

MEDIUM VOLTAGE PRODUCT

AdvaSense™ sensor solutions for Gas-Insulated Switchgear (RMU)

Product overview

AdvaSense™ sensors based on advanced measurement principles have been developed as alternative solution to conventional instrument transformers in order to achieve significant reduction in dimensions, increase of safety and to provide greater rating standardization with a wider functionality range.

Due to their compact sizes and optimized designs AdvaSense™ sensors represent ideal solutions for new installations as well as retrofit purposes of existing switchgear. AdvaSense™ sensors provide state of the art solution for current and voltage

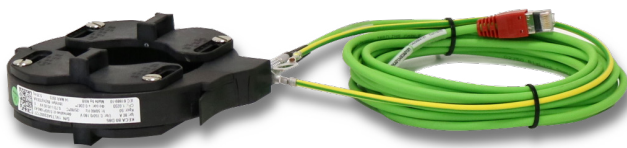
measurement also in applications where it is very difficult to use conventional instrument transformers. ABB offers wide range of sensor products suitable for use in secondary Gas-Insulated Switchgear (RMU - Ring Main Units).



Indoor Current Sensor KECA 80 C85

The current sensor (Electronic current transformers according to IEC 60044-8 and low-power passive current transformers according to IEC 61869-10 standards) type KECA 80 C85 is intended for current measurement in gas insulated medium voltage switchgear. The design of the current sensor has been optimized to be easily assembled on the shielded cable connectors and therefore makes the sensor suitable for retrofit purposes.

Ratings	
Rated primary current of application	up to 4 000 A
Rated primary current	80 A
Cable lengths	2.2; 3.4; 3.6 m; 5 m
Inner diameter	85 mm



Indoor Current Sensor KECA 80 D85 (split core type)

The current sensor (Electronic current transformers according to IEC 60044-8 and low-power passive current transformers according to IEC 61869-10 standards) type KECA 80 D85 is intended for current measurement in gas insulated medium voltage switchgear. The current sensor is the split core type equipped with a clamping system which provides easy and fast installation and therefore makes the sensor suitable for retrofit purposes.

Ratings	
Rated primary current of application	up to 4 000 A
Rated primary current	80 A
Cable lengths	5 m
Inner diameter	up to 85 mm



Indoor Voltage Sensors KEVA C

The voltage sensor (Electronic voltage transformers according to IEC 60044-7 and low-power passive voltage transformers according to IEC 61869-11 standards) type KEVA C is intended for voltage measurement in gas insulated medium voltage switchgear. The voltage sensor KEVA C has been designed as easy replacement of originally used insulating plugs in the cable connectors. Voltage sensors KEVA C are compatible with cable connectors from ABB Kabeldon, Nexans (Euromold), Raychem and NKT.

Ratings	
Rated primary voltage of application	up to 36 kV
Highest voltage for equipment	up to 36 kV
Rated primary voltage	22/√3 kV and 33/√3 kV
Cable lengths	2.2, 5, 8, 9.9 m

Measurement	Sensor type	Supported type of cable connector		Cable length	Sensor ordering code	
		Manufacturer	Type		IEC 60044-8	IEC 61869-10
Current sensor	KECA 80 C85	All types of screened separable connectors		2.2 m	1VL5400056V0101	1VL5400056V1101
				3.6 m	1VL5400056V0102	1VL5400056V1102
				3.4 m	1VL5400056V0103	1VL5400056V1103
				5 m	1VL5400056V0104	1VL5400056V1104
Current sensor	KECA 80 D85	All shielded cables		5 m	1VL5400076V0101	1VL5400076V1101
					IEC 60044-7	IEC 61869-11
Voltage sensor	KEVA 24 C10	Nexans Euromold	400 TB/G; 440 TB/G; K400 TB/G; K440 TB/G; 400PB-xSA	2.2 m	1VL5400061V0101	1VL5400061V1101
				5 m	1VL5400061V0103	1VL5400061V1103
				8 m	1VL5400061V0104	1VL5400061V1104
				9.9 m	1VL5400061V0102	1VL5400061V1102
	KEVA 24 C10c			2.2 m	1VL5400061V0201	1VL5400061V1201
				5 m	1VL5400061V0203	1VL5400061V1203
				8 m	1VL5400061V0204	1VL5400061V1204
				9 m	1VL5400061V0202	1VL5400061V1202
Voltage sensor	KEVA 24 C21	ABB Kabeldon	CSE-A 12630; CSE-A 24630; CSEP-A 12630; CSEP-A 24630; SOC 630 (older); CSAP-A 6/12/24 kV	2.2 m	1VL5400062V0101	1VL5400062V1101
				5 m	1VL5400062V0103	1VL5400062V1103
				8 m	1VL5400062V0104	1VL5400062V1104
				9.9 m	1VL5400062V0102	1VL5400062V1102
	KEVA 24 C21c			2.2 m	1VL5400062V0201	1VL5400062V1201
				5 m	1VL5400062V0203	1VL5400062V1203
				8 m	1VL5400062V0204	1VL5400062V1204
				9.9 m	1VL5400062V0202	1VL5400062V1202
Voltage sensor	KEVA 24 C22	NKT and TE connectivity	CB 12-630; CB 24-630; CC 12-630; CC 24-630; CBC 40,5 630 (max for 24 kV); CSA M12; CSA M16; CB 36-400 (for max 24 kV) RSTI L56xx; RSTI-CC L56xx	2.2 m	1VL5400063V0101	1VL5400063V1101
				5 m	1VL5400063V0103	1VL5400063V1103
				8 m	1VL5400063V0104	1VL5400063V1104
				9.9 m	1VL5400063V0102	1VL5400063V1102
	KEVA 24 C22c			2.2 m	1VL5400063V0201	1VL5400063V1201
				5 m	1VL5400063V0203	1VL5400063V1203
				8 m	1VL5400063V0204	1VL5400063V1204
				9.9 m	1VL5400063V0202	1VL5400063V1202
Voltage sensor	KEVA 24 C23	NKT and TE connectivity	CB 12-630; CB 24-630; CC 12-630; CC 24-630; CBC 40,5 630 (max for 24 kV); CSA M12; CSA M16 RSTI 58xx/39xx; RSTI-CC 58xx/39xx; RSTI LCxx/LAxx (older)	2.2 m	1VL5400064V0101	1VL5400064V1101
				5 m	1VL5400064V0103	1VL5400064V1103
				8 m	1VL5400064V0104	1VL5400064V1104
				9.9 m	1VL5400064V0102	1VL5400064V1102
	KEVA 24 C23c			2.2 m	1VL5400064V0201	1VL5400064V1201
				5 m	1VL5400064V0203	1VL5400064V1203
				8 m	1VL5400064V0204	1VL5400064V1204
				9.9 m	1VL5400064V0202	1VL5400064V1202
Voltage sensor	KEVA 24 C24	Nexans Euromold	430 TB - 630A; K430 TB - 630A; 300 PB - 630A; K300 PB - 630A	2.2 m	1VL5400078V0101	1VL5400078V1101
				5 m	1VL5400078V0103	1VL5400078V1103
				8 m	1VL5400078V0104	1VL5400078V1104
				9.9 m	1VL5400078V0102	1VL5400078V1102
	KEVA 24 C24c			2.2 m	1VL5400078V0201	1VL5400078V1201
				5 m	1VL5400078V0203	1VL5400078V1203
				8 m	1VL5400078V0204	1VL5400078V1204
				9.9 m	1VL5400078V0202	1VL5400078V1202

Measurement	Sensor type	Supported type of cable connector		Cable length	Sensor ordering code	
		Manufacturer	Type		IEC 60044-8	IEC 61869-10
Voltage sensor	KEVA 24 C25	Cellpack	CTS 630A 24kV CTKS 630A 24kV CTKSA 630A 24kV	2.2 m	1VL5400079V0101	1VL5400079V1101
				5 m	1VL5400079V0103	1VL5400079V1103
				8 m	1VL5400079V0104	1VL5400079V1104
				9.9 m	1VL5400079V0102	1VL5400079V1102
	KEVA 24 C25c			2.2 m	1VL5400079V0201	1VL5400079V1201
				5 m	1VL5400079V0203	1VL5400079V1203
				8 m	1VL5400079V0204	1VL5400079V1204
				9.9 m	1VL5400079V0202	1VL5400079V1202
Voltage sensor	KEVA 24 C26	Südkabel	SET 12, 24; SAT 12, 24; SEHDK 13.1, 23.1; SAK 12, 24; SEHDT 23.1; MUT 23; MUT 23.1; AD 23.1 SP	2.2 m	1VL5400080V0101	1VL5400080V1101
				5 m	1VL5400080V0103	1VL5400080V1103
				8 m	1VL5400080V0104	1VL5400080V1104
				9.9 m	1VL5400080V0102	1VL5400080V1102
	KEVA 24 C26c			2.2 m	1VL5400080V0201	1VL5400080V1201
				5 m	1VL5400080V0203	1VL5400080V1203
				8 m	1VL5400080V0204	1VL5400080V1204
				9.9 m	1VL5400080V0202	1VL5400080V1202
Voltage sensor	KEVA 24 C30	TE connectivity	RICS 51x3, 51x9, 51x7	2.2 m	1VL5400081V0101	-
				5 m	1VL5400081V0103	-
				8 m	1VL5400081V0104	-
				9.9 m	1VL5400081V0102	-
Voltage sensor	KEVA 24 C2 4.1	Nexans	(K)480 TB/G; (K)484 TB/G; (K)489 TB/G;	2.2 m	-	1VL5400084V1101
	KEVA 24 C2 4.1c	Euromold	(K)800 PB/G; (K)809 PB/G; (K)480 BE/G;	5 m	-	1VL5400084V1103
			800 SA-10xN (X up to 24)	2.2 m	-	1VL5400084V1201
				5 m	-	1VL5400084V1203
Voltage sensor	KEVA 36 C2 4.1	Nexans	M480 TB/G; M16; M800 PB/G;	2.2 m	-	1VL5400085V1101
	KEVA 36 C2 4.1c	Euromold	M484 TB/G; M804 PB/G; M489 TB/G;	5 m	-	1VL5400085V1103
			M809 PB/G;	2.2 m	-	1VL5400085V1201
			800 SA-10-xN (x=30,33,36) M480 BE/G	5 m	-	1VL5400085V1203

Tab. 1. AdvaSense™ Sensor overview. Note: For use in alternative cable connectors please contact ABB.

01 Assembly of sensors on cable connector

02 Sensor connection to IED (Intelligent Electronic Device)

AdvaSense™ Sensor assembly

Current sensor KECA 80 C85 shall be installed on shielded head of cable connector using clamping system.

Current sensor KECA 80 D85 shall be installed on shielded cable using clamping system which allows assembly on different diameters of MV cable.

Voltage sensors KEVA C are assembled as easy replacement of originally used insulating plugs in cable connectors.

Standard package

Standard package for 3-phase application where current and voltage measurements are required consists of:

- 3 pcs of current sensors KECA 80 C85 or KECA 80 D85
- 3 pcs of voltage sensors KEVA C
- 3 pcs of connector adapter AR4 (ordering code for connector adapter AR4 is 1VL5300752R0101)

Sensor compatibility

ABB sensors are compatible with wide range of ABB IEDs. Examples of suitable Fault Passage Indicators and Protection relays for secondary Gas-Insulated Switchgear: RIO600, REF 601, REJ 601, REM 601; REF 615, REM 615, RED 615, REC 615 and REF 620, REM 620, REX 640.

ABB sensors are also compatible with a-eberle EOR-3D Combined Earth Fault and Short Circuit Indicator.

Product	Catalogue	Instructions for installation, use and maintenance
KECA 80 C85	1VLC000715	1VLM000806
KECA 80 D85	1VLC000722	1VLM000805
KEVA C	1VLC000717	1VLM000800

Tab. 2. References

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