MCTS II
Multi Channel Current Transducer System

Specifications

SIGNALTEC GmbH, Reutersbrunnenstrasse 27, D-90429 Nürnberg, GERMANY, T. +49 911 2550993-0, F. +49 911 2550993-13, Email: info@signaltec.com, Web: www.signaltec.com

Transducer Specifications

Transducers with rms-range

Newer LEM transducer types of the IT xx5-S series and the IN series are specified for a maximum rms-range.

Type	IT 65-S	IT 205-S	IT 405-S	IT 605-S	IN 1000-S	IN 2000-S
						
Current Range **DC** **AC Sinus** **Peak**	 60 A 60 A 85 A	 200 A 200 A 283 A	 400 A 400 A 566 A	 600 A 600 A 845 A	 1000 A 1000 A 1414 A	 2000 A 2000 A 2828 A
100 ms Overload	300 A_{pk}	1000 A_{pk}	2000 A_{pk}	3000 A_{pk}	5000 A_{pk}	10000 A_{pk}
Ratio	600 : 1	1000 : 1	1500 : 1	1500 : 1	1500 :1	2000 : 1
Output Range	0 … 100 mA_{rms}	0 … 200 mA_{rms}	0 … 266.67 mA_{rms}	0 … 400 mA_{rms}	0 … 666.67 mA_{rm}	0 … 1 A_{rms}
Max. Measuring Resistance (Full Range)	50 Ω	20 Ω	15 Ω	5 Ω	4 Ω	3.5 Ω
Bandwidth (-3 dB, Small Signal 0,5 %)	DC … 800 kHz	DC … 1 MHz	DC … 300 kHz	DC … 300 kHz	DC … 440 kHz	DC … 140 kHz
Step Response (0 … 90 %)	1 µs	1 µs	1 µs	1 µs	1 µs	1 µs
Error (of Full Scale)	< 0.033 %	< 0.0103 %	< 0.0059 %	< 0.0039 %	< 0.0012 %	< 0.0012 %
Temp.-Coefficient (of Full Scale)	< 2.5 ppm/K	< 1 ppm/K	< 1 ppm/K	< 1 ppm/K	< 0.3 ppm/K	< 0.1 ppm/K
Frequency Influence* (of Measured Value)	< 0.025 %/kHz	< 0.1 %/kHz	< 0.175 %/kHz	< 0.3 %/kHz	< 0.1 %/kHz	< 0.1 %/kHz
Angular Accuracy*	< 0.01 ° + 0.02 °/kHz	< 0.01 ° + 0.075 °/kHz	< 0.01 ° + 0.08 °/kHz	< 0.01 ° + 0.175 °/kHz	< 0.01 ° + 0.05 °/kHz	< 0.01 ° + 0.075 °/kHz
Temperature Range	-40 … 85 °C	-40 … 85 °C	-40 … 85 °C	-40 … 85 °C	-40 … 85 °C	-40 … 85 °C
Test Voltage 50 Hz	5.4 kV	5.4 kV	4.6 kV	4.6 kV	4.2 kV	6 kV
Inner Diameter	26 mm	26 mm	30 mm	30 mm	38 mm	70 mm
Mass	0.33 kg	0.35 kg	1.08 kg	1.08 kg	1.3 kg	4.2 kg
Link to LEM Data Sheet for detailed Specifications	IT 65-S	IT 205-S	IT 405-S	IT 605-S	IN 1000-S	IN 2000-S

* Verified with 50 Arms, DC … 10 kHz

Transducers with peak-range

Older LEM transducer types of the IT xx0-S series are specified for a maximum DC-range. They can be used up to the equal AC-rms-range by using a limited burden resistor.

Type	IT 60-S	IT 200-S	IT 400-S	IT 700-S	IT 1000-S/SP1
					
Current Range **DC** **AC Sinus** **Peak**	 60 A 42 A 60 A	 200 A 141 A 200 A	 400 A 282 A 400 A	 700 A 495 A 700 A	 1000 A 707 A 1000 A
100 ms Overload	300 A_{pk}	1000 A_{pk}	2000 A_{pk}	3500 A_{pk}	4000 A_{pk}
Ratio	600 : 1	1000 : 1	2000 : 1	1750 : 1	1000 : 1
Output Range	0 … 100 mA_{pk}	0 … 200 mA_{pk}	0 … 200 mA_{pk}	0 … 400 mA_{pk}	0 … 1000 mA_{pk}
Max. Measuring Resistance (Full Range)	60 Ω	30 Ω	2.5 Ω	2.5 Ω	3 Ω
Bandwidth (-3 dB, Small Signal 0,5 %)	DC … 800 kHz	DC … 500 kHz	DC … 500 kHz	DC … 100 kHz	DC … 500 kHz
Step Response (0 … 90 %)	1 µs	1 µs	1 µs	1 µs	1 µs
Error (of Full Scale)	< 0.027 %	< 0.0083 %	< 0.0043 %	< 0.0053 %	< 0.0053 %
Temp.-Coefficient (of Full Scale)	< 2.5 ppm/K	< 2 ppm/K	< 1 ppm/K	< 0.5 ppm/K	< 0.5 ppm/K
Frequency Influence* (of Measured Value)	< 0.025 %/kHz	< 0.075 %/kHz	< 0.05 %/kHz	< 0.1 %/kHz	< 0.3 %/kHz
Angular Accuracy (DC … 10 kHz)	< 0.01 ° + 0.05 °/kHz	< 0.01 ° + 0.075 °/kHz	< 0.01 ° + 0.075 °/kHz	< 0.01 ° + 0.12 °/kHz	< 0.015 ° + 0.15 °/kHz
Temperatur Range	10 … 50 °C	10 … 50 °C	10 … 50 °C	10 … 50 °C	10 … 50 °C
Test Voltage 50 Hz	5.4 kV	5.4 kV	5.4 kV	4.6 kV	3.1 kV
Inner Diameter	26 mm	26 mm	26 mm	30 mm	30 mm
Mass	0.3 kg	0.3 kg	0.3 kg	0.8 kg	1 kg
Link to LEM Data Sheet for detailed Specifications	IT 60-S	IT 200-S	IT 400-S	IT 700-S	IT 1000-S/SP1

* Verified with 50 Arms, DC … 10 kHz

SIGNALTEC GmbH, Reutersbrunnenstrasse 27, D-90429 Nürnberg, GERMANY, T. +49 911 2550993-0, F. +49 911 2550993-13, Email: info@signaltec.com, Web: www.signaltec.com

Rack Specifications

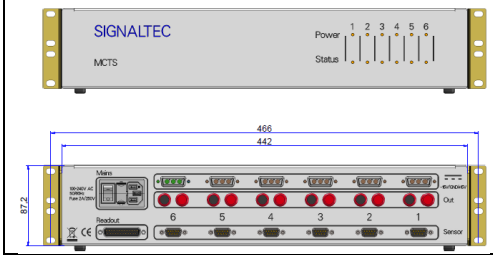
Features

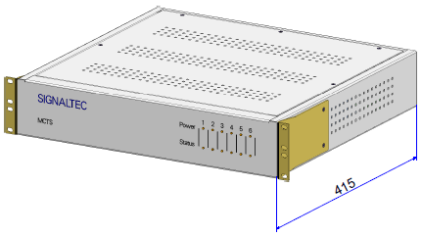
- Modular system for up to six transducer power supply channels
- Galvanic separation between channels
- Standard transducer status readout interface
- Supply voltage for active burden modules
- 19”-rack mountable device

Front

Rear

Dimensions





Cabinet Width:	442 mm (19” rack type)
Cabinet Height:	87,2 mm (2 HU)
Cabinet Depth:	415 mm
Mass Basic Unit:	6.8 kg
Mass Internal power supply:	0.5 kg
Mass 19” mounting brackets:	0.5 kg

General Data

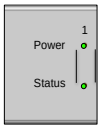
Operation Temperature:	-10 … 60 ºC
Operation Humidity:	20 … 90 % RH, noncondensing
Warranty period:	36 Months

Electrical Data

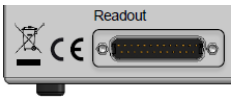
Supply voltage:	100-240 VAC, 50/60 Hz, fused with 6 A slow blow
Output voltages:	+ 15 V_{DC}, 3.4 A_{max} / -15 V_{DC}, 2.0 A_{max}
Max. Power Consumption:	The maximum power consumption depends on the number of channels installed, the number of transducers connected and the current consumption of each transducer. The maximum power consumption of a six channel MCTS with transducers IN 2000-S at 2000 A_{rms} primary current is around 175 W.

Power and Transducer Status Functions

The channel and transducer status is visible on the MCTS front panel and can be read out via the Status-Readout Interface



Power LED green:	Channel installed
Power LED off:	Channel not installed
Status LED green:	Transducer ok
Status LED red:	Transducer overload or open output



Status-Readout-Interface

This interface gives out the transducer status by means of potential free relay contacts.

Switching voltage: 200 V
Switching current: 2 A

A status readout cable is available as an option.

DC-voltage output for active burden modules

Especially the current transducers for higher primary current levels are not able to drive much more than 1 V at the output. If this is enough, our passive plug-on burden resistors are the right solution to get a mV/A-signal out of the sensor. If the connected measurement instrument demands a higher voltage signal level, our active plug-on voltage modules are the right solution. These deliver 7 V_{rms} (9.9 V_{pk}) at transducer nominal primary current.

SIGNALTEC GmbH, Reutersbrunnenstrasse 27, D-90429 Nürnberg, GERMANY, T. +49 911 2550993-0, F. +49 911 2550993-13, Email: info@signaltec.com, Web: www.signaltec.com

Optional Burden Modules

The transducer system delivers the transducer output current at the 4 mm output terminals on the back panel of the rack. For those instruments that don't have current input terminals, optional high precision passive and active plug-on burden modules with very low phase angle error are available. The active voltage output modules are supplied by the MCTS rack with a 3-pole D-SUB connector.

Passive plug-on burden resistors

Passive plug-on burden resistors are available from 1 Ω to 50 Ω. The burden resistor is limited by the transducer and the length of the connection cable. For higher output voltages active plug-on burden amplifiers are available.

Order Number	Resistance Value	Accuracy	Max. Output Voltage	Bandwidth	Phase Error	Load Influence
MCTS/BR1/0.02	1 Ω	0.02 % of MV	1.00 V_{rms} @ 1000 mA_{rms}	> 1 MHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/BR1.5/0.02	1.5 Ω	0.02 % of MV	1.00 V_{rms} @ 667 mA_{rms}	> 1 MHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/BR2.5/0.02	2.5 Ω	0.02 % of MV	1.58 V_{rms} @ 632 mA_{rms}	> 1 MHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/BR3.75/0.02	3.75 Ω	0.02 % of MV	1.94 V_{rms} @ 516 mA_{rms}	> 1 MHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/BR5/0.02	5 Ω	0.02 % of MV	2.24 V_{rms} @ 447 mA_{rms}	> 1 MHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/BR10/0.01	10 Ω	0.01 % of MV	3.16 V_{rms} @ 316 mA_{rms}	> 1 MHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/BR25/0.01	25 Ω	0.01 % of MV	5.00 V_{rms} @ 200 mA_{rms}	> 1 MHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/BR50/0.01	50 Ω	0.01 % of MV	7.07 V_{rms} @ 141 mA_{rms}	> 1 MHz	< 1° @ 100 kHz	< 0.1 ppm/mW

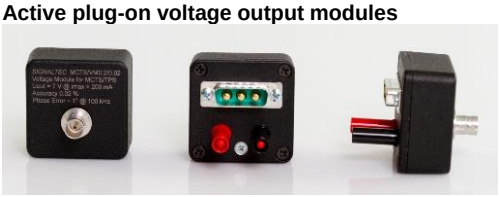
Mechanical Data

Width: 51 mm
Height: 51 mm
Depth: 62 mm (Connectors included)
Mass: 85 g

Resulting scaling with passive burden resistors

Transducer	Passive BR	Scaling	Output Voltage
IT 60-S	MCTS/BR50/0.01	83.333 mV/A	5.000 V_{pk} @ 60 A_{pk}
IT 200-S	MCTS/BR25/0.01	25.000 mV/A	5.000 V_{pk} @ 200 A_{pk}
IT 400-S	MCTS/BR1/0.02	0.500 mV/A	0.200 V_{pk} @ 400 A_{pk}
IT 700-S	MCTS/BR1/0.02	0.571 mV/A	0.400 V_{pk} @ 700 A_{pk}
IT 1000-S/SP1	MCTS/BR1/0.02	1.000 mV/A	1.000 V_{pk} @ 1000 A_{pk}
IT 65-S	MCTS/BR25/0.01	41.667 mV/A	2.500 V_{rms} @ 60 A_{rms}
IT 205-S	MCTS/BR10/0.01	10.000 mV/A	2.000 V_{rms} @ 200 A_{rms}
IT 405-S	MCTS/BR10/0.01	6.667 mV/A	2.667 V_{rms} @ 400 A_{rms}
IT 605-S	MCTS/BR2.5/0.02	1.667 mV/A	1 V_{rms} @ 600 A_{rms}
IN 1000-S	MCTS/BR1.5/0.02	1.000 mV/A	1 V_{rms} @ 1000 A_{rms}
IN 2000-S	MCTS/BR1/0.02	0.500 mV/A	1 V_{rms} @ 2000 A_{rms}

Active plug-on voltage output modules



The output voltage level the transducer can drive is limited. The active plug-on burden modules combine a very precise burden resistor with a highly accurate voltage amplifier. The plug-on burden voltage modules deliver 7 V_{rms} (9.9 V_{pk}) at transducer nominal value.

Order Number	Input Resistance	Accuracy	Max. Output Voltage	Bandwidth	Phase Error	Load Influence
MCTS/VM1/0.02	1 Ω	0.01 % of MV + 0.01 % of MR	7 V_{rms} @ 1000 mA_{rms}	> 300 kHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/VM0.66/0.02	1.5 Ω	0.01 % of MV + 0.01 % of MR	7 V_{rms} @ 667 mA_{rms}	> 300 kHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/VM0.4/0.02	2.5 Ω	0.01 % of MV + 0.01 % of MR	7 V_{rms} @ 400 mA_{rms}	> 300 kHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/VM0.26/0.02	3.75 Ω	0.01 % of MV + 0.01 % of MR	7 V_{rms} @ 267 mA_{rms}	> 300 kHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/VM0.2/0.02	5 Ω	0.01 % of MV + 0.01 % of MR	7 V_{rms} @ 200 mA_{rms}	> 300 kHz	< 1° @ 100 kHz	< 0.1 ppm/mW
MCTS/VM0.1/0.02	10 Ω	0.01 % of MV + 0.01 % of MR	7 V_{rms} @ 100 mA_{rms}	> 300 kHz	< 1° @ 100 kHz	< 0.1 ppm/mW

Mechanical Data

Width: 51 mm
Height: 51 mm
Depth: 62 mm (Connectors included)
Mass: 105 g

Resulting scaling with active burden modules

Transducer	Active VM	Scaling	Output Voltage
IT 60-S	MCTS/VM0.1/0.02	116.667 mV/A	7.000 V_{pk} @ 60 A_{pk}
IT 200-S	MCTS/VM0.2/0.02	35.000 mV/A	7.000 V_{pk} @ 200 A_{pk}
IT 400-S	MCTS/VM1/0.02	3.500 mV/A	1.400 V_{pk} @ 400 A_{pk}
IT 700-S	MCTS/VM1/0.02	4.000 mV/A	2.800 V_{pk} @ 700 A_{pk}
IT 1000-S/SP1	MCTS/VM1/0.02	7.000 mV/A	7.000 V_{pk} @ 1000 A_{pk}
IT 65-S	MCTS/VM0.1/0.02	116.667 mV/A	7.000 V_{rms} @ 60 A_{rms}
IT 205-S	MCTS/VM0.2/0.02	35.000 mV/A	7.000 V_{rms} @ 200 A_{rms}
IT 405-S	MCTS/VM0.26/0.02	17.500 mV/A	7.000 V_{rms} @ 400 A_{rms}
IT 605-S	MCTS/VM0.4/0.02	11.667 mV/A	7.000 V_{rms} @ 600 A_{rms}
IN 1000-S	MCTS/VM0.66/0.02	7.000 mV/A	7.000 V_{rms} @ 1000 A_{rms}
IN 2000-S	MCTS/VM1/0.02	3.500 mV/A	7.000 V_{rms} @ 2000 A_{rms}

SIGNALTEC GmbH, Reutersbrunnenstrasse 27, D-90429 Nürnberg, GERMANY, T. +49 911 2550993-0, F. +49 911 2550993-13, Email: info@signaltec.com, Web: www.signaltec.com

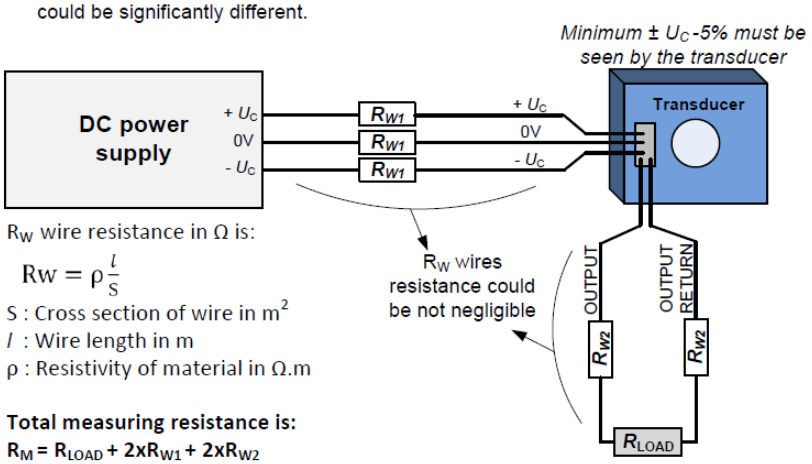
Connection Cables

Connection cables from the MCTS rack to the transducers are available in various cable lengths. Special cable lengths can be manufactured according demand. Be aware that the cable resistance is part of the maximum burden resistance mentioned in the transducer data sheets. The cables are available with two different wire cross sections, 0.34 mm² and 0.75 mm².

Power supply and load

In order to reach the measuring range according to the maximum measuring resistor, be careful with the setup measurement when wires length are high. It means that:

- the wires resistance could be not negligible
- the voltage at the output of the DC power supply and the voltage at the transducer could be significantly different.



R_W wire resistance in Ω is:

$$Rw = \rho \frac{l}{S}$$

S : Cross section of wire in m^2
l : Wire length in m
ρ : Resistivity of material in Ω.m

Total measuring resistance is:
$R_M = R_{LOAD} + 2xR_{W1} + 2xR_{W2}$

If $R_{W1} = R_{W2} = R_{WIRE}$ then $R_M = R_{LOAD} + 4xR_{WIRE}$

Standard Connection Cables

Order Number	Cable Length	Wire Cross Section	Single Wire Resistance	Loop Resistance (4 x R_{WIRE})	Mass
MCTS/TPS/1.5	1.5 m	0.34 mm²	0.08 Ω	0.31 Ω	0.21 kg
MCTS/TPS/2.5	2.5 m	0.34 mm²	0.13 Ω	0.52 Ω	0.28 kg
MCTS/TPS/3	3 m	0.34 mm²	0.16 Ω	0.63 Ω	0.32 kg
MCTS/TPS/5	5 m	0.34 mm²	0.26 Ω	1.05 Ω	0.47 kg
MCTS/TPS/10	10 m	0.34 mm²	0.52 Ω	2.09 Ω	0.84 kg
MCTS/TPS/15	15 m	0.34 mm²	0.79 Ω	3.14 Ω	1.21 kg
MCTS/TPS/20	20 m	0.34 mm²	1.05 Ω	4.19 Ω	1.58 kg
MCTS/TPS/25	25 m	0.34 mm²	1.31 Ω	5.24 Ω	1.95 kg
MCTS/TPS/30	30 m	0.34 mm²	1.57 Ω	6.28 Ω	2.32 kg
MCTS/TPS/5/0.75	5 m	0.75 mm²	0.12 Ω	0.47 Ω	0.65 kg
MCTS/TPS/10/0.75	10 m	0.75 mm²	0.24 Ω	0.95 Ω	1.15 kg
MCTS/TPS/15/0.75	15 m	0.75 mm²	0.36 Ω	1.42 Ω	1.70 kg
MCTS/TPS/20/0.75	20 m	0.75 mm²	0.47 Ω	1.90 Ω	2.30 kg
MCTS/TPS/30/0.75	30 m	0.75 mm²	0.71 Ω	2.85 Ω	3.30 kg

Total Measuring Resistance at Full Scale

Transducer	Measuring Resistance
IT 60-S	60 Ω
IT 200-S	30 Ω
IT 400-S	2.5 Ω
IT 700-S	2.5 Ω
IT 1000-S/SP1	3 Ω
IT 65-S	50 Ω
IT 205-S	20 Ω
IT 405-S	15 Ω
IT 605-S	5 Ω
IN 1000-S	4 Ω
IN 2000-S	3.5 Ω

Maximum Burden Resistor depending on Transducer and Connection Cable

The remaining burden resistance can be calculated by the subtraction of the connection cable loop resistance from the transducer total measuring resistance.

Example IN 1000-S with 15 meters cable 0.34 mm² and 0.75 mm²:
IN 1000-S total measuring resistance: 4 Ω at 1000 A_{rms}
MCTS/TPS/15 loop resistance: 3.14 Ω → Maximum allowed burden resistor = 4 Ω - 3.14 Ω = 0.86 Ω
MCTS/TPS/15/0.75 loop resistance: 1.42 Ω → Maximum allowed burden resistor = 4 Ω - 1.42 Ω = 2.58 Ω

SIGNALTEC GmbH, Reutersbrunnenstrasse 27, D-90429 Nürnberg, GERMANY, T. +49 911 2550993-0, F. +49 911 2550993-13, Email: info@signaltec.com, Web: www.signaltec.com

Accessories

MCTS/CB
Carrying bag for rack, transducers, cables and burden modules

TSC
Transducer soft case for use with carrying bag
TSC1 for IT 60-S, 65-S, 200-S, 205-S, 400-S
TSC2 for IT 405-S, 605-S, 700-S, IN 1000-S
TSC3 for IT 1000-S/SP1
TSC4 for IN 2000-S

MCTS/ROC
18-pole D-SUB-cable for status-readout-interface, length 3 m

BNC4A
BNC to 4 mm banana-plug adapter

BPL0.5
4 mm banana-plug test lead set, length 0.5 m

BPL01
4 mm banana-plug test lead set, length 1 m

BNCL1
BNC to BNC test lead, length 1 m

BNC4L1
BNC to 4 mm banana-plug test lead, length 1 m

Order Numbers

MCTS Racks	
MCTS2/1CH	Basic unit with one internal power supply including 19” mounting brackets, power cord and manual
MCTS2/2CH	Basic unit with two internal power supplies including 19” mounting brackets, power cord and manual
MCTS2/3CH	Basic unit with three internal power supplies including 19” mounting brackets, power cord and manual
MCTS2/4CH	Basic unit with four internal power supplies including 19” mounting brackets, power cord and manual
MCTS2/5CH	Basic unit with five internal power supplies including 19” mounting brackets, power cord and manual
MCTS2/6CH	Basic unit with six internal power supplies including 19” mounting brackets, power cord and manual
MCTS2/BU	Basic unit without internal power supply including 19” mounting brackets, power cord and manual
MCTS/PS	Internal power Supply
Current Transducers	
IT 65-S	AC/DC current transducer 60 A_{rms}
IT 205-S	AC/DC current transducer 200 A_{rms}
IT 405-S	AC/DC current transducer 400 A_{rms}
IT 605-S	AC/DC current transducer 600 A_{rms}
IN 1000-S	AC/DC current transducer 1000 A_{rms}
IN 2000-S	AC/DC current transducer 2000 A_{rms}
IT 60-S	AC/DC current transducer 60 A_{pk}
IT 200-S	AC/DC current transducer 200 A_{pk}
IT 400-S	AC/DC current transducer 400 A_{pk}
IT 700-S	AC/DC current transducer 700 A_{pk}
IT 1000-S/SP1	AC/DC current transducer 1000 A_{pk}
Connection Cables	
MCTS/TPS/1.5	1.5 meters connection cable, 0.34 mm²
MCTS/TPS/2.5	2.5 meters connection cable, 0.34 mm²
MCTS/TPS/3	3 meters connection cable, 0.34 mm²
MCTS/TPS/5	5 meters connection cable, 0.34 mm²
MCTS/TPS/10	10 meters connection cable, 0.34 mm²
MCTS/TPS/15	15 meters connection cable, 0.34 mm²
MCTS/TPS/20	20 meters connection cable, 0.34 mm²
MCTS/TPS/25	25 meters connection cable, 0.34 mm²
MCTS/TPS/30	30 meters connection cable, 0.34 mm²
MCTS/TPS/5/0.75	5 meters connection cable, 0.75 mm²
MCTS/TPS/10/0.75	10 meters connection cable, 0.75 mm²
MCTS/TPS/15/0.75	15 meters connection cable, 0.75 mm²
MCTS/TPS/20/0.75	20 meters connection cable, 0.75 mm²
MCTS/TPS/30/0.75	30 meters connection cable, 0.75 mm²
Passive Burden Resistors	
MCTS/BR1/0.02	1 Ω plug-on burden resistor for MCTS/TPS
MCTS/BR1.5/0.02	1.5 Ω plug-on burden resistor for MCTS/TPS
MCTS/BR2.5/0.02	2.5 Ω plug-on burden resistor for MCTS/TPS
MCTS/BR3.75/0.02	3.75 Ω plug-on burden resistor for MCTS/TPS
MCTS/BR5/0.02	5 Ω plug-on burden resistor for MCTS/TPS
MCTS/BR10/0.01	10 Ω plug-on burden resistor for MCTS/TPS
MCTS/BR25/0.02	25 Ω plug-on burden resistor for MCTS/TPS
MCTS/BR50/0.02	50 Ω plug-on burden resistor for MCTS/TPS
Active Voltage Output Modules	
MCTS/VM1/0.02	Plug-on output current amplifier 1A/7V
MCTS/VM0.66/0.02	Plug-on output current amplifier 667mA/7V
MCTS/VM0.4/0.02	Plug-on output current amplifier 400mA/7V
MCTS/VM0.26/0.02	Plug-on output current amplifier 267mA/7V
MCTS/VM0.2/0.02	Plug-on output current amplifier 200mA/7V
MCTS/VM0.1/0.02	Plug-on output current amplifier 100mA/7V
Accessories	
MCTS/CB	Carrying bag for MCTS rack, transducers and cables
TSC1	Transducer soft case for IT 60-S, IT 65-S, IT200-S, IT 205-S and IT 400-S
TSC2	Transducer soft case for IT 405-S, IT 605-S, IT 700-S and IN 1000-S
TSC3	Transducer soft case for IT 1000-S/SP1
TSC4	Transducer soft case for IN 2000-S
MCTS/ROC	Status readout interface cable, length 3 m
BPL0.5	4mm banana-plug test lead set for MCTS current output terminals, red and black, length 0.5 m
BPL1	4mm banana-plug test lead set for MCTS current output terminals, red and black, length 1 m
BNCL1	BNC to BNC test lead, length 1 m
BNC4L1	BNC to 4 mm banana-plug test lead, length 1 m
BNC4A	BNC to 4 mm banana-plug adapter

SIGNALTEC GmbH, Reutersbrunnenstrasse 27, D-90429 Nürnberg, GERMANY, T. +49 911 2550993-0, F. +49 911 2550993-13, Email: info@signaltec.com, Web: www.signaltec.com