

Plug-in modules for UPA

Plug-in modules to be combined to UPA series

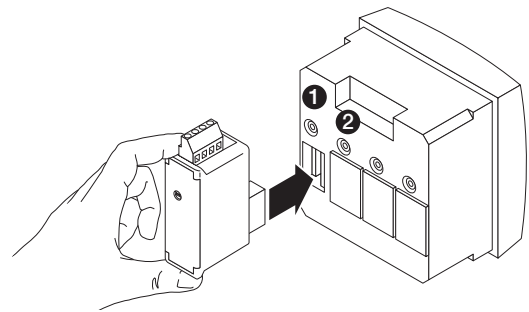


» Plug-in modules for UPA20

The following plug-in modules can be combined to UPA20 only.

Available plug-in modules	Description
485-MDB-20	RS485 communication with MODBUS protocol (speed up to 38400 baud)
1DO-20	1 digital output which can be allocated to: - pulses: configurable (type, weight, duration) to kWh or kvarh - monitoring: I_{L1}, I_{L2}, I_{L3}, I_{N}, V_{L1-N}, V_{L2-N}, V_{L3-N}, V_{L1-L2}, V_{L2-L3}, V_{L3-L1}, f, P_{Σ}, Q_{Σ}, S_{Σ}, PF_{Σ}, $THDA_{L1}$, $THDA_{L2}$, $THDA_{L3}$, $THDV_{L1}$, $THDV_{L2}$, $THDV_{L3}$, $THDV_{L1-L2}$, $THDV_{L2-L3}$, $THDV_{L3-L1}$ time counter - equipment control
1DO-3DI-20	3 digital inputs for information report from an external contact and 1 digital output which can be allocated to: - pulses: configurable (type, weight, duration) to kWh or kvarh - monitoring: I_{L1}, I_{L2}, I_{L3}, I_{N}, V_{L1-N}, V_{L2-N}, V_{L3-N}, V_{L1-L2}, V_{L2-L3}, V_{L3-L1}, f, P_{Σ}, Q_{Σ}, S_{Σ}, PF_{Σ}, $THDA_{L1}$, $THDA_{L2}$, $THDA_{L3}$, $THDV_{L1}$, $THDV_{L2}$, $THDV_{L3}$, $THDV_{L1-L2}$, $THDV_{L2-L3}$, $THDV_{L3-L1}$ time counter - equipment control

Module name	Max module number	①	②
485-MDB-20	1	x	x
1DO-20	2	x	x
1DO-3DI-20	2	x	x



» Technical specifications of plug-in modules for UPA20

Pulse or alarm output for 1DO-20 / 1DO-3DI-20	
Number	1
Type	100 VDC - 0.5 A - 10 VA
Max. number of manoeuvres	$\leq 10^8$
Inputs for 1DO-3DI-20	
Number	3
Power supply	10 ... 30 VDC
Minimum width of signal	10 ms
Minimum length between 2 pulses	18 ms
Type	Optical couplers

485-MDB-20	
Link	RS485
Type	2 to 3 half duplex wires
Protocol	MODBUS® RTU
MODBUS® speed	1400 to 38400 baud

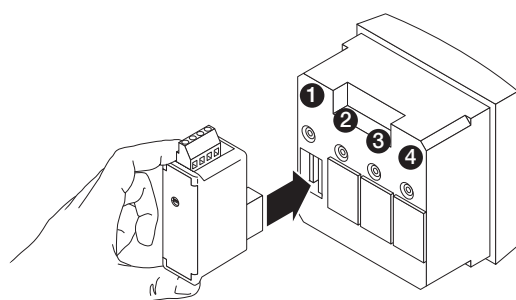
» Plug-in modules for UPA30/UPA41

The following plug-in modules can be combined to UPA30 or UPA41 only.

Available plug-in modules	Description
485-MDB-30-41	RS485 communication with MODBUS protocol (speed up to 38400 baud)
2PULSE-30-41	2 configurable pulse outputs (type, weight and run) on $\pm$ kwh, $\pm$ kvarh and kVAh
2DO-2DI-30-41	2 digital inputs for pulse counting and 2 digital outputs which can be allocated to: - monitoring: $I_{L1}, I_{L2}, I_{L3}, I_N, V_{L1-N}, V_{L2-N}, V_{L3-N}, V_{L1-L2}, V_{L2-L3}, V_{L3-L1}, f, \pm P_{\Sigma}, \pm Q_{\Sigma}, S_{\Sigma}, PF_{\Sigma}, THDA_{L1}, THDA_{L2}, THDA_{L3}, THDA_N, THDV_{L1}, THDV_{L2}, THDV_{L3}, THDV_{L1-L2}, THDV_{L2-L3}, THDV_{L3-L1}, P_{PRED}, Q_{PRED}, S_{PRED}, T^{\circ}C$ internal, $T^{\circ}C1$ external, $T^{\circ}C2$ external, $T^{\circ}C3$ external, time counter - remote control - timed remote control
2AO-30-41	2 analog outputs which can be allocated to: $I_{L1}, I_{L2}, I_{L3}, I_N, V_{L1-N}, V_{L2-N}, V_{L3-N}, V_{L1-L2}, V_{L2-L3}, V_{L3-L1}, f, \pm P_{\Sigma}, \pm Q_{\Sigma}, S_{\Sigma}, PF_{\Sigma}, I_{\Sigma}, V_{\Sigma}, P_{PRED}, Q_{PRED}, S_{PRED}, T^{\circ}C$ internal, $T^{\circ}C1$ external, $T^{\circ}C2$ external, $T^{\circ}C3$ external, 30 VDC power supply
TEMP-30-41	Detection of internal temperature ($T^{\circ}C$ internal) and up to 3 external temperature through PT100 probes ($T^{\circ}C1$ external, $T^{\circ}C2$ external, $T^{\circ}C3$ external)

Module name	Max module number	① ▲ only for UPA30	②	③	④
485-MDB-30-41	1	x	x	x	x
2PULSE-30-41	4	x	x	x	x
2DO-2DI-30-41	3	x	x	x	x
2AO-30-41	2	x*	x*	x*	x*
TEMP-30-41	1		x	x	

* If two modules are used they must be placed on slots 1 and 2



Please note that UPA41 is provided with a permanent module on slot 1. This module allows to measure the neutral current (N) and it cannot be removed.

» Technical specifications of plug-in modules for UPA30/UPA41

Outputs (alarms / control) for 2DO-2DI-30-41	
Number of relays	2(1)
Type	250 VAC - 5 A - 1150 VA
Optical coupler inputs for 2DO-2DI-30-41	
Number	2(1)
Power supply	10 ... 30 VDC
Minimum width of signal	10 ms
Minimum length between 2 pulses	18 ms
Type	Optical couplers
2PULSE-30-41	
Number of relays	2
Type	100 VDC - 0.5 A - 10 VA
Max. number of manoeuvres	≤ 108
2AO-30-41	
Number of outputs	2(2)
Type	Insulated
Scale	0 / 4 ... 20 mA
Load resistance	600 Ω
Maximum current	30 mA

485-MDB-30-41	
Link	RS485
Type	2 to 3 half duplex wires
Protocol	MODBUS® RTU
MODBUS® speed	4800 to 38400 baud
Inputs for TEMP-30-41	
Type	PT100
Connection	2, 3 or 4 wires
Dynamic	- 20°C ... 150°C
Accuracy	± 1 digit
Maximum length	300 cm

» Order codes of plug-in modules for UPA20

ORDER CODE	MODEL	TYPE	CERTIFICATION
	Name	Description	UL
PLUG-IN MODULES FOR UPA20			
1216.0001.0001	485-MDB-20	RS485 Modbus communication	●
1216.0002.0001	1DO-20	1 digital output configurable for pulses/alarms	●
1216.0003.0001	1DO-3DI-20	1 digital output configurable for pulses/alarms, 3 digital inputs	

» Order codes of plug-in modules for UPA30/UPA41

ORDER CODE	MODEL	TYPE	CERTIFICATION
	Name	Description	UL
PLUG-IN MODULES FOR UPA30/UPA41			
1216.0004.0001	485-MDB-30-41	RS485 Modbus communication	●
1216.0005.0001	2PULSE-30-41	2 digital outputs configurable for pulses	●
1216.0006.0001	2DO-2DI-30-41	2 digital outputs configurable for pulses/alarms, 2 digital inputs	●
1216.0007.0001	2AO-30-41	2 analog outputs	●
1216.0008.0001	TEMP-30-41	Temperature detection	
ACCESSORIES FOR TEMP-30-41 MODULE			
7502.0004.0001	PT100 screw	PT100 temperature probe, M6 screw	
7502.0005.0001	PT100 lug	PT100 temperature probe, M6 lug	

NOTE: Subject to change without notice



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72PG01_2_201912_3