





FMI-5 Operator Panel – Moisture Content Measurement and Result				
Function	FMI-5 30 (Eco)	FMI-5 60 (Base)	FMI-5 300M (Pro)	FMI-5 300MA (Elite)
				
<b>MOISTURE MEASUREMENT</b>				
Contact free moisture content measurement	V	V	V	V
Non-destructive measurement	V	V	V	V
Digital display	V	V	V	V
Moisture range 2-30% (dry-sorting)	V	V	V	V
Moisture range 30-250% (pre-sorting)			O	O
Resolution in % (absolute value)	0.1	0.1	0.1	0.1
Accuracy in % (absolute value, measured on reference material)	0.2	0.2	0.2	0.2
Repeatability in % (absolute value, measured on reference material)	0.2	0.2	0.2	0.2
Measurement according to EN 13181-3	V	V	V	V
Measurement on spruce and pine approved to EN 14080:2013, EN15497:2014 and EN16351:2015 <sup>1</sup>			O	O
<b>MEASUREMENT RESULTS</b>				
Average moisture content per board	V	V	V	V
Peak moisture content per board	V	V	V	V
Average + Peak moisture content per board			V	V
Realtime + Average moisture content per board (L-Type sensors only) <sup>2</sup>			V	V
Realtime + Average moisture content per board (Layer function only) <sup>3</sup>			V	V

**Type number**

- 5 ..... Type of FMI operating panel
- 30, 60, 300 ..... Maximum throughput in boards/minute
- M ..... Multiple level
- A ..... Advanced functionality





**Legend**

- "V" included
- "O" option

<sup>1</sup> Other species on request

<sup>2</sup> Output Row<sub>A</sub> = real-time moisture content; Output Row<sub>B</sub> is average moisture content





<sup>3</sup> Output Row<sub>A</sub> = real-time moisture content; Output Row<sub>B</sub> is average moisture content





FMI-5 Operator Panel – Measurement Functions				
Function	FMI-5 30 (Eco)	FMI-5 60 (Base)	FMI-5 300M (Pro)	FMI-5 300MA (Elite)
				
<b>MOISTURE MEASUREMENT FUNCTIONS</b>				
Maximum speed (L-type sensor)	50 m/min	150 m/min	1200 m/min	1200 m/min
	165 ft/min	500 ft/min	4000 ft/min	4000 ft/min
Maximum throughput (either sensor type)	30 pieces/min	60 pieces/min	300 pieces/min	300 pieces/min
Maximum L-type sensors per Operator Panel	1	1	1	1
Maximum X-type sensors per Operator Panel	1	2	6	10
External input cable (X-type sensors only) <sup>4</sup>			0	0
Board-by-board (X-type and L-type sensors)	V	V	V	V
Layer – AVG, Peak and Real-Time (X-type sensors only) <sup>5</sup>			0	0
Layer – External trigger (X-type sensors only) <sup>6</sup>			0	0

<sup>4</sup> Cable length 5 m (17 ft) or 30 m (100 ft)

<sup>5</sup> Layer includes multiple X-type sensors and average, peak or real-time measurement and optional accessories





<sup>6</sup> Layer includes multiple X-type sensors and average, peak or real-time measurement and optional accessories





FMI-5 Operator Panel – Product Settings					
Function		FMI-5 30 (Eco)	FMI-5 60 (Base)	FMI-5 300M (Pro)	FMI-5 300MA (Elite)
					
<b>PRODUCT SETTINGS</b>					
Adjustable sensitivity for knot, wet spot and finger joint suppression [mm]		V	V	V	V
Calibration	Manually	V	V	V	V
	Automatically	V	V	V	V
	Optimization	V	V	V	V
Density	Pre-set, per batch	V	V	V	V
	Automatically, per batch			V	V
Width	Pre-set, per batch	V	V	V	V
	Automatically, per batch			V	V
Thickness	Pre-set, per batch	V	V	V	V
	Automatically, per batch			V	V
Temperature	Pre-set, automatically per batch	V	V	V	V
	Automatically, per batch			V	V

FMI-5 Operator Panel – Input / Output				
Function	FMI-5 30 (Eco)	FMI-5 60 (Base)	FMI-5 300M (Pro)	FMI-5 300MA (Elite)
				
<b>DIGITAL INPUT</b>				
Digital input "zeroing"			V	V
Digital input "start/stop measuring"			V	V
<b>DIGITAL OUTPUT WITH ADJUSTABLE "ACTIVE TIME" (10-2000MS)<sup>7</sup></b>				
Digital output "watch-dog"	V	V	V	V
Digital output "measurement active"			V	V
Digital output "alarm"			V	V
Digital output "too wet"	V	V	V	V
Digital output "too dry / too wet"		V	V	V
Digital output "too dry / ok / too wet"			V	V
Digital output "too dry / dry / ok / wet / too wet"			V	V
<b>DIGITAL OUTPUT WITH ADJUSTABLE "DELAY TIME" AND "ACTIVE TIME" (10-2000MS)<sup>8</sup></b>				
Digital output "too wet" to marker or signal tower stack light	V	V	V	V
Digital output "too dry / too wet" to marker or signal tower stack light		V	V	V
Digital output "too dry / ok / too wet" to marker or signal tower stack light			V	V
Digital output "too dry / dry / ok / wet / too wet" to marker or signal tower stack light			V	V

<sup>7</sup> Output Row<sub>A</sub>; Solid State transistor output









<sup>8</sup> Output Row<sub>B</sub>; 24VDC, 200mA transistor output

FMI-5 Operator Panel – Communication				
Function	FMI-5 30 (Eco)	FMI-5 60 (Base)	FMI-5 300M (Pro)	FMI-5 300MA (Elite)
				
<b>COMMUNICATION</b>				
RS 232 interface			O	V
RS 485 interface			O	V
Ethernet interface	V	V	V	V

FMI-5 Operator Panel – Features				
Function	FMI-5 30 (Eco)	FMI-5 60 (Base)	FMI-5 300M (Pro)	FMI-5 300MA (Elite)
				
<b>SERVICE<sup>9</sup></b>				
Remote client	V	V	V	V
Software updates	V	V	V	V
System information	V	V	V	V
<b>COMMUNICATION</b>				
Protocol #4, MC result and product selection (9600, 8, n, 1)		V	V	V
Protocol #5, MC result per x sensor and product selection (9600, 8, n, 1)		V	V	V
Protocol #6, MC result and product selection (2400, 8, n, 1)		V	V	V
Protocol #8 mpaBATCH (38400, 8, n, 1)			V	V
Protocol #12 FMI Report (38400, 8, n, 1)		V	V	V
<b>PC SOFTWARE</b>				
mpaBATCH datalogging and reporting software with automatic density, width and thickness settings per board			O	V
<b>OPERATOR PANEL</b>				
7" Touchscreen full-colour display	V	V	V	V
Multiple languages <sup>10</sup>	V	V	V	V
Single access code	V	V		
Multiple access codes			V	V
Memory backup	V	V	V	V
Supply voltage 100~240VAC - 1.4A - 50/60Hz	V	V	V	V
Operating temperature 0~50°C / 32~122°F (non-condensing)	V	V	V	V
Dimensions	380x380x240mm	380x380x240mm	380x380x240mm	380x380x240mm
	15"x15"x10"	15"x15"x10"	15"x15"x10"	15"x15"x10"
Weight	13.6 kg	13.6 kg	13.6 kg	13.6 kg
	30 lbs	30 lbs	30 lbs	30 lbs

<sup>9</sup> Contract either 3 or 5-year, fix fee per year

<sup>10</sup> CS, DA, DE, FR, EN, ES, ET, FI, ID, IT, LV, NL, NO, PL, PT, RO, RU, SV, TR, VI, ZH

FMI Sensors								
Description	X101-X	X401	X601	X101-L	L101C	L101	L151	L201
								
Wood transport	Transversal	Transversal	Transversal	Longitudinal	Longitudinal	Longitudinal	Longitudinal	Longitudinal
Photocells to detect wood	1 included	1 integrated	1 integrated	2 included	2 included	2 included	2 included	2 included
Photocells by customer	O			O	O	O	O	O
Minimum wood length <sup>11</sup>	200mm	600mm	800mm	150mm	250mm	300mm	350mm	450mm
	8"	24"	32"	6"	10"	12"	14"	18"
Minimum wood width <sup>12</sup>	20mm	30mm	30mm	20mm	30mm	30mm	40mm	50mm
	0.8"	1.2"	1.2"	0.8"	1.2"	1.2"	1.6"	2.0"
Wood thickness	5~50mm	10~150mm	10~150mm	5~50mm	10~100mm	10~100mm	20~150mm	50~200mm
	0.2-2.0"	0.4-6"	0.4-6"	0.2-2.0"	0.4-4"	0.4-4"	0.8-6.0"	2.0-8.0"
Wood moisture measuring direction	Width	Width	Width	Length	Length	Length	Length	Length
Measuring spot	100mm	250mm	2 x 250mm	100mm	150mm	150mm	150mm	150mm
	4"	10"	2 x 10"	4"	6"	6"	6"	6"
Variable wood width within batch from	50mm	100mm	100mm	150mm	250mm	300mm	300mm	300mm
	2"	4"	4"	6"	10"	10"	12"	12"
Microprocessor controlled	V	V	V	V	V	V	V	V
Drift free sensor electronics	V	V	V	V	V	V	V	V
Number of measurements per second	500	500	500	500	500	500	500	500
High speed digital communication	V	V	V	V	V	V	V	V
Reference block with calibration report	V	V	V	V	V	V	V	V
Maximum sensor cable length from Operator Panel to L-type sensor or last X-type sensor	50 m	50 m	50 m	50 m	50 m	50 m	50 m	50 m
	164 ft	164 ft	164 ft	164 ft	164 ft	164 ft	164 ft	164 ft
Operating temperature -20~50°C -4~122°F (noncondensing)	V	V	V	V	V	V	V	V
Heavy duty industrial housing	Steel, powder coated	Steel, powder coated	Steel, powder coated	Steel, powder coated	Steel, powder coated	Steel, powder coated	Steel, powder coated	Steel, powder coated
Dimensions		400x200x100 mm	600x200x100 mm		615x365x290 mm	615x365x290 mm	615x365x340 mm	615x365x390 mm
		16x8x4"	24x8x4"		24x14x11"	24x14x11"	24x14x13"	24x14x15"
Weight		8.3 kg	11.4 kg			26 kg	27 kg	28 kg
		18 lbs	25 lbs			57 lbs	59 lbs	62 lbs

<sup>11</sup> The minimum board length is dependent on the cross section of the wood and the maximum board speed, all in respect to the minimum measuring time of 10ms per board.

<sup>12</sup> The minimum board width is dependent on the maximum board speed in respect to the minimum measuring time of 10ms per board.