	None
Response Syntax	<State>
Response(s)	*State:* The response data syntax for <State> is defined as a <NR3 NUMERIC RESPONSE DATA> element. Returns the ON/OFF State of the laser used in manual operation.

:DIAGnostic:POWer?

Description	This query returns the power measured from the LM used in manual operation in dB.
Syntax	:DIAGnostic:POWer?
Parameter(s)	None
Response Syntax	<Power>
Response(s)	*Power:* The response data syntax for <Power> is defined as a <NR3 NUMERIC RESPONSE DATA> element. Returns the power in dB from the LM used in manual operations.
Example(s)	DIAG:WAV 1.49e-6 DIAG:LAS ON DIAG:POW? DIAG:LAS OFF

:DIAGnostic:IOR

Description	This command overrides the default IOR values. A wavelength specific default IOR value is applied when the CONF:WAV command is issued. The default value is editable in the acquisition tab of the MS12001 application.
Syntax	:DIAGnostic:IOR<wsp><RefractionIndex>
Parameter(s)	*RefractionIndex:* The program data syntax for <RefractionIndex> is defined as a <NONDECIMAL NUMERIC PROGRAM DATA> element. Corresponds to the index of refraction for the currently selected wavelength.
Example(s)	CONF:WAV 1.625e-6 DIAG:IOR 1.4802

:DIAGnostic:IOR?

Description	This query returns the current IOR value used by the RM.
Syntax	:DIAGnostic:IOR?
Parameter(s)	None
Response Syntax	<RefractionIndex>
Response(s)	*RefractionIndex:* The response data syntax for <RefractionIndex> is defined as a <NR3 NUMERIC RESPONSE DATA> element. Returns the current index of refraction value.

:FETCh:POWer:LEVel?

Description	This query returns the power level coefficient that is associated with the RM that is currently selected (from the group of MS12 modules) and with the LM that is currently selected (from the group of MS12-PM01 modules), for the current wavelength.
Syntax	:FETCh:POWer:LEVel?
Parameter(s)	None
Response Syntax	<PowerLevel>
Response(s)	*PowerLevel:* The response data syntax for <PowerLevel> is defined as a <NR3 NUMERIC RESPONSE DATA> element. Returns the power level coefficient that is associated with the RM and LM that are currently selected, for the current wavelength.

:INITialize

Description	This command starts the initialization of the modules that are associated with the system configuration. This operation is asynchronous because the initialization of all the modules (from the MS12 and MS12-PM01 groups) takes a few minutes. You should ensure that the status of the instrument switches from BUSY to READY, using the STATus? query.
Syntax	:INITialize
Parameter(s)	None

:LM:SELect

Description	This command selects an LM (from the group of MS12-PM01 modules) using its serial number.
Syntax	:LM:SELect<wsp><LmSerialNumber>
Parameter(s)	*LmSerialNumber:* The program data syntax for <LmSerialNumber> is defined as a <STRING PROGRAM DATA> element. Corresponds to the serial number of the LM that will be selected (from the group of MS12-PM01 modules).

:LM:SELect?

Description	This query returns the serial number of the LM that is currently selected (from the group of MS12-PM01 modules).
Syntax	:LM:SELect?
Parameter(s)	None
Response Syntax	<LmSerialNumber>
Response(s)	*LmSerialNumber:* The response data syntax for <LmSerialNumber> is defined as a <STRING RESPONSE DATA> element. Returns the serial number of the LM that is currently selected (from the group of MS12-PM01 modules).

:MEASure:POWer:LEVel

Description	This command determines the power level coefficient and configures it automatically. This coefficient will be used only when performing IL measurements on singlemode fibers. The measurement will be performed according to the selected RM (from the MS12 module group) and the selected LM (from the MS12-PM01 module group), at the selected wavelength. Important: You must connect the RM directly to the LM and use a special fiber to perform the measurement.
Syntax	:MEASure:POWer:LEVel
Parameter(s)	None

:READ:COMPonent:POSition?

Description

This command calculates the distance between the A connector and the component position, identified as C point. This service is only applicable when doing component testing measurements.

Syntax

:READ:COMPonent:POSition?<wsp><Mtj1Il>,<Mtj1Length>

Parameter(s)

➤ *Mtj1Il:*

The program data syntax for <Mtj1Il> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element.

Corresponds to the insertion loss (IL) of the Master Test Jumper 1 (MTJ1), in decibels (dB).

➤ *Mtj1Length:*

The program data syntax for <Mtj1Length> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element.

Corresponds to the length of the Master Test Jumper 1 (MTJ1), in meters (m).

Response Syntax

<Length>

Response(s)

Length:

The response data syntax for <Length> is defined as a <NR3 NUMERIC RESPONSE DATA> element.

Returns the distance between the A connector and the compenent under test, in meters (m).

:READ:IL?

Description	This command measures the insertion loss (IL) of singlemode or multimode fibers. The measurement will be performed according to the selected RM (from the MS12 module group) and the selected LM (from the MS12-PM01 module group), at the selected wavelength. When the measurements are performed on singlemode fibers, the power level coefficient will also be taken into account.
Syntax	:READ:IL?
Parameter(s)	None
Response Syntax	<IL>
Response(s)	*IL:* The response data syntax for <IL> is defined as a <NR3 NUMERIC RESPONSE DATA> element. Returns the insertion loss value, in decibels (dB).

:READ:INTermal:REFLectance?

Description	This query returns the internal reflectance value of the module. This value will be taken into account when performing reflectance measurements on multimode fibers.
Syntax	:READ:INTermal:REFLectance?<wsp><IL>
Parameter(s)	*IL:* The program data syntax for <IL> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element. Corresponds to the insertion loss (IL), in decibels (dB).
Response Syntax	<Reflectance>
Response(s)	*Reflectance:* The response data syntax for <Reflectance> is defined as a <NR3 NUMERIC RESPONSE DATA> element. Returns the internal reflectance value of the module for a multimode fiber.

:READ:LENGth?

Description	This command measures the fiber length between the RM and LM. The measurement will be performed according to the selected RM (from the group of MS12 modules) and LM (from the group of MS12-PM01 modules), at the selected wavelength.
Syntax	:READ:LENGth?<wsp><IL>
Parameter(s)	*IL:* The program data syntax for <IL> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element. Corresponds to the insertion loss (IL), in decibels (dB).
Response Syntax	<Length>
Response(s)	*Length:* The response data syntax for <Length> is defined as a <NR3 NUMERIC RESPONSE DATA> element. Returns the length, in meters (m).

:READ:MM:REFLectance?

Description

This command measures the reflectance on a multimode fiber. The measurement will be performed according to the selected RM (from the group of MS12 modules) and LM (from the group of MS12-PM01 modules), at the selected wavelength.

Syntax

:READ:MM:REFLectance?<wsp><IL>,<Internal Reflectance>,<Length>

Parameter(s)

➤ *IL:*

The program data syntax for <IL> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element.

Corresponds to the insertion loss (IL), in decibels (dB).

➤ *InternalReflectance:*

The program data syntax for <InternalReflectance> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element.

Corresponds to the internal reflectance value of the module that was determined using the READ:INTernal:REFLectance? query during the configuration process. This value is expressed in decibels (dB).

➤ *Length:*

The program data syntax for <Length> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element.

Corresponds to the distance, in meters (m), at which you want to perform the reflectance measurement.

Response Syntax

<Reflectance>

Response(s)

Reflectance:

The response data syntax for <Reflectance> is defined as a <NR3 NUMERIC RESPONSE DATA> element.

Returns the reflectance value on the multimode fiber, in decibels (dB).

:READ:SM:REFLectance?

Description

This command measures the reflectance on a singlemode fiber. The measurement will be performed according to the selected RM (from the group of MS12 modules) and LM (from the group of MS12-PM01 modules), at the selected wavelength.

Syntax

:READ:SM:REFLectance?<wsp><IL>,<Length>

Parameter(s)

➤ *IL:*

The program data syntax for <IL> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element.

Corresponds to the insertion loss (IL), in decibels (dB).

➤ *Length:*

The program data syntax for <Length> is defined as a <DECIMAL NUMERIC PROGRAM DATA> element.

Corresponds to the distance, in meters (m), at which you want to perform the reflectance measurement.

Response Syntax

<Reflectance>

Response(s)

Reflectance:

The response data syntax for <Reflectance> is defined as a <NR3 NUMERIC RESPONSE DATA> element.

Returns the reflectance value on the singlemode fiber at the desired distance. The value is expressed in decibels (dB).

:RM:SELect

Description	This command selects an RM (from the group of MS12 modules), using its serial number.
Syntax	:RM:SELect<wsp><RmSerialNumber>
Parameter(s)	*RmSerialNumber:* The program data syntax for <RmSerialNumber> is defined as a <STRING PROGRAM DATA> element. Corresponds to the serial number of the RM that will be selected (from the group of MS12 modules).

:RM:SELect?

Description	Retourne le numÈro de sÈrie du RM actuellement sÈlectionÈ dans le groupe des modules MS12. This query returns the serial number of the RM that is currently selected (from the group of MS12 modules).
Syntax	:RM:SELect?
Parameter(s)	None
Response Syntax	<RmSerialNumber>
Response(s)	*RmSerialNumber:* The response data syntax for <RmSerialNumber> is defined as a <STRING RESPONSE DATA> element. Returns the serial number of the RM that is currently selected.

:RM:SNUMber?

Description	This query returns the serial number of the RM whose wavelength corresponds to the wavelength that is passed as a parameter.
Syntax	:RM:SNUMber?<wsp><Wavelength>
Parameter(s)	*Wavelength:* The program data syntax for <Wavelength> is defined as a <NONDECIMAL NUMERIC PROGRAM DATA> element. Corresponds to the wavelength, in meters (m).
Response Syntax	<RmSerialNumber>
Response(s)	*RmSerialNumber:* The response data syntax for <RmSerialNumber> is defined as a <STRING RESPONSE DATA> element. Returns the serial number of the RM.

:RM:WAVelength:LIST?

Description	This query returns a list of wavelengths at which the instrument will be able to perform a measurement, according to the RM module that is currently selected.
Syntax	:RM:WAVelength:LIST?
Parameter(s)	None
Response Syntax	<Wavelengths>
Response(s)	*Wavelengths:* The response data syntax for <Wavelengths> is defined as a <NR3 NUMERIC RESPONSE DATA> element. Returns a list of the wavelengths at which the instrument will be able to perform measurements according to the currently selected RM.

:STATus?

Description	This query returns a value indicating the status of the switch (READY, BUSY, etc.). This command is an event and has no associated *RST condition or query form.
Syntax	:STATus?
Parameter(s)	None
Response Syntax	<Status>
Response(s)	*Status:* The response data syntax for <Status> is defined as a <CHARACTER RESPONSE DATA> element. The <Status> response represents the module state, where: UNINITIALIZED, means the module is not initialized. INITINPROGRESS, means the module initialization is in progress, READY, means the module is ready, BUSY, means the module is busy, DISCONNECTED, means the module is disconnected, DEFECTIVE, means the module is defective and UNCONFIGURED, means the module is not configured.

:WAVelength:LIST?

Description	This query returns a list of the wavelengths that are available, based on the MS12 modules that were used during the initialization.
Syntax	
Parameter(s)	None
Response Syntax	
Response(s)	*Wavelengths:*