Messtechnik • Prozessinstrumentierung • Prüf- und Kalibriertechnik
Measurement • Process Instrumentation • Test and Calibration Equipment
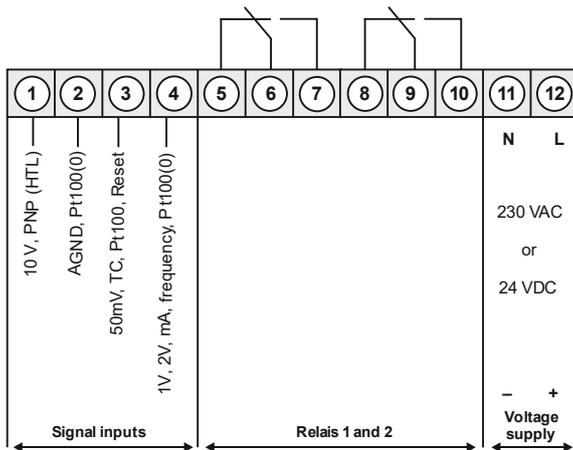
ICS SCHNEIDER MESSTECHNIK

ITFT1 – full graphic indicator for panel-mounting in 96x48 mm (WxH)
Multifunctional measuring input: direct voltage, direct current, Pt100(0), Thermocouple, frequency, rotational speed, counter

- presentation of metered value of -1999…9999 Digits
- digit height approx. 15 mm
- selectable colour for measurand and background: red, green, white, black, orange
- minimal installation depth: 25 mm without plug-in terminal, with transformer 42 mm
- display panel 2,4", 320x240 Pixel
- display of metering point description and signal description
- adjustable signs for physical dimensions
- min/max value recording
- 9 adjustable supporting points
- display flashing at threshold value exceedance/undercut
- Tara function
- programming interlock via access code
- protection class IP65 at the front
- pluggable screw terminal
- 2 switching points (changer)
- option: interface RS485 with Modbus protocol
- accessories: PC-based configuration kit PM-TOOL with USB adapter

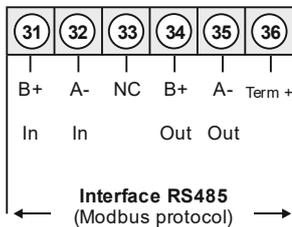| ORDER NUMBER (without options)	EUR

- **Multifunctional measuring input**

Supply 230 VAC	**ITFT1-11U.000X.572A**	238.30
Supply 24 VDC galv. isolated	**ITFT1-11U.000X.772A**	248.90

1	2	3	4	5	6	7	8	9	10	11	12
10 V, PNP (HTL)	AGND, Pt100(0)	50mV, TC, Pt100, Reset	1V, 2V, mA, frequency, Pt100(0)							N	L

Signal inputs — Relais 1 and 2 — Voltage supply (230 VAC or 24 VDC) — +

31	32	33	34	35	36
B+ In	A- In	NC	B+ Out	A- Out	Term +

Interface RS485 (Modbus protocol)

- **Order key options**

IT	F	T	1-	1	1	U.	0	0	0	X.	5	7	2	A
IT	F	T	1-	1	1	U.	0	0	0	X.	7	7	2	A

4	Interface RS485 – galv. isolated (only possible without relay)	58.30

• Parameterisation software

PC-based configuration software PM-TOOL for a simple adjustment, **PM-TOOL-USB** **30.70**
incl. USB adapter. Programming happens on the rears side via micro USB plug.

• Technical data

Housing	Dimensions	W96 x H48 x D 25 mm, (with plug-in terminal 47 mm, devices with transformer 42 mm)
	Panel cut-out	$92.0^{+0.8}$ x $45.0^{+0.6}$ mm
	Fixing	screw elements for a wall thickness of up to 3 mm
	Housing material	PC Polycarbonate, black, UL94V-0
	Sealing material	EPDM, 65 Shore, black
	Protection class	at the front side IP65 standard, at the rear side IP00
	Weight	approx. 100 g
	Connection	plug-in terminal; wire cross section up to 2.5 mm^2
		push-in terminal; wire cross section up to 0.75mm² for interface RS485

Display	Display	fullgraphic TFT-display with 320x240 Pixel
	Digit height	15 mm
	Presentation of metered value	-1999 to 9999
	Measurand background colour	Red, Green, White, Black or Orange (selectable)
	Limit values	optical display flashing

Measuring input

Signal	Measuring range	Measuring range	Resolution
Voltage	0…10 V Ri > 100 kOhm	0…12 V	≥ 14 bit
Voltage	0…2 V Ri ≥ 10 kOhm	0…2.2 V	≥ 14 bit
Voltage	0…1 V Ri ≥ 10 kOhm	0…1.1 V	≥ 14 bit
Voltage	0…50 mV Ri ≥ 10 kOhm	0…75 mV	
Current	4…20 mA Ri = ~125 Ohm	1…22 mA	
Current	0…20 mA Ri = ~125 Ohm	0…22 mA	
Pt100-3-wire	-50…200°C	-58…392°F	0.1°C / 0.1°F
Pt100-3-wire	-200..850°C	-328…1562°F	1°C / 1°F
Pt1000-2-wire	-200..850°C	-328…1562°F	1°C / 1°F
Thermo K	-270…1350°C	-454…2462°F	1°C / 1°F
Thermo S	-50…1750°C	-328…3182°F	1°C / 1°F
Thermo N	-270…1300°C	-454…2372°F	1°C / 1°F
Thermo J	-170…950°C	-274…1742°F	1°C / 1°F
Thermo T	-270…400°C	-454…752°F	1°C / 1°F
Thermo R	-50…1768°C	-58…3214°F	1°C / 1°F
Thermo B	80…1820°C	176…3308°F	1°C / 1°F
Thermo E	-270…1000°C	-454…1832°F	1°C / 1°F
Thermo L	-200…900°C	-328…1652°F	1°C / 1°F
Frequency	0…10 kHz	0…10 kHz	0.001 Hz / ±1
NPN	0…3 kHz	0…3 kHz	0.001 Hz / ±1
PNP	0…1 kHz	0…1 kHz	0.001 Hz
Rotational speed	0…9999 1/min	0…9999 1/min	0.001 1/min
Counter	0…9999 (prescaler up to 1000)		

Pulse input	**TTL** Low <2 V / High >3 V	**HTL/PNP** Low <6 V / High >8 V
	NPN Low <0.8 V / High via resistance	**Namur** Low <1.5 mA / High >2.5 mA

Reset input	active <0.8 V

Relay	with changeover contact 30 VDC / AC 2 A resistive burden

Interface	RS485	9.600 Baud, no parity, 8 DataBit, 1 StopBit, wire length max. 1000m
	Protocol	Modbus with ASCII or RTU-protocol

Measuring error	Standard	0.2% of measuring range ± 1 Digit
	Pt100 / Pt1000	0.5% of measuring range ± 1 Digit
	Thermocouples	0.3% of measuring range ± 1 Digit

Accuracy	Reference junction	± 1°C
	Drift of temperature	100 ppm/K
	Measuring time	0.01 to 2.0 seconds
	Measuring rate	approx. 1/s with temperarure sensor, approx. 100/s with standard signals
	Measuring principle	U/F conversion
	Resolution	approx. 14 Bit at 1s measuring time

Power pack	Supply	230 VAC 50/60 Hz, ≤ 3 VA
		24 VDC ± 10% galvanically isolated, ≤ 1 VA

Memory	EEPROM	Data preservation ≥ 100 years at 25°C

Ambient conditions	Working temperature	-20 to + 50°C
	Storing temperature	-30 to + 70°C
	Weathering resistance	relative humidity 0-85% on years average without dew

| EMV | EN 61326 |
| CE-identification | Conformity according directive 2014/30/EU |

Safety regulations   According to low voltage directive 2013/35/EU; EN 61010; EN 60664-1

Housing: